MASTOLOGY

Official Journal of the Brazilian Society of Mastology

Volume 31, Supplement 2, 2021

ISSN 2594-5394

Abstracts from the Brazilian Breast Cancer Symposium - BBCS 2021

Sociedade Brasileira de Mastologia

Brazilian Society of Mastology

MASTOLOGY

Official Journal of the Brazilian Society of Mastology

Volume 31, Supplement 2, 2021

Brazilian Society of Mastology

BRAZILIAN SOCIETY OF MASTOLOGY

Praça Floriano, 55, sala 801, Centro – 20031-050 – Rio de Janeiro (RJ)
Phone numbers: (21) 2220-7711 / (21) 2220-7111
E-mail: contact@mastology.org

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Mastology is a publication of the Brazilian Society of Mastology. The responsibility for concepts emitted in the articles is exclusive of its authors

Founder: Antônio Figueira Filho

Submissions - mailing address: Praça Floriano, 55, sala 801, Centro – Rio de Janeiro (RJ) – 20031-050

National and international subscription and advertising: Brazilian Society of Mastology - Phone number: (21) 2220-7711 - Whatsapp (21) 98138-0034

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Contents

15 **EFFECTIVENESS OF AMPK ACTIVATING DRUGS ON TUMOR SUPPRESSION: A SYSTEMATIC REVIEW**
Victor Domingos Lisita Rosa, Adnan Nasser Daghastanli, Armani Gontijo Plácido Di Araujo, Ana Vitoria Cordeiro Rocha, Thiago Martins de Abreu, Jade de Oliveira Silva, Rafael Ribeiro Alves

COMMENTED POSTER

16 **HOW MUCH CAN WE TRUST ON THE SELF-REPORTED COLOR WHEN EVALUATING BREAST CANCER ANCESTRY**
René Aloisio da Costa Vieira, Débora Sant'Anna de Andrade e Silva, Ana Carolina Laus, Carlos Eduardo Bacchi, René Julias Costa e Silva, Idam de Oliveira-Junior, Rui Pereira, Rui Manuel Vieira Reis

17 **BREAST CONSERVING SURGERY WITH GEOMETRIC COMPENSATION TECHNIQUE: NEW INDICATIONS, ONCOLOGICAL SAFETY, AND COSMESIS**
Flavia Cardoso Franca, Idam de Oliveira-Junior, Andrea Moreno Morgan, Raphael Luiz Haikel, René Aloisio da Costa Vieira

18 **MODIFIED SLOW DIGESTION TECHNIQUE FOR THE ISOLATION OF PATIENT-DERIVED CELLS: AN IN VITRO MODEL FOR THE DESIGN OF BREAST CANCER-ASSOCIATED STROMA**
Foivos Irakleidis, Michael Masucci,Eleftherios Sfakianakis, Peng H Tan, Hazel Welch

19 **OCCULT LESIONS LOCALIZATION AND "IN VIVO" MARGINS EVALUATION OF BREAST CARCINOMA DETECTED BY NEW HYBRID TECHNIQUE USING RADIOFLUORESCENCE—A PILOT STUDY**
Antonio Cesar Pereira, Rogerio Bizinoto Ferreira, Delio Marques Conde, Alexandre Marchiori Xavier de Jesus, Ana Beatriz Marinho de Jesus Teixeira, Sebastião Alves Pinto, Sergi Vidal-Sicart

20 **ONCOPLASTIC MAMMAPLASTY WITH DISGUISED GEOMETRIC COMPENSATION**
Régis Resende Paulinelli, Luiz Fernando Jubé Ribeiro, Thauana Dias Santos, Elisana Maria Santos Caires, Marilha Gabriella Martins Pontes, Bruna Morais Faria

21 **ANALYSIS OF CD80- AND CD86-EXPRESSING B-LYMPHOCYTE LEVELS IN THE BLOOD OF WOMEN WITH LOCALLY ADVANCED TRIPLE-NEGATIVE BREAST CANCER**
Amanda Forte Mendes Tejo Salgado, Maria Eduarda Borges Kerstenetzky, Vitoria Ferreira David Melquiades, Marcelo Ramos Tejo Salgado, Leuridan Cavalcante Torres,

22 **PREDICTORS OF BREAST CANCER PROGNOSIS BASED ON TUMOR BIOMARKERS**
Beatriz Alves Lima, Andressa da Silva Pereira, Bruna Alves Lima, Diana Gonçalves Lima, Leonardo Ferreira Pucci, Renato Moraes Ferreira, Tiago Castro Ferreira, Henrique Ferreira Pucci

23 **IMPACT OF THE MAMMAPRINT GENETIC SIGNATURE ON THE DECALONATION OF THE CHEMOTHERAPY TREATMENT IN A MEDIUM INCOME COUNTRY – STUDY OF REAL LIFE**
Fabio Postiglione Mansani, Márcia Magalhães Fernandes, Ruffo de Freitas-Junior

24 **ANALYSIS OF THE LEVEL OF CIRCULATING LEUKOCYTE PLATELET AGGREGATES IN WOMEN WITH BREAST CANCER**
Maria Eduarda Borges Kerstenetzky, Amanda Forte Mendes Tejo Salgado, Vitoria Ferreira David Melquiades, Vinicius Rafael Agostinho Gomes, Denise Sobral Viana, Jurema Telles de Oliveira Lima, Marcelo Ramos Tejo Salgado, Leuridan Cavalcante Torres

25 **THE INFLUENCES OF ADHERENCE TO TAMOXIFEN AND CYP2D6 PHARMACOGENETICS ON PLASMA CONCENTRATIONS OF THE ACTIVE METABOLITE (Z)-ENDOXIFEN IN BREAST CANCER**
José Claudio Casali da Rocha

26 **INTERFERENCE OF BREAST CANCER COMMUNICATION ON TREATMENT ADHERENCE AND THE DOCTOR–PATIENT RELATIONSHIP**
Pedro Henrique de Ávila Perillo, Vinicius Lemos Nascimento, Laís Martins Queiroz, Ianca Leandra Santos, Ana Carla Moreira Miranda, Débora Sara de Almeida Cardoso

27 **MAMMOGRAPHY SCREENING IN A STATE OF MIDWESTERN BRAZIL: AN ECOLOGICAL STUDY**
Leonardo Ribeiro Soares, Rosangela da Silveira Corrêa, Rosemar Macedo Sousa Rahal, Danielle Cristina Netto Rodrigues, Suzana Alves Bastos, Rodrigo Massakatsu Nishiharu Tanaka, Lucy Aparecida Parreira Marins, Ruffo Freitas-Junior

28 **THE INFLUENCE OF THE NAVIGATING NURSE BEFORE THE DIAGNOSIS AND START OF TREATMENT OF PATIENTS AFFECTED BY BREAST CANCER IN THE CITY OF GOIANIA (GO), BRAZIL**
Bruna Gonçalves Queiroz, Ruffo Freitas-Junior

29 **EFFECTS OF RESISTANCE TRAINING ON MUSCLE PERFORMANCE AND FUNCTIONAL CAPACITY IN BREAST CANCER SURVIVORS**
Weder A. Silva, Rafael Alves, Vitor Marques, Naiany Pereira, Ellen Gomes, Carlos Vieira

30 **HEREDITARY BREAST AND OVARIAN CANCER PATIENTS HAVE A FAMILY HISTORY OF CANCER OUTSIDE THE SPECTRUM OF THE SYNDROME, MIMICKING LYNCH AND LI–FRAUMENI SYNDROMES**
Elisângela de Paula Silveira Lacerda, Rebeca Mota Goveia, Paula Francinete Faustino Silva, Thais Bonfim Teixeira, Ruffo de Freitas-Junior

31 **RISK FACTORS FOR PERIPHERAL NEUROPATHY INDUCED BY CHEMOTHERAPY IN WOMEN WITH BREAST CANCER AND THEIR CORRELATION WITH QUALITY OF LIFE: A SYSTEMATIC REVIEW**
Victor Domingos Lisita Rosa, Diego Vinícius Gonçalves Santana, Amanda Laíza dos Reis Mota, Lanuscia Morais de Santana, Fernando Santos de Azeredo, Rosemar Macedo Sousa Rahal, Maria Cecilia Monteiro Dela Vega, Ruffo de Freitas Junior

32 **EVALUATION OF BONE MINERAL DENSITY LOSS IN PATIENTS WITH BREAST CANCER USING AROMATASE INHIBITORS AS ADJUVANT ENDOCRINE THERAPY: 5-YEAR FOLLOW-UP**
Marcelo Antonini, Gisela Rosa Franco Salerno, Natalia Daniela Kovalinski Vieira, Mariana Soares Cardoso, Matheus de Paula Solino, Odair Ferraro, Reginaldo Guedes Coelho Lopes

33 **IMPORTANCE AND IMPACT OF ONLINE COURSES FOR TRAINING PRIMARY HEALTH CARE PROFESSIONALS IN THE SCREENING, IDENTIFICATION, AND MANAGEMENT OF MAMMALIAN PATHOLOGIES/BREAST CANCER**
Alexandre Villela de Freitas, Lucas Stathiacos e Castella, Carolina Abreu de Rezende, Ana Jéssily Camargo Barbosa, Tânia Silva de Melo

34 **AN IN SÍLICO ANALYSIS DETECTED MEMBERS OF THE PLECKSTRIN HOMOLOGY-LIKE DOMAIN FAMILY B AS POTENTIAL PROGNOSTIC BIOMARKERS IN PATIENTS WITH BREAST CANCER**
Renan Gomes do Nascimento

E-POSTER

35 **PUBLICATION RATE OF SCIENTIFIC PAPERS PRESENTED AT THE LARGEST EVENT ON BREAST CANCER RESEARCH IN LATIN AMERICA**
Leonardo R. Soares, Sergio Nascimento, Rosemar M. S. Rahal, Ruffo Freitas-Junior, Herik J. de S. Pimentel, Tágara O. Kamimura

36 **PROGNOSTIC SIGNIFICANCE OF PD-L1 EXPRESSION IN BREAST CANCER**
Magno Belém Cirqueira, Carolina Rodrigues Mendonça, Leonardo Ribeiro Soares, Maria Auxiliadora de Paula Carneiro Cysneiros, Régis Resende Paulinelli, Marise Amaral Rebouças Moreira, Ruffo de Freitas-Junior

37 **THE CHALLENGE OF SURVIVAL OF PATIENTS WITH METASTATIC DE NOVO BREAST CANCER**
Fernanda Perez Magnani Leite, Gisele Aparecida Fernandes, Allan Alves Fernandes, Maria Paula Curado, Solanges Moraes Sanches, Fabiana Baroni Alves Makdissi

38 **HIGH NEUTROPHIL-TO-LYMPHOCYTE RATIO IS PROGNOSTIC FACTOR IN EARLY-STAGE BREAST CANCER PATIENTS**
Leonardo Fleury Orlandini, Franklin Fernandes Pimentel, Jurandyr Moreira de Andrade, Francisco José Cândido dos Reis, Leticia De Mattos-Arruda, Daniel Guimarães Tiezzi,

