BBCS BRAZILIAN BREAST CANCER SYMPOSIUM 2025

May 15 - 17, 2025

PROGRAMMING

bbcs.org.br

MESSAGE FROM THE ORGANIZATION COMMITTEE

Welcome to the 14th BBCS, the largest breast cancer clinical research event in Latin America, and to the 8th Survivorship Forum! It is with immense joy that we welcome you once again to the Tulip Complex in Brasilia, a place that has already become a symbol of innovation and knowledge exchange.

It's a special moment: another edition full of vibrant energy, dedicated researchers and top-quality scientific papers. Here, we have the unique opportunity to share advances, discuss challenges and, above all, foster the formation of innovative ideas and partnerships that will drive the future of breast cancer treatment and research.

We would like to emphasize that an event of this magnitude is only possible thanks to the collaboration of a large number of colleagues who love research and believe in its potential to transform lives. Furthermore, we would never be able to do something like this without the support and trust of our sponsors, who firmly believe in the seriousness of our work and the importance of making progress in the fight against breast cancer.

The Survivorship Forum, which is also part of this celebration, will be dedicated to the well-being and the exchange of experiences between extremely dedicated professionals, as well as inspiring words from breast cancer survivors. This special moment reinforces the importance of emotional support, comprehensive care and the hope that drives us in the search for better treatment and a better life for our patients.

May this meeting be marked by inspiration, discoveries and the enthusiasm that only an event like this can provide. We wish you all a productive and enriching symposium, full of good news!

Welcome to BBCS 2025!

SUMMARY

ORGANIZATION COMMITTEE

Alexandre Marchiori Xavier de Jesus (BRA)
Ana Carolina Salles de Mendonça Ferreira (BRA)
Andre Mattar (BRA)
Angelica Nogueira Rodrigues (BRA)
Augusto Tufi Hassan (BRA)
Danielle Cristina Netto Rodrigues (BRA)
Flávia Vidal Cabero (BRA)
Giuliano Mendes Duarte (BRA)
João Nunes de Matos Neto (BRA)
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Leonardo Ribeiro Soares (BRA)
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Viviane Esteves (BRA)
Vivienne Carduz Castilho (BRA)
Vyvian Paes de Oliveira (BRA)
Whemberton Martins de Araújo (BRA)
Whitsanya Nayara Eterna de Almeida Ribeiro (BRA)
Yazan Masannat (UK)

AWARDS FOR SCIENTIFIC PAPERS

The Best Paper – oral presentation

The presenting author of the best paper will be awarded with air ticket, accommodation and registration to the San Antonio 2025 in Texas / USA.

The Best Paper in Locoregional Treatment

The presenting author of the best paper in Locoregional Treatment will be awarded with R$5,000.00 (five thousand reais) to be paid when the event ends.

The Best Paper in Epidemiology

The best paper in Epidemiology will be awarded, as well. The presenting author will be awarded with air ticket, accommodation and registration for the Jornada Paulista de Mastologia – JPM 2025.

The Best Paper in Imaging

The best paper in Imaging will be awarded, as well. The presenting author will be awarded with registration for the Jornada Paulista de Mastologia – JPM 2025.

Unicentro Br Award

The best research work carried out in Brazil, with the author being 45 years old or younger on the date of the paper submission, i.e., born from 1980 onwards. The best paper in this category will be awarded R$ 5,000.00 (five thousand reais). It will be paid to the presenting author.

The Best Paper in Systemic Treatment

The best paper in Systemic Treatment will be awarded with R$5,000.00 (five thousand reais) to be paid out when the event ends. It will be paid to the presenting author.

Other awards

1. The best paper in Basic and Translational Research will be awarded with R$2,000.00 (two thousand reais) to be paid out when the event ends. It will be paid to the presenting author.

AWARDS FOR SCIENTIFIC PAPERS

2. The best paper in Tracking be awarded with R$2,000.00 (two thousand reais) to be paid when the event ends. It will be paid to the presenting author.

BBCS 2025 Award

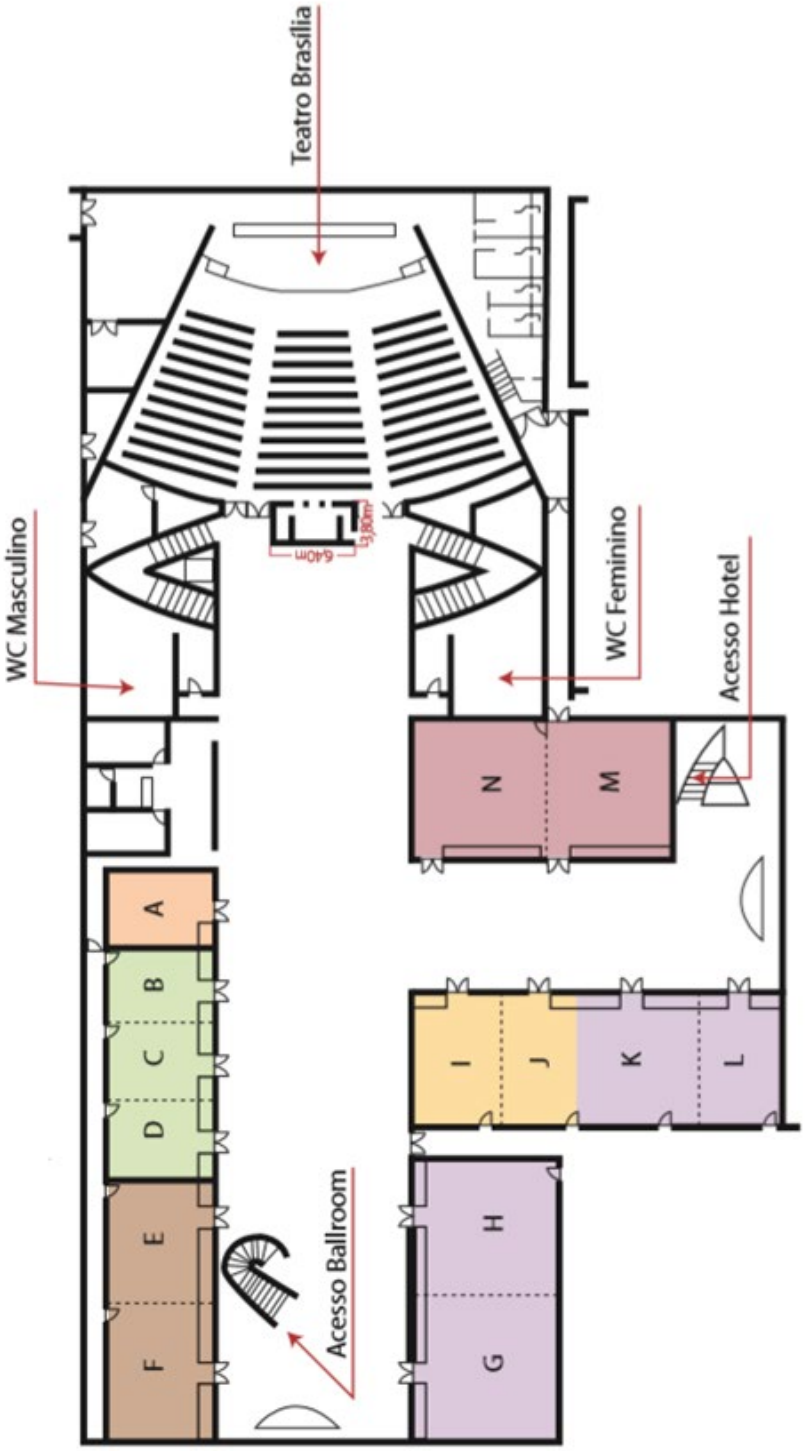
BBCS award was created to honor the contemporary researcher that most contributed to breast cancer research in Brazil and worldwide.

Maria Antonieta Regal Dutra Award

The award is granted to people who have spared no effort and dedication in controlling and treating breast cancer in Brazil and worldwide.

*Awards are not cumulative.

IMPLANTATION



SCHEDULE

SCHEDULE

MAY 15TH (THURSDAY)

7 am to 6 pm	Registration and material delivery – Hotel Royal Tulip
8 am to 8 pm	BBCS Workshops
8 am to 6 pm	Masterclass - Guests Only (Room H)
8 am to 1:30 pm	Scientific Meeting Daiichi Sankyo - Guests Only (Room G)
12 pm to 1:30 pm	Mini Meeting Gilead – Guests Only (Room F)
12 pm to 1:30 pm	Mini Meeting Libbs – Guests Only (Room I)
12 pm to 1:30 pm	Breast Breaking News (Room JK)
6:30 pm to 8 pm	Mini Meeting Astrazeneca (Room F)

MAY 16TH (FRIDAY)

7 am to 6 pm	Registration and material delivery – Hotel Royal Tulip
8 am to 8:10 am	Official opening - Main Auditorium (Theater)
8:10 am to 6 pm	Scientific Program BBCS - Simultaneous Room (Room M+N)
8:10 am to 6:20 pm	Scientific Program BBCS - Main Auditorium (Theater)
11:40 am to 11:45 am	BBCS 2025 Award - Main Auditorium (Theater)
12 pm to 1:30	Mini Meeting Roche – Guests Only (Room G)
2 pm to 6 pm	3rd Meeting of Researchers of the Projeto Itaberaí (Room G)
2:10 pm to 3:40 pm	Mini Meeting Exact Sciences (Room JK)

MAY 17TH (SATURDAY)

7 am to 1 pm	BBCS Registration and material delivery – Hotel Royal Tulip
8 am to 1 pm	VIII Fórum de Pacientes Advocacy & Survivorship - WEEM no BBCS (Sala M+N)
8 am to 1:30 pm	Scientific Program BBCS - Main Auditorium (Theater)
10:30 am to 10:40 am	Maria Antonieta Regal Dutra Award - VIII Fórum (Room M+N)
12:50 pm to 1:30 pm	BBCS Awarding and closing BBCS (Theater)

SCIENTIFIC AGENDA

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM B+C+D
8 am – 12 pm **2ND MIDWEST CONFERENCE ON MASTOLOGY**
Coordinators: Alexandre Marchiori Xavier de Jesus (BRA)
Thaís Regina Daltoé Inglez (BRA)

PART 1
8 am – 10:05 am

8 am – 8:20 am	The use of exogenous hormones and breast cancer. What is the evidence? Where are we headed? Viviane Esteves (BRA)
8:20 am - 8:40 am	Common Mistakes in BI-RADS Categorization and what to Expect from the Upcoming 6th Edition Ruth Helena de Morais Bonini (BRA)
8:40 am – 9 am	Challenges in attempts at breast conservation. How far can we go? Does a multifocal/multicentric disease equals mastectomy? LCIS and lesions that indicate high risk margins. What to do? Jose Pereira Guará (BRA)
9 am - 9:20 am	Challenges in the diagnosis of invasive lobular carcinoma of the breast Sebastião Alves Pinto (BRA)
9:20 am – 9:40 am	Closing the wall in large resections Vilmar Marques de Oliveira (BRA)
9:40 am – 10 am	Discussion

10 am – 10:30 am **Coffee Break**

PART 2
10:30 am – 12 pm

Coordinators:	Lucimara Priscila Campos Veras Giorgi (BRA) Luis Fernando Corrêa de Barros (BRA)
10:30 am – 10:50 am	Advances in PET CT:FDG for staging? FES in disease progression? Whemberton Martins de Araújo (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

10:50 am - 11:10 am	Non-invasive Lobular Neoplasia (ALH/LCIS) and Non-Classical Variants: Differential Diagnosis and Clinical Implications Maria do Carmo Abreu (BRA)
11:10 am - 11:30 am	How to estimate the benefits of preventive surgery in cancer patients with patogenic mutations, in moderate and high penetrance genes Alessandra Borba (BRA)
11:30 am – 11:50 am	Discussion

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM E
8 am – 12 pm **POSITIONING AND COMMUNICATION ON SOCIAL MEDIA**

Coordinator: Daniel Buttros (BRA)
Fabiana Baroni Alves Makdissi (BRA)
Karla Viandell (BRA)
Leonardo Ribeiro Soares (BRA)
Mariana Mesquita Gomes Caitano (BRA)

PART 1
8 am – 10 am

8 am – 8:15 am Opening
Daniel Buttros (BRA)
Leonardo Ribeiro Soares (BRA)

8:15 am - 8:30 am The doctor who communicates
Daniel Buttros (BRA)

8:30 am – 9 am Branding - communication behind the brand
Karla Viandell (BRA)

9 am - 10 am Instagram workshop - Bio, highlights, stories, etc
Daniel Buttros (BRA)
Fabiana Baroni Alves Makdissi (BRA)
Karla Viandell (BRA)
Leonardo Ribeiro Soares (BRA)
Mariana Mesquita Gomes Caitano (BRA)

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10 am – 10:30 am **Coffee Break**

PART 2
10:30 am – 12 pm

10:30 am – 11:30 am Strategic and intentional content
Karla Viandell (BRA)

11:30 am - 12 pm Reels Workshop (information + connection)
Daniel Buttros (BRA)
Fabiana Baroni Alves Makdissi (BRA)
Karla Viandell (BRA)
Leonardo Ribeiro Soares (BRA)
Mariana Mesquita Gomes Caitano (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM E
2 pm – 6 pm **PALLIATIVE CARE WORKSHOP**

Coordinator: Ricardo Caponero (BRA)

PART 1
2 pm – 4 pm

2 pm – 2:25 pm	Why a palliative care symposium at a mastology congress? Ricardo Caponero (BRA)
2:25 pm – 2:50 pm	What cancer did to me Lu Braga (BRA)
2:50 pm – 3:15 pm	How can palliative care contribute to mastology? Sarah Ananda Gomes (BRA)
3:15 pm – 3:40 pm	Family - Constitution and approach Isabella Barros Rabelo Gontijo Tumeh (BRA)
3:40 pm – 4 pm	Discussion

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4 pm – 4:30 pm **Coffee Break**

PART 2
4:30 pm – 6 pm

4:30 pm – 4:55 pm	The lonely howl Ana Lúcia Coradazzi (BRA)
4:55 pm – 5:20 pm	Are we the best doctor we can be? Fabiana Baroni Alves Makdissi (BRA)
5:20 pm – 5:45 pm	The essence of caring - What really matters? Fátima Silvana Furtado Gerolin (BRA)
5:45 pm – 6 pm	Discussion and closing remarks

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM F

10 am – 11:40 am	**SPONSORED CLASS FOR MASTOLOGY / CLINICAL ONCOLOGY RESIDENTS - MSD**
Coordinator:	Andre Mattar (BRA) Paola Ferreira de Freitas Germek (BRA)
10 am – 10:20 am	Biomakers in breast cancer Andre Mattar (BRA)
10:20 am – 10:40 am	Surgical conduct in BRCA Fabio Bagnoli (BRA)
10:40 am – 11 am	Precursor lesions and chemoprophylaxis Marcelo Antonini (BRA)
11 am – 11:20 am	Upfront Axillary approach in 2025 Guilherme Novita (BRA)
11:20 am – 11:40 am	Discussion

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM F

12 pm – 1:30 pm **MINI MEETING GILEAD**
GUESTS ONLY

Anti-TROP2 antibody-drug conjugates in the management of HER2 metastatic breast cancer patients

Speakers: Luciana Landeiro (BRA)
Ana Carolina Salles (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM F
2 pm – 6:10 pm **CLINICAL RESEARCH WORKSHOP**

Coordinator: Larissa Andressa Orsolini (BRA)

MODULE 1 **MAKING CONNECTIONS IN CLINICAL RESEARCH**
2 pm – 4 pm

2 pm – 2:20 pm	From the past to the future: the importance of Clinical Research for Health Institutions – public and private. History and indicators of Clinical Research Eldom de Medeiros Soares (BRA)
2:20 pm – 2:40 pm	Research Center: from structuring to managing clinical research projects based on the life cycle of a clinical protocol Isabela Basso dos Santos Trindade (BRA)
2:40 pm – 3 pm	Empowerment: the role of clinical research professionals in managing the diversity and complexities of clinical trial protocols Livia Maria Querino da Silva Andrade (BRA)
3 pm – 3:20 pm	Mindset: transforming minds in Clinical Research with a focus on the power of communication for successful approaches: research centers x sponsors Bruna Roz Rodrigues (BRA)
3:20 pm – 3:40 pm	How to obtain and ensure the quality of clinical study data, balancing demands and metrics Vania Solda de Jesus (BRA)
3:40 pm – 4 pm	Discussion

4 pm – 4:30 pm **Coffee Break**

MODULE 2 **HOW TO INCREASE PATIENT ACCESS TO CLINICAL STUDIES?**
4:30 pm – 6:10 pm

4:30 pm – 4:50 pm	Patient Navigation in different health services and the increase in recruitment performance of research centers Silvia Kelly R. Ferreira (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

4:50 pm – 5:10 pm Expanding a Research Center's portfolio: what's the best way to do it?
Roberto Hegg (BRA)

5:10 pm – 6:10 pm Benchmarking in a discussion with experts: how to increase patient access to clinical studies?

Mediator: Larissa Andressa Orsolini (BRA)
Debaters: André Mattar (BRA)
Bruna Roz Rodrigues (BRA)
Eldom de Medeiros Soares (BRA)
Isabela Basso dos Santos Trindade (BRA)
Livia Maria Querino da Silva Andrade (BRA)
Nayara Portilho Araujo (BRA)
Roberto Hegg (BRA)
Silvia Kelly R. Ferreira (BRA)
Vania Solda de Jesus (BRA)

1. Patient navigation – is it a reality?
2. The indication of a clinical study as a well-established medical act – first conduct? What is the biggest difficulty in putting it into practice?
3. Strengthening partnerships – how to do it? Recruiting New Studies – flows and tips?
4. Overcoming competition between centers and how does the sponsor strategically "choose" the center?
5. Using social media to promote clinical studies – an effective strategy?
6. Socioeconomic and geographical issues: main barriers and how to overcome them?

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM F

6:30 pm – 8 pm	**MINI MEETING EBOOK – ASTRAZENECA CLINICAL RESEARCH** **GUESTS ONLY**
6:30 pm – 6:35 pm	Opening Ceremony Larissa Andressa Orsolini (BRA)
6:35 pm – 6:50 pm	Overview Molecules
6:50 pm – 7:10 pm	Clinical trial - TROPION BREAST 05 Rene Augusto Almeida de Souza (BRA)
7:10 pm – 7:30 pm	Clinical trial - EVOPAR BREAST 01 Eldom de Medeiros Soares (BRA)
7:30 pm – 7:55 pm	Discussion
7:55 pm – 8 pm	Closing Ceremony Larissa Andressa Orsolini (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM G

8 am – 1:30 pm	**SCIENTIFIC MEETING - DAIICHI SANKYO** **SPEAKER TRAINING** **GUESTS ONLY**

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM G **PRACTICAL UPDATE ON WORKING IN CASES ELIGIBLE FOR NEOADJUVANT THERAPY – DAIICHI SANKYO**

ROOM FOR MASTOLOGISTS
2 pm – 5 pm

Coordinators: Ângela Flavia Logullo Waitzberg (BRA)
Cristiane Nimir (BRA)

PART 1 **PATOLOGY IN NEOADJUVANT THERAPY FOR MASTOLOGISTS**
2 pm – 3:30 pm

Debaters: Roberto Kepler da Cunha Amaral (BRA)
Lais Tomaz Maya João (BRA)
Cristina Pinto Naldi Ruiz (BRA)

2 pm – 2:35 pm Biopsy, the surgical specimen, and molecular testing: back to the pre-analytical universe. Why are we talking about this today?
Cristiane Nimir (BRA)

- Direct impact of material quality on diagnostic accuracy. Dilemmas in interpreting limited findings: adequate representation vs. correlation
- Underfixation vs. Overfixation and the impact on diagnosis
- Relevance in tailored treatments, such as targeted therapy and immunotherapy
- The importance of biopsy as the only sample in the pathological complete response

2:35 pm – 2:45 pm Questions

2:45 pm – 3:20 pm We need to talk about macroscopic evaluation in neoadjuvant therapy: impact on examination quality and complete response assessment
Ruana Rocha Costa (BRA)

- Tumor identification to clip or not to clip?
- Adequate macroscopy: identification and representation of the tumor bed
- Microscopic evaluation and different classification methods
- What should we verify in the neoadjuvant therapy reports?
- When to repeat immunohistochemistry?

3:20 pm – 3:30 pm Questions

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

3:30 pm – 4 pm	**Coffee Break**

PART 2

4 pm – 5 pm	Multidisciplinary discussion of 1 clinical case containing the complex characteristics of a neoadjuvant therapy case together with all mastologists and pathologists

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM H
8 am – 5:30 pm **BBCS 2025 - BREAST CANCER MASTERCLASS**
GUESTS ONLY

Coordinator: Ana Carolina Salles (BRA)
Leandro Gonçalves Oliveira (BRA)

PART 1
8 am – 10 am

8 am – 8:20 am Opening

Moderators: Ana Carolina Salles (BRA)
Andreza Karine de Barros Almeida Souto (BRA)
Deidimar Cassia Batista Abreu (BRA)
Leonardo de Sousa Santos (BRA)
Lucimara Priscila Campos Veras Giorgi (BRA)

8:20 am – 8:40 am Breast cancer screening in Brazil - How are we doing?
Marcelo Antonini (BRA)

8:40 am – 9 am Genetic counseling for all breast cancer patients?
Renata Lazari Sandoval (BRA)

9 am – 9:20 am The importance of breast MRI in the diagnosis of breast cancer
Daniela Gusmao de Araujo Batista (BRA)

9:20 am – 9:40 am The role of sentinel lymph nodes in breast cancer treatment
Francisco Pimentel Cavalcante (BRA)

9:40 am – 10 am Discussion

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10 am – 10:30 am **Coffee Break**

PART 2
10:30 am – 12:30 pm

Moderators: Ana Carolina Salles (BRA)
Augusto Ribeiro Gabriel (BRA)
Cristiane Nimir (BRA)
Leandro Gonçalves Oliveira (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

10:30 am – 10:50 am Important aspects and challenges in assessing HER-2 status in 2025
Sebastião Alves Pinto (BRA)

10:50 am – 11:10 am Neoadjuvant therapy in patients diagnosed with triple negative breast cancer - The state of the art
Marcelo Ramos Tejo Salgado (BRA)

11:10 am – 11:30 am Treatment sequencing of metastatic luminal disease
Romualdo Barroso de Sousa (BRA)

11:30 am – 11:50 am Treatment sequencing of metastatic triple negative disease
Victor Domingos Lisita Rosa (BRA)

11:50 am – 12:10 pm Treatment sequencing of metastatic HER2-positive disease
Susanne Crocamo Ventilari da Costa (BRA)

12:10 pm – 12:30 pm Discussion

12:30 pm – 2 pm **Lunch**

PART 3
2 pm – 4 pm

Moderators: Daniel Fernandes Marques (BRA)
Karimi Amaral (BRA)
Leandro Gonçalves Oliveira (BRA)
Nilceana Maya Aires Freitas (BRA)

2 pm – 2:20 pm The role of genomic signatures, Oncotype and Mammaprint in the treatment of RH-positive breast cancer, localized disease
Fábio Postiglione Mansani (BRA)

2:20 pm – 2:40 pm Adjuvant hormone therapy and the role of cyclin inhibitors in localized/ locally advanced breast disease
Ana Carolina Salles (BRA)

2:40 pm – 3 pm Advances in breast radiotherapy and the impact on breast cancer treatment
Gustavo Nader Marta (BRA)

3 pm – 3:20 pm Discussion

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

3:20 pm – 4 pm	**Coffee Break**

PART 4
4 pm – 5:30 pm

Moderators:	João Nunes de Matos Neto (BRA) Max S. Mano (BRA) Pollyanna Dornelas Pereira (BRA) Rodrigo Pepe Costa (BRA)
4 pm – 4:20 pm	Clinical case discussion - Surgical approach Leonardo Ribeiro Soares (BRA)
4:20 pm – 4:40 pm	Clinical case discussion - Focus on early disease Danielle Laperche dos Santos (BRA)
4:40 pm – 5 pm	Clinical case discussion - Metastatic focus Leandro Gonçalves Oliveira (BRA)
5 pm – 5:30 pm	Closing

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM I

12 pm – 1:30 pm **MINI MEETING LIBBS**
GUESTS ONLY

Palbociclibe: real world evidence in clinical practice

Speakers: Renata Rodrigues da Cunha Colombo Bonadio (BRA)
Tiago Padua Santos (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM I **PRACTICAL UPDATE ON WORKING IN CASES ELIGIBLE FOR NEOADJUVANT THERAPY – DAIICHI SANKYO**

ROOM FOR PATHOLOGISTS
2 pm – 5 pm

Coordinators: Ângela Flavia Logullo Waitzberg (BRA)
Cristiane Nimir (BRA)

PART 1 **UPDATE ON THE APPROACH TO CASES UNDERGOING NEOADJUVANT THERAPY FOR PATHOLOGISTS**

2 pm – 3:30 pm

Debaters: Augusto Tufi Hassan (BRA)
Allisson Bruno Barcelos Borges (BRA)
Amanda Assis Lima Lopes (BRA)

2 pm – 2:25 pm Update on the macroscopic approach to the surgical specimen in neoadjuvant therapy: difficulties beyond the guidelines
Ângela Flavia Logullo Waitzberg (BRA)

- Identification and description of the tumor bed
- Organization and registration of the piece
- Adequate representation where “more is always more”
- When to represent more where the limit is?

2:25 pm – 2:30 pm Questions

2:30 pm – 2:55 pm Microscopic evaluation
Karla Kabbach (BRA)

- Je suis@ RCB
- Does the ideal report exist?
- How to report multicentricity and multifocality?
- How to classify DCIS?
- How to classify lymphatic invasion?
- What would the ideal report be like?

2:55 pm – 3 pm Questions

3 pm – 3:20 pm Staging of residual disease in lymph nodes
Gabriela Moura de Paula (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

- When it is exclusive
- When we only have isolated cells and/or lymphatic invasion
- When there is no aggregated lymphoid tissue
- When only fibrosis remains
- The role of immunohistochemistry

3:20 pm – 3:25 Questions

MOVE TO ROOM G.

3:25 pm – 4 pm **Coffee Break**

PART 2

4 pm – 5 pm Multidisciplinary discussion of 1 clinical case containing the complex characteristics of a neoadjuvant therapy case together with all mastologists and pathologists. MOVE TO ROOM G.

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM I
6:30 pm – 8 pm **ESTUDO VÊNUS**

Coordenador: Giuliano Mendes Duarte (BRA)
Secretária: Amanda Maria Sacilotto Detoni (BRA)

18:30 – 18:45	Abertura e apresentações
18:45 – 19:00	Atualização da estatística e estimativa de recrutamento Maria Beatriz de Paula Leite Kraft (BRA)
19:00 – 19:15	Análise estatística do estudo VENUS Luis Otávio Zanatta Sarian (BRA)
19:15 – 19:30	O que esperar do estudo VENUS após a publicação do SOUND e INSEMA Leonardo Ribeiro Soares (BRA)
19:30 – 20:00	Debate

André Mattar (BRA)
Andrea Pires Souto Damin (BRA)
Clécio Ênio Murta de Lucena (BRA)
Darley de Lima Ferreira Filho (BRA)
Fabrício Palermo Brenelli (BRA)
Francisco Pimentel Cavalcante (BRA)
Heloísa Maria de Luca Vespoli (BRA)
Idam de Oliveira Junior (BRA)
Lucas Roskamp Budel (BRA)
Marcelo Antonini (BRA)
Rafael Henrique Szymanski Machado (BRA)
René Aloisio da Costa Vieira (BRA)
Roberta Dantas Jales Alves de Andrade (BRA)
Rodrigo Caires Campos (BRA)
Rosemar Macedo Sousa Rahal (BRA)
Ruffo Freitas Junior (BRA)
Vinicius Milani Budel (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM JK
12 pm – 1:30 pm **BREAST BREAKING NEWS - BBN**
ABSOLUTE TRUTHS ARE ABSOLUTELY FRAGILE

Speakers: Débora de Melo Gagliato Jardim (BRA)
Silvio Bromberg (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM JK
2 pm – 6:15 pm **ONCOPLASTY WORKSHOP**
10th STUDENTS AND ALUMNI MEETING OF THE CONTINUED EDUCATION PROGRAM ON ONCOPLASTY AND BREAST RECONSTRUCTION HOSTED BY ARAÚJO JORGE CANCER HOSPITAL, AMARAL CARVALHO HOSPITAL AND ARISTIDES MALTEZ HOSPITAL

2 pm – 6:15 pm

Coordinators: Cícero de Andrade Urban (BRA)
Maurício de Aquino Resende (BRA)
Régis Resende Paulinelli (BRA)

SESSION 1 **BREAST CONSERVATION**
2 pm – 2:55 pm

Coordinator: João Ricardo Auler Paloschi (BRA)

2 pm – 2:15 pm Perforator flaps - When and how to use them?
Peter Barry (UK/Australia)

2:15 – 2:30 pm Therapeutic mammoplasty – Plan the flight and then fly the plan.
Maurício de Aquino Resende (BRA)

2:30 – 2:45 pm Extreme oncoplasty or mastectomy?
Régis Resende Paulinelli (BRA)

2:45 – 2:55 pm Discussion
Aline Regina Nunes Reis (BRA)
Clécio Ênio Murta de Lucena (BRA)
Mauro Pinto Passos (BRA)

SESSION 2 **TOTAL BREAST RECONSTRUCTION**
2:55 pm – 4 pm

Coordinator: Paulus Fabrício Mascarenhas Ramos (BRA)

2:55 – 3:10 pm The secret of a good implant-based reconstruction
Cícero de Andrade Urban (BRA)

3:10 pm – 3:25 pm Pre-pectoral, ADM, lipofilling or myocutaneous flaps after radiotherapy?
Fabrício Palermo Brenelli (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

3:25 pm – 3:40 pm	Tips for improving the results in the Latissimus Dorsi with immediate fat grafting Vilmar Marques de Oliveira (BRA)
3:40 pm – 4 pm	Discussion Fabiana Christina Araújo Pereira Lisboa (BRA) Lucimara Priscila Campos Veras Giorgi (BRA) Rodrigo Pepe Costa (BRA)

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4 pm – 4:30 pm	**Coffee Break**

SESSION 3 **4:30 pm – 5:10 pm**	**CASE DISCUSSION**
Coordinator:	Ailton Joioso (BRA)
4:30 pm - 4:50 pm	Case presentation Daniel Meirelles Barbalho (BRA)
Debaters:	Darley de Lima Ferreira Filho (BRA) Rafael Gonçalves Portela (BRA)
4:50 pm – 5:10 pm	Case presentation René Aloisio da Costa Vieira (BRA)
Debaters:	Frank Lane Braga Rodrigues (BRA) Sálvia Maria Cangaçu da Rocha (BRA)

SESSION 4 **5:10 pm – 5:50 pm**	**VIDEO SESSION**
Coordinator:	Luiz Fernando Jubé Ribeiro (BRA)
5:10 pm – 5:20 pm	Thauana Dias dos Santos (BRA)
5:20 pm – 5:30 pm	Idam de Oliveira Junior (BRA)
5:30 pm – 5:50 pm	Discussion Alexandre Marchiori Xavier de Jesus (BRA) Luiz de Paula Silveira Júnior (BRA) Rogério Bizinotto Ferreira (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

SESSION 5 **5:50pm – 6:15 pm**	**CONFERENCE**
Coordinator:	Flávia Vidal Cabero (BRA)
5:50 pm – 6:10 pm	Overcoming Challenges in Oncoplastic Surgery Yazan Masannat (UK)
6:10 pm – 6:15 pm	Closing Cícero de Andrade Urban (BRA) Maurício de Aquino Resende (BRA) Resende Paulinelli (BRA)

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

ROOM M+N
8 am – 6 pm **BREAST IMAGING WORKSHOP**

Coordinator: Henrique Lima Couto (BRA)
José Luís Esteves Francisco (BRA)

WELCOME
8 am – 8:05 am

Henrique Lima Couto (BRA)
José Luís Esteves Francisco (BRA)

MODULE 1 **CONFERENCE**
8:05 am – 8:40 am

Coordinator: Roberta Pinter Lacerda (BRA)

8:05 am – 8:35 am Screening in the public vs. private sector in Brazil.
Current situation and how medical societies can intervene to improve the quality of life in Brazil
Linei Augusta Brolini Dellê Urban (BRA)

8:35 am – 8:40 am Discussion

MODULE 2
8:40 am – 10 am

Coordinator: Luiza Louza Normanha Cortizo Vidal (BRA)

8:40 am – 8:55 am What is the connection between AI vs breast cancer imaging screening?
Luciano Fernandes Chala (BRA)

8:55 am – 9:10 am How is AI being used to interpret breast images? Useful or overkill?
Selma di Pace Bauab (BRA)

9:10 am – 9:25 am Breast calcifications: how to reduce errors in interpretation?
Marcela Caetano Vilela Lauar (BRA)

9:25 am – 9:40 am Tips to avoid problems with breast calcification biopsies
Rodrigo Pepe Costa (BRA)

9:40 am – 10 am Discussion

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

10 am – 10:30 am	**Coffee Break**

MODULE 3
10:30 am – 12:10 pm
SYMPTOMS AND SIGNS – HOW TO INVESTIGATE

Coordinator:	João Bosco Machado da Silveira (BRA)
10:30 am – 10:45 am	Papillary flow – multimodal assessment Thaís Paiva Moraes (BRA)
10:45 am - 11 am	Palpable nodule at first consultation: rationalization of diagnosis Maria Clara de Paula Carvalho (BRA)
11 am - 11:15 am	Mastitis – how the breast imaging specialist can collaborate with the mastologist Selma di Pace Bauab (BRA)
11:15 am – 11:40 am	Marathon of cases in mammography and tomosynthesis Linei Augusta Brolini Dellê Urban (BRA)
11:40 am – 12:10 am	Discussion

MODULE 4
2 pm – 3 pm

Coordinator:	Rachel Machado de Oliveira Portela (BRA)
2 pm – 2:15 pm	Focal fundus enhancement in MRI. How to investigate? Thaís Paiva Moraes (BRA)
2:15 pm – 2:30 pm	Armpits. How to evaluate and what is the importance of the image for the mastologist? Bernardes de Lima Miziara (BRA)
2:30 pm – 3 pm	Discussion

SCIENTIFIC AGENDA – MAY 15TH – THURSDAY

MODULE 5 **3 pm – 4:30 pm**	**DISCUSSION OF IMAGINOLOGICAL CASES WITH PATHOLOGIST**
Coordinator: Debaters:	Henrique Lima Couto (BRA) Thaís Paiva Moraes (BRA) André Mattar (BRA)
Imaging specialist:	Lilian Soares Couto (BRA)
Imaging specialist:	Luciano Fernandes Chala (BRA)
Pathologist:	Filomena Marino Carvalho (BRA)
Pathologist:	Sebastião Alves Pinto (BRA)
4:30 pm – 5 pm	**Coffee Break**
MODULE 6 **5 pm – 6 pm**	**CASE MARATHON**
Coordinator:	Lucas Roskamp Budel (BRA)
5 pm – 5:20 pm	Clinical cases – VAB and VAE – details that make the difference Henrique Lima Couto (BRA)
5:20 pm – 5:40 pm	Clinical cases – Magnetic resonance imaging – details that make the difference Mariana Mesquita Gomes Caitano (BRA)
5:40 pm – 6 pm	Clinical cases – Ultrasound – details that make the difference Selma di Pace Bauab (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

THEATER
MAIN AUDITORIUM

8 am – 8:10 am	Official opening Ruffo de Freitas Junior (BRA) Angelica Nogueira Rodrigues (BRA) Augusto Tufi Hassan (BRA) Gustavo Nader Marta (BRA)

8:10 am – 8:50 am	**General session 1**
Coordinator: Discussants:	José Cláudio Casali da Rocha (BRA) Mark Pegram (EUA) Martina Lichtenfels (BRA)
8:10 am – 8:20 am	Treatment patterns and safety of adjuvant therapy after chemoimmunotherapy for early-stage triple-negative breast cancer in a real-world scenario: the neo-real/ GBECAM-0123 study Renata Rodrigues da Cunha Colombo Bonadio (BRA)
8:20 am – 8:30 am	Just one weekly session of strength or combined training preserves cellular integrity, cardiorespiratory fitness, and increases neuromuscular strength in women with breast cancer during chemotherapy: a randomized controlled trial Rafael Ribeiro Alves (BRA)
8:30 am – 8:40 am	Low-intensity exercises during chemotherapy infusion for fatigue, functionality and neuropathy in women with breast cancer Brenda Taynara Macedo da Costa (BRA)
8:40 am – 8:50 am	Discussion

8:55 am – 9:15 am	**Mini Conference:** Incidence of breast cancer in young women and the importance of screening
Chairman: Speaker:	Luciano Fernandes Chala (BRA) Ruffo de Freitas Junior (BRA)
9:15 am – 9:25 am	Discussion Linei Augusta Brolini Dellê Urban (BRA) Marcelo Antonini (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

9:30 am – 9:50 am	**Mini Conference:** De-escalation (and end) of the axilla in all scenarios? (Recorded class)
Chairman:	Augusto Tufi Hassan (BRA)
Speaker:	Toralf Reimer (GER)

9:50 am – 10:30 am	**Coffee Break**

10:30 am – 11:10 am	**Diamond Satellite Symposium – MSD:** New horizons for women with high-risk, early-stage TNBC: overal survival with immunotherapy and the multidisplinary treatment

ONLY PRESCRIBERS

Speakers:	Fabiana Baroni Alves Makdissi (BRA) Luciana Landeiro (BRA)

11:10 am 11:40 am	**Gold Satellite Symposium – LILLY:** Recurrence risk in N1 HR+/HER2-: clinical case discussion

ONLY PRESCRIBERS AND PHARMACISTS

Speakers:	Antonio Carlos Buzaid (BRA) Cristiano Augusto Andrade de Resende (BRA)

11:40 pm – 11:45 am	BBCS 2025 Awards – Andre Mattar (BRA)
Coordinators:	Ruffo de Freitas Junior (BRA) Ricardo Caponero (BRA) Renata Rodrigues da Cunha Colombo Bonadio (BRA)

11:45 pm – 12:05 pm	**Mini Conference:** Building bridges between clinical reality and scientific production
Chairman:	Ricardo Caponero (BRA)
Speaker:	Andre Mattar (BRA)

12:05 pm – 2 pm	**Lunch Novartis and Roche – Advances and Challenges in the Treatment of Breast Cancer**

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

5' Opening - Ruffo de Freitas Junior (BRA)

10' The process of incorporating innovations into the Clinical Protocol and Therapeutic Guidelines (PCDT) - Susana Ramalho (BRA)

15' Updates from the Clinical Protocol and Therapeutic Guidelines (PCDT) to the Diagnostic and Therapeutic Guidelines (DDT) - Renata Rodrigues da Cunha Colombo Bonadio (BRA)

10' The *SUS I experience is different from yours *SUS = Brazilian Unified Health System - Luciana Holtz de Camargo Barros (BRA)

15' Discussion

5' Closing

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2 pm – 2:20 pm — **Satellite Symposium – Oncoclínicas:** Locally advanced TNBC with complete response to systemic treatment – when to optimize pembrolizumab as adjuvant

Speakers: Danielle Laperche dos Santos (BRA)
João Nunes de Matos Neto (BRA)

2:20 pm – 2:40 pm — **Mini Conference:** Patient-centered treatment decision: challenges to its real implementation in medical practice

Chairwoman: Mayza Lemes Duarte Frota (BRA)
Speaker: Solange Moraes Sanches (BRA)

2:40 pm – 3:10 pm — **Gold Satellite Symposium – Daiichi Sankyo:** New Anti-TROP 2 therapies for luminal breast cancer

ONLY PRESCRIBERS

Speaker: Cristiano Augusto Andrade de Resende (BRA)

3:10 pm – 3:30 pm — **Silver Satellite Symposium** – **ROCHE:** Evolution in the treatment of breast cancer HR+/HER2- with PI3K mutation: how far have we come and where are we headed?

