

# BBCS BRAZILIAN BREAST CANCER SYMPOSIUM 2024

May 16 - 18, 2024

## OFFICIAL PROGRAM

 [bbcs.org.br](https://bbcs.org.br)







## MESSAGE FROM THE ORGANIZING COMMITTEE

Welcome to the Brazilian Breast Cancer Symposium 2023.

The history of Brasilia and its symbolism at BBCS 2024 - Brazilian Breast Cancer Symposium

Dear colleagues and friends,

The city of Brasilia was built between 1957 and 1960, under the efforts of Juscelino Kubitschek and the sweat of workers from different parts of Brazil, with the aim of transferring the federal capital from Rio de Janeiro to the central plateau. With Lúcio Costa's urban design and Oscar Niemeyer's futuristic architecture, an innovative city ahead of its time was born. The official launch on April 21, 1960, the day Tiradentes died - the leader of the Inconfidência Mineira who advocated for the country's independence in the 18th century. In practice, the symbolism of this date is very clear and reflects in Brasilia the ideal of freedom of a people and the courage of a nation that spares no effort to fulfill its deepest dreams.

With the expansion of the BBCS - Brazilian Breast Cancer Symposium, the beloved city of Pirenópolis became too small to welcome all our guests. With the comfort, safety and compliance of everyone involved in mind, the event's Organizing Committee overcame the new challenges and held this year's edition in Brasilia - 64 years after the city's inauguration and 15 years after the event's first edition.

It is with great pleasure and enthusiasm that we welcome you all to the 13th edition of the BBCS 2024 - Brazilian Breast Cancer Symposium. This event is a crucial meeting point for the national and global community of researchers, clinicians and other health professionals.

Over the next few days, we will be fortunate to share knowledge, experiences and significant advances in this universe that encompasses different facets of breast cancer research and patient care. As we explore the latest scientific, diagnostic and therapeutic advances with the workshops, we will take advantage of this meeting to share knowledge, experiences and unique perspectives from different parts of the world in the main plenary, with presentations by guests from different countries. Together, we can learn from each other, inspire new approaches and cooperate to drive research and innovation in all areas related to breast cancer.

This edition will also favor us with a forum where topics related to access, survival and genetic sequencing of breast cancer will be discussed; this is why we are dedicated to this cause. Every advance we make in this field has the potential to positively impact countless lives around the world, offering hope, comfort and a cure to our patients and their families.

Our sincere thanks to all the guests, speakers, organizers, sponsors and participants who



contributed to making this edition of the BBCS in the federal capital a memorable event. May this symposium be a space for open dialog, mutual respect and fruitful collaboration; a source of inspiration, learning and lasting connection.

A warm welcome to you all!

Flora Soares Barbosa

Ruffo Freitas-Junior

Danielle Cristina Netto Rodrigues

Rosemar Macedo Sousa Rahal

Leonardo Ribeiro Soares

APCAM - Associação de Portadores de Câncer de mama (Association of Breast Cancer Patients) of the HC/UFG; CORA - Centro Avançado do Diagnóstico da Mama (Advanced Breast Diagnostic Center) of the Federal University of Goiás; REBRACAM - Rede Brasileira de Pesquisa em Câncer de mama (Brazilian Breast Cancer Research Network)



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## ORGANIZATION COMMITTEE

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Augusto Tufi Hassan (BRA)  
Cristiano Augusto Andrade de Resende (BRA)  
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 Charles Maurice Perou (EUA)  
 Christina Souto Cavalcante Costa (BRA)  
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Daniel Marques (BRA)  
Daniel Meirelles Barbalho (BRA)  
Daniela Gusmao de Araujo Batista (BRA)  
Daniele Assad Suzuki (BRA)  
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Danúbia de Brito Rodrigues Silva (BRA)  
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Eduardo Gonzales (ARG)  
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 José Roberto Filassi (BRA)  
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 Linei Urban (BRA)  
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 Ludmila Thommen Teles (BRA)  
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Michael D Alvarado (EUA)  
Milena Martello Cristofalo (BRA)  
Mohammad Jahanzeb (EUA)  
Nancy Cristina Ferraz de Lucena Ferreira (BRA)  
Nayara Alves de Freitas Lemos (BRA)  
Nayara Portilho Araujo (BRA)  
Nicola Rocco (ITA)  
Nilceana Maya Aires Freitas (BRA)  
Pablo Roberto Novik (BRA)  
Paula de Camargo Moraes (BRA)  
Paulus Fabrício Mascarenhas Ramos (BRA)



Priscila Dias Watanabe (BRA)  
 Rafael Botan (BRA)  
 Raquel Civolani Marques Fernandes (BRA)  
 Régis Resende Paulinelli (BRA)  
 Renata Costa Cangussu (BRA)  
 Renata Lazari Sandoval (BRA)  
 Renata Rodrigues da Cunha Colombo Bonadio (BRA)  
 Renato Cagnacci Neto (BRA)  
 René Aloisio da Costa Vieira (BRA)  
 Rhanderson Cardoso (EUA)  
 Ricardo Caponero (BRA)  
 Ricardo da Costa Pinto (BRA)  
 Rita de Cássia Macieira (BRA)  
 Roberto Hegg (BRA)  
 Roberto Kepler da Cunha Amaral (BRA)  
 Rodrigo Pepe (BRA)  
 Romualdo Barroso de Sousa (BRA)  
 Rosemar Macedo Sousa Rahal (BRA)  
 Ruana Moura Rocha (BRA)  
 Ruffo de Freitas Junior (BRA)  
 Ryan Turncliff (EUA)  
 Salvia Maria Canguçu (BRA)  
 Sandra Portela Rezende (BRA)  
 Silvia Helena Rabelo dos Santos (BRA)  
 Stuart McIntosh (GBR)  
 Susanne Crocamo Ventilari da Costa (BRA)  
 Tadahiko Shien (JPN)  
 Thais Paiva Moraes (BRA)  
 Thaís Regina Daltoé Inglês (BRA)  
 Thiago David Alves Pinto (BRA)  
 Tomás Reinert (BRA)  
 Uirá Resende (BRA)  
 Vania Solda de Jesus (BRA)  
 Vera Aparecida Saddi (BRA)  
 Victor Domingos Lisita Rosa (BRA)  
 Victor Rocha Pires de Oliveira (BRA)  
 Vilmar Marques de Oliveira (BRA)  
 Vinicius Milani Budel (BRA)



## 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 2024 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 | IMAGING

The best paper in Epidemiology / Imaging will be awarded, as well. The presenting author will be awarded with air ticket, accommodation and registration for the Jornada Paulista de Mastologia – JPM 2024.

### SICOOB 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 1979 onwards. The best paper in this category will be awarded R\$ 5,000.00 (five thousand reais).

### IOP – INSTITUTO DE ONCOLOGIA DO PARANÁ AWARD

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.

### OTHER AWARDS

1. The best paper in Translational Research will be awarded with R\$5,000.00 (five thousand reais) to be paid out when the event ends.
2. The best paper in Basic Research be awarded with R\$5,000.00 (five thousand reais) to be paid when the event ends.

### BBCS 2024 AWARD

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

### MARIA ANTONIETA REGRAL 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.



## SCHEDULE

### MAY 16<sup>TH</sup> (THURSDAY)

7 am to 6 pm	Registration and material delivery <i>Hotel Royal Tulip</i>
8 am to 8:50 pm	BBCS Workshops
7 pm to 9 pm	Libbs Happy Hour <i>Place: Bar do Capitão</i>

### MAY 17<sup>TH</sup> (FRIDAY)

7 am to 6 pm	Registration and material delivery <i>Hotel Royal Tulip</i>
8 am to 8:10 am	Official opening <i>Main Auditorium (Ballroom 1)</i>
8:10 am to 8:30 pm	Scientific Program BBCS <i>Simultaneous Room (Ballroom2)</i>
8 am to 6:30 pm	Scientific Program BBCS <i>Main Auditorium (Ballroom 1)</i>
11:40 am to 11:45 am	BBCS 2024 Award <i>Main Auditorium (Ballroom 1)</i>
2 pm to 6 pm	2nd Meeting of Researchers of the Projeto Itaberaí <i>(Room G+H)</i>

### MAY 18<sup>TH</sup> (SATURDAY)

7:30 am to 1 pm	BBCS Registration and material delivery <i>Hotel Royal Tulip</i>
8 am to 12 pm	VII Fórum com o tema "Acesso e Sobrevida no Câncer de Mama" <i>Ballroom 2</i>
8 am to 1 pm	Scientific Program BBCS <i>Main Auditorium (Ballroom 1)</i>
10 am - 10:10 am	Maria Antonieta Regral Dutra Award <i>Ballroom 2</i>
12:35 pm to 1pm	BBCS Awarding and closing BBCS <i>Ballroom 1</i>



## SCIENTIFIC AGENDA

**MAY 16TH, 2024 | THURSDAY**

### **ROOM "E" | PALLIATIVE CARE WORKSHOP**

**8 am – 12 pm**

**The disease, the patient, and the health professional**

Coordinator                      Ricardo Caponero (BRA)

#### **PART 1**

**8 am – 10:05 am**

- |                   |   |
|-------------------|---|
| 8 am – 8:25 am    | How to explain more and apologize less? How I do it.<br>Difficulties and communication strategies along the patient's journey. From BI-RADs, biopsy results, proposing surgery, potential complications and sequelae of surgery, the need for adjuvant treatment, to detecting recurrence or metastatic disease.<br>Carlos Alberto Ruiz (BRA) |
| 8:25 am - 8:50 am | What are the best options for dealing with treatment adverse events and improving patient compliance?<br>What are the most common patient complaints and how to deal with them?<br>Pablo Roberto Novik (BRA)  |
| 8:50 am - 9:15 am | Former cancer patient forever?<br>How to deal with the risk of relapse and secondary neoplasms and the patients' fear? Strategies to reintegrate them into a "normal" life routine. How to deal with fertility issues?<br>Sandra Portela Rezende (BRA)  |
| 9:15 am - 9:40 am | What is compassion fatigue, how to identify it and how to deal with it? When and why it happens. Is it bad? Is there anything we can do to avoid it?<br>Rita de Cássia Macieira (BRA)   |



9:40 am – 10:05 am    Discussion

10:05 am – 10:35 am    Coffee Break

**PART 2**

**10:35 am – 12 pm**

- |                     |   |
|---------------------|---|
| 10:35 am - 11 am    | <p>What's on the other side of the diagnosis?<br/>What are the feelings, expectations and emotions of patients and their families during the course of the disease?<br/>Ana Lúcia Coradazzi (BRA)</p>   |
| 11 am - 11:25 am    | <p>Which path to choose to be the best?<br/>How to improve communication so that it is empathetic and effective, and what are the strategies for dealing with patients (and their families) with unyielding expectations that go far beyond reality.<br/>Maria Júlia Paes da silva (BRA)</p>                  |
| 11:25 am - 11:50 am | <p>When having conversations about life and death, what should we not say?<br/>Communicating well does not mean communicating "everything". How to set the limit and not exceed the patient's wishes and expectations regarding the information they want.<br/>Isabella Barros Rabelo Gontijo Tumeh (BRA)</p> |
| 11:50 am – 12 pm    | <p>Debates, closing remarks</p>   |

**ROOM “E” | MINI MEETING GILEAD**

**12 pm – 2 pm**

- |                        |  |
|------------------------|--|
| <b>Anti-TROP2 ADC:</b> | <p><b>Clinical practice on the management of patients with metastatic breast cancer</b></p> <p>Cristiano Augusto Andrade de Resende (BRA)<br/>Andreza Karine de Barros Almeida Souto (BRA)</p> |
|------------------------|--|





## ROOM "E" | CLINICAL RESEARCH WORKSHOP

**2 pm – 6:20 pm**

Coordinator André Mattar (BRA)  
Roberto Hegg (BRA)  
Romualdo Barroso de Sousa (BRA)

### MODULE 1

**2 pm – 4:10 pm**

2 pm – 2:05 pm	Opening André Mattar (BRA)
2:05 pm – 2:20	Current clinical research setting in Brazil where we are now? Franklin Fernandes Pimentel(BRA)
2:20 pm – 2:35 pm	What does the industry seek in a research center? Vania Solda de Jesus (BRA)
2:35 pm – 2:50 pm	How to start an oncology research center? José Luiz Pedrini (BRA)
2:50 pm – 3:05 pm	Clinical research budget: is there a better way to make it? Larissa Andressa Orsolini (BRA)
3:05 pm – 3:20 pm	How to be successful in approving an investigator-initiated study Graziela Zibetti Dal Molin (BRA)
3:20 pm – 3:40 pm	Q & A
3:40 pm – 4:10 pm	How to deal with daily problems - Clinical cases André Mattar (BRA) Roberto Hegg (BRA) Romualdo Barroso de Sousa (BRA)
3:45 pm – 4:10 pm	Q & A



4:10 pm - 4:40 pm

Coffee Break

<b>MODULE 2</b>	
<b>4:40 pm – 6:15 pm</b>	
4:40 pm – 4:55 pm	Artificial intelligence in clinical research, where are we now? Jorge Henrique Santos Leal (BRA)
4:55 pm – 5:10 pm	Letter to the editor. Challenging a published paper Leonardo Ribeiro Soares (BRA)
5:10 pm – 5:35 pm	Step by step in interpreting research paper Daniel Buttros (BRA)
5:35 pm – 5:50 pm	How to write a successful research paper? Rhanderson Cardoso (BRA)
5:50 pm – 6:15 pm	Q & A
6:15 pm – 6:20 pm	Closing

ROOM “F” | 1ST MIDWEST CONFERENCE ON MASTOLOGY

<b>8:15 am – 3:50 pm</b>	
Coordinators	Alexandre Marchiori Xavier de Jesus (BRA) Guilherme Novita Garcia (BRA) Lucimara Priscila Campos Veras Giorgi (BRA) Luis Fernando Corrêa de Barros (BRA) Thaís Regina Daltoé Inglez (BRA)

<b>TABLE 1</b>	<b>ONCOPLASTY</b>
Coordinator	Alexandre Marchiori Xavier de Jesus (BRA)





8:15 am – 8:35 am	Conservative surgery - How to approach tumors in more difficult locations? How to improve the aesthetic result? Régis Resende Paulinelli (BRA)
8:35 am – 8:55 am	Reoperation on irradiated breasts, whether cosmetic or oncologic. Does conduct change? Ana Gabriela Caldas Oliveira (BRA)
8:55 am – 9:15 am	Adenectomy in large breasts. How to perform skin reduction? How to define the flap thickness? Vilmar Marques de Oliveira (BRA)
9:15 am – 9:35 am	Treatment of surgical complications Evandro Fallaci Mateus (BRA)
9:35 am – 10:05 am	Discussion Antonio Eduardo Rezende de Carvalho (BRA) Laíra Rodrigues Aguiar (BRA) Luis Fernando Corrêa de Barros (BRA)
10:05 am – 10:35 am	Coffee Break

<b>TABLE 2</b>	<b>HIGH RISK AND GENETICS</b>
Coordinator	Lucimara Priscila Campos Veras Giorgi (BRA)
10:35 am – 10:55 am	High-risk markers (PASH, radiated scar, single papilloma, atypical hyperplasia, columnar cell changes, among others) Thiago David Alves Pinto (BRA)
10:55 am – 11:15 am	How do you choose the best genetic test for your patient? Deidimar Cassia Batista Abreu (BRA)
11:15 am – 11:35 am	High clinical risk and negative genetic test. How to manage? Guilherme Novita Garcia (BRA)



11:35 am – 11:55 am	Mastology in the media: myths and truths (liquid biopsy, thermography, cryoablation, elastography, ozone) Jordana de Faria Bessa (BRA)
11:55 am – 12:30 pm	Discussion Carolina Pompermaier (BRA) Erika Pereira de Sousa e Silva (BRA) Joizeanne Pedroso Pires Chaves (BRA)

TABLE 3	DIAGNOSIS   IMAGING
Coordinator	Thaís Regina Daltoé Inglez (BRA)
2 pm – 2:20 pm	Enhanced foci on MRI. What to do? When to value? What to do if mammotomy is not possible? Linei Augusta Brolini Dellê Urban (BRA)
2:20 pm – 2:40 pm	Staging. What is the scientific evidence? How to stage? José Roberto Filassi (BRA)
2:40 pm – 3 pm	Oncology treatment by vacuum-assisted biopsy. Difficulties with vacuum-assisted biopsies in challenging cases? Heverton Leal Ernesto de Amorim (BRA)
3 pm – 3:20 pm	Preoperative axillary assessment. How, why and for whom? Giuliano Mendes Duarte (BRA)
3:20 pm – 3:50 pm	Discussion Daniela Gusmao de Araujo Batista (BRA) Marcus Nascimento Borges (BRA) Victor Rocha Pires de Oliveira (BRA)



**ROOM "F" | ESTUDO VENUS****6 pm – 8 pm**

- UNICAMP
- UNESP-Botucatu (pesquisador responsável: Eduardo Carvalho Pessoa (BRA))
- UFG-Goiânia (pesquisadores responsáveis: Rosemar Macedo Sousa Rahal (BRA) e Ruffo de Freitas Júnior (BRA))
- UFMG-Belo Horizonte (pesquisador responsável: Clécio Ênio Murta de Lucena (BRA))
- UFRS- HC Porto Alegre (pesquisadores responsáveis: Jorge Biazus (BRA) e Andrea Damin (BRA))
- UFPR - Curitiba (pesquisador responsável: Vinicius Milani Budel (BRA))
- Hospital do Câncer de Barretos (pesquisador responsável: Idam de Oliveira Junior (BRA))
- PUC Campinas (pesquisador responsável: Júlio Narciso Gomes (BRA))
- Hospital do Câncer de Muriaé (pesquisador responsável: René Aloisio da Costa Vieira (BRA))
- Hospital Geral de Fortaleza (pesquisador responsável: Francisco Pimentel Cavalcante (BRA))
- Maternidade Dona Íris (pesquisador responsável: Leonardo Ribeiro Soares (BRA))
- Liga contra o cancer Natal (pesquisador responsável: Roberta Jales (BRA))
- Hospital da Lagoa - RJ (pesquisador responsável: Rafael Szimanski (BRA))
- Hospital Barão de Lucena - Recife - PE (pesquisador responsável: Darley de Lima Ferreira Filho (BRA))
- Hospital Servidor SP (pesquisador responsável: Marcelo Antonini (BRA))
- Hospital da Mulher SP (pesquisador responsável: André Mattar (BRA))
- HFPiauí (pesquisador responsável: Kamila Bezerra (BRA))
- Oncocenter (pesquisador responsável: Sabas Vieira (BRA))

**ROOM "G" | BBCS 2024 - BREAST CANCER PRECEPTORSHIP /  
MASTERCLASS | GUESTS ONLY | WITH TRANSLATION****8 am – 6:50 pm**

Coordinator Ana Carolina Salles de Mendonça Ferreira (BRA)

8 am Opening

**MINI CONFERENCE 1**

Moderator Cristiane Nimir (BRA)



8:15 am – 8:35 am

Rare subtypes of breast cancer  
Thiago David Alves Pinto (BRA)

8:35 am – 8:45 am

Discussion

### PANEL 1

Moderators

Luiz de Paula Silveira Júnior (BRA)  
 Romualdo Barroso de Sousa (BRA)  
 Victor Domingos Lisita Rosa (BRA)

8:45 am – 9:05 am

Initial HR-positive disease - clinical case discussion  
Ana Carolina Salles de Mendonça Ferreira (BRA)

9:05 am – 9:25 am

The revolution in the surgical treatment of breast cancer  
Francisco Pimentel Cavalcante (BRA)

9:25 am – 9:45 am

When to use genomic signatures in the care of our patients, and how to apply them?  
Romualdo Barroso de Sousa (BRA)

9:45 am – 10:05 am

Adjuvant hormone therapy and cyclin inhibitors. What strategies do we currently have, and how can we personalize treatment?  
Tomás Reinert (BRA)

10:05 am – 10:35 am

Discussion

10:35 am – 11 am

Coffee Break

### PANEL 2

Moderators

Ana Carolina Salles de Mendonça Ferreira (BRA)  
 Leandro Gonçalves Oliveira (BRA)  
 Renato Cagnacci Neto (BRA)

11 am – 11:20 am

HR-positive metastatic disease - clinical case discussion  
Daniel Fernandes Marques (BRA)





11:20 am – 11:40 am	Treatment sequencing for HR-positive metastatic breast cancer Daniele Assad Suzuki (BRA)
11:40 am – 12 pm	New therapeutic strategies in the treatment of HR-positive disease Daniel Fontes Santos de Teive e Argolo (BRA)
12 pm – 12:30 pm	Discussion

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### PANEL 3

Moderators	Andreza Karine de Barros Almeida Souto (BRA) Fernanda Cesar Moura (BRA) Leonardo Ribeiro Soares (BRA)
2 pm – 2:20 pm	Clinical case of triple negative disease - initial disease João Nunes de Matos Neto (BRA)
2:20 pm – 2:40 pm	Update on the systemic treatment of localized/locally advanced triple negative disease Cristiano Augusto Andrade de Resende (BRA)
2:40 pm – 3 pm	When to consider prophylactic mastectomy in patients with BRCA1, BRCA2 and p53 mutations, with no personal history of breast cancer? Maria Isabel Achatz (BRA)
3 pm – 3:20 pm	Update on systemic treatment of metastatic triple negative breast cancer and management of immune-mediated events Mark Pegram (EUA)
3:20 pm – 3:50 pm	Discussion
3:50 pm – 4:30 pm	Coffee Break



## MINI CONFERENCE 2

Moderator	Allisson Bruno Barcelos Borges (BRA)
4:30 pm – 4:50 pm	Update on radiotherapy treatment for breast cancer. What is the trend for patients with early axillary disease who respond to neoadjuvant therapy? Nilceana Maya Aires Freitas (BRA)
4:50 pm – 5 pm	Discussion

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## PANEL 4

Moderators	Ana Carolina Salles de Mendonça Ferreira (BRA) Gustavo Nader Marta (BRA) Susanne Crocamo Ventilari da Costa (BRA)
5 pm – 5:20 pm	Clinical Case of metastatic HER2 disease, progressing in first line with CNS metastasis Eduardo de Figueiredo Vissotto (BRA)
5:20 pm – 5:40 pm	Update on systemic treatment of metastatic HER2 disease Leandro Gonçalves Oliveira (BRA)
5:40 pm – 6 pm	The impact of lifestyle changes on reducing the risk of breast cancer and recurrence Renata Costa Cangussu (BRA)
6 pm – 6:20 pm	To what extent and how should molecular expression influence the surgical decision in the metastatic disease? Tadahiko Shien (JPN)
6:20 pm – 6:50 pm	Discussion
6:50 pm	Closing



## **SALÃO PANORÂMICO | MINI MEETING ASTRAZENECA**

### **| WITH TRANSLATION**

**12 pm – 2 pm**

Precision medicine: impact of diagnosis on breast cancer treatment

ADVANCES AND CHALLENGES IN BREAST CANCER TREATMENT:  
PERSPECTIVES IN ENDOCRINE THERAPY, TRIPLE NEGATIVE TUMORS,  
HER2-LOW AND NEW BIOMARKERS

Speakers

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

Target audience

Pathologists, Mastologists and Oncologists

Topics to be discussed through the clinical cases presented:

1. Recent advances in the understanding of endocrine therapy resistance pathways in Breast Cancer, including PI3K/AKT/m-TOR and ESR1.
2. Detailed review of intrinsic subtypes in triple negative tumors, emphasizing the challenges and opportunities in identifying new biomarkers.
3. Relevance of the Her2-low biomarker
4. Innovations in molecular biology and how these advances can be integrated into daily pathology practice to improve the diagnosis, prognosis and treatment of breast cancer.

## **ROOM "H" | MINI MEETING TOLMAR | GUESTS ONLY**

**12 pm – 2 pm**

12 pm – 1 pm

Lunch

1 pm – 2 pm

OVELIA – A Global Phase 3 Trial of Ovarian Functional Suppression utilizing a novel 3-month formulation of leuprolide acetate  
Ryan Turncliff (EUA)



- Tolmar – Company Overview
- GnRH therapies and use in pre-menopausal patients
- SOFT/TEXT: Considering study results in the context of patient care
- Overview of the OVELIA clinical trial
- Q&A

## ROOM “H” | ONCOPLASTY WORKSHOP

**9th 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 – 6:30 pm**

Coordinators      Maurício de Aquino Resende (BRA)  
Paulus Fabrício Mascarenhas Ramos (BRA)  
Régis Resende Paulinelli (BRA)

### SESSION 1      HOT TOPICS – PART 1

**2 pm – 3 pm**

Coordinator      João Ricardo Auler Paloschi (BRA)

2 pm – 2:15 pm      Mastoplasty secrets and tips  
Alberto Rancati (ARG)

2:15 pm – 2:30 pm      Transexual breast surgery  
Márcia Portela de Melo (BRA)

2:30 pm – 2:45 pm      Managing tuberous breasts  
Régis Resende Paulinelli (BRA)

2:45 pm – 3 pm      Discussion  
Clécio Ênio Murta de Lucena (BRA)  
Mauro Pinto Passos (BRA)





Paulus Fabrício Mascarenhas Ramos (BRA)

## SESSION 1

**3 pm – 4:15 pm**

## HOT TOPICS – PART 2

3 pm – 3:15 pm

Breast reconstruction in large breasts  
Ricardo da Costa Pinto (BRA)

3:15 pm – 3:30 pm

Breast reconstruction after radiotherapy  
Fabricio Palermo Brenelli (BRA)

3:30 pm – 3:45 pm

Avoiding complications in myocutaneous flaps  
Vilmar Marques de Oliveira (BRA)

3:45 pm – 4:15 pm

Discussion  
Aline Carvalho Rocha (BRA)  
Fabiana Christina Araújo Pereira Lisboa (BRA)  
Rodrigo Pepe Costa (BRA)

4:15 pm – 4:45 pm

Coffee Break

## SESSION 2

**4:45 pm – 5:35 pm**

## CASE DISCUSSION

Coordinator

Ailton Joioso (BRA)

4:45 pm – 5:05 pm

Case presentation  
Maurício de Aquino Resende (BRA)

Debaters:

Daniel Meirelles Barbalho (BRA)  
Darley de Lima Ferreira Filho (BRA)  
José Carlos Campos Torres (BRA)

5:05 pm – 5:35 pm

Case presentation  
Luiz Fernando Jubé Ribeiro (BRA)

Debaters:

Frank Braga Rodrigues (BRA)  
Lucimara Priscila Campos Veras Giorgi (BRA)



Salvia Maria Canguçu (BRA)

**SESSION 3**  
**5:35 pm – 6 pm**

5:35 pm – 5:45 pm	Extreme oncoplastic surgery Mario Casales Schorr (BRA)
5:45 pm – 5:55 pm	Tackling complications Maximiliano Cassilha Kneubil (BRA)
5:55 pm – 6:05 pm	Discussion Leonardo Fleury Orlandini (BRA) Marcellus do Nascimento Moreira Ramos (BRA)

**SESSION 4**  
**6:05 pm – 6:30 pm**

**CONFERENCE**

6:05 pm – 6:25 pm	Oncoplastic surgery in the future Nicola Rocco (ITA)
6:30 pm – 6:35 pm	Closing Maurício de Aquino Resende (BRA) Paulus Fabrício Mascarenhas Ramos (BRA) Régis Resende Paulinelli (BRA)

**ROOM “BALLROOM 1” | MAMA GENESIS WORKSHOP**  
**WITH TRANSLATION**

**2 pm – 6 pm**

Coordinators	Carlos Henrique dos Anjos (BRA) Fábio Postiglione Mansani (BRA) Maria Cristina Figueroa Magalhães (BRA)
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**MODULE 1**  
**2 pm – 3 pm**





Coordinator:	Fábio Postiglione Mansani (BRA)
Commentator (M)	Augusto Ribeiro Gabriel (BRA)
Commentator (O)	Glauber Moreira Leitão (BRA)
2 pm – 2:30 pm	Quantitative medicine for breast cancer patients Charles Maurice Perou (EUA)
2:30 pm – 3 pm	Meet with professor – Q & A Charles Maurice Perou (EUA)

## MODULE 2

### 3 pm – 4:15 pm

Coordinator	Maria Cristina Figueroa Magalhães (BRA)
Commentator (M)	Lincon Jo Mori (BRA)
Commentator (O)	Daniel Fontes Santos de Teive e Argolo (BRA)
3 pm – 3:15 pm	Atypical cell proliferation at the stem cell level and its relationship with repair genes Leonard Medeiros da Silva (BRA)
3:15 pm – 3:30 pm	Understanding Immunotherapy Maria Cristina Figueroa Magalhães (BRA)
3:30 pm – 3:45 pm	HER family – its importance in carcinogenesis Aumilto Augusto da Silva Junior (BRA)
3:45 pm – 4 pm	How an ADC is built and what its relationship is with the target cell Aline Coelho Gonçalves (BRA)
4 pm – 4:15 pm	Q & A
4:15 pm – 4:45 pm	Coffee Break

## MODULE 3

### 4:45 pm – 6:15 pm



Coordinator	Carlos Henrique dos Anjos (BRA)
Commentator (M)	Cesar Cabello dos Santos (BRA)
Commentator (O)	Renata Lazari Sandoval (BRA)
4:45 pm – 5:15 pm	Deciphering the Genome: interpreting somatic and germline changes with public domain tools (Hands On) Carlos Henrique dos Anjos (BRA)
5:15 pm – 6:15 pm	Frontiers of knowledge  20' Circulating tumor DNA reveals complex biological features with clinical relevance in metastatic breast cancer Charles Maurice Perou (EUA)  20' Mechanisms of endocrine resistance to current therapies and impacts on future treatments in luminal subtype Tomás Reinert (BRA)  20' Q & A
6:15 pm	Closing

## ROOM "BALLROOM 2" | BREAST IMAGING WORKSHOP

### 8 am – 6 pm

Coordinators	Henrique Lima Couto (BRA) <b>José Luis Esteves Francisco (BRA)</b>
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### MODULE 1 CONFERENCE

8 am – 8:40 am

Coordinator:	José Luis Esteves Francisco (BRA)
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8 am – 8:30 am	Should we worry about overdiagnosis? How big is the problem? Stuart McIntosh (GBR)
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8:30 am – 8:40 am	Discussion
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## MODULE 2

**8:40 am – 10:05 am**

Coordinators Daniela Gusmao de Araujo Batista (BRA)  
Mariana Mesquita Gomes Caitano (BRA)

8:40 am – 8:55 am New recommendations on breast cancer screening issued by CBR, FEBRASGO and SBM. What has changed? What can't we forget?  
Linei Augusta Brolini Dellê Urban (BRA)

8:55 am – 9:10 am Update BI-RADS  
Maria Júlia Gregório Calas (BRA)

9:10 am – 9:25 am CDIS image  
Paula de Camargo Moraes (BRA)

9:25 am – 9:40 am Focal asymmetries. How do we evaluate them nowadays?  
Heverton Leal Ernesto de Amorim (BRA)

9:40 am – 10:05 am Discussion

10:05 am – 10:30 am Coffee Break

## MODULE 3

**10:30 am – 12:10 pm**

Coordinators Andrea Ribeiro (BRA)  
Luiza Louza Normanha Cortizo Vidal (BRA)

10:30 am – 10:45 am Tomosynthesis: where we are now  
Luciano Fernandes Chala (BRA)

10:45 am – 11 am Preoperative breast imaging. Which exams to request?  
Gustavo Machado Badan (BRA)



11 am – 11:15 am	Contrast-enhanced mammography: state of the art Rodrigo Pepe Costa (BRA)
11:15 am – 11:30 am	Tomosynthesis-directed biopsy: indications? How do I do it? Heverton Leal Ernesto de Amorim (BRA)
11:30 am – 11:50 am	Breast imaging case marathon Linei Augusta Brolini Dellê Urban (BRA)
11:50 am – 12:10 pm	Discussion

**MODULE 4**  
**2 pm – 3:20 pm**

Coordinators	Cristina Pinto Naldi Ruiz (BRA) Henrique Lima Couto (BRA)
2 pm – 2:20 pm	Ultrasound in breast cancer screening: strategies and results Luciano Fernandes Chala (BRA)
2:20 pm – 2:40 pm	US-guided biopsies: How do I do it? Bertha Andrade Coelho (BRA)
2:40 pm – 3 pm	False positives and negatives in breast US. What relies on technology? What relies on the operator? Almir Bitencourt (BRA)
3 pm – 3:20 pm	Discussion

**MODULE 5**  
**3:20 pm – 4:15 pm**

**Discussion of imaging cases with pathologists**

Coordinators	Eduardo Carvalho Pessoa (BRA) Henrique Lima Couto (BRA)
Imaging specialist:	Luciano Fernandes Chala (BRA)
Imaging specialist:	Gustavo Machado Badan (BRA)





Pathologist: Raquel Civolani Marques Fernandes (BRA)  
Pathologist: Cristiane Nimir (BRA)

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4:15 pm – 4:45 pm Coffee Break

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## MODULE 6

### 4:45 pm – 6 pm

Coordinators Luiza Louza Normanha Cortizo Vidal (BRA)  
Mariana Mesquita Gomes Caitano (BRA)

4:45 pm – 5:05 pm Breast MRI: non-nodular background enhancement, second look US or  
up front MRI biopsy?  
Almir Bitencourt (BRA)

5:05 pm – 5:25 pm BI-RADS 4 in Magnetic Resonance Imaging: stratification and its pitfalls  
João Ricardo Maltez de Almeida (BRA)

5:25 pm – 5:45 pm Magnetic Resonance: technique and biopsy results?  
Thais Paiva Moraes (BRA)

5:45 pm – 6 pm Discussion



MAY 17TH, 2024 | FRIDAY

SIMULTANEOUS ROOM | ROOM G+H

14h – 18h	<b>II REUNIÃO DE INVESTIGADORES DO PROJETO ITABERÁI - INVESTIGATOR MEETING</b>
14h00 – 14h05	Abertura da Reunião / Boas-Vindas
Coordenador	Ruffo de Freitas Junior (BRA)
14h05 – 14h15	<b>Instituto Avon e o Novo Panorama do Câncer de Mama no SUS</b> Coordenadora de Projetos Câncer de Mama do Instituto Avon Mariana Lorencinho (BRA)
14h15 – 14h25	Consultora Médica do Instituto Avon Juliana Francisco (BRA)
14h25 – 15h10	<b>Situação do Projeto ITABERÁI: compilado de um ano de coleta de dados.</b>
14h25 – 14h30	Protocolo do Estudo Clínico: Projeto ITABERÁI Priscila Dias Watanabe (BRA)
14h30 – 14h45	Aplicativo Rosa e Sistema Rosa Watch Douglas Euclides da Silva (BRA)
14h45 – 14h50	Programa de treinamento continuado da Equipe de Saúde da Família Christina Souto Cavalcante Costa (BRA) Luana Vieira Martins (BRA)
14h50 – 14h55	Nível de compreensão e adesão do ACS ao Projeto ITABERÁI Danúbia de Brito Rodrigues Silva (BRA)
14h55 – 15h00	Engajamento do ACS para o rastreamento do câncer de mama: Projeto ITABERÁI Mary Ann Monteiro Lopes Cassiano (BRA)





15h00 – 15h10

Resultados parciais do Projeto ITABERAÍ  
Danielle Cristina Netto Rodrigues (BRA)

15h10 – 16h15

**A contribuição dos Setores envolvidos na melhoria do rastreamento do câncer de mama para o Projeto ITABERAÍ: aplicabilidade para o estudo Multicêntrico**

Coordenação

Ruffo de Freitas Junior (BRA)

**Ministério Público: o olhar do Poder Judiciário**

1ª Promotoria de Justiça da Comarca de Itaberaí  
Elissa Tatiana Pryjmak (BRA)

Coordenadoria das Promotorias de Justiça da Comarca de Itaberaí  
Paulo Henrique Otoni (BRA)

**Poder Legislativo e seu alcance na saúde pública**

Deputada Federal  
Adriana Sauthier Accorsi (BRA)

**A força do Poder Executivo**

Prefeita do Município de Itaberaí  
Rita de Cássia Soares Mendonça (BRA)

**Secretário Municipal de Saúde de Itaberaí**

Carlos Rodrigues Galvão Júnior (BRA)

**A importância da Fundação de Apoio à Pesquisa**

Diretora Executiva da Fundação de Apoio ao Hospital das Clínicas - FUNDAHC  
Lucilene Maria de Sousa (BRA)

Coordenadora de Ensino, Pesquisa e Extensão da FUNDAHC  
Jéssica Nayane de Oliveira Silva (BRA)

**A atuação do terceiro setor no rastreamento do câncer de mama: Instituto Avon**

Coordenadora de Projetos Câncer de Mama do Instituto Avon  
Mariana Lorencinho (BRA)



	<b>A participação da indústria farmacêutica como facilitador do acesso</b> Gerente de Ciências Médicas – Libbs Farmacêutica Vivienne Carduz Castilho (BRA)
16h15 – 16h45	Coffee Break
16h45 – 16h55	<b>A importância da CRF Eletrônica (RedCap)</b> Monitora de Pesquisa Clínica - Libbs Farmacêutica Bruna de Lima Cavalcanti (BRA) Gerente de Ciências Médicas – Libbs Farmacêutica Vivienne Carduz Castilho (BRA)
16h55 – 17h05	<b>Assuntos Regulatórios: Centro Coordenador e Documentos Éticos</b> Analista de Processos Regulatórios Clínico – Libbs Farmacêutica Edilene Regina Sousa (BRA)
17h05 – 17h50	<b>Projeto ITABERAÍ Multicêntrico: estratégias para a implantação nos Centros Coparticipantes</b> Coordenador Ruffo de Freitas Júnior (BRA)  Adriana (Florianópolis - SC) Breno Albuquerque (Paragominas – PA) Denise Borba (Sorriso – MT) Evelling Lorena (Araguaína – TO) Fábio Postiglione Mansani (Ponta Grossa - PR) Giuliano Tosello (Presidente Prudente – SP) Giuliano Mendes Duarte (Indaiatuba – SP) José Luis Esteves Francisco (São José do Rio Preto – SP) Marcelo Bello (Rio de Janeiro – RJ) Paula Saab (Nossa Senhora do Socorro – SE) Rita de Cássia (Itaberaí – GO)
17h50 – 18h00	<b>Discussão e Encerramento</b> Ruffo de Freitas Junior (BRA)



**MAY 17TH, 2024 | FRIDAY**

**SIMULTANEOUS ROOM - BALLROOM 2**

**8:10 am – 8:38 am**

**Commented poster session 1**

Coordinator

Franklin Fernandes Pimentel (BRA)

Discussants

Christina Souto Cavalcante Costa (BRA)

Daniel Buttros (BRA)

8:10 am – 8:13 am

Immediate postoperative complications associated with sentinel lymph node biopsy in early breast cancer in the context of the Sentinel Lymph Node Biopsy versus no Axillary Surgery in Early Breast Cancer Clinically and Ultrasonographically node negative (VENUS) Trial  
Amanda Maria Sacilotto Detoni (BRA)

8:13 am – 8:16 am

Breast cancer and local therapy: breast conservation and oncoplastic surgery are associated with improved quality of life  
Daniel Meirelles Barbalho (BRA)

8:16 am – 8:19 am

CK19 expression and prognosis in women with breast cancer  
Silvia Helena Rabelo dos Santos (BRA)

8:19 am – 8:22 am

Forequarter amputation in patients with breast cancer: a systematic literature review  
René Aloisio da Costa Vieira (BRA)

8:22 am – 8:25 am

The Potential Role of Cavity Margins Sampling Shaving (CMSH) to Predict Complete Tumor Resection by Vacuum Assisted Excision (VAE)  
Henrique Lima Couto (BRA)

8:25 am – 8:28 am

Is axillary evaluation still necessary in DCIS?  
Marcellus do Nascimento Moreira Ramos (BRA)

8:28 am – 8:38 am

Discussion

**8:40 am – 9 am**

**Mini conference: How can the quality of the pathology study affect the treatment of breast cancer patients?**

Chairwoman

Aline Carvalho Rocha (BRA)

Speaker

Ruana Moura Rocha (BRA)



9 am – 9:10 am	Discussion
<b>9:10 am – 9:30 am</b>	<b>Mini conference: Breastfeeding after breast cancer</b>
Chairman	Luis Fernando Pádua Oliveira (BRA)
Speaker	Mayka Volpato dos Santos (BRA)
9:30 am – 9:40 am	Discussion
<b>9:40 am – 10:30 am</b>	<b>Coffee Break</b>
<b>10:30 am – 11 am</b>	<b>Commented poster session 2</b>
Coordinator	Clécio Ênio Murta de Lucena (BRA)
Discussants	Marcelo Antonini (BRA) Vera Aparecida Saddi (BRA)
10:30 am – 10:33 am	Factors influencing the engagement of Community Health Workers in breast cancer screening: Itaberaí Project Mary Ann Monteiro Lopes Cassiano (BRA)
10:33 am – 10:36 am	Assessment of a continuing education program for Community Health Workers for breast cancer screening: Itaberaí Project Luana Vieira Martins (BRA)
10:36 am – 10:39 am	Variant analysis in the TP53 gene for families in the state of Goiás with suspected Li-Fraumeni Syndrome: tool for early diagnosis and prevention of breast cancer Késsila Macedo Veiga (BRA)
10:39 am – 10:42 am	Diagnostic accuracy study of magnetic resonance breast spectroscopy Ilse Franco de Oliveira (BRA)
10:42 am – 10:45 am	Suspicious mammographic findings out of the age range recommended by Brazilian Ministry of Health Eduarda Martins dos Santos (BRA)
10:45 am – 10:48 am	Gastrin-Releasing Peptide Receptor (GRPR) as a promising prognostic biomarker in breast cancer Martina Lichtenfels (BRA)





10:48 am – 10:58 am Discussion

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**11 am – 11:20 am Mini conference: Telemedicine and breast cancer**

Chairman Roberto Kepler da Cunha Amaral (BRA)

Speaker Maciel Matias (BRA)

11:20 am – 11:40 am Discussion

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**11:40 am – 12 pm Mini conference: What would I like and not like to hear from a healthcare professional as a patient?**

Chairwoman Nancy Cristina Ferraz de Lucena Ferreira (BRA)

Speaker Lorena Borges Braga de Oliveira (BRA)

12 pm – 12:10 pm Discussion

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**12:10 pm – 12:50 pm BD Symposium - Tumor Board: minimally invasive breast treatment**

Chairman Henrique Lima Couto (BRA)

Debaters Aline Coelho Gonçalves (BRA)

André Mattar (BRA)

Bruno Leonardo de Souza (BRA)

Mariana Mesquita Gomes Caitano (BRA)

Nilceana Maya Aires Freitas (BRA)

Raquel Civolani Marques Fernandes (BRA)

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**2 pm – 2:30 pm Commented poster session 3**

Coordinator Darley de Lima Ferreira Filho (BRA)

Discussants Idam de Oliveira Junior (BRA)

Silvia Helena Rabelo dos Santos (BRA)

2 pm – 2:03 pm Characterization of an epigenetic regulatory network on basal-like breast cancer subtype and its impact on signaling pathways and biological processes  
Larissa Miyuki Okano (BRA)