39 **PALB2 MUTATION IN A 31-YEAR-OLD WOMAN: A CASE REPORT**
Júlia R. S. do Ó, Joaquim F. Fernandes, Rafael C. E. Segato, Frank L. B. Rodrigues, Ana Cláudia G. Lima, Nilceana M. A. Freitas, Deidimar C. B. Abreu, Leandro G. Oliveira

40 **THIRD AND FOURTH IPSILATERAL AND CONTRALATERAL PRIMARY BREAST CANCER IN A COHORT OF WOMEN TREATED FROM 2000 TO 2015 AT AC CAMARGO CANCER CENTER**
Ariane Silva da Rocha, Maria Paula Curado, Gisele Aparecida Fernandes

41 **SOCIODEMOGRAPHIC AND LIFESTYLE ASPECTS VERSUS ACCESS TO TREATMENT FOR PATIENTS WITH BREAST CANCER AT A CANCER CENTER IN SÃO PAULO**
José Euderaldo Costa Gomes Filho, Ariane Silva da Rocha, Gisele Aparecida Fernandes, Rossana Verónica Mendoza López, Maria Paula Curado

42 **CLINICAL AND PATHOLOGICAL CHARACTERISTICS AND MOLECULAR SUBTYPES IN A PROSPECTIVE COHORT OF PATIENTS WITH BREAST CANCER ACCORDING TO ACCESS TO TREATMENT: SUPPLEMENTARY HEALTH CARE VERSUS UNIFIED HEALTH SYSTEM**
José Euderaldo Costa Gomes Filho, Ariane Silva da Rocha, Gisele Aparecida Fernandes, Rossana Verónica Mendoza López, Maria Paula Curado

72 **NTRK MUTATION IN ADENOID CYSTIC CARCINOMA: A RARE TYPE OF TRIPLE NEGATIVE**
Silvaleide Ataides Assunção, Vinicius Lemos Nascimento, Bruno Henrique de Aguiar Brito, Carolina Daher de Alencar Neves, Laura Queiroz da Silva, Pedro Vinicyus Novais e Souza, Fernando Santos de Azevedo, Lanúscia Morais de Santana

73 **ENDOCRINE THERAPY INTAKE AND OVERALL SURVIVAL IN YOUNG WOMEN WITH BREAST CANCER**
Alessandra Borba Anton de Souza, Beatriz Fetzner, Ester da Rosa, Gustavo Roesler, Isabela Albuquerque Severo de Miranda, Marcelle Morais dos Santos, Felipe Pereira Zerwes, Antônio Luiz Frasson

74 **EFFECTS OF CHEMOTHERAPY TREATMENT ON ANXIETY AND FATIGUE OF WOMEN WITH BREAST CANCER**
Naiany Pereira, Vitor Marques, Rafael Moraes, Rafael Alves, Fabíola Mamede, Weder Silva, Wanderson Santos, Carlos Vieira

75 **METAPLASTIC BREAST CARCINOMA: CASE SERIES**
Fergus Tomás Rocha de Oliveira, Rafael Everton Assunção Ribeiro da Costa, Eduarda Norberto Siqueira, Ana Lúcia Nascimento Araújo, Sabas Carlos Vieira

76 **ANALYSIS OF PATIENTS WITH LOCALLY ADVANCED BREAST CANCER TREATED AT ICESP**
Gabriela Bezerra Nobrega, Bruna Salani Mota, Gabriela Boufelli de Freitas, Jonathan Yugo Maesaka, Rodrigo Gonçalves, Sérgio Mitsuo Masili Oku, Angela Francisca Trinconi da Cunha, José Roberto Filassi

77 **ASPECTS OF BREAST CANCER DIAGNOSIS AND DELAYED TREATMENT IN BRAZIL**
Isabella Inês Rodrigues Rosa, Alexandre Santana Valadares, Douglas Marques de Paula, Tiago Paiva Prudente, Maria Elvira Freitas Martins, Guilherme Ferreira Barros, Ana Laura de Sene Amâncio Zara

78 **GRANULAR CELL TUMOR SIMULATING BREAST CANCER ON SCREENING MAMMOGRAM: CASE REPORT**
Erika Marina Solla Negrão, Livia Conz, Silvia Maria Prioli de Souza Sabino, Anapaula Hidemi Uema Watanabe, Jane Camargo da Silva Santos Picone, Edmundo Carvalho Mauad

79 **CUTANEOUS AND BONE METASTASIS OF OCCULT BREAST CANCER: CASE REPORT**
Rafael Everton Assunção Ribeiro da Costa, Fergus Tomás Rocha de Oliveira, Eduarda Norberto Siqueira, Ana Lúcia Nascimento Araújo, Sabas Carlos Vieira

80 **RECURRENCE IN MALE BREAST CANCER: A CASE SERIES**
Rafael Everton Assunção Ribeiro da Costa, Fergus Tomás Rocha de Oliveira, Eduarda Norberto Siqueira, Ana Lúcia Nascimento Araújo, Sabas Carlos Vieira

81 **CHANGES IN BLOOD PRESSURE IN BREAST CANCER SURVIVORS UNDER A PHYSICAL EXERCISE PROGRAM**
José Jean de Oliveira Toscano, Kettury Maria da Silva Barros, Amaro Wellington da Silva, Naira Sabrina Ferreira da Costa, Vicente de Paulo Silva Moreira, Carlos Alencar Souza Alves Júnior, Diego Augusto dos Santos Silva

82 **EVALUATION OF METABOLIC SYNDROME AND OBESITY IN BREAST CANCER SURVIVORS SUBJECTED TO INTERDISCIPLINARY APPROACH: A PROSPECTIVE COHORT STUDY**
Vanildo Prado, Daniel Buttros, Luciana Buttros de Paula, Benedito de Sousa Almeida Filho, Heloisa Maria de Luca Vespoli, Carla Kamya Pessoa, Eduardo Pessoa, Eliana Aguiar Petri Nahás

83 **EXPERIENCE OF A PRIVATE HOSPITAL IN THE FEDERAL DISTRICT IN CRYOTHERAPY WITH A HYPOTHERMAL CAP FOR PATIENTS USING PACLITAXEL 80 mg/m² WEEKLY FOR 12 WEEKS**
Patrícia Werlang Schorn, Juçara Motta Serafim Eliam, André Moreira Lemes, Caroli ne Alves de Souza Ramos, Juliana Sinezio Santos, Lenisa Cezar Vilas Boas, Elyse Carvalho Borges dos Santos de Figuerêdo

84 **PHYSIOTHERAPEUTIC APPROACH TO SCIENTIFIC CHANGES INVOLVED IN AXILLARY WEB SYNDROME: A CASE REPORT**
Karla Ferreira do Carmo, Nayara Alves de Freitas Lemos, Ruffo Freitas-Junior, Suzana Fonseca Coelho e Faria, Osvaldo de Alcântara Braga Aidar, Débora Sara de Almeida Cardoso, Mosiah Araújo, Juliana Botti

85 **ONLINE GROUP THERAPY WITH WOMEN DIAGNOSED WITH BREAST CANCER: A LOOK FROM PSYCHOLOGY PROFESSIONALS**
Carolina de Souza, André Villela de Souza Lima Santos, Manoel Antônio dos Santos

EDITORIAL
https://doi.org/10.29289/259453942021V31S2001

The 10th anniversary of the Brazilian Breast Cancer Symposium: connecting researchers and promoting science

Ruffo Freitas-Junior[1], Rosemar Macedo Sousa Rahal[1],
Régis Resende Paulinelli[1], Luis Fernando Pádua Oliveira[1]

Conducting research in Brazil is not an easy task. Even though the number of researchers and research groups has increased exponentially in recent years in the country, barriers to the development of science are still present and, at times, scientific growth is even discouraged. In search of strategies to minimize this scenario, the Brazilian Breast Cancer Symposium (BBCS) was idealized to encourage research on breast cancer in Brazil. To this end, the event dedicates its prime hours to researchers so that they can present their data, has an evaluation committee composed of research experts to judge the papers presented, and grants prestigious awards.

The BBCS agenda is divided into two parts, a pre-congress event composed of lectures, courses, and seminars on a wide range of subjects related to breast cancer (educational part) and another part focused on the production of scientific knowledge and promotion of original research.

After a decade of existence, the BBCS has established itself as the largest event about breast cancer research in Latin America. Some data support this assertion. First, the large number of papers submitted annually (in 2021, amid the pandemic, 122 papers were submitted). Second, the quality of the papers, which can be measured through the number of publications in scientific journals. Rahal et al.[1] observed, for example, that the rate of BBCS publications was 2.5 times higher than that of the Brazilian Congress of Mastology and 4 times that of the Jornada Paulista de Mastologia, which are the largest and most renowned Mastology congresses in Brazil. The BBCS was also the scientific event that published the highest number of journals classified as A1 and A2, and with the greatest impact. Another aspect to be considered is the variety of papers. The main areas covered are pathology, basic sciences, epidemiology, and surgery. However, the Symposium attracts researchers from all areas, including radiology, systemic treatment, rehabilitation and radiotherapy, among others.

The BBCS was initially conceived by Dr. Ruffo de Freitas Júnior, who is passionate about breast cancer science, epidemiology, and treatment. He is the former president of the Brazilian Society of Mastology and has managed to attract and motivate followers. In recent years, the BBCS was held in Pirenópolis, a bucolic and picturesque small historic town located in the heart of Brazil, between Goiânia and Brasília, with good hotel options, natural wonders, waterfalls, restaurants, and wineries.

The BBCS is only possible because of the collaboration of a large network of professors, sponsors, researchers, colleagues from different areas (mastologists, clinical oncologists, pathologists, cancer surgeons, gynecologists, radiologists, plastic surgeons, physiotherapists, nurses, psychologists, social workers, and basic scientists), dozens of national and international professors, and thousands of congress participants. In 2021, the virtual version of the Symposium had approximately 1,514 people registered, from different Brazilian states and countries around the world.

In this specific issue of Mastology©, we have published the most important papers presented on the 10th anniversary of the BBCS. Thus, the BBCS has fulfilled its mission and warmly thanks all of those who believe in and collaborate with this project.