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

Speaker:	Gisah Guilgen (BRA)
Debaters:	Carlos Henrique dos Anjos (BRA) Ruffo de Freitas Junior (BRA)

3:30 pm – 4:10 pm	**General session 2**
Coordinator:	René Aloisio da Costa Vieira (BRA)
Discussants:	Idam de Oliveira Junior (BRA) Lilian Soares Couto (BRA)
3:30 pm – 3:40 pm	DENSE-BBREAST Study: dose-dense neoadjuvant chemotherapy in breast cancer: a network meta-analysis of efficacy and toxicity Andre Mattar (BRA)
3:40 pm – 3:50 pm	Innovative platform for chemoresistance: advancing functional precision medicine in breast cancer Martina Lichtenfels (BRA)
3:50 pm – 4 pm	Machine learning-based transcriptomic model enhances prognostic stratification in breast cancer Valbert Oliveira Costa Filho (BRA)
4 pm – 4:10 pm	Discussion

4:10 pm – 4:40	Coffee Break

4:40 pm – 5 pm	**Mini Conferencia**: Therapeutic strategies targeting HER2
Chairwoman:	Paola Ferreira de Freitas Germek (BRA)
Speaker	Mark Pegram (EUA)

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5 pm – 5:40 pm	**General session 3**
Coordinator:	Vinicius Milani Budel (BRA)
Discussants:	Andrea Pires Souto Damin (BRA) Giuliano Tavares Tosello (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

5 pm – 5:10 pm	Omission of axillary surgery in early breast cancer with negative lymph nodes: a systematic review and meta-analysis of randomized clinical trials Bárbara Bizzo Castelo (BRA)
5:10 pm – 5:20 pm	Updated meta-analysis of randomized trials: pCR as a prognostic marker for survival in breast cancer treated with neoadjuvant chemotherapy Marcelo Antonini (BRA)
5:20 pm – 5:30 pm	Metronomic versus standard fixed dosing chemotherapy in HER2-negative metastatic breast cancer: a reconstructed individual patient data meta-analysis Anelise Poluboiarinov Cappellaro (BRA)
5:30 pm – 5:40 pm	Discussion

5:40 pm – 6:20 pm	**General session 4**
Coordinator: Discussants:	Max S. Mano (BRA) Franklin Fernandes Pimentel (BRA) Renata Rodrigues da Cunha Colombo Bonadio (BRA)
5:40 pm – 5:50 pm	CDK4/6 Inhibitor plus endocrine therapy after progression on CDK4/6 inhibition in HR+/HER2- advanced breast cancer: a systematic review and meta-analysis (REIGNITE Study) Luís Felipe Leite da Silva (BRA)
5:50 pm – 6 pm	GRPR as a prognostic biomarker and mediator of doxorubicin resistance in breast cancer Martina Lichtenfels (BRA)
6 pm – 6:10 pm	Breast surgery for metastatic breast cancer: a update of Cochrane systematic review Giuliano Tavares Tosello (BRA)
6:10 pm – 6:20 pm	Discussion

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

SIMULTANEOUS ROOM – ROOM M+N

8:10 am – 8:40 am	**Fast presentation 1**
Coordinator:	Luis Otávio Zanatta Sarian (BRA)
Discussants:	Christina Souto Cavalcante Costa (BRA) Nayara Alves de Freitas Lemos (BRA)
8:10 am – 8:14 am	Impact of mindfulness practices on the quality of life of women with breast cancer: systematic review Paulo Gustavo Tenório do Amaral (BRA)
8:14 am – 8:18 am	Epigenetic modulation of 3D telomeric architecture by 5-aza-dc in luminal and triple-negative breast cancer cells Fábio Morato de Oliveira (BRA)
8:18 am – 8:22 am	Immediate breast reconstruction using a latissimus dorsi flap: Is lipofilling or implant-based reconstruction better? Andrea Pires Souto Damin (BRA)
8:22 am – 8:26 am	Impact of short-duration physical exercise on the upper limb of women treated for breast cancer. blue flower project Daniel Buttros (BRA)
8:26 am – 8:30 am	The effects of resistance training vs. combined training on the health-related quality of life levels of breast cancer patients undergoing neoadjuvant chemotherapy Anderson Garcia Silva (BRA)
8:30 am – 8:40 am	Discussion

8:40 am – 9:10 am	**Mini conference:** General issue: impacts of chemotherapy on the indicators of body composition, comorbidities and exercise practice of women undergoing breast cancer treatment
Chairman:	Carlos Alexandre Vieira (BRA)
Speakers:	10’ Impact of chemotherapy regimens on body composition of breast cancer women: a multicenter study across four Brazilian regions Jordana Carolina Marques Godinho Mota (BRA)
	10’ Effects of supervised movement on comorbidities associated with chemotherapy Nayara Alves de Freitas Lemos (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

	10' Insights on strength training, during chemotherapy treatment, for breast cancer Rafael Ribeiro Alves (BRA)
9:10 am – 9:40 am	**Satellite Symposium – Knight:** Effective strategies for controlling nausea and vomiting in the face of new cancer treatments
Speaker:	Andreza Karine de Barros Almeida Souto (BRA)
9:40 am – 10:30 am	**Coffee Break**
10:30 am – 11 am	**Fast presentation 2**
Coordinator:	Carlos Alexandre Vieira (BRA)
Discussants:	Marcelo Antonini (BRA) Marise Amaral Rebouças Moreira (BRA)
10:30 am – 10:34 am	Utilizing machine learning to identify biomarkers of chemoresistance in breast cancer: a complementary analysis with in vitro resistance platforms Martina Lichtenfels (BRA)
10:34 am – 10:38 am	Efficacy and safety of capivasertib for breast cancer patients: a systematic review and meta-analysis of randomized controlled trials Valbert Oliveira Costa Filho (BRA)
10:38 am – 10:42 am	The role of liquid biopsy in breast cancer screening and monitoring: a systematic review of literature Vyvian Paes de Oliveira (BRA)
10:42 am – 10:46 am	Evaluation of the impact and evolution of community health agents (CHAs) in early breast cancer detection in the Itaberaí Project, Goiás Christina Souto Cavalcante Costa (BRA)
10:46 am – 10:50 am	Stage I HER2-positive breast cancer - is systemic therapy required? Renata Rodrigues da Cunha Colombo Bonadio (BRA)
10:50 am – 11 am	Discussion
11 am – 11:20 am	**Mini conference:** Leadership in healthcare: in an increasingly challenging scenario, necessary and understandable knowledge

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

Chairman:	Cícero de Andrade Urban (BRA)
Speaker:	Max S. Mano (BRA)
11:20 am – 11:30 am	Discussion

11:30 am – 11:50 am	**Mini conference:** Genetic signature: beyond risk stratification
Chairman:	Alexandre Marchiori Xavier de Jesus (BRA)
Speaker:	Fábio Postiglione Mansani (BRA)
11:50 pm – 12 pm	Discussion

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12 pm – 2 pm	**Lunch**

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2 pm – 2:30 pm	**Fast presentation 3**
Coordinator:	Marcus Nascimento Borges (BRA)
Discussants:	Giuliano Mendes Duarte (BRA) Luis Fernando Pádua Oliveira (BRA)
2 pm – 2:04 pm	Prognostic impact of real-world immunohistochemical changes in breast cancer treated with neoadjuvant chemotherapy Marcelo Antonini (BRA)
2:04 pm – 2:08 pm	Progression-free survival as a surrogate endpoint for overall survival in antibody-drug conjugate trials for advanced breast cancer: a systematic review and meta-analysis Anelise Poluboiarinov Cappellaro (BRA)
2:08 pm – 2:12 pm	MicroRNA-21 (miR-21) expression and its association with resistance to neoadjuvant chemotherapy in breast cancer: preliminary results Andrea Pires Souto Damin (BRA)
2:12 pm – 2:16 pm	Immune-related adverse events among patients with early-stage triple-negative breast cancer treated with pembrolizumab plus chemotherapy: real-world data from the Neo-Real/GBECAM 0123 study Matheus de Oliveira Andrade (BRA)
2:16 pm – 2:20 pm	Grade 1 hormone receptor-positive early breast cancer – is oncotype dx necessary? Renata Rodrigues da Cunha Colombo Bonadio (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

2:20 pm – 2:30 pm	Discussion

2:30 pm – 2:50 pm	**Mini conference:** Hormone replacement therapy / hormonal implants: indications and contraindications
Chairwoman:	Érika Pereira de Sousa e Silva (BRA)
Speaker:	João Bosco Ramos Borges (BRA)
2:50 pm – 3 pm	Discussion

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3 pm – 3:30 pm	**Fast presentation 4**
Coordinator:	Rafael Henrique Szymanski Machado (BRA)
Discussants:	Maria Alves Barbosa (BRA) Luiz de Paula Silveira Júnior (BRA)
3 pm – 3:04 pm	Genetic screening of pathogenic variants in relatives of patients with hereditary breast and ovarian cancer in the state of Goiás: tool for early diagnosis and prevention of breast and ovarian cancer in the Goiás Todo Rosa Program Elisângela de Paula Silveira Lacerda (BRA)
3:04 pm – 3:08 pm	Omission of axillary lymph node dissection in clinically node-negative breast cancer with sentinel node metastasis: a systematic review and meta-analysis of noninferiority randomized clinical trials Maria Clara Ramos Miranda (BRA)
3:08 pm – 3:12 pm	A Comprehensive meta-analysis and systematic review of same-day discharge protocols following mastectomy with immediate breast reconstruction in surgical oncology Luana Ferreira Vasques (BRA)
3:12 pm – 3:16 pm	Identifying predictors of implant loss in immediate breast reconstruction: integrating surgical and dosimetric factors in a large-scale study Dayane Innocente Souza (BRA)
3:16 pm – 3:20 pm	Osteoradionecrosis/osteomyelitis of the chest wall associated with radiotherapy for breast cancer René Aloisio da Costa Vieira (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

3:20 pm – 3:30 pm	Discussion
3:30 pm – 3:50 pm	**Mini conference:** Management of Keynote-522 in clinical practice, post-KN522 adjuvant strategy and pathways for de-escalation
Chairworman: Speaker:	Tatiana Strava Correa (BRA) Renata Rodrigues da Cunha Colombo Bonadio (BRA)
3:50 pm – 4 pm	Discussion
4 pm – 4:30 pm	**Coffee Break**
4:30 pm – 4:50 pm	**Mini conference:** The woman in menopause: before, during and after cancer
Chairwoman: Speaker:	Katyane Larissa Alves (BRA) Daniel Buttros (BRA)
4:50 pm – 5 pm	Discussion
5 pm – 5:20 pm	**Mini conference:** Cryoablation in breast cancer: from ANVISA approval to clinical practice - are we ready?
Chairman: Speaker:	Daniel Meirelles Barbalho (BRA) Silvio Bromberg (BRA)
5:20 pm – 5:30 pm	Discussion
5:30 pm – 5:50 pm	**Mini conference:** Tumour microenvironment role on the behaviour of breast cancer
Chairwoman: Speaker:	Gabriela Moura de Paula (BRA) Filomena Marino Carvalho (BRA)
5:50 pm – 6 pm	Discussion

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

ROOM G

12 pm – 1:30 pm	**MINI MEETING ROCHE - CLINICAL RESEARCH GUESTS ONLY**
12 pm – 12:05 pm	Opening Ceremony Larissa Andressa Orsolini (BRA)
12:05 pm – 12:20 pm	Overview Molecules Maíra Sant' Anna (BRA)
12:20 pm – 12:40 pm	CLINICAL TRIAL - CO44657 pionERA Nayara Portilho Araujo (BRA)
12:40 pm – 1:10 pm	CLINICAL TRIAL - PROGRAM INAVO: 122 and 123 Luis Fernando Barbosa Silva (BRA)
1:10 pm – 1:25 pm	Discussion
1:25 pm – 1:30 pm	Closing Ceremony Larissa Andressa Orsolini (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

14h – 18h **III REUNIÃO DE INVESTIGADORES DO PROJETO ITABERAÍ – INVESTIGATOR MEETING**

14h – 14h05 Abertura da Reunião / Boas-Vindas
Coordenador: Ruffo de Freitas Junior (BRA)

14h05 – 14h20 Tempo decorrido entre o primeiro sintoma ao diagnóstico do câncer de mama: experiência de uma UNACOM de Montes Claros (MG)
Carolina Lamac Figueiredo (BRA)

14h20 – 14h35 Tempo decorrido entre o primeiro sintoma ao diagnóstico do câncer de mama: experiência de uma UNACOM de Goiânia (GO)
Christina Souto Cavalcante Costa (BRA)

14h35 – 14h45 O impacto do Projeto ITABERAÍ
Danielle Cristina Netto Rodrigues (BRA)

14h45 – 15h45 Projeto ITABERAÍ: sistema integrado em saúde para gerenciamento de dados

14h45 – 15h05 O uso do Aplicativo Rosa

- 14h45 – 14h55: Na visão do desenvolvedor
  Douglas Euclides da Silva (BRA)
- 14h55 – 15h05: Visão do Agente Comunitário de Saúde
  Laillyanne Luiza Pereira de Morais Carvalhais (BRA)

15h05 – 15h45 A aplicação do Sistema RosaWatch

- 15h05 – 15h15: Na prática do desenvolvedor
  Douglas Euclides da Silva (BRA)
- 15h15 – 15h25: Na prática da enfermeira da Unidade Básica de Saúde
  Whitsanya Nayara Eterna de Almeida Ribeiro (BRA)
- 15h25 – 15h35: Na prática da médica especialista
  Priscila Dias Watanabe (BRA)
- 15h35 – 15h45: Na prática da enfermeira navegadora
  Luana Viera Martins (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

15h45 – 16h	Situação do Projeto no município de Presidente Prudente Giuliano Tavares Tosello (BRA)
16h – 16h15	Situação do Projeto no município de Ponta Grossa Fábio Postiglione Mansani (BRA)
16h15 – 16h45	**Coffee Break**
16h45 – 17h45	Financiamento do Projeto
16h45 – 17h45	Instituições Parceiras

16h45 – 16h55: Libbs Farmacêutica
Gerente de Ciências Médicas
Vivienne Carduz Castilho (BRA)

16h55 – 17h05: Instituto Natura
Coordenadora de Projetos em Saúde da Mulher
Mariana Reginato Dias Lorencinho (BRA)

17h05 – 17h35 A comunhão dos três poderes: a experiência do município de Itaberaí / GO

17h05 – 17h15: Prefeita do Município de Itaberaí / GO
Rita de Cássia Soares Mendonça (BRA)

17h15 – 17h25: Secretário Municipal de Saúde de Itaberaí / GO
Carlos Rodrigues Galvão Júnior (BRA)

17h25 – 17h35: Presidente da Câmara Municipal de Saúde de Itaberaí
João Pereira Filho (BRA)

17h35 – 17h45 Órgão de Fomento à Pesquisa: Fundação de Amparo à Pesquisa do Estado de Goiás – FAPEG

17h35 – 17h45: Diretor Científico e de Inovação da FAPEG
Cláudio Rodrigues Leles (BRA)

17h45 – 18h Discussão e Encerramento
Ruffo de Freitas Junior (BRA)

SCIENTIFIC AGENDA – MAY 16TH – FRIDAY

ROOM JK
2:10 pm – 3:40 pm **MINI MEETING EXACT SCIENCES**

Improving precision medicine: how the Oncotype DX test can help shape treatment strategies

Speaker: Antonio Carlos Buzaid (BRA)

- 12-year update on the TAILORx Study
- How Anti-Müllerian hormone (AMH) can guide therapeutical decision-making in pre-menopausal patients, with positive lymph node
- Subanalysis of the TAILORx Study: correlation between recurrence score and anthracycline use

SCIENTIFIC AGENDA – MAY 17TH – SATURDAY

THEATER
MAIN AUDITORIUM

8 am – 8:40 am	**General session 5**
Coordinator: Discussants:	Marcelo Ramos Tejo Salgado (BRA) Darley de Lima Ferreira Filho (BRA) Susanne Crocamo Ventilari da Costa (BRA)
8 am – 8:10 am	TP53 genetic variants identified in Brazilian women with hereditary breast cancer – systematic review of the literature Maria Eduarda Pires Vaz (BRA)
8:10 am – 8:20 am	Prognostic impact of neoadjuvant chemotherapy-induced changes in immunohistochemical markers on survival outcomes in breast cancer: a systematic review and meta-analysis Marcelo Antonini (BRA)
8:20 am – 8:30 am	A systematic review and extracted individual patient data meta-analysis of long-term outcomes in triple-negative breast cancer after a pathologic complete response: does the type of neoadjuvant therapy matter? Renata Rodrigues da Cunha Colombo Bonadio (BRA)
8:30 am – 8:40 am	Discussion

8:45 am – 9:05 am	**Mini Conference:** Neoreal: What did we learn about chemoimmunotherapy for early-stage TNBC from a Brazilian Real Life Study?
Chairman: Speaker:	Victor Domingos Lisita Rosa (BRA) Romualdo Barroso de Sousa (BRA)

9:05 am – 9:25 am	**Mini Conference:** Challenges related to the surgical approach to inflammatory carcinoma
Chairman: Speaker:	Sergio Zerbini Borges (BRA) Régis Resende Paulinelli (BRA)

9:25 am – 9:45 am	**Mini Conference:** Decoding HER2: unraveling isoform expression and its hidden complexity in breast cancer

SCIENTIFIC AGENDA – MAY 17TH – SATURDAY

Chairworman: Flávia Pinto Cardozo (BRA)
Speaker: Carlos Henrique dos Anjos (BRA)

9:45 am – 10:05 am **Mini Conference:** Treatment options for Metastatic HR+ Breast Cancer beyond CDK4/6 Inhibitors?

Chairman: Dannillo Guimarães Pereira (BRA)
Speaker: Mohammad Jahanzeb (EUA)

10:05 am – 10:20 am **Coffee Break**

10:20 am – 10:50 am **Gold Satellite Symposium – Astrazeneca:** Bridging the Gap: New therapeutical frontiers in Luminal MBC

ONLY PRESCRIBERS

Speakers: Andreza Karine de Barros Almeida Souto (BRA)
Ruana Rocha Costa (BRA)

10:50 am – 11:10 am **Mini Conference:** Treatment of HER2-positive disease in the CNS

Chairman: Rafael de Negreiros Botan (BRA)
Speaker: Antonio Carlos Buzaid (BRA)

11:10 am – 11:50 am **Hot Topics -** Surgical approach in patients with high penetrance mutation. Conservative surgery or mastectomy?

Coordinator: Alexandre Marchiori Xavier de Jesus (BRA)
Speakers: 15' Conservative surgery
Idam de Oliveira Junior (BRA)
15' Mastectomy
Rosemar Macedo Sousa Rahal (BRA)

11:50 am – 12:10 pm **Mini Conference:** Challenges in incorporating new drugs in the treatment of breast cancer

Chairman: Augusto Rodrigues de Araújo Neto (BRA)
Speaker: Angelica Nogueira Rodrigues (BRA)

SCIENTIFIC AGENDA – MAY 17TH – SATURDAY

12:10 pm – 12:50 pm	**Lecture:** The best of breast cancer in the last 12 months (ASCO 2024, SABS 2024 and BBCS 2025)
Chairman:	Lucas Roskamp Budel (BRA)
Speaker 1:	20' Systemic - Cristiano Augusto Andrade de Resende (BRA)
Speaker 2:	20' Loco regional – Francisco Pimentel Cavalcante (BRA)

12:50 pm – 1:30 pm	Awarding and closing remarks Darley de Lima Ferreira Filho (BRA) Flávia Vidal Cabero (BRA) Leonardo Ribeiro Soares (BRA)

APPROVED PAPER FOR ORAL PRESENTATION

APPROVED PAPER FOR ORAL PRESENTATION

MAY 16th, FRIDAY

General session 1

8:10 am – 8:20 am Treatment patterns and safety of adjuvant therapy after chemoimmunotherapy for early-stage triple-negative breast cancer in a real-world scenario: the neo-real/ GBECAM-0123 study
Renata Rodrigues da Cunha Colombo Bonadio (BRA)

8:20 am – 8:30 am Just one weekly session of strength or combined training preserves cellular integrity, cardiorespiratory fitness, and increases neuromuscular strength in women with breast cancer during chemotherapy: a randomized controlled trial
Rafael Ribeiro Alves (BRA)

8:30 am – 8:40 am Low-intensity exercises during chemotherapy infusion for fatigue, functionality and neuropathy in women with breast cancer
Brenda Taynara Macedo da Costa (BRA)

General session 2

3:30 pm – 3:40 pm DENSE-BBREAST Study: dose-dense neoadjuvant chemotherapy in breast cancer: a network meta-analysis of efficacy and toxicity
Andre Mattar (BRA)

3:40 pm – 3:50 pm Innovative platform for chemoresistance: advancing functional precision medicine in breast cancer
Martina Lichtenfels (BRA)

3:50 pm – 4 pm Machine learning-based transcriptomic model enhances prognostic stratification in breast cancer
Valbert Oliveira Costa Filho (BRA)

APPROVED PAPER FOR ORAL PRESENTATION

General session 3

5 pm – 5:10 pm — Omission of axillary surgery in early breast cancer with negative lymph nodes: a systematic review and meta-analysis of randomized clinical trials
Bárbara Bizzo Castelo (BRA)

5:10 pm – 5:20 pm — Updated meta-analysis of randomized trials: pCR as a prognostic marker for survival in breast cancer treated with neoadjuvant chemotherapy
Marcelo Antonini (BRA)

5:20 pm – 5:30 pm — Metronomic versus standard fixed dosing chemotherapy in HER2-negative metastatic breast cancer: a reconstructed individual patient data meta-analysis
Anelise Poluboiarinov Cappellaro (BRA)

General session 4

5:40 pm – 5:50 pm — CDK4/6 Inhibitor plus endocrine therapy after progression on CDK4/6 inhibition in HR+/HER2- advanced breast cancer: a systematic review and meta-analysis (REIGNITE Study)
Luís Felipe Leite da Silva (BRA)

5:50 pm – 6 pm — GRPR as a prognostic biomarker and mediator of doxorubicin resistance in breast cancer
Martina Lichtenfels (BRA)

6 pm – 6:10 pm — Breast surgery for metastatic breast cancer: a update of Cochrane systematic review
Giuliano Tavares Tosello (BRA)

MAY 17th, SATURDAY
General session 5

8 am – 8:10 am — TP53 genetic variants identified in Brazilian women with hereditary breast cancer – systematic review of the literature
Maria Eduarda Pires Vaz (BRA)

APPROVED PAPER FOR ORAL PRESENTATION

8:10 am – 8:20 am Prognostic impact of neoadjuvant chemotherapy-induced changes in immunohistochemical markers on survival outcomes in breast cancer: a systematic review and meta-analysis
Marcelo Antonini (BRA)

8:20 am – 8:30 am A systematic review and extracted individual patient data meta-analysis of long-term outcomes in triple-negative breast cancer after a pathologic complete response: does the type of neoadjuvant therapy matter?
Renata Rodrigues da Cunha Colombo Bonadio (BRA)

APPROVED PAPER FOR ORAL PRESENTATION

APPROVED PAPER FOR FAST PRESENTATION

APPROVED PAPERS FOR FAST PRESENTATION

MAY 16th, FRIDAY

Fast presentation 1

8:10 am – 8:14 am Impact of mindfulness practices on the quality of life of women with breast cancer: systematic review
Paulo Gustavo Tenório do Amaral (BRA)

8:14 am – 8:18 am Epigenetic modulation of 3D telomeric architecture by 5-aza-dc in luminal and triple-negative breast cancer cells
Fábio Morato de Oliveira (BRA)

8:18 am – 8:22 am Immediate breast reconstruction using a latissimus dorsi flap: Is lipofilling or implant-based reconstruction better?
Andrea Pires Souto Damin (BRA)

8:22 am – 8:26 am Impact of short-duration physical exercise on the upper limb of women treated for breast cancer. blue flower project
Daniel Buttros (BRA)

8:26 am – 8:30 am The effects of resistance training vs. combined training on the health-related quality of life levels of breast cancer patients undergoing neoadjuvant chemotherapy
Anderson Garcia Silva (BRA)

Fast presentation 2

10:30 am – 10:34 am Utilizing machine learning to identify biomarkers of chemoresistance in breast cancer: a complementary analysis with in vitro resistance platforms
Martina Lichtenfels (BRA)

10:34 am – 10:38 am Efficacy and safety of capivasertib for breast cancer patients: a systematic review and meta-analysis of randomized controlled trials
Valbert Oliveira Costa Filho (BRA)

10:38 am – 10:42 am The role of liquid biopsy in breast cancer screening and monitoring: a systematic review of literature
Vyvian Paes de Oliveira (BRA)

APPROVED PAPERS FOR FAST PRESENTATION

10:42 am – 10:46 am Evaluation of the impact and evolution of community health agents (CHAs) in early breast cancer detection in the Itaberaí Project, Goiás
Christina Souto Cavalcante Costa (BRA)

10:46 am – 10:50 am Stage I HER2-positive breast cancer - is systemic therapy required?
Renata Rodrigues da Cunha Colombo Bonadio (BRA)

Fast presentation 3

2 pm – 2:04 pm Prognostic impact of real-world immunohistochemical changes in breast cancer treated with neoadjuvant chemotherapy
Marcelo Antonini (BRA)

2:04 pm – 2:08 pm Progression-free survival as a surrogate endpoint for overall survival in antibody-drug conjugate trials for advanced breast cancer: a systematic review and meta-analysis
Anelise Poluboiarinov Cappellaro (BRA)

2:08 pm – 2:12 pm MicroRNA-21 (miR-21) expression and its association with resistance to neoadjuvant chemotherapy in breast cancer: preliminary results
Andrea Pires Souto Damin (BRA)

2:12 pm – 2:16 pm Immune-related adverse events among patients with early-stage triple-negative breast cancer treated with pembrolizumab plus chemotherapy: real-world data from the Neo-Real/GBECAM 0123 study
Matheus de Oliveira Andrade (BRA)

2:16 pm – 2:20 pm Grade 1 hormone receptor-positive early breast cancer – is oncotype dx necessary?
Renata Rodrigues da Cunha Colombo Bonadio (BRA)

APPROVED PAPERS FOR FAST PRESENTATION

Fast presentation 4

3 pm – 3:04 pm — Genetic screening of pathogenic variants in relatives of patients with hereditary breast and ovarian cancer in the state of Goiás: tool for early diagnosis and prevention of breast and ovarian cancer in the Goiás Todo Rosa Program
Elisângela de Paula Silveira Lacerda (BRA)

3:04 pm – 3:08 pm — Omission of axillary lymph node dissection in clinically node-negative breast cancer with sentinel node metastasis: a systematic review and meta-analysis of noninferiority randomized clinical trials
Maria Clara Ramos Miranda (BRA)

3:08 pm – 3:12 pm — A Comprehensive meta-analysis and systematic review of same-day discharge protocols following mastectomy with immediate breast reconstruction in surgical oncology
Luana Ferreira Vasques (BRA)

3:12 pm – 3:16 pm — Identifying predictors of implant loss in immediate breast reconstruction: integrating surgical and dosimetric factors in a large-scale study
Dayane Innocente Souza (BRA)

3:16 pm – 3:20 pm — Osteoradionecrosis/osteomyelitis of the chest wall associated with radiotherapy for breast cancer
René Aloisio da Costa Vieira (BRA)

APPROVED PAPERS FOR E-POSTER

APPROVED PAPERS FOR E-POSTER

MAY 16th, FRIDAY

Session E-poster 1
8 am to 12 pm

TV 1	Breast cancer screening indicators in users of the unified health system (SUS) after the implementation of the Itaberaí Project Marcella Rezende De Mendonça (BRA)
TV 1	Adherence to endocrine therapy and sexual dysfunction in patients older than 65 years old with early estrogen receptor-positive breast cancer Danielle Laperche-Santos (BRA)
TV 1	Accuracy of Multidetector Computed Tomography (MDCT) with a Dedicated Protocol in the Locoregional Staging of Breast Cancer Soraia Quaranta Damião (BRA)
TV 1	Vacuum-Assisted Biopsy in The Era of Low-Risk Ductal Carcinoma in Situ Active Monitoring: Real World Data and Implications Henrique Lima Couto (BRA)
TV 2	HER2 status and tumor heterogeneity in invasive breast carcinomas: clinical pathological impact Angela Flavia Logullo Waitzberg (BRA)
TV 2	Extreme Oncoplasty: Equivalent to Other Types of Partial and Total Breast Reconstruction? Aline Regina Nunes Reis (BRA)
TV 2	Diagnostic Accuracy of MRI for Predicting Pathological Complete Response in Triple-Negative Breast Cancer Treated with Neoadjuvant Chemotherapy and Immunotherapy Soraia Quaranta Damião (BRA)
TV 3	Cost-Effectiveness Analysis and Budget Impact Analysis of Next-Generation Sequencing (NGS) Panel Including BRCA1 and BRCA2 Genes for Women Diagnosed with Non-Metastatic Breast Cancer in Brazil Henrique Lima Couto (BRA)

APPROVED PAPERS FOR E-POSTER

TV 3 Immunoexpression of markers related to the HER2 pathway in cases of pure positive HER2 breast carcinoma treated with Trastuzumab
Angela Flavia Logullo Waitzberg (BRA)

TV 3 Clinical image quality evaluation of mammography for breast cancer screening
Flavia Vidal Cabero (BRA)

TV 3 Neutrophil-to-lymphocyte ratio (NLR) predicts long-term survival in early triple negative breast cancer (TNBC) treated with neoadjuvant chemotherapy (NACT)
Renata Colombo Bonadio (BRA)

TV 4 Co-segregation analysis of the XAF1-E134* variant in patients with pathogenic variants in the TP53 gene: its relationship with the clinic
Elisângela De Paula Silveira Lacerda (BRA)

TV 4 Assisted Breast Reconstruction with a Biosynthetic Mesh and Implants. A pilot study
Francisco Pimentel Cavalcante (BRA)

TV 5 Characteristics and outcomes of patients with triple negative breast cancer (TNBC) treated with neoadjuvant chemotherapy (NACT) according to race
Renata Colombo Bonadio (BRA)

TV 5 Clinical characteristics related to long-term survival in durable responders with her-2 metastatic breast cancer: a systematic review
Fabio Postiglione Mansani (BRA)

TV 5 Are dietary glycemic index and load associated with breast cancer?
Leonardo Ribeiro Soares (BRA)

TV 5 Computed Tomography in the Locoregional Staging of Breast Cancer: Interobserver Agreement and Comparison with Conventional Imaging
Soraia Quaranta Damião (BRA)

TV 6 HER2 expression heterogeneity pattern in invasive breast carcinomas: frequency, distribution and relation to morphological variables
Angela Flavia Logullo Waitzberg (BRA)

APPROVED PAPERS FOR E-POSTER

TV 6 Dual Anti-HER2 Blockade with Taxane as First-Line Treatment for HER2-Positive Breast Cancer with Visceral Metastases: A Technology Incorporation Assessment within SUS
Elisa Bouret Campos Barroso (BRA)

TV 6 Impact of the COVID-19 Pandemic on breast cancer diagnosis and treatment
Idam De Oliveira-Junior (BRA)

TV 6 Obesity and overweight levels in Brazilian women with early-stage ER+ breast cancer in adjuvant endocrine therapy
Danielle Laperche-Santos (BRA)

TV 7 Cyclin inhibitors for breast cancer: A comparative real world data analysis
Beatriz Ferreira Bueno (BRA)

TV 7 CDK4/6 inhibitors (iCDK4/6) in breast cancer (BC): Is it possible to predict response?
Nathália Machado Soldi (BRA)

TV 8 Impact of Fat Grafting Combined with Expander-to-Implant Exchange in a One-Stage Procedure After Irradiation
Tainara Rodrigues Miranda (BRA)

TV 8 Tumor-Infiltrating Lymphocytes as Prognostic Markers in a Brazilian Population with Neoadjuvant Chemotherapy-Treated Breast Cancer: A survival study
Renata Montarroyos Leite (BRA)

TV 8 Co-occurrence of Germline Pathogenic Variants in Breast Cancer Predisposition Genes: A Study in Northeast Brazil
Valbert Oliveira Costa Filho (BRA)

TV 8 Cannabidiol promotes immunogenic cell death and controls breast tumor development
João Paulo Mesquita Luiz (BRA)

TV 9 Cost and duration of hospitalizations due to puerperal mastitis in the brazilian unified health system
Leonardo Ribeiro Soares (BRA)

TV 9 Rhabdomyolysis Due to Interactions Between CDK4/6 Inhibitors and Statins During Breast Cancer Treatment: A Case-Based Systematic Review
Rafael Batista João (BRA)

APPROVED PAPERS FOR E-POSTER

TV 9 An analysis of sexual dysfunction symptoms in hormone receptor positive breast cancer patients during adjuvant endocrine therapy in a Brazilian center
Danielle Laperche Dos Santos (BRA)

TV 9 Analysis of factors contributing to delayed initiation of treatment following definitive diagnosis of breast cancer at a university hospital in Goiás, Brazil
Augusto Rodrigues De Araujo Neto (BRA)

TV 10 Antitumor Potential of GSK343 in Breast Cancer Cells: An in vitro Study
Louise Sofia Carneiro Madeira (BRA)

TV 10 Development and validation of the axillary web syndrome classification scale
Nayara Alves De Freitas Lemos (BRA)

TV 10 Oncological outcomes of breast-conserving surgery versus mastectomy following neoadjuvant chemotherapy in a contemporary multicenter cohort
Francisco Pimentel Cavalcante (BRA)

TV 10 Breast cancer: 20-year evolution of the epidemiological and clinical profile in a reference cancer center
Fabio Postiglione Mansani (BRA)

Session E-poster 2
2 pm to 6 pm

TV 11 Genetic testing impact on clinical decision making in Brazilian breast cancer patients with identified genetic variants
Flávio Silva Brandão (BRA)

TV 11 Epigenetic modulation of aurka and aurkb by 5-aza-2′-deoxycytidine in breast cancer cells
Millena Silva Barbosa Dos Santos (BRA)

TV 11 Association between body composition and physical activity level with quality of life of women with hormone receptor-positive breast cancer undergoing adjuvant endocrine therapy
Amanda Guimarães Castro Custodio (BRA)

APPROVED PAPERS FOR E-POSTER

TV 11 Transcriptional Modulation of SMYD2 and SMYD3 Genes by Ozone Therapy in Breast Tumor Cells
Natália Peres Noleto (BRA)

TV 12 Use of the CanRisk Tool in Risk Prediction in Patients with Breast and/or Ovarian Cancer: a Brazilian reality?
Lis De Paula Lacerda (BRA)

TV 12 Breast cancer in women older than those advised for mammographic screening in a public hospital in the Federal District
Júllia Eduarda Feijó Belluco (BRA)

TV 12 Analysis of Axillary Lymph Node Response to Neoadjuvant Therapy in Young Breast Cancer Patients (≤40 Years) Treated at Dr. Arnaldo Cancer Institute in São Paulo
Fabio Francisco Oliveira Rodrigues (BRA)

TV 12 GSK343 and EZH2: Epigenetic Modulation in Breast Tumor Cells
Isabela Dias Cruvinel (BRA)

TV 13 Vitamin A Deficiency and Its Association with Tumor Characteristics in Breast Cancer Patients
Letícia De Barros Souto Barcelona Bernardes (BRA)

TV 13 Epidemiology of Male Breast Cancer in Brazil
Flávio Silva Brandão (BRA)

TV 13 Inflammatory breast carcinoma: prognostic factors associated with survival in a tertiary hospital in central-west Brazil
Jordana Joab Alencar Barros (BRA)

TV 13 Nipple-sparing mastectomy as a risk-reducing strategy in high-risk patients
Martina Lichtenfels (BRA)

TV 14 Effects of the hypomethylating agent 5-aza-2′-deoxycytidine on SMYD2 and SMYD3 expression in MCF7 and BT474 cells
Vitoria Helena De Paiva Tavares (BRA)

APPROVED PAPERS FOR E-POSTER

TV 14 National Survey on Attitudes of Brazilian Breast Surgeons regarding Oncoplastic Surgery: Success of a training model
Francisco Pimentel Cavalcante (BRA)

TV 14 Epidemiological and immunohistochemical analysis of young women with breast cancer in a public hospital of the unified health system of the Federal District
Júllia Eduarda Feijó Belluco (BRA)

TV 14 Evaluation of the recurrence rate of breast cancer after in tertiary hospital from the Federal District
Thais Karla Vivan (BRA)

TV 15 Delays in the initiation of breast cancer treatment in Brazil: An analysis by age and region
Valbert Oliveira Costa Filho (BRA)

TV 15 AI-Driven Analysis of Local Recurrence Factors in NSM for Invasive Tumor Patients
Martina Lichtenfels (BRA)

TV 15 Artificial Intelligence and Machine Learning for Breast Cancer Recurrence Prediction: A Data-Centric Approach
Fabio Francisco Oliveira Rodrigues (BRA)

TV 15 Lipofilled mini dorsi flap: an alternative for breast reconstruction
Valbert Oliveira Costa Filho (BRA)

TV 16 The impact of COVID-19 on the navigation, diagnosis and treatment of breast cancer patients. Assessment of pre- and pandemic results
René Aloisio Da Costa Vieira (BRA)

TV 16 Nipple-sparing mastectomy in young patients: Evaluating oncologic efficacy and prophylactic benefits
Martina Lichtenfels (BRA)

TV 16 Invasive ductal breast cancer in Brazil: comparative epidemiological analysis between Goiás and other Brazilian states (2013-2025)
Christina Souto Cavalcante Costa (BRA)

APPROVED PAPERS FOR E-POSTER

TV 16 Hemoglobin and Bone Metastasis Risk in Breast Cancer: A Prognostic Perspective
Letícia De Barros Souto Barcelona Bernardes (BRA)

TV 17 Evaluation of lymph nodes in women undergoing neoadjuvant chemotherapy in the treatment of breast cancer
Letícia Sousa Amancio Da Costa (BRA)

TV 17 Gene Modulation by Ozone: AURKA and AURKB in the Context of Breast Carcinoma
Mirelle Alencar Marques (BRA)

TV 17 Effect of Resistance Training on The Phase Angle of Breast Cancer Patients During Neoadjuvant Chemotherapy: A Pilot Study
Nathan Muci Aguiar Damasio (BRA)

TV 17 Fibroadenoma in axillary accessory breast. A Systematic review of the literature
René Aloisio Da Costa Vieira (BRA)

TV 18 Trends in mastectomy for early breast cancer in a public institution with limited access: a retrospective cohort
Francisco Pimentel Cavalcante (BRA)

TV 18 Regional discrepancies between diagnosis and treatment start of breast cancer: a comparative analysis of DATASUS data in different brazilian regions
Isabela Marquez Bernardes (BRA)

TV 18 Analysis of the Impact of Mammogram Coverage on Breast Cancer Mortality
Amarílis De Oliveira Almeida (BRA)

TV 18 Hospitalized breast cancer patients in Mato Grosso (2014–2024): factors associated with survival and mortality predictors
Samuel Sotero Lourenço (BRA)

TV 19 Epidemiological Analysis of the Main Diagnostic Tests for Breast Cancer (Mammography, Cytology, and Histopathology) in Brazil from 2021 to 2024
Amarílis De Oliveira Almeida (BRA)

APPROVED PAPERS FOR E-POSTER

TV 19 Comparison of sedentary behavior between female cancer survivors and apparently healthy women
Vitor Alves Marques (BRA)

TV 19 Evaluation of shoulder joint complex, kinesiophobia, quality of life, lymphedema and physical activity level of women with breast cancer undergoing surgical treatment
Flávia Batista Gomes Noleto (BRA)

TV 19 Case report: Pseudoaneurysm, an unusual complication after breast biopsy
Thais Karla Vivan (BRA)

TV 20 Breast cancer in quilombo descendants cities in the State of Pará
Bárbara Waléria Gonçalves Alves (BRA)

TV 20 Effects of Music Therapy on Pain and Anxiety Reduction During Surgical Procedures or Radiotherapy in Breast Cancer: A Systematic Review
Amarílis De Oliveira Almeida (BRA)

TV 20 Breast partial amputation: a new option for oncologic breast-conserving surgery
René Aloisio Da Costa Vieira (BRA)

TV 20 Responses from one session of Mat Pilates on anxiety indicators in apparently healthy women and breast cancer survivors
Ellen Gomes De Oliveira (BRA)

MAY 17th, SATURDAY

Session E-poster 3
8 am to 12 pm

TV 21 Interval for surgical treatment after neoadjuvant chemotherapy in patients with breast cancer at the Hospital de Clínicas Complex of the Federal University of Paraná in 2020 to 2022
Lucas Roskamp Budel (BRA)

APPROVED PAPERS FOR E-POSTER

TV 21 A longitudinal cohort in breast cancer patients: a case-control study
Maria Fernanda De Matos Maluf (BRA)

TV 21 Image-guided percutaneous cryoablation of breast cancer
Luiz De Paula Silveira Júnior (BRA)

TV 21 Effects of natural polyphenols on metabolic pathways in breast cancer: an integrative review
Iasmim Gonçalves Almeida (BRA)

TV 22 Impact Of COVID-19 on the incidence of hospitalizations due to puerperal mastitis and breast abscess in Brazil: an ecological study
Leonardo Ribeiro Soares (BRA)

TV 22 Artificial intelligence in breast cancer detection and screening: an integrative review
Iasmim Gonçalves Almeida (BRA)

TV 22 Breast cancer treatment-induced peripheral neuropathy: what does the literature tell us about it?
Tatiane Nunes Da Silva Rodarte (BRA)

TV 22 Comparative analysis of tumor biology with age range and clinical outcome of patients diagnosed with breast cancer in one year in a tertiary hospital in the Federal District
Juliana Terra Ribeiro (BTA)

TV 23 A new navigation aid tool for breast health education
Darley De Lima Ferreira Filho (BRA)

TV 23 The Importance of a Multidisciplinary Team in the Treatment of Oncology Patients and Adherence to the Proposed Treatment
Marcela Martins De Freitas Moreira (BRA)

TV 23 From High Costs to High Access: Breaking Barriers in Breast MRI AI, Abbreviated Protocols, and the Future of Accessibility
Virgínia De Assis Silva (BRA)

APPROVED PAPERS FOR E-POSTER

TV 23 Impacts of late screening and diagnosis of breast cancer: an integrative literature review
Miriam Silva Santos (BRA)

TV 24 Pilates Method and Augmented Reality: strategies to improve the quality of life for public health system users diagnosed with Breast Cancer – A randomized study
Nayara Alves De Freitas Lemos (BRA)

TV 24 From screening to intervention: Impasses and elucidations granted to nurse navigators in clinical studies
Silvia Kelly Rodrigues Silva Ferreira (BRA)

TV 24 Real-World Study on the Use of Trastuzumab Deruxtecan in Breast Cancer at a Public Hospital in the State of Goiás
Augusto Rodrigues De Araujo Neto (BRA)

TV 24 Challenges in the Diagnosis of Breast Cancer in Homeless Women: A literature review
Amarílis De Oliveira Almeida (BRTA)

TV 25 Impact of the Ketogenic Diet on Breast Cancer Management: A Systematic Review
Amarílis De Oliveira Almeida (BRA)

TV 25 Genetics and Predisposition to Breast Cancer: The impact of mutations in the BRCA1 and BRCA2 genes
Amarílis De Oliveira Almeida (BRA)

TV 25 Merrf syndrome and its potential link to breast cancer development: biological and clinical implications
Daniela Lima Nogueira (BRA)

TV 26 Breast Cancer Screening in Transgender Women
Matheus Silva Fernandes (BRA)

TV 26 Post-treatment morphea in breast cancer: a case report
Bárbara Waléria Gonçalves Alves (BRA)

APPROVED PAPERS FOR E-POSTER

TV 26 Metastatic Chest Wall Sarcoma Invading The Breast: A Rare Case Report
Gustavo De Oliveira Mota Maciel (BRA)

TV 27 Invasive carcinoma of the breast in males: a review of the literature
Guilherme Gamba (BRA)

TV 27 Quality of life and sexuality in palliative breast cancer patients
Jean Karlus Rocha De Souza (BRA)

TV 27 The importance of palliative care in patients with breast cancer
Evelyn Cristine Nascimento (BRA)

TV 28 The relationship between spirituality and quality of life in patients with breast cancer
Lure Êmilly Barreto Da Silva (BRA)

TV 28 Masson's Tumor of the Breast in a Patient with Invasive Breast Carcinoma: A Rare Benign-Vascular Lesion Mimicking Malignancy
Cristiano Augusto Andrade De Resende (BRA)

TV 28 Malignant phyllodes tumor: double recurrence in a young patient
Lucas Roskamp Budel (BRA)

TV 29 Breast implants-associated anaplastic large cell lymphoma (BIA-ALCL)
Luiz De Paula Silveira Júnior (BRA)

TV 29 Regression of giant renal angiomyolipoma in a patient under aromatase inhibitor therapy for breast cancer – case report
Deidimar Cassia Batista Abreu (BRA)

TV 30 Primary breast amyloidosis: case report and literature review
Luiz De Paula Silveira Júnior (BRA)

TV 30 Primary and Secondary Angiosarcoma: A case report
Darley De Lima Ferreira Filho (BRA)

TV 30 "Bronquinho": A Low-Cost Alternative for Fat Grafting in Breast Reconstructions within the Brazilian National Healthcare System (SUS)
Manuela Bezerra e Silva França (BRA)

APPROVED PAPER FOR ORAL PRESENTATION

TREATMENT PATTERNS AND SAFETY OF ADJUVANT THERAPY AFTER CHEMOIMMUNOTHERAPY FOR EARLY-STAGE TRIPLE-NEGATIVE BREAST CANCER IN A REAL-WORLD SCENARIO: THE NEO-REAL/ GBECAM-0123 STUDY

Renata Rodrigues da Cunha Colombo Bonadio[1], Laura Testa[1], Monique Tavares[2], Daniele Assad-Suzuki[3], Daniela Dornelles Rosa[4], Débora de Melo Gagliato[5], Maria del Pilar Estevez Diz[6], Romualdo Barroso Sousa[7]

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Objectives: The KEYNOTE-522 trial established neoadjuvant pembrolizumab plus chemotherapy (P+CT) followed by adjuvant pembrolizumab as the standard of care for stage II–III triple-negative breast cancer (TNBC). However, integrating this regimen with other adjuvant therapies, such as capecitabine or olaparib, remains uncertain in clinical practice. This study evaluates real-world treatment patterns and safety outcomes of adjuvant therapies following neoadjuvant P+CT.
Methodology: The multicentric Neo-Real/ GBECAM-0123 study includes TNBC patients treated with neoadjuvant P+CT since July 2010 across ten cancer centers. This analysis focuses on treatment patterns and safety, particularly grade ≥ 3 adverse events (AEs).
Results: Of 410 patients enrolled, 359 underwent surgery and 185 completed adjuvant therapy. Median age was 43 years; 69.5% had stage II and 25.8% stage III disease. A pathologic complete response (pCR) was achieved in 62.5% (n=218); among them, 85.9% continued adjuvant pembrolizumab. In BRCA wild-type/unknown patients with residual disease (n=114), 54.4% received pembrolizumab plus capecitabine (P+C), 26.3% pembrolizumab (P) alone, and 10.5% capecitabine alone. Among BRCA-mutated patients with residual disease (n=12), 75% received pembrolizumab plus olaparib (P+O), 16.7% P+C, and 8.3% olaparib alone (O). Grade ≥ 3 AE rates were higher with P+C (16.3%) and P+O (14.3%) compared to P alone (6.3%, p=0.057). Anemia grade ≥ 3 occurred in 14.3% of P+O patients (vs. 0% P alone), while diarrhea (6.1%) and hand-foot syndrome (8.2%) were more frequent with P+C. No increase in immune-related grade ≥ 3 AEs were observed with combinations.
Conclusion: In a real-world scenario, most patients with TNBC continued adjuvant pembrolizumab after a pCR, while adjuvant capecitabine and adjuvant olaparib were frequently used in combination with pembrolizumab for those of residual disease. Combined adjuvant strategies showed higher rates of grade ≥ 3 adverse events and drug discontinuations. The efficacy of the combined adjuvant strategies remains to be determined.

Keywords: Breast Neoplasms, Adjuvant Chemotherapy (or Adjuvant Therapy*), Immunotherapy, Poly(ADP-ribose) Polymerase Inhibitors, Capecitabine

JUST ONE WEEKLY SESSION OF STRENGTH OR COMBINED TRAINING PRESERVES CELLULAR INTEGRITY, CARDIORESPIRATORY FITNESS, AND INCREASES NEUROMUSCULAR STRENGTH IN WOMEN WITH BREAST CANCER DURING CHEMOTHERAPY: A RANDOMIZED CONTROLLED TRIAL

Rafael Ribeiro Alves[1], Victor Domingos Lisita Rosa[1], Ruffo Freitas-Júnior[1], Anderson Garcia[1], Nathan Muci Aguiar Damasio[1], Vitor Andrade Maciel[1], Vitor Alves Marques[1], Carlos Alexandre Vieira[1]

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Objectives: To compare the effects of strength training or combined training on cellular integrity, cardiorespiratory fitness, and neuromuscular strength in women with breast cancer undergoing chemotherapy.
Methodology: A randomized controlled clinical trial was conducted (CEP:50717115.4.0000.5083;REBEC:16497). Nineteen volunteers (age: 45.1±2.9) were randomized into the following groups: strength training (ST), combined training (CT), or control group (CG). Volunteers in the ST and CT groups (strength + aerobic) underwent 12 weeks of training with one session per week during neoadjuvant chemotherapy with anthracyclines®. Cellular integrity, cardiorespiratory fitness, and neuromuscular strength were assessed before the first (baseline) and after the fourth chemotherapy cycle (post-treatment). Cellular integrity was evaluated based on tetrapolar bioimpedance test. Cardiorespiratory fitness was assessed using a treadmill stress test, while neuromuscular strength was measured with an isometric knee extension test. Data are presented as mean and standard deviation. A two-way ANOVA test (3x2) was used with Sidak's pos-hoc test. The significance level was $p < 0.05$.
Results: The ST, CT, and CG groups did not differ at baseline of cellular integrity (6.1±0.2; 6.2±0.2; and 5.3±0.4, respectively), cardiorespiratory fitness (22.5±0.3; 22.4±0.9; and 23.2±1.2, respectively), and neuromuscular strength (141±20; 243±49; and 101.6±12.1, respectively). However, the CG group showed a reduction in cellular integrity at post-treatment (5±0.4; P=0.01), while the CT and ST groups had no significant changes (6.4±0.3 and 6.2±0.1, respectively). Cardiorespiratory fitness decreased in the CG group post-treatment (19.9±0.8; P=0.04) and was lower compared to the CT group (25.5±1.4; P=0.04). The ST group showed no difference in post-treatment fitness. Neuromuscular strength increased in the ST (258.8±48.2; P=0.03) and CT (446.8±59.1; P=0.00) groups, with a significant difference compared to CG post-treatment (90±7.7; P=0.01).
Conclusion: Just one session per week of ST or CT for three months preserves cellular integrity, cardiorespiratory fitness, and increases neuromuscular strength in women with breast cancer undergoing chemotherapy with anthracyclines.