2:03 pm – 2:06 pm	<p>Understanding and Adherence Level of Community Health Workers (CHW) to breast cancer screening according to the protocol established in the Itaberaí Project</p> <p>Danúbia de Brito Rodrigues Silva (BRA)</p>
2:06 pm – 2:09 pm	<p>The role of tumor-associated macrophages in the prediction of sentinel lymph node involvement in breast cancer</p> <p>Aline Carvalho Rocha (BRA)</p>
2:09 pm – 2:12 pm	<p>Evaluation of Tumor Infiltrating Lymphocytes as a predictive biomarker of recurrence in patients with Ductal Carcinoma In Situ of the breast</p> <p>Camila Vitola Pasetto (BRA)</p>
2:12 pm – 2:15 pm	<p>The alarming level of sexual dysfunction among Brazilian women with early breast cancer undergoing adjuvant endocrine therapy</p> <p>Daniele Assad Suzuki (BRA)</p>
2:15 pm – 2:18 pm	<p>Does the intrinsic chemoresistance profile modulate the efficacy of neoadjuvant chemotherapy in breast cancer patients?</p> <p>Martina Lichtenfels (BRA)</p>
2:18 pm – 2:28 pm	Discussion
<b>2:30 pm – 2:50 pm</b>	<b>Mini conference: Physiotherapy during chemotherapy infusion: why and how?</b>
Chairwoman	Nayara Alves de Freitas Lemos (BRA)
Speaker	Anke Bergmann (BRA)
2:50 pm – 3 pm	Discussion
<b>3 pm – 3:30 pm</b>	<b>Commented poster session 4</b>
Coordinator	René Aloisio da Costa Vieira (BRA)
Discussants	Marise Amaral Rebouças Moreira (BRA)
	Silvia Helena Rabelo dos Santos (BRA)
3 pm – 3:03 pm	<p>Analysis of the magee 3 equation for assessing prognosis in breast cancer treatment</p> <p>Milena Martello Cristofalo (BRA)</p>





3:03 pm – 3:06 pm	Integrated health technological solution for the resolution of breast cancer screening actions: Itaberaí Project Douglas Euclides da Silva (BRA)
3:06 pm – 3:09 pm	Evaluation of the endometrium of women who used tamoxifen: correlation between ultrasonographic, hysteroscopic and histological findings Clécio Ênio Murta de Lucena (BRA)
3:09 pm – 3:12 pm	Evaluation of pathological complete response in axilla in patients with triple negative breast cancer and pathological complete response in breast: a systematic review Milena Martello Cristofalo (BRA)
3:12 pm – 3:15 pm	Capivasertib and fulvestrant, a new salvation for hormone receptor-positive breast cancer? A systematic review Gustavo Moreira Andrade (BRA)
3:15 pm – 3:18 pm	Scenario of breast reconstruction in the unified health system in Brazil Darley de Lima Ferreira Filho (BRA)
3:18 pm – 3:28 pm	Discussion

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**3:30 pm – 3:50 pm      Mini conference: Strategies to increase patient adherence to hormone therapy**

Chairman	Augusto Rodrigues de Araújo Neto (BRA)
Speaker	Daniele Assad Suzuki (BRA)

3:50 pm – 4 pm	Discussion
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4 pm – 4:30 pm	Coffee Break
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**6:30 pm – 8:30 pm      AI - ONCOLOGY INSIGHT  
GUESTS ONLY**

6:30 pm – 6:50 pm	Introduction to AI Cláudia Ottaiano (BRA)
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6:50 pm – 6:55 pm	Question session
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6:55 pm – 7:15 pm	Application of AI in medicine Uirá Resende (BRA)
7:15 pm – 7:20 pm	Question session
7:20 pm - 7:40 pm	Practical application of AI in Oncology Rafael Botan (BRA)
7:40 pm – 8:15 pm	Workshop Rafael Botan (BRA)
8:15 pm – 8:25 pm	Introduction to Voida and Voida Pro Rafael Botan (BRA)
8:25 pm – 8:30 pm	Question session
8:30 pm	Closing



**MAY 17TH, 2024 | FRIDAY**

**BALLROOM 1 | MAIN AUDITORIUM | WITH TRANSLATION**

8 am – 8:10 am      Official opening  
Ruffo de Freitas Junior (BRA)

**8:10 am – 8:50 am      General session 1**

Coordinator      José Cláudio Casali da Rocha (BRA)  
Discussants      Mark Pegram (EUA)  
Vinicius Milani Budel (BRA)

8:10 am – 8:20 am      Effect of vitamin D supplementation on the pathological complete response to neoadjuvant chemotherapy in women with breast cancer: a randomized clinical trial  
Eduardo Carvalho Pessoa (BRA)

8:20 am – 8:30 am      Breast cancer screening based on physical examination of the breast performed by community health workers: Itaberaí Project  
Priscila Dias Watanabe (BRA)

8:30 am – 8:40 am      Machine learning model to predict resistance to neoadjuvant chemotherapy in breast cancer  
Martina Lichtenfels (BRA)

8:40 am – 8:50 am      Discussion

**8:55 am – 9:25 am      Gold Satellite Symposium – MSD – How immunotherapy redefines the treatment of high-risk triple negative breast cancer**

Speaker      Francisco Pimentel Cavalcante (BRA)

**9:30 am – 9:50 am      Silver Satellite Symposium – DAIICHI SANKYO – The breast cancer patient's journey - care with a multidisciplinary team**

Chairwoman      Rosemar Macedo Sousa Rahal (BRA)  
Speaker      Marcelle Mendes Ladgem Fernandes (BRA)



9:50 am – 10:30 am    Coffee Break

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**10:30 am – 11:10 am    General session 2**

Coordinator            Régis Resende Paulinelli (BRA)  
Discussants            Michael Alvarado (EUA)  
                                Giuliano Mendes Duarte (BRA)

10:30 am – 10:40 am    Randomized clinical trial: breast cancer screening based on physical examination performed by community health workers  
Danielle Cristina Netto Rodrigues (BRA)

10:40 am – 10:50 am    Vacuum-Assisted Excision (VAE): a single-step approach to the diagnosis and treatment of Early Breast Cancers (EBC) – initial report  
Henrique Lima Couto (BRA)

10:50 am – 11 am        External prostheses after mastectomy: adhesion, manufacture and selection of a low-cost functional model to be performed in developing countries  
René Aloisio da Costa Vieira (BRA)

11 am – 11:10 am        Discussion

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**11:15 am – 11:35 am    Silver Satellite Symposium – LILLY – Cyclin inhibitors: do the differences make a difference in clinical practice?**

Speaker                    Debora de Melo Gagliato Jardim (BRA)

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**11:40 pm – 11:45 am    BBBS 2024 Awards – Charles Maurice Perou (EUA)**

Coordinators            Ruffo de Freitas Junior (BRA)  
                                Rosemar Macedo Sousa Rahal (BRA)

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**11:45 pm – 12:05 pm    Mini Conference: How should molecular classification be approached in a dynamic scenario of changes in gene expression during the course of the disease?**

Chairman                 Ricardo Caponero (BRA)  
Speaker                    Charles Maurice Perou (EUA)

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**2 pm – 2:40 pm**

**General session 3**

Coordinator André Mattar (BRA)  
Discussants Tadahiko Shien (JPN)  
Ana Gabriela Caldas Oliveira (BRA)

2 pm – 2:10 pm

Is it possible to omit axillary surgery after neoadjuvant therapy for breast cancer? Preliminary outcomes in patients who underwent neoadjuvant treatment in the ongoing VENUS trial – a randomized controlled clinical trial  
Maria Beatriz de Paula Leite Kraft (BRA)

2:10 pm – 2:20 pm

Disparity in access to anti-her-2 therapies in neoadjuvant chemotherapy: a prognostic analysis based on real world data between public and private systems in Brazil  
Marcelo Antonini (BRA)

2:20 pm – 2:30 pm

The diffusion sequence by magnetic resonance in the diagnosis of breast cancer: an analysis of accuracy  
Ilse Franco de Oliveira (BRA)

2:30 pm – 2:40 pm

Discussion

**2:45 pm – 3:25 pm**

**Gold Satellite Symposium – NOVARTIS - A2A: Treatment of HR+/HER2- luminal breast cancer**

Speaker Tomás Reinert (BRA)  
Ruffo de Freitas Junior (BRA)

**3:30 pm – 4:10 pm**

**Table: There are no fools here. The clinical study presented by its author | co-author**

Chairman Augusto Tufi Hassan (BRA)  
Speakers 10' Prospective study: Impact of breast magnetic resonance imaging on oncoplastic surgery and on indications of mastectomy in patients who were previously candidates to breast conserving surgery  
Karina Furlan Anselmi (BRA)  
  
10' Outcomes after elevation of serratus anterior fascia flap versus



	serratus muscle flap in direct-to-implant breast reconstruction following mastectomy: a prospective study Lilian de Sá Paz Ramos (BRA)
	10' Factors associated with unsatisfactory cosmetic results in oncoplastic surgery Idam de Oliveira Junior (BRA)
Discussion	10'
4:10 pm – 4:40	Coffee Break
<b>4:40 pm – 5:10 pm</b>	<b>Gold Satellite Symposium – ZEISS – The case for intraoperative radiotherapy: results and insights from the TARGIT a trial</b>
Chairwoman	Nilceana Maya Aires Freitas (BRA)
Speaker	Michael Alvarado (EUA)
<b>5:15 pm – 5:45 pm</b>	<b>ASTRAZENECA – Mechanisms of endocrine resistance</b>
Speaker	Mohammad Jahanzeb (EUA)
<b>5:50 pm – 6:30 pm</b>	<b>General session 4</b>
Coordinator	Glauber Moreira Leitão (BRA)
Discussants	Gustavo Nader Marta (BRA) Darley de Lima Ferreira Filho (BRA)
5:50 pm – 6 pm	First interim analysis of radiotherapy data after 4.5 years of sentinel lymph node biopsy Versus no axillary surgery in early breast cancer clinically and UltraSonographically node negative: a prospective randomized controlled trial - VENUS Trial Danielle Cristina Miyamoto Araújo (BRA)
6 pm – 6:10 pm	Patient-reported aesthetic outcomes in Oncoplastic Breast Surgery compared to Conventional Breast-Conserving Surgery: a systematic review and meta-analysis Charles Karel Martins Santos (BRA)





- 6:10 pm – 6:20 pm      Breast conservation therapy or mastectomy and breast reconstruction in the treatment of locally advanced and/or Multifocal/Multicentric breast cancer? Systematic review and meta-analysis  
Aline Regina Nunes Reis (BRA)
- 6:20 pm – 6:30 pm      Discussion



MAY 18TH, 2024 | SATURDAY

BALLROOM 1 | MAIN AUDITORIUM | WITH TRANSLATION

<b>8 am – 8:45 am</b>	<b>General session 5</b>
Coordinator	João Nunes de Matos Neto (BRA)
Discussants	Mohammad Jahanzeb (EUA)
	Luciana Castro Garcia Landeiro (BRA)
8 am – 8:10 am	Dose-dense versus 3-weekly AC during Neoadjuvant Chemoimmunotherapy for Early-Stage Triple-Negative Breast Cancer: GBECAM 0123 - The Neo-Real Study Renata Rodrigues da Cunha Colombo Bonadio (BRA)
8:10 am – 8:20 am	Distinct expression of miRNAs and its association with survival in TNBC and non-TNBC breast tumors subtypes from a cohort of patients from South of Brazil Emanuelle Nunes de Souza (BRA)
8:20 am – 8:30 am	Enrichment of intestinal Bifidobacterium genus is associated with residual disease among patients with early-stage HER2+ breast cancer (BC) following neoadjuvant chemotherapy (NACT) Ludmila Thommen Teles (BRA)
8:30 am – 8:40 am	Discussion
<b>8:45 am – 9:05 am</b>	<b>Mini Conference: When should a patient with metastatic breast cancer undergo surgery? The experience of japanese clinical oncology group</b>
Chairwoman	Nayara Portilho Araujo (BRA)
Speaker	Tadahiko Shien (JPN)
<b>9:10 am – 9:50 am</b>	<b>Diamond Satellite Symposium – ASTRAZENECA - ADCs in refractory luminal disease</b>
Speaker	Romualdo Barroso de Sousa (BRA)





9:50 am – 10:20 am Coffee Break

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**10:20 am – 10:50 am Mini conference: The philosophical view on breast cancer treatment: from the other side of the table**

Chairman Carlos Alberto Ruiz (BRA)  
Speaker Ana Kelly Ferreira Souto Pinto (BRA)

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**10:55 am – 11:35 am Table: How to de-escalate treatment in EC I, luminal tumors. Where do I bet my chips?**

Coordinator Lais Tomaz Maya João (BRA)  
Speakers 15' De-escalate axilla and maintain whole breast irradiation  
Guilherme Novita Garcia (BRA)  
  
15' De-escalate radiotherapy (partial) and maintain BLS  
Michael Alvarado (EUA)

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**11:35 am – 11:55 am Mini conference: CDK4/6 inhibitors after patent expirations: how affordability can change the landscape of HR+/HER2- metastatic breast cancer**

Chairman Franklin Fernandes Pimentel (BRA)  
Speaker Mark Pegram (EUA)

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**11:55 am – 12:35 pm Lecture: The best of breast cancer in the last 12 months (ASCO 2023, SABS 2023 and BBCS 2024)**

Chairman Gabriel Felipe Santiago (BRA)  
Speaker 1 20' Systemic - Mohammad Jahanzeb (EUA)  
Speaker 2 20' Loco regional – Michael Alvarado (EUA)

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12:35 pm – 1 pm Awarding and closing remarks



## APPROVED PAPER FOR ORAL PRESENTATION

**MAY 17<sup>TH</sup>, FRIDAY**

### General session 1

- |                   |   |
|-------------------|---|
| 8:10 am – 8:20 am | Effect of vitamin D supplementation on the pathological complete response to neoadjuvant chemotherapy in women with breast cancer: a randomized clinical trial<br>Eduardo Carvalho Pessoa (BRA) |
| 8:20 am – 8:30 am | Breast cancer screening based on physical examination of the breast performed by community health workers: Itaberaí Project<br>Priscila Dias Watanabe (BRA)                                     |
| 8:30 am – 8:40 am | Machine learning model to predict resistance to neoadjuvant chemotherapy in breast cancer<br>Martina Lichtenfels (BRA)  |

### General session 2

- |                     |  |
|---------------------|--|
| 10:30 am – 10:40 am | Randomized clinical trial: breast cancer screening based on physical examination performed by community health workers<br>Danielle Cristina Netto Rodrigues (BRA)                      |
| 10:40 am – 10:50 am | Vacuum-Assisted Excision (VAE): a single-step approach to the diagnosis and treatment of Early Breast Cancers (EBC) – initial report<br>Henrique Lima Couto (BRA)                      |
| 10:50 am – 11 am    | External prostheses after mastectomy: adhesion, manufacture and selection of a low-cost functional model to be performed in developing countries<br>René Aloisio da Costa Vieira (BRA) |





### General session 3

- |                   |   |
|-------------------|---|
| 2 pm – 2:10 pm    | Is it possible to omit axillary surgery after neoadjuvant therapy for breast cancer? Preliminary outcomes in patients who underwent neoadjuvant treatment in the ongoing VENUS trial – a randomized controlled clinical trial<br>Maria Beatriz de Paula Leite Kraft (BRA) |
| 2:10 pm – 2:20 pm | Disparity in access to anti-her-2 therapies in neoadjuvant chemotherapy: a prognostic analysis based on real world data between public and private systems in Brazil<br>Marcelo Antonini (BRA)  |
| 2:20 pm – 2:30 pm | The diffusion sequence by magnetic resonance in the diagnosis of breast cancer: an analysis of accuracy<br>Ilse Franco de Oliveira (BRA)  |

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### General session 4

- |                   |   |
|-------------------|---|
| 5:50 pm – 6 pm    | First interim analysis of radiotherapy data after 4.5 years of sentinel lymph node biopsy Versus no axillary surgery in early breast cancer clinically and UltraSonographically node negative: a prospective randomized controlled trial - VENUS Trial<br>Danielle Cristina Miyamoto Araújo (BRA) |
| 6 pm – 6:10 pm    | Patient-reported aesthetic outcomes in Oncoplastic Breast Surgery compared to Conventional Breast-Conserving Surgery: a systematic review and meta-analysis<br>Charles Karel Martins Santos (BRA)   |
| 6:10 pm – 6:20 pm | Breast conservation therapy or mastectomy and breast reconstruction in the treatment of locally advanced and/or Multifocal/Multicentric breast cancer? Systematic review and meta-analysis<br>Aline Regina Nunes Reis (BRA)   |



**MAY 18<sup>TH</sup>, SATURDAY**

**General session 5**

8 am – 8:10 am	Dose-dense versus 3-weekly AC during Neoadjuvant Chemoimmunotherapy for Early-Stage Triple-Negative Breast Cancer: GBECAM 0123 - The Neo-Real Study Renata Rodrigues da Cunha Colombo Bonadio (BRA)
8:10 am – 8:20 am	Distinct expression of miRNAs and its association with survival in TNBC and non-TNBC breast tumors subtypes from a cohort of patients from South of Brazil Emanuelle Nunes de Souza (BRA)
8:20 am – 8:30 am	Enrichment of intestinal Bifidobacterium genus is associated with residual disease among patients with early-stage HER2+ breast cancer (BC) following neoadjuvant chemotherapy (NACT) Ludmila Thommen Teles (BRA)

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## APPROVED PAPERS FOR COMMENTED POSTER

**MAY 17<sup>TH</sup>, FRIDAY**

### Commented poster session 1

8:10 am – 8:13 am	Immediate postoperative complications associated with sentinel lymph node biopsy in early breast cancer in the context of the Sentinel Lymph Node Biopsy versus no Axillary Surgery in Early Breast Cancer Clinically and Ultrasonographically node negative (VENUS) Trial Amanda Maria Sacilotto Detoni (BRA)
8:13 am – 8:16 am	Breast cancer and local therapy: breast conservation and oncoplastic surgery are associated with improved quality of life Daniel Meirelles Barbalho (BRA)
8:16 am – 8:19 am	CK19 expression and prognosis in women with breast cancer Silvia Helena Rabelo dos Santos (BRA)
8:19 am – 8:22 am	Forequarter amputation in patients with breast cancer: a systematic literature review René Aloisio da Costa Vieira (BRA)
8:22 am – 8:25 am	The Potential Role of Cavity Margins Sampling Shaving (CMSH) to Predict Complete Tumor Resection by Vacuum Assisted Excision (VAE) Henrique Lima Couto (BRA)
8:25 am – 8:28 am	Is axillary evaluation still necessary in DCIS? Marcellus do Nascimento Moreira Ramos (BRA)

### Commented poster session 2

10:30 am – 10:33 am	Factors influencing the engagement of Community Health Workers in breast cancer screening: Itaberaí Project Mary Ann Monteiro Lopes Cassiano (BRA)
10:33 am – 10:36 am	Assessment of a continuing education program for Community Health Workers for breast cancer screening: Itaberaí Project Luana Vieira Martins (BRA)



- 10:36 am – 10:39 am Variant analysis in the TP53 gene for families in the state of Goiás with suspected Li-Fraumeni Syndrome: tool for early diagnosis and prevention of breast cancer  
Késsila Macedo Veiga (BRA)
- 10:39 am – 10:42 am Diagnostic accuracy study of magnetic resonance breast spectroscopy  
Ilse Franco de Oliveira (BRA)
- 10:42 am – 10:45 am Suspicious mammographic findings out of the age range recommended by Brazilian Ministry of Health  
Eduarda Martins dos Santos (BRA)
- 10:45 am – 10:48 am Gastrin-Releasing Peptide Receptor (GRPR) as a promising prognostic biomarker in breast cancer  
Martina Lichtenfels (BRA)
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### Commented poster session 3

- 2 pm – 2:03 pm Characterization of an epigenetic regulatory network on basal-like breast cancer subtype and its impact on signaling pathways and biological processes  
Larissa Miyuki Okano (BRA)
- 2:03 pm – 2:06 pm Understanding and Adherence Level of Community Health Workers (CHW) to breast cancer screening according to the protocol established in the Itaberaí Project  
Danúbia de Brito Rodrigues Silva (BRA)
- 2:06 pm – 2:09 pm The role of tumor-associated macrophages in the prediction of sentinel lymph node involvement in breast cancer  
Aline Carvalho Rocha (BRA)
- 2:09 pm – 2:12 pm Evaluation of Tumor Infiltrating Lymphocytes as a predictive biomarker of recurrence in patients with Ductal Carcinoma In Situ of the breast  
Camila Vitola Pasetto (BRA)
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- 2:12 pm – 2:15 pm      The alarming level of sexual dysfunction among Brazilian women with early breast cancer undergoing adjuvant endocrine therapy  
Daniele Assad Suzuki (BRA)
- 2:15 pm – 2:18 pm      Does the intrinsic chemoresistance profile modulate the efficacy of neoadjuvant chemotherapy in breast cancer patients?  
Martina Lichtenfels (BRA)
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#### Commented poster session 4

- 3 pm – 3:03 pm          Analysis of the magee 3 equation for assessing prognosis in breast cancer treatment  
Milena Martello Cristofalo (BRA)
- 3:03 pm – 3:06 pm      Integrated health technological solution for the resolution of breast cancer screening actions: Itaberaí Project  
Douglas Euclides da Silva (BRA)
- 3:06 pm – 3:09 pm      Evaluation of the endometrium of women who used tamoxifen: correlation between ultrasonographic, hysteroscopic and histological findings  
Clécio Ênio Murta de Lucena (BRA)
- 3:09 pm – 3:12 pm      Evaluation of pathological complete response in axilla in patients with triple negative breast cancer and pathological complete response in breast: a systematic review  
Milena Martello Cristofalo (BRA)
- 3:12 pm – 3:15 pm      Capivasertib and fulvestrant, a new salvation for hormone receptor-positive breast cancer? A systematic review  
Gustavo Moreira Andrade (BRA)
- 3:15 pm – 3:18 pm      Scenario of breast reconstruction in the unified health system in Brazil  
Darley de Lima Ferreira Filho (BRA)
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## APPROVED PAPERS FOR E-POSTER

**MAY 17<sup>TH</sup>, FRIDAY**

### Session E-poster 1 8 am to 12 pm

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|------|--|
| TV 1 | Impact of surgical treatment on the quality of life of female public employees in the State of São Paulo after breast cancer treatment: a single institution cross-section observational study<br>Marcelo Antonini (BRA) |
| TV 2 | Overall survival analysis of women with breast cancer: a 27-year historical cohort<br>Marina Elias Rocha (BRA)   |
| TV 2 | BRCA1 and BRCA2 germline pathogenic variants in brazilian breast cancer patients from a private oncologic service in Goiânia, Goiás<br>Leandro Gonçalves Oliveira (BRA)  |
| TV 2 | Body composition, metabolic status and level of physical activity in women with breast cancer under adjuvant hormonal therapy<br>Amanda Guimarães Castro Custodio (BRA)  |
| TV 3 | Prediction of recurrence after neoadjuvant chemotherapy (NACT) in early triple negative breast cancer (TNBC)<br>Daniel Negrini Batista (BRA)   |
| TV 3 | Physiotherapist action after surgical treatment of breast cancer via teleconsultation<br>Marcelo Antonini (BRA)  |
| TV 3 | Analysis of the Time Interval between Breast Cancer Detection and Diagnosis in the Brazilian Unified Health System (SUS) from 2008 to 2014<br>Eler da Silva Reis (BRA)   |
| TV 4 | Histopathological findings of patients undergoing vacuum breast biopsy<br>Maryana Neves de Souza (BRA)   |





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|------|--|
| TV 4 | Cancer health disparities among patients with estrogen-receptor positive invasive breast carcinoma undergoing adjuvant endocrine therapy: Impact of insurance coverage<br>Danielle Laperche-Santos (BRA)             |
| TV 4 | Two years post-COVID-19: evaluating the impact on brazil's breast cancer early detection program<br>Marcelo Antonini (BRA)   |
| TV 5 | Analysis of biopsychosocial aspects of breast cancer survivors and apparently healthy women<br>Vitor Alves Marques (BRA)   |
| TV 5 | Prediction of pathologic complete response to chemoimmunotherapy in triple-negative breast cancer using tumor-infiltrating lymphocytes – exploiting cutoff values<br>Renata Rodrigues da Cunha Colombo Bonadio (BRA) |
| TV 5 | Regional disparities in breast cancer histopathological examination turnaround time: a five-year comparative analysis in Brazil<br>Natália Barros Salgado Vieira (BRA)   |
| TV 6 | Return to work after breast cancer treatment in state public employees in Brazil: a cross-sectional observational study<br>Marcelo Antonini (BRA)  |
| TV 6 | Epidemiologic analysis of mammographies and the pandemic impact on the early detection of neoplastic lesions in Tocantins from 2020 to 2023<br>Ianny Keruly Damião Pessoa Duarte (BRA)                               |
| TV 6 | Intrinsic chemoresistance in luminal breast neoplasms: Efficacy from an innovative in vitro chemoresistance platform<br>Martina Lichtenfels (BRA)  |
| TV 7 | Management disparity in elderly female with breast cancer following mastectomy: a cross-sectional study<br>Lilian de Sá Paz Ramos (BRA)  |



TV 7	Vaccun assisted biopsy for breast carcinoma diagnosis: cost- minimization analysis Andressa Amorim (BRA)
TV 7	The use of latissimus dorsi myocutaneous flap in locally advanced breast carcinoma Idam de Oliveira-Junior (BRA)
TV 8	Cosmetic perception after breast conserving surgery and quality of life: is there a correlation? Idam de Oliveira-Junior (BRA)
TV 8	Relationship between tumor-associated macrophages (TAMs) in the tumor microenvironment as prognostic indicators in breast neoplasms Fabline Ribeiro Amorim (BRA)
TV 8	Impact of surgical treatment on shoulder joint complex and muscle strength of women undergoing breast cancer treatment Flávia Batista Gomes Noleto (BRA)

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**Session E-poster 2**  
**2 pm to 6 pm**

TV 1	Analysis of malignity rates of percutaneous biopsy in lymph nodes of breast cancer patients Marina Diogenes Teixeira (BRA)
TV 1	Comprehensive analysis of twist1 in breast cancer and other carcinomas: an association with prognosis and tumor microenvironment Bruno Ricardo Barreto Pires (BRA)
TV 1	Effects of Covid-19 on breast cancer in public healthcare system in Brazil (2018-2022) Aline Ferreira Bandeira de Melo Rocha (BRA)
TV 2	Mammography in The Federal District: analysis of suspected and confirmed malignancy cases between 2018 and 2023 Mariana Valadares Bittar (BRA)





TV 2	Comparison of clinical staging and mammographic detection in women aged 40-49 years and 50-69 years in public health care system Aline Ferreira Bandeira de Melo Rocha (BRA)
TV 2	Muscle strength related to quality of life in breast cancer patients and survivors Julia Kalida Diniz (BRA)
TV 3	Valvulopathy due to mediastinal radiation: a diagnosis little thought of in radiotherapy for breast cancer, a systematic review Gustavo Moreira Andrade (BRA)
TV 3	Is it possible that there is a relationship between meningioma and the appearance of breast cancer? A systematic review Gustavo Moreira Andrade (BRA)
TV 3	Evaluation of HER2-low incidence in the Clinical Oncology Service of Hospital das Clínicas da Universidade Federal de Goiás (HC-UFG) Fernanda José de Toledo (BRA)
TV 4	Radiological findings analysis in treated breast cancer patients that had mammography in the state of Tocantins in 2023 Cândida Verônica de Andrade Paz (BRA)
TV 4	Breast Cancer Treatment Delays in Brazil: An Ecological Study from 2017 to 2022 Marcelo Antonini (BRA)
TV 4	Impact of the genomic signature of 70-genes for breast cancer in the public system and in supplementary health care in a country of medium socioeconomic development Fabio Postiglione Mansani (BRA)
TV 5	Evidence-based breast cancer recommendations guide for empowering asymptomatic women Gláucia Pina Guimarães Porto Duarte (BRA)
TV 5	The expression of TAM and EPHA2 genes in breast cancer Darley de Lima Ferreira Filho (BRA)



TV 5	Epidemiological analysis of the pandemic and post-pandemic period in the diagnosis of breast cancer in north of Brazil Dalila Pereira Soares (BRA)
TV 6	Epidemiological analysis of the impact of the COVID-19 pandemic on breast cancer screening in the north of Brazil Ana Julia Tassi (BRA)
TV 6	The growth of oncoplastic breast surgery in northern Peru. Experience of tertiary institute Gustavo Adolfo Flores Trujillo (PER)
TV 6	Experience on care, treatment and monitoring of women's neoplasms from an oncologic team in Goiás Vinicius de Souza Naves (BRA)
TV 7	The usage of artificial intelligence in the early breast cancer detection Ândrea Tammiê Peixoto da Silva (BRA)
TV 7	Immunohistochemical and molecular aspects of phyllodes tumors of the breast and the repercussions on diagnosis and treatment: a scope review Luiz de Paula Silveira Neto (BRA)
TV 7	Retrospective Analysis of the Epidemiological Profile of Patients Submitted to Breast Reconstruction at a Public Hospital in the Northeast Darley de Lima Ferreira Filho (BRA)
TV 8	Evaluation of quality of life of women breast cancer survivors who practitioner resistance training for 12 months Jessika Teodoro Santos (BRA)
TV 8	A new navigation aid tool: instagram as a facilitator of breast health education Darley de Lima Ferreira Filho (BRA)
TV 8	Half-moon technique: a new option for breast reconstruction of central tumors or tumors with central extension René Aloisio da Costa Vieira (BRA)



## MAY 18<sup>TH</sup>, SATURDAY

### Session E-poster 3

8 am to 12 pm

- |      |  |
|------|--|
| TV 1 | Angiogenesis, heroine or villain? The expression and significance of VEGF when dealing with the prognosis of patients with breast cancer<br>Gustavo Moreira Andrade (BRA)  |
| TV 1 | Education evaluation with breast cancer: an ecological study<br>Darley de Lima Ferreira Filho (BRA)  |
| TV 1 | Medullary breast cancer. An experience of a tertiary peruvian cancer center<br>Gustavo Adolfo Flores Trujillo (PER)  |
| TV 2 | Epidemiological analysis of the impact of the COVID-19 pandemic on the diagnosis of breast cancer in northern Brazil<br>Monielli Muribeca Silva Milhomem (BRA)   |
| TV 2 | Analysis of the breast cancer mortality rate in recent years in different regions of Brazil<br>Marina Elias Rocha (BRA)  |
| TV 2 | Brazilian Society of Mastology podcast: creation and consolidation of a new communication channel<br>Leonardo Ribeiro Soares (BRA)   |
| TV 3 | Effects of chemotherapy on peripheral neuropathy of women breast cancer survivors: an integrative review<br>Tatiane Nunes da Silva Rodarte (BRA)   |
| TV 3 | Effects of low volume resistance training on blood pressure changes, glycemic levels, fatigue scores, bone mineral density, and muscle strength: a case study at a University Hospital<br>Rafael Ribeiro Alves (BRA) |



TV 3	Role of the nurse in the mental health of patients under breast cancer treatment Marina Elias Rocha (BRA)
TV 4	Nursing team interventions in the early diagnosis of breast cancer Marina Elias Rocha (BRA)
TV 4	Mastectomy and conservative treatment: finding balance between therapeutic efficiency and quality of life Marina Elias Rocha (BRA)
TV 4	The importance of primary care in the prevention of breast cancer in brazil Marina Elias Rocha (BRA)
TV 5	Sequential single-agent chemotherapy as neoadjuvant treatment in early stage HER-2 positive breast cancer during pregnancy: case report Thiago Lourenço Apolinário (BRA)
TV 5	Management of physical therapy after chemotherapy extravasations: case report Nádia Oliveira Gomes (BRA)
TV 5	Therapeutic approaches in pregnant women with breast cancer Marina Elias Rocha (BRA)
TV 6	Male breast cancer Marina Elias Rocha (BRA)
TV 6	Radio-induced breast angiossarcoma: case report Luiz de Paula Silveira Júnior (BRA)
TV 7	Adenoid cystic carcinoma of the breast: Case report of a rare tumor with a good prognosis Fernanda José de Toledo (BRA)
TV 7	Case Report: Sinusoidal obstruction syndrome post-treatment with trastuzumab emtansine (T-DM1) in breast cancer Ana Carolina Silva Barbosa (BRA)



- TV 8                      Intraoperative physiotherapeutic approach in oncoplastic surgery: case report  
Nayara Alves de Freitas Lemos (BRA)
- TV 8                      The influence of social skills in the humanization of breast cancer care  
Marina Elias Rocha (BRA)



## APPROVED PAPERS FOR ORAL PRESENTATION

### EFFECT OF VITAMIN D SUPPLEMENTATION ON THE PATHOLOGICAL COMPLETE RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN WOMEN WITH BREAST CANCER: A RANDOMIZED CLINICAL TRIAL

*Eduardo Carvalho Pessoa<sup>1</sup>; Michelle Omodei Sako<sup>1</sup>; Daniel Buttros<sup>1</sup>; Heloisa De Luca Vespoli<sup>1</sup>; Jackeline Chemicoviaki<sup>1</sup>; Eliana Nahas<sup>1</sup>; Benedito Almeida-Filho<sup>1</sup>*

<sup>1</sup>São Paulo State University in Botucatu - Unesp, São Paulo, Brazil.

**Objective:** To evaluate the effect of vitamin D (VD) supplementation on the pathological complete response (pCR) rate in women with breast cancer (BC) undergoing neoadjuvant chemotherapy (NCT). **Methodology:** A randomized clinical trial was conducted on 80 women aged 45 years with a histological diagnosis of BC, who were eligible for NCT. Women were randomized to one of two groups that received either daily supplementation with 2000IU of cholecalciferol (VD, n=40) or placebo (n=40) during the chemotherapy period (6 months). The primary outcome measure was pCR. Serum 25-hydroxyvitamin-D [25(OH)D] was measured at two time points, after BC diagnosis and at the end of chemotherapy. Clinical, anatomopathological, immunohistochemical, and chemotherapy data were collected. Per-protocol analysis was performed using Student's t-test, chi-square test, ANOVA, and logistic regression (OR, odds ratio). Study registration: RBR-10k4gqdg. **Results:** Seventy-five of the 80 randomized women completed chemotherapy and underwent surgery. Mean baseline 25(OH)D values indicated hypovitaminosis D in both groups (VD group:  $19.6 \pm 5.8$  ng/mL and placebo:  $21.0 \pm 7.9$  ng/mL,  $p=0.331$ ). After 6 months of intervention, there was a significant increase in 25(OH)D values in the VD group compared to the placebo ( $28.0 \pm 8.7$  vs  $20.2 \pm 6.1$  ng/mL,  $p=0.032$ ). The pCR rate was higher in women supplemented with VD when compared to the placebo ( $55.3\%$  vs  $32.4\%$ ,  $p=0.046$ ). In logistic regression analysis adjusted for variables that interfere with pCR (anatomopathological, immunohistochemical, and chemotherapy regimens), women with 25(OH)D values  $\geq 20$  ng/mL were more likely to achieve pCR than women with VD deficiency (OR 0.10, 95%CI 0.02-0.61,  $p=0.013$ ). **Conclusion:** In the present study, women with BC undergoing NCT and receiving supplementation with 2,000IU of VD had a higher pCR rate than women in the placebo group. Women with 25(OH)D values  $\geq 20$  ng/mL were more likely to achieve a pCR than women with VD deficiency. Our results support the evidence that serum VD levels should be assessed during NCT and supplementation may be beneficial for attaining pCR in women with BC. Further studies are needed to validate these results since confirmation of this finding is of direct clinical relevance and has possible therapeutic implications.

**Keywords:** Breast cancer; Vitamin D; Pathological complete response; Neoadjuvant chemotherapy



## BREAST CANCER SCREENING BASED ON PHYSICAL EXAMINATION OF THE BREAST PERFORMED BY COMMUNITY HEALTH WORKERS: ITABERAÍ PROJECT

Priscila Dias Watanabe<sup>1</sup>; Ruffo de Freitas Júnior<sup>1</sup>; Danielle Cristina Netto Rodrigues<sup>1</sup>; Rosângela da Silveira Corrêa<sup>1</sup>; Paola Ferreira de Freitas<sup>1</sup>; Marcus Nascimento Borges<sup>1</sup>; Maria do Carmo Egito de Sá<sup>2</sup>; Leonardo Ribeiro Soares<sup>1</sup>

<sup>1</sup>CORA – Advanced Breast Diagnosis Center, Federal University of Goiás. Brazilian Network of Breast Cancer Research, Brazil.

<sup>2</sup>Municipal Health Department of Itaberaí – Goiás, Brazil.

**Objective:** The objective of this study is to evaluate the effectiveness of screening actions based on Physical Breast Examination (PBE) performed by Community Health Workers (CHW) for the reduction of advanced tumors (Stages III-IV) and reduction of mortality rate. **Methodology:** This is a randomized, phase III, open-label clinical trial. Women aged 40 or older, without a diagnosis of breast cancer, and assisted in their homes by CHW, are eligible. For the randomization, the headquarters where the NHS are located were randomized (by drawing) into Control Groups (CG) and Intervention Group (IG). The intervention consisted of performing the PBE by female CHW, who receive continuous theoretical-practical training. For data collection, a system called "Rosa App" was developed. The variables used to build the App were: sociodemographic data, lifestyle habits, anamnesis, information about previous exams, and about the physical breast examination. For the follow-up of altered cases identified by the CHW, a web system was developed. The sample size calculation was defined to detect the reduction of severe cases and mortality (by 10% and 20%, respectively). For this, 80% of sample power was adopted, with a 5% Type I error, after adjusting for intracluster correlation and sample effect (0.032 and 1,892, respectively). The trial was approved by the Research Ethics Committee (CAAE 56916522.8.0000.5078) and ReBEC (RBR-39vm2nd). **Results:** For the first Participating Center (municipality of Itaberaí - Goiás), a population of 1,894 women was estimated in each group (total of 3,788). The study was activated in December 2022, and until February 29, 2024, 3,101 women were randomized, with 1,607 in the CG and 1,494 in the IG. Of these, 366 showed alterations identified in the PBE performed by the CHW, and eight received a diagnosis of breast cancer. **Conclusion:** The trial could help establish new public policy strategies for breast cancer screening. Support: Avon Institute and Libbs Pharmaceuticals.

**Keywords:** Clinical Protocols, Breast Cancer, Community Health Workers.



## MACHINE LEARNING MODEL TO PREDICT RESISTANCE TO NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER

Matheus GS Dalmolin<sup>1</sup>; Martina Lichtenfels<sup>2</sup>; Marcelo AC Fernandes<sup>1</sup>; Caroline Brunetto de Farias<sup>3</sup>

<sup>1</sup>Department of Computer Engineering and Automation, Federal University of Rio Grande do Norte, Natal, RN, Brazil.

<sup>2</sup>Translational Research, Ziel Biosciences, Porto Alegre, RS, Brazil.

<sup>3</sup>Ziel Biosciences, Porto Alegre, RS, Brazil.

**Objective:** The aim is to use a machine learning algorithm to identify biomarkers of resistance to neoadjuvant chemotherapy (NACT) in breast cancer (BC). **Methodology:** We evaluated microarray gene expression data of BC samples before NACT from public datasets of the Gene Expression Omnibus database. We performed differential expression analyses comparing patients who presented residual disease (RD) versus pathological complete response (pCR) to NACT in each dataset and employed a machine learning algorithm to classify genes involved in NACT resistance. Differentially expressed genes with an adjusted p-value less than 0.01 and a logFC greater than 1 or less than -1, identified in more than one analysis, were selected as potentially relevant to tumor resistance. We implemented the XGBoost algorithm, a machine-learning technique based on trees, and used the SHAP method to interpret the prediction results of the machine-learning model. **Results:** The selected datasets were GSE25066, GSE20271, and GSE20194, containing 472, 173, and 267 samples. These datasets present heterogeneous data, with different subtypes of BC and treatments used in the NACT (FACT x FECT, and paclitaxel x docetaxel). Our differential expression analysis identified 39 genes for the dataset GSE25066, 28 for GSE20271, and 43 for GSE20194. The XGBoost algorithm achieved an average accuracy of 95% in classifying samples into pCR and RD. Through the SHAP, we identified the genes that most contributed to the prediction of resistance to NACT in the algorithm and found 229 genes in GSE25066, 84 in GSE20271, and 154 in GSE20194. Despite the high heterogeneity of the datasets and methodologies, we identified 5 genes that were common to both methods. **Conclusion:** These findings contribute to a better understanding of the mechanisms involved in intrinsic tumor resistance to NACT, highlighting the capacity of the XGBoost algorithm in predicting breast cancer resistance, and allowing the development of personalized therapeutic strategies.

**Keywords:** Breast neoplasms; neoadjuvant chemotherapy; drug resistance; gene expression; algorithms



## **RANDOMIZED CLINICAL TRIAL: BREAST CANCER SCREENING BASED ON PHYSICAL EXAMINATION PERFORMED BY COMMUNITY HEALTH WORKERS**

Danielle Cristina Netto Rodrigues<sup>1</sup>; Ruffo de Freitas Júnior<sup>1</sup>; Rosangela da Silveira Corrêa<sup>1</sup>; Douglas Euclides de Silva<sup>2</sup>; Christina Souto Cavalcante Costa<sup>1</sup>; Regina Lopes da Silva<sup>2</sup>; Priscila Dias Watanabe<sup>1</sup>; Leonardo Ribeiro Soares<sup>1</sup>

<sup>1</sup>CORA – Advanced Breast Diagnosis Center, Federal University of Goiás. Brazilian Network of Breast Cancer Research, Brazil.

<sup>2</sup>Municipal Health Department of Itaberaí – Goiás, Brazil.

**Objective:** To evaluate partial results after one year of data collection from breast cancer screening conducted by Community Health Agents (CHW), according to the ITABERAÍ Project.

**Methodology:** A multicenter randomized clinical trial phase III, where the unit of observation was data from women aged 40 years or older, without a diagnosis of breast cancer, who consented to participate in the study and were randomized by CHW and registered in the Rosa Application. Randomization considered the National Health Strategies (NHS) of each CHW, which were randomly allocated into Control Group and Intervention Group. The Intervention was considered as the Physical Breast Examination (PBE) performed by the CHW. **Results:** After one year of data collection, 3101 women were randomized, with 1607 (51.8%) in the Control Group and 1494 (48.2%) in the Intervention Group. The mean age was 58.1, with 57.8 years  $\pm$ 11.1 in the Control Group and 58.5 years  $\pm$ 11.1 in the Intervention Group ( $p>0.05$ ). Of the total participants, 2989 reported on mammography (MMG) status, of which 1550 were in the Control Group and 1439 in the Intervention Group. Among women in the Control Group, only 615 (38.3%) had undergone MMG in the last two years, while in the Intervention Group, it was 647 (43.3%). CHW identified 315 (10.2%) abnormal cases, and after screening in NHS 71(22.5%) women received specialist medical care. After further examinations, 13 (18.3%) were referred for biopsy, with diagnostic confirmation in nine women (69.2%), six (66.7%) from the Intervention Group and three (33.3%) from the Control Group. Of the confirmed cancers, three underwent conservative surgeries (Quadrantectomy), one Mastectomy, four were referred for Neoadjuvant Chemotherapy, and one is pending treatment decision. **Conclusion:** The results suggest, initially, that properly trained Community Health Workers are an important strategy that can contribute to improving breast cancer screening in Brazil. Support: Avon Institute and Libbs Pharmaceuticals.