REFERENCE

1. Rahal RMSR, Nascimento S, Soares LR, Freitas-Junior R. Publication rate of abstracts on breast cancer presented at different scientific events in Brazil. Mastology. 2020;30:e20200048. https://doi.org/10.29289/25945394202020200048

[1]Program of Mastology, CORA Advanced Center for the Diagnosis of Breast Diseases, Universidade Federal de Goiás – Goiânia (GO), Brazil.
***Corresponding author:** ruffojr@terra.com.br
Conflict of interests: nothing to declare.

https://doi.org/10.29289/259453942021V31S2002

ANCESTRY OF BREAST CANCER PATIENTS IN BRAZIL

René Aloisio da Costa Vieira[1,2], Débora Sant'Anna[3], Ana Carolina Laus[3], Carlos Eduardo Bacchi[4], René Julias Costa e Silva[4], Idam de Oliveira-Junior[1,2], Rui Pereira, Rui Manuel Reis[5]

[1]Programa de Pós-Graduação em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[2]Programa de Pós-Graduação em Tocoginecologia, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Botucatu (SP), Brazil.
[3]Centro de Pesquisa Molecular em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[4]Laboratório de Patologia Bacchi – Botucatu (SP), Brazil.
[5]Instituto de Patologia e Imunologia Molecular, Universidade do Porto – Porto, Portugal

Objective: To evaluate the ancestry of breast cancer (BC) patients from different Brazilian geographical regions and to associate it with molecular subtype. **Methods:** Ethics approval 1136/2016. This was an observational, transversal, epidemiological study, evaluating patients with BC. Molecular characterization of BC was performed by immunohistochemistry. DNA was extracted to evaluate ancestry. For analysis of ancestry, the AIM-INDEL panel was used, with 46 primer pairs. The polymerase chain reaction (PCR) products were subjected to capillary electrophoresis, and the results were analyzed using GeneMapper 4.0 software. For inference of the ancestral profile, the data were evaluated with Structure v. 2.3.3 software. Each participant was classified into one of the following ancestries: European, African, Amerindian, and Asian. Ancestry was tested for correlations with the geographical region and the molecular subtype. The differences were compared using the chi-squared and Kruskal–Wallis tests. SPSS v.20.0 for Windows was used analysis. **Results:** A total of 1,330 patients were included, out of whom it was possible to evaluate ancestry in 1,127. There was a difference in race, molecular subtype, and ancestry between the geographical regions. In the South region, there were higher rates of self-reported white ethnicity, European ancestry, and HER-2-luminal tumors, which may influence age at diagnosis and yield a higher rate of early tumors. Conversely, in the North and Northeast regions, there was a higher rate of African ancestry, self-reported nonwhite ethnicity, HER-2+ tumors, and triple-negative tumors. Triple-negative and HER-2+ tumors were associated with a higher rate of advanced and metastatic disease at diagnosis, with triple-negative tumors being more frequent in young women. **Conclusions:** This is the largest assessment of genetic ancestry in the Brazilian BC patients. There were differences in ancestry and molecular subtype between the different regions. Knowledge of these characteristics may contribute to a better understanding of the molecular distribution of cancer in these regions.

Grant: FAPESP no 2018/16629-9

Keywords: Breast Cancer; Epidemiology; Genetic Variation; Molecular Pathology; Brazil.

https://doi.org/10.29289/259453942021V31S2003

R337H MUTATION AND DUCTAL CARCINOMA IN SITU OF THE BREAST

Nayara Alves de Freitas Lemos[1], Ruffo de Freitas-Junior[2], Rebeca Mota Gouveia[3], Elisângela Silveira-Lacerda[3]

[1]Mastology Program, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Department of Gynecology and Obstetrics, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[3]Samambaia Campus, Instituto de Ciências Biomédicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: To identify the prevalence of the founding variant c.1010G>A (R337H) in the TP53 gene in patients with ductal carcinoma in situ (DCIS). **Methods:** This is a cross-sectional study, carried out using data from the Goiania Population-Based Cancer Registry, in partnership with the team from the Molecular and Cytogenetic Genetics Laboratory of the Federal University of Goias and Clinical Research Unit/HC. Peripheral venous blood collections, DNA extraction, and Sanger genetic sequencing were carried out in 27 samples from unselected patients diagnosed with DCIS in the period between 1994 and 2010, who agreed to participate in the research by signing the free and informed consent form. This work was approved by the Research Ethics Committee of Hospital das Clínicas/UFG, as a proposing institution, and Research Ethics Committee of the Co-participant Institution Hospital Araújo Jorge/Association for Combating Cancer in Goiás (ACCG) in attention to the resolution CNS: 466/2012 and its complementaries (1,940,921). **Results:** In our study, conducted in mid-western Brazil with a population of women with DCIS not selected for family history and involving 27 samples, 2 cases (7.4%) of the pathogenic TP53 R337H mutation were found. **Conclusions:** The present study showed that the prevalence of the founding variant c.1010G>A (R337H) in the TP53 gene in patients with DCIS proved to be considerably high, comparing the same rate found in other Brazilian studies for invasive breast carcinoma. This study warrants that there is a need for further studies testing not only the TP53 gene, but also other genes related to hereditary breast and ovarian cancer syndrome in DCIS. Although DCIS is a non-obligate precursor to invasive carcinoma, we highlighted the facts that strengthen the reflection on better genetic research in women with DCIS.

Keywords: Epidemiology; Carcinoma; Intraductal; Noninfiltrating; Survival; Breast Neoplasms; Hereditary Breast and Ovarian Cancer Syndrome; Li–Fraumeni Syndrome.

https://doi.org/10.29289/259453942021V31S2004

GEOMETRIC COMPENSATION TECHNIQUE FOR CONSERVATIVE TREATMENT OF BREAST CANCER: A SYSTEMATIC REVIEW

Flavia Cardoso Franca[1,2,3], Idam de Oliveira-Junior[1,3], Andrea Moreno Morgan[2,3], Raphael Luiz Haikel[3], René Aloisio da Costa Vieira[1,2]

[1]Programa de Pós-Graduação em Tocoginecologia, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Botucatu (SP), Brazil.
[2]Programa de Pós-Graduação em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[3]Departamento de Mastologia e Reconstrução Mamária, Hospital de Câncer de Barretos – Barretos (SP), Brazil.

Objective: A systematic review was carried out using PRISMA methodology to evaluate indications, patient selection, surgery, and results associated with geometric compensation technique (GCT). **Methods:** Approved by Ethics Committee 1594/2018. A search was conducted for publications addressing patients with breast cancer undergoing extreme oncoplasty (EO) and/or reports of cases of patients with breast cancer undergoing GCT, split reduction technique (SRT), or techniques with same principles to evaluate indications and recent developments in literature. The research was carried out until October 12, 2020 in eight medical databases. The descriptors searched for in title/abstract were: ("Breast Neoplasm" AND "Mastectomy Segmental") AND (Mammaplasty OR "Geometric Compensation" OR "Split Reduction" OR "Extreme Oncoplasty"). **Results:** In the systematic review, 3,584 articles were evaluated, 19 articles were selected, 243 patients undergoing GCT were found. Of the 19 articles, 6 need mention. The indication ranged from tumors close to skin in upper and outer quadrants to all quadrants and large (>5 cm) multifocal tumors, favoring breast conserving surgery instead of mastectomy, with high rates of free margins, low recurrence, and good aesthetic outcomes. **Conclusions:** GCT is an oncologically safe and aesthetically satisfactory option for the surgical removal of large tumors in breast or in unfavorable resection sites, which is the initial candidate for mastectomy. Regardless of the name used for its diffusion, split reduction, or geometric compensation, it is a really good surgical technique. It is important to organize literature because dissemination of GCT can benefit many women, otherwise it would be restricted to some surgeons.

Keywords: Breast Neoplasms; Segmental Mastectomy; Plastic Surgery; Mammoplasty; Conservative Treatment.

https://doi.org/10.29289/259453942021V31S2005

DIAGNOSIS OF BREAST CANCER IN BRAZIL: REFLECTION ON THE IMPACT OF THE COVID-19 PANDEMIC

Dandara Rocha Ramos[1], Maria Fernanda Passos Rocha Ramos[1], Paulus Fabricio Mascarenhas Ramos[1], Katia de Miranda Avena[1]

[1]Centro Universitário UniFTC – Salvador (BA), Brazil.

Objective: To compare the number of breast cancer diagnoses performed in the public health system in Brazil, in the period from 2015 to 2020, analyzing the effects of the coronavirus disease 2019 (COVID-19) pandemic. **Methodology:** This is an observational, cross-sectional study, with a descriptive and quantitative approach, which is carried out with secondary data provided by the Cancer Information System (SISCAN/DATASUS), considering two time frames — before the pandemic (2015–2019) and during the pandemic (2020). The study included women diagnosed with breast cancer, who underwent mammography between 2015 and 2020. Appreciation by the Research Ethics Committee was waived because public, aggregated data were used, without identifying the participants. **Results:** Between 2015 and 2020, 14,598,318 mammograms were performed in Brazil. The temporal analysis shows a gradual upward behavior in all years, reaching a growth of 49.6% from 2015 (n=2,047,295) to 2019 (n=3,063,022). In the year 2020, there is a significant drop (39.8%) in the number of mammograms performed (n=1,843,182). From 2015 to 2020, 197,368 breast cancer diagnoses were carried out in Brazil. As with the monographs, in the year of the pandemic, a significant drop (46.9%) was demonstrated in the diagnoses performed (n=22,167), a figure that represents only 33.4% of the estimate for 2020 made by the National Cancer Institute (n=66,280). **Conclusions:** With the emergence of the COVID-19 pandemic and the magnitude taken by it, there was a significant impact on the screening, monitoring, and treatment of breast cancer in the country. It is possible that measures of social isolation to contain the virus contributed to this behavior, causing underdiagnosis and future expectations of less favorable prognosis. It is believed that this scenario will worsen in 2021 in view of the number of cases that are no longer diagnosed, a fact that possibly will reflect on the severity of the cases and the costs for public health.

Keywords: Breast Cancer; COVID-19; Diagnosis; Women Health.

https://doi.org/10.29289/259453942021V31S2006

CLINICAL SIGNIFICANCE OF BREAST DENSITY: IS THERE ANY NEED FOR SUPPLEMENTAL SCREENING?

Eleftherios Sfakianakis[1], Foivos Irakleidis[1], Katerina Ntailiani[2], Peng Tan[1]

[1]Breast Unit, Royal Free Hospital NHS Foundation Trust – London, United Kingdom.
[2]Breast Unit, Guy's and St Thomas Hospital NHS Foundation Trust – London, United Kingdom.

Objectives: Mammographic density (MD) is the amount of fibroglandular breast tissue, which appears relatively radiopaque on mammography when compared with fat that appears radiolucent. It may obscure an underlying breast cancer (BC), thus decreases mammographic sensitivity. MD is also an independent BC risk factor. MD is most commonly classified by the Breast Imaging Reporting and Data System (BI-RADS), fifth edition, 2012, where breast density is determined by radiologists using visual assessment that is subject to inter-rater variability. The term "dense breasts" refers to either heterogeneously dense or extremely dense breasts (category C or D), accounting for approximately 47%–50% of women. Supplemental screening modalities, such as digital breast tomosynthesis (DBT), MRI, and ultrasound, when combined with digital mammography (DM) have shown to be effective in the identification of mammographically occult breast lesions in high breast density patients. In this study, we examined the potential value of available screening modalities and their importance in patients with increased MD. **Methodology:** We conducted a systematic review of the literature via MEDLINE assessing the clinical importance of MD and its role in supplemental screening protocols. **Results:** Reduced mammographic sensitivity — Mammographic sensitivity rate is adversely proportional to MD. Breast stromal component and hence stromal stiffening promote an increase in MD. Another important factor is that extracellular matrix stiffness has been found to be tumorigenic and is significantly associated with BC. As a consequence, the combined relative BC risk is increased exponentially in levels A, B, C, and D BI-RADS categories, respectively. Supplemental screening modalities — To overcome the limitations of digital mammography in higher MD categories, the introduction of DBT has significantly improved BC detection and reduced recall rates when added to mammography. Both STORM-1 and STORM-2 trials showed the significant improvement in BC detection rate when DBT was combined with DM. On the other hand, MBTST trial revealed an increase of false-positive rates when BC screening was carried out with DBT alone. In another multicenter study, the ACRIN Protocol 6666 established that the addition of ultrasound (US) to DM in women within BI-RADS C and D groups will identify an additional 1.1–7.2 cancers per 1,000 high-risk women, but substantially increase the number of false positive results. Breast MRI may be offered as supplemental screening modality in women with heterogeneous or extremely dense breast tissue. The combination of MRI with DM and US in screening of heterogeneous or extremely dense breasts with at least one risk factor for BC produces a 100% sensitivity rate. Also, supplemental MRI screening in women with extremely dense breasts can reduce the incidence of undetected interval BC. On the contrary, the addition of MRI possesses low specificity rates and increased cost. **Conclusions**: Increased BD is a common mammographic finding in women. Although very common, its association with reduced mammographic sensitivity and consequently BC detection masking is of high clinical significance. Additionally, BD alone is a risk factor for BC, despite the fact that the exact mechanisms of tumorigenesis associated to it are yet to be fully understood. Supplemental screening modalities, such as DBT, MRI, and US, when combined with DM have been shown to be effective in the identification of mammographically occult BC in high BD patients. The increased number of unnecessary biopsies as a result of increased false positivity rates may increase the physical and psychological patient burden. Since there is no consensus for routine use of DBT or MRI in screening of women with increased BD, the decision for supplemental screening should be personalized.