Keywords: resistance training, neoplasia, aerobic training.

LOW-INTENSITY EXERCISES DURING CHEMOTHERAPY INFUSION FOR FATIGUE, FUNCTIONALITY AND NEUROPATHY IN WOMEN WITH BREAST CANCER

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Objectives: To evaluate the practice of low to moderate intensity exercise during chemotherapy infusion.
Methodology: This is a randomized clinical trial with 35 participants, including breast cancer patients aged 18 to 85 years, approved by the Ethics Committee of the Hospital de Amor, under number 82161424.6.0000.5437. Randomization was performed using random sampling by the REDCap platform and consisted of two groups: G1 (Intervention Group) and G2 (Control Group). During the first chemotherapy cycle, questionnaires were administered to assess functionality (IPAQ), fatigue (FAS), chemotherapy-induced neurotoxicity (QNIA), and perceived exertion using the Borg scale. For exercise prescription, the maximum heart rate of each patient was calculated. Group G1 was subjected to exercises predefined by the researcher, while Group G2 followed the conventional guidelines of the department. After five sessions, participants responded to the study questionnaires and provided feedback created by the researcher.
Results: In the final evaluation (after the intervention), 28.6% of patients did not experience fatigue, 14.3% had mild fatigue, with severe fatigue being predominant. Regarding functionality, 57.1% became more active after the research period, meeting at least one of the recommendations regarding frequency and/or duration of physical activity. Regarding the degree of neuropathy, in the lower limbs, grade 4 (persistent and disabling symptoms) was highlighted in 71.4% of the women. In the upper limbs, 50% of the patients had no symptoms or paresthesia, while the other 50% presented grade 4. For orofacial symptoms, grade 3 (pain or functional impairment interfering with activities of daily living) and grade 4 predominated, both at 28.6%. According to the feedback provided by the researcher, the physical exercise practice during infusion was beneficial for the patients. Larger-scale studies are needed to confirm the efficacy. The study is still in the inclusion phase.
Conclusion: Physical exercise during infusion is feasible, safe, and beneficial for the participants.

Keywords: exercise therap; antineoplastic agents; breast neoplasms.

DENSE-BBREAST STUDY: DOSE-DENSE NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER: A NETWORK META-ANALYSIS OF EFFICACY AND TOXICITY

André Mattar[1], Marcelo Antonini[2], Felipe Zerwes[3], Francisco Pimentel Cavalcante[4], Eduardo Camargo Millen[5], Antonio Luis Frasson[6], Fabricio Palermo Brenelli[7], Leonardo Ribeiro Soares[8]

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Objectives: To evaluate the efficacy and toxicity of dose-dense (DD) versus standard anthracycline- and taxane-based neoadjuvant chemotherapy (NAC) regimens in breast cancer through a systematic review and network meta-analysis (NMA).
Methodology: This PRISMA-compliant NMA included seven randomized trials and high-quality observational studies comprising 2,670 patients with non-metastatic breast cancer. The primary endpoint was pathological complete response (pCR); secondary endpoints included overall survival (OS), disease-free survival (DFS), and grade 3–4 toxicities. Subgroup analyses were conducted across molecular subtypes and treatment characteristics. Treatment ranking was performed using Surface Under the Cumulative Ranking Curve (SUCRA) analysis.
Results: Dose-dense regimens significantly improved pCR rates compared to standard regimens (effect size: 0.87; 95% CI: 0.81–0.93), with an absolute pCR rate of 43.9%. Survival analyses showed a 15–25% relative reduction in recurrence and mortality with DD therapy. The most pronounced benefits were observed in HER2-positive and triple-negative breast cancer (TNBC) subgroups, especially in high-risk, early-stage disease. However, DD regimens were associated with increased toxicity, including grade 3–4 neutropenia (10–24%) and anemia (up to 30%). SUCRA analysis ranked trastuzumab-based, platinum-containing, and combination regimens highest in efficacy, while standard AC and capecitabine-based regimens ranked lower. Subgroup and sensitivity analyses confirmed the robustness of these findings and emphasized the heterogeneity of benefit across tumor types and clinical risk factors.
Conclusion: Dose-dense NAC regimens improve pCR, DFS, and OS, particularly in HER2-positive and TNBC patients. However, their increased toxicity profile necessitates judicious patient selection and comprehensive supportive care. Future directions include integrating biomarkers, immune checkpoint inhibitors, and novel agents to enhance efficacy and personalize treatment. Dose-dense chemotherapy should be prioritized in high-risk subtypes where the therapeutic benefit outweighs potential adverse effects.

Keywords: Dose-dense chemotherapy, Neoadjuvant therapy, Breast cancer, Triple-negative, HER2-positive, Pathological complete response, Network meta-analysis, Survival outcomes, Toxicity.

INNOVATIVE PLATFORM FOR CHEMORESISTANCE: ADVANCING FUNCTIONAL PRECISION MEDICINE IN BREAST CANCER

Martina Lichtenfels[1], Antônio Luiz Frasson[2], Julia Caroline Marcolin[1], Heloisa Rezende[3], Camila Alves da Silva[1], Alessandra Borba Anton de Souza[2], Caroline Brunetto de Farias[1], José Luiz Pedrini[4]

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Objectives: Our study aimed to validate a novel in vitro chemoresistance platform by assessing the chemoresistance profiles of treatment naïve-breast cancer and residual tumors after neoadjuvant chemotherapy (NACT).
Methodology: Patients with primary invasive BC (naïve-treatment) and residual disease (RD) after NACT were included. Tumor samples were obtained and cultured on the chemoresistance platform with several cytotoxic drugs used for BC treatment. After 72h, cell viability was evaluated, with resistance categorized as low, intermediate, and high resistance.
Results: Samples from 70 patients with primary BC and 27 RD after NACT were tested using the chemoresistance platform. Patients undergoing upfront surgery exhibited significantly favorable clinicopathological characteristics and prognosis, such as older age, smaller tumors, negative axillary lymph node, and luminal subtype compared to those with residual disease presenting younger age, larger tumors, positive axillary lymph node, and more triple- negative BC. The chemoresistance platform revealed distinct resistance patterns, with tumors showing higher resistance to taxanes compared to anthracyclines and cyclophosphamide ($p < 0.05$). RD after NACT exhibited significantly higher resistance to docetaxel, paclitaxel, doxorubicin, and cyclophosphamide than primary tumors, possibly indicating the acquisition of resistance during treatment. High resistance in RD after NACT correlated with a worse prognosis, with 8% experiencing local recurrence, 24% developing metastasis ($p = 0.0001$) and 12% dying from disease progression ($p = 0.05$). Overall survival was 98.5% in primary tumor group and 88% in residual disease after NACT group.
Conclusion: The chemoresistance platform effectively identified drug resistance patterns based on tumor characteristics, demonstrating the potential of functional precision medicine to personalize and improve BC treatment by avoiding inefficient drugs, particularly in the context of treatment de-escalation.

Keywords: Breast neoplasms, drug resistance, precision medicine

MACHINE LEARNING-BASED TRANSCRIPTOMIC MODEL ENHANCES PROGNOSTIC STRATIFICATION IN BREAST CANCER

Valbert Oliveira Costa Filho[1], Eduarda Severo Alvarenga[1], Carlos Alberto Barbosa Neto[1], Fabrícia Cardoso Marques[1], Gabriel Maciel Almeida[1], João Luiz Lima Pinheiro[1], Mariana Macambira Noronha[1], Anelise Poluboiarinov Cappellaro[2]

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Objectives: To identify prognostic genes and to test machine learning (ML) models based on transcriptomics to predict overall survival of breast cancer (BC) patients.
Methodology: We conducted a systematic review of transcriptomic datasets, registered on DOI:10.17605/OSF.IO/65F87. A gene was classified as a core prognostic gene (CPG) if it consistently indicated either good or poor prognosis in at least 50% of the datasets without conflicting outcomes. These CPGs were used to predict patient prognosis using 10 different machine learning models: CoxBoost, Elastic-Net, GBM, Lasso, plsRcox, Ridge, Random Survival Forest, StepCox, SuperPC, and SVM. Models were trained on the largest dataset, with the others used for validation. CTRP data were used to predict drug sensitivity across all patients.
Results: Individual patient data from a total of 2,380 BC cases from 10 worldwide datasets were included. A set of 44 CPGs was identified and used for subsequent ML analyses. CoxBoost demonstrated the highest Cindex (0.7) and was selected as the final model. Pooling results with a random-effects model, patients classified as high-risk by our model had a hazard ratio (HR) of 3.1 (95%CI: 2.55–3.77) for OS and 3.7 (95%CI: 2.67–4.25) for disease-free survival (DSF). The model achieved great AUC values of 0.831, 0.721, and 0.724 for OS prediction at 1, 3, and 5 years, respectively. High-risk patients had higher TP53 mutations, while low-risk patients showed more PIK3CA and CDH1 mutations. High-risk tumors were enriched in Wnt/β-catenin and TGF-β pathways, while low-risk tumors had more TP53 pathway activity and immune complement function. High-risk tumors also showed reduced sensitivity to docetaxel, gemcitabine, and 5-fluorouracil.
Conclusion: This study demonstrated the effectiveness of our CoxBoost-based model in predicting OS and DFS. Patients classified as high-risk by our model exhibited markedly lower OS, distinct genomic alterations, and resistance to key chemotherapies. These findings highlight the potential of transcriptomic data for patient stratification.

Keywords: Gene Expression Profiling, Breast Neoplasms, Prognosis

OMISSION OF AXILLARY SURGERY IN EARLY BREAST CANCER WITH NEGATIVE LYMPH NODES: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CLINICAL TRIALS

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Objectives: To assess whether there are differences in clinical outcomes regarding the omission of axillary surgery in patients with early-stage breast cancer and clinically negative nodes.
Methodology: We conducted a systematic review and meta-analysis including randomized clinical trials (RCTs) comparing the no-axillary surgery with standard axillary-surgery (Sentinel Lymph Node Biopsy-SLNB or Axillary Dissection-AD). The study was registered in PROSPERO (CRD420250653779) and the selection process followed PRISMA guidelines. The search strategy included the terms: ("breast cancer") AND ("axillary dissection" OR "axillary surgery" OR "no axillary surgery" OR "sentinel lymph node") AND ("randomized study" OR "randomized clinical trial") within the PubMed and Web of Science databases, with the last search in March 2025. The primary outcomes were overall survival, disease-free survival, and axillary-recurrence rates. Data selection was performed using Rayyan software. Meta-analysis was performed using RevMan version 5.4 software, with dichotomous variables assessed using odds ratios (OR) and 95% confidence intervals (CIs). Heterogeneity was assessed using the I^2 test and corrected using a random-effects model. The risk of bias was assessed with the RoB-2 instrument.
Results: Of 550 retrieved studies, 91 duplicates were excluded, and after data selection, a total of 8.806 patients from seven RCTs were included in the analysis. Of these, 2.915 patients were in no-surgery group and 5.891 in axillary-surgery group. Among these trials, 2 compared no-axillary surgery with SLNB, while 5 compared no-axillary surgery with AD. Overall survival (OR = 1.02 [0.86-1.20]; p = 0.84; I^2 = 36%) and disease-free survival (OR = 0.80 [CI:0.63-1.00]; p = 0.05; I^2 = 63%) showed no significant differences between the groups. Axillary recurrence was lower in the axillary-surgery group (OR = 0.18 [CI:0.10-0.31]; p < 0.01; I^2 = 39%).
Conclusion: Omission of axillary surgery in early-stage breast cancer with negative nodes did not affect overall survival or disease-free survival rates.

Keywords: Breast Cancer, Axillary Surgery, Sentinel Lymph Node Biopsy, Disease-Free Survival, Overall Survival, Randomized Clinical Trials

UPDATED META-ANALYSIS OF RANDOMIZED TRIALS: PCR AS A PROGNOSTIC MARKER FOR SURVIVAL IN BREAST CANCER TREATED WITH NEOADJUVANT CHEMOTHERAPY

Marcelo Antonini[1], Ludmila Lemos Oliveira[1], Andre Mattar[2], Francisco Pimentel Cavalcante[3], Eduardo Camargo Millen[4], Felipe Zerwes[5], Fabricio Palermo Brenelli[6], Antonio Luiz Frasson[7]

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Objectives: To present an updated meta-analysis including only randomized clinical trials (RCTs) evaluating the prognostic impact of pathological complete response (pCR) on overall survival (OS) and disease-free survival (DFS) in breast cancer patients treated with neoadjuvant chemotherapy (NAC), expanding on previous meta-analyses that combined RCTs and real-world evidence (RWE) data.
Methodology: A systematic review and meta-analysis were conducted according to PRISMA guidelines. We included RCTs reporting pCR after NAC and survival outcomes (OS and DFS). Hazard ratios (HRs) and 95% confidence intervals were extracted or estimated. Heterogeneity was assessed using the I^2 statistic, and publication bias was evaluated through funnel plots, Egger's, and Begg's tests. The study is registered in PROSPERO (CRD42024558811).
Results: Thirteen RCTs (n = 6,977 patients) were included. pCR was significantly associated with improved OS (15% higher survival) and DFS (45% higher survival) compared to non-pCR patients. The benefit was greater in triple-negative breast cancer (TNBC) and HER2-positive subtypes. In TNBC, pCR was linked to a 45% increase in OS and a 71% increase in DFS; in HER2-positive tumors, pCR was associated with a 13% increase in OS and a 23% increase in DFS. The pooled analysis showed significant associations (OS: Z = 10.3, p = 0.03; DFS: Z = 20.2, p = 0.02). Moderate-to-high heterogeneity was observed (OS I^2 = 60%; DFS I^2 = 75%).
Conclusion: This updated meta-analysis, based exclusively on RCTs, confirms that pCR is a strong prognostic marker for survival in early-stage breast cancer, especially in TNBC and HER2-positive subtypes, providing robust evidence beyond previous analyses that mixed RCTs with RWE.

Keywords: Breast Neoplasms, Neoadjuvant Therapy, Pathologic Complete Response, Randomized Controlled Trials as Topic, Survival Rate

METRONOMIC VERSUS STANDARD FIXED DOSING CHEMOTHERAPY IN HER2-NEGATIVE METASTATIC BREAST CANCER: A RECONSTRUCTED INDIVIDUAL PATIENT DATA META-ANALYSIS

Luiz Felipe Costa de Almeida[1], Luís Felipe Leite da Silva[1], Ana Carolina Putini Vieira[2], Anelise Poluboiarinov Cappellaro[3], Felipe Batalini[4]

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Objectives: To systematically evaluate and compare the efficacy and safety of metronomic chemotherapy (mCT) versus standard fixed-dose chemotherapy in patients with HER2-negative metastatic breast cancer (MBC) through a reconstructed individual patient data meta-analysis.
Methodology: This systematic review and meta-analysis adhered to PRISMA guidelines and was registered in PROSPERO (CRD42025645145). Randomized clinical trials (RCTs) comparing metronomic dosing with standard chemotherapy in HER2-negative MBC were identified through comprehensive searches of MEDLINE, Embase, and Cochrane databases. Primary outcomes included reconstructed individual patient data (IPD)-based progression-free survival (PFS) and overall survival (OS). Secondary outcomes were objective response rate (ORR), disease control rate (DCR), and toxicity assessed via pooled odds ratios (OR).
Results: Four RCTs totaling 436 patients were analyzed. Compared to standard chemotherapy, mCT significantly reduced PFS (HR = 1.22; 95% CI, 1.01–1.49; P<0.05) and OS (HR = 1.38; 95% CI, 1.08–1.76; P<0.05). There were no statistically significant differences in ORR (OR 1.26; 95% CI, 0.77–2.08; P>0.05) and DCR (OR 0.77; 95% CI, 0.50–1.17; P>0.05). Patients treated with mCT experienced significantly fewer incidences of vomiting (OR 0.28; 95% CI, 0.10–0.76; P<0.05) and alopecia (OR 0.16; 95% CI, 0.08–0.31; P<0.05). No significant differences were observed for diarrhea, anemia, neutropenia, or hand-foot syndrome between groups.
Conclusion: Metronomic chemotherapy is associated with a better toxicity profile, specifically reducing alopecia and vomiting, while maintaining similar response and disease control rates. However, standard fixed-dose chemotherapy provides superior progression-free and overall survival outcomes, thus remaining the recommended treatment standard. Clinicians should weigh the trade-off between quality of life and survival outcomes carefully in personalized treatment discussions.

Keywords: metronomic, chemotherapy, breast cancer, meta-analysis

CDK4/6 INHIBITOR PLUS ENDOCRINE THERAPY AFTER PROGRESSION ON CDK4/6 INHIBITION IN HR+/HER2- ADVANCED BREAST CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS (REIGNITE STUDY)

Luiz Felipe Costa de Almeida[1], Luís Felipe Leite da Silva[1], Mariana Gouveia[2], Brenda Ernst[3], Jesse Lopes da Silva[4], Andreia Cristina de Melo[4], Paolo Tarantino[5], Felipe Batalini[3]

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Objectives: To systematically evaluate the efficacy and safety of cyclin-dependent kinase 4/6 inhibitors (CDK4/6i) combined with endocrine therapy (ET) compared to ET alone in patients with hormone receptor-positive, human epidermal growth factor receptor 2-negative (HR+/HER2-) advanced breast cancer (BC) who progressed to prior CDK4/6i therapy.
Methodology: This systematic review and meta-analysis adhered to PRISMA guidelines and was registered in PROSPERO (CRD420251007031). Randomized clinical trials (RCTs) were identified through comprehensive searches in PubMed, Cochrane, Embase, and conference proceedings (ASCO, ESMO, SABCS). The primary outcome was progression-free survival (PFS), analyzed using hazard ratios (HR) with a random-effects model and 95% confidence intervals (CI). Adverse effects were evaluated through pooled odds ratios (OR).
Results: Five RCTs encompassing 1,184 patients were included. Overall, CDK4/6i plus ET significantly improved PFS versus ET alone, yielding a HR of 0.72 (95% CI 0.56–0.92; p<0.05). Subgroup analyses highlighted superior efficacy when patients switched to a different CDK4/6i following progression (HR 0.61; 95% CI 0.48–0.77; p<0.05), whereas continuation of the same agent showed no significant benefit (HR 0.93; 95% CI 0.68–1.28; p=0.15). Genetic profiling demonstrated that patients harboring PIK3CA mutations experienced notable PFS improvement (HR 0.71; 95% CI 0.52–0.98; p<0.05), whereas no significant benefit was observed among patients with ESR1 mutations (HR 0.86; 95% CI 0.60–1.24; p= 0.06). CDK4/6i plus ET significantly increased odds of anemia (OR 2.67; 95% CI 1.45–4.93), neutropenia (OR 19.27; 95% CI 9.94–37.35; p<0.05), thrombocytopenia (OR 4.51; 95% CI 2.20–9.25; p<0.05), and diarrhea (OR 4.29; 95% CI 1.28–14.39; p<0.05) compared to ET alone.
Conclusion: Treatment with CDK4/6i combined with ET beyond CDK4/6i progression demonstrates significant clinical benefit in HR+/HER2- advanced breast cancer, particularly when switching between different CDK4/6i. Patients with PIK3CA mutations notably benefit from this strategy. These findings provide critical insights for the refinement of future clinical guidelines.

Keywords: Cyclin-Dependent Kinase Inhibitor Proteins; Breast Neoplasms; Meta-Analysis

GRPR AS A PROGNOSTIC BIOMARKER AND MEDIATOR OF DOXORUBICIN RESISTANCE IN BREAST CANCER

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Objectives: This study aimed to verify the expression and prognostic implications of GRPR in breast cancer (BC) by analyzing multiple cancer-related databases and complementary in vitro assays.
Methodology: GRPR expression and its association with prognosis in BC were assessed using different databases: ONCOBD, Gent2, and GEPIA. In vitro experiments were performed using MCF-7 and MDA-MB-231 BC cell lines, both naïve and treated with cytotoxic drugs. GRPR expression and cell viability were assessed to investigate potential roles in drug resistance.
Results: Bioinformatics analysis revealed overexpression of GRPR in BC compared to healthy tissue. GRPR expression positively correlated with estrogen receptor and low-grade tumors ($p < 0.001$). Among molecular subtypes, Luminal A exhibited the highest levels of GRPR, followed by Luminal B, HER2+, TNBC and basal. Prognostic analysis using Gent2 indicated that higher GRPR expression was associated with improved overall survival ($p = 0.004$). However, GEPIA analysis did not confirm a statistically significant survival difference. In vitro, both cell lines treated with doxorubicin showed decreased viability ($p < 0.0001$), along with a significant increase in GRPR expression, with a fold change of 5.7 ($p < 0.0001$) for MCF-7 and 2.7 ($p = 0.007$) for MDA-MB-231, suggesting that surviving cells express higher level of GRPR. This pattern was not observed with cyclophosphamide, indicating a potential role of GRPR in acquired resistance to doxorubicin.
Conclusion: GRPR expression is associated with estrogen receptor positivity and may indicate favorable prognosis in BC. Nonetheless, its upregulation following doxorubicin exposure suggests a potential role in chemoresistance. The findings support GRPR as a promising biomarker for prognosis and a potential therapeutic target, particularly in the context of resistance to anthracycline-based chemotherapy.

Keywords: breast neoplasm, GRP-R protein, drug resistance

BREAST SURGERY FOR METASTATIC BREAST CANCER: A UPDATE OF COCHRANE SYSTEMATIC REVIEW

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Objectives: To assess the effects of breast surgery on women with de novo metastatic breast cancer.
Methodology: The inclusion criteria were randomized controlled trials of women with de novo metastatic breast cancer that compared breast surgery plus systemic therapy versus systemic therapy alone in these databases: the Cochrane Breast Cancer Specialised Register, CENTRAL, MEDLINE (by PubMed), and Embase (by OvidSP) on 19 April 2023 following the Cochrane handbook methodology.
Results: This is an update of the Cochrane systematic review published in 2018, which was approved by the ethics committee and had its research protocol published in 2014. We included five randomized clinical trials including 1368 women with de novo metastatic breast cancer in the review. Breast surgery does not reduce mortality in women with de novo metastatic breast cancer (HR 0.89; 95% CI 0.75 to 1.05, P = 0.09). In subgroup analyses for women with luminal tumours, the addition of breast surgery to systemic treatment appears to increase the OS, reducing the risk of death by 18% (HR 0.82; 95% CI 0.69 to 0.96). Breast surgery reduces the risk of local disease progression (HR 0.43; 95% CI 0.32 to 0.58) and doesn't improve metastatic disease control (HR of 1.19, 95% CI 0.86 to 1.18). The quality of life of women undergoing locoregional treatment is similar when compared to women undergoing systemic treatment alone in 24 months of follow-up (MD 2.74; 95% CI -2.22–7.70).
Conclusion: Based on existing evidence from five randomized clinical trials, the impact of adding breast surgery to the management of de novo metastatic breast cancer is likely to enhance the local control of disease. However, breast surgery does not improve overall survival and distant progression-free survival. Locoregional treatment does not seem to affect the quality of life of these women.

Keywords: 'advanced breast cancer', 'metastatic breast cancer', 'breast surgery', 'breast-conserving surgery', 'mastectomy', 'lumpectomy', 'segmentectomy'

TP53 GENETIC VARIANTS IDENTIFIED IN BRAZILIAN WOMEN WITH HEREDITARY BREAST CANCER – SYSTEMATIC REVIEW OF THE LITERATURE

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Objectives: The objective of this study was to describe the genetic variants of TP53 in Brazilian patients with hereditary breast cancer (HBC).
Methodology: The systematic review was registered in PROSPERO (International Prospective Register of Systematic Reviews), CRD420250656510, and conducted in accordance with the PRISMA (Preferred Reporting Items for Systematic reviews and Meta-Analyses) recommendations. The database consulted was PUBMED and the search strategy was (Familial OR Hereditary) breast cancer AND Brazil. Articles that investigated TP53 genetic variants in HBC patients using genetic sequencing or polymerase chain reaction (PCR) were included.
Results: Initially, 566 articles were identified, of which 25 were included in the study. The selected studies comprised 7,730 participants and were carried out in the South (n=4), Southeast (n=17), Northeast (n=2) and Central-West (n=2) regions of the country. The included studies described 31 pathogenic variants of TP53, and the most common one was p.(Arg337His), described in 22 studies. The p.(Arg273His) variant appeared in three studies, p.(Gly245Ser) in two studies, as well as p.(Arg248Gln), in two studies. The p.(Arg337His) variant, described in 22 studies (296 patients), resulted in an approximate frequency of 3.8%, and appears to have been introduced into Brazilian population through a founder effect. Its prevalence is high among inhabitants of the South and Southeast regions, with frequencies ranging from 0.9% to 12%, according to the age and geographic origin of the patients. Most of the included studies focused on the South and Southeast regions.
Conclusion: This literature review demonstrates the profile of TP53 pathogenic variants described in the Brazilian population with HBC and reflects the inequality of gene sequencing resources in the country, reflecting the concentration of the studies in the South and Southeast regions. It also highlights the importance of making genetic tests available in the Unified Health System, given the socioeconomic vulnerability of a large portion of Brazilian women.

Keywords: Familial breast cancer; Genetic testing; Hereditary cancer; p53

PROGNOSTIC IMPACT OF NEOADJUVANT CHEMOTHERAPY-INDUCED CHANGES IN IMMUNOHISTOCHEMICAL MARKERS ON SURVIVAL OUTCOMES IN BREAST CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Objectives: The objective of this systematic review and meta-analysis was to evaluate the association between NAC-induced alterations in IHC marker expression and overall survival (OS) and disease-free survival (DFS) in breast cancer patients.
Methodology: A systematic search was performed in PubMed, EMBASE, and the Cochrane Library to identify studies evaluating changes in IHC marker expression after NAC and their correlation with survival outcomes. Eligible studies comprised randomized controlled trials (RCTs), cohort studies, and case-control studies involving breast cancer patients undergoing NAC. Data regarding changes in IHC markers and survival outcomes were extracted and analyzed utilizing a random-effects model to compute pooled odds ratios (ORs) with 95% confidence intervals (CIs). The I^2 statistic was utilized to assess heterogeneity, while publication bias was evaluated through funnel plot analysis and Egger's test. The study protocol is registered with PROSPERO (CRD420250655833).
Results: The meta-analysis comprised ten studies. The pooled analysis indicated that a transition from positive to negative hormone receptor status (ER and PR) following NAC was linked to a notable reduction in OS and DFS. In a similar manner, the conversion from positive to negative HER2 status was associated with decreased overall survival and disease-free survival.
Conclusion: NAC significantly alters IHC marker expression, which correlates strongly with survival outcomes in breast cancer patients. The conversion of hormone receptors and HER2, reduction of Ki-67, and increase in tumor-infiltrating lymphocytes following NAC are significant prognostic indicators. The findings highlight the necessity for regular reevaluation of IHC status following NAC to guide personalized adjuvant therapy approaches and enhance patient outcomes. Additional prospective research is necessary to confirm these associations and investigate the underlying molecular mechanisms.

Keywords: breast cancer, neoadjuvant chemotherapy, immunohistochemistry, survival, hormone receptors, HER2, Ki-67, tumor-infiltrating lymphocytes

A SYSTEMATIC REVIEW AND EXTRACTED INDIVIDUAL PATIENT DATA META-ANALYSIS OF LONG-TERM OUTCOMES IN TRIPLE-NEGATIVE BREAST CANCER AFTER A PATHOLOGIC COMPLETE RESPONSE: DOES THE TYPE OF NEOADJUVANT THERAPY MATTER?

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Objectives: Neoadjuvant chemotherapy is standard of care for stage IB-III triple-negative breast cancer (TNBC), with pathological complete response (pCR) strongly associated with survival. Although the escalation of neoadjuvant therapies with platinum and immune checkpoint inhibitors (ICI) improves pCR rates and long-term outcomes, patients with pCR in the control arms of pivotal trials also show favorable outcomes. Whether the type of neoadjuvant regimen leading to pCR impacts long-term survival differently is largely unknown.
Methodology: We conducted a systematic review and meta-analysis, searching PubMed, Embase, Cochrane, and conference proceedings for phase II and III trials including early-stage Patients with TNBC with pCR. A pooled analysis of Kaplan-Meier-derived individual patient data was performed for event-free survival (EFS) and overall survival (OS), with subgroup analyses by treatment regimens.
Results: Of 2,830 identified publications, 18 trials (16 randomized and 2 single-arm) comprising 3,430 patients with TNBC and pCR were included. Neoadjuvant ICI with chemotherapy improved EFS (HR 0.67; 95%CI 0.50-0.89; p<0.01) compared with chemotherapy-only regimens, with no significant OS difference for patients with pCR (HR 0.84; 95%CI 0.50-1.41; P=0.51). In contrast, EFS and OS were not significantly different regardless of platinum use (HR 0.55; 95%CI 0.20-1.50; P=0.24 and HR 0.33; 95%CI 0.09-1.22; P=0.10, respectively). Similarly, anthracycline-containing regimens showed comparable EFS to anthracycline-free regimens (HR 0.86; 95%CI 0.51-1.45; P=0.58). For patients with pCR after ICI therapy, the benefit of adjuvant ICI for EFS or OS was not statistically significant (HR 1.16; 95%CI 0.55-2.44; P=0.70 and HR 2.91; 95%CI 0.40-21.37; P=0.29, respectively).
Conclusion: Neoadjuvant ICI-based regimens improve EFS in early-stage Patients with TNBC with pCR. However, adjuvant ICI after pCR appears to offer no additional benefit, and EFS remains unaffected by neoadjuvant chemotherapy type (with or without platinum or anthracycline).

Keywords: Meta-analysis, Triple-negative breast cancer, Pathological complete response, Immune checkpoint inhibitor, Neoadjuvant treatment

APPROVED PAPERS FOR FAST PRESENTATION

IMPACT OF MINDFULNESS PRACTICES ON THE QUALITY OF LIFE OF WOMEN WITH BREAST CANCER: SYSTEMATIC REVIEW

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Objectives: To determine the impact of mindfulness practices on quality of life, depression, anxiety, sleep, stress, and pain in women with breast cancer.
Methodology: A systematic review was conducted following PRISMA guidelines and based on randomized clinical trials that included women with breast cancer who underwent mindfulness practices. The study was registered in PROSPERO under the number CRD42024502665 and included a risk of bias analysis using the RoB2 tool, statistical analysis of standardized mean differences (SMD) of questionnaire scores used to assess outcomes, meta-analysis with R software, and evidence certainty through the GRADE scale.
Results: A total of 29 randomized studies from around the world were included. 3,407 women with breast cancer; 1,680 of them received the intervention (mindfulness practice). The risk of bias was not significant in the studies. In the meta-analysis, for quality of life, mindfulness improved the SMD by 0.84 (95% CI 0.19; 1.49) with low evidence certainty. For depression, the SMD decreased by 0.71 (95% CI -1.19; -0.22) with moderate certainty. In anxiety, the SMD decreased by 0.48 (95% CI -0.73; -0.24) with moderate certainty. Sleep improved with an SMD of 0.76 (95% CI -1.37; -0.14) with moderate certainty. Stress decreased by SMD 0.73 (95% CI -1.53; -0.07), but with very low certainty, and pain decreased by SMD 0.21 (95% CI -0.61; 0.19), with low evidence certainty. All meta-analyses showed considerable heterogeneity of the studies.
Conclusion: Mindfulness practices may slightly improve the quality of life and reduce depression and anxiety in women with breast cancer. For sleep, stress, and pain, the evidence is uncertain. Despite the mild impact demonstrated in this study, the broad socioeconomic accessibility of mindfulness practices may support the clinical recommendation.

Keywords: systematic review, breast neoplasms, survivorship, mindfulness, quality of life

EPIGENETIC MODULATION OF 3D TELOMERIC ARCHITECTURE BY 5-AZA-DC IN LUMINAL AND TRIPLE-NEGATIVE BREAST CANCER CELLS

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Objectives: Genomic instability is a hallmark of cancer and is strongly associated with telomeric dysfunction. Telomeres, structures that protect the ends of chromosomes, when shortened or spatially disorganized, can lead to chromosomal fusion, DNA breakage, and aberrant chromosome segregation. This study evaluated the impact of the hypomethylating agent 5-aza-2′-deoxycytidine (5-aza-dC) on the three-dimensional reorganization of telomeres in luminal A (MCF7) and triple-negative (DU4475) breast cancer cell lines, focusing on the relationship between telomeric architecture and genomic instability.
Methodology: Cells were treated with 5-aza-dC (10, 20, 30, and 50 μM) for 72 hours. Analysis was performed using Q-FISH and TeloView®, assessing the following parameters: number of telomeres, telomere aggregates, signal intensity (length), a/c ratio (spatial distribution), and nuclear volume. Statistical analysis was performed using ANOVA with Bonferroni post-test ($p < 0.05$).
Results: The assays demonstrated that 5-aza-dC induced statistically significant alterations in telomeric parameters, particularly at concentrations of 30 and 50 μM. In MCF7, there was a reduction in the number of telomeres (from 58.4 ± 6.1 to 42.2 ± 4.8; $p < 0.001$) and aggregates (from 8.3 ± 1.2 to 4.1 ± 0.9; $p < 0.0001$), indicating reduced genomic instability. In DU4475, nuclear volume decreased (up to 40%; $p < 0.0001$), and changes in the a/c ratio ($p < 0.01$) suggested nuclear reprogramming and impact on 3D genome organization.
Conclusion: 5-aza-dC promotes 3D telomeric reorganization associated with the reduction of classical signs of genomic instability. This reinforces the role of telomeres not only as markers of cellular aging but also as epigenetic sensors of chromosomal stability in breast tumors, including luminal and triple-negative cell lines.

Keywords: Breast Neoplasms, Telomeres, Genomic Instability

IMMEDIATE BREAST RECONSTRUCTION USING A LATISSIMUS DORSI FLAP: IS LIPOFILLING OR IMPLANT-BASED RECONSTRUCTION BETTER?

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Objectives: This study explores the outcomes of immediate breast reconstruction using the latissimus dorsi muscle flap (LDMF), comparing two approaches: LDMF combined with prosthesis (implant-based) and LDMF with fat grafting (lipofilling). The goal is to evaluate early and late postoperative complications and help determine which of these methods is more effective in terms of complications, surgical duration, hospital stay, and long-term outcomes.
Methodology: We conducted a 20-year retrospective cohort study involving 71 patients who underwent mastectomy with immediate reconstruction using LDMF. Of these, 35 underwent reconstruction with a prosthesis and 36 with fat grafting. Clinical and pathological characteristics, surgical duration, length of hospital stay, and early and late postoperative complications were evaluated. Minor complications (seroma, superficial infection, superficial dehiscence) and major complications (hematoma, deep dehiscence, deep infection, flap loss, life-threatening events) were documented. Data were analyzed using Fisher's exact test and the Kruskal-Wallis test, with significance set at $p<0.05$.
Results: Both groups demonstrated comparable clinical characteristics with similar average ages (49.65 years in the implant group and 49.12 years in the lipofilling group, $p=0.497$). No statistically significant differences were found in BMI, comorbidities, smoking habits, or clinical staging. The prosthesis group had a significantly shorter hospital stay (2.2 vs. 2.8 days, $p<0.001$) with no significant increase in operative time. Notably, the implant group exhibited a rate of capsular contracture (25.7%) and unplanned implant removal (17.1%). Overall, 37.1% of patients undergoing LDMF with prosthesis experienced implant-related complications. Minor complications, specifically seroma formation, were common but statistically similar across groups. Importantly, fat grafting required fewer additional surgeries to complete the breast reconstruction process compared to implant-based reconstructions.
Conclusion: The LDMF with fat grafting presents a reliable, lower-complication alternative to implant-assisted reconstructions in immediate breast reconstruction following mastectomy. This technique demonstrates significant promise as a new standard in reconstructive breast surgery.

Keywords: Breast reconstruction; Latissimus dorsi flap; Lipofilling.

IMPACT OF SHORT-DURATION PHYSICAL EXERCISE ON THE UPPER LIMB OF WOMEN TREATED FOR BREAST CANCER. BLUE FLOWER PROJECT

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Objectives: To evaluate the impact of short-duration physical exercise on quality of life and functionality, range of motion, and upper limb volumetry in women treated for breast cancer.
Methodology: This was a prospective cohort study. Women with a diagnosis of breast cancer who had completed cancer treatment were included. The intervention lasted 24 weeks, with a progressive exercise protocol using body weight, six days per week, lasting 12 minutes per day. Activities were performed in person in groups once a week and individually through a specific APP from the Blue Flower Project five times a week. Variables assessed: 1. Quality of life related to upper limb dysfunctions (DASH), shoulder functionality (goniometer / BAIOBIT®),subclinical arm volume/lymphedema, body composition (bioimpedance / inBody 770®). All assessments were conducted at baseline, at 3 months, and at 6 months. Repeated measures ANOVA was applied. A significance level of 5% ($p < 0.050$) was assumed for statistical significance.
Results: Of the 56 women who started the program, 34 completed the 24 weeks. The mean age was 57 (±8) years. There was a significant improvement in quality of life related to upper limb dysfunction measured by the DASH ($p = 0.001$) and in the range of motion for flexion ($p = 0.017$), adduction ($p = 0.007$), abduction ($p = 0.005$), medial rotation ($p = 0.011$), and lateral rotation of the shoulder ($p = 0.01$). Patients also showed a reduction in upper limb volumetry measured by tape ($p = 0.017$) and in lean muscle mass of the arms assessed by bioimpedance ($p = 0.006$).
Conclusion: Daily physical activity for 12 minutes had a significant impact on quality of life related to upper limb functionality, range of motion in all movements and a reduction in arm volumetry in women treated for breast cancer.

Keywords: breast cancer; lymphedema; physical activity; quality of life

THE EFFECTS OF RESISTANCE TRAINING VS. COMBINED TRAINING ON THE HEALTH-RELATED QUALITY OF LIFE LEVELS OF BREAST CANCER PATIENTS UNDERGOING NEOADJUVANT CHEMOTHERAPY

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Objectives: To compare the effects of Resistance Training (RT), Combined Training (CT) and Control Group (CON) on the Health-Related Quality of Life (HRQoL) of breast cancer patients undergoing neoadjuvant chemotherapy.
Methodology: A randomized clinical trial (Brazilian Registry of Clinical Trials No. 16497) was conducted with 19 women undergoing neoadjuvant chemotherapy, distributed in RT (n = 6; age: 44.33 ± 5.50), CT (n = 6; age: 43.80 ± 8.64) and CON (n = 6; age: 40.42 ± 7.96). The RT group performed Resistance Training, while the CT group performed the same Resistance Training protocol adding an Aerobic Training session at the end. Both groups (RT and CT) performed physical exercise sessions once a week for 12 weeks. The CON group received only usual care. HRQoL was assessed by the Functional Assessment of Cancer Therapy (FACT-B). Data normality was analyzed by the Kolmogorov-Smirnov test. A one-way ANOVA was performed for parametric data to compare groups at baseline. Finally, a factorial ANOVA with repeated measures was conducted to evaluate the effects of group, time, and group*time interaction. The analysis followed the intention-to-treat (ITT) principle, so that all randomized participants were included in the analysis, regardless of protocol adherence or data completeness. The study was approved by the Ethics Committee of UFG (CAAE: 50717115.4.0000.5083).
Results: One-way ANOVA showed that the groups had similar HRQoL scores at baseline (p = 0.93). The factorial ANOVA did not detect significant effects for Group (p = 0.87), Time (p = 0.59), or Group*Time interaction (p = 0.87), indicating that HRQoL levels did not change throughout the intervention, and were not influenced by the different training or control protocols.
Conclusion: There were no significant changes in HRQoL levels in the TR, TC and CON groups after 12 weeks of physical exercise during neoadjuvant chemotherapy treatment.

Keywords: Keywords: cancer; sedentary; physical exercise

UTILIZING MACHINE LEARNING TO IDENTIFY BIOMARKERS OF CHEMORESISTANCE IN BREAST CANCER: A COMPLEMENTARY ANALYSIS WITH IN VITRO RESISTANCE PLATFORMS

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Objectives: The aim is to use a machine learning algorithm to identify biomarkers of resistance to neoadjuvant chemotheraphy (NACT) in breast cancer (BC) and validate these findings in a preliminary patient cohort comparing results with an in vitro resistance platform.
Methodology: We analyzed clinicopathological data from BC samples before NACT using public datasets and a proprietary database. Differential analyses compared patients with residual disease (RD) versus pathological complete response (pCR) to NACT. We employed the XGBoost algorithm, a tree-based machine learning technique, and SHAP for interpretation. Additionally, we collected and cultured tumor samples from patients with primary invasive BC who were referred to NACT in a chemoresistance platform, testing with cytotoxic drugs to classify the tumors based on cell viability.
Results: These datasets included 1,012 patients exhibiting heterogeneous data. The XGBoost algorithm achieved 82% accuracy in classifying samples into pCR and RD, with SHAP analysis highlighting age, estrogen receptor status, and grade as key resistance predictor. Among the 10 patient samples, five patients achieved pCR, one has a good response with microinvasion, and four presented poor responses. In the chemoresistance platform, patients with pCR exhibited low resistance to the drugs used in chemotherapy and those with poor responses demonstrated high rates of intermediate-to-high resistance to the drugs already used. Distinct resistance patterns to treatments not used in clinics were observed, suggesting these drugs could be alternative treatment options. The algorithm predicted NACT response with 81.8% accuracy in this cohort.
Conclusion: These findings highlighted the capacity of the XGBoost algorithm in predicting BC resistance, and in combination with chemoresistance platform allows the development of personalized therapeutic strategies.

Keywords: Breast neoplasms, neoadjuvant chemotherapy, drug resistance, machine learning

EFFICACY AND SAFETY OF CAPIVASERTIB FOR BREAST CANCER PATIENTS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF RANDOMIZED CONTROLLED TRIALS

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Objectives: Capivasertib, an oral AKT inhibitor, has shown potential in treating breast cancer (BC) by targeting the PI3K/AKT pathway. This meta-analysis aims to assess the efficacy and safety of capivasertib in BC by summarizing high-quality evidence from randomized controlled trials (RCTs).
Methodology: PubMed, Embase, and Cochrane databases were searched to identify RCTs evaluating capivasertib, an oral inhibitor of all three isoforms of the serine/threonine kinase AKT, in patients with BC. The outcomes of interest included overall survival (OS), progression-free survival (PFS), objective response rate (ORR), and grade 3–5 Adverse Events. When possible, subgroup analyses were performed for patients with and without PIK3CA/AKT1/PTEN alterations. Data pooling was performed using a random-effects model. Statistical analyses were conducted using the "meta" and "metaprop" packages in RStudio.
Results: A total of 631 studies were screened. Four RCTs with a total of 548 patients were included in this meta-analysis. Among these, 124 patients received Capivasertib + paclitaxel, while 424 patients received Capivasertib + fulvestrant. A total of 236 patients were part of the PIK3CA/AKT1/PTEN-altered subpopulation, while 243 patients were in the non-altered subpopulation. For PFS, the capivasertib group demonstrated a Hazard Ratio (HR) of 0.69 (0.54-0.89; I^2=64%, p<0.01). For OS, the HR was 0.67 (0.50-0.89; I^2=0; p<0.01). No statistically significant results were observed in the subgroup analysis of PIK3CA/AKT1/PTEN mutations for PSF or OS. The ORR was 0.34 (0.20-0.52, I^2=90%) for the overall population and 0.40 (0.23-0.60, I^2=83.2) for patients with PIK3CA/AKT1/PTEN alterations. Furthermore, the incidence of adverse events of grade ≥3 was 54% (43%-65%, I^2=82.7%).
Conclusion: This meta-analysis supports the efficacy of capivasertib in improving OS and PSF in BC patients. However, the high rate of grade 3–5 adverse events suggests the need for careful monitoring. Future research should focus on reducing side effects and exploring capivasertib's effects in specific molecular subgroups.

Keywords: Breast Neoplasms, Progression-Free Survival, Survival

THE ROLE OF LIQUID BIOPSY IN BREAST CANCER SCREENING AND MONITORING : A SYSTEMATIC REVIEW OF LITERATURE

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Objectives: This study evaluated the potential of liquid biopsy for breast cancer early detection, tumor monitoring, and personalized treatment, by analyzing circulating biomarkers. It also investigated its ability to reduce invasive procedures and to expand diagnostic access in low-resource settings.
Methodology: This is a systematic review of the literature that followed the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, and that was registered at PROSPERO, under CRD420251019679. The PubMed database was used to search operators “liquid biopsy” AND “breast cancer.” The applied filters were “last 10 years”, “free full text”, “humans”, and “women”. PICO criteria were used as follows: Participants: women with breast cancer; Intervention: liquid biopsy for screening and monitoring breast cancer, analyzing circulating tumor DNA (ctDNA), circulating tumor cells (CTCs), microRNAs, and extracellular vesicles (EVs); Comparison: conventional diagnostic and monitoring methods; Outcome: potential of liquid biopsy for early detection, monitoring, and reduction of invasive procedures. Out of 212 articles identified and reviewed, 152 were included after applying eligibility criteria.
Results: The most frequent biomarkers were ctDNA, CTCs, microRNAs, and EVs, that showed potential clinicalimportance. CtDNA, the most validated marker, correlated with tumor burden, treatment resistance mutations, and prognosis, particularly with ESR1 and PIK3CA mutations linked to endocrine resistance. High CTC counts associated with poor prognosis and increased metastatic risk. Exosomal microRNA signatures improved diagnostic accuracy, especially with CA 15-3 and CEA. Multi-omics approaches combining miRNA and ctDNA show >90% sensitivity in early detection. Challenges included low sensitivity in early-stage tumors, tumor heterogeneity, and financial cost.
Conclusion: Liquid biopsy is a less invasive alternative for breast cancer screening and monitoring, improving disease stratification accuracy. Circulating tumor DNA detects cancer at different stages and identifies biomarkers for personalized treatment. By reducing invasive biopsies, it enhances quality of life and adherence, especially in resource-limited settings.