**Keywords:** Screening; Breast Cancer; Community Health Workers.



## VACUUM-ASSISTED EXCISION (VAE): A SINGLE-STEP APPROACH TO THE DIAGNOSIS AND TREATMENT OF EARLY BREAST CANCERS (EBC) – INITIAL REPORT

Henrique Lima Couto<sup>1</sup>; Bertha Andrade Coelho<sup>2</sup>; Bernardo Ferreira de Paula Ricardo<sup>3</sup>; Aleida Nazareth Soares<sup>4</sup>; Daniela Rodrigues Siqueira<sup>5</sup>; Tereza Cristina Ferreira de Oliveira<sup>5</sup>; Jaqueline Mércia Moreira Silva<sup>5</sup>; Isabela Francis Jacinto Marcelino<sup>5</sup>

<sup>1</sup>Redimama-Redimasto, Belo Horizonte, MG, Brazil. Brazilian Society of Mastology – Belo Horizonte - MG, Brazil.

<sup>2</sup>Clínica Mater Montes Claros - MG, Brazil. UNIFIPMOC – Montes Claros – MG, Brazil. Brazilian Society of Mastology – Belo Horizonte - MG, Brazil.

<sup>3</sup>Laboratório Anatomia BH, Belo Horizonte - MG, Brazil.

<sup>4</sup>Faculdade Santa Casa, Belo Horizonte - MG, Brazil.

<sup>5</sup>Redimama-Redimasto, Belo Horizonte, MG, Brazil.

**Objective:** to describe the initial experience applying VAE associated to cavity margins sampling shaving (CMSH) to breast lesions (BL), smaller than 15mm and suspected of malignancy, as a single step approach in diagnosing and treating EBC. **Methodology:** an open interventional study is being conducted recruiting patients with Category 4 and 5 ACR BI-RADS™ BL, smaller than 15mm, candidates for VAE. Patients with diagnosed multifocal/multicentric breast cancer (BC) are excluded. The VAE is performed, complete BL excision achieved and CMSH obtained by 12 entire cavity circumference core samples (CS). If BC is confirmed patients are submitted to standard surgery (SS) and adjuvant therapy. Data on demographic, imaging, pathology, VAE-CMSH and surgery are being recorded. BREAST-Q core biopsy score (CBS) is applied to analyze patient satisfaction. SPSS® 20.0 software is used to statistical analyzes. **Results:** From 01/12/2023 to 06/03/2024, 12 patients were assigned with mean age of 53,92 years; mean imaging tumor size (iT) 10,7mm (7-15). Mean 40 CS weighting 18,3g were retrieved in 21min VAE-CMSH time. Two patients had skin laceration and 1 diffuse breast bruising, despite high satisfaction, mean BreastQ-CBS of 15,1/16. Three lesions were invasive cancers (IC), 4 lesions of indeterminate potential of malignancy (B3 lesions), 3 fibroadenomas and 2 fibrocystic diseases. The IC were BI-RADS 4C masses, 12mm mean iT, 6,3mm (6-7) mean pathological size, 2 lobular and 1 ductal, all luminal A like in immunohistochemistry, completed resected by ultrasound guided VAE-CMSH, submitted to lumpectomy with negative sentinel node biopsy (pN0), representing true negative cases (neither residual tumor on CMSH nor on SS). **Conclusion:** VAE-CMSH is a feasible, fast, well tolerated outpatient procedure with high patient satisfaction. It can accurately diagnose and complete resect suspected BL smaller than 15mm in a single step approach, including B3 lesions and EBC, presenting promising results, no false negative in the first 3 BC patients.

**Keywords:** Early breast cancer, vacuum assisted biopsy, vacuum assisted biopsy, minimally invasive breast cancer treatment



## EXTERNAL PROSTHESES AFTER MASTECTOMY: ADHESION, MANUFACTURE AND SELECTION OF A LOW-COST FUNCTIONAL MODEL TO BE PERFORMED IN DEVELOPING COUNTRIES

René Aloisio da Costa Vieira<sup>1,2,3,4</sup>; Matheus Sampaio Ibrahim<sup>4</sup>; Lucas Guimarães de Souza Araujo<sup>4</sup>; José de Assis e Souza Junior<sup>3</sup>; Luiz Carlos Navarro de Oliveira<sup>3</sup>; Carla Simone Moreira de Freitas<sup>3</sup>

<sup>1</sup>Postgraduate Program in Tocogynecology. Botucatu Faculty of Medicine, Brazil.

<sup>2</sup>Postgraduate Program in Oncology. Barretos Cancer Hospital, Brazil.

<sup>3</sup>Muriae Cancer Hospital, Brazil.

<sup>4</sup>Faculty of Medicine at UniFaminas/ Muriae, Brazil.

**Objective:** Objective: Create a low-cost external breast prosthesis (BEP) and evaluate factors associated with non-adherence BEP use. **Methodology:** Methodology: Study approved by Brazilian Ethics Committee CAAE 68799223.2.0000.5105. A observational, prospective transversal study, carried out in a Tertiary Public Oncological Hospital, in previously mastectomized patients, without breast reconstruction, aiming to evaluate factors associated with non-adherence to BEP. In addition to this fact, we create a low-cost PME, lightweight and with low purchase cost. The patients were presented to 5 prosthesis models, one commercial, three manufactured models and the new model. They had different weight, covering and filling material. The patients chose two prosthesis justifying it. In assessing adherence or non-adherence to the use of the prosthesis, the chi-square test and logistic regression were used. **Results:** Results: The silicone prosthesis cost was US\$40, with weight ranging for 123 to 504 grams, and the new BEP cost was US\$4, with weight ranging 19 to 48 grams. When asked to select two prosthesis options, it was observed that the first choice was the silicone prosthesis (33.9%), and the second option was the prosthesis made in the study (70.5%). Of the 72 patients evaluated, 45.8% (33) did not use BEP. Excluding patients with a follow-up period of less than 1 month (n=9), failure to use BEP was associated with lack of knowledge (n=9), poor adaptation (n=4), with the remainder having no reason (n= 8). Evaluating the factors time since surgery, age, education, prosthesis size, clinical stage, BMI; age and BMI were associated with not using BEP. The factors that patients consider most important in a prosthesis were weight (41.7%), shape (29.2%), comfort (15.3%), ease of cleaning (12.5%). **Conclusion:** Conclusion: There are multiple barriers related to non-adherence to BEP, making it necessary to improve patient knowledge and adherence. The new BEP is lightweight with low cost production, facilitating its production and patient adherence in low-income countries.

**Keywords:** breast neoplasms; external breast prosthesis; quality of life



## IS IT POSSIBLE TO OMIT AXILLARY SURGERY AFTER NEOADJUVANT THERAPY FOR BREAST CANCER? PRELIMINARY OUTCOMES IN PATIENTS WHO UNDERWENT NEOADJUVANT TREATMENT IN THE ONGOING VENUS TRIAL – A RANDOMIZED CONTROLLED CLINICAL TRIAL

Maria Beatriz de Paula Leite Kraft<sup>1</sup>; Giuliano Mendes Duarte<sup>1</sup>; Danielle Cristina Miyamoto Araújo<sup>1</sup>; Rodrigo Menezes Jales<sup>1</sup>; Vinicius Milani Budel<sup>2</sup>; Lucas Roskamp Budel<sup>2</sup>; Luis Otávio Sarian<sup>1</sup>; VENUS Trial Group<sup>3</sup>

<sup>1</sup>Department of Gynecology and Obstetrics, Faculty of Medical Sciences, State University of Campinas (UNICAMP), Brazil.

<sup>2</sup>Department of Gynecology and Obstetrics, Federal University of Paraná (UFPR), Brazil.

<sup>3</sup>VENUS TRIAL Group

**Objective:** Axillary surgery omission after neoadjuvant therapy (NAT) in breast cancer (BC) has not yet been studied. VENUS (ClinicalTrials.gov NCT05315154, ReBEC RBR-8g6jbf, Ethics approved: CAAE:06805118.2.0000.5404) is an ongoing trial that evaluates the omission of sentinel lymph node biopsy (SLNB) in early BC and allows the inclusion of patients submitted to NAT. The aim of this study is to present preliminary axillary outcomes in patients submitted to NAT and compare it with patients referred to upfront surgery in the VENUS trial.

**Methodology:** Multicenter, prospective, non-inferiority, open, randomized controlled clinical trial that includes women with stage T1/T2, N0 (clinical/ultrasound) M0 breast cancer, randomized to: SLNB or no axillary surgery. The initial treatment could be NAT or up-front surgery, based on local protocol at each study center. After NAT, axillary ultrasound should be also negative before randomization. **Results:** Up to 4.5 years after the VENUS trial started, 322 women were randomized. NAT was performed in 8% (n=26), of which 12 were randomized to SLNB (neoSLNB group) and 14 to no axillary surgery. Breast overall pCR rate was 39.1%. In the neoSLNB group, 41.7% had triple negative, 8.3% HER-2, 25% luminal HER and 25% luminal versus 1.3%, 1.9%, 9.5% and 87.4%, respectively in the upfront surgery group (p<0.001). Mean tumor size was 2.3 cm in the neoSLNB versus 1.5 cm upfront surgery group (p<0.001). In the neoSLNB group, there were 8.3% of axillary positivity (1/12) and 20.9% (28/134) in upfront surgery group (p<0.05). So far, there was no axillary recurrence (mean follow-up of 20 months). **Conclusion:** Patients submitted to NAT had larger and more aggressive tumors than patients in the upfront surgery. Axillary positivity after NAT was lower than in patients referred to upfront surgery. Until now, there were no axillary recurrences in the VENUS trial.

**Keywords:** node negative breast cancer, sentinel lymph node dissection, axillary staging, axillary surgery omission.



## DISPARITY IN ACCESS TO ANTI-HER-2 THERAPIES IN NEOADJUVANT CHEMOTHERAPY: A PROGNOSTIC ANALYSIS BASED ON REAL WORLD DATA BETWEEN PUBLIC AND PRIVATE SYSTEMS IN BRAZIL

Marcelo Antonini<sup>1,2</sup>; Andre Mattar<sup>3,4</sup>; Isabela Bastos Maia<sup>1</sup>; Andressa Gonçalves Amorim<sup>3</sup>; Marina Diogenes Teixeira<sup>3</sup>; Felipe Zerwes<sup>5</sup>; Denise Joffily Pereira da Costa Pinheiro<sup>1</sup>; Reginaldo Guedes Coelho Lopes<sup>1</sup>

<sup>1</sup>Mastology Department of Hospital do Servidor Público Estadual, São Paulo, Brazil.

<sup>2</sup>Preceptor of Mastology of University of São Paulo City (UNICID), São Paulo, Brazil.

<sup>3</sup>Mastology Department of Women's Health Hospital, São Paulo, Brazil.

<sup>4</sup>Breast Surgeon at Oncoclínicas, São Paulo, Brazil.

<sup>5</sup>Mastology Department of Medical Scholl of PUC-RS., Porto Alegre, Brazil.

**Objective:** The aim of this study is to evaluate the impact of disparities in the use of trastuzumab in the neoadjuvant chemotherapy (NAC) within the Brazilian public health system on pathological complete response (pCR), overall survival (OS), and disease-free survival (DFS). **Methodology:** A retrospective, multicenter cohort study was conducted with female patients older than 18 years, diagnosed with non-metastatic, HER-2 positive breast cancer, who underwent NAC. The study took place at the Hospital Pérola Byington (PEROLA), serving the Unified Health System, and the Hospital do Servidor Público Estadual (HSPE), catering to public employees of the State of São Paulo, thus considered a private facility. pCR was defined as the absence of any residual invasive or in situ tumors in the breast and axillary nodes. Being an exploratory study based on real-world data (RWD), no confirmatory hypotheses were formulated; hence, there was no need for adjustments for multiple comparisons. OS and DFS were estimated using the Kaplan-Meier method over a period of five years. **Results:** Between 2011 and 2020, 381 patients at PEROLA and 78 patients at HSPE were treated with NAC for HER-2 positive BC. Access to Trastuzumab was higher at HSPE than at PEROLA (83.4% vs 60.0%  $p < 0.001$ ). The rate of pCR in patients who used Trastuzumab was significantly higher in both institutions, PEROLA (54.3% vs 26.4%  $p < 0.0001$ ) and at HSPE (52.7% vs 26.4%  $p < 0.0001$ ). The OS of HER-2+ patients with pCR at HSPE was higher than at PEROLA with a significant difference (80% vs 61% log rank  $p < 0.0001$ ) and the DFS was also superior at HSPE with a significant difference (89% vs 67% with log rank  $p < 0.0001$ ). **Conclusion:** In conclusion, we can demonstrate, with RWD, that disparity in access to trastuzumab in NAC between the public and private healthcare systems are negatively impacting clinical outcomes and patient survival, highlighting the need for measures to ensure equity in cancer treatment. Addressing this issue is crucial for improving oncological care and the quality of life for patients.

**Keywords:** breast cancer, neoadjuvant chemotherapy, disparity, equity, trastuzumab, overall survival, disease free survival.



## THE DIFFUSION SEQUENCE BY MAGNETIC RESONANCE IN THE DIAGNOSIS OF BREAST CANCER: AN ANALYSIS OF ACCURACY

Ilse Franco de Oliveira<sup>1</sup>; Rosemar Macedo Sousa Rahal<sup>1</sup>; Ruffo de Freitas-Junior<sup>1</sup>; Camila Leal Diniz<sup>1</sup>; Cristina Pinto Naldi Ruiz<sup>2</sup>; Luiza Louza Normanha Cortizo Vidal<sup>3</sup>; Paulinelly Messias de Almeida<sup>2</sup>; Marcelo Vilela Lauer<sup>2</sup>

<sup>1</sup>Advanced Breast Diagnostic Center, Medical School, Goias Federal University, Brazil.

<sup>2</sup>São Marcelo Clinic, Goiânia, Goias, Brazil.

<sup>3</sup>Aura Diagnostics, Goiânia, Goias, Brazil.

**Objective:** To evaluate the accuracy of diffusion-weighted magnetic resonance imaging in diagnosing breast cancer compared to breast biopsy. **Methodology:** Diagnostic accuracy study of qualitative cross-sectional analysis to perform Breast Magnetic Resonance Spectroscopy carried out on 215 women over 18 years of age who agreed to participate in the study. Data was verified using normalized QQ plot analysis and standardized residual histogram. The distribution of the patients' profile according to the biopsy result was tested using the Chi-square test and Student's t test. To evaluate the sensitivity and specificity of DWI (Diffusion), ROC curve analysis was performed using the biopsy result as the gold standard. Data were analyzed in SPSS, version 26.0. The significance level adopted was 5% ( $p < 0.05$ ). **Results:** Regarding restriction to the Diffusion sequence (DWI), it was observed that 78.1% had restriction and 21.9% were without restriction, confirmed in the respective ADC maps at the values of b50, b400 and b800. After breast biopsies, it was observed that 74.4% of the results were positive for malignancy and 25.6% for benignity. The data revealed that 81.8% of biopsy results were benign for BI-RADS® 3 and 41.3% malignant for BI-RADS® 4, with 19.4% malignant for BI-RADS® 4A. Compared to biopsies, the result for breast lumps was significant, totaling 68.8% for malignancy. However, for cysts, the 30.9% benign result in biopsy results was significant. It is important to highlight that 94.4% of malignant results confirmed by Biopsies showed Diffusion restriction in exams confirmed with their respective ADC maps. To evaluate the accuracy of the diffusion-weighted sequence (DWI), ROC curve analysis was performed in comparison with breast biopsy. In the case of Diffusion Restriction (DWI), sensitivity was 0.94 and specificity was 0.69. **Conclusion:** The significance indicated in the data infers that the model was efficient in predicting breast diagnosis.

**Keywords:** Accuracy; Breast cancer; Diffusion-Weighted Imaging



## FIRST INTERIM ANALYSIS OF RADIOTHERAPY DATA AFTER 4.5 YEARS OF SENTINEL LYMPH NODE BIOPSY VERSUS NO AXILLARY SURGERY IN EARLY BREAST CANCER CLINICALLY AND ULTRASONOGRAPHICALLY NODE NEGATIVE: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL - VENUS TRIAL

Danielle Cristina Miyamoto Araújo<sup>1</sup>, Giuliano Mendes Duarte<sup>1</sup>, Sergio Carlos Barros Esteves<sup>1</sup>, Rodrigo Menezes Jales<sup>1</sup>, Eduardo Carvalho Pessoa<sup>2</sup>, Idam de Oliveira Júnior<sup>3</sup>, Luis Otávio Sarian<sup>1</sup>, VENUS Trial Group<sup>4</sup>

<sup>1</sup>Department of Gynecology and Obstetrics, Faculty of Medical Sciences, State University of Campinas (UNICAMP), Brazil.

<sup>2</sup>Department of Gynecology and Obstetrics at Universidade Estadual Paulista Júlio de Mesquita Filho (UNESP), Brazil.

<sup>3</sup>Department of Mastology and Breast Reconstruction of the Barretos Cancer Hospital, Brazil.

<sup>4</sup>VENUS TRIAL Group

**Objective:** VENUS (ClinicalTrials.gov - NCT05315154 and ReBEC - RBR-8g6jbf; ethics approval: CAAE:06805118.2.0000.5404) is an ongoing trial that evaluates omission of sentinel lymph node biopsy (SLNB) in early breast cancer clinically and ultrasonographically node negative. This is a partial report on the first interim radiotherapy data collected up to 4.5 years after the VENUS trial has started. The objective is to evaluate whether radiotherapy is being uniform between VENUS groups. **Methodology:** Prospective, multi-center, non-inferiority randomized controlled clinical trial including T1-2 N0 (clinical/ultrasound) M0 breast cancer patients randomized into: SLNB or no axillary surgery. Adjuvant radiotherapy planning was based on local protocols adopted by each study center. In the no-surgery group, axilla status was considered N0 during planning. Radiotherapy features analyzed were: planning, number and location of fields, whole-breast/boost dose, fractioning and dose distribution in axillary levels I-III. **Results:** Until February 2024, 322 women were randomized. Radiotherapy was performed in 221 (SLNB n=115 and no-surgery n=106). Two-D, 3D-IMRT and 3D-Conformational planning were applied for 7, 26, 173 patients, respectively, with no imbalance across study groups (p=0.23). Mean whole-breast dose was 424742.cGy in SLNB and 4269.95cGy in no-surgery (p=0.67). Mean percentage of total prescribed breast doses distribution in axillary were: Level I 5.73% SLNB vs 2.16% no-surgery (p=0.12), Level II 0.53% SLNB vs 0.07% no-surgery (p=0.86), Level III 0.96% SLNB vs 0.00% no-surgery (p=0.06). Radiotherapy fields (axilla, supraclavicular fossa, breast and internal mammary) and boost are described and were all evenly balanced across study groups. **Conclusion:** Breast radiotherapy has achieved an unintentional low radiation dose in the axilla of some patients, mainly at Level I. However, there was no difference between VENUS trial groups in radiotherapy parameters. So far, with more than 40% of the sample size achieved, there has been no violation of radiotherapy procedure protocol in the VENUS trial.

**Keywords:** Breast neoplasms, Breast cancer, Sentinel lymph node biopsy, Breast cancer treatment, Axillary surgery, Ultrasound, Radiotherapy



## PATIENT-REPORTED AESTHETIC OUTCOMES IN ONCOPLASTIC BREAST SURGERY COMPARED TO CONVENTIONAL BREAST-CONSERVING SURGERY: A SYSTEMATIC REVIEW AND META-ANALYSIS

Maria Clara Ramos Miranda<sup>1</sup>; Charles Karel Martins Santos<sup>1</sup>; Gabriel Alves Barbosa<sup>1</sup>; Melissa Silva Mariano<sup>1</sup>; Giovanna Martins Milhomem<sup>1</sup>; Asafe Ribeiro Dias da Silva<sup>1</sup>; Itamar Fernandes Souza Júnior<sup>1</sup>; Otaviano Ottoni da Silva Netto<sup>1</sup>

<sup>1</sup>School of Medical and Life Sciences, Pontifical Catholic University of Goiás – Goiânia (GO), Brazil.

**Objective:** We aimed to compare aesthetic and surgical satisfaction of Oncoplastic Breast Surgery (OBS) to Conventional Breast-Conserving Surgery (CBCS). **Methodology:** This meta-analysis (PROSPERO: CRD42024521223) followed PRISMA and PICO guidelines. PubMed, Embase, Scopus, Web of Science, and Cochrane databases were searched for randomized trials and non-randomized studies comparing OBS to CBCS for female breast cancer patients, and reporting outcomes of patient-reported aesthetic results; overall satisfaction; complications; and re-excision. A random-effects model was performed in R software. Heterogeneity was assessed using  $I^2$  statistics. Continuous and dichotomous data were presented as standardized mean difference (SMD) and Odds Ratio (OR), respectively. Confidence Interval (CI) was defined at 95%. **Results:** Thirty-six non-randomized studies were included, along 9453 patients, with 3578 undergoing OBS. OBS yielded better patient-reported aesthetic outcomes compared to CBCS, notably in satisfaction with breast reconstruction (SMD 0.68; 95%CI 0.126-1.227;  $p = 0.016$ ;  $I^2 = 89\%$ ) and psychosocial well-being (SMD 0.23; 95%CI 0.003-0.459;  $p = 0.047$ ;  $I^2 = 49\%$ ). Physical and sexual well-being showed no significant difference. Overall satisfaction favored OBS (OR 3.08; 95%CI 1.58-6.01;  $p < 0.001$ ;  $I^2 = 82\%$ ), despite higher postoperative complications (OR 1.27; 95%CI 1.003-1.589;  $p = 0.047$ ;  $I^2 = 9\%$ ). There was no significant difference in infections, seromas, and hematomas, however, OBS showed a higher risk of skin/nipple-areola complex necrosis (OR 2.56; 95%CI 1.28-5.11;  $p = 0.008$ ;  $I^2 = 0\%$ ). Regarding the need for a second surgery, OBS had fewer re-excisions (OR 0.46; 95%CI 0.34-0.62;  $p < 0.0001$ ;  $I^2 = 45\%$ ). **Conclusion:** OBS shows better aesthetic and satisfaction outcomes than CBCS, with reduced re-excisions. Nonetheless, postoperative complications require careful evaluation.

**Keywords:** Breast Neoplasms, Breast-Conserving Surgery, Breast Reconstruction, Patient Satisfaction.



## BREAST CONSERVATION THERAPY OR MASTECTOMY AND BREAST RECONSTRUCTION IN THE TREATMENT OF LOCALLY ADVANCED AND/OR MULTIFOCAL/MULTICENTRIC BREAST CANCER? SYSTEMATIC REVIEW AND META-ANALYSIS

Aline Regina Nunes Reis<sup>1</sup>, Régis Resende Paulinelli<sup>2</sup>, Carine Abadia Nunes<sup>3</sup>, Rosemar Macedo Sousa Rahal<sup>4</sup>.

<sup>1</sup>Postgraduate Program in Health Sciences, School of Medicine, Universidade Federal de Goiás, Goiânia - GO. Brazil.

<sup>2</sup>Hospital de Câncer Araújo Jorge, Goiânia - GO. Brazil

<sup>3</sup>UNIUBE, Polo Quirinópolis - GO. Brazil

<sup>4</sup>CORA – Advanced Center for Breast Diagnosis, Universidade Federal de Goiás, Goiânia - GO. Brazil.

**Objective:** The purpose of this systematic review and meta-analysis is to measure if breast conservation therapy (BCT) was feasible for female patients with Multifocal (MF), Multicentric (MC) and/or  $\geq 5$ cm breast cancer (BC) and compare the results of treatment with those patients that underwent mastectomy (MT). **Methodology:** This systematic review and meta-analysis were recorded at Prospero CRD42022362765 and conducted based on Prisma checklist. PubMed, Web of Science and Virtual Health Library databases were searched in April 2023. **Results:** A total of 8 retrospective cohort studies were included for evaluation, comprising a total of 2151 women, of which 838 underwent BCT and 1313 underwent MT. The meta-analysis revealed that in the treatment of MF/MC and/or  $\geq 5$ cm BC, based on the Random Effects Model, there was no significant difference in Local Relapse (LR) (OR= 0.67, 95%CI= 0.02-1.37, p= 0.61,  $I^2$ = 7.5%), Regional Recurrence (RR) (OR= -0.23, 95%CI= -1.97-1.51, p= 0.79,  $I^2$ = 0), Metastasis (OR= -0.08, 95%CI= -0.76-0.60, p= 0.813,  $I^2$ = 0) and Mortality (OR= -0.02, 95%CI= -1.89-1.85, p= 0.98,  $I^2$ = 42%) between the BCT and MT groups. The cumulative incidence of LR was 3.2% (27/838) for BCT and 1.1% (14/1313) for MT. The incidence of RR was 1% in both the BCT and MT groups. The incidence of metastasis was 6.6% in the BCT (21/316) group and 7.8% (18/229) in the MT group and mortality was 4.1% (9/222) in the BCT group, with a mean follow-up of 65.1 months and 2.5% (3/119) in the MT group with a mean follow-up of 51 months. **Conclusion:** Our results demonstrated that BCT does not result in inferior local control or worse survival outcomes for patients with MF/MC and/or  $\geq 5$ cm BC, and that BCT can be offered when feasible clinically for these patients.

**Keywords:** Breast Neoplasms; Mastectomy; Mastectomy, Segmental; Systematic Review; Meta-Analysis



## DOSE-DENSE VERSUS 3-WEEKLY AC DURING NEOADJUVANT CHEMOIMMUNOTHERAPY FOR EARLY-STAGE TRIPLE-NEGATIVE BREAST CANCER: GBECAM 0123 - THE NEO-REAL STUDY

Renata Rodrigues da Cunha Colombo Bonadio<sup>1,2</sup>; Monique Tavares;<sup>3</sup> Daniela Dornelles Rosa<sup>2,4</sup>; Mayana Lopes de Brito<sup>2,5</sup>; Débora de Melo Gagliato<sup>2,6</sup>; Daniele Assad-Suzuki<sup>2,7</sup>; Laura Testa<sup>1,2</sup>; Romualdo Barroso-Sousa<sup>2,8</sup>

<sup>1</sup>D'Or Institute for Research and Education (IDOR), São Paulo, Brazil.

<sup>2</sup>Brazilian Breast Cancer Study Group (GBECAM), São Paulo, Brazil.

<sup>3</sup>A.C.Camargo Cancer Center, São Paulo, Brazil.

<sup>4</sup>Oncology Service, Hospital Moinhos de Vento, Porto Alegre, Brazil.

<sup>5</sup>DASA Oncology - Clínica AMO, Salvador, Brazil.

<sup>6</sup>Oncology Center - Hospital Beneficência Portuguesa, São Paulo, Brazil.

<sup>7</sup>Medical Oncology Department, Hospital Sírio-Libanês, Brasília, Brazil.

<sup>8</sup>DASA Oncology, Brasília Hospital, DASA, Brasília, Brazil.

**Objective:** This analysis aims to evaluate the effectiveness and safety of dose-dense AC (ddAC) compared to every 3 weeks (q3w) AC during neoadjuvant pembrolizumab plus chemotherapy (P+CT) for triple-negative breast cancer (TNBC). **Methodology:** The Neo-Real study is a collaborative real-world data effort evaluating patients treated with neoadjuvant P+CT since July 2020 in ten cancer centers. Effectiveness endpoints were pathologic complete response (pCR) and residual cancer burden (RCB) 0-1. Factors associated with pCR and RCB 0-1 were also explored. Safety endpoints included drug discontinuation, grade &#8805; 3 adverse events (AE), and antibiotics use. **Results:** Among 333 patients included to date, 311 finished the neoadjuvant therapy phase (safety cohort) and 279 underwent surgery with available pathology reports (effectiveness cohort). ddAC was used in 58.2% and q3w AC in 41.8% of the cases. Most patients (69.1%) had stage II TNBC. A pCR was observed in 65.4% with ddAC and 58.7% with q3w AC (P=0.260), while RCB 0-1 occurred in 82.4% and 73.5%, respectively (P=0.115). Patients with stage III disease had a numerically higher pCR with ddAC (59% vs 40%, P = 0.155), while pCR rates were similar regardless of AC schedule in stage II disease (66.6% vs 64.5%; P=0.760). Ki67 &#8805; 50%, tumor grade 3, and TILs &#8805; 30% were identified as predictors of higher pCR rates, while clinical stage III and receiving < 6 cycles of neoadjuvant pembrolizumab were associated with a decreased pCR. While no significant disparities in drug discontinuation or antibiotics use were noted, ddAC showed a trend towards higher rates of grade &#8805; 3 AE (40.5% vs. 30.7%, P=0.092), particularly febrile neutropenia (16% vs. 9.2%). **Conclusion:** The Neo-Real study found no statistically significant differences in effectiveness or safety between ddAC and q3w AC during neoadjuvant P+CT. However, the numerically higher pCR rates with ddAC in patients with stage III disease deserves further investigation.

**Keywords:** Triple-negative Breast Neoplasms; Immunotherapy; Anthracyclines; Neoadjuvant Therapy



## DISTINCT EXPRESSION OF MIRNAS AND ITS ASSOCIATION WITH SURVIVAL IN TNBC AND NON-TNBC BREAST TUMORS SUBTYPES FROM A COHORT OF PATIENTS FROM SOUTH OF BRAZIL

Emanuelle Nunes-Souza<sup>1</sup>; Rafael Marchi<sup>1</sup>; Valquíria Antunes<sup>1</sup>; Aline Simonetti Fonseca<sup>1</sup>; Jeanine Nardin<sup>2</sup>; José Claudio Casali da Rocha<sup>3</sup>; Daiane Rosolen<sup>1</sup>; Luciane Regina Cavalli<sup>1,4</sup>

<sup>1</sup> Research Institute Pelé Pequeno Príncipe, Faculdades Pequeno Príncipe, Curitiba, PR, Brazil.

<sup>2</sup> Escola de Medicina e Ciências da Vida, Pontifícia Universidade Católica do Paraná, Curitiba, PR, Brazil.

<sup>3</sup> A. C. Camargo Cancer Center, São Paulo, SP, Brazil.

<sup>4</sup> Department of Oncology, Lombardi Comprehensive Cancer Center, Georgetown University, Washington DC, USA.

**Objective:** The main objective of this study was to determine the expression levels of miR-26a-5p, miR-126-3p, and 182-5p and its association with clinical parameters in patients with the triple-negative breast cancer (TNBC) and non-TNBC subtypes in a cohort of patients from South of Brazil. **Methodology:** The miRNAs were selected based on their common regulatory interactions of gene targets involved in the cell adherence and junction, and critical associated cancer signaling pathways. Primary tumors of TNBC (n=30) and non-TNBC (n=52) patients were obtained before treatment from Erasto Gaertner Hospital, Curitiba, PR. The clinical data included: age, tumor size and TNM stage, lymph node and distant metastasis, comorbidity (ies), and survival status. The tumor samples, and adjacent non-tumor tissue samples were subjected to tissue microdissection, RNA isolation and RTqPCR. Approval by CONEP (894.864). **Results:** The three miRNAs showed significantly different expressions between the TNBC and adjacent non-tumor tissues (p<0.001). In the non-TNBC group, only miR-126-3p showed significant difference (p<0.01). Expression analysis revealed significantly lower expression of miR-26a-5p (p<0.01), and higher expression of miR-126-3p and miR-182-5p (p<0.001 and p<0.01, respectively) in TNBC compared to non-TNBC tissues. No significant differences were observed in clinicopathological data between the groups or in their association with miRNA expression. However, higher expression of the miR-26a-5p and miR-126-3p, were significantly associated with patient mortality in the TNBC group (p<0.05 and p<0.01, respectively). **Conclusion:** Our findings demonstrated a distinct pattern of expression of miR-26a-5p, miR-126-3p, and 182-5p between TNBC and non-TNBC breast cancer subtypes and revealed a significant association of these miRNAs on the survival of the TNBC patients. These observations underscore the potential of these miRNAs as valuable biomarkers for subtype classification and their impact on TNBC survival. By delineating specific molecular signatures associated with each subtype, our study contributes to the understanding of the underlying biological mechanisms driving TNBC and non-TNBC tumors.

**Keywords:** Triple Negative Breast Cancer; TNBC; non-Triple Negative Breast Cancer; non-TNBC; miRNAs; miR-26a-5p; miR-126-3p; miR-182-5p.



## ENRICHMENT OF INTESTINAL BIFIDOBACTERIUM GENUS IS ASSOCIATED WITH RESIDUAL DISEASE AMONG PATIENTS WITH EARLY-STAGE HER2+ BREAST CANCER (BC) FOLLOWING NEOADJUVANT CHEMOTHERAPY (NACT)

Ludmila Thommen Teles<sup>1,2</sup>, Vitor Heidrich<sup>1,3</sup>, Rosângela Vieira de Andrade<sup>4</sup>, Maria Sueli Soares Felipe<sup>4</sup>, Melissa Lole Da Cas Vita<sup>5</sup>, Thiago David Alves Pinto<sup>6</sup>, Anamaria A. Camargo<sup>1,3</sup>, Romualdo Barroso de Sousa<sup>1,2</sup>.

<sup>1</sup>Health Science Graduate Program, Instituto Sírio-Libanês de Ensino e Pesquisa – São Paulo (SP), Brazil.

<sup>2</sup>DASA Oncology, Brasília Hospital, DASA, Brasília, Brazil.

<sup>3</sup>Molecular Oncology Center, Hospital Sírio-libanês – São Paulo (SP), Brazil.

<sup>4</sup>Graduate Program in Genomic Sciences and Biotechnology – UCB - Brasília (DF), Brazil.

<sup>5</sup>Sírio-Libanês Hospital, Brasília, Brazil.

<sup>6</sup>Health Science Graduate Program, University of Brasilia, Brasilia, Brazil.

**Objective:** The objective of this study was to characterize the gut microbiome (GM) of patients with early-stage breast cancer (eBC) who underwent NACT and to evaluate its association with clinicopathological factors and outcomes. **Methodology:** This was a prospective study conducted at two Brazilian Institutions. Fecal samples were collected at the baseline and prior to surgery. The GM was analyzed by 16S rRNA amplicon sequencing to characterize the &#945; (InvSimpson indexes) and &#946; (weighted UniFrac distance) diversity, as well the taxonomic composition. **Results:** Among the 55 female patients included, the median age was 49 yo, 56% had stage III disease, and 23% had used antibiotics in the prior two months before starting NACT. Regarding the immunohistochemical profile, 34.5% (n=19) of patients had estrogen receptor-positive(ER+)/HER2-negative BC, 20% (n=11) had HER2-positive disease, and 45.5% (n=25) were triple-negative. All patients with ER+ had KI 67 > 14%. There was no significant difference in alpha or beta-diversity between patients with or without pathological complete response, nor within clinical pathologic factors. The taxonomic profiling of fecal samples revealed that Lachnospiraceae at family and Blautia at genus levels were the most abundant taxon, and longitudinal samples collected during NACT showed no significant changes in GM composition. We found an enrichment for Clostridia sp. among patients who did not use antibiotic ( $p < 0.05$ , pFDR &#8804; 0.25). Notably, we found a higher abundance of Bifidobacterium genus ( $p < 0.05$ , pFDR &#8804; 0.25) in baseline samples from patients with HER2+ tumors who presented residual disease following NACT. **Conclusion:** This pilot study demonstrates the feasibility of gut microbiome sequencing in patients with eBC. We identified significant association between the relative abundance of intestinal Bifidobacterium genus response to NACT among patients with HER2+ tumors. If validated, these results can help tailor the preoperative systemic treatment of patients with HER2+ eBC.

**Keywords:** Breast Cancer; Neoadjuvant Chemotherapy; Gut microbiota



## APPROVED COMMENTED POSTER

### IMMEDIATE POSTOPERATIVE COMPLICATIONS ASSOCIATED WITH SENTINEL LYMPH NODE BIOPSY IN EARLY BREAST CANCER IN THE CONTEXT OF THE SENTINEL LYMPH NODE BIOPSY VERSUS NO AXILLARY SURGERY IN EARLY BREAST CANCER CLINICALLY AND ULTRASONOGRAPHICALLY NODE NEGATIVE (VENUS) TRIAL

Amanda Maria Sacilotto Detoni<sup>1</sup>, Giuliano Mendes Duarte<sup>1</sup>, Danielle Cristina Miyamoto Araújo<sup>1</sup>, Rodrigo Menezes Jales<sup>1</sup>, Ruffo de Freitas Júnior<sup>2</sup>, Rosemar Macedo Sousa Rahal<sup>2</sup>, Luis Otávio Sarian<sup>1</sup>, VENUS Trial Group<sup>3</sup>

<sup>1</sup>Department of Obstetrics and Gynecology - Faculty of Medical Sciences, State University of Campinas – SP (UNICAMP). Brazil.

<sup>2</sup>Department of Obstetrics and Gynecology - Federal University of Goiás (UFG). Brazil.

<sup>3</sup>VENUS TRIAL Group

**Objective:** VENUS is an ongoing trial that evaluates the omission of sentinel lymph node biopsy (SLNB) in early breast cancer clinically and ultrasonographically node negative. Despite SLNB being a low-morbidity procedure compared to axillary dissection, there are complications associated with it that may be underestimated. The aim of this study is to evaluate the first data about immediate and late axillary complications in patients of the VENUS trial.

**Methodology:** Prospective, multi-center, non-inferiority randomized controlled trial including T1-2 N0 (clinical/ultrasound) M0 breast cancer patients randomized into: SLNB or no axillary surgery. Complications were assessed during postoperative follow-up visits and at 6-month intervals. This report focuses on postoperative assessments. The variables included were: pain, seroma, paresthesia, arm movement restriction, lymphedema, patent blue tattooing, and others, as well as whether treatments/interventions were required. Registered in ClinicalTrials.gov (NCT05315154) and ReBEC (RBR-8g6jbf). Approved by the ethics committee (CAAE:06805118.2.0000.5404). **Results:** Until now, 322 patients were randomized to SLNB (n=170) or no-surgery (n=152). Mean follow-up time so far is 20.6 months (range 3.3 - 48.6 mos). The overall axillary complication rate was 53.5% (SLNB) versus 5.3% (non-SLNB)(p<0.001). In the immediate postoperative assessment, blue dye tattooing was the most frequent (33.5%) complication, followed by pain (22.4%), paresthesia (8.2%), seroma (6.5%), dehiscence and infection (2.4%), and range of motion restriction (1.8%). Complications were not associated with the number of sentinel nodes resected (regression coef = -0.06, p=.534). Interventions to treat at least one of the complications were required for 36.9% of the patients, being analgesics the most frequent (50%) intervention. **Conclusion:** SLNB was associated with a higher rate of complications, which may be overlooked and lead to treatment morbidity, and should not be disregarded.

**Keywords:** Breast cancer, Sentinel lymph node biopsy, Breast cancer treatment, Axillary surgery, Complications.



## BREAST CANCER AND LOCAL THERAPY: BREAST CONSERVATION AND ONCOPLASTIC SURGERY ARE ASSOCIATED WITH IMPROVED QUALITY OF LIFE

Daniel Meirelles Barbalho<sup>1</sup>; Natalia Polidorio<sup>1</sup>; Lincon Mori<sup>2</sup>; Alfredo Barros<sup>2</sup>; Marcelo Sampaio<sup>3</sup>; Sandro Melo<sup>2</sup>; Murilo Fraga<sup>3</sup>; Felipe Andrade<sup>2</sup>

<sup>1</sup>Department of Breast Surgical Oncology, Hospital Sírio-Libanês, Federal District, Brazil

<sup>2</sup>Department of Breast Surgical Oncology, Hospital Sírio-Libanês, São Paulo, Brazil

<sup>3</sup>Department of Plastic and Reconstructive Surgery, Hospital Sírio-Libanês, São Paulo, Brazil

**Objective:** Breast cancer is one of the leading causes of cancer in women worldwide. Local treatment can be distressful to patients. We aimed to evaluate how different types of local treatment impact the quality of life of Breast Cancer patients. **Methodology:** Breast-Q Satisfaction with Breasts scores were collected before surgery and one year post-operatively after a first breast oncologic surgery. Linear regression was used to estimate the impact of breast conservation, use of oncoplastic surgery, types of breast reconstruction, and use of radiation therapy on Breast-Q scores. All analyses were adjusted by age, education, marital status, body-mass index, T staging, N staging, tumor subtype, presence of bilateral cancer, radiation therapy, axillary staging, presence of complications and pre-operative Breast-Q scores. **Results:** From December 2017 to December 2021, 349 patients answered both pre and one-year post-operative Breast-Q scores. In total, 237 (68%) patients received breast-conserving surgeries, and 112 (32%) received mastectomies. All mastectomy patients received breast reconstruction and 176 (74% of breast-conserving surgeries) received concomitant oncoplastic surgery. After multivariable analysis, mastectomy was associated with lower scores compared to breast-conserving surgery (-21.3; 95%CI: -36.2, -6.4, p=0.005), oncoplastic surgery was associated with higher scores (9.2; 95%CI: 0.8, 17.6, p=0.032). There was a tendency of higher scores with the use of flaps in breast reconstruction, and a tendency of lower scores with the use of radiation therapy, but not significant. Interestingly, bilateral cancers were associated with higher scores (25.8; 95%CI: 3.6, 47.9, p=0.023). Of note, there were 6 bilateral cancers, 5 treated with bilateral mastectomies. **Conclusion:** Breast-conserving surgery is associated with better quality of life compared to mastectomy. Oncoplastic surgery is associated with even better quality of life. Patients should be counseled whenever multiple options of surgery are possible, and efforts should be made to increase the availability of trained surgeons in oncoplastic techniques.

**Keywords:** Breast Neoplasms, Surgical Oncology, Quality of Life, Psychological Well-Being.



## CK19 EXPRESSION AND PROGNOSIS IN WOMEN WITH BREAST CANCER

Silvia Helena Rabelo dos Santos<sup>1,2</sup>; Odeony Paulo dos Santos<sup>2,3</sup>; Vera Aparecida Saddi<sup>4</sup>; Andrea Alves Ribeiro<sup>4</sup>; Luiz Carlos Zeferino<sup>5</sup>

<sup>1</sup>School of Pharmacy, Federal University of Goiás. Goiânia, Brazil.

<sup>2</sup>Institute of Tropical Pathology and Public Health, Federal University of Goiás. Goiânia, Brazil.

<sup>3</sup>Center for Social Sciences, Health and Technology, Federal University of Maranhão. Imperatriz, Brazil.

<sup>4</sup>Pontifical Catholic University of Goiás. Goiânia, Brazil.

<sup>5</sup>Department of Obstetrics and Gynecology, State University of Campinas, São Paulo, Brazil.

**Objective:** To evaluate the association between CK19 expression and clinicopathological characteristics in cases of women with breast cancer. **Methodology:** This is a cross-sectional study involving women with breast cancer whose biopsies were analyzed by immunohistochemistry were included. The selection of participants was done in the years 2010 and 2015, based on a search in the records of anatomopathological examinations. The representative images were captured by the Image Prolife program. Selection criteria for representative areas were based on image sharpness and on the areas of greater intensity of cellular immunoreaction (hot-spot areas). The association analyzes between CK19 expression and clinicopathological characteristics were performed using the Chi-Square test. The research was approved by the Research Ethics Committees of the Federal University of Goiás, and HAJ, opinions number: 3,983,832 and 4,019,893. **Results:** A total of 121 cases of women diagnosed with breast cancer were included. In summary, women under the age of 50 represented 52.9% of the total cases, 57.9% were classified as luminal, histological grade 1 and 2 tumors represented 53.8% of cases, 51.2% were classified as stage I and II e 74. 4% of cases had tumors <5cm. The mean expression of CK19 was 70.6% and the median was 79.3%. Median values of marked cells were used to define cut-off points for low and high expression. Regarding CK19 expression and clinicopathological characteristics, a significant association was observed between the median CK19 expression and the luminal phenotype ( $p=0.001$ ; [OR: 2.86 95%CI 1.24-6.60), age &#8805; 50 years ( $p=0.002$ ; OR: 2.34 CI: 1.09-4.99]), tumor size < 5cm ( $p=0.03$  OR: 2.47 95% CI 1.01-6.04) and a borderline association with absence of distant metastasis ( $p=0.072$ ; 2.08 (0.930-4.64)). The other variables such as histological grade, lymph node metastasis, staging, recurrence and death from cancer did not show associations with the expression of CK19. **Conclusion:** CK19 expression is associated with some clinicopathological characteristics of better prognosis in women with breast cancer.