Keywords: Mammographic Density; Breast Screening; BI-RADS.

https://doi.org/10.29289/259453942021V31S2007

ANALYSIS OF OVERALL SURVIVAL IN BITCHES WITH BREAST CANCER USING TARGET PROTEINS RELATED TO THE PI3K/AKT/MTOR PATHWAY

Isabela Fernanda Spinelli Perossi[1], Mylena Mitie Saito[2], Giovanna Rossi Varallo[3], Jucimara Colombo[3], Débora Aparecida Pires de Campos Zuccari[3]

[1]Universidade Estadual Paulista "Júlio de Mesquita Filho", Instituto de Biociências, Letras e Ciências Exatas – Botucatu (SP), Brazil.
[2]Centro Universitário de Rio Preto – São José do Rio Preto (SP), Brazil.
[3]Faculdade de Medicina de São José do Rio Preto – São José do Rio Preto (SP), Brazil.

This study aims to verify survival in female dogs with breast tumor by analyzing the expression of target proteins PIK3CA, ZEB1, and ZEB2 belonging to the PI3K/AKT/mTOR pathway through immunohistochemistry (IHC) test in a retrospective study. The samples were obtained from dogs with breast cancer, previously identified by standard histopathological analysis, from which tissue microarray (TMA) blocks were made, and then immunohistochemical analyzes (IHC) were carried out using the development kit "REVEAL Polyvalent HRP-DAB Detection System," for the proteins previously mentioned. For the purpose of prognostic analysis, these dogs were monitored for 540 days after surgical resection and survival was related to protein expression using the histoscore (HS) method. The HS is a measure to convert the IHC into quantitative values, and it is based on the intensity of the staining and the percentage of stained cells, ranging from 0 to 300. Individually through the analysis of the IHC, it was observed in the PIK3CA protein that from the HS = 164 the survival was on average 189 days, for ZEB1, the HS = 100 the survival was on average 438 days, and on the protein ZEB2 with the HS = 157, the survival was on average 178 days. Thus, the high expression of PIK3CA and ZEB2 proteins was correlated with lower survival in the dogs. In all studied proteins, it was observed that HS > 100 was correlated with a significant reduction in overall survival ($p>0.05$). The lower survival in female dogs with breast cancer after surgical resection was related to low rates of expression of PIK3CA and ZEB2 and, therefore, these can be considered as prognostic markers reserved for breast cancer in female dogs.

Keywords: Canine; Breast; Cancer; PIK3CA; Metastasis; Survival.

https://doi.org/10.29289/259453942021V31S2008

CIRCULATING TUMOR DNA OF CEREBROSPINAL FLUID SAMPLES IN TRIPLE-NEGATIVE BREAST CANCER: USEFULNESS OF LONGITUDINAL ASSESSMENT FOR EARLY DETECTION OF BRAIN METASTASIS

Lucrezia Raimondi[1], Laura Di Benedetto[2], Paolo Ciracì[3], Rachele Lazzeroni[4], Filippo Maria Raimondi[5], Gian Paolo Spinelli[1], Giuseppe Naso[6]

[1]U.O.C. Territorial Oncology of Aprilia, Sapienza University of Rome – Aprilia, Italy.
[2]BIOS SpA – Rome, Italy.
[3]Institut National de la Santé et de la Recherche Médicale (INSERM) U 1053, Research in Translational Oncology, University of Bordeaux – Bordeaux, France.
[4]Department of Medical and Surgical Sciences and Translational Medicine, Sapienza University of Rome, Sant'Andrea University Hospital – Rome, Italy.
[5]Biostatistical Consultant, E-Campus University – Rome, Italy.
[6]Division of Medical Oncology, Policlinico Umberto I – Rome, Italy.

Objectives: Triple-negative breast cancer (TNBC) still has poor prognosis for a higher rate of relapse and a greater tendency of developing brain metastasis (BrM) compared with other major breast cancer subtypes. Circulating tumor DNA (ctDNA) represents a valuable tool associated with the outcome and the aggressiveness of breast cancer. Biomarkers allowing to predict the development of BrM in TNBC are needed. We studied the usefulness of assessment of CSF-ctDNA for identification early at-risk patients to develop BrM in TNBC. **Methodology:** A total of 323 newly diagnosed nonmetastatic TNBC patients who underwent neoadjuvant therapy + surgery (NACT) with complete response (CR) were prospectively enrolled. After surgery, CSF-ctDNA collected from all patients enrolled was extracted and assessed using the QIAamp Circulating Nucleic Acid Kit. Survival curves were estimated by using Kaplan–Meier method and compared with the log-rank test. Multivariate Cox regression was used to identify the risk of mortality at 3 years. **Results:** After NACT, CSF-ctDNA was detectable in 126/323 (39%) patients, 101/126 (80%) were diagnosed at Stage 3. A total of 124 out of 126 (98.4%) ctDNA+ patients subsequently developed BrM. In contrast, only 2 (2/197, 1%) ctDNA– patients subsequently developed BrM and 195 other patients remain in a CR ($p<0.001$, Fisher's exact test). CSF-ctDNA did associate with PFS and OS: undetectable ctDNA was associated with superior PFS (HR 0.3; $p=0.002$) and OS (HR 0.2; $p<0.01$), indicating survival is largely determined by the onset of BrM. With a median follow-up of 3 years, median PFS of ctDNA+ versus ctDNA– patients was 13 months versus not reach, $p=0.004$ (log-rank test). Median OS for ctDNA+ versus ctDNA– patients was 16 months after NACT versus not reach, $p=0.0016$ (log-rank test). At multivariate analysis, detectable CSF-ctDNA emerged as the best predictor of the development of BrM and 24-month mortality (HR: 3.62; $p<0.0001$). Age, stage, Ki67%, and response to chemotherapy were not significantly associated with the prognosis. **Conclusion:** After NACT, detectable CSF-ctDNA significantly associated with PFS and OS, identifying early at-risk patients to develop BrM in TNBC who should take advantage from appropriate additional treatment, remains a critical problem.

Keywords: Triple-Negative Breast Cancer; Brain Metastasis; Circulating Tumor DNA; Liquid Biopsy; Predictive Biomarkers.

https://doi.org/10.29289/259453942021V31S2009

SYNERGISTIC MECHANISMS OF ACTION: COMPARISON OF ADCC AND SIGNALING PATHWAYS INHIBITION BY TRASTUZUMAB BIOSIMILAR OR ORIGINATOR TRASTUZUMAB IN COMBINATION WITH PERTUZUMAB IN HER2+ BREAST CANCER CELL LINES

Franklin Fernandes Pimentel[1], Daniel Guimarães Tiezzi[1], Jurandyr Moreira de Andrade[1], João Gonçalves[2], Ana Carolina Ferreira Cardoso[3], Vivienne Carduz Castilho[3], Roger Chammas[4], Juliano Simões de Toledo[5]

[1]Breast Disease Division, Department of Gynecology and Obstetrics, Ribeirao Preto Medical School, Universidade de São Paulo – Ribeirão Preto (SP), Brazil.
[2]iMed, Research Institute for Medicines, Faculty of Pharmacy, University of Lisbon – Lisboa, Portugal.
[3]Clinical Research, Libbs Pharmaceutical Ltd – São Paulo (SP), Brazil.
[4]Centro de Investigação Translacional em Oncologia, Instituto do Câncer do Estado de São Paulo, Faculdade de Medicina, Universidade de São Paulo – São Paulo (SP), Brazil.
[5]External R&D and Biotechnology, Libbs Pharmaceutical Ltd – São Paulo (SP), Brazil.

Objectives: Trastuzumab and pertuzumab bind to HER2 synergistically at different subdomains, improving the clinical benefit of breast cancer treatment. Recently, trastuzumab biosimilars were approved after comparison with the originator, proving high similarity in structure and activity, and equivalent efficacy, safety, and immunogenicity. This study aimed to compare in vitro antibody-dependent cell-mediated cytotoxicity (ADCC) and HER2-signaling inhibition elicited by biosimilar trastuzumab (BS-TZB) or originator trastuzumab (TZB) in combination with pertuzumab (PTZ). **Methodology:** Human breast cancer cell lines BT474 (HER2+/estrogen [ER] and progesterone receptor [PR]-positive) and HCC1954 (HER2+/ER and PR-negative) were used. Anti-HER2 antibodies: TZB (Herceptin® 440 mg, Roche, batch: N7194B11-B3064); BS-TZB (Zedora® 440 mg, Libbs/Biocon [trastuzumab-dkst], batch: 18F0072); and PTZ (Perjeta® 420 mg, Roche, batch: H0260B01) were commercially acquired. ADCC assay: cells were incubated with TZB or BS-TZB, with/without PTZ. To determine the cytotoxicity percentage, the LDH activity using the CytoTox-ONETM was measured. Western blot: HCC1954 cells were incubated with TZB or BS-TZB, with/without PTZ to analyze the HER2 signaling cascade. We analyzed that Akt, ERK, STAT3, and MKK3/6 were the downstream molecules. **Results:** ADCC activity of BS-TZB was higher than that of TZB in both cell lines (EC50 [µg/mL]: 1.01 and 1.32, respectively, for BT474: 0.16 and 0.23, for HCC1954). Combined with PTZ, BS-TZB also showed slightly higher ADCC activity than TZB (EC50 [µg/mL]: 0.90 and 1.15, for BT474: 0.13 and 0.19, for HCC1954). BS-TZB and TZB inhibited the phosphorylation levels of Akt, ERK, STAT3, and MKK3/6 in a dose- dependent manner. PTZ enhanced inhibition effects of BS-TZB and TZB on p-AKT and p-ERK, while it had no effect on the p-STAT3 and p-MKK3/6. **Conclusions:** In association with pertuzumab, trastuzumab biosimilar showed non-inferior biological potency and equivalent signaling inhibition compared with originator trastuzumab. This study explored mechanisms elicited by dual HER2 blockade, showing the same pattern for BS-TZB as well as TZB, combined with PTZ.