Keywords: Breast Cancer; Cancer Screening Test; Circulating Tumor DNA; Liquid Biopsy; Tumor Biomarkers.

EVALUATION OF THE IMPACT AND EVOLUTION OF COMMUNITY HEALTH AGENTS (CHAS) IN EARLY BREAST CANCER DETECTION IN THE ITABERAÍ PROJECT, GOIÁS

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Objectives: The objective is to assess the impact and evolution of the participation of Community Health Agents (CHAs) in the early detection of breast cancer in the Itaberaí Project, Goiás, through their adherence and performance.
Methodology: The methodology is based on structured training for CHAs, including educational activities, practical simulations, and constant supervision, ensuring greater confidence in performing the examination and improving communication skills. Additionally, this strategy has contributed to enhancing the patient care flow, strengthening professional confidence, and promoting more humanized and effective healthcare.
Results: The results indicate a positive impact, with improved disease identification and increased access for women to appropriate healthcare. In 2022, initial resistance was observed among some professionals 24 (54.1%) due to insecurity in performing the breast physical examination and lack of knowledge about the benefits of the initiative. However, with continuous training, adherence significantly increased 9 (21.4%). Statistical analyses using the chi-square test demonstrated a significant difference between initial resistance and adherence after training (χ^2 = 14.86, p-value = 0.0001). Between 2024 and 2025, most CHAs are more committed and aware of the importance of their role in prevention. Cycle 1 of the project (2022-2024) was structured into three stages, allowing for a gradual improvement in the strategy. Initially, the project included eight Basic Health Units (UBSs), expanding to ten, with the participation of 76 CHAs, divided into a control group (CG) 34 (44.7%) and an intervention group (IG) 42 (55.3%). In the IG, six (14.3%) male CHAs did not perform the examination, and two (4.8%) female CHAs chose not to, with one (2.4%) later adhering after training and professional support.
Conclusion: The growing adherence of CHAs reinforces the importance of training and confirms the effectiveness of the initiative, establishing the Itaberaí Project as a model for primary care, prevention, and community healthcare, highlighting its positive impact on public health.

Keywords: Community Health Agent (CHA), Breast Cancer, Impact, Early Cancer Detection.

STAGE I HER2-POSITIVE BREAST CANCER - IS SYSTEMIC THERAPY REQUIRED?

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Objectives: Recent SEER data suggest that pts with tumors ≤1 cm achieve excellent outcomes regardless of CT use. This study evaluates the clinical characteristics, treatment patterns and outcomes of patients with HER2+ stage I breast câncer (BC).
Methodology: We evaluated a cohort of stage I HER2+ BC patients treated between 2008–2023 at a large cancer center in Brazi, assessing PFS based on anti-HER2 adjuvant therapy use and associated factors via Cox regression.
Results: A total of 115 pts with stage I HER2+ BC were identified, with a median age of 55 years (range 22– 80). Most tumors were pT1c (65.7%), while 14.9% were pT1mic/pT1a and 19.2% were pT1b. Tumor grade distribution was: 8.3% grade 1, 52.3% grade 2, 39.4% grade 3. Additionally, 78.3% had high Ki67 (> 20%), 65.8% were estrogen receptor (ER)-positive, and 51.8% were progesterone receptor (PR)-positive. Systemic therapy with CT plus trastuzumab (Ch+T) was administered to 93 patients (80.8%). No significant diferences in baseline characteristics were observed between pts who received or did not receive Ch+T, except for tumor stage. Specifically, 27.7% of patients with pT1mic/pT1a, 72.7% with pT1b, and 94.7% with pT1c received Ch+T (P<0.001). After a median follow-up of 80 months, 8 recurrences and 5 deaths (2 unrelated to BC) were recorded. Five new primary non-breast tumors were identified. The 7-year PFS rate was 93.3% for patients who received Ch+T and 95% for those who did not (HR 2.15, 95% CI 0.27–17.02, P=0.467). In Cox regression, no factors, including tumor stage, grade, Ki67 index, ER/PR expression and systemic treatment, were associated with recurrence risk.
Conclusion: Pts with HER2+ stage I BC have an excellent prognosis, with low recurrence rates. These findings align with SEER data, supporting de-escalation strategies. Larger studies are needed to confirm outcomes of subcentimetric tumors not receiveing systemic therapy.

Keywords: Breast Neoplasms; Receptor, ErbB-2

PROGNOSTIC IMPACT OF REAL-WORLD IMMUNOHISTOCHEMICAL CHANGES IN BREAST CANCER TREATED WITH NEOADJUVANT CHEMOTHERAPY

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Objectives: To evaluate the rate and types of immunohistochemical (IHC) changes after neoadjuvant chemotherapy (NAC) and their influence on disease-free survival (DFS) and overall survival (OS) in breast cancer patients, with a focus on conversions such as HR+/HER-2+ to HR-/HER-2- and their implications for treatment adjustments.
Methodology: This retrospective cohort study included 369 female patients aged 18 years or older with non-metastatic breast cancer treated with NAC between January 2011 and January 2023. Patients who did not achieve complete pathological response were evaluated for changes in IHC profiles, including hormone receptor (HR) status, HER-2 expression, and Ki-67 index. Prognostic outcomes were assessed using Kaplan-Meier survival analysis and multivariate Cox regression models. This study was approved by the Research Ethics Committee of Hospital do Servidor Publico Estadual (CAAE 80127724.1.0000.5463) through Plataforma Brazil. Due to its retrospective nature, the requirement for informed consent was waived, ensuring the confidentiality and anonymity of patient data through record anonymization.
Results: IHC changes were observed in 41.7% of patients. Among those initially classified as HR-/HER-2-, 50.9% gained HR expression, and 14.1% acquired HER-2 expression. In HR+/HER-2+ cases, 70.8% experienced a loss of HER-2 expression. Patients with HER-2+ tumors exhibited more frequent IHC changes compared to HER-2- cases ($p < 0.0001$). After a median follow-up of 47.7 months, local recurrences occurred in 10.3% of patients, distant metastases in 29.5%, and 25.5% had died. Patients with IHC changes demonstrated significantly worse DFS and OS ($p = 0.002$), with the poorest outcomes associated with conversion to HR-/HER-2- ($p < 0.001$).
Conclusion: Post-NAC IHC changes are common and associated with poor prognosis, especially in patients losing HR and HER-2 expression. Monitoring IHC shifts is critical for guiding personalized treatment and improving prognostic evaluation.

Keywords: Breast cancer, neoadjuvant chemotherapy, immunohistochemical profile, hormone receptors, HER-2.

PROGRESSION-FREE SURVIVAL AS A SURROGATE ENDPOINT FOR OVERALL SURVIVAL IN ANTIBODY-DRUG CONJUGATE TRIALS FOR ADVANCED BREAST CANCER: A SYSTEMATIC REVIEW AND META-ANALYSIS

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Objectives: To evaluate the validity of progression-free survival (PFS) as a surrogate endpoint for overall survival (OS) in randomized controlled trials (RCTs) assessing antibody-drug conjugates (ADCs) in advanced breast cancer.
Methodology: A systematic review and meta-analysis were performed following PRISMA and ReSEEM guidelines. Searches were conducted in PubMed, Embase, and Cochrane databases, including conference proceedings up to February 2024. Linear regression models weighted by trial size assessed trial-level correlation between hazard ratios (HRs) for PFS and OS. Surrogacy strength was classified based on the coefficient of determination (R^2): strong (≥0.7), moderate (0.5–0.69), or weak (<0.5).
Results: Fifteen RCTs involving 7,360 patients were included. Overall, a moderate correlation between PFS and OS was identified (R^2 = 0.61; 95% CI 0.29–0.94). Subgroup analyses revealed variability, with a notably weak correlation in HER2-positive breast cancer (R^2 = 0.31; 95% CI 0.00–1.00). Trials with fewer participants (≤529) exhibited stronger correlations (R^2 = 0.74; 95% CI 0.35–1.00) compared to larger studies (>529 participants, R^2 = 0.36; 95% CI 0.00–1.00). The surrogate threshold effect for meaningful OS prediction was identified as a 25% reduction in the hazard ratio for PFS across trials.
Conclusion: PFS shows moderate surrogacy for OS in ADC trials for advanced breast cancer, with substantial variation across subgroups. Given the weak correlation in HER2-positive disease, reliance solely on PFS might misrepresent true clinical benefit. OS should remain the primary endpoint in trials evaluating ADC efficacy.

Keywords: Breast cancer, immunoconjugates, meta-analysis

MICRORNA-21 (MIR-21) EXPRESSION AND ITS ASSOCIATION WITH RESISTANCE TO NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER: PRELIMINARY RESULTS

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Objectives: Evaluate the expression of miR-21 in the plasma of breast cancer patients and investigate its potential association with resistance to neoadjuvant chemotherapy.
Methodology: All breast cancer patients with an indication of neoadjuvant chemotherapy and submitted to surgical treatment at the Breast Unit of Hospital de Clinicas de Porto Alegre between 2023 and 2024 were selected. The chemotherapy resistance was determined through clinical outcomes (e.g., pathological complete response vs. residual disease). Patients were grouped based on their pathological response to chemotherapy: complete response, partial response, or no response. mi R-21 was isolated from patients plasma colected before chemotherapy. The expression of miR-21 was quantified by quantitative reverse transcription polymerase chain reaction (qRT-PCR). Evaluation of the association between miR-21 expression and chemotherapy response was performed with Student's t-test or ANOVA. Tumors were classified into high- and low-expressing tumors, based on the median miR-21 expression values Statistical analysis was performed using IBM SPSS Statistics version 18.
Results: Patients with elevated plasma miR-21 levels were significantly more likely to belong to the no-response group, accounting for 70% of the non-responders. In contrast, lower miR-21 levels were associated with a 2.6 times higher probability of partial response ($P < 0.001$).
Conclusion: Our preliminary results suggest that miR-21 expression in plasma could serve as a potential biomarker for predicting resistance to neoadjuvant chemotherapy in early breast cancer patients. Further studies are needed to validate these findings and explore the role of miR-21 in chemotherapy resistance.

Keywords: neoadjuvant chemotherapy, Breast cancer, Plasma microRNA.

IMMUNE-RELATED ADVERSE EVENTS AMONG PATIENTS WITH EARLY-STAGE TRIPLE-NEGATIVE BREAST CANCER TREATED WITH PEMBROLIZUMAB PLUS CHEMOTHERAPY: REAL-WORLD DATA FROM THE NEO-REAL/GBECAM 0123 STUDY

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Objectives: Pembrolizumab combined with neoadjuvant chemotherapy is the standard of care for stage II-III triple-negative breast cancer (TNBC) based on the KEYNOTE-522 trial. However, 13% of patients experienced immune-related adverse events (irAEs) of grade ≥3 in the trial. This study aims to describe patterns of irAEs in a real-world scenario during treatment with pembrolizumab for early-stage TNBC.
Methodology: Patients treated with neoadjuvant pembrolizumab plus chemotherapy across ten Brazilian cancer centers were evaluated in the Neo-Real/GBECAM0123 study. This analysis focuses on irAE evaluation, including time to onset, management, and association between irAEs and pathological complete response (pCR). Logistic regression analyses were conducted to evaluate possible clinical predictors of irAEs. The irAE-free survival was assessed using the Kaplan-Meier method.
Results: A total of 368 patients were included. Overall, 31% of patients (n=114) presented with any grade irAEs. Most of irAEs (72.8%) occurred during the neoadjuvant phase while 28.1% happened during the adjuvant period. The most frequent irAEs were endocrine (12.8% of the entire cohort), cutaneous (7.6%) and gastrointestinal (7.1%). A total of 50 patients (13.6%) experienced grade ≥3 irAEs, predominantly gastrointestinal (32%). The median duration of irAEs was 29.5 days (range 2-418). 58 patients (56%) needed corticosteroids, and 2 patients required additional immunosuppressive therapy. Immunotherapy rechallenge was possible in 54% of the cases; permanent discontinuation of pembrolizumab was necessary for 16%. No significant association was observed between irAEs and clinic-pathologic features nor pCR status.
Conclusion: In this real-world analysis, we observed a similar incidence of irAEs as reported in the KEYNOTE-522 trial. Most patients experienced resolution of their irAEs, but some required permanent discontinuation of pembrolizumab. Additionally, there were lasting dysfunctions, particularly endocrine, demanding lifelong support. Careful monitoring and management of these events are essential. Identifying patients who do not require pembrolizumab remains a challenge.

Keywords: triple-negative breast cancer; immunotherapy; immune-related adverse events.

GRADE 1 HORMONE RECEPTOR-POSITIVE EARLY BREAST CANCER – IS ONCOTYPE DX NECESSARY?

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Objectives: Oncotype Dx (ODX) genomic risk score (RS) is a key tool for guiding adjuvant chemotherapy decisions in early-stage hormone receptor-positive (HR+), HER2-negative breast cancer (BC). Since some genes assessed in RS tests are linked to proliferation, its utility in low-proliferation tumors, such as histologic grade 1 (G1) or those with low Ki67-index, remains uncertain. We aimed to access ODX role in G1 tumors.
Methodology: GBECAM-0520, a multicentric real-world data (RWD) study, assessed ODX's usefulness in G1 HR+, HER2-negative BC. Conducted across nine Brazilian cancer centers (2009–2024), key endpoints included the prevalence of high genomic RS and invasive disease-free survival (IDFS).
Results: Among 1059 HR+, HER2-negative BC patients undergoing ODX, 194 had G1 tumors. Median age was 51 years (range 31–72), and 49% were premenopausal. Most had non-special type carcinoma (80%) and Ki67 < 20% (76%). Tumor stages were 32% T1b, 44% T1c, and 14% T2, while nodal status was 75% N0, 9% N1mic, and 15% N1. Based on the Adjuvant! algorithm, 90% (n=174) had low clinical risk. ODX results showed 22% low RS, 71% intermediate RS, and 6% high RS. With a median 51-month follow-up, six patients recurred—five locoregionally and one distantly; one died without recurrence. All recurrences occurred in the intermediate RS group; no events were seen in the high-risk group. Recurrence rates were 3.4% for Ki67 < 20% and 4.9% for Ki67 ≥ 20%. The estimated 5-year IDFS rate was 98.4% (95% CI 93.7%–99.6%).
Conclusion: For G1 BC with low clinical risk, ODX's utility and cost-effectiveness may be limited. Careful clinical risk assessment is crucial for optimizing genomic RS testing and resource allocation.

Keywords: Breast Neoplasms, Genomics, Adjuvant Chemotherapy, Neoplasm Grading

GENETIC SCREENING OF PATHOGENIC VARIANTS IN RELATIVES OF PATIENTS WITH HEREDITARY BREAST AND OVARIAN CANCER IN THE STATE OF GOIÁS: TOOL FOR EARLY DIAGNOSIS AND PREVENTION OF BREAST AND OVARIAN CANCER IN THE GOIÁS TODO ROSA PROGRAM

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Objectives: Approximately 10% of breast and ovarian cancer cases are hereditary. Genetic screening of family members of patients with germline pathogenic variants is essential for prevention, early diagnosis, and personalized therapeutic actions. Identifying pathogenic variants allows screening of family members at risk. This strategy, already incorporated into the Unified Health System in Goiás, strengthens public policies and enables prevention and precision oncological care. This study aimed to identify germline pathogenic variants and their prevalence in family members of patients with pathogenic variants.
Methodology: A total of 305 patients who met the National Comprehensive Cancer Networking criteria for suspected hereditary breast and ovarian cancer syndromes were evaluated and were referred to the Human Genetics Center/UFG by reference hospitals of the Unified Health System (SUS) of the State of Goiás. After pre-genetic counseling and application of the Free and Informed Consent Form, 4 mL of venous blood were collected for DNA extraction used for next-generation sequencing with the Oncomine™ BRCA Expanded panel kit and submitted to sequencing on the Ion Torrent platform.
Results: Of the 308 patients evaluated, 5.8% (18/308), 1.8% (6/308) and 3.9% (12/308) were positive for some pathogenic variant in the BRCA1 BRCA2 and TP53 genes, respectively. Three families were investigated for the variant in the TP53 gene and two families with a pathogenic variant in the BRCA1 and 2 genes. The variants c.1010 G>A (6/7) and c.455C>T (1/7) were identified. Within the families with variants, it was analyzed that 47.05% (8/17) of the tested relatives were also positive cases, with one case of cancer followed by death.
Conclusion: Given these results, genetic screening of relatives of patients with variants in BRCA1/2 genes enables prevention, early diagnosis and personalized approaches, expanding the impact of the healthcare network in Goiás.

Keywords: prevention; germline genetic panel; Li-Fraumeni syndrome; TP53; BRCA1; BRCA2

OMISSION OF AXILLARY LYMPH NODE DISSECTION IN CLINICALLY NODE-NEGATIVE BREAST CANCER WITH SENTINEL NODE METASTASIS: A SYSTEMATIC REVIEW AND META-ANALYSIS OF NONINFERIORITY RANDOMIZED CLINICAL TRIALS

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Objectives: To evaluate the de-escalation of axillary lymph node dissection (ALND) in clinically node-negative (cN0) breast cancer (BC) with sentinel node (SN) metastasis.
Methodology: A systematic review and meta-analysis (CRD420251000419) was conducted following PRISMA guidelines and the PICOTS framework. We searched PubMed, Embase, and Cochrane databases for randomized clinical trials (RCTs) with ≥5-year follow-up that evaluated ALND omission in cN0 BC with positive SN, assessing overall survival (OS), disease-free survival (DFS), locoregional recurrence (LRR), or complications. Pooled hazard ratios (HRs) and risk ratios (RRs) were calculated using R software, with 95% confidence intervals (CIs). Substantial heterogeneity was defined as $I^2 > 25\%$. A margin of 1.25 was set to assess noninferiority.
Results: Eight RCTs were included, comprising 7,798 patients (no ALND: 50.6%; ALND: 49.4%). Omitting ALND was noninferior for OS (HR 0.96; 95% CI, 0.75–1.23; $I^2 = 12.9\%$; p = 0.731; p for noninferiority = 0.0174) and DFS (HR 1.02; 95% CI, 0.89–1.16; $I^2 = 21.6\%$; p = 0.791; p for noninferiority = 0.0013), but inferior for LRR (HR 1.00; 95% CI, 0.76–1.32; $I^2 = 20.6\%$; p = 0.999; p for noninferiority = 0.0578). Sensitivity analysis showed similar results for 10-year endpoints. Omitting ALND significantly reduced the risk of lymphedema (RR 0.33; 95% CI, 0.19–0.59; $I^2 = 35.9\%$; p = 0.009). Subgroup analysis showed no significant DFS differences by estrogen receptor status (positive vs. negative, p = 0.1656), number of metastatic SNs (1 vs. ≥2, p = 0.4632), tumor size (<2 vs. ≥2 cm, p = 0.8169), and age (<65 vs. ≥65 years, p = 0.9971).
Conclusion: Omitting ALND provides equivalent OS and DFS while reducing lymphedema, although noninferiority in LRR was not demonstrated.

Keywords: Sentinel Lymph Node Biopsy; Breast Neoplasms; Lymphatic Metastasis; Meta-Analysis.

A COMPREHENSIVE META-ANALYSIS AND SYSTEMATIC REVIEW OF SAME-DAY DISCHARGE PROTOCOLS FOLLOWING MASTECTOMY WITH IMMEDIATE BREAST RECONSTRUCTION IN SURGICAL ONCOLOGY

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Objectives: This meta-analysis and systematic review aim to update the evidence on the safety, feasibility, and outcomes of Same-Day Discharge (SDD) after mastectomy with immediate breast reconstruction. We will identify factors influencing SDD by reviewing variables such as age, comorbidities, reconstruction type, and intraoperative and postoperative management. Key outcomes compared between SDD and overnight hospitalization include complication rates, readmissions, pain control, and patient satisfaction. This study seeks to provide evidence on the effectiveness of SDD protocols and their impact on clinical practice, assessing whether SDD can offer a safe, effective alternative to traditional hospitalization for selected patients.
Methodology: The analysis of 61,537 patients across 8 studies concluded that SDD after mastectomy with immediate reconstruction did not increase complication, readmission, or reoperation rates. The meta-analysis revealed a moderate and statistically significant effect favoring SDD, with an effect size of 0.193 (95% CI: 0.034–0.352; p = 0.017). The I2 statistic of 0% indicated no heterogeneity, reinforcing the robustness of the results. No publication bias was detected.
Results: Traditionally, patients remain hospitalized for postoperative monitoring, but advancements in anesthesia and surgery have made SDD an increasingly viable option. Studies suggest that SDD is safe and effective, with no significant increase in complications, readmissions, or reoperations compared to overnight stays. Patient selection is crucial, with factors such as comorbidities and reconstruction type influencing outcomes. Proper pain management and follow-up care are essential for success. Standardizing protocols for SDD could help minimize variability in outcomes and ensure consistent patient care.
Conclusion: The findings of this review suggest that SDD after mastectomy with IBR is a safe, feasible, and advantageous strategy for selected patients. The implementation of this protocol can optimize hospital resources without compromising patient safety and clinical outcomes. It is possible to anticipate that this approach is a reality.

Keywords: Discharge on the same day; Breast reconstruction; Mastectomy; Immediate reconstruction;

IDENTIFYING PREDICTORS OF IMPLANT LOSS IN IMMEDIATE BREAST RECONSTRUCTION: INTEGRATING SURGICAL AND DOSIMETRIC FACTORS IN A LARGE-SCALE STUDY

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Objectives: This study aims to identify surgical and dosimetric predictors of implant loss and establish safety constraints for patients undergoing immediate implant-based breast reconstruction (IBBR) with postoperative radiotherapy (PORT).
Methodology: This retrospective cohort study included 292 patients who underwent IBBR followed by PORT between 2010 and 2022. Surgical techniques and radiotherapy protocols were assessed. Radiotherapy dosimetry focused on dose distribution within a 1 cm annular volume around the implant inside the Clinical Target Volume. Statistical analysis included chi-square, log-rank, and multivariate tests.
Results: All patients received PORT at 50 Gy in 25 fractions. Implant loss rate was 13%. Univariate analysis showed significant association between implant loss and postoperative complications, surgical reintervention, and clinical N staging ($p = 0.016$). Logistic regression identified postoperative complications (OR = 2.46, $p = 0.012$) and surgical reintervention (OR = 3.51, $p = 0.007$) as independent predictors of implant loss. Among complications, seroma was significant (OR = 2.71, $p = 0.042$). Anatomical placement significantly impacted loss rates, with 26% failure in prepectoral vs. 12% in subpectoral placement (OR = 2.46, $p = 0.035$). Dosimetric analysis showed correlation between implant loss and prosthesis volume receiving ≥108% of prescribed dose ($p = 0.048$) and the 1 cm periprosthetic annular volume receiving ≥108% ($p = 0.004$). ROC curve analysis identified a threshold of 4.57 cc for V108% in the annular region (AUC = 0.6459, sensitivity = 0.70, specificity = 0.57). Spearman's correlation showed a strong positive correlation between V108% in the prosthesis and annular region ($\rho = 0.682$)
Conclusion: Postoperative complications, surgical reintervention, and implant anatomical placement were independent predictors of implant failure. Dosimetric analysis showed that a V108% in the periprosthetic ring exceeding 4.57 cc increased the risk of implant loss, suggesting this as a valuable dosimetric constraint. These findings support more effective and safer treatment strategies, potentially transforming clinical practice

Keywords: Breast reconstruction, Predictive factors, Implant loss, Postoperative radiotherapy

OSTEORADIONECROSIS/OSTEOMYELITIS OF THE CHEST WALL ASSOCIATED WITH RADIOTHERAPY FOR BREAST CANCER

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Objectives: Evaluate the factors associated with the diagnosis and potential surgical treatments performed in patients with suspected osteoradionecrosis/osteomyelitis of the costal arches after breast cancer treatment.
Methodology: A systematic review of the literature, using the PICOS and PRISMA methodologies, carried out in two databases (PubMed and Lilacs), using the descriptors: breast neoplasms and (osteoradionecrosis or osteomyelitis). In addition, all cases treated in a tertiary oncology hospital over a 5-year period were evaluated. The study CAAE 81761124.9.0000.5105 was approved by the Research Ethics Committee.
Results: Osteoradionecrosis is an uncommon entity associated with breast cancer, with decreasing incidence. It can present as a local inflammatory process, skin ulceration, and bone changes, and may be associated with osteomyelitis. Clinical treatment is usually associated with surgical treatment. Of the 125 articles evaluated, 22 were included in the study. In the differential diagnosis with osteomyelitis, thoracic magnetic resonance imaging and triphasic scintigraphy are the main exams to be performed. In general, clinical treatment does not control the lesion, requiring debridement (with or without rib resection) which is associated with the use of flaps, and myocutaneous flaps are the most commonly used. In the service, two patients were treated, representing 0.07% of the cases treated, one of whom had previously undergone breast-conservative treatment. One patient were submitted to resection of the chest wall, and the two cases underwent reconstruction with latissimus dorsi flap.
Conclusion: In the presence of ulceration/osteoradionecrosis, a careful evaluation should be performed to rule out the presence of osteomyelitis. Clinical treatment is generally not effective. Surgical debridement with resection of the affected area, antibiotic therapy and use of myocutaneous flaps are good options for early recovery and local control.

Keywords: breast neoplams; osteoradionecrosis; osteomyelitis; surgical flaps; chest wall

APPROVED PAPERS FOR E-POSTER

BREAST CANCER SCREENING INDICATORS IN USERS OF THE UNIFIED HEALTH SYSTEM (SUS) AFTER THE IMPLEMENTATION OF THE ITABERAÍ PROJECT

Marcella Rezende de Mendonça[1], Ruffo Freitas-Júnior[2], Danielle Cristina Netto Rodrigues[2], Christina Souto Cavalcante Costa[1], Luana Marques Novato[2], Isabel Cristina da Silva[3], Regina Lopes da Silva[4], Rosangela da Silveira Corrêa[2]

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Objectives: To evaluate the mammographic screening indicators in SUS users residing in the municipality of Itaberaí, as well as to compare the coverage before and after three years of the implementation of the Itaberaí Project.
Methodology: Data were collected from the records of the Regulation Sector and the Mammography Service of the municipality. Indicators were evaluated regarding: clinical indication, age group, interval between the exam request and the report release, and the results of the exams according to the BIRADS® classification.
Results: In 2021, 359 mammograms were performed, with an estimated coverage of 4.3%. In 2022, 770 were performed (10%), in 2023, 951 (12.7%), and in 2024, 2,217 mammograms were performed, showing a statistically significant increase of 29.6% ($p<0.05$). Indicators for 1,339 (60%) of the exams performed in 2024 were calculated. Regarding clinical indication, 86.5% were for screening, and 13.5% were for diagnostic purposes. The average age was 50 years, with the highest prevalence in the 50-69 years age group (54.1%), followed by the 40-49 years age group (33.8%). Among the screening mammograms, the BIRADS®0 rate was 17.5%, BIRADS®1 was 7.0%, BIRADS®2 was 74.2%, BIRADS®3 was 0.22%, BIRADS®4 was 0.5%, and BIRADS®5 was 0.07%. For the total number of mammograms, the average time between the request and the report issuance was 19 days, with a median of 13 days, and in 42.1% of the exams, the time was up to 10 days. Of the exams performed, 13.8% were available to the woman in the mammography service.
Conclusion: There was a significant increase in mammographic coverage for women after the implementation of the Itaberaí Project. It was observed that the time between the request and the report needs to improve as a quality measure. Strategies are needed to ensure that women seek their exam in the mammography service. Support: Natura-Avon Institute, Libbs Pharmaceutical
Keywords: Breast câncer; Screening; Mammography; Health Status Indicators

ADHERENCE TO ENDOCRINE THERAPY AND SEXUAL DYSFUNCTION IN PATIENTS OLDER THAN 65 YEARS OLD WITH EARLY ESTROGEN RECEPTOR-POSITIVE BREAST CANCER

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Objectives: Studies of adjuvant endocrine therapy (ET) for early-stage ER+ breast cancer have a suboptimal number of patients older than 65 years included. This study aims to evaluate adherence to adjuvant ET, quality of life (QOL) and sexual dysfunction in women >65 years old with early breast cancer.
Methodology: Women with early-stage ER+breast cancer on adjuvant ET for at least 6 months, were invited to participate of this study. Patients were stratified according to age <=65 y.o. and > 65 y.o. Adherence was assessed with Morisky Medication Adherence Scale (MMAS-8). QOL was assessed using EORTC QLQ C30 and BR-23 forms. Sexuality was assessed with the Female Sex Function Index Questionnaire.
Results: From June 2021 to March 2024, 774 women from 14 Brazilian institutions were recruited. Mean age was 62 y.o , mean tumor size was 2.24 cm, mean duration of ET was 3.2y. About 191 patients (24.7%) were older than 65y, 69.6% of them were high adherent to ET and 70.7% had sexual dysfunction. In comparison with women <=65 y.o, older women were associated with private healthcare insurance (p=0.003), living with no partner (p < 0.0001), lower level of education (p = 0.0009), had prior lumpectomy (p = 0.0017), prior sentinel node biopsy (p = 0.03), no prior chemotherapy (p < 0.0001), use of aromatase inhibitors (p < 0.0001). Patients older than 65 y.o. were more associated with higher adherence (p = 0.0009), and there was no difference in sexual dysfunction between the groups. Patients over 65 y.o. had higher QOL scores for Emotional, Cognitive and Social Functioning, Body Image and Future Perspective.
Conclusion: Patients older than 65 y.o had less aggressive treatments, better domains in QOL and higher adherence to ET than patients aged up to 65 y.o. In this context, sexual dysfunction affects women of both ages groups.

Keywords: Breast Cancer; GnRH; aromatase inhibitor; Adherence; Aging; Sexuality

ACCURACY OF MULTIDETECTOR COMPUTED TOMOGRAPHY (MDCT) WITH A DEDICATED PROTOCOL IN THE LOCOREGIONAL STAGING OF BREAST CANCER

Mariana Leticia Galupo[1], Soraia Quaranta Damião[1], Letícia Maria Mota Braga Cavalcante[1], Laura Sales de Carvalho Lima[1], Maria Eduarda Parada Vinhas[1], Vinicius Cardona Felipe[1], Bianca Miranda Lago[1], Almir Galvão Vieira Bitencourt[1]

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Objectives: To evaluate the accuracy of multidetector computed tomography (MDCT) with a dedicated protocol in locoregional breast cancer staging.
Methodology: Retrospective, single-center study that included female patients diagnosed with breast cancer who underwent contrast-enhanced MDCT for staging purposes. Patients who had undergone neoadjuvant chemotherapy were excluded. Some scans were performed using a conventional protocol, with patients in the supine position. In contrast, others were performed using a dedicated protocol in the prone position. MDCT results were compared to the surgical pathology findings (gold standard).
Results: 95 patients were included, mean age of 54 years (32–85). Most tumors were of no special type (66.3%) and luminal (86.3%). The majority of patients underwent breast-conserving surgery (58.9%) and sentinel lymph node biopsy (84.2%). Of the CT scans, 47 (49.5%) were performed in the supine position and 48 (50.5%) in the prone position, using the dedicated breast evaluation protocol. The primary tumor was identified on CT in 85 patients (89.5%), more frequently in prone-position scans (93.8% vs. 85.1%). Tumors most commonly appeared as masses on CT (68.4%) or masses associated with non-mass enhancement areas (11.6%). Tumor size assessed on prone-position CT showed a stronger correlation with the tumor size in the surgical specimen ($r = 0.662$; $p < 0.001$), compared to the supine position ($r = 0.176$; $p = 0.298$). Prone-position CT showed a significant association with pathological analysis for the detection of multifocality/multicentricity (accuracy of 73%; $p = 0.032$) and the presence of metastatic axillary lymph nodes (accuracy of 75%; $p = 0.003$), while supine-position CT did not show a significant association.
Conclusion: MDCT with a dedicated protocol is a feasible method for evaluating breast lesions and axillary lymph nodes and can provide additional information for locoregional staging, especially in settings where breast MRI is not routinely performed.

Keywords: Breast cancer; Locoregional staging; Chest computed tomography.

VACUUM-ASSISTED BIOPSY IN THE ERA OF LOW-RISK DUCTAL CARCINOMA IN SITU ACTIVE MONITORING: REAL WORLD DATA AND IMPLICATIONS

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Objectives: This study evaluates vacuum assisted biopsy (VAB) as diagnostic test for LR-DCIS active surveillance in real-world clinical practice.
Methodology: Database analysis of 116 cancers [both invasive breast cancers (IC) and ductal carcinoma in situ (DCIS)] diagnosed by VAB submitted to standard surgical treatment with complete histological data from VAB and surgery from 04/13/2017 to 11/28/2020. The VAB results were matched to the surgical pathology, considered the gold standard. The pathological diagnoses were grouped into malignancies requiring guideline surgical treatment [DCIS with high risk (HR-DCIS) of progression to IC or IC] versus those eligible to alternative active surveillance (LR-DCIS). HR-DCIS/IC were considered positive while LR-DCIS negative results. VAB sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV), and accuracy were obtained.
Results: Mean age 55.6 [± 12.27]; mean IC size 7.14 [± 5.17]mm and 12.6 [± 11.63]mm for DCIS; 65.52% ultrasound guided (70/116) and 44.48% (46/116) stereotactic guided; 42.24% (49/116) masses, 26,72% (31/116) masses associated with calcifications and 31.03% (36/116) calcifications. Out of 116 malignancies diagnosed by VAB, 15 (12.9%) resulted LR- DCIS in the biopsy, 10 (8.6%) confirmed LR-DCIS in surgery, and 5 (4.3%) upgraded to HR-DCIS/IC in surgery. VAB showed 95.28% sensitivity, 100% specificity, PPV was 100%, and NPV 66.67%.
Conclusion: VAB LR-DCIS active monitoring would lead to a moderate overall reduction of short-term breast cancer surgical overtreatment in real world clinical practice.

Keywords: Breast cancer, Vacuum assisted biopsy, Enlarged Vacuum Assisted Biopsy, Vacuum Assisted Excision, DCIS, active monitoring.

HER2 STATUS AND TUMOR HETEROGENEITY IN INVASIVE BREAST CARCINOMAS: CLINICAL PATHOLOGICAL IMPACT

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Objectives: Assess the human epidermal growth factor receptor 2 (HER2) expression spectrum in primary invasive breast carcinoma (IBC), focusing on its heterogeneity and correlation with pathological factors, given its impact on prognosis and therapy resistance.
Methodology: A retrospective study reanalyzed HER2 IHC slides from primary IBC patients diagnosed and treated at São Paulo Federal University Hospital (2019-2023). Clinical data (age, laterality, tumor size, BI-RADS) were collected. HER2 slides were reviewed by three observers, following ASCO-CAP 2018 guidelines. Statistical analysis used SPSS Statistics 26.0.
Results: The study included 353 patients, with a mean age of 58. 191 cases (54.1%) were left-sided and 162 (45.9%) right-sided. BI-RADS categories 4 and 5 were most common. Of 164 patients with follow-up, 14 deaths occurred. Pathologically, 304 cases (86.1%) were no special type, and 26 (7.4%) were invasive lobular carcinoma. HER2 status showed 296 (83.9%) negative, 42 (11.9%) positive, and 15 (4.2%) HER2 2+. Of the negative cases, 235 were HER2 0+ and 61 were HER2 1+. HER2 intratumoral heterogeneity (ITH) was present in 66 cases (18.7%), with 34 (51.5%) showing 1+ as the primary score. HER2 positivity and intratumoral heterogeneity were associated with higher mortality (p=0.003 and p=0.001, respectively). HER2-positive tumors were larger than HER2-negative ones (31.3 mm vs. 25.6 mm, p=0.012), while ITH did not correlate with tumor size (p=0.165).
Conclusion: We conclude that ITH is prevalent in HER2 expression and should be addressed in pathology reports since it may play an additional role in tumor progression and drug response, especially in the antibody-drug conjugates scenario.

Keywords: Breast Neoplasms; Receptor, ErbB-2.

EXTREME ONCOPLASTY: EQUIVALENT TO OTHER TYPES OF PARTIAL AND TOTAL BREAST RECONSTRUCTION?

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Objectives: This study aimed to compare extrema oncoplasty (EO, partial breast reconstruction for tumors >5 cm or multicentric lesions) with standard oncoplasty (SO) for unicentric T1/T2 tumors, and extreme reconstruction (ER, total breast reconstruction for tumors >5 cm or multicentric lesions) with standard reconstruction (SR, total reconstruction for unicentric T1/T2 tumors).
Methodology: This retrospective cohort study included 917 women with breast cancer or phyllodes tumors who underwent partial or total breast reconstruction at least 6 months post-surgery and radiotherapy between March 2004 and April 2024. Clinical parameters, complications, surgical techniques, local recurrence rates, and survival were evaluated from medical records. Aesthetic outcomes were assessed prospectively using the Harvard scale, Breast-Q, and BCCT.core software after informed consent. The study was approved by the ethics committees, and data were analyzed with SPSS software.
Results: Among patients with extreme lesions, 138 (42.2%) underwent oncoplasty, compared to 386 (65.4%) in the standard group. Invasive ductal carcinoma was the most common histology (76.3%), and 8.1% had multicentric tumors. The EO group required more frequent axillary clearance, neoadjuvant chemotherapy, and more complex surgical techniques compared to SO. Complication rates in EO were similar to SO and significantly lower than in the ER group. Intraoperative margin evaluation was more common in EO (54.7%), with similar rates of positive or close margins across groups. Mean follow-up was 81.6 months. Reconstruction procedures were fewer in the conservative groups than in mastectomy groups. Local recurrence and overall survival rates were similar across all groups. Patients in conservative groups reported higher satisfaction with aesthetic outcomes and quality of life compared to mastectomy with reconstruction.
Conclusion: Extreme oncoplasty is a feasible, safe option for selected patients with locally advanced or multicentric breast cancer, offering superior aesthetic outcomes, higher patient satisfaction, and lower complication rates than total breast reconstruction, with similar oncologic results.

Keywords: Extreme oncoplasty, Mastectomy, Mammaplasty, Breast Cancer; Multicentric breast cancer, Quality of life, Survival rate

DIAGNOSTIC ACCURACY OF MRI FOR PREDICTING PATHOLOGICAL COMPLETE RESPONSE IN TRIPLE-NEGATIVE BREAST CANCER TREATED WITH NEOADJUVANT CHEMOTHERAPY AND IMMUNOTHERAPY

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Objectives: This study aims to assess the diagnostic performance of preoperative MRI in predicting pCR for patients with triple-negative breast cancer undergoing NAC with immunotherapy.
Methodology: Retrospective, single-center, IRB-approved study included female patients diagnosed with triple-negative no special type invasive breast carcinoma, eligible for NAC and immunotherapy, from February 2022 to January 2024.
Results: 52 patients were included, with a mean age of 46.1 years and a mean tumor size of 39 mm. Regarding treatment response, a high radiological complete response (rCR) rate was observed (84.6%). Among those with rCR, the majority showed a pCR on histopathological evaluation (33 patients, 84.6%), while 5.1% were classified as RCB I and 10.3% as RCB II. Among patients who had only a partial radiological response, 15.3% achieved pCR, 30.8% were classified as RCB I, 46.2% as RCB II, and 7.7% as RCB III, representing the subgroup with the highest residual tumor burden after neoadjuvant treatment. MRI sensitivity for predicting pCR was 94.3%, specificity was 64.7%, PPV was 84.6%, and NPV was 84.6%. MRI accuracy for predicting pCR was 84.6%. During the one-year follow-up, distant metastases occurred in three patients: two rCR (RCB 0 and RCB II) and one partial radiological response (RCB II). One patient died during follow-up, and no cases of locoregional recurrence were documented.
Conclusion: Our results show that MRI has an excellent diagnostic performance in predicting pCR in patients with triple-negative breast cancer treated with NAC associated with immunotherapy.

Keywords: breast cancer; magnetic resonance imaging; neoadjuvant chemotherapy; immunotherapy; pathologic complete response; radiologic complete response.

COST-EFFECTIVENESS ANALYSIS AND BUDGET IMPACT ANALYSIS OF NEXT-GENERATION SEQUENCING (NGS) PANEL INCLUDING BRCA1 AND BRCA2 GENES FOR WOMEN DIAGNOSED WITH NON-METASTATIC BREAST CANCER IN BRAZIL

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Objectives: This study aims to estimate both the cost-effectiveness and budget impact of using NGS sequencing panels with genetic counselling to detect BRCA1/2 mutations in women diagnosed with non-metastatic breast cancer, compared to no genetic testing, from the perspective of Brazil's Public Health System.
Methodology: A hybrid economic model (decision tree plus Markov model) simulated costs and outcomes over a 10-year horizon of NGS panels with genetic counselling to identify BRCA1/2 pathogenic variants in women diagnosed with non-metastatic breast cancer. The eligible population was estimated using the epidemiological method using national data identified in the literature. We estimated both the incremental cost-effectiveness ratio (ICER) per quality-adjusted life year (QALY) gained and the budget impact of adding NGS panels plus genetic counselling to identify pathogenic variants in BRCA1/2 in women diagnosed with non-metastatic breast cancer.
Results: Genetic testing for BRCA1/2 mutations combined with genetic counselling showed an incremental benefit of 0.044 QALYs gained at an additional cost of R$ 3.314,83 compared to no genetic testing and genetic counselling, resulting in an incremental cost-effectiveness ratio (ICER) of R$ 75.961,11 per QALY gained. Considering the expected number of women, the cumulative budget impact over five years with the availability of genetic testing for BRCA1/2 and genetic counselling would be R$ 31.104.761,08, compared to the current scenario (without BRCA1/2 test and genetic counselling).
Conclusion: Genetic testing for BRCA1/2 mutations combined with genetic counselling was cost-effective from the Brazilian public health system (SUS) perspective, with an ICER value below the established willingness-to-pay threshold of R$120,000.00/QALY.

Keywords: next-generation sequencing panels, breast cancer, BRCA mutations, cost-effectiveness analysis, budget impact analysis

IMMUNOEXPRESSION OF MARKERS RELATED TO THE HER2 PATHWAY IN CASES OF PURE POSITIVE HER2 BREAST CARCINOMA TREATED WITH TRASTUZUMAB

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Objectives: To evaluate immunoexpression of possible markers involved in the HER2 pathway in breast carcinoma with pure HER2 overexpressing treated with trastuzumab.
Methodology: We analyzed 90 patients diagnosed with pure HER2-positive breast carcinoma treated with trastuzumab at IBCC and HSP/Unifesp between 2009 and 2018. Immunohistochemistry assessed HER2 pathway markers (MUC4, IGF-1, IGF-1R, EGFR, p21, p27, p53, p16, cyclin D1, PTEN, CDK4, Bcl-2, VEGF, AR, MDM2, and TNFα) in paraffin-embedded tumor and compromised lymph nodes samples, correlating them with clinicopathological variables. Statistics analyses were performed using the SPSS® (v25, IBM), with p-values ≤0.05 considered significant. Associations were verified through Pearson's X2 and Fisher's exact tests, while survival analysis used the Kaplan-Meier.
Results: Resistance to trastuzumab occurred in 40% of cases; OS was 4.13 years (95% CI: 5.1-12.5), and DFS was 3.6 years (95% CI: 5.1-13.1). In tumor samples, cyclin D1 correlated with nuclear grade (p=0.049) and recurrence (p=0.038); IGF-1 with tumor size (p=0.015) and death (p=0.046); p16 (p=0.016) and PTEN (p=0.050) with treatment response. Poor prognosis markers included p53 with histological grade (p=0.003) and nuclear grade (p=0.048), and IGF-1R with lymph node involvement (p=0.016). In lymph nodes, TNFα (p=0.043) and CDK4 (p=0.011) correlated with good prognosis, while p53 (p=0.045) remained a poor prognosis marker.
Conclusion: Cyclin D1, IGF-1, p16, and PTEN showed potential as good prognosis markers, while p53 and IGF-1R were associated with worse outcomes. In lymph nodes, TNFα and CDK4 were favorable markers, whereas p53 retained its poor prognosis role.