**Keywords:** Breast cancer, prognosis, CK19, immunohistochemistry



## FOREQUARTER AMPUTATION IN PATIENTS WITH BREAST CANCER: A SYSTEMATIC LITERATURE REVIEW

Flávia Cardoso Franca<sup>1</sup>; René Aloisio da Costa Vieira<sup>1,2,3</sup>; Idam de Oliveira-Junior<sup>2</sup>

<sup>1</sup>Botucatu Faculty of Medicine, Brazil.

<sup>2</sup>Barretos Cancer Hospital, Brazil.

<sup>3</sup>Muriae Cancer Hospital, Brazil.

**Objective:** Objective: To carry out a systematic review of the literature, evaluating the impact of forequarter amputation in locoregional control and survival of patients with breast cancer.

**Methodology:** Methodology: Based on resolution 466/12, Research Ethics Committee evaluation was not necessary. Systematic literature review using eight databases. The PICOS and PRISMA methodologies were used. Two evaluators selected the articles, and the data was summarized in a standardized form.

**Results:** Results: Of 1,326 articles initially selected on 12/31/2022, 55 articles served as the basis for the review, 104 cases were observed. The indication 78 (75.0%) were primary tumors and 7 (6.7%) local recurrences. The main histological type of the primary tumor was invasive ductal carcinoma. The main indication was due to Stewart-Treves Syndrome (43.3%), followed by local recurrence of breast cancer (23.1%), radio-induced tumor (14.4%) and locally advanced primary (5.8%). Surgery was considered potentially curative in 50.0%, palliative in 31.7%, and not performed in 2.9%. In patients where the complication rate was reported, it was around 27.3%, the main ones being necrosis, pleural effusion, dehiscence and infection, with no mortality observed. When evaluating well-being (n=22), all reported improvement in this aspect. In 71 patients, local recurrence was evaluated, being in the order of 32.4%. In 89 patients it was possible to assess survival. The overall actuarial survival at 24, 36 and 60 months was 37.1%, 31.6% and 28.0%, respectively. The type of surgery had an impact on survival (p=0.002), 47.2% of patients undergoing curative surgery were alive at 60 months, and 15.3% of patients undergoing palliative surgery were alive at 24 months. **Conclusion:** Conclusion: In breast cancer, forequarter amputation is associated with high morbidity, absence of mortality, allowing a high rate of local control and pain control. When performed on a curative basis, it allows a high survival rate.

**Keywords:** breast neoplasms; disarticulation; stewart treves syndrome; surgical amputation; forequarter amputation



## THE POTENTIAL ROLE OF CAVITY MARGINS SAMPLING SHAVING (CMSH) TO PREDICT COMPLETE TUMOR RESECTION BY VACUUM ASSISTED EXCISION (VAE)

Paula Clarke<sup>1</sup>; Henrique Lima Couto<sup>2</sup>; Eduardo Carvalho Pessoa<sup>3</sup>; Helio Rubens Carvalho Nunes<sup>4</sup>; Bertha Andrade Coelho<sup>5</sup>; Bernardo Ferreira de Paula Ricardo<sup>6</sup>; Heverton Leal Ernesto de Amorim<sup>7</sup>; Jaqueline Mércia Moreira Silva<sup>2</sup>

<sup>1</sup>Redimama-Redimasto, Belo Horizonte - MG, IPSM, Belo Horizonte - MG, Brazil.

<sup>2</sup>Redimama-Redimasto, Belo Horizonte - MG, Brazil.

<sup>3</sup>Department of Obstetrics and Gynecology, Botucatu Medical School, Sao Paulo State University-UNESP, Botucatu - SP, Brazil.

<sup>4</sup>Botucatu Medical School, Sao Paulo State University-UNESP, Botucatu, SP, Brazil.

<sup>5</sup>Clínica Mater Montes Claros, Minas Gerais. UNIFIPMOC – Montes Claros. Brazilian Society of Mastology – Belo Horizonte - MG, Brazil.

<sup>6</sup>Laboratório Anatomia BH, Belo Horizonte - MG, Brazil.

<sup>7</sup>Clínica UD Diagnóstica, João Pessoa - PB, Brazil.

**Objective:** to evaluate CMSH as a predictor of complete tumor resection (CR) by VAE. **Methodology:** Retrospective database analysis of 120 ductal carcinoma in situ (DCIS) and invasive cancers (IC) of the breast, smaller than 20mm (image), submitted to diagnostic VAE-CMSH and standard surgery (SS) from June 2021 to December 2023. VAE definition: more than 12 core samples (CS) with 7G needle or 18 samples with 10G needle. CMSH definition: core sampling the round residual cavity circumference after VAE. CMSH-CS were allocated in an exclusive bottle and sent to laboratory. Demographic, imaging, pathology, VAE, CMSH and SS data were collected. CMSH was compared to SS (gold standard) to predict CR. SPSS® 20.0 software was used to statistical analyzes. **Results:** Mean age was 58,5; mean imaging tumor size (iT) 12,4mm; masses were 68(56,7%); mean VAE-CS 29,5 weighting 9,3g; mean CMSH-CS 10,9 weighting 6,2g; mean final pathological tumor size (pT) 7,5mm. IC were 75(62,5%) and DCIS 45(37,5%); 46(38,3%) were CR by VAE-CMSH and 74(61,7%) were not. CMSH was negative for residual cancer in 52(43,3%) and positive in 68(56,7%). CMSH sensitivity (SENS) was 70.7%, specificity (ESP) 66.7%, positive predictive value (PPV) 77.9%, negative predictive value (NPV) 57.7% and false negative rate (FNR) 29.3%. The variables significantly related to VAE-CMSH CR were the pathological tumor size in the CMSH ( $p=0.014$ ) and pT ( $p=0.023$ ); to true negative CMSH was pT ( $p=0.041$ ); to false negative CMSH were calcifications ( $p=0.030$ ); IC associated to DCIS ( $p<0.001$ ) and the DCIS tumor size in the SS ( $p=0.016$ ). For pure IC, CMSH SENS was 88.9%, ESP 83.3%, PPV 88.9%, NPV 83.3% and FNR 11.1%. **Conclusion:** CMSH may be a potential approach to predict CR by VAE. Potential selected criteria for future intention to CR trials comparing VAE-CMSH to SS should be small masses pure invasive cancers without calcifications.

**Keywords:** breast neoplasms; image guided biopsies; minimally invasive surgical procedures; vacuum-assisted excision;



## IS AXILLARY EVALUATION STILL NECESSARY IN DCIS?

Marcellus do Nascimento Moreira Ramos<sup>1</sup>; Andre<sup>Mattar1, 2, 3</sup>; Andressa Gonçalves Amorim<sup>1, 2</sup>; Marcelo Antonini<sup>4</sup>; Felipe Andreotta Cavagna<sup>1, 2</sup>; Juliana Monte Real<sup>4</sup>; Roberto Hegg<sup>1</sup>; Luis Henrique Gebrim<sup>1, 5</sup>

<sup>1</sup>Hospital Pérola Byington, São Paulo – SP, Brazil.

<sup>2</sup>Hospital da Mulher, São Paulo – SP, Brazil.

<sup>3</sup>Oncoclínicas, São Paulo – SP, Brazil.

<sup>4</sup>Hospital Servidor Público Estadual, São Paulo – SP, Brazil

<sup>5</sup>Hospital Beneficência Portuguesa, São Paulo – SP, Brazil

**Objective:** The objective was to evaluate the surgical approach in the axilla (SNB or axillary dissection – AD) of patients diagnosed with DCIS in a single institution and describe the surgical treatment (mastectomy or breast conservative surgery – BCS). **Methodology:** This was a retrospective analysis of DCIS in a reference center from January 2011 to December 2019. The patients were splited into 3 age groups: under 40, 40-49, and 50 or older and we analyzed type of breast and axillary surgery, as the method of diagnostic and pathologic characteristics of that lesion after surgery. **Results:** Our sample included 494 patients who underwent core biopsy or vacuum-guided biopsy guided by mammography or ultrasound and were diagnosed with DCIS and underwent surgical treatment. DCIS was diagnosed through mammographic alterations in 61,5% of all cases and nuclear grade 2 was the most common (48,3%). Comedonecrosis was present in 77,9% of our specimens. The BCS was made in 72,9% of the cases, with the axillary approach being performed in 34,7%. When a mastectomy was made 92,5% were submitted to axillary approach, showing a strong correlation in the type of surgery and axillary approach (p-value < 0,001). Patients younger than 40 years were more likely to undergo an axillary evaluation regardless of the type of surgery (p=0.015). In only 3,2% of cases (16 in 494) we had an upstage to invasive carcinoma and none of them had a lymph node involvement. **Conclusion:** Our results showing no axillary involvement should be taken into account when deciding to evaluate the axilla in DCIS. The cost, mobility, and complications of the surgical treatment in these patients can help us stop evaluating the axilla.

**Keywords:** Ductal carcinoma in situ; Axillary approach; Sentinel node biopsy; Axillary dissection.



## FACTORS INFLUENCING THE ENGAGEMENT OF COMMUNITY HEALTH WORKERS IN BREAST CANCER SCREENING: ITABERAÍ PROJECT

Mary Ann Monteiro Lopes Cassiano<sup>1</sup>; Ruffo de Freitas Júnior<sup>2</sup>; Renata Nunes da Silva<sup>1</sup>; Queila da Silva Ferreira<sup>1</sup>; Nicaella Eterna de Oliveira Santos Nascimento<sup>1</sup>; Luana Vieira Martins<sup>2</sup>; Rosangela da Silveira Corrêa<sup>2</sup>; Danielle Cristina Netto Rodrigues<sup>2</sup>

<sup>1</sup>Primary Health Care Network. Itaberaí Municipal Health Department, Goiás – Brazil.

<sup>2</sup>CORA - Advanced Breast Diagnosis Center, Federal University of Goiás. Brazilian Breast Cancer Research Network, Brazil.

**Objective:** To evaluate the factors influencing the engagement of Community Health Agents (CHW) in home visits for breast cancer screening, according to the actions of the Itaberaí Project. **Methodology:** A clinical trial, controlled, randomized, multicenter, phase III, where the observation unit was the CHW in their National Health Strategies (NHS). With randomization, CHW were randomly allocated into Control Group (CG) and Intervention Group (IG). Where the intervention is the Physical Breast Examination (PBE) performed by properly trained CHAs. The evaluation was conducted using a group technique, where CHW were previously encouraged to report challenges and facilitators in participating in the Itaberaí Project. Data were categorized by content approximation, evaluated, and compared between the groups. **Results:** Out of the 74 CHW active in the Project, 72 (91.1%) participated in this research, with 33 (45.8%) in the CG and 39 (54.2%) in the IG. In the CG, the most prevalent challenge was women's acceptance to participate in the Project, as reported by 33 CHW (100.0%), where the reasons were: fears and taboos, delays in undergoing exams, and having health insurance, 14 (42.4%), 13 (39.4%), and 6 (18.2%) respectively. While the most common facilitators for executing the Project reported by CHW were: helping others and saving lives 25 (75.8%), recognition and appreciation of CHW 23 (69.7%), and ongoing training 22 (66.7%). In the IG, the most prevalent challenge was women's resistance to receiving the PBE, while the least prevalent was CHW insecurity in performing the PBE. Among the facilitators, the most prevalent was prompt service 28 (70.0%). **Conclusion:** The factor that most influences the engagement of CHAs in carrying out the Itaberaí Project is "saving lives" or "helping others". However, they still encounter resistance from women due to fears and taboos regarding breast cancer. Support: Avon Institute and Libbs Pharmaceuticals.

**Keywords:** Community Health Workers; Work Engagement; Screening; Breast Cancer.



## ASSESSMENT OF A CONTINUING EDUCATION PROGRAM FOR COMMUNITY HEALTH WORKERS FOR BREAST CANCER SCREENING: ITABERAÍ PROJECT

Luana Vieira Martins<sup>1</sup>; Ruffo de Freitas Júnior<sup>1</sup>; Danielle Cristina Netto Rodrigues<sup>1</sup>; Rosangela da Silva Corrêa<sup>1</sup>; Christina Souto Cavalcante Costa<sup>1</sup>; Luana Marques Novato<sup>1</sup>; Paola Ferreira de Freitas<sup>1</sup>; Priscila Dias Watanabe<sup>1</sup>

<sup>1</sup>CORA - Advanced Breast Diagnosis Center, Federal University of Goiás. Brazilian Network of Breast Cancer Research, Goiânia – GO, Brazil.

**Objective:** To evaluate a theoretical-practical continuing training program for Community Health Workers (CHW) in breast cancer screening, according to the actions of the Itaberaí Project. **Methodology:** The CHW training program is developed according to the following stages: face-to-face theoretical-practical, distance learning (DL), and ongoing on-site training. This program corroborates with the phases of the Itaberaí Project, which is a clinical trial, controlled, randomized, multicenter, phase III, where the unit of observation was the CHW in their National Health Strategies (NHS), randomly allocated to Control Group (CG) and Intervention Group (IG). The theoretical-practical training and DL course were evaluated using a questionnaire containing closed-ended questions, with a Likert Scale (ranging from 1 poor to 4 excellent), and open-ended questions. The completion was anonymously done by the participants. **Results:** Out of the 74 CHW active in the Project, 66 (89.2%) completed the DL course and participated in this research. Regarding the course evaluation, content, methodology, speakers, and the platform used, 33 (50.8%), 46 (69.7%), 37 (56.9%), 47 (72.3%), and 44 (66.7%) CHW indicated as "excellent", respectively. As a suggestion for improvement, the most cited was "adaptation to a more accessible language." Regarding the face-to-face theoretical-practical training, 67 CHW (90.5%) responded to the questionnaire, with 29 CHW (43.2%) from the CG and 38 (56.7%) from the IG. The evaluation of the training overall, content, methodology, and duration was considered "excellent" by 52 CHW (77.6%), 49 (73.1%), 50 (74.6%), and 40 (59.7%), respectively. There was no significant difference between groups for the evaluated responses. Regarding practice for the IG, 31 (%) CHW indicated "increased confidence" in performing the physical examination of the breast. **Conclusion:** The evaluation of the training program showed positive results among CHW and increases their confidence in carrying out the actions of the Itaberaí Project. Support: Avon Institute and Libbs Pharmaceutical.

**Keywords:** Community Health Workers; Training Program; Program Evaluation.



## VARIANT ANALYSIS IN THE TP53 GENE FOR FAMILIES IN THE STATE OF GOIÁS WITH SUSPECTED LI-FRAUMENI SYNDROME: TOOL FOR EARLY DIAGNOSIS AND PREVENTION OF BREAST CANCER

Késsila Macedo Veiga<sup>1</sup>; Rebeca Mota Goveia<sup>1</sup>; Paula Francinete Faustino da Silva<sup>1</sup>; Adelaide Fernandes Costa<sup>1</sup>; Elisangela de Paula Silveira Lacerda<sup>1</sup>

<sup>1</sup>Center for Human Genetics, Institute of Biological Sciences, Federal University of Goiás. Brazil

**Objective:** Breast cancer is the most common type of cancer in the world. In Brazil, there is a high incidence of Li-Fraumeni Syndrome (LFS), one of the main syndromes related to the development of hereditary breast cancer. This study aimed to identify the prevalence of variants in the TP53 gene in probands suspected of having LFS and their families. **Methodology:** We evaluated 123 patients who met the National Comprehensive Cancer Networking criteria for suspected hereditary breast cancer syndromes, who were referred to the Center for Human Genetics/UFG by Hospital das Clínicas/UFG. After applying the Informed Consent Form, 4 ml of venous blood was collected for DNA extraction used for next generation sequencing and analysis of the entire coding region of the TP53 gene. The DNA library was prepared using the PCR target amplification method with the Oncomine™ BRCA Expanded panel kit and subjected to sequencing on the Ion Torrent platform. Raw data was evaluated on the Ion Reporter platform and variants were classified according to the American College of Medical Genetics. **Results:** Of the 123 patients evaluated, 12.19% (15/123) were positive for TP53 variants in 7 different families. 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 family members tested were also positive cases, with 100% (17/17) not developing any type of cancer to date. **Conclusion:** These data alert to the considerable incidence of Li-Fraumeni syndrome in the state of Goiás and draws attention to the power of directing treatment and prevention of breast cancer that genetic tests could provide for our population, with the possibility of personalization monitoring high-risk families.

**Keywords:** Hereditary Breast Cancer; NGS; Li-Fraumeni Syndrome; TP53.



## DIAGNOSTIC ACCURACY STUDY OF MAGNETIC RESONANCE BREAST SPECTROSCOPY

Ilse Franco de Oliveira<sup>1</sup>; Rosemar Macedo Sousa Rahal<sup>1</sup>; Ruffo de Freitas-Junior<sup>1</sup>; Camila Leal Diniz<sup>1</sup>; Cristina Pinto Naldi Ruiz<sup>2</sup>; Luiza Louza Normanha Cortizo Vidal<sup>3</sup>; Lizzi Naldi Ruiz<sup>2</sup>; Marcelo Vilela Lauer<sup>2</sup>

<sup>1</sup>Advanced Breast Diagnostic Center, Medical School, Goiás Federal University, Brazil

<sup>2</sup>São Marcelo Clinic, Goiânia, Goiás, Brazil

<sup>3</sup>Aura Diagnostics, Goiânia, Goiás, Brazil

**Objective:** To analyze the diagnostic accuracy of breast magnetic resonance spectroscopy in comparison to breast biopsy. **Methodology:** Diagnostic accuracy study of qualitative cross-sectional analysis to perform Breast Magnetic Resonance Spectroscopy carried out on 215 women over 18 years of age who agreed to participate in the study. Data were verified using normalized Q-Q plot analysis and standardized residual histogram. To analyze the patients' profile, the Chi-square test and Student's t test and Kappa index were performed for agreement between observers. The sensitivity and specificity of the spectroscopy was tested using the ROC curve compared to the results of the biopsies using SPSS version 26.0. Significance level was 5% ( $p < 0.05$ ). **Results:** The most important findings were breast lumps with a total of 59.1%, followed by cysts with 18.1% of the total. Cho Ratio\* values in relation to Creatine were found to be altered in 76.3% of results. The Kappa index between observers was 99%. After biopsies, 74.4% of the results were malignant and 25.6% benign. After analysis, 81.8% of the benign ones were BI-RADS® 3 and 41.3% of the malignant ones were BI-RADS® 4, with 19.4% of malignancies for BI-RADS® 4<sup>a</sup> and 12.5% for BI-RADS® 6, in this case, confirming the findings of previous exams. To evaluate the accuracy of the results found, an ROC curve analysis was performed in comparison with the breast biopsy which is considered the gold standard for diagnosing breast cancer. The Cho Ratio had an average sensitivity of 98% and an average specificity of 89%. Cho Integral also has a sensitivity of 98% and a specificity of 92%. **Conclusion:** As demonstrated in this study, after statistical analysis, the model was efficient in predicting breast diagnosis.

**Keywords:** Breast cancer; Accuracy study; MRI-Spectroscopy



## SUSPICIOUS MAMMOGRAPHIC FINDINGS OUT OF THE AGE RANGE RECOMMENDED BY BRAZILIAN MINISTRY OF HEALTH

Eduarda Martins dos Santos<sup>1</sup>; Karoline Nunes Rodrigues Viana<sup>1</sup>; Cândida Verônica de Andrade Paz<sup>1</sup>; Ianny Keruly Damião Pessoa Duarte<sup>1</sup>; Jascyone Barbosa da Silva<sup>1</sup>; Rafael Pereira Camargo<sup>1</sup>; Tássia Aimê Teixeira Nascimento<sup>1</sup>; Fabiana Cândida Queiroz Santos Anjos<sup>2</sup>

<sup>1</sup>Medicine student - University of Gurupi - TO, Brazil.

<sup>2</sup>Medical residency in Gynecology and Obstetrics - Federal University of Uberlândia - MG, Brazil.

**Objective:** To evaluate Brazilian's data about the results of mammography screening obtained from the systematization of the Breast Imaging-Reporting and Data System (BI-RADS) in categories 4 and 5 in women between 40 to 49 years old and 70 to 74 years old, age range not contemplated by the current recommendation of Brazilian Ministry of Health. **Methodology:** Epidemiological study, descriptive, quantitative and comparative based on analysis of data extracted from the System of Cancer Information (SISCAN), in the period between 2019 to 2023, analyzing the age range of 40 to 49 years old and 70 to 74 years old; seeking reports of mammographic findings: BI-RADS 4 and 5. Comparisons were made of the reports that suggested breast cancer in the age range recommended (screening between 50 to 69 years old) and not recommended by current recommendation of Brazilian Ministry of Health. **Results:** In the period between 2019 to 2023 a total of 116.833 mammograms were performed obtaining the results in the categories BI-RADS 4 and 5. Considering the age range that was not elected by the Brazilian Ministry of Health for screening, a total of 31.393 (26,86%) cases between 40 to 49 years old and 8.298 (7,1%) between 70 to 74 years old were found, representing 33,96% cases of 116.833 mammograms performed in the last 5 years. **Conclusion:** In view of the verified data, this study shows the relevance of the expansion in the screening of breast cancer in women, since 33,96% of findings that suggested breast cancer were not being diagnosed by following the Brazilian Ministry of Health recommendation, showing how necessary is to give attention into public politics targeting to reconsider the current established recommendations.

**Keywords:** breast neoplasms; diagnostic screening programs; mammography.



## GASTRIN-RELEASING PEPTIDE RECEPTOR (GRPR) AS A PROMISING PROGNOSTIC BIOMARKER IN BREAST CANCER

Martina Lichtenfels<sup>1</sup>; Matheus Dalmolin<sup>2</sup>; Julia Caroline Marcolin<sup>1</sup>; Camila Alves da Silva<sup>1</sup>; Caroline Brunetto de Farias<sup>1</sup>

<sup>1</sup>Translational Research, Ziel Biosciences, Porto Alegre, RS, Brazil.

<sup>2</sup>Department of Computer Engineering and Automation, Federal University of Rio Grande do Norte, Natal, RN, Brazil.

**Objective:** Previous studies indicated a positive correlation between GRPR and estrogen receptor (ER) levels, suggesting a potential association between these receptors and tumor progression. Our study aims to verify the expression and prognostic implications of GRP and GRPR in breast cancer by analyzing multiple cancer-related databases. **Methodology:** The expression and prognosis of GRP and GRPR in breast cancer were assessed using different databases, including ONCOBD, Gent2, and Gene Expression Profiling Interactive Analysis (GEPIA). **Results:** Bioinformatics analysis revealed overexpression of GRPR in breast cancer compared to healthy tissue, while GRP level was similar in both samples. The expression of GRP and GRPR positively correlated with estrogen receptor and grade 1 tumors ( $p < 0.001$ ). Among the breast cancer subtypes, Luminal A showed the highest levels of GRP and GRPR, followed by Luminal B, HER2+, TNBC and basal. Prognosis analysis using Gent2 indicated better outcomes for breast cancer patients with higher expression of GRP and GRPR, showing improved overall survival (OS) compared to those with low expression ( $p = 0.004$ ). However, in GEPIA, no difference was observed in OS in patients with high and low expression of the biomarkers. Additional studies are needed to elucidate these relationships. **Conclusion:** Our findings suggest that GRP and GRPR expression correlates with estrogen receptor positivity in breast cancer and may be associated with a good prognosis for breast cancer patients. Furthermore, the overexpression of GRPR in breast cancer suggests its potential as a novel prognostic biomarker and might be useful as a therapeutic target in cancer treatment.

**Keywords:** breast neoplasm; Gastrin-Releasing Peptide; Computational Biology; estrogen receptor



## CHARACTERIZATION OF AN EPIGENETIC REGULATORY NETWORK ON BASAL-LIKE BREAST CANCER SUBTYPE AND ITS IMPACT ON SIGNALING PATHWAYS AND BIOLOGICAL PROCESSES

Larissa Miyuki Okano<sup>1</sup>; Alexandre Luiz Korte de Azevedo<sup>2</sup>; Tamyres M Carvalho<sup>2</sup>; Tathiane Maistro Malta<sup>3</sup>; Mauro Antonio Alves Castro<sup>4</sup>; Luciane Regina Cavalli<sup>1,5</sup>

<sup>1</sup> Research Institute Pelé Pequeno Príncipe, Faculdades Pequeno Príncipe, Curitiba, PR, Brazil.

<sup>2</sup> Genetics Department, Federal University of Paraná, Curitiba, PR, Brazil.

<sup>3</sup> Oncology, Stem Cells and Cell Therapy Department, University of São Paulo, Ribeirão Preto, SP, Brazil.

<sup>4</sup> Bioinformatics and Systems Biology Laboratory, Federal University of Paraná, Curitiba, PR, Brazil.

<sup>5</sup> Oncology Department, Lombardi Comprehensive Cancer Center, Georgetown University, Washington DC, USA.

**Objective:** The main objective of this study was to identify DNA methylation at the distal cis-regulatory genomic regions associated with the basal-like breast cancer (BLBC) subtype, construct an epigenetic regulatory network, and determine its impact on cancer-associated signaling pathways and biological processes. **Methodology:** BLBC (n=134) and non-tumoral breast (n=84) samples with DNA methylation, mRNA, and miRNA expression data were downloaded from The Cancer Genome Atlas (TCGA) database using a pipeline of computational tools. DNA methylation patterns on cancer-specific enhancers enriched for transcription factors (TF) binding sites and potential master regulators TFs were identified. An epigenetic network among these elements and miRNA expression was constructed and analyzed in relation to the involved signaling pathways, biological processes, and potential interaction with druggable targets. **Results:** The analysis revealed 152 differentially methylated genes (99 hypomethylated and 53 hypermethylated) between BLBC and non-tumoral breast samples, with alterations negatively correlated with gene expression. Additionally, 500 miRNAs (317 upregulated and 183 downregulated) were observed differentially expressed between these groups. The regulatory network constructed from these elements implicated major regulators of cancer-associated signaling pathways including, AR, ErbB, KRAS, mTORC1, NOTCH, PI3K, TGF- $\beta$ , NF- $\kappa$ B, WNT, and P53. The biological processes involved, based on the DNA methylation status, were primarily related to the cell cycle, cell binding activities, and transcription signaling pathways. Finally, drug-target analysis interactions of the regulatory pairs revealed 24 drugs commonly used in cancer treatment, such as 5-fluorouracil, methotrexate, cisplatin, and tamoxifen. **Conclusion:** In summary, this study demonstrated the impact of DNA methylation on distal genomic regions of transcription sites, revealing a complex and intricate epigenetic regulatory network involving genes, miRNAs, and TFs, highlighting the molecular heterogeneity of the BLBC. Additionally, the identification of critical signaling pathways and the potential druggable targets and pharmacological compounds found to interact with this epigenetic network, indicate their potential role as therapeutic targets for BLBC.

**Keywords:** breast cancer, basal-like, epigenetics, DNA methylation, microRNA, transcription factor, regulatory network



## UNDERSTANDING AND ADHERENCE LEVEL OF COMMUNITY HEALTH WORKERS (CHW) TO BREAST CANCER SCREENING ACCORDING TO THE PROTOCOL ESTABLISHED IN THE ITABERAÍ PROJECT

Danúbia de Brito Rodrigues Silva<sup>1</sup>; Ruffo de Freitas Júnior<sup>2</sup>; Laillyanne Luiza Pereira de Moraes Carvalhais<sup>1</sup>; Silvania Maria Lino da Serra<sup>1</sup>; Danielle Cristina Netto Rodrigues<sup>2</sup>; Rosangela da Silveira Corrêa<sup>2</sup>; Christina Souto Cavalcante Costa<sup>2</sup>; Isabella Barros Rabelo Gontijo Tume<sup>3</sup>

<sup>1</sup>Primary Health Care Network. Itaberaí Municipal Health Department, Goiás, Brazil.

<sup>2</sup>CORA – Advanced Breast Diagnosis Center, Federal University of Goiás. Brazilian Breast Cancer Research Network, Brazil.

<sup>3</sup>Araujo Jorge Cancer Hospital. Goiânia Cancer Combat Association – ACCG, Brazil.

**Objective:** To evaluate the level of understanding and adherence of CHW according to the protocol of the Itaberaí Project (PI), aiming at breast cancer screening. **Methodology:** A clinical, controlled, randomized, multicenter, phase III trial, where the unit of observation was the engagement of CHW in the PI. With randomization, CHW were randomly allocated to the Control Group (CG) and Intervention Group (IG). For evaluation and comparison between groups of CHW understanding and adherence levels to the Project, a specific questionnaire was developed, with closed questions, according to the Likert scale and filled out anonymously. **Results:** Out of the 74 CHW active in the Primary Health Care Network in Itaberaí, 65 participated in the research, with 34 (52.3%) in the CG and 31 (47.7%) in the IG. The average length of time working as a CHW was 17.09 years  $\pm$  7.15 in the CG and 16.38  $\pm$  8.02 in the IG ( $p=0.69$ ). There was no significant difference in educational level between groups ( $p=0.59$ ). Regarding understanding, there was no significant difference between the Groups, as 100% of CHW understand that their role is to guide women on early detection and diagnosis, identify possible breast changes, and refer them to Basic Health Units (BHU). Regarding what could improve women's adherence to the PI, 25 (73.5%) CHW from the CG and 29 (93.5%) from the IG reported that investing in greater Project publicity through media would be beneficial. Regarding the level of CHW adherence to the PI according to the Likert scale, a higher prevalence of "extremely committed" was observed, with 28 (82.3%) CHW from the CG and 24 (77.4%) CHW from the IG. **Conclusion:** The results suggest that CHWs have an understanding of their role in the PI and grasp its importance for breast cancer screening. Support: Avon Institute and Libbs Pharmaceuticals.

**Keywords:** Community Health Workers, Screening, Breast Cancer.



## THE ROLE OF TUMOR-ASSOCIATED MACROPHAGES IN THE PREDICTION OF SENTINEL LYMPH NODE INVOLVEMENT IN BREAST CANCER

Aline Carvalho Rocha<sup>1</sup>; Victor Piana Andrade<sup>2</sup>

<sup>1</sup>Ceará Cancer Prevention Institute, Fortaleza – CE, Pronutrition Oncology, Fortaleza – CE, Brazil.

<sup>2</sup>AC Camargo Cancer Center, São Paulo – SP, Brazil.

**Objective:** The purpose of this study was to evaluate the association between the TAM density of breast tumor stroma and sentinel lymph node involvement. **Methodology:** The cohort consisted of patients with histopathological diagnosis of early-stage invasive breast cancer submitted to mastectomy or quadrantectomy and sentinel lymph node biopsy between January 2007 and December 2012 at a Brazilian referral hospital (AC Camargo Cancer Center). Using tissue microarrays, 101 tumors were submitted to immunohistochemistry for total macrophages (CD68), M2 macrophages (CD163), M1 macrophages (HLA-DR), and proliferating macrophages (double staining for CD68 and Ki67). **Results:** The cut-off for the macrophages markers were CD68 (110 céls/mm<sup>2</sup>), CD163 (25 céls/mm<sup>2</sup>) e HLA-DR (80 céls/mm<sup>2</sup>). No association was observed between the TAM density of breast tumor stroma and sentinel and lymph node involvement. Low CD68 and CD163 expression was associated with luminal tumors, while high CD68 and CD163 expression was associated with hormone receptor-negative tumors, histological grade III, and high mitotic indices. HLA-DR was not correlated with hormone receptor status, HER 2 or anatomopathological variables. Most macrophages displayed no proliferation. **Conclusion:** Stromal TAMs not predictive of axillary involvement in tumors of good prognosis.

**Keywords:** tumor-associated macrophages; sentinel lymph; breast cancer



## EVALUATION OF TUMOR INFILTRATING LYMPHOCYTES AS A PREDICTIVE BIOMARKER OF RECURRENCE IN PATIENTS WITH DUCTAL CARCINOMA IN SITU OF THE BREAST

Camila Vitola Pasetto<sup>1</sup>; Fernando Nalesso Aguiar<sup>1</sup>; Marcella Bassan Peixoto<sup>1</sup>; Máira Teixeira Dória<sup>1</sup>; Bruna Salani Mota<sup>1</sup>; Jonathan Yugo Maesaka<sup>1</sup>; José Roberto Filassi<sup>1</sup>; Rodrigo Gonçalves<sup>1</sup>

<sup>1</sup>Department of Obstetrics and Gynecology - Breast Disease Division, São Paulo Medical School, University of São Paulo, Brazil.

**Objective:** To evaluate the association between Tumor Infiltrating Lymphocytes (TILs) in Ductal Carcinoma In Situ (DCIS) samples and disease recurrence. **Methodology:** This is a retrospective cohort study with patients diagnosed with DCIS and treated at University of Sao Paulo. We included women over 18 years old with a diagnosis of DCIS who underwent treatment from Jan/2007 to Dec/2020. Male patients, patients with a diagnosis of invasive or microinvasive disease in the anatomopathological examination of the surgical specimen or patients with history of any neoplasm were excluded. The main outcome was survival analysis according to the quantification of TILs, adjusted for potential confounders. Two pathologists evaluated TILs in the sample with the highest tumor representation and numerically quantified it as percentage. Kaplan-Meier curves, log-rank tests and Cox regression models were used to evaluate survival. Chi-square tests were used to evaluate the association between categorical variables. **Results:** 283 patients met the eligibility criteria. Mean follow-up was 77.2 months, with a recurrence rate of 9.2%. Mean age of patients was 55 years. Clustered amorphous microcalcifications were the most prevalent mammographic presentation. The most frequent histological and IHC features were cribriform presentation (73%) and ER positivity (86%), respectively. We observed that tumors with focal necrosis (HR 6.4 [1.39-34.71] p 0.018) or comedo necrosis (HR 4.53 [1.34 – 15.28] p 0.015) had higher risks of recurrence. Patients with a percentage value of TILs, greater than or equal to 17% also had a higher risk of recurrence (HR 2.97 [95%CI 1.17-7.51] p 0.02). These patients were mostly under 65 years of age (OR 0.45 [95%CI 0.21 - 0.97] p 0.049). In a multivariate model, CN and TILs>17% remained significantly associated with recurrence (p=0.034 and p=0.035 respectively). **Conclusion:** In our cohort, high value of TILs (>17%) and presence of CN were independently associated with DCIS recurrence.

**Keywords:** Ductal Carcinoma In Situ of the breast, Recurrence, Tumor Infiltrating Lymphocytes, Immunological microenvironment.



## THE ALARMING LEVEL OF SEXUAL DYSFUNCTION AMONG BRAZILIAN WOMEN WITH EARLY BREAST CANCER UNDERGOING ADJUVANT ENDOCRINE THERAPY

Daniele Assad Suzuki<sup>1,2</sup>; Heloisa Resende<sup>2,3</sup>; Danielle Laperche dos Santos<sup>2,4</sup>; Renata Arake-  
lian Netto<sup>2,5</sup>; Poliana Albuquerque Signorini<sup>2,6</sup>; Angélica Nogueira-Rodrigues<sup>2,7,8</sup>; Daniela Dor-  
nelles Rosa<sup>2,9</sup>; Romualdo Barroso-Sousa<sup>2,10</sup>

<sup>1</sup>Hospital Sírio-Libanês, Brasília DF, Brazil.

<sup>2</sup>GBECAM – Brazilian Breast Cancer Study Group, Brazil.

<sup>3</sup>University Center - UNIFOA, Volta Redonda - RJ, Brazil.

<sup>4</sup>Hemolabor, Goiânia, Goiás, Brazil.

<sup>5</sup>Women's Hospital, São Paulo, Brazil.

<sup>6</sup>CINPAM - Integrated Amazon Research Center, Manaus, Brazil.

<sup>7</sup>Oncocentro, Grupo Oncoclinicas Belo Horizonte, MG, Brazil

<sup>8</sup>Federal University of Minas Gerais, Brazil.

<sup>9</sup>Hospital Moinhos de Vento, Rio Grande do Sul, Brazil

<sup>10</sup>DASA Oncology, Brasilia Hospital, DASA, Brasília, Brazil

**Objective:** This study aims to determine the frequency of sexual dysfunction among women with early breast cancer on adjuvant endocrine therapy and to explore its relationships with patients' clinical and social characteristics and healthcare insurance. **Methodology:** Women with history of early-stage ER+ invasive carcinoma of the breast on adjuvant endocrine therapy for at least 6 months and at least one sexual intercourse in the previous 4 weeks. were evaluated for sexual dysfunction with the Female Sexual Function Index questionnaire. Demographic and clinical information was reviewed from medical records. Data collection was done with RedCap software and statistical analyzes were performed on the software R (R Core Team (2022)). **Results:** From June 2021 to March 2024, 774 patients were recruited in 15 institutions. Mean age was 56.8 years, 38.8% were premenopausal and 65,1% received chemotherapy. Mean duration of endocrine treatment was 3.7 years. Only 315 (54%) out of 774 patients in this study had a sexual intercourse in the previous 4 weeks before evaluation and were included in the analysis. Sexual dysfunction was found in 252 (89%) participants with active sex life. Age was significantly associated with sexual dysfunction with women > 40 years-old having higher rates (95.3%) compared with younger patients (10% p=0.01). Patients without sexual dysfunction had significantly higher EORTC QLQ C30 domain scores. ET duration between 2 and 5 years vs <2 years, higher vs lower education level, EORTC QLQ-BR23 breast symptoms and sexual functioning higher scores were significantly associated with the occurrence of sexual dysfunction in multivariate analysis (p < 0.05). **Conclusion:** Sexual dysfunction is a great concern for woman. In our study, only 56.37% of women evaluated had sexual intercourse in the previous four weeks and from those women 89% reported sexual dysfunction. This is a major health problem and strategies to improve this issue are crucial.

**Keywords:** Endocrine Therapy; Breast Cancer; Sexuality; Adjuvant treatment



## DOES THE INTRINSIC CHEMORESISTANCE PROFILE MODULATE THE EFFICACY OF NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER PATIENTS?

Martina Lichtenfels<sup>1</sup>; Alessandra Borba Anton de Souza<sup>2</sup>; Bianca Silva Marques<sup>3</sup>; Francine Hickmann Nyland<sup>3</sup>; Júlia Caroline Marcolin<sup>1</sup>; Caroline Brunetto de Farias<sup>1</sup>; Antônio Luiz Frasson<sup>2</sup>; José Luiz Pedrini<sup>3</sup>

<sup>1</sup>Translational Research, Ziel Biosciences, Porto Alegre, RS, Brazil.

<sup>2</sup>Breast Service, Hospital São Lucas da PUCRS, Porto Alegre, RS, Brazil.

<sup>3</sup>Mastology Service of Grupo Hospitalar Conceição, Porto Alegre, RS, Brazil.

**Objective:** To validate the efficacy of an in vitro chemoresistance platform, Bioverso® 61650, to demonstrate tumor resistance in breast cancer (BC) patients with partial response to neoadjuvant chemotherapy (NACT). **Methodology:** Patients with primary invasive BC and who presented residual disease (RD) after NACT were included. Fresh tumor samples were collected during biopsy or surgery and dissociated to obtain the tumor cells. The tumor cells were cultured in the Bioverso® 61650; with 8 cytotoxic drugs, and after 72h, cell viability was evaluated. The test result is defined as low, medium, and high resistance. **Results:** Seven primary tumors and 26 RD after NACT were tested in the chemoresistance platform. Of the RD cohort, 42.3% exhibited triple-negative BC (TNBC) followed by 30.7% of Luminal. A predominant fraction (61.5%) had received a regimen of doxorubicin, cyclophosphamide, and paclitaxel. A marked high resistance was observed across all tested drugs (mean of high resistance: 88% taxanes, 51% anthracyclines, 72% platins, 27% cyclophosphamide, and 67% gemcitabine). Of these patients, 11.5% experienced local recurrence, 23% developed metastases, and 3 (11.5%) patients died from disease progression. We also tested 7 primary tumors that were referred to NACT. One (14.3%) achieved pathological complete response (pCR), one (14.3%) had downstaging with residual microinvasion, and 5 (71.4%) exhibited a poor response. In the chemoresistance platform, the tumors with poor response to NACT presented higher rates of medium-high resistance to the administered drugs. Indeed, they also have a more resistant profile for the 8 cytotoxic drugs tested. **Conclusion:** The preliminary finding highlighted the efficacy of Bioverso® 61650; in demonstrating distinct drug resistance patterns in BC, suggesting a role of intrinsic resistance in the suboptimal response to NACT that could influence the worse prognosis of patients.

**Keywords:** Breast neoplasms; neoadjuvant chemotherapy; drug therapy; residual neoplasms; drug resistance



## ANALYSIS OF THE MAGEE 3 EQUATION FOR ASSESSING PROGNOSIS IN BREAST CANCER TREATMENT

Thais Perez Vazquez<sup>1</sup>; Rodrigo Gonçalves<sup>1</sup>; Fernando Nalesso Aguiar<sup>2</sup>; Bruna Salani Mota<sup>1</sup>; Milena Martello Cristófalo<sup>1</sup>; Edmund Chada Baracat<sup>3</sup>; Jose Roberto Filassi<sup>1</sup>

<sup>1</sup>Department of Obstetrics and Gynecology - Breast Disease division of Clinical Hospital of Medical School of University of São Paulo and Cancer Institute of the State of São Paulo (ICESP), São Paulo, Brazil.

<sup>2</sup>Department of Pathology-Pathological Anatomy Sector of the São Paulo Cancer Institute (ICESP), Medical School of University of São Paulo, São Paulo, Brazil

<sup>3</sup>Department of Obstetrics and Gynecology, Medical School of University of São Paulo, São Paulo, Brazil.

**Objective:** In the treatment of breast cancer, along with molecular tests, tools such as Residual Cancer Burden (RCB) and Magee equations (ME) are used for prognosis. ME3, linked to the OncotypeDX recurrence score, also predicts pathological complete response. Our objective is to evaluate the relationship of ME3 with overall survival (OS), disease-free survival (DFS) and estimate the association between RCB and ME3. **Methodology:** Retrospective cohort study, carried out at the Cancer Institute of the State of São Paulo of the Hospital das Clínicas of the Faculty of Medicine of the University of São Paulo (ICESP/HCFMUSP) including patients with HER2-negative and HR-positive BC undergoing chemotherapy neoadjuvant treatment (NCT) from January 2011 to December 2017. OS and DFS analyzes were performed using the Kaplan-Meier method and the log-rank test. ME3 scores were categorized into low (<18), intermediate (18-31) and high risk (>31). The association between these categories and the RCB categories was assessed using the chi-square test. **Results:** We enrolled 143 women (mean age: 50.3 years, range: 25-85). Pre-NCT, 55.2% had tumors >5cm, 35% had no axillary lymph node involvement (N0). The median OS time was 71.5 months, with a longer OS (43 months) observed for low ME3 values. A statistically significant association was found between ME3 and OS (HR=4.56, 95%CI 1.35 -15.43; p= 0.015), which was not observed for DFS (HR= 2.33, 95%CI 1.06 -5.13;p= 0.036). Regarding RCB scores, 88.1% had moderate (RCB-II, 42.7%) or extensive (RCB-III, 45.4%) residual tumor burden. For ME3, 37.1% had a low value and 53.8% had an intermediate value. An inverse association was identified between RCB and ME3, a statistically significant relationship (chi-square = 39.3215, p = 0.000). **Conclusion:** ME3 demonstrated a statistically significant association with RCB and OS and could serve as an alternative to Oncotype Dx in resource-limited countries.