Keywords: Biodrugs; Oncology; Targeted Therapy; Biological Drug.

https://doi.org/10.29289/259453942021V31S2010

TRIPLE-NEGATIVE BREAST CANCER AND BRCA1 UNDEREXPRESSION ASSOCIATION: AN EVIDENCE-BASED META-ANALYSIS OF CASE–CONTROL STUDIES

Fabiana Lúcia de Lima Souza[1], Francielle Souza Silva Lopes[1], Hellen Karine Paes Porto[1], Cesar Augusto Sam Tiago Vilanova-Costa[2]

[1]Faculdade União de Goyazes – Trindade (GO), Brazil.
[2]Associação de Combate ao Câncer em Goiás – Goiânia (GO), Brazil.

Objectives: This meta-analysis aims to evaluate the association of triple-negative breast cancer and BRCA1 gene underexpression by means of a meta-analysis. **Methodology:** Case–control studies, published between the years 2011 and 2015, were selected from three available databases (PubMed, Scopus, and Web of Science) and were analyzed using Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) recommendations. Literature search was performed using the key words "([triple-negative breast cancer] AND [BRCA1] AND [Associated] AND [expression])." Study quality was assessed using the Grading of Recommendations, Assessment, Development, and Evaluations (GRADE). The quality of evidence of the studies was classified into four categories: high, moderate, low, or very low quality. We also analyzed the influence of possible conflicts of interest and any information on ethical approval of the studies. **Results:** A total of 11 studies, out of the 189 studies initially identified, were included in this meta-analysis after applying the inclusion and exclusion criteria. Results show a high prevalence of BRCA1 mutations and underexpression on triple-negative breast cancer patients (χ^2=33.814 and p=0.0001). Studies also show that chemotherapy remains the basis of systemic treatment for breast cancer patients with the BRCA1 mutations and after triple-negative breast cancer treatment, tumor recurrence and resistance to therapy remain a challenging problem. **Conclusion:** This meta-analysis corroborates other studies that the underexpressive BRCA1 carriers are linked to a higher risk to develop breast cancers that tend to be negative for estrogen (ER), progesterone (PgR), and HER-2 receptor (triple-negative).

Keywords: Triple-Negative Breast Cancer; BRCA1; Treatment.

https://doi.org/10.29289/259453942021V31S2011

A NEW COPPER TERNARY COMPLEX IS A PROMISED COMPOUND FOR THE TREATMENT OF TRIPLE-NEGATIVE BREAST CANCER

Paula Marynella Alves Pereira Lima[1,2], Douglas Cardoso Brandão[1], Raquel Pereira Cruz[1], Priscila Capelari Orsolin[2], Wendell Guerra[4], Luiz Ricardo Goulart[5], Robson José de Oliveira Júnior[3], Thaise Gonçalves Araújo[1,5]

[1]Laboratory of Genetics and Biotechnology, Institute of Biotechnology, Universidade Federal de Uberlândia – Patos de Minas (MG), Brazil.
[2]Laboratory of Cytogenetic and Mutagenesis, Centro Universitário de Patos de Minas – Patos de Minas (MG), Brazil.
[3]Biotechnology Institute, Universidade Federal de Uberlândia – Uberlândia (MG), Brazil.
[4]Chemistry Institute, Federal Universidade Federal de Uberlândia – Uberlândia (MG), Brazil.
[5]Laboratory of Nanobiotechnology, Institute of Biotechnology, Universidade Federal de Uberlândia – Uberlândia (MG), Brazil.

Objectives: Triple-negative breast cancer (TNBC) is a biologically aggressive tumor with poor prognosis due to the lack of effective therapeutic strategies. Although chemotherapy is widely employed, chemoresistance and severe side effects remain a challenge in controlling this breast cancer subtype. Doxorrubicin (DOX) and platinum-based drugs are commonly used in oncological regimens but with limitations. In this scenario, metallodrugs based on copper element have been emerged as novel and promised compounds, due to the presenting mechanisms of action and biodistribution different from the platinum drugs already used, and may be effective against tumors that are resistant to conventional chemotherapy. This study focuses on assessing the cytotoxic effect of new copper ternary metal complex (CBP-01) on breast cancer tumor cells. **Methodology:** Cell viability of human breast cell lines, MCF 10A (non-neoplastic) and neoplastic cells, MCF7, T-47D, and MDA-MB-231, was evaluated by 3-[4,5-dimethylthiazole-2-yl]2,5-diphenyltetra-zolium bromide — MTT methodology. CBP-01 was tested in different concentrations (1, 5, 10, 12.5, 25, and 50 μM) for 24, 48, and 72 h, and the cellular responses were compared with Carboplatin (CARB), Cisplatin (CIS), and DOX. **Results:** The dose-dependent profile was identified for the four drugs and the cell viability differed between the times of treatment. CBP-01 was effective against the tumor cell lines. Regarding the triple-negative cell line (MDA-MB231), CBP-01 was clearly more effective with lower IC_{50} (2.05) and higher SI (3.10) than the other compounds. **Conclusion:** Our data provide new prospects for TNBC treatment and may yield new directions for tumor management.

Keywords: Triple-Negative Breast Cancer; Chemotherapy; Cytotoxic; Copper Complex

https://doi.org/10.29289/259453942021V31S2012

ASSOCIATION BETWEEN PERIODONTAL DISEASE AND BREAST CANCER: SYSTEMATIC REVIEW AND META-ANALYSIS

René Aloisio da Costa Vieira[1,2], William Eduardo Pirola[1], Eliane Marçon Barroso[3], Ricardo Ribeiro Gama[1], Martins Fideles dos Santos Neto[1], Marcos Alves de Lima[4], Idam de Oliveira-Junior[1,2]

[1]Programa de Pós-Graduação em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[2]Programa de Pós-Graduação em Tocoginecologia, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Botucatu (SP), Brazil.
[3]Centro Universitário da Fundação Educacional de Barretos – Barretos (SP), Brazil.
[4]Núcleo de Apoio ao Pesquisador, Hospital de Câncer de Barretos – Barretos (SP), Brazil.

Objective: The present study evaluates a possible association between breast cancer and periodontal disease (PD) as a risk factor. **Materials and Methods:** Ethics approval 3.462.635. This is a systematic review of the literature combined with a meta-analysis. Five databases were searched, and relevant studies published were retrieved and screened. The articles were evaluated and subsequently synthesized using the PRISMA methodology. Odds ratios (OR) with 95% confidence intervals (CI) to assess the association between PD and the risk of breast cancer were calculated. **Results:** Initially, 712 were identified, and after abstract analysis, 14 articles were selected for qualitative evaluation, and 11 presented sufficient data for meta-analysis. We selected cohort studies (prospective and retrospective) and case–control studies. Literature reviews, meta-analyses, and clinical case reports were excluded. Regarding 233,215 women, the meta-analysis showed that PD increases the risk of developing breast cancer, OR=1.619, 95%CI 1.544–1.698, and this positive association was present in seven studies. **Conclusion:** PD increases the risk of breast cancer. Since the quality of the studies was heterogeneous, further studies with improved methods are needed to better quantify the risk.

Keywords: Breast Cancer; Epidemiology; Prevention; Periodontics; Gingivits.

https://doi.org/10.29289/259453942021V31S2013

IMPACT OF PHYSICAL ACTIVITY ON PHYSICAL FITNESS AND BODY COMPOSITION OF WOMEN AFTER BREAST CANCER TREATMENT

Édipo Giovani França Lara[1], Selene Elifio Esposito[1], José Claudio Casali da Rocha[1,2]

[1]Pontifícia Universidade Católica – Curitiba, (PR), Brazil.
[2]AC Camargo Cancer Center – São Paulo (SP), Brazil.

Introduction: Much has been discussed about benefits of physical exercise in women who have ended breast cancer treatment, which includes not only the improvement of their quality of life but also a remarkable decreased risk of recurrence. To achieve these benefits, it is important that the parameters for prescribing and monitoring physical activity for this population are well defined, as well as the evaluation of factors that may interfere with the results and the adherence to physical exercises. **Objectives:** To assess the impact of physical exercise on physical fitness and body composition in women who have ended breast cancer curative treatment and to evaluate the impact of physical exercise on women with binge eating disorder. **Methods:** This prospective study included 107 women between 18 and 60 years of age shortly after the end of their curative treatment for breast cancer (surgery and/or chemotherapy and/or radiotherapy). The participants, after signing the informed consent form, were motivated to do aerobic exercises, localized muscular strength/resistance, and flexibility exercises. Intervention consisted of sets of physical exercises prescribed to all participants by a physical educator in progressive intensities and volumes over the months, according to their adaptive responses, considering individual capabilities and limitations. All participants were evaluated at entrance for cardiovascular morbidities and oriented how to exercise by their own at their homes. Evaluations including body composition, VO_{2max}, and localized muscle resistance were performed at pre-intervention (basal), after 6 and 9 months of intervention. **Results:** A total of 78 (72.8%) women adhered to the training program, and 29 (27.2%) chose not to adhere. After 9 months of regular and individualized intervention, adherent women showed significantly better results in all variables of body composition and physical fitness: body mass (-4.38±3.67 kg; p<0.0001), BMI (-1.62±1.53 kg/m^2; p<0.0001), fat percentage (-3.41±3.17%; p<0.0001), while in non-adherent women, the parameters did not change much or became ever worse: total mass (+2.83±3.21 kg; p=0.8277), BMI (+1.16±1.24 kg/m^2; p=0.8897), fat percentage (+1.77 ± 2.73%; p=0.05). Women with binge eating disorder, who had the worst parameters at baseline (pre-intervention), were the ones who obtained more prominent results in reducing their body mass, BMI, and fat percentage (p<0.05). This favorable impact of exercise extended to all age groups and does not correlate with former physical activity (p>0.05), as well as it was not influenced by breast cancer characteristics (e.g., histology, stage, and molecular subtypes) or treatment (i.e., mastectomy, axillary surgery, chemotherapy, or radiotherapy; p>0.05). **Conclusion:** Our study shows that individualized programs of self-training sets of physical exercises, remotely guided by a physical education professional, could improve the body composition and physical fitness of women in surveillance after breast cancer, regardless of the history of breast cancer or treatment, showing that it is possible to reduce risk factors associated with breast cancer recurrence and to contribute to a better quality of life for these women.

Keywords: Breast Cancer; Physical Exercise; BMI; VO_2; Muscular Endurance; Surveillance.

https://doi.org/10.29289/259453942021V31S2014

ICOMBINED SELOL NANOCAPSULES AND MAGNETIC HYPERTHERMIA THERAPIES WITH PEQUÍ OIL SUPPLEMENTATION TO TREAT BREAST TUMOR AND PREVENT METASTASES IN A SHORT-TERM IN AGED SWISS MICE

Willie Oliveira Pinheiro[1], Laise Rodrigues de Andrade[2], Marcelo Henrique Sousa[3], Mayara Simonelly Costa do Santos[4], Gabriel Ribeiro Farias[5], Graziella Anselmo Joanitti[6]

[1]Post-Graduation Program in Sciences and Technologies in Health, Faculty of Ceilandia, Universidade de Brasília – Brasília (DF), Brazil.
[2]Institute of Biological Sciences, Department of Genetics and Morphology, Universidade de Brasília – Brasília (DF), Brazil.
[3]Faculty of Ceilandia, Green Nanotechnology Group, Universidade de Brasília – Brasília (DF), Brazil.
[4]Electron Microscopy Laboratory, Institute of Biological Sciences, Universidade de Brasília – Brasília (DF), Brazil.
[5]Laboratory of Immunology and Inflammation, Department of Cell Biology, Universidade de Brasília – Brasília (DF), Brazil.
[6]Laboratory of Bioactive Compounds and Nanobiotechnology (LBCNano), Faculty of Ceilandia, Universidade de Brasília – Brasília (DF), Brazil.