Keywords: Breast cancer, HER2, trastuzumab, immunohistochemistry

CLINICAL IMAGE QUALITY EVALUATION OF MAMMOGRAPHY FOR BREAST CANCER SCREENING

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Objectives: Evaluate mammographic image quality in a real clinical practice scenario for breast cancer screening.
Methodology: Observational prospective study where images from digital mammograms from Diagnostic Service (DS) in the state of Goias in 2019 were analyzed. A specific protocol was created based on evaluation criteria of the Brazilian College of Radiology, European Guidelines and American College of Radiology. For each variable score one was attributed to conformity and zero for nonconformity. Logistic regression model was utilized and taken into consideration the following independent variables: location (City vs. Country),Public health system – Sistema Unico de Saude (SUS) (Public vs. Private),number of monthly exams (≤ 300 vs. > 300), device manufacturing year (≤2011 vs. > 2011), and breast density (≤ 75% vs. > 75% of the parenchyma).
Results: Out of 163 fully functioning mammograms, 151 (92.6%) were eligible, with 53 (32.5%) equipment that accepted to participate voluntarily in the research, which produced a total of 1,024 images. On the clinical image analysis as to the positioning of the patient, it was observed the higher conformity for symmetry parameters, in both projections (>90%). The conformity rate amongst the other parameters varied from 18.6% to 100%. In the multivariable analysis, was observed that only the variable monthly exams (OR 3,44; IC95% 1,67-7,09; p=0,0008) and mammogram device manufacturing year (OR 2,46; 1,02-5,95; p=0,04) were associated to a higher conformity rate. After the percentage consolidation conformity rate per DS, as to the final clinical mammography quality, no DS presented desirable conformity (>90%), 28 DS's obtained acceptable conformity (between 70 to 89%), and 25 services presented conformity below 70%.
Conclusion: Conformity rate of mammographic exam is extremely low and varies accordingly to the multiple parameters analyzed. Mammographies performed at centers with less productivity (≤ 300/ Monthly) and with newer devices (>2011), presented higher chances of conformity at the clinical imaging evaluation.
Keywords: Screening, mammography, clinical quality

NEUTROPHIL-TO-LYMPHOCYTE RATIO (NLR) PREDICTS LONG-TERM SURVIVAL IN EARLY TRIPLE NEGATIVE BREAST CANCER (TNBC) TREATED WITH NEOADJUVANT CHEMOTHERAPY (NACT)

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Objectives: Evaluate the role of neutrophil-to-lymphocyte ratio (NLR) in predicting survival after NACT.
Methodology: We retrospectively reviewed data from medical records of 692 patients who underwent NACT for early-stage TNBC (II-III) from 2012 and 2024. NLR was calculated from the complete blood count before NACT initiation and the cut-off point used was 2. Event free survival (EFS) and overall survival (OS) were estimated with the Kaplan-Meier method and Cox regression model was used to calculate Hazard Ratio (HR). Logistic regression was used to verify association between NLR and pathological complete response (pCR).
Results: The overall pCR rate was 28.3% and patients with NLR ≤ 2 had an increased probability of achieving pCR (33% vs 22.7%, p = 0.002). After a median follow-up of 59.6 months, NLR ≤ 2 was associated with improved 5-year EFS in the overall population (51% vs 66%, HR 0.59, p<0.001), in patients with stage II disease (69% vs 81%, HR 0.49, p=0.01), stage III (43% vs 55%, HR 0.70, p=0.01) and residual disease (42% vs 54%, HR 0.65, p=0.001). 5-year OS was also improved in the overall population with NLR ≤ 2 (58% vs 73%, HR 0.56, p<0.01), stage II disease (75% vs 86%, HR 0.42, p=0.009), stage III disease (50% vs 62%, HR 0.68, 9, p=0.015) and in patients with residual disease (50% vs 64%, HR 0.62, p=0.001). In multivariate analysis, including pCR status and clinical stage, NLR ≤ 2 remained statistically significant for improved OS (p= 0.002) and EFS (p=0.002).
Conclusion: NLR >2 is an independent risk factor for poorer survival in pts with TNBC who received NACT.

Keywords: Triple Negative Breast Neoplasms, Biomarkers, Neoadjuvant Therapy

CO-SEGREGATION ANALYSIS OF THE XAF1-E134* VARIANT IN PATIENTS WITH PATHOGENIC VARIANTS IN THE TP53 GENE: ITS RELATIONSHIP WITH THE CLINIC

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Objectives: Variant co-segregation refers to a genetic inheritance pattern in which alterations in different genes are transmitted simultaneously through generations with greater frequency. In this context, the co-segregation of the XAF1-E134* and TP53-R337H variants was recently reported in the literature as a likely factor associated with increased aggressiveness of the tumor phenotype, in addition to being associated with clinical heterogeneity. The aim of this study was to identify the XAF1-E134* variant associated with a more aggressive cancer phenotype of Li-Fraumeni Syndrome.
Methodology: All patients treated at the Human Genetics Center of the Federal University of Goiás (CEGH-UFG) since 2022, who underwent genetic sequencing for analysis of the TP53 gene, were included in the present investigation. To date, of the 348 general patients, 30 cases were found that presented pathogenic variants associated with TP53, specifically c.455C>T and c.1010G>A. Of these positive cases, 11 correspond to primary patients and 19 family members previously screened due to kinship with diagnosed individuals.
Results: Of the 30 samples with identified variants, 18 were submitted to qPCR for validation and additional analysis. Among these, 14 cases presented positive results, distributed in 7 different families. These findings highlight the importance of family genetic screening and the use of complementary methodologies, such as qPCR, to deepen the molecular characterization of TP53 variants and their correlation with cancer predisposition.
Conclusion: A high prevalence of the XAF1-E134 variant associated with the TP53 gene was observed. Given the relevance of these variants and their clinical implications in the aggressiveness and heterogeneity of hereditary cancer in Brazil, it is essential to develop research in this area, aiming to expand scientific knowledge and contribute to the advancement of personalized clinical treatment and prevention strategies.

Keywords: HBOC;

ASSISTED BREAST RECONSTRUCTION WITH A BIOSYNTHETIC MESH AND IMPLANTS. A PILOT STUDY

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Objectives: Acellular dermal matrix (ADM) has been widely utilized in implant-based breast reconstruction; however, its application has been associated with elevated complication rates. An absorbable biosynthetic mesh (GORE® BIO-A®) may theoretically exhibit lower complication rates while potentially providing functional characteristics similar to ADMs. Nevertheless, there is a paucity of literature data regarding this material.
Methodology: A retrospective analysis was conducted on in high-risk patients undergoing implant-assisted reconstruction with the biosynthetic matrix. Immediate complications, aesthetic outcomes, and capsular contracture were evaluated. BCCT.core and Harvard's scale were used to evaluate aesthetic outcome. Quality of life was evaluated using EORTC QLQ-BRECON23.
Results: Thirteen patients with 23 breasts were evaluated. The mean follow-up of 15.6 months (range: 3-44) and mean age of 41.8 years (range: 31-56). Two patients presented with comorbidities (diabetes, hypertension or obesity). The mean implant volume was 383cc (range: 330-490), with all cases being direct-to-implant except for one; 11 breasts were prepectoral. Ten breasts underwent radiotherapy. Six breasts exhibited complications: two breasts of surgical wound dehiscence, two nipple necrosis, one infection, and one hematoma, all managed conservatively. No implant loss occurred. Regarding capsular contracture, 18 were grade I, one were grade II, and four were grade III. Among the 10 breasts whose underwent radiotherapy, four presented with grade III contracture (p=0.13). Based on Harvard's Scale and BCCT.core, the results were deemed good/excellent in 20/23 breasts and in 9/13 cases, respectively. Evaluating quality of life (median), we observed high satisfaction with the surgery (100.0%), the breast (77.8%), and nipple preservation (100.0%), with low site-effects symptoms.
Conclusion: Our pilot study demonstrates that breast reconstruction assisted by an absorbable biosynthetic matrix may be feasible and associated with potentially low complication rates and high quality of life. Despite these promising perspectives, further case-control studies are necessary to corroborate these results.

Keywords: Surgical mesh; Implants; Mammoplasty; Mastectomy; Subcutaneous mastectomy; cosmetics; quality of life

CHARACTERISTICS AND OUTCOMES OF PATIENTS WITH TRIPLE NEGATIVE BREAST CANCER (TNBC) TREATED WITH NEOADJUVANT CHEMOTHERAPY (NACT) ACCORDING TO RACE

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Objectives: Evaluate the differences in characteristics and outcomes of patients with TNBC treated with NACT according to race in a Brazilian cohort.
Methodology: We retrospectively reviewed data regarding ethnicity, socioeconomic features, tumor characteristics and type of treatment from medical records of patients who underwent NACT for TNBC from 2012 and 2024. Patientts were classified into categories, mostly by heteroidentification registers at hospital admission: "White" (W), "Black" (B), ("Mixed or Browns" were categorized as Black) or "Others or unknown". Survival was estimated with the Kaplan-Meier method and differences were assessed by the log-rank test, and stratified by grade (1-2 vs 3). Cox regression model was used to calculate Hazard Ratio (HR). Chi-squared test was used to compare categorical variables.
Results: Of 737 patients, 41.4% were black. There was no significant difference between groups regarding median age, marital status, as well as clinical stage and histological type. However, there was a difference in histological grade, with a higher proportion of black patients with grade 2 disease (39.0% vs 30.8%, p =0.03). A statistically significant difference was found in relation to the time of starting treatment, being greater in the black population (B: 2.3 months vs W: 2.0 months, p = 0.03). There were no significant differences in chemotherapy regimen, type of surgery performed as well as pathological complete response rate. With a median follow-up of 61 months, white population had worse 5 year EFS (65.5% vs 56.6%,HR 1.34, Stratified p 0.02) and 5-year OS (72.9% vs 63.2%, HR 1.3, Stratified p 0.06) than black population.
Conclusion: Black women had better EFS and OS than white women with early TNBC. This may have been influenced by different tumor biology, since fewer black patients had grade 3 tumors.

Keywords: Triple Negative Breast Neoplasms, Race

CLINICAL CHARACTERISTICS RELATED TO LONG-TERM SURVIVAL IN DURABLE RESPONDERS WITH HER-2 METASTATIC BREAST CANCER: A SYSTEMATIC REVIEW

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Objectives: The aim of this study was to identify the characteristics of durable responders and compare them with other MBC profiles.
Methodology: This is a systematic literature review using databases such as PubMed, Embase and Web of Science, in which 12 articles were selected for analysis. This study analyzed 9,474 patients, of whom 2,213 had a survival of 3 to 10 years (long survival) and 7,261 had a poor prognosis.
Results: Among the survivors, 28.39% had de novo metastasis at diagnosis, in contrast to 71.6% in the group with the worst prognosis. Visceral metastases were more common in the control group (48.76%), and in the survivor group (46.05%), while nodal metastases were more prevalent in the survivor group (13.25%) and (11.60%) in the control group. Single metastases were more prevalent in the survivors (61.81%) compared to the control (51.94%). Tumor resection was performed in 42.31% of survivors, compared to 14.90% in the group with the worst prognosis.
Conclusion: It is concluded that patients with long surviving HER-2 positive MBC have distinct clinical characteristics, such as a lower incidence of multiple metastases and a higher prevalence of nodal metastases, as well as better outcomes related to primary tumor surgery.

Keywords: Breast Neoplasms; Survival; Systematic Review

ARE DIETARY GLYCEMIC INDEX AND LOAD ASSOCIATED WITH BREAST CANCER?

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Objectives: To investigate the association between dietary glycemic index (GI) and glycemic load (GL) with breast cancer (BC), considering menopausal status, in women from Central-West, Brazil.
Methodology: Case-control study with non-metastatic BC women and controls (1:2) matching by age (±5 years), body mass index (BMI, ±5 kg/m2) and menopausal status (pre/post-menopausal). The study followed the STROBE Checklist. Body composition was measured by dual-energy X-ray absorptiometry (DXA) method and food intake by three 24-hour dietary recalls and the food quality analysed by the NDR-S©. Insulin and fasting blood glucose blood tests were measured after 12-hours of fasting. Multivariate logistic regression was used to estimate the Odds Ratio (OR) between GI, GL and BC. The multivariate model was defined using Directed Acyclic Graph (DAGs). Values of $p<0.05$ were considered statistically significant.
Results: 334 women participated in the study, most of them were premenopausal (58.0%). The mean age was similar between the groups (51.2 ±11.5y case vs. 51.3 ±10.8y control). Women in the control group had higher education and income than the case group ($p<0.001$). Body composition, serum glycemic profile, and behavioral variables did not differ between the groups and menopausal status. The mean consumption of saturated ($p=0.026$) and monounsaturated fat ($p=0.048$) was higher in the control group compared to the case group for the total sample, and a higher consumption of protein ($p=0.043$), cholesterol ($p=0.002$) and saturated fat ($p=0.018$) was done by controls only in the postmenopausal group. In the logistic regression, only income was associated with the outcomes. As lower income, there were greater chances of developing BC (ORadj=1.20 95%CI: 1.00-1.50, $p<0.001$). The exposure variables were not associated with the outcomes (IG: ORadj=1.00 95%CI: 1,00-1,00; CG: ORadj=1.02 95%CI: 0,99-1,04).
Conclusion: IG and CG of the diet were not associated with the development of BC in this population.

Keywords: Breast Neoplasms; Diet; Food Consumption; Body Composition

COMPUTED TOMOGRAPHY IN THE LOCOREGIONAL STAGING OF BREAST CANCER: INTEROBSERVER AGREEMENT AND COMPARISON WITH CONVENTIONAL IMAGING

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Objectives: To compare the findings of chest CT for locoregional staging in breast cancer patients with those of other imaging modalities (mammography, ultrasound, and breast MRI) and with the final histopathological result (gold standard).
Methodology: This was a retrospective, single-center study, including 146 patients with breast carcinoma who underwent contrast-enhanced chest CT for staging. A targeted assessment of the breast was performed on the CT images by four radiologists with different areas of expertise (two breast radiologists, one thoracic radiologist, and one oncologic radiologist), followed by a consensus evaluation. Accuracy (Ac) and the Kappa coefficient (k) were used to assess interobserver agreement and agreement between the CT consensus evaluation and other imaging findings and histopathology.
Results: The mean patient age was 52 (30–85). Most tumors were invasive carcinoma of no special type (78.8%) and luminal subtype (76.7%). Dense breasts were observed in 65.1% of patients. The primary tumor was identified on CT in 99.3% of cases. Interobserver agreement ranged from moderate to substantial (k = 0.4–0.7). In the consensus evaluation, 79.5% of lesions were nodular, 13.0% non-nodular enhancements, and 6.8% both (Ac: 86.8%; k: 0.6). Multifocality or multicentricity was identified in 28.8% (Ac: 81.9%; k: 0.6). Signs of skin (6.1%), nipple (4.8%), and pectoral muscle involvement (4.1%) were also observed with reasonable accuracy. Tumor staging was consistent (T1–T4; Ac: 70.5%; k: 0.5). Suspicious contralateral lesions (3.4%) and axillary lymph nodes (44.5%; Ac: 89.0%; k: 0.8) were also detected.
Conclusion: Chest CT with targeted breast evaluation demonstrated good interobserver agreement and concordance with standard imaging, supporting its potential utility for locoregional staging without requiring additional contrast or radiation exposure.

Keywords: Breast cancer; Locoregional staging; Chest computed tomography.

HER2 EXPRESSION HETEROGENEITY PATTERN IN INVASIVE BREAST CARCINOMAS: FREQUENCY, DISTRIBUTION AND RELATION TO MORPHOLOGICAL VARIABLES

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Objectives: Evaluate the spectrum of human epidermal growth factor receptor 2 (HER2) expression in primary invasive breast carcinomas (IBC), considering its heterogeneity and its relationship with morphological variables.
Methodology: This retrospective study analyzed HER2 expression and heterogeneity in invasive breast carcinoma (IBC) cases from São Paulo Federal University Hospital (2019–2023). Three observers evaluated HER2 slides per ASCO-CAP 2018 guidelines. Pathological variables were collected, and statistical analyses were performed using SPSS (26.0).
Results: This study included 353 cases, with 29.5% under 50 years and 70.5% over 50. Left-sided tumors accounted for 54.1%. Invasive carcinoma of no special type was most common (91.8%), followed by invasive lobular carcinoma (7.4%). HER2 was negative in 83.9% and positive in 11.9%, with 4.2% classified as HER2 2+. Homogeneous HER2 expression was found in 81.3% of cases, mainly 0+ (80.8%), while 18.7% showed heterogeneity, primarily scattered (59.1%) or clustered (37.9%). ILC cases were mostly homogeneous (92.3%). HER2 heterogeneity was significantly associated with histologic grade ($p = 0.005$) and marginally with estrogen/progesterone expression ($p = 0.060$), but not with tumor size ($p = 0.071$).
Conclusion: We conclude that heterogeneity is prevalent in HER2 expression, especially in IBC, and should be addressed in pathology reports, especially in the ADCs scenario.

Keywords: Breast Neoplasms; Receptor, ErbB-2.

DUAL ANTI-HER2 BLOCKADE WITH TAXANE AS FIRST-LINE TREATMENT FOR HER2-POSITIVE BREAST CANCER WITH VISCERAL METASTASES: A TECHNOLOGY INCORPORATION ASSESSMENT WITHIN SUS

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Objectives: To assess the clinical outcomes of dual anti-HER2 blockade with taxane as first-line therapy for HER2-positive breast cancer with visceral metastases within the SUS (Sistema Único de Saúde).
Methodology: We performed a retrospective analysis of women with HER2-positive metastatic breast cancer and visceral metastases treated at INCA (Instituto Nacional de Cancer) between 2020 and 2022. Eligible patients received first-line therapy with dual HER2 blockade plus taxane. Demographic, clinical, and pathological data were collected, and therapeutic outcomes were assessed based on progression-free survival (PFS), overall survival (OS), and cardiotoxicity.
Results: Seventy-one patients were included; 44% were under 50 years old. The most frequent metastases at baseline were liver (64%), bone (49%), and lung (46%). Fourteen patients developed central nervous system metastases during treatment. The median follow-up was 44 months, with a median PFS of 23 months. At 24 months, OS was 73.9% (95% CI: 61.8%-82.7%) and PFS was 42.6% (95% CI: 30.0%-54.5%). Cardiotoxicity led to treatment discontinuation in 8.5% of patients.
Conclusion: This study highlights the effectiveness of the dual blockade regimen within SUS for a cohort with 100% visceral metastasis. After 44 months, 50% of patients remained alive without disease progression and the cardiac safety profile was predictable, both consistent with phase III trials. The 24-month OS rate of 73,9% was lower than expected, likely due to the more aggressive disease in our cohort and lack of HER2 blockade in later lines of therapy.

Keywords: metastatic breast cancer; HER2-positive; technology incorporation.

IMPACT OF THE COVID-19 PANDEMIC ON BREAST CANCER DIAGNOSIS AND TREATMENT

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Objectives: To assess the impact of the COVID-19 pandemic on breast cancer diagnosis and treatment.
Methodology: Retrospective cohort study involving patients at the Barretos Cancer Hospital diagnosed with breast cancer between 2018 and 2023. Patients will be divided into three groups: pre-pandemic (2018-2019), pandemic (2020-2021) and post-pandemic (2022-2023). The sample, made up of approximately 3,500 patients, was analyzed using appropriate statistical tests to assess associations between epidemiological, histopathological and clinical characteristics and cancer outcomes.
Results: Preliminary analysis revealed significant variations in diagnosis and treatment during the three periods. There was an increase in the age of patient's post-pandemic, with more women over 60 (24.9%, $p < 0.0001$). Clinical staging showed a decrease in stage I (from 23.4% to 14.9%) and an increase in stage III (from 29.6% to 36.7%) during the pandemic, indicating more advanced diagnoses ($p = 0.0082$). Pathological staging followed a similar trend, with a decrease in stage I and an increase in stage II (38.1% post-pandemic). Initial treatment also changed, with a reduction in surgeries during the pandemic (from 59.3% to 37.7%) and an increase in exclusive palliative care (from 0.4% to 2.4%). The use of neoadjuvant hormone therapy was notable during the pandemic (18.1%). The type of surgery varied, with an increase in quadrantectomy in the post-pandemic (from 54.4% to 67.2%) and a decrease in mastectomy with immediate reconstruction (from 23.5% to 17.0%). There was a significant increase in the luminal B HER-negative molecular subtype post-pandemic (from 8.2% to 35.3%, $p < 0.0001$).
Conclusion: The COVID-19 pandemic has significantly impacted the diagnosis and treatment of breast cancer, leading to later diagnosis and changes in treatment modalities.

Keywords: Breast cancer, COVID-19, breast cancer diagnosis, breast cancer treatment

OBESITY AND OVERWEIGHT LEVELS IN BRAZILIAN WOMEN WITH EARLY-STAGE ER+ BREAST CANCER IN ADJUVANT ENDOCRINE THERAPY

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Objectives: There is a correlation between breast cancer mortality and recurrence and being overweight or obese. This study aims to evaluate obesity and overweight levels in Brazilian women with early-stage ER+ breast cancer in adjuvant endocrine therapy (ET).
Methodology: Women with early-stage ER+ breast cancer on adjuvant ET for at least 6 months were included. Patients were stratified according to Body Mass Index (BMI (Eutrophy: 18.5 to 24.9kg/m^2, Overweight: 25 to 29.9kg/m^2 and Obesity: >=30kg/m^2).
Results: From June 2021 to March 2024, 557 women from 11 Brazilian institutions were recruited. Mean age was 62 y.o , mean tumor size was 2.14 cm, mean duration of ET was 3.1y. A total of 27% of patients were obese, 42% were overweight and 30.8% had eutrophy. Women with higher education had a lower prevalence of obesity (26% vs. 31%, p = 0.03). The presence of comorbidities had a higher prevalence among obese women (33% vs. 24, p < 0.001). Patients treated in public hospitals had a higher prevalence of obesity (35%) compared to private hospitals (20%) (p < 0.001). Patients in stage III were often obese (odds ratio = 2.88, 95% CI: 1.55-5.33, p < 0.001). Better Physical Functioning was associated with a lower chance of obesity (odds ratio = 0.95, CI95%: 0.93-0.97, p < 0.001) and overweight (odds ratio = 0.96, CI95 %: 0.94-0.98, p < 0.001). In multivariate analysis, stage III disease (OR 1.72), prior lumpectomy (OR 7.2), axillary lymphadenectomy (OR 2.8) were related to obesity.
Conclusion: Only a third of the women evaluated in the study had an adequate BMI, leading to a worrying risk of morbidity. Some characteristics related to obesity patients, such as more patients treated in the public service and with a lower level of education, lead to the hypothesis that economic factors may be related to this disease.

Keywords: Breast cancer; Obesity; Treatment

CYCLIN INHIBITORS FOR BREAST CANCER: A COMPARATIVE REAL WORLD DATA ANALYSIS

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Objectives: We aim to evaluate the impact of the different Cyclin-Dependent Kinase Inhibitors (CDK 4/6i) as first line therapy on mOS in a contemporary real-world setting.
Methodology: Data from TriNetX (a global dataset of electronic medical records of patients from 111 healthcare organizations) were analyzed and queried for patients with specific terms between 2004-2024. A propensity score matching analysis balanced the cohort. Ribociclib (Rib), Palbociclib (Palb) and Abemaciclib (Abem) were compared using a 2x2 group selection method. Analysis 1 compared Rib versus (vs) Abem; Analysis 2 compared Rib vs Palb; and analysis 3 compared Palb vs Abem. mOS was evaluated with Kaplan–Meier method. Statistical comparison was made with a stratified log-rank test.
Results: No difference of risk for death were identified at Analysis 1 (n=271 pts in each arm), with a not reached mOS for both cohorts (5yrs OS = 61.82% vs 53.66%), x^2=0.03, p 0.863, HR = 0.964, 95% CI = 0.634 – 1.467. Analysis 2 (n=980 pts in each arm) revealed a statistically significant (ss) increased risk for death when receiving Palb over Rib, RR 2.42 (95% CI=-0.202, 0.280; p= < 0.0001) with mOS of 1286 vs 1946 days (x^2=15.447, p <0.0001 HR= 1.441 95% CI = 1.200 – 1.731). Analysis 3 (n=318 in each arm), revealed a ss increased risk for death when receiving palb over rib RR 2.47 (95% CI=-0.231, 0.372; p= <0.0001) with mOS of 1124 vs 1706 (x^2=9.025, p < 0.003, HR = 1.56, 95% CI = 1,165 – 2.091).
Conclusion: Our study revealed that patients treated with Palb instead of Rib or Abem achieved a lower mOS with increased risk for death of breast cancer. Additionally, when comparing Rib to Abem, despite a percentage trend favoring Rib, no difference was found in the overall survival analysis for the risk of death from breast cancer.

Keywords: Breast Neoplasms, Metastasis, Cyclin-Dependent Kinases, Treatment Outcome, Survival.

CDK4/6 INHIBITORS (ICDK4/6) IN BREAST CANCER (BC): IS IT POSSIBLE TO PREDICT RESPONSE?

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Objectives: Up to 20% of luminal BC patients present recurrent disease within 10 years. The development of iCDK4/6 has transformed treatment paradigms due to significant improvements in outcomes. However, no predictive biomarker has been identified despite extensive translational research. Additionally, evidence on iCDK4/6 efficacy in specific populations (e.g., pathogenic germline carriers) and clinical scenarios (treatment sequencing, combinatorial strategies, and post-iCDK4/6 therapy) remains limited. We aimed to identify predictive variables of better responses.
Methodology: We performed a retrospective study of luminal BC patients treated with 3 available iCDK4/6 (abemaciclibe AB, Ribociclib RIB and Palbociclib Pb) between 2018 to 2024, with the aim of reviewing clinical, histological, and genomic profile searching for predictive variables of better responses.
Results: A total of 378 patients were included, with a median age of 60 years; 38% were premenopausal. Median PFS and OS were 30m and 56m, respectively. Most (65%) received iCDK4/6 in 1L, 15% in 2L, and 20% in later lines. PFS and OS declined progressively: 1L (36/62m), 2L (22/52m), others (14/33m) ($p<0.01$). No significant PFS ($p=0.96$) or OS ($p=0.42$) differences were observed between iCDKs (AB 24/43m, RIB 25/45m, PB 27/45m). Patients with visceral metastasis had worse PFS/OS (28 vs. 32m, $p=0.009$; 49 vs. 60m, $p=0.01$). High Ki67 (>70%) predicted poorer outcomes (PFS 15 vs. 29m, $p=0.009$; OS 34 vs. 56m, $p=0.017$).
Conclusion: These results may help refine patient selection and therapeutic strategies, and serve as a basis for prospective studies aiming to validate predictive biomarkers in hormone receptor-positive metastatic breast cancer.

Keywords: Luminal breast cancer, CDK4/6 inhibitors (iCDK4/6), predictive variables, Ki67

IMPACT OF FAT GRAFTING COMBINED WITH EXPANDER-TO-IMPLANT EXCHANGE IN A ONE-STAGE PROCEDURE AFTER IRRADIATION

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Objectives: Reconstructive failure rates for patients undergoing radiation therapy following tissue expander placement exceed 30%, with grade 3 or 4 capsular contracture occurring in over 50% of cases during a 6-year follow-up. Previous studies indicate that two sessions of lipofilling prior to expander-to-implant exchange significantly reduce complication rates. This study aims to evaluate the safety and effectiveness of a single session of immediate fat grafting combined with expander-to-implant exchange in irradiated patients.
Methodology: This retrospective cohort study assessed patients diagnosed with invasive breast carcinoma who underwent post-mastectomy radiation therapy (PMRT) and two-stage implant-based breast reconstruction (IBBR) from 2015 to 2024. A single session of immediate fat grafting was performed concurrently with expander-to-implant exchange. Outcomes assessed included reconstructive failure, aesthetic results, capsular contracture, and infection rates.
Results: A total of 36 patients (mean age 50.3 years, range 24-67) with stage II or III breast cancer were included. The median volume of fat grafting was 90 mL (range 40-285 mL). At a median follow-up of 48 months (range 16-205 months), there were 7 cases of reconstruction failure (19.4%): 4 due to infection, 1 due to severe capsular contracture, 1 due to trauma, and 1 due to pyoderma gangrenosum. Four patients (11.1%) developed grade 3 or 4 capsular contracture.
Conclusion: Immediate fat grafting during expander-to-implant exchange after radiotherapy reduces the rates of capsular contracture and reconstructive failure compared to historical controls, although the results were less pronounced than those observed with two prior sessions of lipofilling. Further studies with larger cohorts are needed to refine the optimal fat grafting protocol for irradiated breast reconstructions.

Keywords: Breast Neoplasms, Radiotherapy, Adipocytes, Implant Capsular Contracture

TUMOR-INFILTRATING LYMPHOCYTES AS PROGNOSTIC MARKERS IN A BRAZILIAN POPULATION WITH NEOADJUVANT CHEMOTHERAPY-TREATED BREAST CANCER: A SURVIVAL STUDY

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Objectives: Assess the association between overall survival at 5 and 10 years and the percentage of tumor-infiltrating lymphocytes (TILs) in breast cancer patients who underwent neoadjuvant chemotherapy followed by surgery at the Hospital Universitário de Sergipe (HU-UFS).
Methodology: It is a survival study with uni and multivariate analyses using core biopsy slides of a retrospective cohort of breast carcinoma patients between June 2011 and March 2019. Variables analyzed included age, histological type, tumor grades, post-surgical clinical staging, immunohistochemical profile, and residual neoplasia. TILs were evaluated by two independent pathologists, blinded, using criteria from the International TILs Working Group. This study received approval from the Research Ethics Committee (UFS) following the guidelines of Resolution CNS 466/12.
Results: We analyzed 46 patients with a mean age of 49.5 years. Molecular subtypes were: 50% luminal A, 26.1% triple-negative, 13% triple-positive, and 10.9% HER2-enriched. Patients with TILs ≤ 5% had better 5- and 10-year survival in all molecular subtypes, with a more significant drop in survival for those with TILs > 5%. Five-year survival was significantly higher in patients with TILs ≤ 5% (p=0.038), but no significant difference was found at 10 years (p=0.059). TILs did not correlate significantly with complete pathological response or overall survival, though patients with TILs > 5% tended to have a worse prognosis.
Conclusion: In this cohort, breast cancer patients treated with neoadjuvant chemotherapy and surgery had better 5-year survival with TILs ≤ 5%. While TILs did not significantly correlate with long-term survival, patients with TILs > 5% showed a trend toward poorer outcomes. These results suggest TILs may be a valuable prognostic marker for short-term survival, but further research is needed to assess its role in long-term outcomes.

Keywords: Lymphocyte, Tumor-Infiltrating, Breast Neoplasms, Tumor Microenvironment, Survival Analysis

CO-OCCURRENCE OF GERMLINE PATHOGENIC VARIANTS IN BREAST CANCER PREDISPOSITION GENES: A STUDY IN NORTHEAST BRAZIL

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Objectives: Breast cancer(BC) is the most common and deadliest cancer diagnosed in women worldwide. Approximately 5%-10 % of cases are attributed to germline pathogenic (P) or likely pathogenic (LP) variants in cancer predisposition genes. Increased use of next-generation sequencing (NGS) to detect these mutations, driven by their predictive and prognostic value for patients and families, has led to greater identification of individuals with multiple (P/LP) variants. However, the co-occurrence of multiple germline pathogenic variants in BC genes is rare, and its impact on carrier cancer risk remains unclear.
Methodology: This cross-sectional study examines patients from a private oncology clinic in Ceará, Brazil, who met the clinical criteria for Hereditary Breast and Ovarian Cancer predisposition(HBOC). Molecular analyses were conducted using commercial multi-gene cancer panels from accredited laboratories between 2018 and 2023. Sequencing was performed using NGS capture panels that included 27 to 84 genes depending on the clinical suspicion.
Results: Among 1055 patients, 141(13.4%) carried a germline P/LP variant in HBOC genes. Of those, 135(95.4%) had 1(P/LP) variant, while 6(4.6%) had 2(P/LP) variants. In the entire cohort, the most frequently mutated gene was BRCA1(34.8%), followed by BRCA2(15.2%), CHEK2(14.1%), PALB2, ATM, MUTYH, RAD51, TP53, and NF1. Among patients with co-occurring mutations, a common pattern involved variants in BRCA1 and MUTYH, observed in five patients. One patient presented with a triple co-occurrence of BRCA1, MUTYH, and BARD. The remaining co-occurrence case involved ATM and BRCA2.
Conclusion: This study uncovers co-occurring germline variants in BC predisposition genes in Northeast Brazil, highlighting potential regional genetic specificities. The clinical implications of these co-occurrences remain uncertain, emphasizing the necessity for prospective cohorts to ascertain whether current risk assessments need adaptation for this population and to guide personalized management.

Keywords: Breast Neoplasms , Risk Management, Mutation

CANNABIDIOL PROMOTES IMMUNOGENIC CELL DEATH AND CONTROLS BREAST TUMOR DEVELOPMENT

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Objectives: Cannabidiol (CBD) therapy has emerging as a promising anticancer drug in many types of cancer models. However, the molecular mechanisms underlying the contribution of antitumor immunity in therapy efficacy of CBD remains unclear. Here, we provide strong evidence that CBD is a bona fide immunogenic cell death (ICD) inducer in breast cancer model.
Methodology: Breast tumor (4T1) cells were treated with CBD and assesed for cell proliferation, as well as HMGB1 and ATP release. CBD-treated 4T1 cells were co-culture with splenocytes, and cytokine profile was analyzed using flow cytometry and ELISA. Additionaly, WT mice were injected subcutanteosly with 4T1 cells, and tumor growth was monitored, followed by characterization of tumor-infiltrating immune cells.
Results: We showed that CBD administration decreased tumor growth in different models (4T1 and 65NR) of breast cancer. Using immunocompromised mice, we show that adaptive antitumor immunity is essential for efficient tumor control in CBD therapy. Indeed, CBD treatment results in the modification of tumor microenvironment, up-regulating antitumoral proinflammatory cytokines, associated with activation of dendritic cells and enhanced CD8+ T cell effector function. Mechanistically, CBD treatment induced stress response in 4T1 tumor cells by ROS accumulation and up-regulation of NOS2 that leads UPR activation resulting in increased immunogenicity and impaired cell growth and proliferation. CBD efficiently promoted ICD hallmarks, and enhanced expression of antigen-presenting molecules on surface of breast cancer cells. In co-culture system with spleen cells, CBD-treated tumor cells stimulated the production pro-inflammatory chemokines and cytokines, induced activation of DCs and T cells. Combination therapy revealed that CBD enhanced efficacy of anti-PD-L1 in breast cancer model. Vaccination protocol with CBD-induced dying cells efficiently protected against breast tumor progression.
Conclusion: Our results reveal CBD as ICD inducer anticancer drug and open a new avenue of opportunities in cancer therapy against breast cancer which aims the establishment long-lasting antitumor immunity.

Keywords: Cannabidiol, immunogenic cell death, breast cancer, tumor, antitumor

COST AND DURATION OF HOSPITALIZATIONS DUE TO PUERPERAL MASTITIS IN THE BRAZILIAN UNIFIED HEALTH SYSTEM

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Objectives: This study aimed to analyze hospitalizations due to puerperal mastitis in the Brazilian Unified Health System (SUS) from 2018 to 2022.
Methodology: A cross-sectional study was conducted using data from the Hospital Information System (SIH/DATASUS). All hospitalizations with a primary diagnosis of postpartum breast infection in women aged 15–49 were analyzed. Length of stay was measured in days, and costs in Brazilian reais were adjusted using the IPCA inflation index. Trends in length of stay and costs from 2018 to 2022 were assessed using Poisson regression.
Results: A total of 11,279 hospitalizations were analyzed. The average length of stay was 5.09 days for clinical treatment and 4.50 days for surgical treatment. From 2018 to 2022, the surgical treatment rate increased (50.8% to 54.2%, $p < 0.05$). The Southeast, South, and Central-West regions showed a decline in hospitalization duration. Daily costs ranged from BRL 67.13 to BRL 154.55, totaling BRL 1,140,016.00 over five years, with higher costs for surgical treatment (BRL 123.71 vs. BRL 77.61 for clinical treatment). Costs rose nationwide from 2018 to 2021 ($p < 0.05$), particularly in the South and Central-West, but declined in 2022.
Conclusion: Clinical treatment is less costly than surgical treatment but increases hospitalization duration. The high costs of hospital care for puerperal breast infections highlight the need for effective prevention and management strategies.

Keywords: mastitis; postpartum period; hospitalization; length of stay; cost analysis

RHABDOMYOLYSIS DUE TO INTERACTIONS BETWEEN CDK4/6 INHIBITORS AND STATINS DURING BREAST CANCER TREATMENT: A CASE-BASED SYSTEMATIC REVIEW

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Objectives: Cyclin-dependent kinase (CDK) 4/6 inhibitors are a significant advance in the treatment of hormone receptor-positive, HER2-negative metastatic breast cancer, with improved survival rates. Nonetheless, their concurrent use with statins, a frequently prescribed class of drugs, may increase the risk of rhabdomyolysis as a consequence of pharmacokinetic and pharmacodynamic interactions. This systematic review analyzes literature case reports to provide practical insights into clinical presentations, therapeutic strategies, and outcomes, aiming to guide safer real-world clinical practices.
Methodology: We systematically searched PubMed, Embase, and Web of Science from inception to January 2025 for case reports and case series reporting rhabdomyolysis in individuals treated with CDK4/6 inhibitor. Data on demographics, clinical features, laboratory findings, management strategies, and patient outcomes were extracted. Quality assessment of the included cases was performed based on the Joanna Briggs Institute Critical Appraisal Checklists. The protocol was registered at PROSPERO (Registration ID: CRD42025631033).
Results: We analyzed six case reports involving female patients aged 55–81 years. All patients were treated for metastatic breast cancer with CDK4/6 inhibitors (ribociclib or palbociclib) alongside statins (simvastatin, atorvastatin, or rosuvastatin). The onset of rhabdomyolysis occurred between 3 days and 48 months after combination therapy. Clinical presentations included myalgia, muscle weakness, and dark urine, with creatine kinase levels ranging from 3,070 to 47,000 U/L. Acute kidney injury was identified in four cases. The management primarily involved cessation of the implicated drugs (e.g., CDK4/6 inhibitors, statins) and hydration, with adjunctive treatments such as corticosteroids, plasma exchange, or intravenous immunoglobulin. Five patients recovered fully, while one fatality was reported.
Conclusion: Rhabdomyolysis due to CDK4/6 inhibitor–statin interactions is a rare complication, albeit with a potentially life-threatening risk. Monitoring, prompt intervention, and individualized treatment strategies are paramount for preventing complications and improving patient outcomes.

Keywords: Breast Cancer; CDK4/6 Inhibitors; Statins; Rhabdomyolysis; Myopathy

AN ANALYSIS OF SEXUAL DYSFUNCTION SYMPTOMS IN HORMONE RECEPTOR POSITIVE BREAST CANCER PATIENTS DURING ADJUVANT ENDOCRINE THERAPY IN A BRAZILIAN CENTER

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Objectives: This study, conducted at a single center in Brazil, aims to evaluate the impact of endocrine therapy on the sexual lives of 105 patients diagnosed with early-stage breast cancer.
Methodology: The women selected for this study were diagnosed with early-stage hormone receptor-positive breast cancer, human epidermal growth factor receptor 2 (HER2) negative, and had been undergoing adjuvant hormone therapy for at least six months. The participants were divided into two groups: those who had engaged in sexual activity in the past four months (considered sexually active) and those who had not (considered sexually inactive). The women in the first group completed the Female Sexual Function Index (FSFI) questionnaire, and sexual dysfunction was identified as a score of ≤ 26.55. Data were collected using the RedCap software and analyzed using RStudio.
Results: A total of 105 women diagnosed with early-stage breast cancer were evaluated. Prior to their diagnosis, 65.4% were sexually active, but only 42.3% reported being sexually active in the four weeks leading up to the questionnaire. The FSFI score indicated sexual dysfunction in 77.3% of the patients, with the main contributing factors being low libido and pain during sexual activity, along with other contributing elements. Additionally, the patients reported moderate satisfaction with their sexual lives in general.
Conclusion: The analysis of the data reveals a notable decline in the sexual quality of life of patients undergoing hormone therapy. This decline reflects not only the effects of hormone therapy but also the impact of the cancer diagnosis and other phases of treatment. The findings highlight the importance of oncologists addressing this issue during consultations and directing patients to seek help, if needed, from specialists in sexology.

Keywords: Hormone Therapy; Breast Cancer; Sexuality; Adjuvant treatment, Survivorship

ANALYSIS OF FACTORS CONTRIBUTING TO DELAYED INITIATION OF TREATMENT FOLLOWING DEFINITIVE DIAGNOSIS OF BREAST CANCER AT A UNIVERSITY HOSPITAL IN GOIÁS, BRAZIL

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Objectives: Describe a series of cases of patients treated at the Hospital das Clínicas of the Federal University of Goiás, diagnosed with breast cancer, and identify the time elapsed from the date of definitive diagnosis to the initiation of specific treatment, while also exploring factors associated with the delays.
Methodology: A retrospective, descriptive-analytical study involving patient record reviews from January 2017 to July 2019 at a university hospital in Goiás. Data on sociodemographic characteristics, diagnosis dates, staging, and treatment initiation were collected. Factors associated with therapeutic delays were analyzed, focusing on patient, physician, and health system-related aspects.
Results: The study reviewed 127 female patients, with a median age of 52.4 years. The median time from symptom onset to specialist consultation was 5 months. Notably, delays linked to system-related factors were substantial, averaging 112 days from the detection of abnormalities in initial exams to the beginning of treatment. These delays were fundamentally due to inefficiencies in primary care providers and the response times of pathology services. Furthermore, the educational level of the patients demonstrated a statistically significant correlation with the stage of the disease at the time of presentation.
Conclusion: The time between diagnosis and treatment initiation significantly exceeds national guidelines. Factors such as education level and the efficiency of primary health care and pathology services are directly related to treatment delay. The quality of medical record and its management impacts data acquisition for analysis and may influence treatment delay. It can be concluded that delays in breast cancer treatment are multifactorial, with significant contributions from primary healthcare and pathology services inefficiencies. Educational interventions for both healthcare providers and patients, coupled with system-level reforms, are essential to ensure timely breast cancer treatment.

Keywords: Breast Cancer, Treatment Delay, Health System, Diagnosis, University Hospital

ANTITUMOR POTENTIAL OF GSK343 IN BREAST CANCER CELLS: AN IN VITRO STUDY

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Objectives: Breast cancer is a heterogeneous and multifactorial disease, requiring specific therapeutic approaches for each subtype. Among promising molecular targets is EZH2, a methyltransferase associated with tumor progression and poor prognosis. This study investigated the cytotoxic and antiproliferative potential of the selective EZH2 inhibitor, GSK343, in breast cancer cell lines MDA-MB-231 (triple-negative) and BT- 474 (luminal B/HER2+), treated with different concentrations of GSK343.
Methodology: Cells were cultured in appropriate medium (37°C, 5% CO_2) and treated with GSK343 at established concentrations (1, 5, 15, 30, and 60 µM). Assays were performed after 24, 48, and 72 hours of exposure. Cell viability was assessed using the MTT assay, while apoptosis was quantified using a DNA fragmentation assay kit. Statistical analysis was performed using ANOVA followed by Tukey's post hoc test, with significance set at $p < 0.05$.
Results: Cytotoxicity assays showed a dose- and time-dependent effect of GSK343 in both cell lines. In MDA-MB-231, a significant reduction in cell viability was observed from 15 µM at 48h ($p < 0.01$), which intensified at 72h, with a marked increase in apoptotic cells at 30 and 60 µM ($p < 0.001$). In BT-474, the effect was more modest at lower doses but still showed a significant reduction in proliferation and induction of apoptosis at concentrations above 30 µM after 72h ($p < 0.05$).
Conclusion: The GSK343 inhibitor can exert significant cytotoxic and antiproliferative effects, especially in MDA-MB-231 cells, suggesting greater sensitivity of the triple negative subtype to EZH2 inhibition. These findings indicate the therapeutic potential of GSK343 as an epigenetic agent in aggressive breast cancers and reinforce the need for further studies for clinical validation.

Keywords: Breast Neoplasms, Genomic Instability, GSK343, apoptosis

DEVELOPMENT AND VALIDATION OF THE AXILLARY WEB SYNDROME CLASSIFICATION SCALE

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Objectives: To develop and validate a Clinical Scale for the classification of Axillary Web Syndrome (EC-SRA).
Methodology: This is an exploratory, methodological development research with a quantitative approach. The study included 23 women undergoing surgical treatment for breast cancer who underwent axillary approaches and were treated at the Physiotherapy outpatient clinic of the Mastology Service of Hospital das Clínicas - Cora/HC, and who signed the Informed Consent Form. Women with alterations or impairment of the shoulder ipsilateral to the breast operated prior to surgical treatment were excluded. The methodology for constructing the instrument was divided into stages: 1. Establishment of the conceptual structure; 2. Construction and Structuring of the EC-SRA items; 3. Content Validation (by 7 experts); 4. Assessment of Usability and Refinement of the instrument 5. Analysis of results. The research period was between April 2020 and August 2021.
Results: The calculated content validity index was 0.97, indicating a high level of agreement among experts, since values of at least 0.80 are considered acceptable. The reliability of the instrument, verified through internal consistency measured by calculating Cronbach's Alpha among evaluators, was 0.8, a value considered ideal. The overall internal consistency of the instrument was considered satisfactory. The analysis of agreement of the instrument measured by the evaluators showed an r (general correlation coefficient) of 0.986, with a p-value <0.001.
Conclusion: Based on the usability assessment, it is possible to conclude that the EC-SRA is capable of measuring the cord and reproducing consistent, stable and accurate results, presenting reliability. The EC-SRA therefore has the potential to be widely used and avoids the merely subjective assessment of the SRA, as is the current clinical reality.