**Keywords:** Breast cancer; Neoadjuvant Therapy; Prognosis



## INTEGRATED HEALTH TECHNOLOGICAL SOLUTION FOR THE RESOLUTION OF BREAST CANCER SCREENING ACTIONS: ITABERAÍ PROJECT

Douglas Euclides de Silva<sup>1</sup>; Ruffo de Freitas Júnior<sup>2</sup>; Danielle Cristina Netto Rodrigues<sup>2</sup>; Rosângela da Silveira Corrêa<sup>2</sup>; Paola Ferreira de Freitas<sup>2</sup>; Marcus Nascimento Borges<sup>2</sup>; Leonardo Ribeiro Soares<sup>2</sup>

<sup>1</sup>Municipal Health Department of Itaberaí – Goiás, Brazil.

<sup>2</sup>CORA – Advanced Breast Diagnosis Center, Federal University of Goiás. Brazilian Network of Breast Cancer Research, Brazil.

**Objective:** To present the technological solution of the ITABERAÍ Project, characterizing a set of services and applications to integrate actions from the registration of study participants to the follow-up of altered cases. **Methodology:** The technological solution involves integrating the mobile application (Rosa App) with the web system (RosaWatch). The App was developed for use by the Community Health Workers (CHW), in collecting data on study participants, and the system was created for the follow-up of altered cases, from suspicion to diagnostic confirmation and initiation of treatment, and is used by coordinators of the National Health Strategies (NHS), regulation, specialists, and participating study centers. The graphical interface of the App was developed in Dart/Flutter, and the Backend was written in Python/Flask for the creation APIs - Application Programming Interface, responsible for communication between the database and the application. For the relational database, MySQL used. The web system was designed in Python/Flask, and for HTML pages, CSS/Bulma and Javascript were used. For analysis and interpretations, the database is exported to the Red-Cap Platform. **Results:** Currently, there are 98 users, all of whom have received training for the use of the technological platforms, with good acceptance and high rates of proper completion. So far, 3101 women have been randomized; 1607 (51.8%) to the Control Group and 1494 (48.2%) to the Intervention Group; of these, 235 (15.7%) have already completed Cycle 2 of the trial. The App is in version 1.8 and the web system is in version 1.1. **Conclusion:** The technological solution proved to be an important strategy for consolidating information and facilitating the follow-up of altered cases identified by both CHW and NHSs. It is user-friendly and effective for data collection, storage, and export for analysis, which contributes to the resolution of actions for breast cancer screening and improvement of public policies. Support: Avon Institute and Libbs Pharmaceuticals.

**Keywords:** Mobile Applications, Screening, Breast Cancer, Community Health Workers



## EVALUATION OF THE ENDOMETRIUM OF WOMEN WHO USED TAMOXIFEN: CORRELATION BETWEEN ULTRASONOGRAPHIC, HYSTEROSCOPIC AND HISTOLOGICAL FINDINGS

Júnia Franco de Oliveira Neves<sup>1</sup>; Ana Paula Brum Miranda Lopes<sup>1</sup>; Clécio Ênio Murta de Lucena<sup>2</sup>

<sup>1</sup>Hospital das Clínicas, Federal University of Minas Gerais – Belo Horizonte - MG, Brazil.

<sup>2</sup>Department of Obstetrics and Gynecology - Mastology, Medical School, Federal University of Minas Gerais - Belo Horizonte - MG, Brazil.

**Objective:** Tamoxifen (TAM) has been increasingly used for an extended period, longer than five years. Secondary endometrial thickening is a common finding, unrelated to disease. The main objective was to evaluate the correlation between abnormal echographic and hysteroscopic findings of endometrial study with clinical manifestations and histological diagnosis in women with a history of breast cancer and use of TAM. **Methodology:** This is a retrospective study in which medical records of women who underwent hysteroscopy due to endometrial alterations at ultrasonography (US) or abnormal uterine bleeding (AUB), with a history of breast cancer and use of TAM, were reviewed. Patients on current or previous treatment for breast cancer and use of TAM, symptomatic or not, were also evaluated with US and referred to hysteroscopy if endometrial thickness  $\geq 9$  mm, intracavitary imaging or AUB. For data analysis, only postmenopausal patients were included (n=50). A control group was formed by postmenopausal women without a history of breast cancer, with endometrial thickness  $\leq 5$  mm, intracavitary imaging or AUB (n=47). It was approved by ethics committee (CAAE=26397219.4.0000.5149). **Results:** US had good sensitivity in the case group (94.1%) and very unsatisfactory specificity (15.2%) in relation to the final histological result, with 63.6% of false-positives. Hysteroscopy had also high sensitivity (94.1%) and higher specificity than US (72.7%). The percentage of false-positives was 36.0%. Older age was related to altered anatomopathological findings (p=0.036). In the control group, US was also less effective compared to hysteroscopy, but with more cases with altered histopathology. **Conclusion:** The US correlation with the hysteroscopic image and histology in women using TAM is poor. Although hysteroscopy is more accurate, it should not be used as a screening method either. US and hysteroscopy showed similar results in the control group. Outpatient hysteroscopy was very tolerable, with or without biopsy.

**Keywords:** Tamoxifen. Endometrium. Ultrasonography. Hysteroscopy. Histology.



## EVALUATION OF PATHOLOGICAL COMPLETE RESPONSE IN AXILLA IN PATIENTS WITH TRIPLE NEGATIVE BREAST CANCER AND PATHOLOGICAL COMPLETE RESPONSE IN BREAST: A SYSTEMATIC REVIEW

Deise Azevedo Pereira<sup>1</sup>; Milena Martello Cristófalo<sup>1</sup>; Gabriela Bezerra Nóbrega<sup>1</sup>; Jonathan Yugo Maesaka<sup>1</sup>; José Roberto Filassi<sup>1</sup>

<sup>1</sup>Cancer Institute of the State of São Paulo, Hospital das Clínicas of the Faculty of Medicine of USP (ICESP/HCF-MUSP), Brazil.

**Objective:** The role of neoadjuvant chemotherapy in breast cancer has been crucial in obtaining prognostic information through systemic treatment response. Thus, the aim was to evaluate the rate of pathological complete response in patients with triple-negative breast cancer who demonstrated pathological complete response in breast and to determine if it is possible to predict for pathological complete response in axilla based on breast response.

**Methodology:** This is a systematic review conducted following the PRISMA protocol and registered in the study registry PROSPERO ID: 498121. PubMed, Embase, and Web of Science databases were consulted with a selection of 180 studies. The Rayyan platform was used for article screening by 2 independent evaluators until the final selection. The final selected studies were subjected to the Newcastle-Ottawa Scale for methodological quality assessment. **Results:** Ten cohort studies evaluating breast and axilla pathological response after neoadjuvant treatment in breast cancer patients, including triple negatives, were included. In this population, the percentage of pathological complete response in axilla was higher than pathological complete response in breast in almost all studies. Furthermore, in no study was pathological response in breast greater than response in axilla. The overall rate of pathological response solely in the breast in the triple-negative population was 33.4%, solely in the axilla was 49.3%, and considering complete pathological response (breast and axilla) was 26.9%. **Conclusion:** Despite triple-negative tumors presenting an excellent rate of complete pathological response, there is no directly proportional relationship between breast and axilla response rates. Thus, it is still not possible to affirm that pathological complete response in breast can predict pathological complete response, even in a tumor subtype with high chemosensitivity. Other factors beyond tumor subtype may interfere with this response pattern.

**Keywords:** Systematic review, Triple-negative breast cancer, Neoadjuvant chemotherapy, Pathological response



## CAPIVASERTIB AND FULVESTRANT, A NEW SALVATION FOR HORMONE RECEPTOR-POSITIVE BREAST CANCER? A SYSTEMATIC REVIEW

Gustavo Moreira Andrade<sup>1</sup>; Rebeca da Silveira Ferreira<sup>1</sup>; Marcos Vinícius Milki<sup>1</sup>; Sofia Reis de Oliveira Crispim<sup>1</sup>

<sup>1</sup>Department of undergraduate medicine at the Pontifical Catholic University of Goiás

**Objective:** The treatment of estrogen receptor positive (ER+) cancer has advanced significantly with the use of targeted therapies, but there are still cases in which therapy fails, therefore, carrying out a systematic review to address a treatment option for these cancers and visualize the importance of approval in Brazil. **Methodology:** We comprehensively searched PubMed database for trials and phase I, II and III that included treatment with capivasertib and fulvestrant in their papers. Our systematic review followed the PRISMA statement guidelines. **Results:** Cabivasertib in conjunction with fulvestrant is a new therapeutic modality for hormone-positive breast carcinomas refractory to conventional treatment, since the mutability rate of these tumors is high and generates resistance to the various hormonal drugs already established on the market, such as tamoxifen and anastrozole. From the phase 2 FAKTION study, 140 patients were eligible for the study, in which 69 achieved dual treatment with survival of 10.3 months compared to placebo survival of 4.8 months. In the phase 3 CAPItello-291 study, 708 patients were eligible and overall survival was higher in the dual treatment group. Changes in AKT1 were found in 289 and the treatment resulted in survival of 7.3 months compared to survival of 3.1 months with placebo. The adverse effects of the drugs were rash, diarrhea, hyperglycemia, kidney injury, vomiting and atypical pneumonia due to indirect alteration of the immune system. **Conclusion:** It was evident that dual therapy capivasertib with fulvestrant is quite effective in the proposed treatment, even more so in patients with altered PI3K/AKT1/PTEN pathways, with an efficacy and improvement in survival twice that of conventional treatment, and with less adverse effects comparable to the classic therapy. With this, it is safe to affirm the need for ANVISA to take the lead in this advancement in treatment and approve the treatment.

**Keywords:** Breast cancer; Estrogen Receptor positive; Capivasertib; Fulvestrant



## SCENARIO OF BREAST RECONSTRUCTION IN THE UNIFIED HEALTH SYSTEM IN BRASIL

Darley de Lima Ferreira Filho<sup>1</sup>; Thais de Lucena Ferreira<sup>1</sup>; Nancy Cristina Ferraz de Lucena Ferreira<sup>1</sup>

<sup>1</sup>Barão de Lucena Hospital, Recife - Pernambuco, Brazil.

**Objective:** The present study evaluated the number of breast reconstructive surgeries performed in the SUS, in the period from January 2019 to January 2023, making a comparative analysis between mastectomies and breast reconstructions performed in the same period, in addition to observing the impact of the COVID-19 pandemic on a possible reduction in the number of breast reconstructive surgeries in the SUS after the year 2020. **Methodology:** It's a retrospective, cross-sectional and descriptive study of available records of Health Centers linked to the Unified Health System, including data collection regarding the number of mastectomies and reconstructive breast surgeries performed in Brazil. Data were extracted from DATASUS. **Results:** In the period observed, 13,609 breast reconstruction surgeries after mastectomy with breast implants were recorded; 59,325 non-aesthetic female breast plastic surgeries and 54 bilateral reconstructive breast plastic surgeries, including bilateral silicone breast implants and silicone breast implants. There were also 288,599 radical mastectomies with axillary lymphadenectomy in oncology; 24,591 radical mastectomies with lymphadenectomy, 50,524 simple mastectomies in oncology; 17,119 simple mastectomies. Therefore, we found a total of 380,833 radical breast oncological surgeries. When we take into account the year in which the procedures were performed, we noticed a trend towards a lower number of surgeries between the years 2020 and 2021, which may be related to the period of the COVID-19 pandemic. In 2019, 103,802 radical breast surgeries were performed with 20,312 reconstructive surgeries in total, while in 2020 and 2021, 89,958 and 86,085 mastectomies were performed, with 13,730 and 15,389 reconstructive surgeries, respectively. **Conclusion:** we found a rate of 19% of reconstructive surgeries in relation to radical surgeries for breast cancer, which corroborates data from the national literature. We believe that a better training of surgeons who provide care in the SUS, as well as a better subdivision of medical teams, forming groups responsible only for reconstructive surgeries, can increase the number of immediate reconstructions, without jeopardizing the treatment of less aggressive cases with surgery of less complexity.

**Keywords:** mastectomy, radical mastectomy, breast cancer, breast reconstruction, SUS, DATASUS



## APPROVED POSTER

### IMPACT OF SURGICAL TREATMENT ON THE QUALITY OF LIFE OF FEMALE PUBLIC EMPLOYEES IN THE STATE OF SÃO PAULO AFTER BREAST CANCER TREATMENT: A SINGLE INSTITUTION CROSS-SECTION OBSERVATIONAL STUDY

Marcelo Antonini<sup>1,2</sup>; Mylena Scheneider Becale<sup>1</sup>; Arthur Gaia Duarte Peixoto<sup>1</sup>; Andre Matar<sup>3,4</sup>; Odair Ferraro<sup>1</sup>; Reginaldo Guedes Coelho Lopes<sup>1</sup>

<sup>1</sup>Mastology Department of Hospital do Servidor Público Estadual, São Paulo, Brazil.

<sup>2</sup>Preceptor of Mastology of University of São Paulo City (UNICID), São Paulo, Brazil.

<sup>3</sup>Mastology Department of Women's Health Hospital, São Paulo, Brazil.

<sup>4</sup>Breast Surgeon at Oncoclínicas, São Paulo, Brazil.

**Objective:** To assess the quality of life (QoL) of breast cancer patients after surgical treatment, compare groups undergoing conservative, radical, and oncoplastic surgeries, and identify symptoms and treatment-related factors that worsen QoL. **Methodology:** This is an observational, cross-sectional, descriptive, and single-institution study that evaluated QoL in state public servants with breast cancer undergoing surgical treatment at the Hospital do Servidor Público Estadual de São Paulo (HSPE) from October 2021 to December 2022. The study included patients with in situ or non-metastatic invasive breast cancer who completed the assessment questionnaire. The European Organization for Research and Treatment of Cancer 30-Item Quality of Life Questionnaire instruments were used for QoL assessment. The study was submitted through Plataforma Brasil to the Research Ethics Committee of the Hospital do Servidor Público Estadual de São Paulo – Francisco Morato de Oliveira and filed on Platform Brasil with approval numbers (CAAE 68337823.4.0000.5463). All patients included in the study signed the TCLE. **Results:** 300 patients with a mean age of 56.6 years were included in the study. The majority had a partner (55.69%) and completed higher education (72.15%). The most prevalent histological type was Invasive Breast Carcinoma (79.74%) and 69.62% of tumors had a positive hormone receptor subtype. The most common surgical treatment was conservative surgery (77.21%). According to the questionnaire, the population's global QoL level (70.6) was satisfactory and the most affected function was emotional (65.1). The majority were satisfied with their appearance after treatment (74.9), but sexual satisfaction was impaired (57.4). **Conclusion:** Patients surviving BC evaluated in this study showed significant changes in QoL. The symptoms most reported by them were insomnia, pain and fatigue. Advanced clinical staging and triple negative molecular subtype were associated with worse QoL scores. Conservative surgical treatment interfered less with QoL and oncoplastic surgery was associated with lower scores. Adjuvant radiotherapy did not impair QoL. Adjuvant chemotherapy was the systemic treatment that most interfered with the QoL of the patients evaluated.

**Keywords:** Breast cancer; Quality of life; Surgery; Conservative; Radical; Oncoplastic.



## OVERALL SURVIVAL ANALYSIS OF WOMEN WITH BREAST CANCER: A 27-YEAR HISTORICAL COHORT

Marina Elias Rocha<sup>1</sup>; Rosemar Macedo Sousa Rahal<sup>1</sup>; Leonardo Ribeiro Soares<sup>1</sup>; José Carlos Oliveira<sup>1</sup>; Ruffo Freitas-Junior<sup>1</sup>

<sup>1</sup>Federal University of Goiás - Faculty of Medicine, Goiânia – GO, Brazil.

**Objective:** To analyze the overall survival and prognostic factors of women with breast cancer in the city of Goiânia, based on a 27-year historical cohort. **Methodology:** This is a retrospective cohort study of overall survival carried out from 1988 to 2015. Data were collected from the Population-Based Cancer Registry of Goiânia, Goiás, Brazil. Survival curves were performed using the Kaplan-Meier method and the log-rank test. Multiple Cox regression analysis was also used. The significance level adopted was 5% ( $p < 0.05$ ). The research was approved by the Ethics Committee. **Results:** Among the 7,395 women included in the study, there was a predominance of the age group of 50-69 years (45.4%), localized disease (62.4%) and pure luminal phenotype (50.1%). The median survival was 122 months, and the overall survival at five and ten years was 83.1% and 65.5%, respectively. Regarding race/color, white women had a longer survival rate compared to black women (average of 120 versus 110 months). In the Cox regression analysis, the following factors were associated with reduced overall survival: age greater than 70 years (HR 1.33;  $p < 0.001$ ), histological grade III (HR 1.21;  $p = 0.042$ ), recipient of negative estrogen (HR 1.26;  $p = 0.010$ ), negative progesterone receptor (HR 1.47;  $p = 0.041$ ), triple negative tumor phenotype (HR 2.36;  $p = 0.008$ ) and regional disease extension (HR 1.73;  $p = 0.023$ ) or metastatic (HR 2.67;  $p = 0.012$ ). **Conclusion:** In the period analyzed, the overall survival of women with breast cancer was 83.1% in five years and 65.5% in ten years. Several clinical, biological and tumor factors influenced the prognosis in this population.

**Keywords:** Breast Cancer, Women's health, Survival analysis, Epidemiology.



**BRCA1 AND BRCA2 GERMLINE PATHOGENIC VARIANTS IN BRAZILIAN BREAST CANCER PATIENTS FROM A PRIVATE ONCOLOGIC SERVICE IN GOIÂNIA, GOIÁS**

Leandro Gonçalves Oliveira<sup>1</sup>; Ana Claudia Gonçalves Lima<sup>1</sup>; Deidimar Cássia Batista Abreu<sup>1,2</sup>; Felipe Marcio Araújo Oliveira<sup>1</sup>; Lays Costa Marques<sup>1</sup>; Danilo Araújo de Gusmão<sup>1</sup>; Sebastião Alves Pinto<sup>1</sup>; Vera Aparecida Saddi<sup>2</sup>

<sup>1</sup>Goiano Institute of Oncology and Hematology, Goiânia – GO, Brazil.

<sup>2</sup>Pontifical Catholic University of Goiás, Goiânia – GO, Brazil.

**Objective:** to evaluate clinical and pathological characteristics of a group of breast cancer (BC) patients presenting germline pathogenic variants (PV) in the BRCA1 and BRCA2 genes.

**Methodology:** this descriptive study was approved by the Research Ethics Committee of PUC Goiás and comprised the retrospective analysis (clinical, genetic, and histopathological) of patients with BC and PV in BRCA1/BRCA2 genes, treated at a tertiary oncologic service.

**Results:** among 52 patients, 51 were women. The average age for the group was 42.3 years (±11.8 years). Expanded germline genetic panel was performed in 88.6% of the cases, resulting in 29 BRCA1 PV (55.8%) and 23 BRCA2 PV (44.2%). The median time between BC diagnosis and genetic testing was 3 months. Genetic testing was performed before surgery in 72.0% of the patients with a BRCA1 PV and in 39.0% of those with a BRCA2 PV. Histological type was carcinoma without other specification in 86.5% of cases and 48% presented histological grade 3. Among BRCA1 PV, estrogen receptors (ER) were negative in 79% and ER >10% in 78,3% among BRCA2 PV. Cancer in the contralateral breast was detected in 15.4% of the patients. Prophylactic contralateral mastectomy and salpingo-oophorectomy were performed in 73.0% and 57.7% of patients, respectively. With a follow-up period of at least three years in 78.8% of the patients, 92.3% were alive and four deaths were recorded, all of which occurred in patients with a BRCA2 PV, and of these, three evolved with progressive disease in the central nervous system. **Conclusion:** this is the largest retrospective epidemiological study including BC with BRCA1 and BRCA2 PV in the Central-West region in Brazil and one of the largest institutional series of BC patients with BRCA1 and BRCA2 PV in the country. With public policies that improve access to genetic testing in Goiás, new data are expected.

**Keywords:** gene BRCA1, gene BRCA2, genetic variant, mutation, breast neoplasm.



## **BODY COMPOSITION, METABOLIC STATUS AND LEVEL OF PHYSICAL ACTIVITY IN WOMEN WITH BREAST CANCER UNDER ADJUVANT HORMONAL THERAPY**

Amanda Guimarães Castro Custodio<sup>1</sup>; Romualdo Barroso Sousa<sup>2</sup>; Daniele Laperche dos Santos<sup>3</sup>; Fernanda Cesar Moura<sup>1,4</sup>; Anna Luiza Zapalowski<sup>5</sup>; Kelly Farina da Silva Florence<sup>1</sup>; Bruno Santos Wance de Souza<sup>5</sup>; Daniele Assad Suzuki<sup>1</sup>

<sup>1</sup>Hospital Sírio-Libanês, Brasília DF, Brazil.

<sup>2</sup>DASA Oncology/Hospital Brasília, Brasília, DF, Brazil.

<sup>3</sup>Hemolabor, Goiânia, Goiás, Brazil.

<sup>4</sup>Instituto Hospital de Base do Distrito Federal, DF, Brazil.

<sup>5</sup>Brasilia University Center - Ceub, Brasília, DF, Brazil.

**Objective:** Evaluate body composition, level of physical activity and presence of metabolic syndrome in women with breast cancer undergoing adjuvant hormone therapy. **Methodology:** Recruitment was carried out in two tertiary hospitals: one public and one private, with women under adjuvant hormone therapy for at least 6 months or more. Analyzes included sociodemographic, body composition by bioelectrical impedance analysis, biochemical and physical activity level questionnaire. Selected data were used to determine the presence of Metabolic Syndrome according to the classification of the National Cholesterol Education Program Adult Treatment Panel III (NCEP-ATP III). **Results:** Total of 107 women were included, with a mean age of 56.9 years, a mean hormone therapy use of 3.4 years and 81,3% postmenopausal. A total of 71.9% were overweight and 87.8% had high body fat percentage (mean 37.2%), mean skeletal muscle index of 6.7kg/m<sup>2</sup>. Metabolic syndrome was identified in 41.1% of the sample and 50% of the patients were sedentary or with a low level of physical activity. Patients who have undergone prior chemotherapy had, on average, a 3.7% higher fat percentage (p=0,0107). For each increase of one unit in BMI, the chance of developing metabolic syndrome increases by 30% (p=0.0003). Patients with aromatase inhibitors had a 4.52 times greater chance of developing metabolic syndrome when compared with tamoxifen (p=0.0074). Patients stage II and III had a 2.58 times greater chance of being in a lower category of physical activity instead of being in a higher category of physical activity than those with grade I (p=0.0178). Sedentary patients were more associated with a treatment interval of 2 to 5 years and patients with high physical activity are more associated with a treatment interval >5 years of hormonal treatment. **Conclusion:** Patients on adjuvant hormone therapy often had metabolic syndrome and high levels of body fat, even though they were physically active.

**Keywords:** body composition; breast cancer; metabolic syndrome



## PREDICTION OF RECURRENCE AFTER NEOADJUVANT CHEMOTHERAPY (NACT) IN EARLY TRIPLE NEGATIVE BREAST CANCER (TNBC)

Gabriel Berlingieri Polho<sup>1</sup>; Laura Testa<sup>1,2</sup>; Romualdo Barroso de Sousa<sup>3</sup>; Daniel Negrini Batista<sup>1</sup>; Renata Colombo Bonadio<sup>1,2</sup>

<sup>1</sup>Cancer Institute of the State of São Paulo (ICESP), University of São Paulo, Brazil.

<sup>2</sup>D'Or Institute of Research and Education (IDOR), Brazil

<sup>3</sup>Group DASA, Brasília, Brazil.

**Objective:** To explore clinical and pathological biomarkers to predict recurrence after NACT in TNBC. **Methodology:** We retrospectively reviewed our institutional database to identify patients with TNBC who underwent NACT with anthracyclines and taxanes. Medical charts were analyzed to extract data. Log-rank was used to compare survival estimates and Cox proportional hazard to determine effects on survival. Approval from the Ethics Committee was obtained before study procedures. **Results:** We identified 110 TNBC patients receiving NACT. Median age was 48 years, 60% had stage III tumors, and 30.9% achieved pathologic complete response (pCR). One-year disease-free survival (1y-DFS) was 74.6% (95% Confidence Interval [CI] 65.3 - 85.3%). A higher risk of recurrence was observed in patients with residual disease (RD) (Hazard Ratio [HR] 5.0, 95% CI 1.17 - 21.52), stage III disease (HR 2.7, 95% CI 1.02 - 7.48) and neutrophil-to-lymphocyte ratio (NLR) > 2 (HR 2.66, 95%CI 1.03 - 6.87). In a subgroup analysis, the percentage of tumor infiltrating lymphocytes (TILs) < 30% was a favorable prognostic factor in stage II disease (no patients recurred after a median follow-up of 13.2 months), but did not impact prognosis in stage III. Among patients with pCR, those who had NLR > 2 had significantly worse prognosis (1y-DFS: 100% vs 75%, p=0.039), while TILs levels did not predict the risk of recurrence. Prognosis of patients who had RD after NACT was not related to TILs < 30% (p=0.56) or NLR > 2 (p=0.34). **Conclusion:** After NACT, patients with RD and those with high NLR despite pCR have a significant risk of recurrence. TILs level did not discriminate recurrence risk within the subgroups of pCR or RD. As a readily available biomarker, NLR should be further explored to tailor treatment decisions.

**Keywords:** Triple Negative Breast Neoplasms, Drug Therapy, Survival Analysis



## PHYSIOTHERAPIST ACTION AFTER SURGICAL TREATMENT OF BREAST CANCER VIA TELECONSULTATION

Marcelo Antonini<sup>1,2</sup>; Isadora de Godoy Carvalho Braga Savi<sup>3</sup>; Gisela Rosa Franco Salerno<sup>3</sup>

<sup>1</sup>Mastology Department of Hospital do Servidor Público Estadual, São Paulo, Brazil.

<sup>2</sup>Preceptor of Mastology of University of São Paulo City (UNICID), São Paulo, Brazil.

<sup>3</sup>Physiotherapy Sector of Mackenzie Presbyterian University, São Paulo, Brazil.

**Objective:** to evaluate the effect of teleservice in immediate postoperative period of breast cancer, considering pain, fatigue, quality of life, mobility of the upper limb and presence of lymphedema. **Methodology:** Prospective longitudinal study with 10 women 15 days after surgery, treated individually for 10 consecutive weeks, "Zoom Platform". Household resources were used for care, always with the help of a family member. They were evaluated regarding quality of life, pain, fatigue, presence of lymphedema and range of movement. All were approached in the immediate post-operative period where initial guidance was given regarding skin care and arm movements. As treatment we use progressive exercises, including respiratory, metabolic, upper limb mobility and myofascial mobilization associated with self-drainage based on complex decongestive therapy. Data were statistically analyzed with KS and T Test ( $p=0.05$ ). Approval of the Brazil Platform (CAAE: 56561222.9.0000.0084). **Results:** The participants were  $65.4 \pm 10$  years old,  $25.08 \pm 3.9$  kg/m<sup>2</sup> and 70% underwent quadrantectomy. Perimetry was maintained, pain and fatigue of the participants improved, with no edema/lymphedema occurring. In range of movement, there was a statistically significant increase in flexion ( $p=0.03$ ) and abduction ( $p=0.03$ ) movements, allowing a reduction in kinesiophobia, quality of life didn't change. **Conclusion:** Teleconsultation made it possible to evaluate the participants' symptoms and willingness to receive care. The proposed therapies demonstrated great improvements in shoulder range of motion, allowing the maintenance of functionality in daily activities. Early gain in range of motion also prepared women to face future treatments such as chemotherapy and radiotherapy.

**Keywords:** Breast Neoplasms, Physical Therapy Modalities, Primary Health Care, Kinesiophobia, Breast Cancer Lymphedema



## ANALYSIS OF THE TIME INTERVAL BETWEEN BREAST CANCER DETECTION AND DIAGNOSIS IN THE BRAZILIAN UNIFIED HEALTH SYSTEM (SUS) FROM 2008 TO 2014

Eler da Silva Reis<sup>1</sup>; Clécio Ênio Murta de Lucena<sup>2</sup>; Mariangela Leal Cherchiglia<sup>3</sup>; Ilka Afonso Reis<sup>4</sup>

<sup>1</sup>Postgraduate Program in Public Health, Medical School, Federal University of Minas Gerais, Brazil.

<sup>2</sup>Department of Obstetrics and Gynecology - Women's Health Division, Federal University of Minas Gerais, Brazil.

<sup>3</sup>Department of Preventive and Social Medicine - Public Health Division, Federal University of Minas Gerais, Brazil.

<sup>4</sup>Department of Statistics - Public Health Division, Federal University of Minas Gerais, Brazil.

**Objective:** To present an analysis of the time interval between the detection and diagnosis of breast cancer among women whose diagnosis was registered in the Unified Health System (SUS) between 2008 and 2014 in the five geographic regions of Brazil. **Methodology:** This study is part of the project "Evaluation of the epidemiological, economic and care trajectory of high-cost procedures in the SUS", approved by the UFMG Research Ethics Committee. This is a retrospective cohort study using data from the "National Oncology Database", analyzed using descriptive and exploratory statistics. The results, presented in tables and graphs, included medians and interquartile ranges (Q1, Q3) stratified by sociodemographic variables, tumor staging and occurrence of death during the study period. Women diagnosed with breast cancer registered with the SUS between January 1, 2008 and December 31, 2014 (204,305 women) participated. The main reason for exclusion was not having undergone any breast cancer diagnostic exam through the SUS (125,480 women; 61.42%). After exclusions, data from 65,555 women (32.07%) were analyzed. **Results:** The time interval between detection and diagnosis of breast cancer varied depending on the geographic region, with a Brazilian median of 132 days (Q1= 61; Q3= 294); only 11% of women completed the diagnosis within 30 days. The majority of the population was made up of white women (59%) aged between 40 and 59 years; 75.5% of women had stage 2 or more advanced tumors. Women with stage 3 and 4 tumors had the shortest time intervals to diagnosis. Similar patterns were found among women who died from breast cancer, with a higher proportion of deaths among indigenous and black women. **Conclusion:** These results indicate the fragility of the care trajectory and highlight the challenge of implementing the diagnosis within 30 days, as determined by Law No. 13,896/2019, which came into force in Brazil in April 2020.

**Keywords:** Breast Neoplasms. Public Health Service. Early Diagnosis. Delayed Diagnosis.



## HISTOPATHOLOGICAL FINDINGS OF PATIENTS UNDERGOING VACUUM BREAST BIOPSY

Maryana Neves de Souza<sup>1</sup>; Renata Grigorio dos Anjos<sup>2</sup>; Adriana de Freitas Torres<sup>3</sup>; Heverton Leal Ernesto Amorim<sup>4</sup>

<sup>1</sup>Mastologist, Fellowship in breast imaging and minimally invasive procedures at UD Diagnóstico por Imagem. João Pessoa. Paraíba. Brazil.

<sup>2</sup>Department of Statistics, Federal University of Pernambuco, UFPE. Recife. Pernambuco. Brazil.

<sup>3</sup>Department of Obstetrics and Gynecology, Center for Medical Sciences, Federal University of Paraíba, UFPB. João Pessoa. Paraíba. Brazil.

<sup>4</sup>Responsible for Department of Breast Imaging and Minimally Invasive Procedures at UD Diagnóstico por Imagem. João Pessoa. Paraíba. Brazil.

**Objective:** To categorize the histopathological findings of breast lesions investigated through vacuum-assisted biopsy, in a reference service, using the National Health Service Screening Program (NHSBSP) classification. **Methodology:** This was a cross-sectional observational study. Information was collected from a database available in a private clinic in the city of João Pessoa/PB – UD Diagnóstico por Imagem from June 2021 to June 2023. Were included 416 female patients who underwent the procedure and 13 patients who did not have data on anatomopathological results were excluded, totaling a final sample of 403 patients. Associations between categorical variables were verified using the Chi-square test or Fisher's exact test. The significance level will be 5%. **Results:** Patients were divided according to the classification of the anatomopathological results of the lesions by the NHSBSP category. Of the 403 patients, 2 were selected as B1 (0.5%), 224 (55.6%) were selected as B2, 123 (30.5%) as B3, only 1 (0.2%) as B4 and 53 (13.2%) as B5. Of the B3 lesions, 66.67% corresponded to histopathological findings of radiating scar. Of the malignant lesions (B5), the highest percentage was histopathological results of ductal carcinoma in situ, representing 58.49% of the lesions. Of these cases, 30 (96.7%) were diagnosed using aspiration biopsy guided by mammography and with the indication of the procedure due to grouped Bi-RADS® 4 microcalcifications. The microcalcifications for B5 lesions compared to B3 lesions were significant  $p < 0.0001$ . **Conclusion:** The prevalence of "in situ" lesions, favoring the early diagnosis of breast neoplasms. Mammotomy has proven to be a safe and effective method for diagnosing suspicious non-palpable lesions and benign cases can be considered treated.

**Keywords:** Breast Neoplasms, Carcinoma Intraductal Noninfiltrating, Breast Carcinoma In Situ, Pathology, Biopsy.



## CANCER HEALTH DISPARITIES AMONG PATIENTS WITH ESTROGEN-RECEPTOR POSITIVE INVASIVE BREAST CARCINOMA UNDERGOING ADJUVANT ENDOCRINE THERAPY: IMPACT OF INSURANCE COVERAGE

Danielle Laperche-Santos<sup>1</sup>; Daniele Assad-Suzuki<sup>2</sup>; Heloisa Resende<sup>3</sup>; Renata Arakelian Netto<sup>4</sup>; Poliana Albuquerque Signorini<sup>5</sup>; Angélica Nogueira-Rodrigues<sup>6</sup>; Daniela Dornelles Rosa<sup>7</sup>; Romualdo Barroso-Sousa<sup>8</sup>

<sup>1</sup>Hemolabor, Goiânia, Brazil.

<sup>2</sup>Hospital Sírio-Libanês, Brasília, Brazil.

<sup>3</sup>University Center - UNIFOA, Volta Redonda, Brazil; Instituto Projeto CURA, São Paulo, Brazil; Latin American Cooperative Oncology Group (LACOG), Porto Alegre, Brazil.

<sup>4</sup>Women's Hospital, São Paulo, Brazil.

<sup>5</sup>CINPAM - Integrated Amazon Research Center, Manaus, Brazil.

<sup>6</sup>Federal University of Minas Gerais, Brazil; ONCOCENTRO, Oncoclinicas Group, Belo Horizonte, Brazil.

<sup>7</sup>Hospital Moinhos de Vento, Rio Grande do Sul, Brazil

<sup>8</sup>DASA Oncology, Brasilia Hospital, DASA, Brasília, Brazil

**Objective:** Challenges in social dynamics and disparities in healthcare persist within the context of cancer care in Brazil and there is a gap regarding the access to optimal care between patients in the public and private health systems. The objective of this work was to describe patients' characteristics at diagnosis, patterns of treatment received and to evaluate diagnosis-to-treatment interval and their association with health insurance coverage.

**Methodology:** We performed a real-world data analysis among women with a history of early-stage ER+ invasive carcinoma of the breast on adjuvant endocrine therapy for at least 6 months in 15 centers of five different Brazilian regions. Data collection was done with RedCap software. Analyses were performed in SAS 9.4. **Results:** From June 2021 to March 2024, 774 patients were included. Mean age was 56.8 years; 52.2% were publicly insured. Treatment at public institutions was significantly associated with more premenopausal patients (47.6% vs. 29.2%,  $p < 0.0001$ ), living without a partner (46.8% vs. 34.7%,  $p = 0.001$ ), lower educational level (46.1% vs. 6.8%,  $p < 0.0001$ ), stage III tumors (29.1% vs. 13.5%,  $p < 0.0001$ ), mastectomy (35.0% vs. 29.8%,  $p = 0.001$ ), axillary dissection (40.6% vs. 18.1%,  $p < 0.0001$ ), chemotherapy (72.7% vs. 58.5%,  $p < 0.0001$ ), radiotherapy (87.2% vs. 78.7%,  $p = 0.003$ ), lower use of ovarian function suppression plus ET (4.2% vs. 18.8%,  $p < 0.0001$ ), lower use of CDK4/6 inhibitors (0.6% vs. 2.7%,  $p = 0.02$ ) and higher use of tamoxifen (53.8% vs. 29.4%,  $p < 0.0001$ ). The diagnosis-to-treatment interval was the double for women treated in the public versus the private system (94 vs. 42 days,  $p < 0.0001$ ). **Conclusion:** Patients with public health coverage were diagnosed with later stages and received more local treatment and less intense and optimal endocrine therapy when compared to privately insured patients. Treatment initiation intervals exceeding the recommended 60-day limit were observed for patients receiving treatment in the public service, despite legal restrictions.

**Keywords:** Breast Neoplasms; Antineoplastic hormonal agents; Healthcare Disparities; Treatment Delay, Health Insurance



## TWO YEARS POST-COVID-19: EVALUATING THE IMPACT ON BRAZIL'S BREAST CANCER EARLY DETECTION PROGRAM

Marcelo Antonini<sup>1,2</sup>; Andre Mattar<sup>3,4</sup>; Denise Joffly Pereira da Costa Pinheiro<sup>1</sup>; Marina Diogenes Teixeira<sup>3</sup>; Andressa Gonçalves Amorim<sup>3</sup>; Marcellus do Nascimento Moreira Ramos<sup>3</sup>; Odair Ferraro<sup>1</sup>; Reginaldo Guedes Coelho Lopes<sup>3</sup>

<sup>1</sup>Mastology Department of Hospital do Servidor Público Estadual, São Paulo, Brazil.

<sup>2</sup>Preceptor of Mastology of University of São Paulo City (UNICID), São Paulo, Brazil.

<sup>3</sup>Mastology Department of Women's Health Hospital, São Paulo, Brazil.

<sup>4</sup>Breast Surgeon at Oncoclínicas, São Paulo, Brazil.

**Objective:** To evaluate the impact of the COVID-19 pandemic on mammographic screening in Brazil over a nine-year span (2015-2023), focusing on BIRADS® results, breast cancer diagnosis rates, and staging. **Methodology:** This ecological observational study used retrospective data from Brazil's mammographic screening database, DATASUS – SISCAN, covering females aged 50-69 years. We analyzed the number of mammograms, BIRADS® results, and cancer staging, using a chi-square test to assess the variation from expected frequencies, with an alpha level of 0.05 for statistical significance. **Results:** From 2015 to 2023, 23,851,371 mammograms were performed, with 542,889 (2.3%) diagnostic and 23,308,482 (97.7%) screening. Of these, 15,000,628 met the inclusion criteria. In 2020, mammograms decreased by 39.6%, followed by a 12.6% drop in 2021. There was a slight increase in 2022 and a significant rise of 17.9% in 2023, though not reaching the anticipated 2,750,000 annual screenings. There was a notable increase in BIRADS® 4 and 5 post-pandemic, suggesting a shift in staging patterns. Early-stage diagnoses were higher than expected pre-pandemic, while later-stage diagnoses (III and IV) increased post-pandemic, indicating potential delays in detection. **Conclusion:** The study revealed significant shifts in mammographic screening and breast cancer diagnosis over nine years. There was a marked decrease during the pandemic with a subsequent rebound. The increase in BIRADS® categories 4 and 5 and the shift to later-stage diagnoses post-pandemic underscore the pandemic's impact on the timeliness and stage of breast cancer detection in Brazil.

**Keywords:** breast cancer, screening, pandemic, COVID19, mammographic



## ANALYSIS OF BIOPSYCHOSOCIAL ASPECTS OF BREAST CANCER SURVIVORS AND APPARENTLY HEALTHY WOMEN

Vitor Alves Marques<sup>1</sup>; Wanderson Divino Nilo dos Santos<sup>1</sup>; Rafael Ribeiro Alves<sup>1</sup>; Ellen Gomes de Oliveira<sup>1</sup>; Flavia Batista Gomes Noletto<sup>2</sup>; Tatiane Nunes da Silva Rodarte<sup>3</sup>; Naiany Pereira Silva<sup>2</sup>; Carlos Alexandre Vieira<sup>4,5</sup>

<sup>1</sup>Student of the Postgraduate Program in Health Sciences /FM/UFG, Brazil.

<sup>2</sup>Student of the Postgraduate Program in Physical Education /FEFD/UFG, Brazil.

<sup>3</sup>CORA physiotherapist/FM/UFG, Brazil

<sup>4</sup>Professor of the Postgraduate Program in Health Sciences /FM/UFG, Brazil.

<sup>5</sup>Professor of the Postgraduate Program in Physical Education /FEFD/UFG, Brazil

**Objective:** To compare the biopsychosocial aspects 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 functional performance was evaluated by the DASH, the kinesiophobia it was evaluated by the Tampa Scale, quality of life by the EORTC BR23, fatigue it was evaluated FACT B+4. 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. Pearson's correlation was used to evaluate the relationship between variables with normal distribution, while the Spearman correlation was used for variables without normal distribution. Statistical significance was set at  $p \leq 0.05$  **Results:** There was significant difference between groups on functional performance (BCS: 17,05 ± 2,11; CNT: 2,61 ± 6,22  $p < 0,001$ ) and kinesiophobia (BCS: 40,50 ± 10,14; CNT: 36,16 ± 6,87  $p = 0,05$ ), quality of life (BCS: 1,71 ± 0,59; CNT: 1,07 ± 0,36,  $p < 0,01$ ), fatigue (BCS: 80,68 ± 12,46; CNT: 88,53 ± 11,56,  $p = 0,013$ ). **Conclusion:** The current results suggest the breast cancer survivors showed lower results of functional performance, kinesiophobia, quality of life and fatigue in comparison the women apparently health.

**Keywords:** cancer; mental health; psychobiological profile



## PREDICTION OF PATHOLOGIC COMPLETE RESPONSE TO CHEMOIMMUNOTHERAPY IN TRI- PLE-NEGATIVE BREAST CANCER USING TUMOR-INFILTRATING LYMPHOCYTES – EXPLOITING CUTOFF VALUES

Renata Rodrigues da Cunha Colombo Bonadio<sup>1,2</sup>; Monique Tavares<sup>2</sup>; Jose Bines<sup>2,3</sup>; Carlos Henrique dos Anjos<sup>2,4</sup>; Bruna M. Zucchetti<sup>2,5</sup>; Anezka Ferrari<sup>7</sup>; Laura Testa<sup>1,2</sup>; Romualdo Barroso-Sousa<sup>2,8</sup>

<sup>1</sup>D'Or Institute for Research and Education (IDOR), São Paulo, Brazil.

<sup>2</sup>Brazilian Breast Cancer Study Group (GBECAM), São Paulo, Brazil.

<sup>3</sup>A.C.Camargo Cancer Center, São Paulo, Brasil.

<sup>4</sup>D'Or Institute for Research and Education (IDOR), Rio de Janeiro, Brazil.

<sup>5</sup>Medical Oncology Department, Hospital Sírio-Libanês, São Paulo, Brazil.

<sup>6</sup>DASA Oncology, Hospital 9 de Julho, São Paulo, Brazil.

<sup>7</sup>DASA Oncology, Hospital Santa Paula, São Paulo, Brazil.