Breast cancer is a group of malignancies most common among women. In 2018, approximately 2.1 million women were diagnosed, with 626,679 deaths. The traditional classification of these diseases is based on the extent of illness (in situ or invasive), the affected tissue (epithelial tissue for instance), and the site of occurrence (duct or lobe). The invasive ductal carcinoma is the most common type. The classification based on molecular characteristics divides breast cancer into at least five groups: Luminal A, Luminal B, negative HER-2, positive HER-2, and triple negative, being the most aggressive subtype. The disadvantages presented by traditional treatments have stimulated the search for new therapeutic alternatives in order to decrease the toxic and adverse systemic effects besides increasing the effectiveness of tumor treatment. So, combined therapies using nanostructures, with molecular sizes, such as magnetic nanoparticles (NPMs) for magnetic hyperthermia and PLGA-Selol nanocapsules as chemotherapy associated or not with supplementation of pequí oil, may represent an innovative and promising tool in cancer therapy. **Objective:** This study aims to evaluate the effectiveness of magnetic hyperthermia using NPMs combined with chemotherapy by Selol nanocapsules associated or not with pequí oil, in the treatment of breast tumors implanted in elderly Swiss female mice. **Material and methods:** The effectiveness of the treatment was evaluated by clinical, hematological, biochemical, genotoxic, and histopathological parameters. The treatment period was 7 and 14 days. **Results:** The combined therapies of magnetic hyperthermia and PLGA-Selol nanocapsules prevented metastases to lymph nodes, liver, and lungs, and a case of complete tumor remission was observed. The next step is to evaluate if the supplementation with pequí oil can enhance the efficacy of these treatments. **Conclusion:** The results already showed the potential use of these therapies for future clinical trials in elderly patients with breast cancer.

Keywords: Breast Cancer; Magnetic Hyperthermia; Selol, Pequí Oil and Combined Therapies.

https://doi.org/10.29289/259453942021V31S2015

EFFECTIVENESS OF AMPK ACTIVATING DRUGS ON TUMOR SUPPRESSION: A SYSTEMATIC REVIEW

Victor Domingos Lisita Rosa[1], Adnan Nasser Daghastanli[1], Armani Gontijo Plácido Di Araujo[1], Ana Vitoria Cordeiro Rocha[1], Thiago Martins de Abreu[1], Jade de Oliveira Silva[1], Rafael Ribeiro Alves[1]

[1]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: Some studies demonstrated that metformin increases the efficiency of systemic therapy in cancer patients. It is postulated that the increase in AMPK is one of the different mechanisms which involves tumor suppression. The purpose of this study is to evaluate the effect of AMPK activating drugs on tumor suppression. **Methodology:** This is a systematic review to assess the effectiveness of metformin in tumor suppression. A database search was conducted on PubMed and Cochrane for studies that used metformin to suppress the tumor, comparing users versus non-users in patients with solid tumors. The key words used were "AMPK," "tumor," and "prognosis." Only randomized controlled clinical trials were included in the selection. **Results:** Six trials were included in this literature review. The evidence is robust in relation to tumor reduction in patients who used metformin (either diabetic or not). Saif et al. in a phase I study suggested that metformin can be administered safely with chemotherapy and an increase in AMPK phosphorylation. Dowling et al. proposed that metformin users have changes in phosphorylated AMP-activated protein kinase with beneficial anticancer effects. Klubo-Gwiezdzinska et al. showed that tumor size is smaller in patients who were treated with metformin, suggesting the inhibition of tumor growth by the drug. Rodriguez et al. strongly suggested that the addition of metformin has a significant effect in progression-free survival and overall survival of patients with lung cancer. **Conclusion:** This systematic review showed that metformin therapy has a significant effect in tumor suppression.

Keywords: Breast Cancer; AMPK; Tumor Suppression.

https://doi.org/10.29289/259453942021V31S2016

HOW MUCH CAN WE TRUST ON THE SELF-REPORTED COLOR WHEN EVALUATING BREAST CANCER ANCESTRY

René Aloisio da Costa Vieira[1,2], Débora Sant'Anna de Andrade e Silva[3], Ana Carolina Laus[3], Carlos Eduardo Bacchi[4], René Julias Costa e Silva[4], Idam de Oliveira-Junior[1,2], Rui Pereira[4], Rui Manuel Vieira Reis[1,3]

[1]Programa de Pós-Graduação em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[2]Programa de Pós-Graduação em Tocoginecologia, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Botucatu (SP), Brazil.
[3]Centro de Pesquisa Molecular em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[4]Laboratório de Patologia Bacchi, Instituto de Patologia e Imunologia Molecular, Universidade do Porto – Porto, Portugal.

Objective: To evaluate the association between self-reported color and ancestry in Brazilian patients with breast cancer (BC). **Methods:** Ethics approval 1136/2016. This was an observational, transversal, epidemiological study, evaluating 1,215 patients with BC. DNA was extracted to evaluate ancestry. For genetic ancestry, a 46 AIM-INDEL panel was used, and the polymerase chain reaction (PCR) products were subjected to capillary electrophoresis. The ancestral profile was evaluated with Structure v.2.3.3 software, for ancestry proportion, the percentages of ancestry in the different self-referred colors. For this purpose, descriptive statistics was performed (mean ± standard deviation [minimum – maximum]). To assess differences between groups, ANOVA and Bonferroni were used. **Results:** The color distribution was 77.9% (946) white, 17.4% (212) brown, 4.1% (50) black, 0.3% (4) yellow, and 0.2% (3) mixed. Genetically, the African ancestry proportion was significantly ($p<0.001$), more evident in blacks (0.63±0.21 [0.17–0.96]), followed by browns (0.25±0.16 [0.02–0.70]), and less frequent in white skin color. The European ancestry proportion was significantly ($p<0.001$) higher in whites (0.7±0.17 [0.02–0.97]), followed by browns (0.57±0.19 [0.12–0.92]), yellow (0.27±0.31 [0.12–0.620]), and black (0.24 ± 0.19 [0.02–0.72]). The Asiatic ancestry proportion was significantly ($p<0.001$) higher in yellow (0.48 ± 0.51 [0.04–0.93]) with less difference between the other groups. Finally, the Amerindian ancestry proportion frequency was less frequent in all groups, and cafuse patients did not express differences between all race groups. Brown race group presented differences in the African and European Ancestry. **Conclusion:** Although we found many similarities between white color — European ancestry, black color — African ancestry, and yellow color — Asian ancestry, there is great miscegenation between patients and although they can be labeled as having one color, they do present many ancestral genes that would allow their inclusion in another race group.

Keywords: Breast Cancer; Epidemiology; Genetic Variation; Molecular Pathology; Brazil.

https://doi.org/10.29289/259453942021V31S2017

BREAST CONSERVING SURGERY WITH GEOMETRIC COMPENSATION TECHNIQUE: NEW INDICATIONS, ONCOLOGICAL SAFETY, AND COSMESIS

Flavia Cardoso Franca[1,2,3], Idam de Oliveira-Junior[1,3], Andrea Moreno Morgan[2,3], Raphael Luiz Haikel[3], René Aloisio da Costa Vieira[1,2]

[1]Programa de Pós-Graduação em Tocoginecologia, Faculdade de Medicina de Botucatu, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Botucatu (SP), Brazil.
[2]Programa de Pós-Graduação em Oncologia, Hospital de Câncer de Barretos – Barretos (SP), Brazil.
[3]Departamento de Mastologia e Reconstrução Mamária, Hospital de Câncer de Barretos – Barretos (SP), Brazil.

Objective: Geometric compensation technique (GCT) enables breast conserving surgery (BCS) in selected patients with large tumor for their breast sizes and/or in unfavorable sites, initially candidates to mastectomy. The aim was to evaluate indications, oncological safety, and cosmesis and to increase the number of patients undergoing GCT. **Methods:** Approved by Ethics Committee 1594/2018. A longitudinal cohort study was performed in patients with breast cancer who underwent GCT consecutively. We evaluated retrospectively: indications, clinical characteristics, cosmesis, surgical features, and recurrences. Prospectively breast satisfaction by patients and cosmesis by BCCT.core software, Harris/Harvard, and Garbay scales were evaluated. Descriptive statistics were performed, chi-square test was used to compare aesthetic outcomes; Kaplan–Meier model evaluated follow-up and recurrence. **Results:** It is the second largest world casuistic from one single institution: 36 patients were evaluated, 34 (94.4%) underwent GCT, 26 (72.2%) with medium/large breasts with or without ptosis, 7 (19.4%) with small breasts with or without ptosis, a profile undergoing GCT not previously identified in the literature. The mean tumor clinical size was 3.65 ± 1.59 cm. All margins had no ink on tumor. Frozen section biopsy guided a change from quadrantectomy to mastectomy in two patients (5.6%) because margins were positive. Most patients had no postoperative complications, without delay to start adjuvant treatment. Mean follow-up time was 36.6 ± 16.8 months, with no local recurrences. According to BCCT.core, the postoperative aesthetics was good in 17 (51.5%) patients and 11 (33.3%) was reasonable, and 18 patients (54.5%) self-rated it as excellent and 11 (33.3%) as good. **Conclusion:** GCT is an oncologically safe and aesthetically satisfactory option of BCS and it has been extended to patients with small and medium breasts with ptosis, and large tumors to breast volume or in unfavorable resection sites, initially candidates for mastectomy.

Keywords: Breast Neoplasms; Segmental Mastectomy; Plastic Surgery; Mammoplasty; Conservative Treatment.

https://doi.org/10.29289/259453942021V31S2018

MODIFIED SLOW DIGESTION TECHNIQUE FOR THE ISOLATION OF PATIENT-DERIVED CELLS: AN IN VITRO MODEL FOR THE DESIGN OF BREAST CANCER-ASSOCIATED STROMA

Foivos Irakleidis[1], Michael Masucci[2],Eleftherios Sfakianakis[3], Peng H Tan[3], Hazel Welch[1]

[1]University College London, Department of Surgical & Interventional Sciences – London, United Kingdom.
[2]King's College London, Medical School – London, United Kingdom.
[3]Royal Free London, NHS Foundation Trust – London, United Kingdom.