Keywords: Physical Therapy Services, Sentinel Lymph Node Biopsy; Fibrosis; Validation Study; Lymphatic System

ONCOLOGICAL OUTCOMES OF BREAST-CONSERVING SURGERY VERSUS MASTECTOMY FOLLOWING NEOADJUVANT CHEMOTHERAPY IN A CONTEMPORARY MULTICENTER COHORT

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Objectives: To evaluate local recurrence (LR), distant recurrence (DR) and death in non-metastatic breast cancer (BC) patients undergoing breast-conserving surgery (BCS) or mastectomy following current neoadjuvant chemotherapy (NAC) regimens.
Methodology: This retrospective multicenter cohort was conducted with BC patients (cT1-T4, cN0-N3, M0) treated with BCS or mastectomy following NAC at the Fortaleza General Hospital and the Pontifícia Universidade Católica do Rio Grande do Sul (PUC/RS) between 2013 and 2023.
Results: Patients submitted to NAC were evaluated (n = 365; mastectomy: 165; BCS: 200). More mastectomy patients were over 70 years old (12.7% versus 7%; p = 0.02) and had T4b tumors (16.4% versus 4.5%; p = 0.0003), whereas more BCS patients had node-negative axilla (42% versus 31.5%; p = 0.02). After a mean follow-up of 65 months (range: 4-124), LR and DR were similar in the mastectomy and BCS groups (4.8% versus 5.0%; p = 0.95 and 10.9% versus 9%; p = 0.58, respectively). More deaths occurred in the mastectomy group (8.5% versus 3%; p = 0.03). Ten-year LR-free survival was higher in the BCS group (98.5% versus 95%; HR: 3.41; 1.09-10.64; p = 0.03), while 10-year DR-free survival was similar (91% BCS versus 89% mastectomy, HR: 1.25; 0.65-2.42; p = 0.4). Overall survival was better in the BCS group (97% versus 91.5%; HR: 2.62; 1.06-6.69; p = 0.03). Estimated 10-year disease-free survival, stratified according to tumor stage, showed no difference except for T4, for which the risk was greater in the mastectomy group (94.5% versus 81.8%; HR: 2.86, 1.54-5.30, p = 0.0008). T3/T4 (OR: 4.37, 1.03-21.91; p = 0.04) and axillary dissection (OR: 5.11, 1.14-35.52; p = 0.04) were associated with LR in the BCS group.
Conclusion: In this cohort, BCS proved to be a safe alternative to mastectomy following treatment with NAC, even in cases of locally advanced BC.

Keywords: Breast neoplasms; Chemotherapy; Locally advanced breast cancer; Mastectomy; Neoadjuvant therapy; Segmental mastectomy.

BREAST CANCER: 20-YEAR EVOLUTION OF THE EPIDEMIOLOGICAL AND CLINICAL PROFILE IN A REFERENCE CANCER CENTER

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Objectives: To evaluate the epidemiological profile of female patients diagnosed with breast cancer between 2003 and 2023 at the Instituto Sul Paranaense de Oncologia in Ponta Grossa, Paraná.
Methodology: Data were collected from electronic medical records using a partially structured spreadsheet, followed by statistical analysis using R software.
Results: During the study period, 3,115 patients were diagnosed with breast cancer at this institution. The average age at diagnosis was 56.23 years, with slight variations over the analyzed period. The age group most affected was 51 to 65 years (38.39%), followed by the 41 to 50 age group (24.78%). Regarding histological type, the most prevalent was invasive ductal carcinoma (81.22%), followed by ductal carcinoma in situ (7.51%) and lobular carcinoma (7.32%). The study identified a statistically significant difference in clinical stages at diagnosis between patients treated in the public and private healthcare systems. In advanced stages, such as stage III, 34.91% of patients in the Brazilian Unified Health System (SUS) were diagnosed at this stage, compared to only 18.66% in the private system. Similarly, in stage IV, the metastatic phase of the disease, 12.36% of patients were diagnosed in the SUS, compared to 5.75% in the private healthcare system, with statistically significant differences between the two groups.
Conclusion: The epidemiological profile of patients was consistent with the literature, including the distribution of histological types of breast cancer. No increase in cases among younger patients (≤ 40 years) was observed. Additionally, a significant difference in clinical stages at diagnosis was identified between public and private healthcare systems, reinforcing previous findings that patients in the public system are often diagnosed at more advanced stages, leading to worse clinical outcomes.

Keywords: Breast Neoplasms; Epidemiology; Women's Health

GENETIC TESTING IMPACT ON CLINICAL DECISION MAKING IN BRAZILIAN BREAST CANCER PATIENTS WITH IDENTIFIED GENETIC VARIANTS

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Objectives: The present study aimed to analyse the impact on clinical decision making of an identified pathogenic or likely pathogenic genetic variant in breast cancer Brazilian patients.
Methodology: Retrospective observational cohort of BC patients with a known pathogenic (PV), likely pathogenic (LPV) variants, and variants of uncertain significance (VUS) in cancer related genes in four private and one philanthropic institution in Minas Gerais, Brazil. Pathology and medical records were reviewed, and patients were interviewed.
Results: A total of 62 patients were included. Forty-three patients with BC and a PV/LPV underwent primary breast surgery, 22 of them (51.1%) were aware of the genetic variant at the time of the surgery, and 68.2% of them underwent bilateral surgery. In the group of patients not aware of the variant at surgery only 4.7% underwent bilateral mastectomy ($p<0.001$). The median time from diagnosis to genetic testing was 94.8 months in patients diagnosed before 2015, and 4.8 months in the group diagnosed after 2015 ($p<0.001$). Thirty-eight patients (57.5%) had access to genetic counseling in the entire cohort, with only 3 out of 18 (16%)of the patients from the public sector. Nineteen different PV/LPV were found in BRCA1, 13 in BRCA2, 6 in TP53, 4 in ATM, 4 in PALB2. The most common PV was c.2T>G (p.Met1Arg) in BRCA2, present in four unrelated patients.
Conclusion: This analysis shows a significant delay in genetic testing and limited access to counseling, which has influenced the high rate of conservative surgery in patients unaware of their genetic diagnosis at the time of the surgery. These findings underscore the urgent need to expand hereditary cancer testing and counseling services in Brazil.

Keywords: Breast Neoplasms; Hereditary Breast and Ovarian Cancer Syndrome, BRCA1 Gene; BRCA2 Gene; Prophylactic Mastectomy; Surgical Decision

EPIGENETIC MODULATION OF AURKA AND AURKB BY 5-AZA-2′-DEOXYCYTIDINE IN BREAST CANCER CELLS

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Objectives: Aurora kinases A (AURKA) and B (AURKB) play crucial roles in cell cycle regulation and are frequently overexpressed in various types of cancer, including breast cancer. Epigenetic alterations, such as DNA methylation, may contribute to the dysregulation of these genes. This study aimed to evaluate the modulatory effects of 5-aza-2′-deoxycytidine (5-aza-dC), a DNA methylation inhibitor, on the expression of AURKA and AURKB genes in luminal (MCF7) and HER2+ (BT474) breast cancer cell lines treated with different concentrations of the demethylating agent.
Methodology: Cells were cultured under standard conditions (37℃, 5% CO_2) and treated with 5-aza-dC at various concentrations (10, 20, 30, and 50 µM) for 24h, 48h, and 72h. After treatment, total RNA was extracted and converted into cDNA, followed by gene expression analysis via RT-qPCR. Normalization was performed using housekeeping genes, and data were statistically analyzed by ANOVA with Tukey's post hoc test, with $p < 0.05$ considered significant.
Results: The experiments revealed a dose-dependent response profile in both cell lines. In MCF7, a significant reduction in AURKA expression was observed at 30 and 50 µM, mainly after 48h and 72h ($p < 0.01$). For AURKB, a significant reduction was observed starting at 20 µM at 72h ($p < 0.05$). In the BT474 cell line, both AURKA and AURKB showed a significant decrease in expression at 50 µM, especially at 72h ($p < 0.001$).
Conclusion: Treatment with 5-aza-dC negatively modulated AURKA and AURKB expression in a dose- and time-dependent manner, indicating a possible antitumor epigenetic effect. These findings suggest the potential of 5-aza-dC as an adjuvant therapeutic agent in breast cancers characterized by Aurora kinase overexpression.

Keywords: Breast Neoplasms, Epigenetic, AURKA, AURKB

ASSOCIATION BETWEEN BODY COMPOSITION AND PHYSICAL ACTIVITY LEVEL WITH QUALITY OF LIFE OF WOMEN WITH HORMONE RECEPTOR-POSITIVE BREAST CANCER UNDERGOING ADJUVANT ENDOCRINE THERAPY

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Objectives: Evaluate associations between body composition, physical activity level and quality of life of women with hormone receptor-positive breast cancer undergoing adjuvant endocrine therapy.
Methodology: Recruitment was carried out in two tertiary hospitals: one public and one private, with women under adjuvant endocrine therapy for at least 6 months. Analyzes included: sociodemographic data; weight and height; body composition by electrical bioimpedance; level of physical activity by the short version of the International Physical Activity Questionnaire; and quality of life by scales EORTC QLQ-C30 e EORTC QLQ-BR23.
Results: A total of 107 women were included, with a mean age of 56.9 years and a mean hormone therapy of 3.4 years. In the analyses between body mass index, body fat percentage and independent variables, the EORTC QLQ-C30 score of physical function and EORTC QLQ-BR23 score of pain were considered significant predictors. For each increase in one percent in physical function ($p = 0.0365$) and pain ($p = 0.0046$) scores, there was a significant increase in BMI. For each increase in physical function score, there was a significant reduction in the fat percentage ($p = 0.0025$). The association between physical activity levels and independent variables showed that the EORTC QLQ-C30 global quality of life score was considered a significant predictor. With an increase in the global quality of life score, the likelihood of a patient being in a lower physical activity category rather than a higher one decreased significantly (p= 0,0175).
Conclusion: Both physical function and pain scores played significant roles as predictors of BMI and body fat percentage in the patients analyzed. In addition, quality of life was a significant predictor of physical activity levels.

Keywords: Body composition; physical activity; quality of life; breast cancer; endocrine therapy

TRANSCRIPTIONAL MODULATION OF SMYD2 AND SMYD3 GENES BY OZONE THERAPY IN BREAST TUMOR CELLS

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Objectives: Breast cancer is one of the leading causes of mortality among women worldwide, which drives the search for new therapeutic approaches. In this context, the SMYD2 and SMYD3 genes, which belong to the lysine methyltransferase family, have been associated with tumor progression and epigenetic regulation in cancer. This study aimed to evaluate the gene expression levels of SMYD2 and SMYD3 in luminal breast carcinoma cells (MCF7) and triple-negative carcinoma cells (DU4475) after treatment with different concentrations of ozone.
Methodology: Cells were cultured under standard conditions (37 °C, 5% CO_2) and subjected to in vitro ozone therapy with doses of 5, 10, 15, 20, 30, and 40 µg/mL for 40 minutes. After 24h, 48h, and 72h of incubation, total RNA was extracted, and cDNA was synthesized. Gene expression was quantified by RT-qPCR using housekeeping genes for normalization. Statistical analysis was performed using ANOVA followed by Tukey's post hoc test, with significance set at $p < 0.05$.
Results: A dose- and time-dependent response was observed for both genes. In DU4475 cells, there was a significant reduction in SMYD3 expression from 20 µg/mL, particularly at 48h and 72h ($p < 0.01$). For SMYD2, a progressive decrease in expression was noted in MCF7 cells at concentrations above 15 µg/mL after 72h ($p < 0.05$). In DU4475, SMYD2 expression showed a slight reduction, though not statistically significant at lower doses.
Conclusion: Ozone demonstrated the ability to modulate SMYD2 and SMYD3 gene expression in a dose- and time-dependent manner, suggesting a possible differential epigenetic effect between the cell subtypes. These findings support the potential of ozone therapy as an adjuvant strategy in breast cancer treatment.

Keywords: Breast Neoplasms, Ozone, Genomic Instability, SMYD2, SMYD3

USE OF THE CANRISK TOOL IN RISK PREDICTION IN PATIENTS WITH BREAST AND/OR OVARIAN CANCER: A BRAZILIAN REALITY?

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Objectives: Predictive tools based on mathematical and genetic models, such as CanRisk, which is based on the BOADICEA model (Breast and Ovarian Analysis of Disease Incidence and Carrier Estimation Algorithm), have stood out for their ability to estimate the probability of developing these types of cancer in a personalized way. Estimate the absolute and relative risk of an individual developing breast and ovarian cancer over the lifetime using the CanRisk tool, comparing the percentage risk with the genetic result.
Methodology: CanRisk was applied to 22 breast cancer patients and 21 ovarian cancer patients from the Goiás Todo Rosa Project, with a positive germline panel. After CanRisk was applied during pre-counseling, the data were analyzed using the application's own risk calculator. The estimated risk values were classified according to the National Institute for Health and Care Excellence (NICE) criteria.
Results: For the patients with breast cancer, the data showed that the estimated lifetime risks (20–80 years) ranged from 5.9% to 12.9%, with an average of 9.77%, classified as low risk of presenting genetic mutations or developing cancer. Data from 21 patients diagnosed with ovarian cancer presented estimated risks ranging from 0.9% to 2.3%. The values obtained were concentrated in the low risk range, with 3 below the average (<1%) and none above 2.5%.
Conclusion: CanRisk did not prove to be a valuable tool for estimating individual risk of breast and ovarian cancer. However, the results reinforce that its accuracy may be limited by the quality and comprehensiveness of the data entered. Although all patients had confirmed mutations in BRCA1/2, the CanRisk model did not classify them as high risk, which suggests that there is no need to use this tool in Brazil.

Keywords: Breast Cancer; BRCA1; BRCA2; Early Cancer Detection

BREAST CANCER IN WOMEN OLDER THAN THOSE ADVISED FOR MAMMOGRAPHIC SCREENING IN A PUBLIC HOSPITAL IN THE FEDERAL DISTRICT

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Objectives: To evaluate the clinical-epidemiological profile of women diagnosed with breast cancer after 70 years of age in a public hospital in the Federal District.
Methodology: A cross-sectional, retrospective study that analyzed 169 women diagnosed with breast cancer at the Hospital Regional da Asa Norte, from January 2021 to July 2024, through the TrackCare platform with analysis by SAS 9.4, in absolute and percentage frequency. Of these, 32 met the inclusion criteria.
Results: The mean age was 77.28 ± 4.51 years. The mean age at menarche was 11.76 ± 1.48 and at menopause 48.60 ± 2.99 years. Regarding race, 20 (62%) considered themselves brown, 9 (28%) white and 2 (6%) considered themselves black. The most prevalent comorbidity was systemic arterial hypertension, in 22 (68%), followed by diabetes mellitus, in 13 (40%). Regarding parity, the median was three pregnancies, with a quartile range of 3 ± 2. Family history was negative for the majority, 22 (68%) and only 5 (16%) underwent hormone replacement therapy. Breastfed for 6 months or more, 26 (81%). Only 10 (32%) reported smoking. The most prevalent histological type was invasive ductal carcinoma, in 29 (91%), and the molecular subtype was Luminal A, in 20 (62%) cases. Stage II was the most prevalent, 13 (40%), followed by III, 9 (28%). Surgical treatment was the most prevalent, with an equal distribution between conservative and radical surgery. Immediate breast reconstruction was performed in only three women (9.37%).
Conclusion: Considering the aging of the Brazilian population and the increasing rates of breast cancer diagnoses in women over 70 years of age, it is concluded that mammographic screening in this age group should not be neglected, as it allows early diagnosis and curative treatment. Screening guidelines should not be limited to chronological age.

Keywords: Breast Cancer; Elderly Women; Clinical Epidemiology; Mammographic Screening.

ANALYSIS OF AXILLARY LYMPH NODE RESPONSE TO NEOADJUVANT THERAPY IN YOUNG BREAST CANCER PATIENTS (≤40 YEARS) TREATED AT DR. ARNALDO CANCER INSTITUTE IN SÃO PAULO

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Objectives: To describe pathological complete response (pCR) rates in axillary lymph nodes after neoadjuvant therapy (NAT) in young breast cancer patients (≤40 years) and correlate with molecular subtypes
Methodology: We analyzed patients ≤40 years treated at a cancer center in São Paulo from August 2018 to July 2023. Collected data included molecular subtype (luminal-like, HER2+, triple negative [TN]), axillary response (ypN0 vs ypN+), and survival outcomes. Statistical analysis used descriptive methods of cN+ patients and their response to NAT followed by surgery. This study was approved by the ethics committee at Dr. Arnaldo Cancer Institute.
Results: The study included 50 young patients (median age 35.5 years) with breast cancer, among whom 26 patients (52%) had clinically positive axillary involvement (cN+) before treatment. After NAT, we observed that 40% (10/26) of cN+ patients achieved pathological complete response in axilla (ypN0). ypN0 rates varied significantly among subtypes: HER2+: 62% (8/13); TN: 38% (5/13); Luminal: 23% (6/26). 60% (16/26) remained ypN+, with 77% of these being luminal subtype. Regarding surgical approach: 44% (11/26) of cN+ patients underwent axillary lymph node dissection. Among those achieving ypN0, only 20% (2/10) required dissection.
Conclusion: HER2+ tumors showed the highest ypN0 rate (54%), while TN had the worst prognosis (60% of deaths). Complete axillary response correlates with better prognosis, especially in HER2+. Triple Negative requires aggressive multimodal approach due to high progression rates. Our data support axillary treatment individualization based on subtype and response to NAT

Keywords: breast cancer, young patients, neoadjuvant therapy, axillary response, molecular subtypes

GSK343 AND EZH2: EPIGENETIC MODULATION IN BREAST TUMOR CELLS

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Objectives: The enzyme EZH2 (Enhancer of Zeste Homolog 2), a catalytic component of the PRC2 (Polycomb Repressive Complex 2), is associated with transcriptional repression of tumor suppressor genes and the progression of various cancer types, including breast cancer. This study aimed to evaluate the expression levels of the EZH2 gene in two breast cancer cell lines — MDA-MB-134 (luminal) and HTB-123 (triplenegative) treated with different concentrations of the selective EZH2 inhibitor, GSK343.
Methodology: Cells were cultured under standardized conditions (37°C, 5% CO_2) and treated with GSK343 at established concentrations (1, 5, 15, 30, and 60μM) for 24h, 48h, and 72h. After the exposure periods, total RNA was extracted and cDNA synthesized. EZH2 gene expression was quantified by RT-qPCR, using housekeeping genes for data normalization. Statistical analysis was performed using ANOVA with Tukey's post-test, with $p < 0.05$ considered statistically significant.
Results: The results revealed a dose-dependent reduction in EZH2 expression, particularly at concentrations of 15μM and above. In the HTB-123 cell line, inhibition was more pronounced starting at 30μM, with a significant decrease after 48h and more marked after 72h ($p < 0.01$). In MDA-MB-134, the response occurred earlier, with significant reductions already observed at 15 μM after 24h ($p < 0.05$), indicating greater sensitivity to the inhibitor.
Conclusion: GSK343 is effective in negatively modulating EZH2 expression in breast cancer cells of different subtypes, with effects dependent on dose and exposure time, reinforcing its potential as an epigenetic agent in antitumor therapeutic strategies.

Keywords: Breast Neoplasms, Genomic Instability, EZH2, GSK343

VITAMIN A DEFICIENCY AND ITS ASSOCIATION WITH TUMOR CHARACTERISTICS IN BREAST CANCER PATIENTS

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Objectives: Breast cancer is the most common cancer among women worldwide, yet limited literature exists on vitamin A's effects in breast cancer patients. This study investigated the correlation between vitamin A deficiency and tumor characteristics.
Methodology: This prospective study included 50 newly diagnosed breast cancer patients who had undergone primary surgery. Universal sampling was used. The study analyzed estrogen receptor (ER), progesterone receptor (PR), and human epidermal growth factor receptor 2 (HER2) status, along with vitamin A levels (µg/dL). Statistical analyses included t-tests and chi-square tests. The study was approved by the Research Ethics Committee.
Results: The mean age was 54.6 years (SD ± 12.2), and the mean vitamin A level was 32.2 µg/L (SD ± 18.1). ER was positive in 76%, PR in 68%, HER2 in 8%, and triple-negative breast cancer (TNBC) in 20%. ER-positive cases had higher vitamin A levels (37.2 µg/L) than ER-negative cases (16.6 µg/L), $p < 0.0001$. PR-positive cases also had elevated vitamin A levels (36.9 µg/L) compared to PR-negative cases (22.3 µg/L), $p < 0.006$. No significant difference was found between HER2-positive (40.3 µg/L) and HER2-negative (30.7 µg/L) cases, $p < 0.174$. TNBC cases had lower vitamin A levels (16.8 µg/L) than non-TNBC cases (36.1 µg/L), $p < 0.002$.
Conclusion: Vitamin A levels are significantly associated with breast cancer subtypes, being higher in ER and PR-positive cases and lower in TNBC. These findings suggest vitamin A status may influence prognosis and warrant further investigation into its therapeutic role in breast cancer management.

Keywords: Breast Neoplasms, Vitamin A, Estrogen Receptor, Receptors, Progesterone, Triple Negative Breast
Neoplasms.

EPIDEMIOLOGY OF MALE BREAST CANCER IN BRAZIL

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Objectives: Male breast cancer is a rare disease, accounting for less than 1% of all breast cancer cases. In Brazil, data on its epidemiology and treatment patterns remain limited. This study aimed to analyze the clinical and epidemiological characteristics of male breast cancer patients diagnosed in Brazil between 2000 and 2022.
Methodology: Data were extracted from the Brazilian Hospital Cancer Registries via the National Cancer Institute (INCA) database, covering 239 cancer centers across all regions. Variables analyzed included age, race, education, tumor characteristics, clinical stage, histology, treatment modalities, and geographic disparities. Only microscopically confirmed in situ and invasive tumors (ICD-10 C50) were included; non-epithelial neoplasms were excluded. Data analysis was conducted using R software.
Results: A total of 4,918 cases of male breast cancer were identified. The highest number of cases occurred between 2015 and 2019. The mean age at diagnosis was above 60, with 75.7% of patients aged ≥50 years. Most patients were white (38.7%) or brown (30%), and 43% had ≤8 years of schooling. Southeast and Northeast accounted for the majority of cases. Tumor staging revealed a predominance of stage II (26.6%) and stage III (24.3%) disease. The most frequent tumor location was the upper outer quadrant. Surgery was the most common initial treatment, followed by chemotherapy, radiotherapy, and hormone therapy. Only 3% of patients received no oncological treatment. A significant proportion of patients (60.8%) traveled to another city for treatment.
Conclusion: This study presents one of the most comprehensive national overviews of male breast cancer in Brazil, revealing significant disparities in diagnosis and access to care . The data highlight the need for improved awareness and earlier detection. Further research is crucial to support evidence-based care for this underserved population.

Keywords: Breast Neoplasms, Male; Clinical Epidemiology; Brazil

INFLAMMATORY BREAST CARCINOMA: PROGNOSTIC FACTORS ASSOCIATED WITH SURVIVAL IN A TERTIARY HOSPITAL IN CENTRAL-WEST BRAZIL

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Objectives: The primary objective of this study was to identify factors associated with survival in patients with IBC undergoing surgical treatment at the Hospital de Base do Distrito Federal. Our secondary objectives were to define the epidemiological and clinical profile of these patients, evaluate the pathological staging, identify the rate of locoregional recurrence, distant recurrence and deaths, and estimate disease-free survival (DFS) and overall survival (OS).
Methodology: A retrospective cohort study was performed with 68 patients treated between 2013 and 2023. Analyses included Cox regression to determine factors associated with recurrence and mortality, using the hazard ratio (HR) as a measure of effect, and Kaplan-Meier curves to assess survival, considering $p < 0.05$ as significant.
Results: The median age of patients was 50.5 years with 47% under 50 years. The most prevalent tumor subtype was Triple Negative (39.7%), and the most common clinical staging was IIIB N1 (48.5%). The pathological complete response rate was 22%.The median follow up was 1,4 years, locoregional recurrence occurred in 22% of patients, 47.5% had distant recurrence, and mortality reached 47.06%. The median survival time was approximately 3.8 years, and the median disease-free time was approximately 2 years. Factors associated with a worse prognosis for overall survival and disease-free survival in the Multivariate analysis included Triple Negative tumor ($p = 0.001$) and (p 0.02) and axillary ypN2/N3 ($p < 0.001$) and ($p < 0.001$), respectively. In univariate analysis, residual tumor size ($p = 0.0199$), presence of angiolymphatic invasion ($p = 0.0036$) were also associated with a worse prognosis.
Conclusion: The study emphasizes the need for early and multidisciplinary treatment of Inflammatory Breast Cancer (IBC). Better pathological response and locoregional control are crucial for prognosis, especially in the Triple Negative subtype.

Keywords: Inflammatory Breast Cancer (IBC), Prognostic Factors, Survival Analysis

NIPPLE-SPARING MASTECTOMY AS A RISK-REDUCING STRATEGY IN HIGH-RISK PATIENTS

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Objectives: We aimed to evaluate indications, complication rates, and unfavorable events in 106 patients undergoing risk-reducing nipple-sparing mastectomy (NSM) with immediate reconstruction over 20 years.
Methodology: We retrospectively reviewed medical records and updated patient follow-ups during routine appointments. Patients who underwent risk-reducing NSM from 2004 to 2024 were included.
Results: The mean patient's age was 42.8 years, with 74.5% under 50. The main indication for risk-reducing NSM was the presence of genetic mutation (61.3%), predominantly BRCA (52%), followed by a family history of breast cancer (38.6%). All patients received silicone implant-based reconstruction. There were one (1%) incidental diagnoses of invasive ductal carcinoma, and three (2.8%) ductal carcinoma in situ. Among 212 ris-reducing NSM, complication rates were low, with partial nipple necrosis, infection, and seroma needing drainage each occurring in approximately 1% of cases. With a mean follow-up of 52 months, only one (1%) patient developed breast cancer.
Conclusion: Our findings highlight the safety and effectiveness of NSM as a risk-reducing strategy, supporting its role in precision surgical oncology for high-risk patients.

Keywords: subcutaneous mastectomy, postoperative complications, breast neoplasms

EFFECTS OF THE HYPOMETHYLATING AGENT 5-AZA-2′-DEOXYCYTIDINE ON SMYD2 AND SMYD3 EXPRESSION IN MCF7 AND BT474 CELLS

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Objectives: The epigenetic genes SMYD2 and SMYD3, part of the lysine methyltransferase family, play crucial roles in gene expression regulation, cell proliferation, and cancer progression—particularly in breast cancer. Dysregulation of these genes has been linked to aggressive tumor phenotypes, making them promising targets for therapeutic interventions. This study aimed to evaluate the modulatory effects of the hypomethylating agent 5-aza-2′-deoxycytidine (5-aza-dC) on the expression levels of SMYD2 and SMYD3 in luminal A (MCF7) and luminal B (BT474) breast cancer cell lines treated with different concentrations.
Methodology: Cells were cultured in DMEM and RPMI media, respectively, and treated with varying concentrations of 5-aza-dC (10, 20, 30, and 50 μM) for 24h, 48h, and 72h. After each time point, RNA was extracted, cDNA synthesized, and gene expression quantified via RT-qPCR, using reference genes for normalization. Data were analyzed using ANOVA followed by Tukey's post-test, with $p < 0.05$ considered significant.
Results: The experiments revealed dose- and time-dependent modulation. In MCF7, a significant reduction in SMYD3 expression was observed from 30 μM, especially after 48h and 72h ($p < 0.01$). In BT474, SMYD2 expression showed a significant decrease at 50 μM after 72h ($p < 0.05$), while SMYD3 was also repressed at all doses from 48h onward, with the most prominent effects at 30 μM and 50 μM ($p < 0.01$).
Conclusion: Treatment with 5-aza-dC significantly downregulated SMYD2 and SMYD3 expression, suggesting that epigenetic modulation may be an effective pathway for controlling these genes in breast cancer cells. These findings reinforce the potential of epigenetic therapy in antitumor strategies.

Keywords: Breast Neoplasms, Epigenetic, SMYD2, SMYD3

NATIONAL SURVEY ON ATTITUDES OF BRAZILIAN BREAST SURGEONS REGARDING ONCOPLASTIC SURGERY: SUCCESS OF A TRAINING MODEL

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Objectives: Historically, breast reconstruction was performed by plastic surgeons. The Brazilian Society of Mastology (SBM) implemented initiatives to improve breast surgeons' training in oncoplastic techniques; however, the current proportion of surgeons performing these techniques remained unknown. This study aimed to determine the proportion of Brazilian breast surgeons performing oncoplastic surgery, their previous training, the complexity of procedures performed and factors influencing adoption of techniques.
Methodology: In this survey, a structured questionnaire was sent to all SBM-affiliated breast surgeons between July and December 2023. Outcome proportions were estimated using binomial distribution. Adjusted proportion ratios (aPR) were calculated using robust Poisson regression.
Results: A 60.2% valid response rate was achieved (n=1059/1759). Almost half of the respondents performed oncoplastic surgery, with most being young (<40 years) (aPR: 1.66; 1.31-1.10; p<0.001), male (aPR: 1.39; 1.22-1.59; p<0.001), southern residents (aPR: 1.39; 1.18-1.63; p<0.001), with a specialist degree in breast disease (aPR: 1.19; 1.00-1.42; p<0.004), primarily trained in general surgery (aPR: 1.32; 1.16-1.51; p<0.001) and secondarily in breast surgery (aPR: 1.41; 1.08-1.85; p=0.01), and performing >100 surgeries/year (aPR: 1.72; 1.49-1.99; p<0.001). The techniques most commonly mastered were simple displacement (88.7%), therapeutic mammoplasty or contralateral symmetrization (96.4%), reconstruction with implants or tissue expanders (93.6%), extreme oncoplasty (81%), skin and nipple-sparing (99%) or skin-reducing mastectomy (84.2%), and thoracoabdominal flaps (71.7%).
Conclusion: A high proportion of Brazilian mastologists perform oncoplastic surgery which, ultimately, may benefit breast cancer patients, increasing the rate of breast-conserving surgery and breast reconstruction, particularly in locations where resources are sparse. These data may encourage the development of strategies aimed at improving medical education in this field and in other countries.

Keywords: breast cancer; mastectomy; segmental mastectomy; subcutaneous mastectomy; oncoplasty; oncoplastic; oncoplastic surgery; mammoplasty; implants; breast reconstruction; questionnaires; survey.

EPIDEMIOLOGICAL AND IMMUNOHISTOCHEMICAL ANALYSIS OF YOUNG WOMEN WITH BREAST CANCER IN A PUBLIC HOSPITAL OF THE UNIFIED HEALTH SYSTEM OF THE FEDERAL DISTRICT

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Objectives: To outline the epidemiological and immunohistochemical profile of young women with breast cancer treated at a hospital of the unified health system (SUS).
Methodology: Cross-sectional, retrospective study that analyzed women with breast cancer under 40 years of age in a public hospital in the Federal District from 01/2017 to 01/2023, using the Trakcare® platform. Approved by the ethics committee: CAAE: 66697522300005553 and Opinion 5907638.
Results: Of the 383 women with breast cancer, 62 (16%) were under 40 years of age. Among them, 2.3% were aged 20 to 24 years, 7.2% were aged 25 to 29 years, 32.3% were aged 30 to 34 years and 58.1% were aged 35 to 39 years. The subjects were 46.2% brown, 27.6% white and 9.5% black. Regarding parity, 21% were nulliparous and 79% had had 1 or more pregnancies. The mean age at menarche was 13 years. Approximately 36.7% used oral hormonal contraception (OHC); 19% had a positive family history (FH) for breast cancer; 8.1% were smokers and 12.9% were alcoholics. The histopathological results in 38 (61.29%) were infiltrating ductal carcinoma, infiltrating lobular carcinoma in 14 (22.58%) and ductal in situ in 10 (16.12%). The most prevalent molecular subtype was luminal B, 19 (30.64%) and non-basal triple-negative, 18 (29.03%), followed by luminal A, 13 (20.96%), HER2, 7 (11.29%) and hybrid luminal, 5 (8.06%).
Conclusion: Young women with breast cancer had a median age of 35 years. Those with positive FH and who used ACHO had a higher incidence of the disease. Non-specific invasive carcinoma, luminal B and triple-negative predominated, attesting to the higher prevalence of more aggressive tumors. The analysis outlined the profile of young women who deserve attention regarding earlier screening for breast cancer.

Keywords: Breast Cancer; Clinical Epidemiology; Immunohistochemistry.

EVALUATION OF THE RECURRENCE RATE OF BREAST CANCER AFTER IN TERTIARY HOSPITAL FROM THE FEDERAL DISTRICT

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Objectives: To evaluate recurrences related to breast surgery for adenectomy in the Mastology sector of the Tertiary Hospital of the Federal District, from June 2013 to June 2020.
Methodology: Observational, descriptive, retrospective study with data collection from patient records selected.
Results: Sixty-one patients who underwent adenectomy were selected; four were excluded because they did not meet the inclusion criteria. The most common age groups were between 50 and 59 years (35.1%), between 40 and 49 years (26.3%), and between 30 and 39 years (19.3%). The most common BMI index among patients was between 20 and 25 kg/m2. In the group of patients who underwent the procedure and had recurrence, the average age was 39.3 years. Of the 57 patients evaluated in the study, six presented recurrence of the disease. One (1.8%) presented local recurrence, one (1.8%) patient presented recurrence in the NAC, two (3.5%) presented local + regional recurrence, and two (3.5%) presented distant metastasis. Premenopause (50%) was the most frequent status in the recurrence group. Ductal histological type was related to all cases of recurrence. T1c and T3 and histological grade two were the most frequent characteristics. The tumor subtypes Luminal B (ki-67>14) (50%) and Luminal B with HER2 positive (ki67>15%) (33.3%) were the most frequent subtypes. The most frequent reason for adenectomy was multicentric/multifocal disease (33.3%), Radiated in QSL (66.7%) was the type of incision related to recurrence.
Conclusion: Adenectomy offers comprehensive treatment of breast injuries, with outcome favorable aesthetics. The overall recurrence rate in our study was 9.5%. After 5 years of study, Gerber et al[12] found a local recurrence rate of only 1.6%, while Sacchini et al.[13] found only 2.9% recurrence. In our study, the local recurrence rate was 1.8% and is therefore consistent with that found in the literature.

Keywords: Breast Neoplasms, Neoplasm Recurrence Local, surgery

DELAYS IN THE INITIATION OF BREAST CANCER TREATMENT IN BRAZIL: AN ANALYSIS BY AGE AND REGION

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Objectives: Breast cancer is the most prevalent malignancy among women in Brazil. This study aims to identify the regions and age groups most affected by delays in the initiation of breast cancer treatment and to assess the potential clinical consequences of such delays on patient outcomes.
Methodology: Data were collected from the "DATASUS" platform, which provided information on the "date of diagnostic examination" and the "date of first treatment," as well as the "regions" and "age groups" of patients. In accordance with guidelines from recent cancer committees, the optimal time to initiate oncological treatment is within 60 days of the diagnostic examination. Consequently, a delay in treatment initiation was defined as any interval exceeding 60 days from the diagnostic exam.
Results: In 2024, a total of 53,401 breast cancer cases initiated treatment, with 31.5% (n=16,830) experiencing delays in treatment commencement. The Central-West region exhibited the highest delay rate, with 39.9% (n=1,190) of cases delayed, followed by the North region at 34% (n=735). Among age groups, patients aged 65 to 69 years had the highest delay rate, with 35.1% (n=2,038) experiencing treatment delays. Delays in initiating breast cancer treatment can result in a range of clinical consequences, which may vary according to the tumor's grade and histological type. However, studies consistently demonstrate that delayed treatment is associated with an increased risk of metastasis, local disease progression, and decreased survival rates.
Conclusion: These findings underscore the critical importance of initiating treatment as early as possible for the progression of the disease, highlighting that regional and social disparities significantly influence the timing of treatment initiation. Further in-depth studies are necessary to better understand the underlying causes of these disparities reflected in the statistics.

Keywords: Breast Neoplasms, Treatment Delay

AI-DRIVEN ANALYSIS OF LOCAL RECURRENCE FACTORS IN NSM FOR INVASIVE TUMOR PATIENTS

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Objectives: The aim is to use a machine learning algorithm to identify risk factors for local recurrence after NSM with immediate reconstruction in a Brazilian breast cancer cohort.
Methodology: We employed a machine learning algorithm to classify features associated with local recurrence following NSM and immediate breast reconstruction for invasive tumors. Specifically, we implemented the XGBoost algorithm, a tree-based machine learning technique, and used SHAP method to interpret the prediction results of the model.
Results: The dataset comprised clinicopathological characteristics, surgical details, and outcome data from 299 BC patients who underwent NSM for invasive tumor treatment. The mean follow-up of the patients was 42.3 months (2001 – 2020). The XGBoost algorithm achieved an average accuracy of 95% in classifying patients into those who experienced local recurrence and those who remained disease-free. SHAP analysis identified the risk factors that most contributed to the prediction of local recurrence in the algorithm, including larger tumors, young age, negative progesterone receptor, not undergoing radiotherapy and chemotherapy, positive lymph nodes, and tumor high grade. Additional factors, such as pre-menopausal status, history of previous breast cancer, lobular and metaplastic tumor types, and adjuvant rather than neoadjuvant treatment, also influence the model, though to a lesser extent.
Conclusion: These preliminary findings enhance our understanding of the mechanisms underlying local recurrence after NSM in patients with invasive tumors, demonstrating the potential of the XGBoost algorithm to personalize breast cancer treatment.

Keywords: Breast neoplasms, machine learning, subcutaneous mastectomy

ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR BREAST CANCER RECURRENCE PREDICTION: A DATA-CENTRIC APPROACH

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Objectives: Breast cancer recurrence remains a significant clinical challenge, particularly in resource-constrained environments where long-term patient monitoring is often limited. Leveraging recent advances in Artificial Intelligence and Machine Learning, this study proposes a data-driven methodology to predict recurrence in breast cancer patients based on clinical and histopathological data extracted from electronic medical records.
Methodology: Through the development of a structured data processing pipeline, unstructured medical records were transformed into a high-quality dataset suitable for predictive modeling. The study introduces a stratified modeling approach, beginning with unsupervised clustering to identify distinct patient subgroups based on tumor aggressiveness. Supervised learning models were subsequently applied to each group, aiming to tailor predictions according to subgroup-specific characteristics. In parallel, survival analysis methods were employed to enhance interpretability and assess long-term outcomes. This study was approved by the ethics committee at Dr. Arnaldo Cancer Institute.
Results: The models developed demonstrated promising performance in predicting recurrence, with results supporting the clinical applicability of the proposed stratified modeling approach. Notably, the integration of survival analysis enhanced the interpretability of predictions, allowing the identification of patterns related to long-term outcomes.
Conclusion: These findings highlight the potential of AI-driven tools to support clinical decision-making and personalized follow-up strategies for breast cancer patients. Ongoing work includes expanding validation across multiple institutions and exploring the integration of molecular biomarkers and advanced deep learning techniques.

Keywords: Breast Neoplasms; Recurrence Prediction; Artificial Intelligence; Machine Learning; Survival Analysis; Medical Oncology

LIPOFILLED MINI DORSI FLAP: AN ALTERNATIVE FOR BREAST RECONSTRUCTION

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Objectives: The Lipofilled Mini Dorsi Flap (LMDF) has emerged as a novel breast reconstruction technique that utilizes a portion of the latissimus dorsi muscle combined with lipofilling to achieve a breast reconstruction with a more natural aesthetic outcome. In light of this, we conducted a systematic review to synthesize the most relevant data on this surgical technique and compile the main outcomes of this technique.
Methodology: The search was carried out in the PubMed, Embase, Scopus, ScienceDirect and Web of Science databases. The search strategy was designed using the descriptor: "Lipofilled Mini Dorsi Flap".
Results: Of the 10 initial studies, after duplicate removal and screening, 2 were included. A total of 106 patients were assessed, of whom 59 underwent immediate reconstruction and 47 underwent implant replacement — 32 replacing prostheses and 15 replacing tissue expanders. Among patients who underwent immediate reconstruction, 1 case of hematoma and 1 case of necrosis were reported, with no occurrences of infection. In the implant replacement group, no cases of hematoma, necrosis, or infection were observed. Regarding patient satisfaction, those in the immediate reconstruction group reported outcomes as very satisfactory (n=25) and satisfactory (n=34), while those in the implant replacement group reported very good (n=18), good (n=20), average (n=4) and 42 patients stated that they experienced the sensation of having a real breast.
Conclusion: The LMDF technique presents itself as a viable, efficient approach with a broad range of applications. The results demonstrated long-lasting outcomes with a natural appearance, without the functional muscle loss associated with other musculocutaneous flaps. The technique proved effective for both single-stage immediate reconstruction and implant replacement (including prostheses and expanders), making it a feasible alternative for both procedures.

Keywords: Mammaplasty, Myocutaneous Flap

THE IMPACT OF COVID-19 ON THE NAVIGATION, DIAGNOSIS AND TREATMENT OF BREAST CANCER PATIENTS. ASSESSMENT OF PRE- AND PANDEMIC RESULTS

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Objectives: Breast cancer is sensitive to mammographic screening and the organization of the health system, a fact that influences staging at diagnosis. During the COVID pandemic, diagnosis was compromised, with changes in patient navigation and treatment. The objective of this study is to compare the changes determined by pandemic in an oncology hospital.
Methodology: A retrospective study, carried out in a Tertiary Oncology Hospital, was approved by the regional Research Ethics Committee (CAAE 69791523.9.0000.5105). We evaluated exclusively patients from the Unified Health System (SUS). The patients were divided into 2 periods of 18 months, before and during pandemic. We evaluate age range, presence of symptoms at diagnosis, molecular subtype, clinical pathological stage, clinical prognosis stage, type of first treatment, and surgical treatment performed were compared. Chi-square test was used to compare groups. We used IBM -SPSS program version 20.0 for statistics.
Results: From July 2018 to December 2022, 460 patients were evaluated. The first treatment was surgery (59.8%), chemotherapy (32.6%), hormone therapy (3.3%) and palliative care (4.3%). The main surgery was breast-conserving surgery (BCS; 79.2%), followed by mastectomy without reconstruction (15.0%) and with reconstruction (5.9%); where oncoplastic procedures occurred in 14.0% of the patients. Several changes were observed during the period ($p < 0.01$): (1) patients diagnosed by screening mammography (40.7% x 26.2%); (2) palpable tumor at diagnosis (64.7% - 73.1%); (3) Age group 40-69 years (72.3% - 75.6%); (4) carcinoma in situ (10.9% - 5.0%); (5) clinical stage II (33.4% x 23.8%; (6) clinical stage III (20.1% x 30.0%); (7) oncoplastic quadrantectomy (4.1% x 15.5%); (8) axillary lymphadenectomy (18.3% x 28.9%).
Conclusion: In our oncology care region, the COVID pandemic, determined negative changes in the health system. Although we have limitations in SUS, it was observed worse tumors characteristics and treatment, based on worse in the diagnostic flow and patient navigation.

Keywords: breast neoplasms; COVID-19; retrospective study; disease progression

NIPPLE-SPARING MASTECTOMY IN YOUNG PATIENTS: EVALUATING ONCOLOGIC EFFICACY AND PROPHYLACTIC BENEFITS

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Objectives: This study evaluated the indications, complication rates, and outcomes of very young breast cancer patients undergoing NSM.
Methodology: We retrospectively reviewed medical records and updated patient follow-ups during routine appointments. Between January 2007 and December 2024 we evaluated 30 breast cancer patients < 30 years old who underwent NSM with immediate breast reconstruction.
Results: Indications for NSM included early breast cancer (n = 18), ipsilateral recurrence (n = 1), compromised margins after previous surgery (n = 1), and risk reduction (n =10). Notably, 90% underwent bilateral surgery. In risk-reducing cases, seven patients carried BRCA mutations, one had a p53 mutation, and two had a strong family history of breast cancer with breast atypia. Among therapeutic NSM, one patient was diagnosed with ductal carcinoma in situ, and 19 with invasive ductal carcinoma, being 42.1% Luminal tumors, 5.3% Luminal/HER2, 21% HER2, and 31.6% triple negative. Neoadjuvant chemotherapy was given to 73.7% (n = 14), with 42.8% (n = 6) achieving a pathological complete response, while 5 patients received adjuvant chemotherapy and 80% underwent radiotherapy (80%). Out of 57 NSM performed, minor postoperative complications were observed, including one (1.7%) hematoma needing drainage and one (1.7%) infection. Over a mean follow-up of 45 months, no patients undergoing risk-reducing NSM developed breast cancer, and two patients in therapeutic group experienced recurrence, one (5%) in the ipsilateral axilla and one (5%) in contralateral breast. The patient with contralateral recurrence did not receive bilateral NSM as part of their treatment.
Conclusion: Our findings highlight the aggressive nature of breast cancer in very young patients, suggesting that combining neoadjuvant chemotherapy with NSM seems to be an effective strategy for very young patients. Additionally, NSM demonstrated promising risk reduction outcomes in this high-risk group.

Keywords: subcutaneous mastectomy, postoperative complications, breast neoplasms, recurrence

INVASIVE DUCTAL BREAST CANCER IN BRAZIL: COMPARATIVE EPIDEMIOLOGICAL ANALYSIS BETWEEN GOIÁS AND OTHER BRAZILIAN STATES (2013-2025)

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Objectives: To analyze, from an epidemiological and comparative perspective, the incidence of invasive ductal breast cancer in Goiás in relation to the other Brazilian states within a given period.
Methodology: The study used a descriptive analysis of data collected through TABNET, considering the period from 2013 to 2025 and covering the 27 federative units of Brazil. Based on this data, the total number of cases of invasive ductal breast cancer in the Brazilian states and the Federal District was quantified, allowing a comparison of the annual incidence between Goiás and the rest of the country.
Results: Breast cancer is the most incident cancer among women after non-melanoma skin cancer, with invasive ductal carcinoma being its most common subtype. In Goiás, 6,643 cases of this type of cancer were confirmed between 2013 and 2025, representing around 7.5% of the 87,668 cases recorded in Brazil in the same period. The epidemiological analysis points to a gradual increase in incidence in the state, from just one case (1.1%) of the 90 recorded in the country in 2013, to 557 cases (30.36%) out of a total of 1380 recorded nationwide by the time of the study in 2025. In 2024, incidence peaked in Goiás, with 3,975 cases, corresponding to 24.97% of the national total. Comparatively, Goiás is the sixth state with the most records of invasive ductal breast cancer in the period analyzed, behind only Minas Gerais, Pernambuco, Paraná, São Paulo and Bahia, states with a larger population than Goiás.
Conclusion: The increase in incidence can be attributed to advances in screening and diagnosis, as well as greater exposure to risk factors such as obesity and the use of hormones. In addition, awareness and health campaigns in Goiás have intensified, favoring the identification of new cases.