<sup>8</sup>DASA Oncology, Brasilia Hospital, DASA, Brasília, Brazil

**Objective:** Triple-negative breast cancer (TNBC) prognosis is significantly influenced by tumor-infiltrating lymphocytes (TILs), but the lack of validated cutoff values limits their clinical applicability. This study aimed to assess TILs as predictors of pathologic complete response (pCR) within the Neo-Real study, a multicenter, real-world data investigation on neoadjuvant pembrolizumab plus chemotherapy (P+CT) for TNBC. **Methodology:** TILs were evaluated using the standardized methodology of the International TILs Working Group. Logistic regression and receiver operating characteristic (ROC) curve analysis were performed to evaluate the predictive ability of TILs and multivariable models for pCR. **Results:** The analysis included 128 patients.

The pCR and results of ROC curve analysis for each TILs' cutoff were as follows:

- 10%: pCR of 39% for TILs < 10% vs 69% for TILs ≥ 10% (AUC 0.635, accuracy 66.7%, sensitivity 78%, specificity 50%);
- 30%: pCR of 52.2% for TILs < 30% vs 78.8% for TILs ≥ 30% (AUC 0.608, accuracy 56.2%, sensitivity 35.6%, specificity 86%);
- 50%: pCR of 55.4% for TILs < 50% vs 87.5% for TILs ≥ 50% (AUC 0.575, accuracy 50.4%, sensitivity 19.1%, specificity 96%);

A cutoff of 10% demonstrated the highest accuracy for pCR, while high specificity was observed at a cutoff of 50%. The probability of residual disease if TILs ≥ 50% is considerably low.

A multivariable logistic regression model, using TILs (≥ 10% vs < 10%), Ki67 (≥ 50% vs < 50%), and tumor stage (III vs II), exhibited the highest AUC (0.688) for predicting pCR. **Conclusion:** Our study underscores the predictive value of TILs for pCR following neoadjuvant P+CT for TNBC. Further enhancement of TILs' predictive potential may be achieved through multivariable models. The cutoff value of ≥ 50% identified patients with a very high probability of pCR. The results reinforce TILs' use as a biomarker for treatment de-escalation, especially for TILs ≥ 50%.

**Keywords:** Triple-negative Breast Neoplasm; Immunotherapy; Tumor Infiltrating Lymphocytes



## REGIONAL DISPARITIES IN BREAST CANCER HISTOPATHOLOGICAL EXAMINATION TURN-AROUND TIME: A FIVE-YEAR COMPARATIVE ANALYSIS IN BRAZIL

Natália Barros Salgado Vieira<sup>1</sup>; Mariana Valadares Bittar<sup>1</sup>; Bianca Santos Arrais de Lavor<sup>1</sup>; Gabriel de Assis Marra<sup>1</sup>; Paulo Lisbão de Carvalho Esteves<sup>1</sup>

<sup>1</sup>Faculty of Education and Health Sciences, University Center of Brasilia, Brazil.

**Objective:** To compare the turnaround time for histopathological examination in cases of breast cancer among the regions of Brazil over the last 5 years. **Methodology:** A retrospective study of descriptive and quantitative nature was conducted using secondary data obtained from the Cancer Information System (SISCAN), available on the DATASUS electronic platform. It evaluated Brazil's turnaround time for breast cancer histopathological examinations, covering the collection, laboratory arrival, and result release intervals over the past 5 years (2019-2023), comparing data across the nation's five regions. **Results:** The Central-West region demonstrated slightly the best percentage of examination completion within 30 days (65.8%), with 16.3% finalized after 60 days. The South region followed, with 65.3% of histopathological examinations completed within 30 days, and only 13.5% conducted after 60 days. Maintaining good performance, the Southeast region presented 65.1% of examinations reported within 30 days, with 14.1% released after 60 days. Meanwhile, the North and Northeast regions showed lower percentages of process completion within 30 days, with 47.3% and 50.1% of examinations, respectively. The percentage of analyses released only after 60 days is also higher, corresponding to 23.8% in the North region and 25.5% in the Northeast. In light of the foregoing, national data indicate an average of 58.5% of examinations reported within the first 30 days, with 18.9% of these released after 60 days. **Conclusion:** The results reveal significant variations in the turnaround time for histopathological examination of breast cancer cases among the regions of Brazil. These disparities underscore the importance of health policies aimed at optimizing diagnostic procedures in the country, especially in the context of breast cancer, where early detection plays a crucial role in the treatment and prognosis of patients.

**Keywords:** Biopsy, Breast Cancer, Socioeconomic Disparities in Health.



## RETURN TO WORK AFTER BREAST CANCER TREATMENT IN STATE PUBLIC EMPLOYEES IN BRAZIL: A CROSS-SECTIONAL OBSERVATIONAL STUDY

Marcelo Antonini<sup>1,2</sup>; Arthur Gaia Duarte Peixoto<sup>1</sup>; Mylena Scheneider Becale<sup>1</sup>; Andre Matar<sup>3,4</sup>; Odair Ferraro<sup>1</sup>; Reginaldo Guedes Coelho Lopes<sup>1</sup>

<sup>1</sup>Mastology Department of Hospital do Servidor Público Estadual, São Paulo, Brazil.

<sup>2</sup>Preceptor of Mastology of University of São Paulo City (UNICID), São Paulo, Brazil.

<sup>3</sup>Mastology Department of Women's Health Hospital, São Paulo, Brazil.

<sup>4</sup>Breast Surgeon at Oncoclínicas, São Paulo, Brazil.

**Objective:** The aim of the study is to evaluate the return-to-work (RTW) rate in public employees patients in the State of São Paulo with breast cancer who underwent surgical treatment in a single institution. **Methodology:** This is an observational, descriptive, cross-sectional, and single-institution study involving public employees, with non-metastatic breast cancer who underwent surgical treatment at the State Public Servant Hospital of São Paulo from October 2021 to December 2022.. To assess the quality of life, the following instruments were used the questionnaire EORTC QLQ-30 and QLQ-BR 22. The study was submitted through Plataforma Brazil and approved (CAAE 68337823.4.0000.5463. **Results:** Of the 339 eligible patients, 300 (88.2%) were still working at the time of diagnosis. The RTW rate in this study was 74.41%. A significant majority of patients, 80.6%, resumed employment within six months, whereas 15.1% returned between six to twelve months, and 12.8% between twelve to eighteen months, respectively. The predominant reason cited for RTW was personal satisfaction with financial necessity prompting. In the EORTC BR-23 sub questionnaire, referring to functional scales, patients who returned to work had a higher score in the body image assessment, average 76.0 versus 52.3, when compared to patients who did not RTW ( $p = 0.032$ ). It was shown that the type of surgical treatment impacts the RTW rate ( $p < 0.001$ ). Among patients who RTW, 87.5% underwent BCS compared to 9.1% of those who did not return to work. In this same group, it was observed that 45.5% underwent radical and oncoplastic surgery. Adjuvant treatment also correlated with RTW, patients undergoing adjuvant chemotherapy have a 6.25-fold increased risk of not returning to work when compared to patients who did not undergo adjuvant chemotherapy. **Conclusion:** The RTW rate among state public employees in the state of São Paulo was 74.41%. It was observed that oncological treatment (surgical, chemotherapy and radiotherapy) has a statistically significant association with the RTW rate. Socially, the offer of adjustment by the employer influences the RT decision, in addition to the patient's personal and work satisfaction. Returning to work is associated with the quality of life of women surviving BC.

**Keywords:** breast cancer, Latin America, return to work, survivorship.



## EPIDEMIOLOGIC ANALYSIS OF MAMMOGRAPHIES AND THE PANDEMIC IMPACT ON THE EARLY DETECTION OF NEOPLASTIC LESIONS IN TOCANTINS FROM 2020 TO 2023

Ianny Keruly Damião Pessoa Duarte<sup>1</sup>; Cândida Verônica de Andrade Paz<sup>1</sup>; Eduarda Martins dos Santos<sup>1</sup>; Karoline Nunes Rodrigues Viana<sup>1</sup>; Tássia Aimê Teixeira Nascimento<sup>1</sup>; Jascyone Barbosa da Silva<sup>1</sup>; Rafael Pereira Camargo<sup>1</sup>; Fabiana Cândida Queiroz Santos Anjos<sup>2</sup>

<sup>1</sup>Medicine student - University of Gurupi, Brazil.

<sup>2</sup>Medical residency in Gynecology and Obstetrics - Federal University of Uberlândia, Brazil.

**Objective:** Analyse the number of screening mammograms and the results obtained in the female population from 50 to 69 years old in the state of Tocantins during the pandemic and post-pandemic period. **Methodology:** Quantitative and comparative study from the pandemic period of 2020/2021 and post-pandemic period 2022/2023. Data was collected from the Cancer Information System (SISCAN/DATASUS) of women from 50 to 69 years old, comparing the mammography results from the pandemic and post-pandemic period. **Results:** During the pandemic, 9601 mammographies of women from 50 to 69 years old were performed considering the classified results by the Breast Imaging Reporting and Data System (BI-RADS) in comparison to the total of 12208 mammographies in post-pandemic in the same conditions, representing an add of 27,1%. Considering the categories with major relevance, BI-RADS 0 has an increase of 33,57%, BI-RADS 4 with a rise of 100%, and BI-RADS 5 with an accrual of 27,77% in the post-pandemic interval. This increase in both categories with major malignancy has an add of 85,71%. Furthermore, BI-RADS 1, 2, and 3 showed an increase of 25,5%, gathering most women in the screening age, and BI-RADS 6 with follow-up in two patients. **Conclusion:** A significant increase was observed in the detection of suspected lesions when bringing expressive accrual results in more malignancy categories in post-pandemic, demonstrating a bigger detection in advanced cases that result in biopsy and follow-up with hormone therapy and chemotherapy. It is necessary to emphasize health prevention to identify women who do not take back their needs and the periodicity of mammography recommended by the government.

**Keywords:** breast cancer; diagnostic screening programs; mammography; pandemics.



## INTRINSIC CHEMORESISTANCE IN LUMINAL BREAST NEOPLASMS: EFFICACY FROM AN INNOVATIVE IN VITRO CHEMORESISTANCE PLATFORM

Martina Lichtenfels<sup>1</sup>; Vivian Fontana<sup>2</sup>; Isis Mendes Barbosa<sup>2</sup>; Francine Hickmann Nyland<sup>2</sup>; Camila Alves da Silva<sup>1</sup>; Júlia Caroline Marcolin<sup>1</sup>; Caroline Brunetto de Farias<sup>1</sup>; José Luiz Pedrini<sup>2</sup>

<sup>1</sup>Translational Research, Ziel Biosciences, Porto Alegre, RS, Brazil.

<sup>2</sup>Mastology Service of Grupo Hospitalar Conceição, Porto Alegre, RS, Brazil.

**Objective:** To validate an in vitro chemoresistance platform, Bioverso<sup>®</sup>, to predict the responsiveness of Luminal tumors to cytotoxic and target therapy drugs. **Methodology:** Patients with estrogen receptor (ER) positive HER2 negative breast cancer (BC) who underwent upfront surgery were included. Fresh tumor samples were collected during surgery and dissociated to obtain the tumor cells. The tumor cells were cultured in the Bioverso<sup>®</sup> with the drugs and after 72h cell viability was evaluated. The test result is defined as low, medium, and high resistance. **Results:** Samples from 31 patients diagnosed with ER+/HER- undergoing upfront surgery were tested in the Bioverso<sup>®</sup>. Eighteen (58%) patients presented Luminal A tumors and 13 (42%) Luminal B. A majority (83.8%) underwent breast-conserving surgery and sentinel lymph node biopsy (80%). The tumor staging revealed 61.2% T1, followed by 35.5% T2 and 3.3% T3 categories. Invasive ductal carcinoma was predominant (90%), with histologic grading of 23.4% grade 1, 63.3% grade 2, and 13.3% grade 3. Adjuvant chemotherapy, predominantly ACT regimen, was administered to 38.7% of the cohort. Over a median follow-up of 13 months, no recurrence was observed. The chemoresistance platform demonstrated higher rates of high resistance to taxanes (63.3% docetaxel and 70.9% paclitaxel), platin-based drugs (60% carboplatin and 46.4% cisplatin) and mTOR inhibitors (60% everolimus) compared with anthracyclines (22.6% doxorubicin and 25.8% epirubicin), cyclophosphamide (14.8%) and PARP inhibitors (36.8% Olaparib). The high resistance to taxanes, platin drugs, and everolimus corroborates existing literature, and the data regarding olaparib invites consideration for personalized treatment based on tumor biomarker profiling. **Conclusion:** The preliminary finding highlighted capability of Bioverso<sup>®</sup> to delineate distinct resistance patterns to both cytotoxic drugs and target therapies in Luminal BC and suggest the potential influence of intrinsic tumor resistance in the differential response to BC treatments.

**Keywords:** Breast neoplasms; drug therapy; taxanes; anthracyclines; drug resistance



## MANAGEMENT DISPARITY IN ELDERLY FEMALE WITH BREAST CANCER FOLLOWING MASTECTOMY: A CROSS-SECTIONAL STUDY

Lilian de Sá Paz Ramos<sup>1, 2</sup>; Larissa Matos Almeida Moura<sup>2</sup>; Jorge Villanova Biazús<sup>1</sup>.

<sup>1</sup>Postgraduate Program in Health Sciences: Gynecology and Obstetrics, Medical School, Federal University of Rio Grande do Sul, Brazil.

<sup>2</sup>Oncology Clinic - CLION, Oncoclinicas Group, Brazil

**Objective:** To evaluate the oncologic approach of elderly women (> 70 years old) diagnosed with stage I-III breast cancer who undergoing mastectomy and compare with younger patients. **Methodology:** In this single-center study we included a total of 930 female patients with early breast cancer who were undergoing mastectomy from January 2018 to December 2022 at Aristides Maltez Hospital. For this analysis, patients were divided in two groups (group 1: > 70 years and group 2: < 70 years). We performed review of medical records and collected clinical and sociodemographic characteristics, in addition to data of surgery, systemic treatments and pathological reports. This study was approved by the Research Ethics Committee of Institute of Health Sciences at the Federal University of Bahia, with CAAE number 57203622.0.0000.5662. **Results:** Ninety-six patients (10.3%) were 70 years old or older. Between the two groups, there was not statistically significant difference in demographics features or clinical stage, but group 1 had slightly more clinically node-positive (56.7% vs 41.4%;  $p=0.038$ ). The group 1 was submitted to more up-front surgery, even in more advanced stages, more axillary dissection (86.5% vs 73%;  $p = 0.006$ ), but, in contrast, received less neoadjuvant chemotherapy [33.3% versus (vs) 50.4%;  $p < 0.01$ ]. Immediate breast reconstruction was performed less frequently in elderly patients (1% vs 23.9%;  $p < 0.01$ ). Furthermore, elderly women received less adjuvant anthracyclines-based chemotherapy (52.5% vs 76.7%;  $p < 0.01$ ) and more adjuvant chemotherapy with non-anthracyclines-based protocols (30% vs 5.5%;  $p < 0.01$ ). **Conclusion:** In this study, we found management disparities between elderly and younger females with breast cancer. Elderly patients were undergoing to more axillary node dissection and less immediate breast reconstruction. Furthermore, 70 years old or older women received less neoadjuvant chemotherapy and anthracycline-based adjuvant therapy, even though there were no significant difference in clinical stage and elderly had higher incidence of positive axillary lymph node.

**Keywords:** breast cancer, elderly, mastectomy, neoadjuvant therapy, chemotherapy



## VACCUN ASSISTED BIOPSY FOR BREAST CARCINOMA DIAGNOSIS: COST- MINIMIZATION ANALYSIS

Andressa Amorim<sup>1</sup>; André Mattar<sup>1</sup>; Marina Diógenes Teixeira<sup>1</sup>; Marcellus do Nascimento Moreira Ramos<sup>1</sup>; Marcelo Antonini<sup>1</sup>; Luciana Lamarão Damous<sup>1</sup>; Reginaldo Guedes Coelho Lopes<sup>1</sup>; Luiz Henrique Gebrim<sup>1</sup>

<sup>1</sup>Department of Mastology, Pérola Byington Hospital, São Paulo, Brazil.

**Objective:** To carry out the cost-minimization analysis between the VAB and the e lumpectomy. **Methodology:** The analysis was based on a retrospective evaluation of 1,833 VAB at Pérola Byington Hospital (PBH), including the pathological results and proportion of patients requiring a lumpectomy after the procedure. It was analyzed from three perspectives: PBH (direct medical costs), the Unified Health System - SUS (Sigtap) and the Brazilian Society (Sigtap and indirect costs). The VAB cost kit (needle, guide clip, marker and reservoir) was estimated at R\$ 2,173. The cost of lost productivity was based on Gross Domestic Product (GDP) per capita (R\$ 120 per business day). **Results:** From HPB perspective the average total cost for a patient who undergoes a VAB is R\$ 3,667 and for a lumpectomy is R\$ 4,313 (average savings of R\$ 646). Under the SUS perspective the average cost for VAB is R\$ 2,987 and for a lumpectomy is R\$ 2,700 (an increase of R\$ 287). The analysis from the perspective of society resulted in a savings of R\$ 128 per patient (fewer days away from patients undergoing VAB). **Conclusion:** Cost-minimization found that VAB is cost-saving compared to lumpectomy (from the perspective of the PBH), which exclusively sees SUS patients, as well as the perspective of society. When analyzed from the perspective of SUS, there is a small increase in cost, but the cost of VAB kit used may have overestimated the costs and an incorporation could decrease the material costs.

**Keywords:** Breast cancer; Vaccun assisted biopsy; Cost - minimization



## THE USE OF LATISSIMUS DORSI MYOCUTANEOUS FLAP IN LOCALLY ADVANCED BREAST CARCINOMA

Luciano Ipólito Branquinho<sup>1</sup>; Wesley J. Magnabosco<sup>1</sup>; Raphael Luiz Haikel<sup>1</sup>; René Aloísio da Costa Vieira<sup>1,2</sup>; Idam de Oliveira Junior<sup>1</sup>

<sup>1</sup>Barretos Cancer Hospital, Brazil.

<sup>2</sup>Muriae Cancer Hospital, Brazil.

**Objective:** To evaluate the impact of the latissimus dorsi muscle myocutaneous flap (LD) in closing moderate to large chest wall defects in locally advanced breast carcinoma. **Methodology:** This study was Approved by the Ethics Committee under number CAAE: 45093521.3.0000.5437. A retrospective study was performed during 2011 to 2019 at a Tertiary Oncology Hospital, in patients submitted to mastectomy and LD was necessary for chest wall closure. Tumor characteristics, resected area, surgical complications and recurrence were evaluated. **Results:** During this period, 22 patients underwent mastectomy associated with the use of LD. Given the indication, 10 were after neoadjuvant chemotherapy, 10 aimed at locoregional control in the presence of recurrence or metastasis and 2 aimed at treatment. The majority of tumors were triple negative (n=10), luminal Her+ (n=5). Eight of the 14 patients undergoing chemotherapy experienced disease progression during treatment. The intention of the surgery was hygienic (n=9), curative (n=7) or palliative, aiming at locoregional control (n=6). The main complications were dehiscence (n=7); flap necrosis (n=6), requiring debridement and suturing; and back seroma (n=4). Surgery allowed local control in 90.9% (20/22) of patients. We observed 8 locoregional recurrences, 2 of which were local. The average follow-up was 21.1 months. During the follow-up period, 16 patients died, with actuarial survival at 24 and 60 months being 36.4% and 22.7%, respectively. **Conclusion:** The LD is a safe flap, easy to construct, useful in primary synthesis after extensive post-mastectomy resection. It presented a high complication rate, but with a simple and effective resolution, allowing a high local control rate, in patients with biological tumors and an unfavorable prognosis.

**Keywords:** breast cancer, locally advanced breast cancer, mastectomy, latissimus dorsi, chest wall defects



## COSMETIC PERCEPTION AFTER BREAST CONSERVING SURGERY AND QUALITY OF LIFE: IS THERE A CORRELATION?

Idam de Oliveira Junior<sup>1,2</sup>; Fabíola Cristina Brandini da Silva<sup>1,2</sup>; Almir José Sarri<sup>2</sup>; René Aloísio da Costa Vieira<sup>1,3</sup>

<sup>1</sup>Postgraduate Program of Oncology, Barretos Cancer Hospital, Sao Paulo, Brazil.

<sup>2</sup>Nucleous of Mastology, Barretos Cancer Hospital, Sao Paulo, Brazil.

<sup>3</sup>Postgraduate Program of Tocogynecology, Botucatu Medical School, Sao Paulo State University, UNESP, Sao Paulo, Brazil.

**Objective:** Breast-conserving surgery (BCS), compared to mastectomy, guarantees equivalent local control and survival, with lower morbidity and higher quality of life (QOL). However, the cosmetic result (CR) of this surgery can be unsatisfactory and influence the survivor's QOL. This issue exacerbates when the patient reports dissatisfaction despite good results determined by healthcare professionals and/or objective methods. Thus, it is necessary to understand the impact of CR on QOL, as well as potential influencing factors. **Methodology:** A cross-sectional, prospective study (ethical approval and FAPESP) was conducted, including patients undergoing BCS. Patients completed the EORTC-C30, QLQ-BR23, and BCTOS questionnaires, performed self-assessment of breast cosmetics, and had photographs taken. The photographs were analyzed using BCCT.core software. For categorical variables, frequencies were calculated, for numerical variables, mean and standard deviation were determined. The results of BCCT.core were compared with patient self-assessment, analyzing four groups: satisfied, very satisfied, true-dissatisfied, and false-dissatisfied. Kappa was used to assess agreement between categorical variables, T Student and Mann-Whitney tests were employed to evaluate the relationship between QOL and CR. ANOVA and Bonferroni adjustment was used to compare groups. **Results:** Three hundred patients were evaluated, 298 completed self-assessment of their breasts (76.8% satisfactory result and 23.2% unsatisfactory) and 297 had BCCT.core evaluation (29.9% satisfactory result and 79.1% unsatisfactory), with a Kappa of 0.095 ( $p=0.01$ ). In self-assessment, patients with unsatisfactory CR showed worse QOL scores in 17 items. Under software analysis, this relationship did not have the same proportion, with unsatisfied patients showing worse scores in only 4 items. In falsely dissatisfied patients (satisfactory result by software and unsatisfactory self-assessment), higher scores of pain and worse functionality were found on the treated side. **Conclusion:** Unsatisfactory cosmetic results were associated with worse QOL scores, a fact that may be linked to other aspects such as breast pain and functionality.

**Keywords:** breast cancer, breast-conserving surgery, breast cosmesis, quality of life, cosmetic results



## RELATIONSHIP BETWEEN TUMOR-ASSOCIATED MACROPHAGES (TAMs) IN THE TUMOR MICROENVIRONMENT AS PROGNOSTIC INDICATORS IN BREAST NEOPLASMS

Fabline Ribeiro Amorim<sup>1</sup>; Mariana Cardoso Silva<sup>1</sup>; Julia Kalida Diniz<sup>1</sup>; Luciana Vieira Queiroz Labre<sup>2</sup>

<sup>1</sup>Department of Medicine at Universidade Evangélica de Goiás (UniEvangélica), Anápolis, Goiás, Brazil.

<sup>2</sup>Department of Postgraduate Program in Tropical Medicine and Public Health, Universidade Federal de Goiás (UFG), Goiânia, Goiás, Brazil

**Objective:** This study aimed to correlate the presence of TAMs with clinicopathologic characteristics in 82 cases of breast cancer and assess their impact on tumours as possible prognostic markers. **Methodology:** Cases selected among the records of anatomopathological examinations carried out at a reference center for cancer treatment. The inclusion criteria were: histopathological diagnosis of invasive ductal carcinoma, immunohistochemical profile, clinicopathologic data available in the records, clinical follow-up for 5 years and enough tumour tissue embedded in paraffin blocks to perform immunohistochemical analyses. For the statistical analyses, the cases were classified following a semiquantitative assessment of cell tagging as low infiltration or high infiltration and according to the mean value. **Results:** High levels of TAMs (CD68+) were significantly correlated with younger women, distant metastases, more advanced cancer staging, estrogen or progesterone receptors-negative and triple-negative breast cancer (TNBC). The survival rate in cases of breast cancer with higher TAM infiltrate decreased, corroborating previous results. The number of CD68+ cells was a strong independent prognostic factor. **Conclusion:** Elevated levels of TAMs (CD68+) showed significant correlations with younger age groups, distant metastases, advanced cancer staging, negativity for estrogen or progesterone receptors, and triple-negative breast cancer (TNBC). Survival rates were lower in breast cancer cases with increased TAM infiltration, consistent with earlier findings. The quantity of CD68+ cells emerged as a robust independent prognostic indicator.

**Keywords:** Triple Negative Breast Neoplasms; Macrophages; Biomarkers, Tumor; Prognosis.



## IMPACT OF SURGICAL TREATMENT ON SHOULDER JOINT COMPLEX AND MUSCLE STRENGTH OF WOMEN UNDERGOING BREAST CANCER TREATMENT

Flávia Batista Gomes Noletto<sup>1</sup>; Tatiane Nunes da Silva Rodarte<sup>2</sup>; Vitor Alves Marques<sup>3</sup>; Ellen Gomes de Oliveira<sup>1</sup>; Anderson Garcia Silva<sup>3</sup>; Rafael Ribeiro Alves<sup>3</sup>; João Batista Ferreira Júnior<sup>4</sup>; Carlos Alexandre Vieira<sup>5,6</sup>

<sup>1</sup>Student of the Postgraduate Program in Physical Education/FEFD/UFG, Brazil.

<sup>2</sup>Physiotherapist at CORA/FM/UFG, Brazil.

<sup>3</sup>Student of the Postgraduate Program in Health Sciences/FM/UFG, Brazil.

<sup>4</sup>Theacher of the Federal Institute of Southeast Minas Gerais, Brazil.

<sup>5</sup>Theacher of the Postgraduate Program in Health Sciences/FM/UFG, Brazil.

<sup>6</sup>Teacher of the Postgraduate Program in Physical Education/FEFD/UFG, Brazil.

**Objective:** To evaluate the range of motion (ROM), muscle strength and functional performance of the shoulder joint complex (SJC) of women with breast cancer undergoing surgical treatment, in two moments, before and after surgery. **Methodology:** The study included 11 volunteers (age  $53.7 \pm 10.8$  years; body mass  $73.1 \pm 17.1$  kg; height  $1.55 \pm 0.06$  m; BMI  $30.4 \pm 6.3$  kg/m<sup>2</sup>) recruited at the Advanced Breast Diagnostic Center (CORA)/UFG. The volunteers were evaluated in the preoperative moment (0 to 8 days before) and in the postoperative moment (30 to 43 days after). Range of motion was assessed using the Clinometer application, muscle strength was assessed using the handgrip strength test (HGS), and functional performance was assessed using the arm, shoulder, and hand dysfunction questionnaire (DASH). **Results:** There was no interaction between the side and time factors and the effect of the side factor for HGS ( $p=0.80$  and  $p=0.41$ , respectively) and ROM on abduction shoulder movements ( $p=0.45$  in both), flexion ( $p=0.92$  and  $0.54$ , respectively),  $0^\circ$  abduction lateral rotation ( $p=0.28$  and  $p=0.14$ , respectively),  $90^\circ$  abduction lateral rotation ( $p=0.39$  and  $p=0.15$ , respectively), respectively) and  $90^\circ$  medial rotation of abduction ( $p=0.06$  and  $p=0.81$ , respectively). There was also no effect of the time factor for HGS ( $p=0.56$ ) and ROM on shoulder movements of lateral rotation  $0^\circ$  abduction ( $p=0.29$ ), lateral rotation  $90^\circ$  abduction ( $p=0.09$ ) and medial rotation  $90^\circ$  abduction ( $p=0.94$ ). However, there was a reduction in abduction ROM ( $p=0.002$ ) and shoulder flexion ROM ( $p=0.002$ ) after surgery on both sides. In addition, there was a reduction in the scores on shoulder functional performance after surgery ( $p=0.005$ ). **Conclusion:** Abduction and flexion of the shoulder were affected after surgery, in addition to a reduction in the scores on the functional performance of the shoulder.

**Keywords:** Muscle strength, breast cancer treatment, surgery



## ANALYSIS OF MALIGNANCY RATES OF PERCUTANEOUS BIOPSY IN LYMPH NODES OF BREAST CANCER PATIENTS

Marina Diogenes Teixeira<sup>1</sup>; Andre Mattar<sup>1</sup>; Andressa Gonçalves Amorim<sup>1</sup>; Marcelo Antonini<sup>2</sup>; Marcellus do Nascimento Moreira Ramos<sup>1</sup>; Luciana Lamarao Damous<sup>2</sup>; Reginaldo Guedes Coelho Lopes<sup>3</sup>; Luiz Henrique Gebrim<sup>1</sup>

<sup>1</sup>Department of Mastology, Hospital da Mulher, São Paulo – Brazil.

<sup>2</sup>Department of Mastology, Institute of Medical Assistance for State Public Servants of S. Paulo (IAMSPE), São Paulo – Brazil.

<sup>3</sup>Department of Obstetrics and Gynecology, Institute of Medical Assistance for State Public Servants of S. Paulo (IAMSPE), São Paulo – Brazil.

**Objective:** Analyze the inconclusive rates of fine-needle aspiration cytology (FNA) and core needle biopsy (CORE) performed in suspicious lymph nodes for breast cancer metastasis according to the anatomical location of biopsies and the type of needle used, verifying which technique was preferred. **Methodology:** A retrospective study was conducted by evaluating the database of patients treated in a public hospital in São Paulo, Brazil. Women submitted to ultrasound-guided percutaneous biopsy of lymph nodes from May 2015 to November 2019 were included in the study. The data were analyzed using IBM-SPSS version 27 and Microsoft EXCEL version 2010. **Results:** A total of 499 biopsies were performed and the mean age of the women was 54.2 years (SD± 11.9) in the CORE group and 53.4 years (SD± 11.8) in the FNA group (p=0.619). According to the anatomical location, 385 were axillary (77.2%), 62 supraclavicular (12.4%), 48 cervical (9.6%) and 4 infraclavicular (0.8%). Regarding the type of needle, 393 were CORE (78.8%) and 106 were FNA (21.2%). When analyzing the results of the FNA, 38 (35.8%) did not present enough material, 31 (29.2%) were positive, 32 (30.2%) were negative and 5 (4.8%) showed atypical cells. Among the 393 CORE performed, 255 (64.9%) were positive, 132 (33.6%) were negative, 1 (0.3%) showed atypical cells and 5 (1.3%) had no representative material. No complications were reported after the procedures. **Conclusion:** CORE was the preferred diagnostic technique in our center, being considered a feasible procedure to evaluate lymph nodes in different sites and with low rates of inconclusive results by insufficient material. In the future, studies evaluating indirect costs may confirm the feasibility of CORE in patients with suspicious lymph nodes in terms of obtaining greater agility and resolute conducts in the public healthcare system.

**Keywords:** image-guided biopsy, lymphatic metastasis, breast pathology, core needle biopsy



## COMPREHENSIVE ANALYSIS OF TWIST1 IN BREAST CANCER AND OTHER CARCINOMAS: AN ASSOCIATION WITH PROGNOSIS AND TUMOR MICROENVIRONMENT

Bruno Ricardo Barreto Pires<sup>1</sup>; Paulo Rohan<sup>2</sup>; Caroline Borges-de-Almeida<sup>2</sup>; Rafael Cardoso Maciel Costa Silva<sup>3</sup>; Renata Binato<sup>2</sup>; Eliana Abdelhay<sup>2</sup>

<sup>1</sup>Department of Biophysics and Biometrics, Rio de Janeiro State University, Rio de Janeiro-RJ, Brazil.

<sup>2</sup>Stem Cell Laboratory, Brazilian National Cancer Institute, Rio de Janeiro-RJ, Brazil.

<sup>3</sup>Laboratory of Immunoreceptors and Signaling, Instituto de Biofísica Carlos Chagas Filho, Federal University of Rio de Janeiro, Rio De Janeiro, Brazil.

**Objective:** Metastasis is the main cause of death in patients with carcinomas. This process depends on a phenotypic alteration known as epithelial-mesenchymal transition (EMT), regulated by transcription factors (TF), including Twist1, whose increased levels have been described in several carcinomas, including breast cancer. However, a comprehensive analysis of its expression to elucidate its predictive value still needs to be performed. This study aims to understand the prognostic value of TWIST1 expression and its biological relevance for tumor microenvironment (TME) in breast cancer and other carcinomas. **Methodology:** Initially, we conducted Kaplan-Meier analyses using patient data from TCGA of breast cancer (BRCA) and their PAM50 intrinsic subtypes, as well as the other types of carcinomas. For those groups whose TWIST1 levels were associated with a poor prognosis, we conducted the deconvolution analyses using the XCELL algorithm followed by Spearman correlation analysis ( $p < 0.05$ ) between TWIST1 levels and estimation of TME infiltrating-cell types. **Results:** Survival analysis showed that high expression of TWIST1 is associated with poor prognosis in the Luminal B breast cancer subtype (BRCA-LumB;  $p = 0.0127$ ), HER2 breast cancer subtype (BRCA-Her2;  $p = 0.022$ ), Clear cell renal cell carcinoma (KIRC-ClearCell;  $p = 0.0004$ ), Kidney renal papillary cell carcinoma (KIRP-Papillary;  $p = 0.0002$ ), Lung adenocarcinoma (LU-AD-AdenoNOS;  $p = 0.016$ ), Stomach adenocarcinoma Diffuse (STAD-Diffuse  $p = 0.0061$ ) and Intestinal (STAD- Intestinal;  $p = 0.0013$ ). In addition, TWIST1 levels revealed a clear correlation with TME-infiltrating cells, demonstrating a positive correlation with cancer-associated fibroblasts (CAFs) and a negative correlation with plasma B cells in the analyzed groups. **Conclusion:** Our findings elucidated the predictive role of TWIST1 in breast cancer and other cancer types, which provided new insights exploring the possible regulatory mechanisms of TWIST1 on the TME, suggesting this transcription factor as a potential target to develop novel diagnostic and therapeutic strategies.

**Keywords:** twist1; tumor microenvironment; prognosis; survival



## EFFECTS OF COVID-19 ON BREAST CANCER IN PUBLIC HEALTHCARE SYSTEM IN BRAZIL (2018-2022)

Aline Ferreira Bandeira de Melo Rocha<sup>1</sup>; Ruffo Freitas-Junior<sup>2,3</sup>; Leonardo Ribeiro Soares<sup>2</sup>

<sup>1</sup>School of Medicine, Federal University of Goiás, Brazil.

<sup>2</sup>Mastology Program, Teaching Hospital, Federal University of Goiás, Brazil.

<sup>3</sup>Araújo Jorge Hospital, Goiás Anticancer Association. Brazil.

**Objective:** This study aimed to evaluate COVID-19 effects on breast cancer screening and clinical stage at diagnosis in patients of 50–69 years of age receiving care within the public healthcare system (SUS) in 2018–2022 in Brazil. **Methodology:** This ecological study analyzes the absolute and relative frequency of screening and staging, using a secondary database of SUS sources: SUS Network Outpatient Data System and Oncology Brazil Panel. **Results:** There was a decrease in mammographic coverage in 2020 (20%) and 2021 (26.7%) compared to 2018 (34.8%) and 2019 (33.9%). For 2022, we observed an increase in the percentage coverage rate (32.7%), which was still lower than in the years before the pandemic. The number of reported cases decreased by 31.5% in 2020–2021 compared to 2018–2019, but there was an increase of 21.2% compared to 2022. There was a 4% increase in the proportion of stage III/IV cases in 2020–2022 compared to 2018–2019, now surpassing the number of cases of early stage breast cancer. **Conclusion:** COVID-19 led to a reduction in breast cancer screening and an expressive increase in advanced tumors in users of the public healthcare network. Urgent interventions in public policies are required as the negative effects of the pandemic on the diagnosis/treatment of breast cancer.

**Keywords:** breast cancer, COVID-19, Brazil, breast cancer screening, clinical staging of breast cancer



## MAMMOGRAPHY IN THE FEDERAL DISTRICT: ANALYSIS OF SUSPECTED AND CONFIRMED MALIGNANCY CASES BETWEEN 2018 AND 2023

Mariana Valadares Bittar<sup>1</sup>; Natália Barros Salgado Vieira<sup>1</sup>; Bianca Santos Arrais de Lavor<sup>1</sup>; Gabriel de Assis Marra<sup>1</sup>; Paulo Lisbão de Carvalho Esteves<sup>1</sup>

<sup>1</sup>Faculty of Education and Health Sciences, University Center of Brasília, Brazil.

**Objective:** To evaluate information related to mammograms classified as BIRADS 4, 5, and 6 in the Federal District over the past 5 years. **Methodology:** A retrospective study of descriptive and quantitative nature, utilizing secondary data collected from the Cancer Information System (SISCAN), available on the DATASUS electronic platform. The situation in the Federal District between 2018 and 2023 was analyzed, incorporating the following variables: quantity of mammograms, clinical indication, age range, type of screening, prior mammography, whether a physical examination had been previously conducted, BIRADS classification, and interval between request, collection, and results. **Results:** During the analyzed period, 2,806 mammograms resulting in BIRADS 4 to 6 were performed, with the vast majority indicated for screening (76.8%) and predominantly in patients aged 50 to 60 years (37.4%). Regarding screening mammograms, a large proportion was allocated to the target population (81.7%), with the remainder for the high-risk population (11.5%) and patients already treated for breast cancer (6.6%). The majority of patients had previously undergone mammography (71.8%), and it was also predominant to perform a physical examination of the breasts before the examination was requested (90.5%). Category 4 of the BIRADS classification was the most prevalent among the three (73.4%). The time between request and examination was also verified, with more than half of the mammograms performed within 10 days (60.6%); and the time between examination and result, with almost half also being released within 10 days (49.3%). **Conclusion:** The commendable performance in both access to and execution of mammograms as a preventive strategy in the Federal District is noteworthy. Mammography proves to be an excellent screening method, demonstrating its usefulness for early detection and appropriate follow-up of breast cancer.

**Keywords:** Breast Cancer, Mammography, Screening.



## COMPARISON OF CLINICAL STAGING AND MAMMOGRAPHIC DETECTION IN WOMEN AGED 40-49 YEARS AND 50-69 YEARS IN PUBLIC HEALTH CARE SYSTEM

Aline Ferreira Bandeira de Melo Rocha<sup>1</sup>; Ruffo Freitas-Junior<sup>2,3</sup>; Leonardo Ribeiro Soares<sup>2</sup>

<sup>1</sup>School of Medicine, Federal University of Goiás, Brazil.

<sup>2</sup>Mastology Program, Teaching Hospital, Federal University of Goiás, Brazil.

<sup>3</sup>Araújo Jorge Hospital, Goiás Anticancer Association, Brazil.

**Objective:** The aim of this study was to compare breast cancer screening and clinical stage at diagnosis in patients aged 40-49 years and 50-69 years treated in the public health system (SUS) in Brazil in the period 2013-2022. **Methodology:** This ecological study analyzed the absolute and relative frequency of staging and used Poisson regression to analyze trends in screening. A secondary database from SUS sources was used: SUS Network Outpatient Data System, Oncology Brazil Panel, Brazilian Institute of Geography and Statistics and National Agency for Supplementary Healthcare. **Results:** When analyzing the clinical staging of breast cancer in the SUS, an increase in the rates of advanced stage (III and IV) is observed in both age groups (40-49 and 50-69 years, with a higher prevalence in the younger group (59%) than in the 50-69 years group (52%) in 2022. In the 40-49 age group, a reduction trend in screening can be observed from 2013 to 2020 (APC -9.57,  $p < 0.05$ ), followed by stability in the years 2020 to 2023. In the 50-69 age group, the proportion of mammographic coverage remained stable. **Conclusion:** In view of the available evidence, it is necessary to expand access to mammography screening for women aged 40 to 49 years in Brazil. This includes implementing public policies that enable testing under the SUS, raising women's awareness of the importance of early detection and combating misinformation.

**Keywords:** breast cancer, Brazil, breast cancer screening, clinical staging of breast cancer, Unified Health System



## MUSCLE STRENGTH RELATED TO QUALITY OF LIFE IN BREAST CANCER PATIENTS AND SURVIVORS

Júlia Kalida Diniz<sup>1</sup>; Fabline Ribeiro Amorim<sup>1</sup>; Débora Emanuelle Gonçalves Leal Santos<sup>2</sup>; Isabelle Cadore Galli<sup>3</sup>; Giovana Pereira Benevides<sup>4</sup>; Arthur Guilherme Dias Oliveira<sup>5</sup>; José Aldo de Almeida Oliveira Neto<sup>6</sup>; Rodrigo Franco de Oliveira<sup>7</sup>

<sup>1</sup>Department of Medicine at Universidade Evangélica de Goiás, Anápolis, Goiás, Brazil.

<sup>2</sup>Department of Medicine at Faculdade Dinâmica Vale do Piranga, Ponte Nova, Minas Gerais, Brazil.

<sup>3</sup>Department of Medicine at Centro Universitário de Várzea Grande, Várzea Grande, Brasil.

<sup>4</sup>Department of Medicine of the Pinhais University Center, Pinhais, Brazil.

<sup>5</sup>Department of Medicine at Faculdade Ciências Médicas de Minas Gerais, Belo Horizonte, Minas Gerais, Brazil

<sup>6</sup>Medicine at UNINASSAU, Vilhena, Rondônia, Brazil

<sup>7</sup>Department of Postgraduate Program in Human Movement and Rehabilitation-PPMHR, Universidade Evangélica de Goiás, Anápolis, Goiás, Brazil.

**Objective:** The objective of this study is to evaluate the relationship between muscle strength and quality of life in breast cancer patients and survivors who practice physical exercise versus those who do not. **Methodology:** We conducted searches using the terms 'Muscle Strength', 'Breast Cancer' and 'Resistance' in the following databases: MEDLINE (by PubMed), Embase (by OvidSP) and Karger. We also searched ClinicalTrials.gov and WHO International Clinical Trials Registry Platform. This systematic review of the literature was performed using PRISMA and Cochrane Handbook for the Scopus and six articles were selected for qualitative analysis. **Results:** The majority of studies found the effectiveness of resistance training (RT) in breast cancer survivors during anticancer treatment, with a positive impact on reducing fatigue levels, less loss of muscle strength and a lower incidence of joint dysfunction, especially when associated with kinesiotaping (KT). Some of the studies listed showed a higher quality of life post-treatment in the group that practiced physical activity, suggesting that resistance training is superior in post-therapeutic anti-cancer rehabilitation, compared to sedentary patients. None of the studies, however, found consistent correlations between strength exercise and reduced BMD in breast cancer survivors. Another study suggests that RT can reduce chronic inflammation, with the potential to prevent cancer recurrence, but more robust evidence is still lacking. **Conclusion:** Breast cancer patients face significant challenges related to muscle strength loss and fatigue during and after treatment. The implementation of an exercise protocol emphasizing resistance training has proven beneficial. The inclusion of KT therapy also shows potential to improve functional performance. When developing treatment strategies for breast cancer patients, it is essential to consider resistance training and possibly KT therapy as integral parts of the care plan to optimize physical outcomes and quality of life for these patients.

**Keywords:** Breast cancer; muscle strength; quality of life.



## VALVULOPATHY DUE TO MEDIASTINAL RADIATION: A DIAGNOSIS LITTLE THOUGHT OF IN RADIOTHERAPY FOR BREAST CANCER, A SYSTEMATIC REVIEW

Gustavo Moreira Andrade<sup>1</sup>; Marina Ribeiro Castro<sup>1</sup>; Gabriela Muniz Ferreira dos Santos<sup>1</sup>; Cyndara Louany da Silva Ramos<sup>1</sup>; Marcos Vinícius Milki<sup>1</sup>; Rebeca da Silveira Ferreira<sup>1</sup>

<sup>1</sup>Department of undergraduate medicine at the Pontifical Catholic University of Goiás, Brazil.