Objective: Highly prevalent cancer-associated fibroblasts (CAFs) are understood to play a key role in tumorigenesis. Understanding of CAFs and tumor-associated stroma is considered to be essential in novel cancer therapies. Patient-derived cells (PDCs) more closely resemble tumor microenvironment compared with commercial cell lines that are subjected to genetic and phenotypic changes. However, PDCs use can be limited by challenges in isolating high-yield viable cultures. Overcoming these challenges would benefit novel personalized cancer research. In this study, we aimed to investigate the effectiveness of modified tissue digestion processing techniques of isolation of PDCs. **Methodology:** PDCs were isolated from breast tissues collected from patients who had previously been diagnosed with breast cancer. Modification of slow and fast digestion processing techniques was used, followed by analysis for morphology and protein marker expression. **Results:** Isolated PDCs were presented with different morphologies and functions compared with breast cancer cell lines. Higher growth potential was observed with a combination of maintenance and filtered conditioned medium. High expression of Vimentin and morphological characteristics of spindle-shaped large cells confirmed the PDCs as fibroblasts. The modified slow digestion approach used in this study was successful in isolating fibroblasts from retrieved breast tissue. The fast digestion approach was not viable and was abandoned early due to poor production of cells. **Conclusions:** PDCs were isolated using a modified slow digestion approach. PDC cultures can more effectively represent breast cancer stroma and are becoming an essential platform for research as a personalized in vitro model for molecular breast cancer research. This study presents a highly successful method of isolating PDCs from breast cancer patients.

Keywords: Patient-Derived Cells; Cancer-Associated Fibroblasts; In Vitro Breast Cancer Stroma; Modified Slow Digestion Processing Technique.

https://doi.org/10.29289/259453942021V31S2019

OCCULT LESIONS LOCALIZATION AND "IN VIVO" MARGINS EVALUATION OF BREAST CARCINOMA DETECTED BY NEW HYBRID TECHNIQUE USING RADIOFLUORESCENCE—A PILOT STUDY

Antonio Cesar Pereira[1], Rogerio Bizinoto Ferreira[2], Delio Marques Conde[3], Alexandre Marchiori Xavier de Jesus[4], Ana Beatriz Marinho de Jesus Teixeira[5], Sebastião Alves Pinto[6], Sergi Vidal-Sicart[7]

[1]Centro Universitário de Anápolis, Unievangélica – Anápolis (GO), Brasil.
[2]Hospital Materno Infantil de Goiânia – Goiânia (GO), Brasil.
[3]Universidade Federal de Goiás, Faculdade de Medicina, Departamento de Ginecologia e Obstetrícia – Goiânia (GO), Brasil.
[4]Instituto de Mastologia e Oncologia – Goiânia (GO), Brasil.
[5]Clínica Radiológica de Anápolis – Anápolis (GO), Brasil.
[6]Departamento de Patologia e Imagenologia, Faculdade de Medicina, Universidade Federal de Goiás – Goiânia (GO), Brasil.
[7]Department of Nuclear Medicine, Hospital Clínic de Barcelona – Barcelona, Spain.

This pilot study presents a new technique of hybrid marking of non-palpable breast lesion with surgical margins evaluation "in vivo," which we referred to as FLuorescence And Seed for Hybrid Intraoperative Evaluation (FLASHIE). Seven women, with one lesion each, were submitted to a previous implantation of 125-iodine seed in the center of the suspected area and then were injected with indocyanine green (ICG). During surgery, an optonuclear probe was used to detect gamma radiation and fluorescence. Gamma detection mode was used to locate lesions, and then fluorescence mode, to analyze the ICG concentration, which allowed distinguishing a benign tumor and six malignant lesions. These lesions were confirmed by conventional pathological and immunohistochemical analysis. In the malignant positive cases, fluorescence was also used for the orientation of the excision of the tissue in order to obtain more adequate surgical margins. This new promising technique may prevent the persistence of post-surgery tumor residues.

Keywords: Surgical Margins Evaluation; Fluorescence; 125-Iodine Seed; Breast Cancer.

https://doi.org/10.29289/259453942021V31S2020

ONCOPLASTIC MAMMAPLASTY WITH DISGUISED GEOMETRIC COMPENSATION

Régis Resende Paulinelli[1,2], Luiz Fernando Jubé Ribeiro[1], Thauana Dias Santos[1], Elisana Maria Santos Caires[1], Marilha Gabriella Martins Pontes[1], Bruna Morais Faria[1]

[1]Gynaecology and Breast Unit, Araújo Jorge Hospital, Associação de Combate ao Câncer de Goiás – Goiânia (GO), Brazil.
[2]Mastology Program, Department of Gynaecology and Obstetrics, Unversidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: To evaluate the results and follow-up of retrospective cohort of patients submitted to a new technique of oncoplastic mammaplasty, referred to as disguised geometric compensation mammaplasty (DGCM), which is suitable for tumors involving the glandular tissue in the lateral or medial pillars of the mammaplasty. **Materials and Methods:** A total of 25 patients with breast tumor involving the pillars of the mammaplasty were included, of whom 20 (80.00%) had invasive ductal carcinoma, 3 (12.00%) had phyllodes tumor, 1 (4.00%) had invasive lobular carcinoma, and 1 (4.00%) had in situ ductal carcinoma. Preoperative markings followed the "Wise-pattern" technique. The resection of the tumor in the pillar of the mammaplasty, preserving the overlying skin, was geometrically compensated with a correspondent area coming from the lower poles, which folds over itself and maintains the skin vascularity in the pillar. One patient was converted to classic geometric compensation due to a positive skin margin in the frozen section. Other patient combined a classic geometric compensation for the inner quadrants and DGCM for the outer quadrants in the same breast. One patient decided to submit to a bilateral mastectomy after adjuvant chemotherapy because of a BRCA2 mutation. Immediate fat grafting was done in one case. Approval from the ethics committee: n. 2.322.212. **Results:** Mean age was 46.96±9.53 years. Mean clinical tumor size was 47.21±22.16 mm before chemotherapy and 36.67±22.5 mm after chemotherapy. There were 11 (44.00%) locally advanced and 1 (4.00%) multicentric tumor. Nine (36.00%) patients were submitted to neoadjuvant chemotherapy. Adjuvant chemotherapy, endocrine therapy, and radiotherapy were indicated according to the necessity. Ptosis was corrected in all cases. The aesthetic results were rated as excellent or good in 21 cases (95.45%) by the Harvard scale and the BCCT.core. Three patients have not returned for the aesthetic evaluation after surgery. The BREAST-Q scores for the satisfaction with the breasts and satisfaction with outcomes were 81.50 (±15.00) and 90.44 (±11.70), respectively. Intraoperative frozen sections were done in 12 (48%) cases. There were two (8.00%) positive margins. One focus of DCIS in the skin margin was treated with radiotherapy, and the other positive margin was treated with re-excision. The complications were: three (12.00%) small wound dehiscences, two (8.00%) small skin necrosis, and two (8.00%) local hyperemia treated with antibiotics, two (8.00%) enlarged scars, and one (4.00%) small hematoma. There were not reoperations to treat complications. There was 1 (4.00%) local recurrence in the breast and axilla after 11 months, treated with radical mastectomy, and 1 (4.00%) metastasis to the brain after 3 months. No deaths were observed within a mean follow-up time of 16.28±11.39 months. **Conclusion:** The technique allowed breast conservation in situations requiring large resection in the pillars of the mammaplasty, with a high rate of free margins, correction of ptosis, satisfactory symmetry, and few complications.

Keywords: Disguised Geometric Compensation; Geometric Compensation; Oncoplastic Surgery; Mammaplasty; Oncoplasty; Breast Cancer; Breast Surgery; Mastology

https://doi.org/10.29289/259453942021V31S2021

ANALYSIS OF CD80- AND CD86-EXPRESSING B-LYMPHOCYTE LEVELS IN THE BLOOD OF WOMEN WITH LOCALLY ADVANCED TRIPLE-NEGATIVE BREAST CANCER

Amanda Forte Mendes Tejo Salgado[1,2,3], Maria Eduarda Borges Kerstenetzky[1,2,3], Vitoria Ferreira David Melquiades[1,2,3], Marcelo Ramos Tejo Salgado[4], Leuridan Cavalcante Torres[1,2]

[1]Instituto de Medicina Integral Professor Fernando Figueira – Recife (PE), Brazil.
[2]Translational Research Laboratory Prof CA, Hart, Instituto de Medicina Integral Professor Fernando Figueira – Recife (PE), Brazil.
[3]Faculdade Pernambucana de Saúde – Recife (PE), Brazil.
[4]Hospital de Câncer de Pernambuco – Recife (PE), Brazil.

Objective: To assess the levels of CD80 and CD86-expressing B lymphocytes in the blood of women with locally advanced triple-negative breast cancer (TNBC). **Methods:** This is a prospective and exploratory cohort study involving 30 women with TNBC and 30 healthy controls, conducted in 2018–2019. Peripheral blood collection was performed prior to chemotherapy. Immunophenotyping of B lymphocytes and CD80 and CD86 molecules was performed by flow cytometry. Women were evaluated for the degree of pathological response to chemotherapy and divided into groups with full (RC) or partial (RP) pathological response. Nonparametric Mann–Whitney U-test was used for comparison between two groups. Values of $p<0.05$ were considered statistically significant. Analyses were performed using Graphpad v7.0 software. **Results:** We analyzed 30 patients with locally advanced TNBC. The age of the patients ranged from 27 to 59 years, and median age was 44.5 years (35.5–51.7). Regarding menopausal status, 62.1% were premenopausal and 37.9% postmenopausal. Regarding the nuclear grade, 63% of the tumors were grade 3, followed by 27% grade 2. In relation to the clinical stage, 30% were in stage IIIA, 63.4% stage IIIB, and 6.6% stage IIIC. In the evaluation of response to neoadjuvant treatment, 56.7% of patients had complete pathological response, and 43.3% had partial response. TNBC patients had high levels of CD86 + B lymphocytes when compared with controls ($p<0.0001$). Regarding total B and CD80 + B levels—no significant differences were observed between the groups. In the analysis of CD86 and CD80 expression and total B cell levels, no significant differences were observed between the RC and RP groups. **Conclusion:** This study showed that the immune system of patients with TNBC can regulate costimulatory molecules in circulating B cells, probably in response to the disease.

Keywords: Breast Neoplasms; Neoadjuvant Therapy; CD80/86, B7-1/2.

https://doi.org/10.29289/259453942021V31S2022

PREDICTORS OF BREAST CANCER PROGNOSIS BASED ON TUMOR BIOMARKERS

Beatriz Alves Lima[1], Andressa da Silva Pereira[1], Bruna Alves Lima[1], Diana Gonçalves Lima[1], Leonardo Ferreira Pucci[1], Renato Moraes Ferreira[1], Tiago Castro Ferreira[1], Henrique Ferreira Pucci[2]

[1]Universidade de Rio Verde, Campus Aparecida – Aparecida de Goiânia (GO), Brazil.
[2]Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.