Keywords: Breast Neoplasms; Breast Ductal Carcinoma; Epidemiology; Incidence

HEMOGLOBIN AND BONE METASTASIS RISK IN BREAST CANCER: A PROGNOSTIC PERSPECTIVE

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Objectives: Bone is the most common site of breast cancer (BC) metastasis, but prognostic factors remain controversial. This study examined the association between hemoglobin (Hb) levels and bone metastasis (BM) risk.
Methodology: This retrospective study evaluated 260 BC patients (2021–2023), analyzing age, clinical stage (IIIa, IIIb, IIIc), estrogen receptor (ER), progesterone receptor (PR), human epidermal growth factor receptor 2 (HER2) status, and Hb levels. Patients were divided into those with and without BM. Treatments included surgery, chemotherapy, radiotherapy, and hormonal blockade for ER/PR-positive cases. HER2 3+ patients received trastuzumab. Statistical analyses included t-tests and chi-square tests. The study was approved by the Research Ethics Committee.
Results: The mean age was 61.3 years (SD ± 9.7), and mean Hb was 12.3 g/dL (SD ± 1.17). ER was positive in 71.5%, PR in 59.6%, and HER2 in 25.8%. Clinical stages IIIa, IIIb, and IIIc were observed in 50.8%, 33.5%, and 15.7%, respectively. BM was identified in 17.3% of cases. Among stage IIIa, IIIb, and IIIc, BM occurred in 22.7%, 10.3%, and 14.6%, respectively (p > 0.067). BM was found in 16.1% of ER-positive vs. 20.3% of ER- negative patients (p > 0.468). PR and HER2 status showed no significant relationship with BM (p > 0.508, p > 0.708). However, Hb levels were significantly lower in BM patients (11.7 g/dL) than in those without (12.5 g/dL, p < 0.0001).
Conclusion: Lower Hb levels may be linked to higher BM risk in BC patients and could serve as a prognostic marker, requiring further investigation.

Keywords: Hemoglobins, Breast Neoplasms, Neoplasm Metastasis and Radiotherapy.

EVALUATION OF LYMPH NODES IN WOMEN UNDERGOING NEOADJUVANT CHEMOTHERAPY IN THE TREATMENT OF BREAST CANCER

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Objectives: To evaluate the impact of neoadjuvant chemotherapy on the surgical management of axillary lymph nodes, focusing on the feasibility of more conservative interventions.
Methodology: This observational, analytical, and cross-sectional study analyzed the medical records of 172 women diagnosed with breast cancer at the Regional Hospital of Asa Norte between June 2021 and August 2024. Among them, 21 women met the study's inclusion criteria.Submitted and approved by the ethics committee: CAAE: 85735824600005553 and Opinion: 7429411.
Results: The mean age of the participants was 52.8 years. Breast involvement was evenly distributed between the right and left sides (47.62% each), while 4.76% had bilateral involvement. The most prevalent molecular subtype was Luminal B (33.33%), followed by HER2-positive (28.57%), triple-negative (19.04%), and Luminal A (14.28%). The average tumor size was 3.7 cm, with tumors measuring 2.1 to 3.0 cm being the most common (57.14%). Axillary staging showed 52.38% with negative nodes and 47.62% with positive nodes. Partial response to chemotherapy was the most frequent outcome (42.86%), while 23.81% achieved pathological complete response and 33.33% showed no response. Surgically, 66.67% underwent mastectomy and 33.33% underwent conservative surgery. Sentinel lymph node biopsy was the predominant axillary approach (57.14%), while 42.86% required lymphadenectomy. Clear margins were observed in 90.48% of cases. The mean number of evaluated lymph nodes was 10.33, with an average of 3.28 positive nodes.
Conclusion: Neoadjuvant chemotherapy contributed to reducing lymph node involvement, enabling more conservative surgical techniques such as sentinel lymph node biopsy and with lower morbidity. with lower morbidity. Therefore, personalized treatment, considering tumor profile and therapeutic response, is essential to improve clinical outcomes and patients quality of life.

Keywords: Breast Cancer; Neoadjuvant Chemotherapy; Sentinel Lymph Node, Lymphadenectomy; Pathological Complete Response.

GENE MODULATION BY OZONE: AURKA AND AURKB IN THE CONTEXT OF BREAST CARCINOMA

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Objectives: The kinases AURKA and AURKB are crucial regulatory enzymes of the cell cycle and mitosis, frequently overexpressed in various types of cancer, including breast cancer. Given the growing investigation into the therapeutic potential of medical ozone in oncological settings, this study aimed to evaluate the effects of different ozone concentrations on the expression of AURKA and AURKB genes in breast cancer cell lines.
Methodology: MDA-MB-134 (luminal B) and HTB-123 (triple-negative) cells were cultured under controlled conditions (37°C, 5% CO_2) and treated with ozone doses (10, 15, 20, 30, and 40 µg/mL) via gas exposure in culture medium for 45 minutes. After the established time points (48h and 72h), total RNA was extracted and cDNA synthesized. Gene expression quantification was performed by RT-qPCR, normalized using validated reference genes. Statistical analysis was conducted using ANOVA followed by Tukey's test, with significance set at $p < 0.05$.
Results: A significant reduction in AURKA expression was observed in both cell lines starting at 30.0µg/mL, with HTB-123 showing greater sensitivity to the 40µg/mL dose after 72h ($p < 0.01$). For AURKB, a more pronounced dose-dependent response was observed in MDA-MB-134, with a statistically significant decrease from 15µg/mL, especially after 72h ($p < 0.05$).
Conclusion: Treatment with increasing doses of ozone negatively modulates AURKA and AURKB expression, demonstrating a potential antitumor effect associated with cell cycle regulation. These findings contribute to the understanding of ozone's role as an adjuvant agent in breast cancer therapy, with differential impact on distinct molecular subtypes.

Keywords: Breast Neoplasms, Ozone, Genomic Instability, AURKA, AURKB

EFFECT OF RESISTANCE TRAINING ON THE PHASE ANGLE OF BREAST CANCER PATIENTS DURING NEOADJUVANT CHEMOTHERAPY: A PILOT STUDY

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Objectives: This pilot study aimed to evaluate the impact of Resistance Training (RT) on phase angle (PhA) in breast cancer patients undergoing neoadjuvant chemotherapy.
Methodology: Five women with breast cancer (stages I–III) were recruited before chemotherapy and randomized into RT (n=3) and control (CON, n=2) groups. The RT protocol lasted 12 weeks, with weekly sessions including 3–4 sets of 10–16 repetitions of exercises targeting major muscle groups, such as leg press, bench press, stiff-leg deadlift, and lat pulldown. PhA was assessed via bioelectrical impedance analysis at baseline and post-intervention. Statistical analysis was performed using IBM SPSS (v.25.0) and JAMOVI (v.2.3.28.0). The Shapiro-Wilk test assessed data normality. Group comparisons were conducted using an independent t-test, and PhA variations over time were analyzed with a two-way ANOVA (2×2). The study was approved by the UFG Ethics Committee.
Results: No statistically significant PhA differences were found between RT and CON (p=0.241). Baseline values were 6.37 ± 0.50 (RT) and 6.30 ± 0.28 (CON), while post-intervention values were 6.37 ± 0.40 (RT) and 5.85 ± 0.35 (CON).
Conclusion: RT did not significantly impact PhA during neoadjuvant chemotherapy. However, considering the prognostic value of PhA, future studies should explore larger samples, longer interventions, and different training protocols.

Keywords: Neoplasms, Resistance Training, Body Composition and Therapeutics.

FIBROADENOMA IN AXILLARY ACCESSORY BREAST. A SYSTEMATIC REVIEW OF THE LITERATURE

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Objectives: Objective: Axillary accessory breast is a benign condition which surgery is performed based on patient's wish. However, accessory breast tissue may be affected by neoplasia, requiring diagnosis and resection. Fibroadenoma represents the main etiology. Thus, this study aims to provide a better understanding of the imaging characteristics, differential diagnoses, and clinical and surgical treatment options for this pathology.
Methodology: Material and Methods: A systematic literature review was performed using the PICOS and PRISMA methodologies to evaluate reported cases in the literature. The databases searched included PubMed and LILACS, without restrictions on date or language. We used the terms: ("Axilla" [Mesh] OR accessory breast) AND "Fibroadenoma"[Mesh]).
Results:
Results: The PubMed literature reported 45 articles and Lilacs reported 1 article, also reported in PubMed. The medical literature reports only 43 cases of fibroadenoma in the axillary accessory breast and we add two additional cases. Despite fibroadenoma being the most common benign breast neoplasm, fewer than 50 cases have been described in the literature regarding this condition. Due to its rarity, clinical suspicion is low, and imaging findings are atypical. This condition should be considered in the differential diagnosis of benign, malignant, or metastatic axillary pathologies. The patients underwent surgical resection of the accessory breasts.
Conclusion:
Conclusion: Conservative management of axillary accessory breast tissue is possible, although ectopic breasts may be affected by neoplasms. In cases of suspected malignancy, investigation follows the same clinical protocol used for breasts in normal anatomical positions, ensuring timely diagnosis. When fibroadenoma occurs in the accessory breast, careful observation is the safest approach and should be conducted in conjunction with evaluation of the primary breast tissue.

Keywords: accessory breast; axilla; supernumerary breast; fibroadenoma

TRENDS IN MASTECTOMY FOR EARLY BREAST CANCER IN A PUBLIC INSTITUTION WITH LIMITED ACCESS: A RETROSPECTIVE COHORT

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Objectives: Breast-conserving surgery (BCS) is the preferred surgical treatment for early breast cancer. In recent years, on the other hand, there has been an increase in mastectomies in developed countries. Little is known, however, about this trend in breast healthcare in low- and middle-income countries.
Methodology: This is a retrospective cohort study of patients who underwent surgery for non-metastatic breast cancer between 2012 and 2019 at the Hospital Geral de Fortaleza (HGF), an institution that exclusively treats patients from the Brazilian public health system (SUS). The main objective of the study was to evaluate the rates of mastectomy in the period, with or without immediate reconstruction, as well as BCS. The chi-square test, with Bonferroni adjustment, was applied to the relative frequency of the procedures performed in order to test the statistical significance in the evolution of the frequencies of surgeries over the years.
Results: 805 patients underwent surgical treatment for non-metastatic breast cancer, with an average of 100 surgeries per year (range 85-118) during the study period. Mastectomy was performed in 552 cases (68.57%), while 253 patients underwent BCS (31.42%). Among the patients who underwent mastectomy, 181 (32.78%) had immediate reconstruction, with the highest proportion using implants (92.26%). No statistical difference was observed between mastectomies with or without reconstruction throughout the period (p=0.6635), with a statistically significant difference between BCS (p=0.04281) and mastectomies.
Conclusion: No increase in mastectomies rates, with and without immediate reconstruction, was observed over the years, but a trend towards an increase in BCS was observed. Further studies are needed to better understand this trend in settings with limited access to health care.

Keywords: Breast neoplasm; Mastectomy; Subcutaneous mastectomy; Breast conserving therapy; Partial mastectomy; Breast reconstruction; Oncoplastic

REGIONAL DISCREPANCIES BETWEEN DIAGNOSIS AND TREATMENT START OF BREAST CANCER: A COMPARATIVE ANALYSIS OF DATASUS DATA IN DIFFERENT BRAZILIAN REGIONS

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Objectives: This study aims to analyze the data available in DATASUS regarding the number of breast cancer diagnoses compared to the starting time of treatments in different Brazilian regions.
Methodology: It is an observational, descriptive, and analytical study using secondary data from DATASUS, covering the period from 2019 to 2024, including women of all ages diagnosed with malignant breast neoplasia, excluding those with incomplete records, in compliance with ethical guidelines and ensuring participant privacy protection.
Results: The analysis of the proportion of patients who started treatment within 30 days of diagnosis revealed important regional variations. The South and Southeast regions had the highest percentages of early treatment, with values often exceeding 25% of diagnosed cases. However, the North and Northeast recorded the lowest rates of starting treatment within this period, with values below 20% in most of the years evaluated. While the analysis of the percentage of patients who started treatment after 60 days of diagnosis revealed that the North and Northeast regions had the highest rates of delay in starting treatment, often above 50% of diagnosed cases. The Southeast and South, despite also registering delays, presented relatively lower percentages.
Conclusion: Despite the implementation of the 60 Day Law, data indicates that the time between diagnosis and treatment start is still a challenge. The lack of statistical significance in the comparison between regions does not rule out the importance of the differences identified, since delays in treatment can compromise clinical outcomes and impact patients' quality of life. Public policies aimed at equity in access to early diagnosis and treatment of breast cancer needed to be reinforced, especially in more vulnerable regions. Measures such as strengthening primary care, expanding the cancer care network and optimizing queue management can be fundamental to reduce these inequalities.

Keywords: Breast cancer, health disparities, treatment delay, epidemiology, Brazil

ANALYSIS OF THE IMPACT OF MAMMOGRAM COVERAGE ON BREAST CANCER MORTALITY

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Objectives: In Brazil, breast cancer is the most prevalent type and the leading cause of cancer-related death among women. Early detection plays a crucial role in improving cure rates, with mammography being the most effective method for screening. This is because mammography can detect malignant tumors in their early, often asymptomatic stages, allowing for timely treatment initiation and, consequently, better prognosis. This study aims to evaluate the impact of mammography coverage in Brazil on breast cancer mortality.
Methodology: A retrospective, cross-sectional quantitative study was conducted using data from the Hospital Information System (SIH-SUS) and the Outpatient Information System (SIA-SUS). Variables analyzed included "mortality" due to malignant breast neoplasms (ICD C50) and "mammograms" from 2013 to 2023. For spatial analysis, data were classified according to Brazil's macro-regions.
Results: Between 2013 and 2023, the number of mammograms performed in the SUS increased from 3.1 million to 4.6 million, peaking in 2019 (5.2 million). In 2020, it dropped to 3.6 million, then resumed its upward trend. The Southeast led in 2022 (2.1 million), followed by the South (1 million) and Northeast (974 thousand). Breast cancer deaths rose from 15,074 (2013) to 18,139 (2022), with the Southeast consistently reporting the highest numbers (8,259 in 2022). The South showed more stable mortality rates despite high screening coverage.
Conclusion: It is evident that the breast cancer mortality rate continued to rise from 2013 to 2023, despite the increase in screening tests during this period. This scenario suggests that although mammography is a fundamental tool for early disease detection, its expansion alone has not been sufficient to reduce mortality. Therefore, the findings highlight the urgent need to strengthen public policies related to early diagnosis, as well as effective medical treatment, to reduce the high mortality rate.

Keywords: Breast cancer, mammography, mortality.

HOSPITALIZED BREAST CANCER PATIENTS IN MATO GROSSO (2014–2024): FACTORS ASSOCIATED WITH SURVIVAL AND MORTALITY PREDICTORS

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Objectives: To analyze factors associated with the survival of breast cancer patients hospitalized in the state of Mato Grosso (2014–2024) using SIH/SUS data, focusing on demographic and hospital characteristics.
Methodology: This retrospective cohort study analyzed 7,546 breast cancer patients (ICD C50 and subcategories) hospitalized between 2014 and 2024, using data from SIH/DATASUS and the Mato Grosso Health Department (DwWeb SES-MT). The outcome was time to death, measured in days from admission, with predictors including demographics and hospitalization factors (e.g., ICU admission, service complexity, costs). Descriptive and bivariate analyses were conducted using RStudio, with incidence density for rate ratios, Kaplan-Meier for survival curves, and Mantel-Haenszel chi-square for hazard ratios, considering $p < 0.05$ as statistically significant.
Results: The analysis included 7,546 breast cancer patients, with 98.6% being women. Most were under 60 years old (67.7%) and resided in the metropolitan region of Cuiabá (54.8%). The majority received high complexity care (56.9%) and 7.9% died during hospitalization. Predictors of mortality included male sex (RR = 13.53; CI95%: 7.72–23.72; $p < 0.001$), age over 60 years (RR = 1.22; CI95%: 1.04–1.42; $p = 0.05$), medium complexity care (RR = 27.37; CI95%: 15.08–49.66; $p < 0.001$), above-average costs (RR = 4.91; CI95%: 3.81–6.32; $p < 0.001$), ICU admission (RR = 2.06; CI95%: 1.67–2.53; $p < 0.001$), public healthcare (RR = 1.74; CI95%: 1.43–2.11; $p < 0.001$), and clinical medical specialty (RR = 9.89; CI95%: 7.43–13.16; $p < 0.001$).
Conclusion: Factors such as male sex, age over 60, medium complexity care, high costs, ICU admission, public healthcare, and clinical care were identified as predictors of mortality in breast cancer patients, highlighting the need for early interventions and efficient resource management.

Keywords: Risk Factors, ICU, Hospitalization, Survival Analysis.

EPIDEMIOLOGICAL ANALYSIS OF THE MAIN DIAGNOSTIC TESTS FOR BREAST CANCER (MAMMOGRAPHY, CYTOLOGY, AND HISTOPATHOLOGY) IN BRAZIL FROM 2021 TO 2024

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Objectives: To analyze the distribution of mammography, cytology, and breast histopathology in Brazil between 2021 and 2024, considering race/ethnicity and age group.
Methodology: A cross-sectional descriptive study analyzing mammography, cytology, and breast histopathology in Brazil from 2021 to 2024. Data were extracted from the Department of Informatics of the Department of Informatics of the Unified Health System (DATASUS), considering race/ethnicity and age group.
Results: Analysis of the Cancer Information System (SISCAN) recorded 161,050 breast histopathology cases, with over half in women aged 40 to 59. Peak incidence occurred among those aged 45 to 49 (13.8%), with prevalence increasing with age. Most cases involved white women (40.04%), followed by Asian (yellow) women (34.5%) and mixed-race (parda) women (15.4%); Indigenous women accounted for only 0.1%. Procedures increased 69%, from 28,094 in 2021 to 47,945 in 2024. In the same period, 41,200 breast cytology exams were performed, mainly in women aged 45 to 49 (6,792), followed by those 40 to 44 (6,312) and 50 to 54 (5,379). The Asian population was most examined (38.8%), followed by white (28.3%) and mixed-race women (19.1%); Indigenous women accounted for only 0.08%. Over 9.2 million mammograms were performed, mainly in women aged 50 to 69, with relevant numbers among those 45 to 49. White women were most frequently screened (44.58%), followed by Asian (31.85%) and mixed-race (15.2%). The high rate of incomplete race/ethnicity records (3.95%) indicates a need to improve data quality.
Conclusion: The increased number of exams reflects greater screening adherence, but access inequalities persist, especially among Indigenous and Black populations. Inconsistent race/ethnicity records highlight the need to improve data collection to support more effective public health policies.

Keywords: Breast Neoplasms, Epidemiology, Diagnostic Techniques and Procedures.

COMPARISON OF SEDENTARY BEHAVIOR BETWEEN FEMALE CANCER SURVIVORS AND APPARENTLY HEALTHY WOMEN

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Objectives: To compare the sedentary behavior of breast cancer survivors with apparently healthy women.
Methodology: Participated the study 62 women separate into Group Breast Cancer Survivors (BCS) (n= 32; age: 52,93 ± 8,95) and Control Group (CG) with apparently healthy women (n = 30; age: 52,16 ± 7,59). The study was approved by Ethics Committee/UFG. The sedentary behavior was evaluated by the IPAQ, which consists of seven questions designed to estimate the duration and intensity of different dimensions of activity or physical inactivity, participants responded to the number of minutes the number of minutes they spent during the week and on the weekend. The inclusion criteria for both groups were: being in menopause and not participating in any regular resistance exercise program in the last 6 months. For the BCS group, having undergone mastectomy or breast quadrantectomy and not having metastasized. Data normality was assessed by the Kolmogorov-Smirnov test. The unpaired t-test was used to compare Statistical significance was set at $p \leq 0.05$.
Results: There was no significant difference between groups on sedentary behavior the week and on the weekend, respectively (BCS: 492,7 ± 155,7; CNT: 541,5 ± 201,4, $p < 0,214$; BCS: 525,7 ± 259,4; CNT: 511,3 ± 245,1, $p< 0,716$).
Conclusion: The current results suggest no difference in the sedentary behavior between the breast cancer survivors and women apparently health

Keywords: Cancer; Sedentary. Physical Inactivity

EVALUATION OF SHOULDER JOINT COMPLEX, KINESIOPHOBIA, QUALITY OF LIFE, LYMPHEDEMA AND PHYSICAL ACTIVITY LEVEL OF WOMEN WITH BREAST CANCER UNDERGOING SURGICAL TREATMENT

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Objectives: Objective: To evaluate the range of motion, muscle strength and functional performance of the shoulder joint complex, levels of shoulder pain and disability, kinesiophobia, quality of life, level of physical activity and lymphedema in women with breast cancer undergoing surgical treatment, at two time points, before and after surgery.
Methodology: Method: 11 volunteers participated in the study (53.7 ± 10.8 years, 73.10 ±17.9 kg, 1.55 ±0.05 m). Anthropometric measurements, evaluation of shoulder range of motion (ROM), handgrip strength (HGS), evaluation of upper limb functional performance (DASH), evaluation of shoulder pain and disability level (SPADI), assessment of kinesiophobia (TAMPA), quality of life assessment (SF-36), level of physical activity (MET) and evaluation of lymphedema (Perimetry) were performed. The study was approved by the Ethics Committee/UFG.
Results:
Results: There was no interaction between condition and time for HGS (p= 0.80) and ROM of the movements evaluated. In addition, there was no effect of the condition factor for HGS (p= 0.41) and ROM on the movements evaluated. There was also no effect of the time factor for HGS (p= 0.56) and ROM on the movements of the AOC of lateral rotation and medial rotation. However, there was a reduction in abduction ROM (p=0.002) and shoulder flexion (p=0.002) after surgery on both sides. There was no change in kinesiophobia (p= 0.12), quality of life (p=0.09), level of physical activity, and lymphedema after surgery. However, there was a worsening of functional performance (p= 0.005) and of the level of pain and disability in the shoulder (p= 0.02) after surgery.
Conclusion:
Conclusion: ROM was reduced after surgery for abduction movements and shoulder flexion. And functional performance and the level of shoulder pain and disability deteriorated after surgery.

Keywords: Keywords: women's health, surgery, breast cancer, upper limbs.

CASE REPORT: PSEUDOANEURYSM, AN UNUSUAL COMPLICATION AFTER BREAST BIOPSY

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Objectives: To describe a rare complication after a slightly invasive ultrasound-guided procedure and its pathognomonic finding.
Methodology: Review of medical records and images. Chronological record of progress and identification and patient response.
Results: Female, 61 years old, post-menopausal, hypertensive, asymptomatic. Performed a mammogram, which showed heterogeneous, amorphous and grouped calcifications in the superolateral quadrant of the left breast, extension of 1.2 cm.She underwent stereotactic-guided mamotomy. Reevaluation on 7th day, continues complaining of pain and worsening of the hematoma. Ultrasound performed on the 8th day shows nodular vascular formation with flow of a "ying-yang" pattern characteristic of pseudoaneurysm. The literature on PA after breast biopsies is scarce due to the low incidence of such complications. Data were found from only 23 cases in 22 years of search. Reported risk factors include advanced age, atherosclerosis, being a woman and use of anticoagulant therapy. PA manifests clinically with a pulsatile mass at the biopsy site. The first-line diagnostic test is color Doppler ultrasonography, which has an accuracy of 95%. The imaging test shows an internal and turbulent flow exhibiting the typical yin-yang sign. Follow-up of the complication ranges from conservative treatment with ultrasound-guided local compression to intravascular thrombin injection or surgery.
Conclusion: Pseudoaneurysms are contained transmural ruptures that occur when the three layers of the arterial wall are violated, forming a saccular collection. It usually manifests as a pulsatile mass in the breast after some local trauma, or due to biopsies and surgeries. It is a rare complication of core needle biopsies. Patients who present with increased pain and rapid growth of a mass at the tumor site after breast biopsy should be evaluated for possible AP. Adequate planning of the biopsy site is important, with prior review of imaging tests, thus avoiding injury to vessels close to the tumor.

Keywords: Pseudoaneurysm. Biopsy. Breast cancer.

BREAST CANCER IN QUILOMBO DESCENDANTS CITIES IN THE STATE OF PARÁ

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Objectives: This study aims to describe the epidemiological profile of reported breast cancer cases in women residing in officially recognized quilombo communities descendant cities in the state of Pará.
Methodology: This is a descriptive epidemiological study with a quantitative approach, based on data from the Department of Informatics of the Brazilian Unified Health System regarding malignant breast neoplasms reported in municipalities with quilombo territories officially recognized by the Instituto de Terras do Pará from 2020 to 2025.
Results: During the study period, a total of 1,011 cases of breast cancer were reported in the studied population in the state of Pará. Ananindeua was the city with the highest number of reported cases (n=368; 36.3%) and also conducted the highest number of mammography screenings. The most affected age group was 45-49 years, and the most frequently reported staging at diagnosis was grade 3.
Conclusion: The term "quilombo descendant territories" refers to areas historically occupied by Afro-descendant individuals who fled enslavement and its associated systemic violence. Recent studies suggest a more aggressive course of breast cancer in Black individuals, particularly due to later-stage diagnoses. To the best of our knowledge, epidemiological studies focusing on these specific populations remain scarce, especially in the Northern region of Brazil. The findings of this study may support the development and implementation of public health policies aimed at early diagnosis and disease control in these territories.

Keywords: Breast Neoplasms, Neoplasm Staging, Ethnic and Racial Minorities.

EFFECTS OF MUSIC THERAPY ON PAIN AND ANXIETY REDUCTION DURING SURGICAL PROCEDURES OR RADIOTHERAPY IN BREAST CANCER: A SYSTEMATIC REVIEW

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Objectives: Breast cancer treatment – which may include surgery, chemotherapy, and radiotherapy – is often associated with pain, anxiety, and reduced quality of life. Music therapy, defined as the clinical and evidence-based use of music to achieve therapeutic goals, has emerged as a promising complementary intervention for pain modulation and stress relief in oncology patients. This study aims to analyze available evidence on the effects of music therapy in breast cancer patients undergoing oncological treatments, contributing to more humanized and effective therapeutic strategies.
Methodology: A systematic review was conducted using the PubMed database to identify randomized clinical trials evaluating the effectiveness of music therapy in reducing pain, anxiety, and inflammatory markers. Outcomes analyzed included pain intensity via visual analog scale, anxiety levels, and biomarkers such as interleukin-6 and HMGB-1 protein.
Results: Receptive, individualized music therapy resulted in an average pain reduction of 3.20 points, compared to 1.75 points in the control group receiving standard care. Anxiety levels decreased by 3.25 points in the intervention group, versus only 0.73 in the control group. Interleukin-6 levels decreased by 6.05% in the music therapy group, while increasing by 43.53% in the control group. HMGB-1 levels dropped by 62.49% with music therapy, compared to a 30.32% reduction without musical intervention. Additionally, both individual receptive and group-integrated music therapy sessions significantly reduced stress, depression, anger, and state anxiety, with individual sessions achieving greater reductions in anxiety. The combination of music therapy and aromatherapy yielded the most significant pain reduction outcomes, suggesting a synergistic effect.
Conclusion: Music therapy significantly contributes to pain relief, anxiety control, and reduction of inflammatory processes in breast cancer patients. Both individual and group modalities are beneficial and adaptable to clinical needs, standing out as viable strategies for integration into multidisciplinary oncological care.

Keywords: Breast cancer, music therapy, pain, anxiety.

BREAST PARTIAL AMPUTATION: A NEW OPTION FOR ONCOLOGIC BREAST-CONSERVING SURGERY

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Objectives: Objective: Breast partial amputation (BPA) is a technique used in patients with gigantomastia and/or a suprasternal notch-areola distance greater than 35 cm. It is infrequently used for breast cancer. The objective of this study was to review BPA indications and its results in an oncologic hospital.
Methodology: Material and Methods: A retrospective study of cases undergoing BPA treated since 2019 at a Tertiary Oncology Hospital. The study was approved by the Research Ethics Committee under number 70454923.9.0000.5105. The BPA technique consists of breast resection with a linear incision close to the level of the mammary fold and resection of all distal breast tissue, followed or not by areolar implants. In oncology, its main indication is for small or medium-sized breasts with extreme ptosis, big and heavy breasts, reducing breast volume, eliminating ptosis, optimizing the area for radiotherapy, and reducing irradiation of neighboring tissues. It is a modality in the context of Extreme Oncoplasty. We reviewed the characteristics and results of patients who underwent this procedure.
Results:
Results: We reviewed 10 institutional patients, generally performed on patients with ptotic, non-voluminous breasts and elderly patients. The surgery was associated with conservative treatment of the breast on the tumor side (6 patients), with the majority of patients undergoing symmetrization (5 patients). Another indication was for symmetrization of patients (2 patients) who underwent mastectomy with prosthesis; or reduction of the contralateral ptotic breast in patients undergoing mastectomy without reconstruction. No serious surgical complications were observed, with a high degree of satisfaction.
Conclusion:
Conclusion: BPA is an easy-to-mark and perform method for breast-conserving surgery. It represents a solution ptotic breast, big or heavy breasts. It is associated with low surgical complications, allowing a reduction in the dose of radiotherapy in nearby organs, leading to a high degree of satisfaction.

Keywords: Gigantomastia; breast-conserving surgery; amputation; oncoplastic surgery

RESPONSES FROM ONE SESSION OF MAT PILATES ON ANXIETY INDICATORS IN APPARENTLY HEALTHY WOMEN AND BREAST CANCER SURVIVORS

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Objectives: Compare the responses of one Mat Pilates session on state anxiety indicators among women who survived breast cancer with apparently healthy women (HW).
Methodology: 30 women participated in the study, separated into a group of breast cancer survivors (BCS) (n =15; age: 61 ± 8,60) and a group of apparently healthy women (n = 15; age: 59,07 ± 6,78). The study was approved by Ethics Committee/UFG. State anxiety levels were evaluated by the IDATE, which consists of 20 statements in which volunteers must indicate how they feel at a given moment, the scores can range from 20 to 80, where: 20 to 34 – represents mild or low anxiety; 35 to 49 – moderate anxiety; 50 to 64 – high or severe anxiety; 65 to 80 – very high anxiety or panic. The inclusion criteria for both groups were: being in menopause and not participating in any regular resistance exercise program in the last 6 months. For the BCS group, having undergone mastectomy or breast quadrantectomy and not having metastasized. For data analysis were used mean and standard deviation.
Results: There was no difference in the classification of anxiety levels between survived breast cancer and apparently healthy women, respectively (BCS pre-test: 34 ± 7,07; post-test: 34 ± 6,78; HW pre-test: 30 ± 6,68; post-test: 31 ± 4,77).
Conclusion: The current results suggest no difference in the classification of anxiety levels between breast cancer survivors and women apparently health, although the classification of anxiety levels of both groups represents mild or low anxiety.

Keywords: cancer; anxiety; exercise

INTERVAL FOR SURGICAL TREATMENT AFTER NEOADJUVANT CHEMOTHERAPY IN PATIENTS WITH BREAST CANCER AT THE HOSPITAL DE CLÍNICAS COMPLEX OF THE FEDERAL UNIVERSITY OF PARANÁ IN 2020 TO 2022

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Objectives: Introduction: One of the possible critical factors for the outcome of breast cancer treatment is the time between diagnosis and the start of neoadjuvant therapy, as well as the interval until surgical treatment. Prolonged time between diagnosis and the institution of treatment may be associated with a worse prognosis, with an impact on overall survival and progression-free survival. Objective: to analyze the time interval between the end of neoadjuvant therapy and surgical treatment in patients at the Complexo Hospital de Clínicas da Universidade Federal do Paraná (CHC-UFPR) between 2020 and 2022.
Methodology: Methods: This is a retrospective, observational and descriptive study. All female patients who were diagnosed with breast cancer and treated at CHC-UFPR and who underwent neoadjuvant therapy followed by surgical treatment were included in the study.
Results:
Results: The sample consisted of 44 patients. The average time between the end of neoadjuvant therapy and surgical treatment was 47.86 days. The average time to start treatment (time from diagnosis to start of neoadjuvant therapy) was 36.2 days. When comparing the time to start neoadjuvant therapy between the years, there was a significant difference between 2020 and 2022 ($p = 0.009$). Surgical treatment was performed after the end of neoadjuvant treatment within eight weeks in 33 (75%) patients and more than eight weeks in 11 (25%) patients.
Conclusion:
Conclusion: The present study demonstrated that 75% of patients diagnosed with breast cancer between 2020 and 2022 at CHC-UFPR underwent surgical treatment within eight weeks of the end of neoadjuvant therapy.

Keywords: Keywords: breast cancer, neoadjuvant therapy, surgery

A LONGITUDINAL COHORT IN BREAST CANCER PATIENTS: A CASE-CONTROL STUDY

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Objectives: To statistically evaluate the possible changes in the sexual and psychological behavior of the participants in the control and surgical group (submitted to radical mastectomy - RM), comparing 5 moments of diagnosis, according to the methodology of the Brazilian version of the Watts Sexual Function Questionnaire (BSWSFQ), considering the qualitative issues of the study.
Methodology: This is a longitudinal cohort, with one year of follow-up, in which women between 50 and 60 years of age, with basic education (minimum) and history of early sexual affective functioning, with benign or malignant breast nodules (submitted to radical mastectomy with or without breast reconstruction as a form of treatment), from the Institute of Gynecology of the Hospital de Clínicas of the University of São Paulo (Mastology Sector) and the Responsibility Sector Social Mastology at the Hospital Sírio Libanês. The participants filled out the BSWSFQ and five qualitative questions were added to assess how they faced issues related to breast cancer and its treatment. Exploratory statistical analysis, case study, coding of qualitative variables for dummyes 0 / 1, panel data analysis, Bootstrap method and hypothesis tests for comparison between groups were used.
Results: Considering p = 0.10, it can be stated that statistically significant differences were found between the moments of collection in the arousal phase for the MR group, which may have impacted the differences observed between the moments for the Total BSWSFQ indicator. Other significant differences were found.
Conclusion: Five years later, the analysis of the panel data confirms and deepens the results found throughout the master's project. The comparative condition between the groups is satisfied. Tests reveal differences between the timing of data collection between the groups and the comparison between the groups. The qualitative evaluation shows the richness of variations in feelings/attitudes (resilience).

Keywords: Breast cancer, cooht stydy, radical mastectomy, resilience

IMAGE-GUIDED PERCUTANEOUS CRYOABLATION OF BREAST CANCER

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Objectives: Percutaneous cryoablation has emerged as a minimally invasive alternative to conventional surgical treatment of breast cancer, especially in patients with comorbidities, advanced age, or who refuse conservative surgery. The technique uses extremely low temperatures to destroy localized tumors, with the potential for lower morbidity and better aesthetic results. Its objective is to evaluate the efficacy, safety, and feasibility of image-guided percutaneous cryoablation in the treatment of breast cancer, focusing on its application as curative or palliative treatment in selected patients.
Methodology: Prospective and retrospective studies of ultrasound-, computed tomography-, or magnetic resonance-guided cryoablation were analyzed, with different sample sizes and monitoring methods. A literature review was performed using the descriptors "cryoablation" and "breast cancer" in the PubMed, LILACS, BVS, NICE and Scielo databases. Among the 83 publications, 15 from the last five years were selected. The parameters evaluated included local tumor control, complications, patient satisfaction and efficacy of imaging methods in post-procedure follow-up.
Results: Cryoablation was well tolerated, performed under local anesthesia, and technically successful in most cases. Complete ablation rates ranged from 70% to 100%, especially effective in tumors smaller than 15 mm. Complications were rare and mild, such as hematomas or superficial burns. Most patients had good local control, with a low recurrence rate. Imaging methods such as magnetic resonance imaging and contrast-enhanced mammography were useful in assessing the efficacy of the ablation technique. Patient satisfaction was high, even in palliative settings.
Conclusion: Image-guided percutaneous cryoablation is a safe, effective and promising therapeutic option for early breast cancer in selected patients. It can provide good tumor control with less physical and emotional impact, being especially valuable when surgery is not indicated. However, the high cost inhibits its indication. Additional studies are needed to consolidate its clinical application.

Keywords: "cryoablation"; "breast cancer"

EFFECTS OF NATURAL POLYPHENOLS ON METABOLIC PATHWAYS IN BREAST CANCER: AN INTEGRATIVE REVIEW

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Objectives: To analyze the effects of natural polyphenols on the modulation of metabolic pathways associated with proliferation, apoptosis, and cell invasion in breast cancer.
Methodology: An integrative review was conducted in PubMed (2020-2025) using MeSH terms: ("Polyphenols"[Mesh]) AND ("Breast Neoplasms/metabolism"[Mesh] OR "Breast Neoplasms/pathology"[Mesh] OR "Breast Neoplasms/physiopathology"[Mesh]). The inclusion criteria focused on studies that examined the effects of natural polyphenols on metabolic pathways related to proliferation, apoptosis, and cell invasion in breast cancer. A total of 78 articles were screened, with 53 meeting the eligibility criteria for final analysis. Fourteen articles were excluded for not addressing metabolic pathways in tumor progression, seven for not focusing on natural polyphenol therapies, and four for not fitting the study's scope.
Results: Natural polyphenols, such as resveratrol, acteoside, epigallocatechin gallate, and curcumin derivatives, exhibit significant antitumor effects in breast cancer, particularly in aggressive subtypes like triple-negative breast cancer. Studies identified key mechanisms, such as apoptosis induction via caspase activation and BAX/BCL-2 regulation, metabolic inhibition by suppressing glycolysis, epigenetic modulation of oncogene promoters, and immune activation that enhances the cytotoxicity of natural killer cells. Additionally, polyphenols show synergy with chemotherapeutic agents, reducing drug resistance by modulating microRNAs and ATP-binding cassette transporters. Advances in nanotechnology, such as the encapsulation of polyphenols in nanoparticles, have improved bioavailability and targeted delivery, thereby increasing therapeutic efficacy. Despite promising results, further clinical trials are needed to optimize polyphenol-based therapies and translate preclinical findings into effective treatments for breast cancer.
Conclusion: Natural polyphenols regulate key pathways in breast cancer progression, showing promise as therapeutic agents. Their effects on apoptosis, metabolism, immunity, and epigenetics are enhanced by nanotechnology and combination therapies, especially in aggressive subtypes. Future studies should focus on optimizing bioavailability and conducting clinical trials to validate their efficacy.

Keywords: Polyphenols, Breast Neoplasms, Herbal Medicine.

IMPACT OF COVID-19 ON THE INCIDENCE OF HOSPITALIZATIONS DUE TO PUERPERAL MASTITIS AND BREAST ABSCESS IN BRAZIL: AN ECOLOGICAL STUDY

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Objectives: This study aimed to evaluate the impact of the COVID-19 pandemic on hospitalization patterns for puerperal mastitis and breast abscess within the Brazilian Unified Health System (SUS).
Methodology: An ecological study was conducted using data from the Hospital Information System of the SUS (SIH/DATASUS). Hospitalizations due to postpartum breast-related issues across Brazil's five regions were analyzed monthly, with March 2020 set as the interruption point. Data normality was assessed using a normalized Q-Q plot and a standardized residuals histogram in R software, with a significance level of 5% ($p < 0.05$).
Results: A total of 11,279 hospitalizations were analyzed, with incidence rates ranging from 6 to 10 cases per 10,000 live births between 2018 and 2022. The Central-West region had the highest hospitalization rates both pre- and post-pandemic, while the Northeast reported the lowest. A 3.35% decline in expected hospitalization levels was observed after the pandemic in Brazil and in most regions.
Conclusion: Hospitalization incidence for postpartum breast conditions varied by period and region. The COVID-19 pandemic contributed to a reduction in incidence across most Brazilian regions.

Keywords: mastitis; puerperium; hospitalization; COVID-19; time series analysis

ARTIFICIAL INTELLIGENCE IN BREAST CANCER DETECTION AND SCREENING: AN INTEGRATIVE REVIEW

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Objectives: To investigate advanced technologies for improving the accuracy and efficiency of breast cancer detection and screening.
Methodology: An integrative review was performed in PubMed, Lilacs, and Embase (2001–February 2024), using MeSH/Emtree terms: Breast Neoplasms, Artificial Intelligence, Mass Screening. Inclusion criteria encompassed studies on breast cancer detection/diagnosis employing Artificial Intelligence (AI), irrespective of language. After duplicate removal (Rayyan software, n = 31), 144 articles were screened, with 66 meeting eligibility for final analysis.
Results: AI technologies have progressed from early wavelet-based models (Zhen & Chan, 2001) to sophisticated deep learning systems, such as Transpara® and Lunit INSIGHT MMG, enhancing diagnostic accuracy and alleviating radiologists' workload. Commercial tools like Transpara® demonstrated a 15% reduction in false negatives (Elhakim et al., 2023), while Lunit INSIGHT MMG increased early detection rates by 22% (Dembrower et al., 2020). Hybrid AI-radiologist models achieved the highest sensitivity (94%, Kizildag Yirgin et al., 2022), outperforming individual human assessments. Challenges include persistent false positives (8–12%) and scalability barriers. Emerging approaches integrating genetic/demographic data (Tao et al., 2023) highlight AI's potential for personalized screening.
Conclusion: AI-driven tools like Transpara® and Lunit INSIGHT MMG demonstrate enhanced accuracy in breast cancer detection through deep learning, yet challenges such as false positives (8–12%) and scalability persist. Personalized approaches integrating genetic/demographic data show promise for tailored screening. AI-human collaboration optimizes diagnostic accuracy; however, further validation and standardized clinical protocols are essential for widespread implementation.

Keywords: Artificial intelligence, mass screening, breast neoplasms.

BREAST CANCER TREATMENT-INDUCED PERIPHERAL NEUROPATHY: WHAT DOES THE LITERATURE TELL US ABOUT IT?

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Objectives: To identify risk factors, as well as effective preventive and therapeutic interventions for the management of chemotherapy-induced peripheral neuropathy in patients with breast cancer.
Methodology: The study followed the guidelines of PRISMA. For the search and selection of articles, the following descriptors were used: Peripheral Neuropathy; Breast Cancer; Neoplasm. The period selected for the search was the last 10 years. As inclusion criteria, the articles should be systematic reviews and/or metaanalyses, randomized controlled studies, in English, Spanish and Portuguese. Duplicate articles, letters to the editor, and opinion articles were excluded.
Results: The risk factors identified were neuropathic pain, anxiety, comorbidity, age, and chemotherapy treatment. The preventive and therapeutic interventions used were pharmacological treatment for peripheral neuropathy, psychological support, and management of neuropathic pain.
Conclusion: The most recurrent risk factors were peripheral neuropathy and anxiety. Preventive and multidisciplinary approaches were fundamental for the management of peripheral neuropathy. Approaches with pharmacological interventions, physiotherapeutic approaches and psychological approaches were highlighted.

Keywords: Peripheral Neuropathy; Breast Cancer; Neoplasm.

COMPARATIVE ANALYSIS OF TUMOR BIOLOGY WITH AGE RANGE AND CLINICAL OUTCOME OF PATIENTS DIAGNOSED WITH BREAST CANCER IN ONE YEAR IN A TERTIARY HOSPITAL IN THE FEDERAL DISTRICT

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Objectives: To comparatively analyze the age range of breast cancer patients in a tertiary hospital with tumor profile, clinical staging, and therapeutic proposal. To evaluate the incidence rate of grade 3 tumors and advanced clinical staging in patients under 50 years of age.
Methodology: Retrospective observational cross-sectional study. The medical records of all patients who underwent breast cancer surgery from April 2022 to March 2023 were analyzed. The relationship between the age groups of patients was comparatively analyzed, with a cutoff point of 50 years, the predominant molecular biology and its relationship with the immunohistochemical profile, clinical staging, and therapeutic indication. The chi-square test was used to assess the associations between molecular profile with clinical response, age, upfront surgery, and staging. The Wald test for equality for relative risk was used to verify whether age is a significant risk factor for grade, molecular profile, response to chemotherapy, upfront surgery, type of surgery, and clinical staging.
Results: More advanced clinical staging and high-grade tumors were observed in younger patients and, consequently, a greater indication for neoadjuvant therapy in this age group, in addition to less conservative surgery and more breast reconstruction. Patients under 50 years of age had an 85% higher risk of having grade III ($p = 0.0127$), an 83% higher risk of having stages IIB to IV ($p = 0.0339$) and a 95% risk of not having undergone up front surgery ($p = 0.0422$).

Conclusion: The data obtained reveal that women under 50 years of age face specific challenges, such as less conservative surgeries due to tumors with a worse prognosis. The differences observed between age groups reinforce the need for personalized approaches in the management of breast cancer.

Keywords: Breast cancer. Female. Epidemiology.