**Objective:** To review the possibility of diagnosing valvular heart disease due to mediastinal radiation, in radiotherapy for breast cancer, as it is little considered and an insidious diagnosis. Due to the reason that radiotherapy is an important way of treatment in patients with not only breast cancer, but lymphomas too. **Methodology:** We comprehensively searched PubMed database for studies and trials that included mediastinum radiotherapy at breast cancer and valvulopathy in their papers. Our systematic review followed the PRISMA statement guidelines. **Results:** Cardiac complications include coronary artery stenosis, pericardial disease, cardiomyopathy, conduction abnormalities and, mainly, valve disease, with significant prevalence in survivors of Hodgkin's lymphoma and breast cancer. Asymptomatic radiation-associated valve disease is usually diagnosed more than 10 years after mediastinal irradiation. Understanding the pathophysiological mechanisms underlying radiation-induced cardiovascular damage is crucial for early diagnosis and effective treatment of subclinical cardiac abnormalities, as valve disease begins with mild asymptomatic valve thickening and progresses to severe valve fibrosis with hemodynamic compromise that requires surgical intervention. Although evidence-based specific cardiac screening approaches are lacking, prevention remains the best way to treat radiation-induced cardiotoxicity. Modern radiotherapy techniques, such as three-dimensional planning and the use of subcarinal blocks, are essential to minimize the volume of the irradiated heart and reduce the risk of cardiovascular complications. **Conclusion:** It is clear that radiotherapy plays an indisputable role in the treatment of breast cancer, however its application may be associated with serious cardiovascular complications, especially when the heart is directly exposed to radiation. Dose prediction models are being developed to predict the risk of future heart valve disease and new radiation techniques are being developed to reduce radiation dose to the heart, but continued surveillance and long-term cardiac follow-up will still be necessary to ensure quality life expectancy of patients undergoing radiotherapy for breast cancer.

**Keywords:** Breast cancer; Radiotherapy; Valvulopathy; Oncology.



## IS IT POSSIBLE THAT THERE IS A RELATIONSHIP BETWEEN MENINGIOMA AND THE APPEARANCE OF BREAST CANCER? A SYSTEMATIC REVIEW

Gustavo Moreira Andrade<sup>1</sup>; Isabela Alves Milhomens<sup>1</sup>; Giovana Netto Pinheiro<sup>1</sup>; Gustavo Nunes Ramos<sup>1</sup>; Giovana Martins da Silva<sup>1</sup>; Marcos Vinícius Milki<sup>1</sup>; Júlia França Montanini<sup>1</sup>

<sup>1</sup>Department of undergraduate medicine at the Pontifical Catholic University of Goiás, Brazil.

**Objective:** This study aims to verify whether there is a relationship between the appearance of breast cancer in patients previously diagnosed with meningioma. If this relationship is found, this research will also aim to encourage other research to understand the reason for this relationship. **Methodology:** We comprehensively searched PubMed database for case reports and case series that included incidence of meningioma and patients with the diagnosis of breast cancer in their papers. Our systematic review followed the PRISMA statement guidelines **Results:** There are more than 49 reported and dated cases of the association between meningioma and breast cancer. Therefore, it is clear that there is an implicit association between meningiomas and breast carcinoma when we look at these data. Many of these cases occur during pregnancy, which can lead to a hormonal hypothesis in their genesis. In a bidirectional study, 795,000 patients were observed who had follow-up for years, in which the standardized incidence ratio was 1.27 for meningioma after a case of breast cancer, in 28,000 patients, the standardized incidence ratio was 1.32 for breast cancer after meningioma. However, in a mono-institutionalized study, 12,330 patients were analyzed and only 33 were observed to have meningioma, presenting a low relational value **Conclusion:** It was seen that there is an inconsistency between the numerous clinical cases found and the research carried out, so there is no way to conclude the correlation between the tumors, but we cannot discard these data. Therefore, further research must be carried out so that we can further improve screening against these tumors, however from this review it is now possible to think of meningioma as a differential diagnosis for neurological symptoms in patients with breast cancer or a previous history.

**Keywords:** Breast Cancer; Meningioma; Relation



## EVALUATION OF HER2-LOW INCIDENCE IN THE CLINICAL ONCOLOGY SERVICE OF HOSPITAL DAS CLÍNICAS DA UNIVERSIDADE FEDERAL DE GOIÁS (HC-UFG)

Fernanda José de Toledo<sup>1</sup>; Victor Domingos Lisita Rosa<sup>1</sup>; Augusto Rodrigues de Araujo Neto<sup>1</sup>; Larissa Vieira de Queiroz Polido<sup>2</sup>; Adriane Borges de Andrade Mendaña<sup>3</sup>; Ravena Figueiredo Alves<sup>3</sup>; Paulo Victor Monteiro Quinan<sup>1</sup>; Augusto Ribeiro Gabriel<sup>1</sup>

<sup>1</sup>Department of oncology, Breast Disease Division, University of Goiás, Brazil.

<sup>2</sup>Department of oncology, Araujo Jorge Cancer Hospital, Brazil.

<sup>3</sup>Department of pathology, University of Goiás, Brazil.

**Objective:** Determine the incidence and epidemiology of patients with Human Epidermal Growth Factor Receptor-type 2 (HER2-low) breast cancer in the oncology service of the HC-UFG from March 2022 to February 2023. **Methodology:** This is an observational and cross-sectional study, which included patients diagnosed with invasive breast cancer and excluded those with immunohistochemistry HER2 3+, HER2 0, or HER2 2+ with positive Fluorescent in situ hybridization (FISH) by immunohistochemistry and those under 18 years old. **Results:** HER2-low tumors at HC-UFG are predominantly luminal (82%). Sixteen patients (11.2%) from the HER2-low group were eligible for analysis and epidemiological characterization, concluding that the average age was 60.2 years, the majority were female (93.7%), had a performance status of 0 at diagnosis (75%), and had a ductal histological subtype (93.7%). Regarding risk factors, 75% had a positive family history of cancer, 37.5% were smokers, and 43.7% were obese, with none being alcohol consumers. Some expression of HER2 was identified in a total of 17 immunohistochemistry tests, thereby classified as HER2-low (14.08%). This proportion of patients, previously classified as triple-negative or luminal, received a new classification, making them also eligible for new drugs available for this specific group. **Conclusion:** From February 2022 to March 2023, HER2-low incidence in breast cancer patients at HC-UFG corresponded to 14.08%. A higher frequency was observed in patients with a positive family history of cancer.

**Keywords:** Breast cancer; HER2 low



## **RADIOLOGICAL FINDINGS ANALYSIS IN TREATED BREAST CANCER PATIENTS THAT HAD MAMMOGRAPHY IN THE STATE OF TOCANTINS IN 2023**

Cândida Verônica de Andrade Paz<sup>1</sup>; Ianny Keruly Damião Pessoa Duarte<sup>1</sup>; Eduarda Martins dos Santos<sup>1</sup>; Karoline Nunes Rodrigues Viana<sup>1</sup>; Jascyone Barbosa da Silva<sup>1</sup>; Rafael Pereira Camargo<sup>1</sup>; Tássia Aimê Teixeira Nascimento<sup>1</sup>; Fabiana Cândida Queiroz Santos Anjos<sup>2</sup>

<sup>1</sup>Medical students from University of Gurupi, Tocantins, Brazil

<sup>2</sup>Professor -Department of Obstetrics and Gynecology, Gurupí, University of Gurupi, Tocantins, Brazil

**Objective:** Evaluate the results obtained in mammography in 2023 in women above 30 years old who previously had breast cancer treatment in the state of Tocantins. **Methodology:** Quantitative and comparative study of mammography results in treated breast cancer patients. It reunited data from the Cancer Information System (SISCAN/DATASUS) using biological sex, time, and location of the exam as filters, evaluating new radiological findings. **Results:** In 2023, 229 mammographies were done in women above 30 years of age who previously had breast cancer. It was analyzed according to the Breast Imaging Reporting and Data System (BI-RADS). It was observed an expressive number of BI-RADS 2 with a prevalence of 86.89%, followed by 8.73% represented by BI-RADS 0 and 3.05% Bi-RADS 4. The categories BI-RADS 1,3, and 5 presented the same percentage with only 0.43%. The age group with the highest number of radiological findings was between 60 and 64 years old, which constitutes 46 exams of the total studied, this number had 37 classified as Bi-RADS 2, 3 as BI-RADS 4, and 1 as BI-RADS 5. The last one was the only finding of the sample that is into this category, it represents 1.74% of the sample with suspect lesions. **Conclusion:** Screening the more considered risk population than usual is necessary in the face of the current prevalence of radiological findings. However, data analysis shows a bigger concern among women between 60 and 64 years old, since there was a recurrence of highly suspect findings only in this age group in 2023.

**Keywords:** breast neoplasms; early diagnosis; mammography; neoplasm staging; recurrence.



## BREAST CANCER TREATMENT DELAYS IN BRAZIL: AN ECOLOGICAL STUDY FROM 2017 TO 2022

Marcelo Antonini<sup>1,2</sup>; Sofia Naira Barbosa Freitas<sup>1</sup>; Andre Mattar<sup>3,4</sup>; Denise Joffily Pereira da Costa Pinheiro<sup>1</sup>; Andressa Gonçalves Amorim<sup>3</sup>; Marina Diógenes Teixeira<sup>3</sup>; Odair Ferraro<sup>1</sup>; Reginaldo Guedes Coelho Lopes<sup>1</sup>

<sup>1</sup>Mastology Department of Hospital do Servidor Público Estadual, São Paulo, Brazil.

<sup>2</sup>Preceptor of Mastology of University of São Paulo City (UNICID), São Paulo, Brazil.

<sup>3</sup>Mastology Department of Women's Health Hospital, São Paulo, Brazil.

<sup>4</sup>Breast Surgeon at Oncoclínicas, São Paulo, Brazil.

**Objective:** This study aimed to evaluate the delay from diagnosis to treatment initiation for breast cancer in Brazil between 2017 and 2022, investigating the relationship between treatment delay, type of treatment, and cancer stage, alongside annual trends in the initiation times of treatment. **Methodology:** Utilizing a descriptive observational design, the research analyzed data from the Brazilian Unified Health System's Oncology Panel (DATA-SUS). The study encompassed female breast cancer cases across Brazil, focusing on the interval to treatment start, cancer stage, and treatment type. Statistical analyses included chi-square tests and joinpoint regression to discern temporal trends, measuring changes through Annual Percent Change (APC). **Results:** From 237,073 cases identified, 24.4% began treatment within 30 days, whereas 37.2% experienced delays beyond 91 days. Radiotherapy showed the longest wait times, with notable delays across all treatment types ( $p < 0.001$ ). Early-stage patients had longer wait times compared to advanced stages ( $p < 0.001$ ). The trend analysis indicated a decrease in patients starting treatment after more than 121 days, but a concerning reduction in those commencing within 30 days (APC -1.15), and an increase in delays of 61 to 91 days (APC 4.03). **Conclusion:** The majority of Brazilian women faced substantial treatment initiation delays, with the most pronounced in radiotherapy and among early-stage patients. The trend analysis highlighted an increase in treatment delays, suggesting an urgent need to address these issues to improve the timeliness of breast cancer care in Brazil.

**Keywords:** Breast Cancer, Treatment Delay, Brazil, Oncology Trends, Time to Treatment.



## IMPACT OF THE GENOMIC SIGNATURE OF 70-GENES FOR BREAST CANCER IN THE PUBLIC SYSTEM AND IN SUPPLEMENTARY HEALTH CARE IN A COUNTRY OF MEDIUM SOCIOECONOMIC DEVELOPMENT

Fabio Postiglione Mansani<sup>1</sup>; Leonardo Ribeiro Soares<sup>2</sup>; Ruffo de Freitas Junior<sup>3</sup>

<sup>1</sup>Assistant Professor, Department of Medicine, State University of Ponta Grossa, Brazil.

<sup>2</sup>Advanced Center for Breast Diagnostic (CORA), Federal University of Goiás, Goiânia, Brazil.

<sup>3</sup>Program of Mastology, Federal University of Goiás, Brazil.

**Objective:** To evaluate the financial viability of using the MammaPrint™ (MP) genetic signature in a public and private system in a country with a medium socioeconomic development index. **Methodology:** A pharmacoeconomic trial with a cost-benefit analysis evaluating the reduction in costs of chemotherapy, support drugs, and materials used during chemotherapy infusion in high-risk hormone receptor-positive (HR+) breast cancer patients submitted to analysis using the MammaPrint™ genetic signature. **Results:** The value of using MammaPrint™ in the Unified Health System (SUS) would bring an additional cost of US\$ 1,334.56 per patient in the over-50 age group. In private medicine, the use of MammaPrint™ in the same population would result in cost savings ranging from US\$ 2,422.53 to US\$ 9,989.95 per patient. **Conclusion:** The use of MP in RH+ breast cancer patients with high clinical risk and low genomic risk in Brazil leads to significant savings in resources when applied to supplementary healthcare. In the SUS, reducing the costs of MP for large-scale use could make its application viable. These values need to be re-evaluated in each institution, using the methodology applied in the trial, adjusting according to costs, to obtain a result that reflects its reality.

**Keywords:** Breast cancer; genomic profile; genetic test; pharmacoeconomics



## EVIDENCE-BASED BREAST CANCER RECOMMENDATIONS GUIDE FOR EMPOWERING ASYMPTOMATIC WOMEN

Gláucia Pina Guimarães Porto Duarte<sup>1</sup>; Maria Helena Pereira Franco<sup>1</sup>

<sup>1</sup> PUC-SP- Pontifícia Universidade Católica de São Paulo – SP, Brazil.

**Objective:** To carry out a systematic review of the literature that pointed to studies that used psychoeducation resources in health for asymptomatic women as a way to face the barriers in the prevention and early detection of breast cancer; to build an evidence-based guide of recommendations for health professionals to empower asymptomatic women with breast cancer, to contribute to disease control programs in Brazil. **Methodology:** Systematic literature review, carried out from September to December 2021, with a search strategy process using in the databases. The mapping and survey were built by PRISMA2020. **Results:** 146 studies identified; 35 excluded; 111 evaluated by title/abstract; 23 for descriptive analysis; 09 for qualitative analysis. 1) Descriptive Analysis-categories: author, year/publication, country, impact factor, objective, design, number, age range, program, location, protocol, actions and results; 2) Qualitative Analysis-The Checklist STROBE was the instrument that served to confirm and refute the observations previously made in the included studies. Training through psychoeducational activities in health are resources for empowerment, expansion of knowledge and autonomy for health promotion. Health education can be the empowering resource that asymptomatic women need to demystify the disease. Constructivist sharing and accessible vocabulary was an important analysis factor. The Guide of Recommendations on Breast Cancer for Empowering Asymptomatic Women aims, from health literacy, to guide health professionals as facilitators to change the behavior of asymptomatic women for breast cancer into healthy habits and actions, in the construction of autonomy, in personal and social resources, in the improvement of the quality of life. **Conclusion:** It is expected that individual and collective dialogues will be expanded, that psycho-oncology, in an innovative and critical way, will help asymptomatic women in a transformation of themselves and many others for the prevention and early detection of the disease and collaborate with breast cancer control programs in Brazil.

**Keywords:** SYSTEMATIC REVIEW – EMPOWERMENT – BREAST CANCER – PSYCHO-ONCOLOGY - HEALTH PROMOTION



## THE EXPRESSION OF TAM AND EPHA2 GENES IN BREAST CANCER

Darley de Lima Ferreira Filho<sup>1</sup>; Amanda Aguiar<sup>1</sup>; Nancy Cristina Ferraz de Lucena Ferreira<sup>1</sup>; Glauber Leitao<sup>1</sup>; Danyelly Brunaska Gondim Martins<sup>1</sup>; Maria Borba<sup>1</sup>; Luiz Alberto<sup>1</sup>

<sup>1</sup>Barão de Lucena Hospital, Recife - PE, Brazil.

**Objective:** Receptor tyrosine kinases (RTKs) are involved in cell growth, motility, and differentiation. Deregulation of RTKs signaling is associated to tumor development and therapy resistance. Potential RTKs like TAM (TYRO3, AXL, MERTK), RON, EPH and MET have been evaluated in many cancers like lung, prostate and colorectal, but little is known in breast tumors. In this study, 51 luminal breast cancer tissue and 8 triple negative breast cancer (TNBC) subtypes were evaluated by qPCR for the expression of TAM, RON, EPHA2 and MET genes. **Methodology:** The study was carried out with women assisted at Hospital Barão de Lucena - Recife (PE), enrolling 59 women, aged from 32 to 100 years old, divided into two groups: 51 patients diagnosed with luminal breast cancer and 8 patients diagnosed with triple negative breast cancer (TNBC). The Research Ethics Committee of the Health Sciences Center of the Federal University of Pernambuco - CAAE: 47869315 0 00005208. **Results:** Among the 59 patients, 21 had luminal A-like, 30 had luminal B-like and 8 TNBC. The median age at diagnosis of breast cancer was 56 years old, and patients were divided into four groups: 10.34% of patients 30-40 years; 22.41% of patients 41-50 years; 32.75% of patients 51-60 years, and 34.4% of patients over 60 years. Parity was reported by 89.83%, smoking habit by 22.03%, and obesity was observed in 37.29% of patients. Luminal breast cancer was the most prevalent subtype, counting for 86.44% patients, of which 58.82% were luminal B-like. Regarding the tumor staging, 11.86% of tumors were in stage I, 42.37% of tumors were in stage II, and 44.06% of tumors were stage III. **Conclusion:** The TAM receptors show potential for targeting therapy once the expression of the three genes coded for the trimer are related to breast cancer subtypes and influenced by patient's aging and habits. Besides, the crosstalk between TAM and others RTKs like MET and EPH receptors.

**Keywords:** RECEPTORS TYROSINE KINASE; TNBC TUMORS; LUMINAL PATIENTS; RESISTANCE; GENE EXPRESSION; TARGET THERAPY



## EPIDEMIOLOGICAL ANALYSIS OF THE PANDEMIC AND POST-PANDEMIC PERIOD IN THE DIAGNOSIS OF BREAST CANCER IN NORTH OF BRAZIL

Dalila Pereira Soares<sup>1</sup>; Vinícius Marçal de Araújo<sup>1</sup>; Maria Clara de Oliveira Gomes Sales<sup>1</sup>; Beatriz Cardoso Batista Santana<sup>1</sup>; Ana Julia Tassi<sup>1</sup>; João Pedro Bezerra Arruda Léda<sup>1</sup>; Monielli Muribeca Silva Milhomem<sup>1</sup>

<sup>1</sup>Medicine course, University of Gurupi - UNIRG, Gurupi Campus - Tocantins, Brazil.

**Objective:** Discuss Brazilian statistical data after the end of the COVID-19 pandemic in the diagnosis of breast cancer in the screening age range recommended by the Ministry of Health (MS) 50 to 69 years, served in the states of the north of Brazil. **Methodology:** Epidemiological, descriptive, quantitative and comparative study carried out from January 2020 to December 2023 based on data collected from the Cancer Information System (SISCAN). The options that were chosen were: "mammogram by patients", "Brazil by region"; "period: 2020 to 2023; "female" "age range: 50 to 69 years"; "BIRARDS 4 and 5 mammography report". Were compared the history of mammograms performed suggestive of breast cancer between the period of 2020 and 2021 (pandemic years) and 2022 and 2023 (post-pandemic years), analyzing the states: Amazonas, Pará, Acre, Roraima, Rondônia, Amapá and Tocantins. **Results:** Throughout 4 years among the 7 selected states, the total number of mammograms suggestive of breast cancer were 2557. Most states saw an increase in the number of breast cancer diagnoses, except Pará (-25%) and Amapá (-57) %, comparing 2020 and 2021. Overall, the states continued to see an increase in the number of diagnoses, except Acre (-27%) and Amapá (-95%), in the years 2021 and 2022. Finally, all states increased diagnoses between 2022 and 2023, except Acre (-20%), and Rondônia (-3%). **Conclusion:** Therefore, given the results obtained in this work, it is clear the importance of producing new qualitative research on the topic, in a way that the relationships between the pandemic and post-pandemic period of the breast cancer in Brazil are understood, as there are not many discussions about whether the tracking that occurred during the period were satisfying or not. With that being said, it is expected that this analysis will encourage news searches so that the question gets fully understood.

**Keywords:** Covid 19; Pandemics; Mammogram; Breast Neoplasms.



## EPIDEMIOLOGICAL ANALYSIS OF THE IMPACT OF THE COVID-19 PANDEMIC ON BREAST CANCER SCREENING IN THE NORTH OF BRAZIL

Ana Julia Tassi<sup>1</sup>; Vinicius Marcal de Araújo<sup>1</sup>; Dalila Pereira Soares<sup>1</sup>; Beatriz Cardoso Batista Santana<sup>1</sup>; Maria Clara de Oliveira Gomes Sales<sup>1</sup>; Monielli Muribeca Silva Milhomem<sup>1</sup>; João Pedro Bezerra Arruda Leda<sup>1</sup>; Myllena Suarte Magalhães<sup>1</sup>

<sup>1</sup>University of Gurupi (UnirG), Tocantins, Brazil.

**Objective:** Discuss Brazilian statistical data after the end of the COVID-19 pandemic in the diagnosis of breast cancer in the screening age range recommended by the Ministry of Health (MS) 50 to 69 years, served in the states of the north of Brazil. **Methodology:** Epidemiological, descriptive, quantitative and comparative study carried out between January 2018 and December 2021 using data collected in the Cancer Information System (SISCAN) as a basis. The options that were chosen: "mammogram by patients", "Brazil by region"; "women"; "mammography screening"; "target population"; "mammography report all categories". The history of mammograms performed in the period 2018 and 2019 (pre-pandemic years) and in the period 2020 and 2021 (pandemic years) was compared, analyzing the states: Rondônia, Acre, Roraima, Pará, Amazonas, Amapá and Tocantins. **Results:** The total number of mammograms performed for breast cancer screening performed in the 4 years and 7 selected states was 375,170. Comparing the period between 2018 and 2019, all states showed an increase in the number of screenings. When comparing 2019 and 2020, only the states of Amapá (+55%) and Acre (+52%) increased the tracking rate. Finally, all states increased the number of screenings comparing 2020 and 2021, with the exception of Amapá (-92%). **Conclusion:** Therefore, a bimodal pattern of breast cancer screening is noted, as the number of mammograms decreased in 2020, compared to the years 2018, 2019 and 2021. To sum up, it is assumed that the result presented due to the period of Lockdown and social distancing present during the pandemic.

**Keywords:** Covid 19; Pandemics; Mammogram; Breast Neoplasms



## THE GROWTH OF ONCOPLASTIC BREAST SURGERY IN NORTHERN PERU. EXPERIENCE OF TERTIARY INSTITUTE

Gustavo Adolfo Flores Trujillo<sup>1</sup>; Raquel Sanchez Otiniano<sup>2</sup>; Elki Pedemonte Murillo<sup>2</sup>; Sairah Alarcon Ruiz<sup>2</sup>; Omar Medina Mejia<sup>2</sup>; Franklin Soriano Lozano<sup>3</sup>; Andy Pantoja Lazaro<sup>1</sup>

<sup>1</sup>Department of Breast Surgery Oncology - Regional Institute of Neoplastic Diseases - Luis Pinillos Ganoza. Peru.

<sup>2</sup>Department of Surgery Oncology - Regional Institute of Neoplastic Diseases - Luis Pinillos Ganoza. Peru.

<sup>3</sup>Department of Plastic Surgery - Regional Institute of Neoplastic Diseases - Luis Pinillos Ganoza. Peru.

**Objective:** The aim of this study is to describe the Oncoplastic management of the breast cancer in northern Perú. **Methodology:** We analyzed 26 patients with the diagnosis of Breast cancer at the “Instituto Regional de Enfermedades Neoplásicas del Norte del Peru” between 2012 to 2020. Our institute oversees the oncology patients from the northwestern of Perú. Clinical features such as timing of the disease, age, were collected. As well data related to the neoplasm included, tumor location, size, pathology, clinical stage, as well oncoplastic techniques and management of axilla disease. Categorical and continuous variables were expressed as percentages and means, respectively. **Results:** A total of 26 patients were included in this research. The mean of age was 57, with a mean time of disease of 9 months. The mean tumor size was 2 cm. Most of the tumors were found in the Upper Outer Quadrant and in the Right breast as well. The main histopathology was Invasive Ductal carcinoma. 62% of the molecular profiles were Luminal followed with 19% Luminal with overexpressed Her2. The clinical stage II was found in the half of the patients. The main oncoplastic technique was Lateral Pattern followed with round block. For the axillar disease management, we used mainly Sental node lymph Dissection 46%. The overall survival was 102 months. None differences of clinical stage or molecular pattern over overall survival. **Conclusion:** The oncoplastic breast techniques are reliable management especially Lateral Pattern mostly for lower clinical stages

**Keywords:** oncoplastic breast surgery, Perú



## EXPERIENCE ON CARE, TREATMENT AND MONITORING OF WOMEN'S NEOPLASMS FROM AN ONCOLOGIC TEAM IN GOIÁS

Vinicius de Souza Naves<sup>1</sup>; Eldom de Medeiros Soares<sup>1</sup>; Lara Carrijo Pereira<sup>2</sup>; Nayara Portilho Araujo<sup>1</sup>; Geraldo Silva Queiroz<sup>1</sup>; Amanda de Castro Morato<sup>1</sup>; Luis Fernando Barbosa Silva<sup>1</sup>; Matheus Mendonça Marcolino<sup>1</sup>; Jessica Ferreira Freitas<sup>1</sup>

<sup>1</sup>Department of Gynecology and Breast Cancer, Araújo Jorge Cancer Hospital, Goiânia. Brazil.

<sup>2</sup>IMEPAC University, Araguari. Brazil.

**Objective:** To comprehend and acquire data from the outpatient consultations, surgeries, follow up consultations and adverse event care performed at the year of 2022. **Methodology:** Data was collected from digital medical records of gynecology a breast cancer team from the HAJ. Ambulatorial data were divided by month, while surgeries and hospital stay by international classification of diseases. **Results:** Over the period of January and December of 2022, 24.396 outpatient consultations were performed, an average of 2033 per month. The follow up consultations represents most of the demand (18.326), followed by chemotherapy consultation (3281) as first time consulting represents 2373 cases. The admissions for surgery were 1780 during 2022, as 1657 were elective and diagnostic surgeries. Most of the surgeries intended to treated breast cancer with 488 procedures, followed by uterine cervix cancer (156 cases), ovarian cancer (143 cases) and endometrial cancer (113 cases). Most of diagnostic surgery were performed to cervical cancer, with 241 surgeries, followed by ovarian cancer (172) and to breast cancer (165). The admissions due to adverse events resulted into emergency surgery in 123 cases, representing 6,9% of surgeries of that year. The hospitalizations due to clinical events were 123, and most of them related to cervical cancer. The deaths by breast cancer represented 81 (38,8%) by the total of 209 deaths, followed by cervical cancer (71 deaths) and ovarian cancer (42 deaths). Most of deaths occurred due to clinical events. **Conclusion:** The HAJ represent the only institution classified as a high complexity cancer center in Goiás. The gynecological and breast cancer team provides support to that population and those statistic number are crucial to improve treatment and understanding these neoplasms on regional, national and global context.

**Keywords:** Genital Neoplasms, Female; Breast Neoplasms; Uterine Cervical Neoplasms; Health Statistics; Endometrial Neoplasms



## THE USAGE OF ARTIFICIAL INTELLIGENCE IN THE EARLY BREAST CANCER DETECTION

Ândrea Tammiê Peixoto da Silva<sup>1</sup>; Anna Luiza Lima Bayma<sup>1</sup>; Gabriela Oliveira Silva<sup>1</sup>; Guilherme Alves Ribeiro<sup>1</sup>; Kallyne Rodrigues de Oliveira<sup>1</sup>; Kamille Dias Reis<sup>1</sup>; Mariana luz costa do vale<sup>1</sup>; Francícero Rocha Lopes<sup>2</sup>

<sup>1</sup>Medical Student, University of Gurupi-UNIRG, Gurupi campus, Tocantins, Brazil.

<sup>2</sup>PhD in biomedical sciences, Federal University of Goiás, Goiânia - Goiás, Brazil.

**Objective:** This literature review aims to evaluate the effectiveness of using artificial intelligence in breast cancer screening and its impact on diagnostic approaches for early-stage detection among women. **Methodology:** This is a systematic literature review that analyzed data from three databases: PUBMED, SCIELO, and MEDLINE. The search terms used were "breast cancer", "artificial intelligence", and "diagnostic" to select articles and studies published between 2019 and 2023. The results were analyzed to draw a conclusion about the proposal of this systematic review. **Results:** The literature review provides strong evidence for the use of artificial intelligence (AI) in the early detection of breast cancer. Computer-assisted detection systems, specifically the modern "CAD 2.0" based on optimized learning algorithms, have increased the percentage of malignancy detection and reduced false positives. Additionally, breast tomosynthesis and radiomic techniques have shown promising results in the early tracking and prognosis of breast cancer. These advances demonstrate the potential of AI to improve the precision and effectiveness of breast cancer tracking, contributing positively to clinical practice and enabling early and more accurate interventions for breast cancer patients. **Conclusion:** Through thorough examination and analysis of pertinent studies, it is discerned that the integration of artificial intelligence (AI) in breast cancer screening has been a practice spanning for several decades, yielding considerable advantages ranging from image generation to outcome prediction. Nonetheless, lingering inquiries persist regarding this technology, encompassing bioethical considerations and the refinement, progression, and management of AI systems. Thus, it is anticipated that in forthcoming years, AI will progressively increase its role in facilitating the screening process and promoting early detection of breast cancer.

**Keywords:** Artificial Intelligence; Breast Neoplasms; Women's Health



## IMMUNOHISTOCHEMICAL AND MOLECULAR ASPECTS OF PHYLLODES TUMORS OF THE BREAST AND THE REPERCUSSIONS ON DIAGNOSIS AND TREATMENT: A SCOPE REVIEW

Luiz de Paula Silveira Neto<sup>1</sup>; Luiz de Paula Silveira Júnior<sup>2</sup>; Maria Luiza Bessa de Paula<sup>3</sup>; Luiza Cesca Piva<sup>1</sup>

<sup>1</sup>University Center of Planalto Central Aparecido dos Santos, University of Federal District, Brazil.

<sup>2</sup>Institute of Mastology and Oncology Ltd, Goiânia-GO, Brazil.

<sup>3</sup>Mineiros University Center, Trindade-GO, Brazil.

**Objective:** The objectives are to highlight the importance of immunohistochemical and molecular markers in the diagnosis, treatment and prognosis of phyllodes tumors. 424 publications were identified from the database search and in the end 39 studies were included in the synthesis. **Methodology:** This work's methodology is a scoping bibliographic review, using the writers "phyllodes tumor" AND "immunohistochemistry" in the databases PubMed, SciELO, LILACS, Cochrane Library, NIH, Clinical Trials, NICE and BVSM. 424 publications were identified from the database search and in the end 39 studies were included in the synthesis. **Results:** The results demonstrate that numerous immunohistochemical markers have been studied in an attempt to improve the accuracy in the diagnosis of benign, borderline and malignant phyllodes tumors, such as p53, Ki67, CD117, EGFR, p16, VEGF, CD34, &#946;-catenin, E-cadherin, B7H3, EZH2, ZEB1/ILK, c-Kit, BIK, p-BIK, CD44 and cancer stem cell markers. The higher expression of E-cadherin and &#946;-catenin and CD34 corroborates the diagnosis of benign phyllodes tumor, while borderline phyllodes tumor can express B7H3, CD34, c-Kit and Ki67. An association of histological characteristics, high mitotic index and expression of Ki67 and p53 in malignant phyllodes tumor was verified. High stromal expression of EZH2 in malignant phyllodes tumor has been reported in cases with lower disease-free survival and overall survival, and BIK and p-BIK proteins have very low expressions in these tumors. **Conclusion:** In conclusion, extensive surgical removal is consolidated as the gold standard of treatment for phyllodes tumor, however, it is important to highlight that immunohistochemistry is a potential diagnostic tool in the evaluation of phyllodes tumor, along with histopathological characteristics, and in the near future it may have repercussions and impact on treatment and prognosis of these tumors.

**Keywords:** immunohistochemistry; phyllodes tumors; diagnosis; treatment.



## RETROSPECTIVE ANALYSIS OF THE EPIDEMIOLOGICAL PROFILE OF PATIENTS SUBMITTED TO BREAST RECONSTRUCTION AT A PUBLIC HOSPITAL IN THE NORTHEAST

Darley de Lima Ferreira Filho<sup>1</sup>; Nancy Cristina Ferraz de Lucena Ferreiran<sup>1</sup>; Thais de Lucena Ferreira<sup>1</sup>

<sup>1</sup>Barão de Lucena Hospital, Recife - PE, Brazil.

**Objective:** Breast reconstruction is a right assured by the public health system to patients submitted to mastectomy. However, there are factors that delay the performance of this procedure. To understand the epidemiological profile of women with breast cancer who underwent breast reconstruction in a reference hospital in the state of Pernambuco. **Methodology:** This is an observational, retrospective research with an analytical character and descriptive approach. The data were collected through a questionnaire sociodemographic and clinical-surgical history of patients with breast carcinoma, and then analyzed by SPSS software, version 18 with the percentages of the categories evaluated by the Chi - square test, considering the significance level of 5%. The comparison of analyses was significant ( $p < 0.005$ ), showing that the profile described is the most frequent in the group of patients evaluated. This search was submitted and approved by the Ethics and Research Committee on Human Beings of Fundação Amaury de Medeiros, CAAE: 42457420.1.0000.5193.

**Results:** A non-probabilistic sample of 400 records was obtained in ten years at a tertiary hospital in Recife (PE), most of them with mean age between 46 and 59 years (45.3%), brown (61.1%), married (79.1%), with education until high school (60.7%), household professionals (45%), non-smokers (84.9%), who do not consume alcohol (94.9%) and had immediate reconstruction after mastectomy (70.3%). A lot of patients use the region flaps in 45% and the second most use type of reconstruction was myocutaneous flaps in 23%. The subtype molecular most frequently was Luminal in 60%. **Conclusion:** The findings support that patients with high educational levels are likely to undergo immediate breast reconstruction. Pointing out that the socioeconomic level significantly influences the rates of breast reconstruction after mastectomy, or setorectomy.

**Keywords:** Breast Cancer Treatment, Epidemiology, Mastectomy, Breast Cancer, Breast



## EVALUATION OF QUALITY OF LIFE OF WOMEN BREAST CANCER SURVIVORS WHO PRACTITIONER RESISTANCE TRAINING FOR 12 MONTHS

Jessika Teodoro Santos<sup>1</sup>; Naiany Pereira Silva<sup>1,2</sup>; Rizia Rocha Silva<sup>1,2</sup>; Vitor Alves Marques<sup>1,2</sup>; Rafael Ribeiro Alves<sup>1,2</sup>; Nathan Muci Aguiar Damasio<sup>2</sup>; Carlos Alexandre Vieira<sup>1,2</sup>

<sup>1</sup>College of Physical Education and Dance, Federal University of Goiás, Goiania, GO, Brazil;

<sup>2</sup>Postgraduate Program in Health Sciences, Federal University of Goiás, GO, Brazil;

**Objective:** The study aimed to access the impact of a 12-month resistance training (RT) protocol on the quality of life (QoL) of woman breast cancer (BC) survivors. **Methodology:** Experimental study, lasting 12 months and involving 10 women ( $58.80 \pm 6.94$  years) breast cancer survivors. QoL was evaluated using the FACT B+4 (Functional Assessment of Cancer Therapy-Breast Cancer + Arm Subscale) composed of the domains: physical well-being (PWB), social/family well-being (SWB), well-being emotional (EWB) functional well-being (FWB), breast cancer specific aspects (BCS), Trial Outcomes Index (TOI), FACT-B and FACT- G. To analyze the two dependent measurements (pre- and post-intervention), we used the paired student t test (parametric data) described as mean and standard error (SE) and Wilcoxon test (non-parametric) described in median and SE. **Results:** For QoL, there was a significant difference for SWB with an improvement of 6.10 (SE 2.11) points, ( $t(9) = 2.883$ ,  $p = 0.018$ ;  $d = \text{"large"}$ ), FWB improvement of 7.60 (SE 2.77) points, ( $t(9) = 2.736$ ,  $p = 0.023$ ;  $d = 0.86 \text{"large"}$ ). As for TOI, FACT-G and FACT-B, there were a significant increase post-training, with gains of 13.60 (SE 4.02), 17.10 (SE 5.07) and 21.90 (SE 6.31) points, respectively. With significant differences for TOI ( $t(9) = 3.376$ ,  $p = 0.008$ ;  $d = 1.06 \text{"large"}$ ), FACT-G ( $t(9) = 3.372$ ,  $p = 0.009$ ;  $d = 1.06 \text{"large"}$ ), and FACT-B ( $t(9) = 3.468$ ,  $p = 0.007$ ;  $d = 1.09 \text{"large"}$ ). The Wilcoxon test indicated an improvement in BCS after the intervention, with median of 4.00 (SE 2.14) points ( $W = 3.500$ ,  $p = 0.027$ ;  $rB = 0.84 \text{"large"}$ ). **Conclusion:** RT after 12 months of intervention is significantly beneficial improving the quality of life of women BC survivors.

**Keywords:** Resistance training; quality of life; breast cancer; chemotherapy



## A NEW NAVIGATION AID TOOL :INSTAGRAM AS A FACILITATOR OF BREAST HEALTH EDUCATION

Darley de Lima Ferreira Filho<sup>1</sup>; Nancy Cristina Ferraz de Lucena Ferreira<sup>1</sup>; Juliana Porto Ferraz<sup>1</sup>; Maria Augusta Monteiro Perazzo<sup>1</sup>

<sup>1</sup>Barão de Lucena Hospital, Recife - PE, Brazil.

**Objective:** The purpose of navigation is, therefore, to appropriately direct patients who will need continued care within the health system. In the context of breast cancer patients, this appears to be promising and necessary so that they do not lose follow-up, but also maintain continuity in the provision of medical care postponed due to system failures. The key point of navigation is to look for which mechanisms contribute to delays in care, identifying and addressing barriers in the path of care and treatment of **Methodology:** This was an observational, prospective, experimental study with the objective of evaluating Instagram as a facilitating tool for the navigation of patients who were monitored at the mastology outpatient clinic of the Santa Casa de Misericórdia do Recife hospital, Hospital Barão de Lucena and the Pernambuco Military Police Hospital. Finally, it is worth mentioning that the project was submitted to the Brasil platform under the number(CAAE 74006323.0.0000.5205). **Results:** A total of 105 screening patients were identified as potentially eligible during medical care at the mastology outpatient clinic at the (HBL), the HPMPE) and the Santa Casa de Misericórdia do. Among these, 9 patients captured at the Santa Casa de Misericórdia were excluded since, even during the data collection period, that hospital was no longer part of this research due to loss of ties with the researchers. In the HPMPE, a total of 21 patients were eligible, 6 of whom were excluded because they did not meet the inclusion criteria, considering that it was not possible to contact them to apply the post-test. In the HBL, a total of 76 patients were eligible, 13 of whom were excluded because they did not meet the inclusion criteria: 4 patients refused to take the post-test and 9 patients were lost to follow-up, as it was not possible to establish contact. **Conclusion:** Through this study, we concluded that the Instagram platform is a useful tool for navigating breast cancer patients, capable of significantly reducing barriers.

**Keywords:** BREAST CANCER ; INSTAGRAM ;EPIDEMIOLOGY



## HALF-MOON TECHNIQUE: A NEW OPTION FOR BREAST RECONSTRUCTION OF CENTRAL TUMORS OR TUMORS WITH CENTRAL EXTENSION

René Aloisio da Costa Vieira<sup>1,2,3</sup>; Luiz Carlos Navarro de Oliveira<sup>1</sup>

<sup>1</sup>Muriae Cancer Hospital, Brazil.

<sup>2</sup>Postgraduate Program in Tocogynecology. Botucatu Faculty of Medicine, Brazil.

<sup>3</sup>Postgraduate Program in Oncology. Barretos Cancer Hospital, Brazil.

**Objective:** Objective: To describe, evaluate the indications and results of a new surgical technique for use in the breast conservative treatment of tumors in the central quadrants or central extension. **Methodology:** Methodology: CAAE Project 68787623.8.0000.5105, approved by the UniFaminas- Muriae Ethics Committee on 05/03/2023. The new technique, called “half-moon”, consists of creating a circular island of skin in areas close to the central region, in patients undergoing areolar resection. To do this, an island of skin is created from neighboring semicircles created horizontally or vertically. It is indicated for breasts with small and medium volume, absent or small ptosis, aiming to create a central area, with minimal loss of volume and volume projection. The characteristics of the patients were evaluated, as well as the results of this new technique. **Results:** Results: From 02/2022 to 01/2024, 14 patients underwent the half-moon technique. The median age was 45 years (31-67 years). Given the indication, the majority had small and medium breast volume (11), with absent or grade 1 ptosis (9). In the majority, surgery occurred after neoadjuvant chemotherapy (8), with partial response. Regarding the technique, the surgery was vertical in 11 cases and vertical in 3 cases, being associated with breast explantation and geometric compensation in 2 cases. Of the 8 patients who completed the initial treatment, 3 underwent symmetrization, and 5 refused symmetrization, considering the acceptable results. **Conclusion:** Conclusion: The half-moon flap constitutes a new safe reconstruction option to be performed in central tumors, with areolar resection, being easy to perform and providing acceptable cosmetic results.

**Keywords:** breast neoplasms; breast conserving surgery; surgical flap; surgical procedures, operative



## ANGIOGENESIS, HEROINE OR VILLAIN? THE EXPRESSION AND SIGNIFICANCE OF VEGF WHEN DEALING WITH THE PROGNOSIS OF PATIENTS WITH BREAST CANCER

Gustavo Moreira Andrade<sup>1</sup>; Leonardo Chaves de Oliveira Moraes<sup>1</sup>; Diogo Casagrande Nunes de Souza<sup>1</sup>; Isadora de Sousa Gomes<sup>1</sup>; Marcos Vinícius Milki<sup>1</sup>; Izabela Ramos Nascimento<sup>1</sup>

<sup>1</sup>Department of undergraduate medicine at the Pontifical Catholic University of Goiás, Brazil.

**Objective:** Vascular endothelial growth factor (VEGF) is an important signaling protein that acts in muscle and tissue regeneration and promotes angiogenesis, however, it can help spread the tumor through metastases. So, this review objective is to evaluate the expression and significance of VEGF when dealing with the prognosis of patients with breast cancer.

**Methodology:** We comprehensively searched PubMed database for studies and trials that included expression of VEGF and breast cancer prognosis in their papers. Our systematic review followed the PRISMA statement guidelines. **Results:** VEGF is a signaling protein and appears to be an effective direct pro-angiogenic factor that increases vascular permeability and promotes neoangiogenesis, playing a crucial role in the development and progression of vascularization and tumor growth. Furthermore, it stimulates the proliferation and migration of endothelial cells in a way that promotes tumor survival, invasion and metastasis through the inhibition of endothelial cell apoptosis. It also shows a suppressive function in antitumor immune activity by promoting the recruitment and proliferation of immunosuppressive cells such as Treg cells and myeloid-derived suppressor cells. Thus, in several types of breast cancer, such as locally advanced breast cancer, the edematous inflammatory form, and subtypes, such as triple negative breast cancer, increased VEGF levels were observed resulting from secretion by cancer cells and significant correlation between inflammatory cytokines and VEGF due to the activation of signaling pathways in the tumor microenvironment. In turn, in breast cancer metastases, mainly bone, lung, brain and lymph node, there was high expression of VEGF due to its role in the recruitment of tumor-associated macrophages (TAMs) and metastasis-associated macrophages, contributing to cancer severity and worse prognosis. **Conclusion:** Therefore, the use of VEGF as a prognostic biomarker and therapeutic target is relevant, since factors related to angiogenesis may have significant prognostic value for patients with breast cancer and/or metastatic disease.