A NEW NAVIGATION AID TOOL FOR BREAST HEALTH EDUCATION

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Objectives: The navigation in healthcare is an evidence-based intervention aimed at guiding patients through the healthcare system, particularly for breast cancer patients. It addresses barriers like fear, communication issues, and treatment delays. Effective information dissemination, potentially via Instagram, can enhance patient support and continuity of care, though scientific documentation on this is limited. The study highlights the need for social media to improve patient navigation and reduce disparities in healthcare access.
Methodology: Tthis observational, prospective study evaluated Instagram as a tool for patient navigation in a breast health clinic. Female patients with active Instagram accounts and breast health issues participated. Two questionnaires assessed health education and barriers faced. Over a year, patients accessed educational content via the @_mamasus account. Data were collected ethically, ensuring privacy and consent. The study aimed to enhance patient support and navigation through social media, contributing to better health outcomes.
Results: A total of 76 patients were screened at the Barão de Lucena Hospital's mastology clinic, with 63 meeting inclusion criteria. The study revealed that most participants were women aged 18-49, with various risk factors for breast cancer. After a year of educational content on Instagram (@mama_sus), 87.3% found the platform user-friendly, and 97% felt secure in the information provided. The initiative improved understanding of health rights and the importance of regular check-ups, with 95% stating that knowledge reduced their fear regarding breast health.
Conclusion: This study concludes that Instagram is a useful tool for breast cancer patients, significantly reducing barriers. The platform is easily accessible and intuitive, benefiting patients of all education levels.

Keywords: breast cancer , navigation ,epidemiology

THE IMPORTANCE OF A MULTIDISCIPLINARY TEAM IN THE TREATMENT OF ONCOLOGY PATIENTS AND ADHERENCE TO THE PROPOSED TREATMENT

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Objectives: This study aims to investigate the influence of the multidisciplinary team on the adherence to treatment of patients diagnosed with breast cancer.
Methodology: A literature review was conducted based on 39 articles indexed in the SciELO, LILACS, and BVS Brasil databases, published between 2008 and 2023.
Results: Breast cancer is one of the most prevalent neoplasms among women, often associated with unfavorable prognoses and significant impacts on quality of life. Adherence to treatment is a critical challenge, influenced by factors such as emotional fragility, changes in appearance and routine, adverse effects of medications, lack of understanding about the treatment and socioeconomic barriers. The multidisciplinary team can play a crucial role in improving adherence by offering comprehensive support. The review revealed that the role of nurses is essential to provide emotional comfort and continuous support (Fernandes et al., 2008). The contribution of pharmacists in drug therapy has been shown to increase adherence (Oliveira Rangel et al., 2019). Psychologists help patients deal with the diagnosis and adapt to changes, facilitating adherence (Araújo Resende Xavier et al., 2022). Nutritional assistance provided by nutritionists improves response to treatment and minimizes side effects (Heloisa Catezani Del Buono et al., 2017). Physiotherapy promotes pain relief and improves quality of life, contributing to adherence (Pinheiro et al., 2020). A randomized study conducted at the Massachusetts General Hospital Cancer Center involving 181 patients highlighted the need for professionals to address the symptoms that may be experienced by patients undergoing oral antineoplastic treatment, as symptoms can affect treatment adherence.
Conclusion: The multidisciplinary approach in patients with breast cancer results in significant improvements in multiple dimensions, especially in mental health and quality of life. This reinforces adherence to treatments and the bond with the health team, highlighting the importance of an integrated and collaborative intervention in oncological care.

Keywords: “breast cancer,” “multidisciplinary team,” “adherence,” and “oncological treatment.”

FROM HIGH COSTS TO HIGH ACCESS: BREAKING BARRIERS IN BREAST MRI AI, ABBREVIATED PROTOCOLS, AND THE FUTURE OF ACCESSIBILITY

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Objectives: To provide a comprehensive overview of the main tools currently in development expected to optimize the accessibility of Magnetic Resonance Imaging (MRI) in the context of breast cancer screening and diagnosis.
Methodology: A literature review of PubMed using the terms “Low-field MRI”, “barriers breast MRI”, “future breast MRI”, “costs breast MRI”, (between the years 2020 and 2025).
Results: 148 studies were evaluated and 24 articles described innovative strategies in development to improve breast MRI accessibility. Abbreviated protocols have been validated to reduce exam duration and lower costs compared to traditional MRI by utilizing only essential sequences for evaluating high-risk patients. Additionally, models utilizing isolated Diffusion-Weighted Imaging (DWI) sequences have shown promise, offering insights into tissue cellularity and membrane integrity, with potential applications in high-risk screening. Artificial intelligence (AI) software has been designed to improve diagnostic accuracy and reduce interpretation time, thus increasing exam capacity and lowering per-exam costs. Certain tools, such as AISmartDensity, analyze mammograms to identify patients who may benefit from additional MRI, preventing, optimizing the limited resources available in public healthcare systems. Moreover, studies also explore reducing magnetic field strength (0.55T–1T) as a means of improving cost-effectiveness, utilizing AI to enhance signal-to-noise ratio (SNR) and image acquisition—as the reduced magnetic field may result in compromised image quality. Additionally, theoretical studies suggest a future role for portable MRI systems and simulated contrast MRI, although commercial models are not yet available.
Conclusion: Addressing disparities in breast MRI is both possible and should be encouraged through cost-reduction strategies, as well as the development and support of new software. Furthermore, protocol optimization ought to be stimulated in institutional centers, considering its potential impact on breast cancer care, particularly for high-risk women

Keywords: MRI, artificial intelligence, abreviated protocols, future, barriers

IMPACTS OF LATE SCREENING AND DIAGNOSIS OF BREAST CANCER: AN INTEGRATIVE LITERATURE REVIEW

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Objectives: To analyze the impacts of late screening and diagnosis of breast cancer and its implications for medicine and women's health.
Methodology: This is an integrative review, carried out between February and March 2025, in the following databases: Virtual Health Library (VHL), MEDLINE/PubMed (via the National Library of Medicine), Scopus and Web of Science - Main Collection (Clarivate Analytics/Thomson Reuters). Cross-sectional, cohort or case-control studies published in the last five years were selected. The studies were independently selected by two reviewers using the Rayyan® literature review manager.
Results: Fifty-eight of the 186 studies identified were duplicates. Ninety-three were excluded for not meeting the eligibility criteria, resulting in 35 articles. Late screening and diagnosis had a negative impact on women's health, such as psychological and clinical consequences, lower adherence to treatment, higher risk of metastasis due to diagnosis at an advanced stage, more aggressive treatments, a worse prognosis, lower survival, increased risk of mortality, and higher costs for health services.
Conclusion: The impacts shown could support the actions of managers and professionals in terms of efficient care and holistic monitoring, as well as improving indicators, reducing costs for health services and increasing the quality of life of women diagnosed with breast cancer.

Keywords: Breast neoplasms; Delayed diagnosis; Mass screening; Women's health.

PILATES METHOD AND AUGMENTED REALITY: STRATEGIES TO IMPROVE THE QUALITY OF LIFE FOR PUBLIC HEALTH SYSTEM USERS DIAGNOSED WITH BREAST CANCER – A RANDOMIZED STUDY

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Objectives: To evaluate the effectiveness of applying the Pilates method and Augmented Reality to improve the quality of life of breast cancer patients who use the SUS.
Methodology: Design, setting, and participants: This controlled, randomized, prospective, single-center clinical trial will analyze data from SUS users undergoing treatment for breast cancer between 2025 and 2026. Inclusion criteria: women, over 18 years old, SUS users diagnosed with breast cancer undergoing treatment at the Advanced Center for Breast Diagnosis at Hospital das Clínicas de Goiânia (CORA). Exclusion criteria: Clinical, orthopedic or neurological contraindications that prevent the practice of physical activity; less than 85% of the expected frequency of activities. Interventions: Experimental group: 75 women who will practice 12 Pilates exercises. Control group: 150 women who will perform 12 exercises with augmented reality. Participants will be screened by a specific team and randomized, according to their entry into the project and randomly allocated to the following Groups: Intervention Group and Control Group. Randomization will be on a 1:2 scale, when as soon as the first patient accepts and signs the Informed Consent Form, she will be allocated to the Intervention Group and the next two will be automatically allocated to the Control Group and so on for the remaining participants. The time of participation in the project will be a minimum of 3 months and a maximum of 6 months, with a frequency of two classes per week. Ethical aspects The project was submitted for approval by the Research Ethics Committee of the Hospital das Clínicas of the Federal University of Goiás (CEP/HC/UFG), opinion No. 7,070,731 and in the Brazilian Registry of Clinical Trials, UTN Number: U1111-1316-6505.
Results: Main expected results and measures: improve the quality of life assessed by the questionnaire (EQ-5D-3L).
Conclusion: The study is in the structural phase to later start clinical protocols.

Keywords: Breast neoplasms; Physiotherapy; Augmented Reality; Virtual Reality; Quality of life; Comprehensive Health Care; Pilates Method; Comprehensive Health Care for Women

FROM SCREENING TO INTERVENTION: IMPASSES AND ELUCIDATIONS GRANTED TO NURSE NAVIGATORS IN CLINICAL STUDIES

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Objectives: To map the roles of nurse navigators in recruiting patients for clinical trials.
Methodology: This is an Integrative Review, based on searches in the Virtual Health Library (VHL), using the terms "Nurse Navigator", "Clinical Research" and "Patient Recruitment". The selection included articles published over a 10-year period.
Results: In two North American studies, inclusive and didactic approaches were used to clarify the phases of clinical protocols to candidates, resulting in more assertive recruitment with an emphasis on sociocultural heterogeneity. In contrast, a Brazilian study of 173 patients identified difficulties in screening, such as communication problems (24.3%), patient disinterest (16.2%) and missed appointments (16.2%). In addition, another investigation in Brazil revealed thatonly 1% of health professionals refer cancer patients for clinical trials. However, a survey of 263 patients who were under the care of the nurse navigator found that 97% were satisfied with the service provided, despite the difficulties faced.
Conclusion: Faced with these obstacles, it is essential for nurses to identify the patient's sociocultural obstacles, as well as to be compatible with previous institutional flows, adapting the model of care provided in the service of origin to the needs of the clinical protocol. Furthermore, it is essential that, as well as sharing the studies with the multi-team, they are fully involved, understanding the criteria and interpreting their scope so that each referral is effective. The nurse navigator, with the support of the Federal Nursing Council, plays a fundamental role in organizational processes in the face of the complexity of health systems. The growing demand for innovation in clinical research requires the recruiter to take an integrated approach, with accessible communication and referrals that facilitate the patient's journey through the various services available.

Keywords: Patient Navigation-Clinical Study-Personnel Recruitment-Cancer of Breast

REAL-WORLD STUDY ON THE USE OF TRASTUZUMAB DERUXTECAN IN BREAST CANCER AT A PUBLIC HOSPITAL IN THE STATE OF GOIÁS

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Objectives: Analyze clinical data, evaluate response rates and overall survival in breast cancer patients receiving Trastuzumab Deruxtecan (T-DXd) at a public hospital in Brazil.
Methodology: Medical records of patients treated with T-DXd at the Clinical Oncology service of Hospital das Clínicas, Federal University of Goiás (UFG), were reviewed.
Results: Among 28 patients proposed for treatment, 12 accessed the medication, while 15 awaited approvals due to legal barriers, since the medication is not incorporated into the national public healthcare system. Therefore, the median time from request to treatment was 3.5 months (range: 1–7). The median age was 54.4 years (range: 31–74). Tumor subtypes were evenly distributed: HER-2 positive (33.3%), luminal-HER (33.3%), and HER-2 low (33.3%). All patients had localized disease and received neoadjuvant chemotherapy. Median time to metastatic recurrence was 39 months, with HER-2 low patients experiencing the longest interval (86.5 months). Common recurrence sites were lungs and bones (58.4%), liver (50%), and unresectable local recurrence (33.4%). Median number of prior treatments was 4. At the time of analysis, 25% remained on treatment (median: 5 months, range: 2-22), 75% experienced disease progression. Median progression-free survival was 5 months overall, 13 months for HER-2 positive, and 4 months for luminal-HER and HER-2 low. Two patients had received T-DM1 before starting T-DXd, both were HER-2 positive. One had a minimal response (4.5 months with T-DM1, 5 months with T-DXd), while the other had an exceptional response (31 months on T-DM1 and continued T-DXd for 22 months). Overall, 25% of patients had died, median overall survival of 12 months after initiating T-DXd.
Conclusion: Compared to DESTINY-Breast 03 and 04 trials, real-world outcomes were inferior, likely due to patient pre-treatment and access limitations. Despite these challenges, T-DXd demonstrated clinical benefits, reinforcing the need for optimized treatment strategies in public healthcare.

Keywords: Breast neoplasms, Receptor ErbB-2, Drug Therapy, Drug Effect

CHALLENGES IN THE DIAGNOSIS OF BREAST CANCER IN HOMELESS WOMEN: A LITERATURE REVIEW

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Objectives: Breast cancer is the most common neoplasm among women and a global public health challenge. Homeless women face barriers in diagnosis and treatment due to the lack of preventive exams, stigma, and social vulnerability, factors that compromise early detection and adherence to treatment. The study analyzes challenges in diagnosing breast cancer in homeless women, highlighting barriers and strategies for inclusion.
Methodology: The bibliographic review was conducted using the PubMed, SciELO, and Google Scholar repositories, employing the descriptors “breast cancer,” “social vulnerability,” “challenges,” and “treatment”, including studies from 2015 to 2024.
Results: This review analyzed the factors that hinder the diagnosis and treatment of breast cancer in vulnerable women, especially those experiencing homelessness. Limited access to healthcare, long waiting lines, socioeconomic inequality, and a lack of information exacerbate the problem. Racial disparities indicate that Black and mixed-race women face greater difficulties. Public policies are essential to ensure equity in access to proper examinations and treatments.
Conclusion: The review on breast cancer diagnosis in homeless women in Brazil (2015-2024) identified difficulties in accessing healthcare, long waiting lines, a lack of examinations, and insufficient knowledge about prevention. Socioeconomic and racial disparities exacerbate the scenario, with advanced stages being more prevalent among Black and mixed-race women. The absence of continuous screening and adapted policies contributes to delayed diagnosis. Effective measures, such as mobile units and targeted campaigns, are essential to broaden access. Improving data quality can make strategies more precise, reducing inequalities in care and treatment.

Keywords: Breast cancer, social vulnerability, challenges, and treatment.

IMPACT OF THE KETOGENIC DIET ON BREAST CANCER MANAGEMENT: A SYSTEMATIC REVIEW

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Objectives: Cancer is a group of diseases marked by loss of cellular control, leading to genetic mutations and uncontrolled proliferation. Among women, breast cancer is the most common type, with rising global incidence linked to factors such as age, genetics, lifestyle, and diet. Among modifiable lifestyle habits, nutrition plays a key role in both prevention and treatment. The ketogenic diet, high in fats and low in carbohydrates, aims to replace glucose with ketone bodies as the main energy source, impacting cancer cell metabolism. This strategy seeks to inhibit the Warburg Effect, where tumor cells preferentially use glucose for energy, even in the presence of oxygen.
Methodology: This systematic review examined studies published between 2010 and 2024 in the PubMed database, using the descriptors "ketogenic diet," "breast cancer," "metabolic therapy," and "breast neoplasm." Included studies were clinical trials, systematic reviews, and experimental research on ketogenic diets in patients with breast cancer.
Results: The reviewed studies reported significant reductions in biomarkers such as lactate, insulin, and fasting glucose, alongside anti-inflammatory effects, including lower tumor necrosis factor-alpha and increased interleukin-10 levels. An inverse correlation between carbohydrate intake and beta-hydroxybutyrate levels indicated adherence to ketosis. Additionally, the ketogenic diet showed potential in improving quality of life, body composition, and treatment adherence.
Conclusion: The ketogenic diet emerges as a promising adjuvant strategy in breast cancer management. Its effects on tumor metabolism and systemic inflammation suggest potential benefits when integrated into multidisciplinary treatment protocols. Further research is warranted to ensure its safety and efficacy in clinical settings.

Keywords: Breast cancer, ketogenic diet, patient care management.

GENETICS AND PREDISPOSITION TO BREAST CANCER: THE IMPACT OF MUTATIONS IN THE BRCA1 AND BRCA2 GENES

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Objectives: Breast neoplasia is influenced by environmental, hormonal, and genetic factors. Among the hereditary factors, mutations in the BRCA-1 and BRCA-2 genes stand out, as they are strongly associated with disease predisposition, with a risk of 80-85% for the development of breast cancer when present. The aim of this article is to analyze the impact of mutations in the BRCA1 and BRCA2 genes on breast cancer predisposition, highlighting their influence on the risk of the disease and the screening and prevention strategies available.
Methodology: This is a descriptive epidemiological study based on data from the Cancer Information System (SISCAN) referring to the risk elevated by screening mammography in Brazilian residents between 2019 and 2025.
Results: Genetic factors play a key role, especially BRCA1 and BRCA2 mutations, which increase lifetime risk by 50%. Rigorous follow-up with genetic testing enables preventive strategies like prophylactic mastectomies. Early detection through mammograms remains crucial for reducing mortality. From age 50, mammography is recommended for early diagnosis. A public policy initiative from the 1980s has improved access to screenings and early detection rates. The SISCAN analysis evaluated 2,130,098 high-risk breast cancer patients, 726,812 with a family history. Mammography adherence was high, with only 4 not undergoing the exam. BI-RADS 5 was found in 1,842 cases and BI-RADS 4 in 8,054. The study suggests stricter screening, including MRI and genetic testing, to improve early detection.
Conclusion: The analysis of SISCAN data demonstrates the importance of screening for breast cancer. This tool remains ideal for early detection, resulting in positive data to reduce mortality, although there are still challenges such as inequality in access to health. Public policies have proven effective in expanding coverage, due to the inclusion of magnetic resonance imaging and genetic tests.

Keywords: Breast cancer, mammography, genetics.

MERRF SYNDROME AND ITS POTENTIAL LINK TO BREAST CANCER DEVELOPMENT: BIOLOGICAL AND CLINICAL IMPLICATIONS

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Objectives: Understand the possible link between MERRF syndrome and breast cancer development.
Methodology: This study consists of a Literature Review, gathering pertinent articles from the last 15 years. The bibliographic research includes articles written in English, selected according to their relevance. Exclusion criteria involve articles that presents patients with other significant comorbidities and patients receiving active chemotherapy or radiation therapy.
Results: Myoclonic Epilepsy and Ragged Red Fibers (MERRF) is a rare mitochondrial disease with predominant progressive myoclonus. It presents commonly with, besides myoclonic epilepsy, cerebellar ataxia, sensorineural deafness, short stature, cutaneous lipomas and myopathy. Currently, there are no studies that defend a direct correlation between MERRF syndrome and breast cancer, but there are studies that defend that mitochondrial defects may result in breast cancer. Breast cancer incidence and mortality have been consistently high among women, and recently, the role of mitochondria in breast cancer has received increasing attention. Mitochondria, as the powerhouse of the cell, are central to both the pathophysiology of MERRF and the development of cancer, including breast cancer. In MERRF, mutations in mitochondrial DNA lead to energy deficits, oxidative stress, and disrupted cellular processes, which affect tissues with high metabolic demands, such as muscles and neurons. This mitochondrial dysfunction can contribute to the accumulation of abnormal cells and altered signaling pathways, processes that are also implicated in cancer initiation and progression. While MERRF itself is not directly linked to breast cancer, the defective mitochondrial function observed in MERRF patients might predispose them to cellular instabilities, potentially increasing the risk of malignancies like breast cancer.
Conclusion: The intricate relationship between mitochondrial dysfunction, oxidative stress, and cellular transformation suggests that MERRF may share underlying mechanisms that also drive tumorigenesis, providing an intriguing area for further exploration in cancer research, since there are no studies that link these conditions.

Keywords: Neoplasms; Mitochondria; MERRF syndrome;

BREAST CANCER SCREENING IN TRANSGENDER WOMEN

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Objectives: To identify early detection approaches for breast cancer in transgender women undergoing hormone therapy.
Methodology: An integrative review of five articles selected between 2015 and 2025 from the PubMed, SciELO, and Biblioteca Virtual em Saúde databases. The inclusion criteria considered studies addressing the incidence, risk factors, and screening guidelines for transgender women.
Results: Feminizing hormone therapy is associated with an increased risk of breast cancer, although this risk is still lower compared to cisgender women. The risk for transgender women on therapy is approximately 46% of the risk observed in cisgender women undergoing regular mammographies. Additionally, 12% of transgender women reported a lack of access to adequate screening services. It is recommended that women on hormone therapy for more than five years start mammography at age 50.
Conclusion: Despite some advancements, there is a need to adapt health protocols to include early breast cancer detection recommendations for transgender women, considering hormone therapy.

Keywords: Breast; Cancer; Screening; Transgender; Women

POST-TREATMENT MORPHEA IN BREAST CANCER: A CASE REPORT

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Objectives: Morphea or Localized Scleroderma (M-LS), is a rare connective tissue disorder characterized by cutaneous sclerosis and variable tissue involvement. It can be clinically classified based on depth and the superficial or deep plaque form is the most common in adult patients.
Methodology: The etiology remains unclear, with the main hypotheses involving autoimmunity and genetic mosaicism. Although benign, the progression of local infiltration, nerve and even internal organs involvement in M-LS may lead to irreversible functional impairments.
Results: A 38-year-old female patient was seen in a private outpatient clinic with an 8 cm nodule in the upper quadrant at the left breast, a palpable axillary node and suspicious findings in the mammogram. A core biopsy revealed a moderately differentiated invasive ductal carcinoma. The proposed treatment included neoadjuvant chemotherapy followed by quadrantectomy with axillary lymph node dissection and adjuvant radiotherapy. One month after surgery, the patient presented a tumor-like lesion at the surgical scar site and biopsy demonstrated dense collagen dermis infiltration involving the pili muscle and interlobular septa while Magnetic Resonance Imaging revealed significant thickening of the skin, parenchyma, and local musculature, associated with a cystic-solid lesion. The patient was referred to a dermatologist, who started treatment with hydroxychloroquine sulfate 400 mg and halobetasol propionate 0.05% cream for topical use, resulting in visible improvement of the lesion. Patient is currently undergoing hormone therapy with semiannual follow-ups jointly the Rheumatology team due to the risk of local infiltration and extracutaneous manifestations.
Conclusion: The treatment of morphea remains under discussion. Although few studies have demonstrated efficacy, high-potency topical corticosteroids, immunosuppressants, and even phototherapy have been considered viable options and treatment choice is based on the infiltration severity. Although rare, M-LS impacts on post-surgical follow-up in breast cancer patients, especially considering the absence of documented cases in the literature describing a similar presentation in carcinomatous lesions sites.

Keywords: Localized Scleroderma, Breast Cancer, Segmental Mastectomy, Adjuvant Radiotherapy.

METASTATIC CHEST WALL SARCOMA INVADING THE BREAST: A RARE CASE REPORT

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Objectives: To report a rare case of metastatic chest wall sarcoma, invading the breast.
Methodology: Epidemiological, observational and descriptive study, submitted and approved by the ethics committee: CAAE: 76870023000005553 and Opinion: 7392920.
Results: Woman, 59 years old, followed up for fibroadenoma in the right breast (mammography in 11/2022-BIRADS 2). In 01/2023, she noticed a rapid and progressive increase in the right breast associated with dyspnea at rest. A chest computed tomography (CT) scan was performed, which showed a 12 cm transthoracic invasive lesion contiguous to the right breast, an endothoracic part, massive pleural effusion, and lung collapse. Core biopsy of the lesion and right thoracentesis were performed. The histopathological examination showed marked cytological atypia, high mitotic activity, infiltration of adipose tissue and striated muscle, compatible with high-grade sarcoma. Immunohistochemistry was negative for cytokeratin and epithelial membrane antigen (E29) and positive for smooth muscle actin (1A4). A new CT scan showed an increase in the lesion (16.5 cm), right lung collapse, destruction of the 6th right costal arch and, in the left lung, basal atelectasis and metastatic implants. Previous history of total hysterectomy in 2020 due to abnormal uterine bleeding, probable leiomyomatosis, but the histopathological result was never recovered. After reviewing the medical records, the aforementioned examination was found, confirming a 9.0 cm uterine leiomyosarcoma with extensive necrosis. Given the findings, the diagnosis of progression of the uterine disease was confirmed, with sarcomatous metastasis to the breast, chest wall and lung. After evaluation by Thoracic Surgery and Mastology, surgery was ruled out and the patient was referred for oncological treatment after respiratory stabilization. Despite antibiotic therapy and thoracentesis, the patient developed septic shock and respiratory failure, resulting in death.
Conclusion: This is an extremely rare case of metastatic sarcoma to the breast.

Keywords: Sarcomas ; Neoplasm Metastasis; Breast neoplasms; Leiomyosarcoma

INVASIVE CARCINOMA OF THE BREAST IN MALES: A REVIEW OF THE LITERATURE

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Objectives: general objective: Elucidate the rarity and particularities of male breast cancer (MBC) specific objectives: review the epidemiology and prevalence of the disease.
Methodology: Was conduced a literature review on male breast cancer and research in the DataSUS database selecting the descriptors "Breast Neoplasms Male," "Invasive Breast Cancer Male," "Male Breast Cancer Invasive," and "Male Breast Neoplasms Invasive," and using inclusion criteria such as "studies in humans," "male sex," and "publications from the last 10 years. Research databases used included PubMed, Google Scholar, Cochrane Library, and EBSCO.
Results: The document reviews the literature on invasive male breast carcinoma, a rare neoplasm representing less than 1% of breast cancer cases. Due to its rarity, diagnosis is often delayed, compromising the prognosis. The study discussed risk factors such as hormonal imbalances, genetic mutations and obesity. It also highlights that male breast cancer has a higher prevalence in older men and, in most cases, is diagnosed in advanced stages. Therapy largely follows the protocols applied to female breast cancer, usually mastectomy is the standard surgical treatment, accompanied by hormonal therapies, chemotherapy, or radiotherapy. The epidemiological analysis through data collection from 2014-2023 reveals that, although male breast cancer is rare, its incidence has been increasing in Brazil. An average of the past 10 years shows that the Northeast region has the highest national incidence with 1.03 cases per 100,000 inhabitants, while the North region has the lowest with an average of 0.31. In absolute numbers, the Southeast region concentrates the cases, with a total of 2,866 cases over 10 years. When analyzing the Southern region, Rio Grande do Sul has the highest incidence with 0.90 cases, while Santa Catarina the lowest with 0.46.
Conclusion: Despite the limitations, it is possible to recognize the importance of early diagnosis and public policies for the prevention of this neoplasm, as well as its particularities.

Keywords: Breast Neoplasms, Male, Men, Breast Neoplasms

QUALITY OF LIFE AND SEXUALITY IN PALLIATIVE BREAST CANCER PATIENTS

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Objectives: To examine the quality of life of breast cancer patients undergoing palliative care, with a special focus on the connection between intimate life and emotional balance, identifying the difficulties and influences that impact on the maintenance of closeness and the affective manifestations of this group of patients.
Methodology: A study with a mixed approach, integrating qualitative and quantitative methods to capture individual perceptions and measurable data on quality of life and sexuality. The descriptive study was conducted by analyzing original articles in Portuguese, obtained from databases such as the Virtual Health Library, Scielo, Revista Eletrônica Acervo Saúde and Pubmed, published between 2020 and 2024. The descriptors "palliative cancer patient", "sexuality", "palliative care", "quality of life" and "breast cancer" were used. Of the 15 publications available for critical analysis, 7 were evaluated.
Results: The impacts of the disease directly influence the patient's life in a way that requires more humanized and holistic care, so the interdisciplinary team helps significantly in controlling the symptoms of palliative breast cancer patients, also recognizing sexual needs in addition to providing essential emotional support, making care more welcoming and guiding some strategies in consultations to improve the patient's sexuality such as: addressing sexuality as part of the treatment, guiding her to practice exercises to regain confidence in the sexual response, including partners in support programs, making the maintenance of healthy habits, such as the regular practice of physical activities.
Conclusion: Finally, it is clear that the late diagnosis of breast cancer combined with communication failures between professionals hampers the planning of the care provided. The literature therefore recommends using creative and multidisciplinary approaches to deepen the understanding of subjective aspects and ensure comprehensive care that leads to more positive therapeutic results.

Keywords: Breast cancer. Quality of life. Sexuality. Palliative care. Cancer patients.

THE IMPORTANCE OF PALLIATIVE CARE IN PATIENTS WITH BREAST CANCER

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Objectives: To analyze the importance of palliative care in patients with breast cancer.
Methodology: The search for articles was carried out in Scielo and Pubmed databases, where 10 original articles in Portuguese and English were found, published between 2020 and 2025, using the descriptors "breast cancer" and "palliative care", of which 4 were selected for review.
Results: Palliative care in breast cancer aims to improve quality of life and alleviate symptoms regardless of the stage of the disease. For many years, this care was seen as a model that integrated the transition between life and death. More recently, it has come to be recognized as a broader approach, which aims at the quality of life of patients and their families in the face of the threat to continuity of life. The aim is to alleviate suffering, which requires early identification, assessment and appropriate treatment of the patient with good communication, where attention is focused not only on pain, but also on other problems of a physical, psychosocial and spiritual nature, listening to the patient's needs, promoting well-being and supporting the family. According to a study carried out with patients with breast cancer, it was found that palliative care contributed significantly to increasing the comfort of patients, reducing anxiety and depression. In addition, it is also important to highlight that the early integration of this care into the treatment can favor the exercise of patient autonomy, as well as the participation of family members and health professionals in the decision-making process and shared planning of care in a comprehensive manner.
Conclusion: In breast cancer, palliative care is an approach designed to improve the quality of life of patients and their families. Upon diagnosis, its objective is to prevent and alleviate suffering through early identification, appropriate assessment and treatment of conditions, whether physical, psychosocial or spiritual.

Keywords: Integrative palliative care; Breast neoplasms; Women's health

THE RELATIONSHIP BETWEEN SPIRITUALITY AND QUALITY OF LIFE IN PATIENTS WITH BREAST CANCER

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Objectives: To discuss the relationship between spirituality and quality of life in patients with breast cancer.
Methodology: A search was conducted in the Scielo and Pubmed databases for original articles in Portuguese and English, published between 2023 and 2025, using the descriptors “breast neoplasms” and “spirituality”, with 17 articles found and 4 selected for review.
Results: Worldwide, breast cancer is the most common neoplasm among women and brings intense and long-lasting physical, social and, above all, emotional challenges to diagnosed patients. The scope of spirituality in patients with breast cancer is necessary since it offers support, consolation and purpose through a new meaning of existence, in order to combat insecurities and fears associated with the disease. Consequently, it strengthens the patient’s emotional aspect and ensures a better quality of life. In this sense, for cancer patients, spirituality acts to help the patient deal with the profound hopelessness that comes with the onset of the disease and proposes a new perspective on coping with breast cancer, in order to improve the patient’s psychological well-being and quality of life.
Conclusion: The treatment of any and all pathologies is the result of the complex interaction between biological, clinical and psychosocial factors. Based on this, the exercise of spirituality has been shown to be an important component in the treatment of patients with breast cancer by promoting comfort, encouragement and support during the disease process, which positively impacts the patient’s quality of life and psychosocial well-being.

Keywords: Breast neoplasms, Spirituality, Quality of Life.

MASSON'S TUMOR OF THE BREAST IN A PATIENT WITH INVASIVE BREAST CARCINOMA: A RARE BENIGN-VASCULAR LESION MIMICKING MALIGNANCY

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Objectives: Intravascular papillary endothelial hyperplasia (Masson's tumor) is a rare benign vascular lesion, infrequently found in the breast. Its presentation can mimic malignancy on imaging and gross examination, posing a diagnostic challenge, particularly in oncologic patients. The objective is to report a rare case of a cavernous hemangioma (Masson's tumor) associated with hematoma within the breast implant capsule, incidentally found during surgical treatment for recurrent invasive breast carcinoma.
Methodology: We conducted a descriptive case report of a patient diagnosed with recurrent invasive ductal carcinoma of the left breast associated with Masson's tumor. Clinical, radiological, surgical, and histopathological data were collected and analyzed. Additionally, a narrative literature review was performed using databases such as PubMed and Scopus, focusing on previously reported cases of Masson's tumor (intravascular papillary endothelial hyperplasia) in the breast, particularly in association with implants or hematomas.
Results: An 84-year-old postmenopausal woman with a history of left breast cancer presented with a suspected local recurrence. Imaging revealed an additional intracapsular mass adjacent to the left breast implant. She underwent left breast segmentectomy and sentinel lymph node biopsy. Histopathological examination confirmed a 1.4 × 1.0 × 0.7 cm invasive ductal carcinoma, stage 1 (pT1c pN0(sn) M0), histologic grade 2, with clear surgical margins and no lymph node involvement (0/3). Remarkably, a rare benign vascular lesion—cavernous hemangioma (Masson's tumor)—associated with hematoma was concurrently identified within the implant capsule. The patient received adjuvant radiotherapy and is currently on aromatase inhibitor therapy, with no signs of recurrence to date.
Conclusion: Masson's tumor is a rare benign vascular lesion that can mimic malignancy, particularly in patients with a history of breast cancer. Its incidental finding in this case highlights the importance of thorough histopathological evaluation of periprosthetic lesions. Awareness of this entity is essential to avoid misdiagnosis and overtreatment.

Keywords: Masson's tumor; Intravascular papillary endothelial hyperplasia; Cavernous hemangioma; Breast cancer; Breast implant; Local recurrence; Case report; Histopathology

MALIGNANT PHYLLODES TUMOR: DOUBLE RECURRENCE IN A YOUNG PATIENT

Lucas Roskamp Budel[1], Maria Helena Louveira[1], Camila Vittola Paseto[1], Nathália de Souza Cruz[1], Brenda Thomas[1], Fernando Carli de Oliveira[1], Nathália Luiza Ferri Bönmann[1]

[1] Universidade Federal do Paraná

Objectives: Objectives: Present a case of a dramatic evolution of malignant phyllodes tumor (PT) in a young patient, discussing the importance of radiological findings for an early diagnosis and correct therapeutic approach.
Methodology: Clinical history: A 23-year-old woman was admitted with a growing nodule in the left breast over a 5-month period - classified as BI RADS 3 on mammography, evolving with hyperemia and local pain, leading to the hypothesis of mastitis. A solid-cystic lesion was seen on ultrasound and a biopsy of the solid component was performed. The possibility of PT was raised due to the rapid evolution and radiological findings, and the patient underwent tumorectomy, which indicated malignant PT. Four weeks later, the patient returned with a lesion similar to the initial, and subsequently underwent mastectomy. She returned after seven weeks with lesions in the surgical wound, underwent a new tumorectomy, which indicated compromised margins in the anatomopathological evaluation, and is currently undergoing radiotherapy.
Results: Discussion: PT is a rare subtype of breast tumors - up to 2% of them. Most PTs are histologically benign, but when malignant, have a higher recurrence and mortality rate. It presents as a fast growing unifocal mass in premenopausal women and can be classified as benign, borderline or malignant depending on its histological evaluation. The differentiation between PT and fibroadenoma, as well as between the histological types of PT, is virtually indistinguishable on mammography and breast ultrasound, but in addition to the clinical signs of fast evolution, breast MRI can be useful in this aspect - appearing as hypointense on T1, variable signal on T2 and early contrast enhancement.
Conclusion:
Conclusion: Although a definitive diagnosis is complex, the diagnosis of PT, including its malignant variant, must be consider in the appropriate clinical-radiological context in order to achieve early treatment and improve prognosis.

Keywords: Breast Neoplasms, Phyllodes Tumor, Diagnostic Imaging

BREAST IMPLANTS-ASSOCIATED ANAPLASTIC LARGE CELL LYMPHOMA (BIA-ALCL)

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Objectives: To describe a case of breast implant-associated anaplastic large cell lymphoma (BIA-ALCL), a rare neoplasm whose low incidence limits the experience of mastology and plastic surgery services. The objective is to report the case and discuss treatment, prevention and surveillance.
Methodology: A literature review was performed using the descriptors "anaplastic lymphoma" AND "breast implants" in the PubMed, LILACS, BVS, NICE, Cochrane Library and Scielo databases. Among 336 publications, 66 articles from the last five years were selected.
Results: The case refers to a 37-year-old woman, with a history of textured silicone implants five years ago and who 6 months ago began to present seroma in the right breast, increased volume and ipsilateral mastalgia. After performing breast ultrasound, mammography and breast MRI, she underwent fine needle aspiration biopsy, and the fluid content was sent for oncotic cytology, fungal research, culture with antibiogram, bacterioscopy and BAAR research, immunohistochemistry (IHG) and immunophenotyping, in which the results were negative. Cytology showed the presence of large and atypical lymphocytes. IHG revealed positivity for CD30 cells and negativity for CD246 (ALK-1), but immunophenotyping revealed 41% of anomalous lymphoid cells with co-expression of CD30, confirming the diagnosis of BIA-ALCL, in agreement with the presence of right anteropectoral seroma, implant accommodation folds, without signs of contracture or capsular rupture.
Conclusion: BIA-ALCL is a non-Hodgkin T-cell lymphoma, with an incidence of 1:30,000 women. The most accepted etiological hypothesis involves the formation of bacterial biofilm on the implant, generating chronic inflammation and malignant transformation of T cells. The patient underwent complete removal of the implant and fibrous capsule and the seroma was sent for examination. Large and atypical cells were found in both. In general, treatment involves explantation, total capsulectomy and, in some cases, chemotherapy and/or radiotherapy. Regular clinical monitoring is essential for early diagnosis and improved prognosis.

Keywords: "anaplastic lymphoma"; "breast implants"

REGRESSION OF GIANT RENAL ANGIOMYOLIPOMA IN A PATIENT UNDER AROMATASE INHIBITOR THERAPY FOR BREAST CANCER – CASE REPORT

Deidimar Cassia Batista Abreu[1,2], Leandro Gonçalves Oliveira[1], Gustavo Batista Oliveira[2], Gustavo Vieira Lopes[2], Luiza Ferro Marques Moraes[2], Vera Aparecida Saddi[1,2], Leandro Ferro de Moraes Bezerra[1,2]

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Objectives: Angiomyolipoma (AML) is the most common benign renal stromal tumor, it is usually asymptomatic and diagnosed incidentally on imaging exams. Although considered a non-hormone-dependent lesion, recent studies have demonstrated the expression of hormone receptors and aromatase in AML, suggesting a possible estrogenic influence on its growth.
Methodology: This case report describes a 66-year-old female patient diagnosed with invasive ductal carcinoma of the breast and a renal AML who underwent therapy with letrozole, a nonsteroidal aromatase inhibitor, afterwards, showing a significant reduction in the size of the kidney tumor.
Results: During diagnosis, breast ultrasound and magnetic resonance imaging identified a lesion classified as BIRADS 5 in the right breast. Initial staging was T1N0M0, and physical examination revealed a one-centimeter nodule in the upper quadrant of the right breast, with no palpable lymph nodes. The patient underwent biopsy, concluding the diagnosis of grade 2 invasive ductal carcinoma, with expression of estrogen receptors, progesterone receptors, negative HER2 and Ki67 in 5% of the tumor cells. During the general investigation, abdominal computed tomography and magnetic resonance imaging revealed the diagnosis of AML in the right kidney. Through treatment with the aromatase inhibitor (letrozole), the AML diagnosed initially with 7.2 centimeters showed a significant reduction to 4.0 centimeters.
Conclusion: This case report highlights the possible estrogenic action on AML growth, a hypothesis corroborated by previous studies that demonstrated the expression of estrogen and progesterone receptors in most cases, as well as the expression of aromatase in the majority of AML. Although direct causality cannot be proven, clinical observations suggest that endocrine therapy exerts a modulating effect on the AML. Future investigations are needed to confirm this association, especially in AML patients contraindicated for surgery or embolization.

Keywords: breast cancer; renal angiomyolipome; letrozole; aromatase inhibitor

PRIMARY BREAST AMYLOIDOSIS: CASE REPORT AND LITERATURE REVIEW

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Objectives: To describe a case of primary breast amyloidosis and present a literature review. This is an extremely rare condition, accounting for 0.5% of amyloidosis cases, which in turn represents 12.8% of primary amyloid tumors. It occurs mainly in elderly and postmenopausal women. It results in fibrillar layers of beta-pleated amorphous Congo protein deposition in the extracapsular space.
Methodology: As this is an uncommon diagnosis, there are few case series published in the literature since the time when amyloidosis was first reported in 1973, highlighting the rare nature of this disease. To write the following case report, the authors performed a literature review on the PubMed, LILACS, NICE and clinical trials platforms, using the descriptors “primary amyloidosis” and “breast” and the Boolean operator AND. Among 55 publications, 8 articles from the last five years were selected.
Results: Female patient, 64 years old, with no family history of amyloidosis, primary history of breast cancer, diagnosed in mammographic screening due to an asymmetric focal area, with imprecise limits, irregular contours, in the union of the upper quadrants of the left breast (BIRADS 4A), which persisted after selective compression. The MRI showed non-nodular enhancement of 1.2 cm. The patient underwent pre-surgical marking with iodine seed and subsequent ROLL. The anatomopathological examination and the search for amyloid deposits by Congo red in polarized light revealed that it was an AMYLOID TUMOR OF THE BREAST.
Conclusion: The risk factors for primary breast amyloidosis are not well known, but may be associated with autoimmune disease, lymphoproliferative disease, and advanced age. There is no evidence that family history and breast density are related. The recommended treatment is usually surgical removal of the suspected area, which usually results in good outcome.

Keywords: “primary amyloidosis”; “breast”

PRIMARY AND SECONDARY ANGIOSARCOMA: A CASE REPORT

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Objectives: Angiosarcoma is a rare malignant vascular neoplasm belonging to the sarcoma group. It is a highly infiltrative tumor with a high local recurrence rate and hematogenous metastasis. : the objective is report a case in order to analyze the treatment of a rare malignant vascular neoplasm.
Methodology: This is a case report based on a retrospective analysis of the medical records of a patient treated at the Mastolgy outpatient clinic of Hospital Barão de Lucena.
Results: F.S.A, a 43 years old, female, from Ribeirão-PE, menarche at 11 years old, G1P1, with no family history of breast cancer. The patient was referred to the Mastology outpatient clinic at Hbl due to a tumor in the left breast in 2020. Ultrasound revealed simple cysts in both breasts and a lipoma in the left breast at 11 o'clock, measuring 2,4 x 1,0 x 2,2 cm- classified as BI- RADS 4. Core biopsy revealed a vascular and spindle cell lesion with mild nuclear atypia and compromised margins. Immunohistochemistry was requested, revealing CD34 and CD31 antibodies and 10% Ki-67 expression. A radical left mastectomy with reconstruction using a lipo-grafted latissimus dorsi flap was performed. After surgery, the patient underwent chemotherapy and radiotherapy as adjuvant therapy. The patient returned on 01/ 29/2024 for a follow-up visit, reporting a skin discoloration between the skin and the latissimus dorsi muscle flap in the sternal region. A histopathological examination was requested, which confirmed a well-differentiated angiosarcoma. A left segmental mastectomy was performed with immediate reconstruction using an inferior pedicle flap.
Conclusion: Although radiotherapy is a secondary tick factor for angiosarcoma, it remains an important form of adjuvant treatment. The surgery is the best option for this case.

Keywords: "Breast CAncer", "Angiosarcoma," , "Soft Tissue Neoplasms"

"BRONQUINHO": A LOW-COST ALTERNATIVE FOR FAT GRAFTING IN BREAST RECONSTRUCTIONS WITHIN THE BRAZILIAN NATIONAL HEALTHCARE SYSTEM (SUS)

Manuela Bezerra e Silva França[1], Bruno Oliveira de Sousa Lima[1], Isabelle Vitória Rocha da Silva[1], Mateus Balbino Barbosa de Carvalho[1], Brunno Braga Sauaia[1], Érik Victor da Silva Alves[1], Yasmin Andrade Sampaio[1], Ana Gabriela Caldas Oliveira[1]

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Objectives: To describe a low-cost alternative for fat grafting in breast reconstructions within the Brazilian National Healthcare System (SUS).
Methodology: This study presents a descriptive analysis of an alternative technique for adipose tissue collection in reconstructive surgeries.
Results: Autologous fat grafting is widely employed in reconstructive surgeries following cancer treatment, owing to its capacity to correct irregularities and restore tissue integrity. It improves functional and aesthetic quality of life in post-mastectomy patients. The conventional technique involves liposuction from a donor site using a 60mL syringe coupled with a liposuction cannula. Negative pressure is generated by the manual movement of the syringe plunger by the operating surgeon. Subsequently, fractionated fat is retro-injected into the subcutaneous tissue of the reconstruction site. However, the cost of materials, prolonged surgical duration, and consequent surgeon fatigue pose significant challenges. The "bronquinho," a medical device typically utilized for airway secretion collection during bronchoscopies and endoscopies, can also generate a negative pressure system without requiring manual actuation. This allows for spontaneous, atraumatic fat aspiration, contributing to the preservation of adipocytes. Furthermore, it is economically accessible.
Conclusion: Considering the aesthetic and regenerative advantages of fat grafting, the application of the "bronquinho" in breast reconstruction fat grafting presents a promising alternative. This method optimizes surgical time, reduces surgeon physical strain, and demonstrates good efficacy and safety. Additionally, its affordability makes it suitable for patients within the SUS. Further research is warranted to validate the effectiveness of this technique in this context.

Keywords: transplantation; autologous; mammaplasty; low-cost technology

EXECUTION

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