**Keywords:** Breast Cancer, Vascular Endothelial Growth Factor, Oncology



## EDUCATION EVALUATION WITH BREAST CANCER :AN ECOLOGICAL STUDY

Darley de Lima Ferreira Filho<sup>1</sup>; Nancy Cristina Ferraz de Lucena Ferreira<sup>1</sup>; Renata Maciel<sup>1</sup>; Bruna Daniela Carvalho<sup>1</sup>; Maria Eduarda Candeias G Pereira<sup>1</sup>

<sup>1</sup>Barão de Lucena Hospital, Recife - PE, Brazil.

**Objective:** This study aims to analyse the association between education level and breast cancer in Brazil among women from 2013 to 2022, observing the relationship between education level and mortality rate in different regions of Brazil, under the hypothesis that women with lower education levels are diagnosed at more advanced stages, resulting in higher mortality rates. **Methodology:** This is an ecological study, using a time series design, based on data collected from the national DATASUS database, including female individuals affected by malignant neoplasm of breast between 2010 and 2022. **Results:** Among the risk factors related to a worse prognosis for breast cancer, education level stands out. A higher number of cases can be observed in patients with lower levels of education, which is more evident in the south, southeast and midwest regions. The low level of education combined with socioeconomic factors leads to a lack of knowledge about the disease and its early detection methods, resulting in restricted access to healthcare services, delays in conducting and receiving tests, and difficulties in transportation to consultations and treatment centers. Furthermore, a higher mortality rate was observed in regions such as the south, southeast and midwest, reinforcing that women with lower education levels have a higher probability of presenting a more advanced stage of cancer at the time of diagnosis, resulting in a worse prognosis. **Conclusion:** The education level of patients proved to be an important factor related to worse outcomes in women with breast cancer in most regions of Brazil, associated with a lack of education and hindered access to healthcare services.

**Keywords:** BREAST NEOPLASMS; EDUCATION; MORTALITY RECORDS



## MEDULLARY BREAST CANCER. AN EXPERIENCE OF A TERTIARY PERUVIAN CANCER CENTER

Gustavo Adolfo Flores Trujillo<sup>1</sup>; Raquel Sanchez Otiniano<sup>2</sup>; Maria Fernanda Alvarado Ortiz<sup>2</sup>; Milagros Abad Licham<sup>3</sup>; Andy Pantoja Lazaro<sup>1</sup>

<sup>1</sup>Department of Breast Surgery Oncology - Regional Institute of Neoplastic Diseases - Luis Pinillos Ganoza. Peru.

<sup>2</sup>Department of Surgery Oncology - Regional Institute of Neoplastic Diseases - Luis Pinillos Ganoza. Peru.

<sup>3</sup>Department of Pathology Oncology - Regional Institute of Neoplastic Diseases - Luis Pinillos Ganoza. Peru.

**Objective:** The aim of this study is to describe clinical features, treatment, and overall survival of Medullary breast cancer of a tertiary Peruvian cancer center at the North of Peru.

**Methodology:** We analyzed 07 patients with the diagnosis of Medullary breast cancer at the “Instituto Regional de Enfermedades Neoplásicas “Luis Pinillos Ganoza”” between 2012 to 2020. Clinical features such as timing of the disease and average age were collected. Data related to the neoplasm included: Stage, and treatment. The overall survival was analyzed until September 2021. Categorical and continuous variables were expressed as percentages and means, respectively. The survival analysis was performed using the Kaplan-Meier curves and log-rank test. **Results:** A total of 07 patients were included in this research. The mean age was 40 years old. Mostly in the right breast also we found stages III and IV around 57% cases. We found more than half were cases associated with Triple Negative molecular type. The mean overall survival was 64 months; most of the patients were treated with surgery, but there is no difference in overall survival with surgery alone or associated to other treatments, also no difference in overall survival regarding the molecular type. **Conclusion:** Medullary breast cancer has very low incidence in our hospital. Most of them have locally advanced disease as initial presentation and are triple negative molecular type. The median overall survival was more than 5 years old.

**Keywords:** Medullary breast cancer, Perú



## EPIDEMIOLOGICAL ANALYSIS OF THE IMPACT OF THE COVID-19 PANDEMIC ON THE DIAGNOSIS OF BREAST CANCER IN NORTHERN BRAZIL

Monielli Muribeca Silva Milhomem<sup>1</sup>; Beatriz Cardoso Batista Santana<sup>1</sup>; João Pedro Bezerra Arruda Léda<sup>1</sup>; Dalila Pereira Soares<sup>1</sup>; Maria Clara de Oliveira Gomes Sales<sup>1</sup>; Vinícius Marçal de Araújo<sup>1</sup>; Ana Júlia Tassi<sup>1</sup>; Fabiana Cândida Queiroz Santos Anjos

<sup>1</sup> University of Gurupi (Unirg), Gurupi – TO, Brazil.

**Objective:** Analyze Brazilian statistical data on the impact of the COVID-19 pandemic on the diagnosis of breast cancer in all age groups, served in the states of the northern region of Brazil. **Methodology:** Epidemiological, descriptive, quantitative and comparative study carried out from January 2018 to December 2021 based on data collected from the Cancer Information System (SISCAN). Mammograms were analyzed in women in the states of the northern region of Brazil presenting suspicious lesion by the systematization Best Imaging - Reporting and Data System (BIRADS 4 and 5). Comparing mammograms performed in the period 2018 and 2019 (pre-pandemic) and, 2020 and 2021 (pandemic years), analyzing the states: Amazonas, Pará, Acre, Roraima, Rondônia, Amapá and Tocantins. **Results:** In total, 202579 mammograms (2018 and 2019) and 190219 (2020 and 2021) were performed, a drop of 7.2%. In the pre-pandemic period 1.1% diagnosis of suspected injury, increasing to 1.3% in the pandemic period. According to the data found, only Acre and Amapá increased the number of mammograms in the pandemic period (from 10043 to 19941- Acre, 4395 to 5560- Amapá), increasing 2.67 times the number of suspicious lesions in Acre and 3.97 times in Amapá. In Roraima, Pará and Tocantins the absolute number of diagnoses decreased in the BI-RADS 4 and 5 categories, however it maintained the proportion of diagnosis within the mammograms performed. Comparing the pre-pandemic and pandemic periods, in the 7 selected states, there was an increase in the diagnosis of suspected injury by 12%, despite having decreased the number of mammograms performed. **Conclusion:** In the period of the COVID-19 pandemic, although breast cancer screening in the States of the Northern Region of Brazil showed a decrease, the findings of BI-RADS 4 and 5 increased, showing that patients at higher risk for breast cancer continued their screening.

**Keywords:** Covid 19; Pandemics; Mammography; Breast Neoplasms.



## ANALYSIS OF THE BREAST CANCER MORTALITY RATE IN RECENT YEARS IN DIFFERENT REGIONS OF BRAZIL

Marina Elias Rocha<sup>1</sup>; Amanda de Borba Reis<sup>1</sup>; Ana Flávia Silva Santos<sup>1</sup>; Giovanna Lyssa de Sousa Crozara<sup>1</sup>; Gustavo Souza Miranda da Silva<sup>1</sup>

<sup>1</sup>Unifimes - University Center of Mineiros – Goiás, Brazil.

**Objective:** To analyze the breast cancer mortality rate in recent years in different regions of Brazil. **Methodology:** A literary, descriptive and qualitative study was carried out, using data collected from the annual reports of the National Cancer Institute and the Ministry of Health, in the years 2019 and 2024, about breast cancer mortality in Brazil. **Results:** When carrying out the studies, it is noted that breast cancer is the first cause of death in women in Brazil, in addition to being something of concern for Brazilian health and is also marked by great challenges for those who go through this situation. It is seen that lethality is higher at older ages, but between 40 and 49 years of age this rate decreases. First of all, it is extremely important to know the risk factors: age over 50, nulliparity, late pregnancy, obesity, sedentary lifestyle, among others. Therefore, screening is necessary so that if the disease appears, diagnosis and treatment can occur as quickly as possible, thus avoiding death. **Conclusion:** Considering that breast cancer has a directly proportional relationship to age over 50 years, sedentary lifestyle and nulliparity, it is concluded that understanding the contribution of risk factors to breast cancer allows health professionals to develop health strategies in order to track and prevent more cases of breast cancer deaths in Brazil.

**Keywords:** Breast cancer, Women's health and mortality.



## BRAZILIAN SOCIETY OF MASTOLOGY PODCAST: CREATION AND CONSOLIDATION OF A NEW COMMUNICATION CHANNEL

Leonardo Ribeiro Soares<sup>1</sup>; Idam de Oliveira-Junior<sup>1</sup>; Larissa Cabral Marques<sup>1</sup>; Natalia Polidorio<sup>1</sup>; Rebeca Heinzen<sup>1</sup>; Thamyse Dassie<sup>1</sup>; Felipe Andrade<sup>1</sup>; Vilmar Marques Oliveira<sup>1</sup>

<sup>1</sup>Brazilian Society of Mastology, Podcast Organizing Committee, Rio de Janeiro, Brazil.

**Objective:** To describe the creation and first year of operation of the SBM Channel, the official podcast of the Brazilian Society of Mastology (SBM, Sociedade Brasileira de Mastologia).

**Methodology:** The SBM Channel was created in 2021 at the initiative of the SBM Board of Directors, with the aim of increasing communication and generating knowledge for members and the general population. To organize it, six associated mastologists were invited; of which four were women and aged between 30-40 years. The channel has two programs: Breast Health in Focus (BHF), released weekly and aimed at the lay public, with an objective and didactic approach; and Point and Counterpoint (PCP), released monthly and aimed at physicians, in which specialists debate various topics related to mastology. Episodes were recorded monthly in an online studio, prepared, and made available on various podcast aggregator platforms. **Results:** In one year, there were 13 episodes of PCP, 56 episodes of BHF, and an additional 4 episodes covering the congress of the American Society of Clinical Oncology (ASCO). In total, 125 specialists were involved in the project, the majority mastologists from all regions of the country. The Channel's audience was over 10,000 listeners, predominantly composed of women (67%), aged between 35 and 44 years old (43%), and accessed mainly through the Spotify platform (79%). **Conclusion:** The SBM Channel fulfilled its objective of spreading knowledge among members and the general population, constituting a new form of communication and access to reliable and quality information.

**Keywords:** Breast Neoplasms, Health Communication, Health Education, Webcast.



## EFFECTS OF CHEMOTHERAPY ON PERIPHERAL NEUROPATHY OF WOMEN BREAST CANCER SURVIVORS: AN INTEGRATIVE REVIEW

Tatiane Nunes da Silva Rodarte<sup>1</sup>; Vitor Alves Marques<sup>2</sup>; Flavia Batista Gomes Noleto<sup>3</sup>; Ellen Gomes de Oliveira<sup>3</sup>; Anderson Garcia Silva<sup>2</sup>; Rafael Ribeiro Alves<sup>2</sup>; Carlos Alexandre Vieira<sup>4,5</sup>

<sup>1</sup>Physiotherapist at Hospital das Clínicas - CORA/FM/UFG, Brazil.

<sup>2</sup>Student of the Postgraduate Program in Health Sciences /FM/UFG, Brazil.

<sup>3</sup>Student of the Postgraduate Program in Physical Education /FEFD/UFG, Brazil.

<sup>4</sup>Professor of the Postgraduate Program in Health Sciences /FM/UFG, Brazil.

<sup>5</sup>Professor of the Postgraduate Program in Physical Education /FEFD/UFG, Brazil.

**Objective:** To systematize the knowledge produced in articles on chemotherapy-induced peripheral neuropathy (CIPN) and its effects on the quality of life of women breast cancer survivors. **Methodology:** The SCOPUS, PUBMED and SCIELO databases were consulted for the selection of articles. Experimental and non-experimental studies published from 2011 to 2023 were selected. The descriptors used were peripheral neuropathy, chemotherapy, breast cancer, quality of life, and pain management. **Results:** A total of 11 articles were analyzed, of which 3 were published in English, 8 in Portuguese. The findings point to the importance of diagnosing and evaluating CIPN, using specific diagnostics and evaluation methods, as well as sensitivity testing. Risk factors for developing CIPN include older age, history of neurological disease, genetic predisposition, type and dose of chemotherapy, and duration of treatment. The prevention and management of CIPN involve pharmacological strategies, such as anticonvulsants, and non-pharmacological strategies, including physical and occupational therapy, as well as complementary strategies such as acupuncture. CIPN has a profound impact on quality of life, affecting physical, psychological, and social aspects. The pain and loss of sensation limit mobility and independence, while the psychological impact includes anxiety and depression. Socially, isolation and difficulties at work contribute to a decline in quality of life. **Conclusion:** An interdisciplinary approach should be adopted that incorporates different therapeutic strategies to improve the quality of life and well-being of these patients.

**Keywords:** Neurological, tumor, cancer treatment



## EFFECTS OF LOW VOLUME RESISTANCE TRAINING ON BLOOD PRESSURE CHANGES, GLYCEMIC LEVELS, FATIGUE SCORES, BONE MINERAL DENSITY, AND MUSCLE STRENGTH: A CASE STUDY AT A UNIVERSITY HOSPITAL

Rafael Ribeiro Alves<sup>1</sup>; Victor Domingos Lisita Rosa<sup>4</sup>; Anderson Garcia Silva<sup>1</sup>; Ellen Gomes de Oliveira<sup>2</sup>; Jessika Teodoro Santos<sup>3</sup>; Nathan Muci Aguiar Damasio<sup>3</sup>; Ruffo Freitas-Junior<sup>4</sup>; Carlos Alexandre Vieira<sup>4,5</sup>

<sup>1</sup>Student of the Postgraduate Program in Health Sciences /FM/UFG, Brazil.

<sup>2</sup>Student of the Postgraduate Program in Physical Education /FEFD/UFG, Brazil.

<sup>3</sup>Undergraduate student FEFD/UFG, Brazil.

<sup>4</sup>Professor of the Postgraduate Program in Health Sciences /FM/UFG, Brazil.

<sup>5</sup>Professor of the Postgraduate Program in Physical Education /FEFD/UFG, Brazil.

**Objective:** To evaluate the effects of one resistance training session (RT) per week on indicators of blood pressure, glycemic levels, fatigue scores, bone mineral density and muscle strength. **Methodology:** A case study was conducted with an elderly patient (78 years old; body mass: 82.8 kg; height (m): 1.54; Body Mass Index: 34.7 kg/m<sup>2</sup>), breast cancer survivor, with mastectomy, undergoing hormone therapy, diagnosed with type II diabetes, hypertension, and grade I obesity. The RT consisted of 1 session per week for 8 weeks. The sessions consisted of only 4 exercises: bench press, lat pulldown, leg press, and crunch exercises, with progressive intensity increase throughout the sessions, which lasted an average of 30 minutes. Before and after the period of training, resting blood pressure, fasting blood glucose, fatigue scores, bone mineral density, and muscle strength were evaluated. CEP: 50717115.4.0000.5083. **Results:** Systolic blood pressure did not change significantly between pré and post moment (152 and 147 mmHg, respectively) as did diastolic blood pressure (77 and 76 mmHg, respectively), as well as total bone mineral density (pré = 2.3 g/cm<sup>2</sup> and post = 2.4 g/cm<sup>2</sup>). However, fasting blood glucose changed the classification values (pré = 129 mg/dl and post = 97 mg/dl). Fatigue levels classified at the pré-moment as moderate in the behavioral (2.2), affective (2.8), and sensory (0.4) domains reduced to absence of fatigue after the intervention, although without classification change in the cognitive domain (pré = 3.5 and post = 1.6, respectively). Additionally, performance in the muscle strength test increased by 33% between pré-moment (90 kg) and post-moment (120 kg). **Conclusion:** Low volume of resistance training was able to improve glycemic levels, fatigue scores, and muscle strength performance in an elderly breast cancer survivor with diabetes, hypertension and obesity.

**Keywords:** Resistance Training; Breast Neoplasms; exercise



## ROLE OF THE NURSE IN THE MENTAL HEALTH OF PATIENTS UNDER BREAST CANCER TREATMENT

Marina Elias Rocha<sup>1</sup>; Geffson Damaceno Machado<sup>1</sup>; Éllyda Vanessa Leonel Oliveira<sup>1</sup>; Jaziane Gonçalves Santos<sup>1</sup>

<sup>1</sup>Estácio de Sá de Goiás – Goiânia – GO, Brazil.

**Objective:** To highlight the importance of nurses as assistants in the mental health care of patients undergoing breast cancer treatment. **Methodology:** An integrative literature review was carried out from 2022 to 2023, using the Pubmed, Medline and Scielo databases. **Results:** Breast cancer is seen as a neoplasm that most affects women in the world, therefore it is a disease surrounded by stigma and suffering that significantly affect the mental health of the patient who is diagnosed and it is extremely important to qualify the professional who will provide the necessary care according to the needs of each case. The role of the nurse is necessary both in prevention and, crucially, after diagnosis, in rehabilitation, providing holistic assistance, taking into account the importance of the work of the multidisciplinary team, assisting in the care plan and decision-making regarding the needs of each patient. , promoting good maintenance of physical and mental comfort. It is up to the nurse to provide humanized and effective assistance that reduces the suffering caused by this illness. In view of this, we can mention the qualification regarding the humanized and cautious approach to the treatment, which, as it is an aggressive disease, becomes long, exhausting and causes a lot of suffering. **Conclusion:** Therefore, in order to identify the importance of professional nurses in relation to the mental health of patients fighting breast cancer, it was noted such importance in relation to humanized and personalized care, with vast knowledge being evident and necessary to adequate planning that will be effective both in prevention and after diagnosis in support for these patients who will continue to be assisted both with drug therapies and in a biopsychosocial way, having a long quality of life in the professional, personal and social spheres.

**Keywords:** Breast Cancer, Nursing and Mental Health.



## NURSING TEAM INTERVENTIONS IN THE EARLY DIAGNOSIS OF BREAST CANCER

Marina Elias Rocha<sup>1</sup>; Éllyda Vanessa Leonel Oliveira<sup>1</sup>; Jaziane Gonçalves Santos<sup>1</sup>; Geffson Damaceno Machado<sup>1</sup>

<sup>1</sup>Estácio de Sá de Goiás, Goiânia – GO, Brazil.

**Objective:** To identify nursing interventions in the early diagnosis of breast cancer. **Methodology:** An integrative literature review was carried out from 2017 to 2024, using the Pubmed, Medline and Scielo databases. **Results:** The cancer panorama is constantly changing and given this current scenario, breast cancer has become the most commonly diagnosed cancer in the world, surpassing lung cancer. Given this problem, analyze the importance of the nursing team's role in Early identification becomes vital, considering that it is the main form of prevention and premature treatment of the disease. It was analyzed that having continuous knowledge about the topic is essential for these professionals to maintain the effectiveness of their main duties. The following interventions were identified that the nursing team must be able to carry out: participating in ongoing education on the subject, carrying out the appropriate nursing consultation, according to the clinical condition and age group, carrying out a clinical breast examination correctly, evaluating symptoms and signs related to neoplasia, request and forward exams according to the standard operating procedure of each institution and monitor the diagnosis and treatment of each client, all of this allows treatment to be started in advance, preventing the progression of this cancer to more advanced stages. dangerous and consequently death. **Conclusion:** Therefore, the nursing team plays an important role in carrying out this identification through their respective duties, as they work directly in the primary health care stage, having constant updating of their knowledge in relation to the topic brings better performance to these professionals, which is essential in relation to their role as a nurse, which involves both the physical and emotional aspects that are related to the health-disease process.

**Keywords:** Breast neoplasms, early detection of cancer, nursing.



## MASTECTOMY AND CONSERVATIVE TREATMENT: FINDING BALANCE BETWEEN THERAPEUTIC EFFICIENCY AND QUALITY OF LIFE

Marina Elias Rocha<sup>1</sup>; Giovanna Sant'Anna da Costa<sup>1</sup>; Alessandro Magno Teixeira Imbrozio<sup>1</sup>; Beatriz Curado Damasceno<sup>1</sup>; Dener Cleiton Souza e Silva<sup>1</sup>; Carla Danielle Dias Costa<sup>1</sup>

<sup>1</sup>Unifimes - University Center of Mineiros – Goiás, Brazil.

**Objective:** To describe the points of balance between the approaches of conservative surgery and radical mastectomy in the treatment of breast cancer, based on treatment and quality of life. **Methodology:** This is a narrative review of the literature in which studies were selected from the PubMed, Scielo and Virtual Health Library databases. We used the descriptors: mastectomy, breast cancer, Halsten mastectomy, conservative surgeries, associated with Boolean operators and and or that helped in expanding the research. **Results:** There are several mechanisms available for the treatment of breast cancer, depending on the stage of the disease and the patient's condition, requiring individualized assessment of the patient to obtain a better prognosis. Thus, the radical mastectomy proposed by Halsten, its modified versions and conservative treatments stand out. In relation to radical mastectomy, which is more aggressive but eligible in advanced diseases, there is resection of the breast, including skin and glands, pectoral muscles and axillary lymph nodes, while conservative surgery removes only part of the mammary gland that contains the tumor. With regard to conservative surgery, even if there is no mutilation of the organ, it was analyzed that there is an increase in the rates of local recurrence of the tumor when compared to mastectomized patients. When evaluating impacts on a woman's quality of life (QL), mastectomy presents numerous problems mainly due to the imagery aspect, which leads to depressive conditions, resulting in lower biopsychosocial functioning. **Conclusion:** It is concluded that the treatment of breast cancer must be individualized, taking into account the possibility of recurrence, QoL and the staging of the neoplasm. Mastectomy reduces the chance of recurrence, however, it has a greater chance of generating grief related to the loss of the breast, reducing QoL. On the other hand, conservative surgery has a better biopsychosocial aspect, but recurrences are more common.

**Keywords:** Breast Cancer, Mastectomy and Quality of Life.



## THE IMPORTANCE OF PRIMARY CARE IN THE PREVENTION OF BREAST CANCER IN BRAZIL

Marina Elias Rocha<sup>1</sup>; Yasmin silva Tavares<sup>1</sup>; Samara Benites Moreira<sup>1</sup>; Daiane de Sena de Oliveira<sup>1</sup>; Júlia Sanches Signor<sup>1</sup>; Isabela Garcia Lima<sup>1</sup>; Carla Danielle Dias Costa<sup>1</sup>

<sup>1</sup>Unifimes - University Center of Mineiros – Goiás, Brazil.

**Objective:** To present the importance of actions to promote, prevent and protect women's health in preventing breast cancer in Brazil. **Methodology:** This is a narrative review of the literature, using the PubMed and Google Scholar databases, using the descriptors "breast cancer prevention" and "primary care". Inclusion criteria were: articles published in Portuguese, available online and free of charge. Exclusion criteria were: articles not available in full and repeated. The initial sample identified 516 studies, of which 5 were selected for the construction of this work. **Results:** The results indicate that effective primary care performance is correlated with earlier diagnoses of breast cancer, through campaigns encouraging self-care, healthy eating and physical activity. In addition, carrying out a physical examination during consultations, health literacy actions in basic health units regarding measures to reduce the chance of developing breast cancer, enabling more effective treatments and increasing survival rates, therefore suggests- an integrated approach between primary care services and specialized oncology and mastology services. **Conclusion:** Therefore, it is concluded that primary care is an important tool in the early detection of this cancer, having a significant impact on the good prognosis of patients, offering well-being and quality of life for these women.

**Keywords:** Breast cancer, primary care, early diagnosis.



## SEQUENTIAL SINGLE-AGENT CHEMOTHERAPY AS NEOADJUVANT TREATMENT IN EARLY STAGE HER-2 POSITIVE BREAST CANCER DURING PREGNANCY: CASE REPORT

Thiago Lourenço Apolinário<sup>1</sup>; Cinthya Roberta Santos de Jesus<sup>2</sup>

<sup>1</sup>Department of Clinical Oncology - Hospital Universitário Oswaldo Cruz, University of Pernambuco, Brazil

<sup>2</sup>Department of Mastology - Hospital Universitário Oswaldo Cruz, University of Pernambuco, Brazil.

**Objective:** Case report about a successful treatment using sequential chemotherapy in pregnant patient with early HER2 positive breast cancer. **Results:** Clinical case A 38-year-old woman was referred to our hospital on May 26th of 2022, diagnosed with an early (T1N0M0, stage IA) invasive carcinoma of no special type hormonal receptor positive HER2 positive tumor on the left breast and 12-week pregnancy. The patient started the neoadjuvant treatment at 13 weeks and five days of gestational age on May 31st with four cycles of 3-weekly Doxorubicin, finished on August 9th. The treatment with Cyclophosphamide was delayed by one week because of transport problems, starting on August 30th and finishing on October 11th. We employed a dose-dense regimen to allow time for recovery before childbirth, scheduled for November 4th. The labor was a cesarean section without complications. We restarted the treatment with weekly paclitaxel and trastuzumab on November 15th, 2022, after five weeks from the last chemotherapy. The patient underwent a breast-conserving surgery plus sentinel lymph node biopsy without complications, resulting in a complete pathologic response in the pathology report. She received adjuvant treatment with radiotherapy and started tamoxifen. She completed the treatment with trastuzumab. **Conclusion:** As demonstrated in CALGB 9741 study, the single sequential chemotherapy is equally effective as concurrent protocol, being an option for patients in the early stages of the second trimester, reducing fetal exposure to chemotherapeutic agents and enabling concomitant use of trastuzumab with taxane.

**Keywords:** Pregnancy, breast cancer



## MANAGEMENT OF PHYSICAL THERAPY AFTER CHEMOTHERAPY EXTRAVASATIONS: CASE REPORT

Nádia Oliveira Gomes<sup>1,2</sup>; Magda Souza de Santana<sup>1</sup>; Elaine da Silva Farias<sup>1</sup>; Keyla de Paula Barbosa<sup>2</sup>; Tito Livio Cardoso Barreto<sup>2</sup>

<sup>1</sup>LS University Center, Taguatinga – DF, Brazil.

<sup>2</sup>Angiofisio Clinic - Vascular and Oncological Physiotherapy, Brasília – DF, Brazil.

**Objective:** Presenting the role of physiotherapy after chemotherapy extravasation. Patient G.M.M.S, 75 years old, diagnosed with breast cancer, during her first session of vesicant chemotherapy via port-a-cath, experienced a burning sensation in the breast. She reported this to the team who asked her to stay under observation. After 24 hours, she developed swelling, redness, and pain in the region. Over the following days, her condition worsened, requiring hospitalization and antibiotic treatment. Due to the extravasation, she continued chemotherapy treatment intravenously. Six months after the incident, she sought physiotherapy reporting a sensation of hardening, swelling, and discomfort in the breast area. Upon physical evaluation, she presented with 14 cm of fibrosis in the breast, significant edema, dilated pores, red and purplish skin, and pain rated at 6 on the Numerical Rating Scale. **Methodology:** 10 physiotherapy sessions, 2x per week were conducted with the aim of reducing fibrosis, edema, and pain. The approach included manual therapy in the fibrosis region, infrared photobiomodulation, shockwave therapy, and compressive taping. **Results:** After 10 sessions, there was a reduction in fibrosis to 7 cm, decreased edema, and no more pain. The patient continues with treatment. **Conclusion:** Physiotherapy offers therapeutic resources that can help reduce the inflammatory process, remodel fibrosis, and provide analgesia in tissue changes caused by extravasation.

**Keywords:** Drug Therapy, Physical Therapy, Skin Manifestations



## THERAPEUTIC APPROACHES IN PREGNANT WOMEN WITH BREAST CANCER

Marina Elias Rocha<sup>1</sup>; Wadyla Thaís Oliveira Cardoso<sup>1</sup>; Ana Carolina Daniel Cintra<sup>1</sup>; Giovanna Sant'Anna da Costa<sup>1</sup>; Amanda de Borba Reis<sup>1</sup>; Isabela Garcia Lima<sup>1</sup>; Lara Cardoso Perillo<sup>1</sup>; Carla Danielle Dias Costa<sup>1</sup>

<sup>1</sup>Unifimes - University Center of Mineiros – Goiás, Brazil.

**Objective:** To understand the therapeutic approaches recommended for pregnant women with breast cancer. **Methodology:** Narrative review, which used PubMed, Scielo and Virtual Health Library as databases, with the descriptors: “breast cancer”, “Pregnant woman at risk” and “Therapeutic indication”. **Results:** Breast cancer (BC) is considered a risk factor during pregnancy, when the diagnosis occurs during or after one year of pregnancy. At this stage, there is greater vascularization and density of the breast parenchyma, intensified during the lactation period. These physiological changes in the pregnancy cycle make early diagnosis by mammography difficult and, consequently, lead to a higher frequency of cases of breast CA in advanced stages. Infiltrating ductal carcinoma corresponds to the majority of breast cancers in pregnant women; for this, the most indicated treatment, in most cases, is surgery. However, radiotherapy is contraindicated, as chemotherapy is only used in the second and third trimesters of pregnancy. The survival of pregnant women with breast CA and non-pregnant women presents little difference, but the clinical control of the patient must be multidisciplinary with an obstetrician, oncologist, nutritionist and psychologist to confirm both the state and the gestational time, which are necessary for safe therapeutic decisions for mother and fetus. **Conclusion:** Therapeutic strategies bring several benefits in the treatment of breast cancer in pregnant women, especially infants. Furthermore, it is important to highlight the importance of the multidisciplinary team in the treatment of breast cancer, taking into account the benefits and risks presented for each patient, therefore, the assessment must be analyzed and individualized for each patient and the specificity of breast cancer, all with the aim of the best treatment of the mother, ensuring the benefits of her relationship with her child and ensuring a healthy and safe motherhood.

**Keywords:** Breast Cancer, Pregnant Women at Risk and Therapeutic Indication.



## MALE BREAST CANCER

Marina Elias Rocha<sup>1</sup>; Jaziane Gonçalves Santos<sup>1</sup>; Éllyda Vanessa Leonel Oliveira<sup>1</sup>; Geffson Damaceno Machado<sup>1</sup>

<sup>1</sup>Estácio de Sá de Goiás, Goiânia – GO, Brazil.

**Objective:** Describe breast cancer in the male population in the literature. **Methodology:** An integrative literature review was carried out from 2014 to 2019, using the Pubmed, Medline and Scielo databases. **Results:** Malignant breast neoplasia is much more common in women and rare in men, accounting for around 1% of diagnoses, making it an uncommon cancer and being more common in patients aged 60 to 70 years. lobular and the most common is ductal carcinoma, the diagnosis is made through clinical ultrasound, mammography and pathological studies. The assessment of genetic factors in first-degree relatives is very important, they are present in 20% of cases, we have several risk factors: hormonal, such as prostate cancer treatment and the use of transsexuals, obesity is one of the most frequent causes and in cases of environmental issues, for both men and women the treatment is similar; initial surgery for the removal of breast tissue, nipple and axillary emptying, others such as hormone therapy, chemotherapy and radiotherapy have not been studied much but due to the positivity in the receptors it has been chosen in adjuvant treatment and followed the female guidelines, of 80 90% of diagnosed patients have positive estrogen and progesterone receptors. **Conclusion:** Breast cancer is very similar between men and women. prognostic characteristics, differences may necessitate a different approach compared to female breast cancer.

**Keywords:** Breast neoplasms, Male Breast Neoplasms, Clinical Diagnosis.



## RADIO-INDUCED BREAST ANGIOSSARCOMA: CASE REPORT

Maria Luiza Bessa de Paula<sup>1</sup>; Luiz de Paula Silveira Júnior<sup>2</sup>; Luiz de Paula Silveira Neto<sup>3</sup>; Sebastião Alves Pinto<sup>4</sup>

<sup>1</sup>Mineiros University Center, Trindade-GO, Brazil.

<sup>2</sup>Institute of Mastology and Oncology Ltd, Goiânia-GO, Brazil.

<sup>3</sup>University Center of Planalto Central Aparecido dos Santos, University of Federal District, Brazil.

<sup>4</sup>Goiano Institute of Oncology and Hematology, Goiânia-GO, Brazil.

**Objective:** To describe a case of radio-induced angiosarcoma after conservative surgery of the right breast, since due to the low incidence of this neoplasm, experience in the different services is limited. Therefore, the authors call for strict follow-up, especially due to the appearance of skin changes after radiotherapy, with the aim of making an early diagnosis of the disease. **Methodology:** To write the following case report, the authors carried out a literature review in the following databases: PubMed, LILACS, VHL, NICE, Cochrane Library and Scielo. **Results:** The authors describe the case of a female patient, 79 years old, with a history of the appearance two months ago of an erythematous-violaceous spot, with a brownish halo, painless, measuring approximately 1.5 x 2.0 cm in its largest axes, with irregular edges, hardened consistency, located at the junction of the upper quadrants of the right breast and over the surgical scar. The aforementioned patient had undergone quadrantectomy and study of the sentinel lymph node (negative) 20 years ago for invasive ductal carcinoma, followed by 30 sessions of radiotherapy (5040 cGy) and endocrinotherapy with tamoxifen citrate (5 years) and letrozole (1 year). **Conclusion:** After incisional biopsy, the pathological anatomy revealed that it was an atypical vascular lesion. Immunohistochemistry demonstrated positivity for antigens related to CD31 and CD34, absence of estrogen receptors and amplification of the C-MYC oncogene confirmed the diagnosis of radiotherapy-induced angiosarcoma, in addition to grade III anaplasia. The mammogram only demonstrated skin thickening in the upper quadrants of the right breast (BIRADS 2) and the breast ultrasound showed well-defined subcutaneous nodular formations, parallel to the skin, with parietal calcifications and suggestive of steatonecrosis (BIRADS 3). Subsequently, the patient underwent modified Madden radical mastectomy and study of the thoracic-lateral sentinel and parasentinel lymph nodes, which were negative for malignancy. Patient is well and is being followed up.

**Keywords:** radio-induced; angiosarcoma; breast.



## ADENOID CYSTIC CARCINOMA OF THE BREAST: CASE REPORT OF A RARE TUMOR WITH A GOOD PROGNOSIS

Fernanda José de Toledo<sup>1</sup>; Augusto Ribeiro Gabriel<sup>1</sup>; Deborah Branco Ferreira Perilo<sup>1</sup>; Felipe Santa Cruz Mesquita<sup>1</sup>; Mariana Abrahão Helou Kaluf<sup>1</sup>; Marilia Bittencourt Gabriel<sup>1</sup>; Paulo Victor Monteiro Quinan<sup>1</sup>; Augusto Rodrigues de Araujo Neto<sup>1</sup>

<sup>1</sup>Department of oncology, Breast Disease Division, University of Goiás, Brazil.

**Objective:** To report a case of a rare breast cancer subtype **Methodology:** A case report **Results:** Case Report: This is a case of a patient diagnosed with adenoid cystic carcinoma of the right breast in June 2007, at 38 years of age. She underwent a quadrantectomy with right axillary lymph node dissection on September 14, 2007, followed by adjuvant radiotherapy and remained under follow-up. In April 2019, probable recurrence was evidenced in the bone (L1) and lung. Bone biopsy in April 2019 did not show malignancy. Lobectomy in August 2019 confirmed metastasis of adenoid cystic carcinoma to the lung, with clear margins. She was referred for radiotherapy in L1 - 10 fractions were performed. In 2020, a nodule was found in the left kidney. Follow-up was proposed. In February 2021, there was new bone progression (osteolytic lesion in L1 and D6 with pathological fracture and pain). She was evaluated by neurosurgery, without surgical intervention. New radiotherapy was recommended. She underwent video-assisted partial nephrectomy in October 2021, confirming adenoid cystic carcinoma. The patient is currently under follow-up and without evidence of oncologic disease. **Conclusion:** Therefore, this patient has been diagnosed with adenoid cystic carcinoma of the right breast in 2007 (17 years of follow-up) and experienced disease recurrence in 2019. Metastasectomies of pulmonary and renal nodules were performed, as well as radiotherapy for bone metastases. She is currently under clinical follow-up with no signs of new lesions or indication for systemic treatment. The patient is asymptomatic with preserved functionality and quality of life.

**Keywords:** Adenoid cystic; Breast cancer; oncology



**CASE REPORT: SINUSOIDAL OBSTRUCTION SYNDROME POST-TREATMENT WITH TRASTUZUMAB EMTANSINE (T-DM1) IN BREAST CANCER**

Ana Carolina Silva Barbosa<sup>1</sup>; Cristiano Augusto Andrade de Resende<sup>2</sup>; Henrique Carvalho Rocha<sup>3</sup>; Andreza Karine de Barros Almeida Souto<sup>1</sup>

<sup>1</sup>Oncoclínicas, Brasília, Federal District, Brazil.

<sup>2</sup>Oncoclínicas - Breast Cancer Division, Brasília, Federal District, Brazil.

<sup>3</sup>Brasília Hospital - DASA, Hepatology Division, Brasília, Federal District, Brazil.

Andreza Karine de Barros Almeida Souto (Oncoclínicas, Brasília, Federal District).

**Objective:** Background: Trastuzumab emtansine (T-DM1) is an anti-HER2 antibody-drug conjugate indicated for the treatment of HER2-positive breast cancer. One of the most severe adverse events reported with T-DM1 is hepatotoxicity. More recently, some cases of noncirrhotic portal hypertension have been described in patients on long-term T-DM1. The underlying liver condition is usually sinusoidal obstruction syndrome. **Methodology:** Here, we present the case of a patient with early stage HER2-positive breast cancer who received adjuvant T-DM1 and developed hepatotoxicity due to this condition. **Results:** Case report: We report a case of a 46-year-old woman with early stage (stage III) HER2-positive breast cancer who started adjuvant T-DM1 therapy for residual disease after HER2-directed therapy. After 3 cycles of T-DM1, patient started a new-onset elevation of liver tests and there was focal hepatic steatosis on abdominal CT. A reduction in platelet count was also apparent over during the T-DM1 therapy. Liver elastography was performed and showed signs of moderate liver fibrosis. The patient underwent a liver biopsy which revealed sinusoidal obstruction and so T-DM1 has been suspended. Thereafter, the patient had normalization of liver tests and platelet count. After discussion with a Hepatologist, we opted to definitively suspend T-DM1 therapy due to the risk of progression to noncirrhotic portal hypertension. **Conclusion:** We presented a rare case of sinusoidal obstruction syndrome induced by T-DM1 in a patient with breast cancer. Hepatotoxicity is one of the main adverse events of T-DM1. A high index of suspicion for liver injury must be maintained for patients who develop liver test abnormalities and/or signs of portal hypertension during treatment with T-DM1. This shows the usual complexity in treating patients with new drugs of breast cancer and the importance of multidisciplinary monitoring.

**Keywords:** Trastuzumab emtansine, Sinusoidal obstruction syndrome, Breast cancer



## INTRAOPERATIVE PHYSIOTHERAPEUTIC APPROACH IN ONCOPLASTIC SURGERY: CASE REPORT

Nayara Alves de Freitas Lemos<sup>1</sup>; Régis Resende Paulinelli<sup>2</sup>

<sup>1</sup>Departament of Physiotherapy - Institute of Mastology and Oncology, Goiânia. Brazil.

<sup>2</sup>Mastologist (Breast Surgeon / Oncoplastic Surgeon) Araujo Jorge Cancer Hospital, Brazil.

**Objective:** Introduction: Fat grafting is a very useful technique in partial and total breast reconstructions. In this technique, where adipose tissue is liposuctioned and purified, it is injected into the breast tissue or thoracic wall to correct deformities or due to its regenerative effect on the skin, improving elasticity and reducing the risk of capsular contracture and rippling. The donor region may experience pain, swelling, and bruising, natural events of inflammation. Normally, mechanical compression is applied, such as a surgical shaper, but the importance of physiotherapeutic action in the recovery process deserves further study.

**Methodology:** Ethical Aspects: The patient signed an Informed Consent Form for the presentation and publication of the Case Report. Case Report: Patient L.M.R.M, female, 68 years old, underwent mastectomy and axillary clearance and immediate reconstruction with an expander on the left side, in January 2022. The anatomopathological study showed classic lobular carcinoma, grade 1, 3.2cm, 7/24 lymph nodes, TNM classification pT2pN2M0 IIIb. Luminal B. She finished chemotherapy and soon after, 15 sessions of Radiotherapy. She underwent a second surgical approach in 2023, Liposuction 480 ml lipofilling, exchange for an extra high projection anatomical implant, and on the right breast, augmentation mammoplasty and mastopexy. She uses letrozole and aprazolam. **Results:** Physiotherapy Approach: because it is mature skin, concerning the aesthetic and functional appearance of the abdominal region, as the donor region, adhesive elastic bandages were applied intraoperatively with the aim of reducing pain, containing swelling, tissue alignment, favoring skin retraction, absorbing bruises, and preventing fibrosis. The patient received 3 weekly physiotherapy sessions after the removal of the bandages, on the 7th postoperative day. During the sessions, the approach was through manual therapies and kinesiotherapy. **Conclusion:** Conclusion: We believe that physiotherapy helps the patient resume her daily life activities with functionality and better quality of life, as happens in aesthetic plastic surgeries.

**Keywords:** Keywords: Breast Neoplasms; Mammoplasty; Physiotherapy Modalities; Compressive Bandages; Exercise Therapy.



## THE INFLUENCE OF SOCIAL SKILLS IN THE HUMANIZATION OF BREAST CANCER CARE

Marina Elias Rocha<sup>1</sup>; Isabella Ferreira Bonifácio<sup>1</sup>; João Pedro Sia Borges<sup>1</sup>; Lara da Cruz Encinas Brandão<sup>1</sup>; Wilson Marques da Silveira Neto<sup>1</sup>

<sup>1</sup>Unifimes - University Center of Mineiros – Goiás, Brazil.

**Objective:** To analyze how social skills can influence the care of patients with breast cancer, in order to create humanized care. **Methodology:** A bibliographical survey of the last 6 years was carried out in the Pubmed and VHL virtual libraries, articles related to this topic were also selected. **Results:** Breast cancer is more prevalent among women, causing different biological and psychological changes in a unique way in each patient. These changes require a holistic approach to care, which is capable of addressing not only the physical aspects of the illness, but also the biopsychosocial, spiritual and family conditions that directly interfere with the course of women's treatment and recovery. Part of these essential factors is family support, together with the multidisciplinary team, which plays an essential role in this context, developing emotional assistance that contributes considerably to the well-being and quality of life of patients. In this way, it is possible to promote a broad support network that involves professionals and family members who contribute substantially to a humanized care practice. Studies have shown that empathetic care, touch, welcoming and qualified listening are examples of social skills, which, combined with assistance to patients with breast cancer, promote humanization and comprehensiveness of care. In this way, the results showed safer and more confident patients, with greater adherence to treatment, reducing fears and negative apprehensions regarding the disease. In this sense, this approach has proven to be efficient especially in Brazilian public health demands, providing more complete, humane and ethical care. **Conclusion:** In this sense, it is concluded that social skills improve care, contributing to improving the quality of life of breast cancer patients by providing a comprehensive look at each patient, addressing their different aspects.

**Keywords:** Social Skills, Breast cancer, Breast neoplasm







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