Objective: To analyze the tumor biological markers of breast cancer associated with the prognostic of the disease. **Methodology:** A systematic review was carried out on the Scielo, PubMed, and the National Cancer Institute databases on the topic. Descriptors used were: tumor biomarkers, breast cancer, and prognosis. Thus, 15 articles published between 2001 and 2020 were selected. **Results:** Breast cancer, characterized by the disordered multiplication of breast cells, is the most incident in women in the world, representing 24.2% of the total cases in 2018, and the most frequent cause of death in this gender. Accordingly, tumor markers are complementary tests for early diagnosis, since they are macromolecules derived from the tumor and biological fluids. The evaluation of tumor markers is of paramount importance due to the great diversity in clinical progression of breast cancer, for example, those hormone receptors (estrogen and progesterone), MIB-1, Ki-67, PCNA, p53, and c-erbB-2. Hence, about two-thirds of breast cancers are positive for hormone receptors and are related to a more favorable prognosis. PCNA (36 kDa protein perceptible in the cell nucleus from the late G1 to the S phase of the cell cycle) and MIB-1 (direct antibody against parts of the Ki-67 antigen) have a high proportion of tumor cells associated with a high-degree tumor differentiation, indicating a worse prognosis. Furthermore, mutations in the p53 and c-erbB-2 genes report low levels of estrogen and progesterone receptors, leading to a worse prognosis. **Conclusion:** In brief, the recognition of the main markers helps in the identification of patients with potentially aggressive tumors and in the mortality reduction of breast cancer, through treatments that can alter the course of the disease. On account of this, it is known that the tumor markers must be used in combination with the other methods such as diagnostic, prognostic, and therapeutic modifications.

Keywords: Tumor Markers; Breast Cancer and Prognosis.

https://doi.org/10.29289/259453942021V31S2023

IMPACT OF THE MAMMAPRINT GENETIC SIGNATURE ON THE DECALONATION OF THE CHEMOTHERAPY TREATMENT IN A MEDIUM INCOME COUNTRY – STUDY OF REAL LIFE

Fabio Postiglione Mansani[1], Márcia Magalhães Fernandes[1], Ruffo de Freitas-Junior[2]

[1]Universidade Estadual de Ponta Grossa – Ponta Grossa (PR), Brazil.
[2]Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction: Genetic signatures have been used in the attempt of de-escalate the treatment of breast carcinoma, reducing the indication for adjuvant chemotherapy (CTAd) in patients with luminal tumors with high clinical risk. The MINDACT trial, using the 70 gene platform MammaPrintTM, analyzing a cohort of European patients, showed that it was possible to save 46% of the use of CTAd in this population. However, there is a lack of information regarding the impact of this platform in the low- and medium-income countries (LMIC). **Objective:** The objective of this study was to analyze the Brazilian population with luminal breast cancer with high clinical risk, subjected to genomic analysis by the MammaPrintTM signature, the percentage of de-escalation of the systemic treatment, saving patients with low genomic risk from chemotherapy, using the MINDACT trial criteria. **Methodology:** Data were collected from 815 patients who underwent the MammaPrintTM genetic platform, provided by the GenCell Pharma database, from several Brazilian states, with luminal profile, by immunohistochemistry (IHC), breast carcinoma, and high clinical risk by the criteria of the MINDACT trial. The percentage of these patients who had a low genomic risk was calculated using MammaPrint™. Patients were categorized by age group and menopausal status. The correlation of low and high clinical and genomic risks was also analyzed according to the Brazilian macro-regions, considering the municipal human development index (MHDI). MammaPrintTM values ^{3}0.355 were considered to be genomic ultra-low risk. **Results:** The age of the patients ranged between 29 and 97 years. Of the 815 patients, 14 (1.71%) had a non-luminal profile to BluePrintTM and were excluded, although demonstrating that there was a strong statistical significance between IHC and BluePrintTM. Out of 801 luminal profile patients of high clinical risk to MammaPrintTM, 477 had low genomic risk, representing a percentage of 59.5%. Of the patients with low genomic risk 124 (15.48%) were ultra-low risk, considering the cutoff of 0.355. When assessing the age group, low genomic risk represents 46% of patients aged below 35 years, 51% of those aged between 35 and 49 years old, 61% aged between 50 and 70 years, and 64% of patients aged above 70 years old. Taking into consideration the menopausal status, 51% of low genomic risk were premenopause and 62% were postmenopause women. The correlation between the MHDI of the Brazilian macro regions and the presence of breast cancer of high genomic risk was not statistically significant. **Conclusions:** The use of the MammaPrintTM genetic signature in a Brazilian cohort, with high clinical risk, demonstrated that 59.5% of the patients could be spared from CTAd, more markedly in the postmenopause women, which represents 62% of the sample. This real-life study showed that for LMICs, MammaPrintTM can generate an even more significant CTAd de-escalation than that observed in the European cohort by the MINDACT study. A broader assessment with analysis of the clinical outcome is needed to confirm these results.

Keywords: Breast Cancer; Genetic Tests; Prognostic Factors; Immunohistochemistry.

https://doi.org/10.29289/259453942021V31S2024

ANALYSIS OF THE LEVEL OF CIRCULATING LEUKOCYTE PLATELET AGGREGATES IN WOMEN WITH BREAST CANCER

Maria Eduarda Borges Kerstenetzky[1,2,3], Amanda Forte Mendes Tejo Salgado[1,2,3], Vitoria Ferreira David Melquiades[1,2.3], Vinicius Rafael Agostinho Gomes[1,2,3], Denise Sobral Viana[4], Jurema Telles de Oliveira Lima[1], Marcelo Ramos Tejo Salgado[4], Leuridan Cavalcante Torres[1,2,4]

[1]Instituto de Medicina Integral Professor Fernando Figueira – Recife (PE), Brazil.
[2]Prof CA Hart Translational Research Laboratory, Instituto de Medicina Integral Professor Fernando Figueira – Recife (PE), Brazil.
[3]Faculdade Pernambucana de Saúde – Recife (PE), Brazil.
[4]Pernambuco Cancer Hospital – Recife (PE), Brazil.

Recognition of support for the study: CNPq – National Council for Scientific and Technological Development, through the Institutional Program for Initiation Scholarships in Technological Development and Innovation (PIBITI).

Objective: To evaluate the levels of circulating platelet–leukocyte aggregates in women with breast cancer (BC). **Methods:** A cross-sectional study was carried out between 2018 and 2019 with 27 women, who aged between 18 and 60 years, diagnosed with BC and 15 healthy women (controls). For the evaluation of the circulating platelet aggregate, samples of peripheral blood were collected at the time of routine laboratory tests for diagnosis and before treatment. Platelet aggregate analysis was performed using monoclonal antibodies by flow cytometry. Mann–Whitney U and Kruskal–Wallis tests were used to analyze medians between two and three groups, respectively. Values of $p<0.05$ were considered statistically significant. Analyses were performed on Graphpad v7.0. **Results:** In the analysis of the percentages of platelet–lymphocyte aggregates (AGP – lymphocytes) and platelet–neutrophils (AGP – neutrophils), no significant differences were observed between patients and controls. However, it was observed that the patients presented high percentage values of aggregate platelet–monocytes (AGP–monocytes) when compared with controls ($p<0.0001$). No significant differences were observed in the percentage levels of AGP–lymphocytes and AGP–neutrophils between the luminous subtypes A/B, HER2+, and triple-negative, and between these tumor subtypes and controls. The percentage values of AGP – monocytes were high in the luminous subtypes A/B, HER2+, and triple negative when compared with controls ($p=0.008$, 0.0001, 0.0002, respectively). However, no significant percentage differences in AGP–monocytes were observed between tumor subtypes. **Conclusion:** The present study showed the involvement of AGP–monocyte in triple-negative breast cancer and HER2+, these tumor subtypes being more aggressive and with a worse prognosis. Based on these data, the importance of new studies based on an investigation of the role of interactions between platelets and immune system cells in breast cancer became clear. The molecules involved in the linkages between platelets and leukocytes may be possible therapeutic targets.

Keywords: Breast Cancer; Platelets; Immune System.

https://doi.org/10.29289/259453942021V31S2025

THE INFLUENCES OF ADHERENCE TO TAMOXIFEN AND CYP2D6 PHARMACOGENETICS ON PLASMA CONCENTRATIONS OF THE ACTIVE METABOLITE (Z)-ENDOXIFEN IN BREAST CANCER

José Claudio Casali da Rocha[1]

[1]Hospital Erasto Gaertner – Curitiba (PR), Brazil.

Tamoxifen efficacy in breast cancer is suspected to depend on adherence and intact drug metabolism. We evaluated the role of adherence behavior and pharmacogenetics on the formation rate of (Z)-endoxifen. In 192 Brazilian patients, we assessed plasma levels of tamoxifen and its metabolites at 3, 6, and 12 months of treatment (LC-MS/MS), adherence behavior (Morisky Medication Adherence Scale), and CYP2D6 and other pharmacogene polymorphisms (MALDI-TOF mass spectrometry and real-time PCR). Adherence explained 47% of the variability of tamoxifen plasma concentrations ($p<0.001$). While CYP2D6 alone explained 26.4%, the combination with adherence explained 40% of (Z)-endoxifen variability at 12 months ($p<0.001$). The influence of low adherence not to achieving relevant (Z)-endoxifen levels was the highest in patients with non-compromised CYP2D6 function (RR 3.65, 95%CI 1.48–8.99). As a proof-of-concept, we demonstrated that (Z)-endoxifen levels are influenced by patient adherence to both tamoxifen and CYP2D6, which is particularly relevant for patients with full CYP2D6 function.

Keywords: Tamoxifen; Breast Cancer; CYP2D6; Adherence; Endoxifen.

https://doi.org/10.29289/259453942021V31S2026

INTERFERENCE OF BREAST CANCER COMMUNICATION ON TREATMENT ADHERENCE AND THE DOCTOR–PATIENT RELATIONSHIP

Pedro Henrique de Ávila Perillo[1], Vinicius Lemos Nascimento[1], Laís Martins Queiroz[1], Ianca Leandra Santos[1], Ana Carla Moreira Miranda[1], Débora Sara de Almeida Cardoso[1]

[1]Faculdade de Medicina, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objectives: Breast cancer is the cancer with the highest incidence in women in Brazil. The revelation of this diagnosis is considered a crucial moment, responsible for uncertainties and even affecting the doctor–patient relationship. Although the communication of bad news is one of the most frequent practices among physicians, difficulties are common. The aim of this study was to evaluate the influence of the communication in the diagnosis of breast cancer and the repercussions on the treatment, using the parameters as suggested by the Centro Avançado de Diagnóstico de Câncer de Mama (CORA/HC-UFG) in Goiânia-GO. **Methodology:** This qualitative and integrative study was conducted in the following databases: PubMed, SciELO, and MedLine with six selected articles. The keywords used were "communication," "diagnosis," "breast cancer," "adherence to treatment," and "doctor–patient relationship." Based on the results, a comparison was made with the one carried out in the CORA/HC-UFG. **Results:** Through the analysis of the articles, it was observed that the no tification of the diagnosis of cancer is considered a critical moment and how professionals notify patients directly interferes in the relationship of the patients with the diagnosis itself. Thus, it is up to the professionals to provide psychological and informative support at the time of diagnosis in order to reduce pessimistic feelings and to avoid abandoning the medical–hospital follow-up. In addition, when analyzing the care provided at CORA, it was noted that the adoption of a more humanized and multiprofessional communication, with the help of the psychological team, it was noticed, in agreement with the studies, a better acceptance and treatment adherence. **Conclusion:** The notification of cancer should be done in the most empathetic way possible, using techniques of psychology and communication, so that the patient receives information about his health situation in a welcoming manner. Furthermore, although the diagnostic communication is a medical act, the presence of a psychologist to support the patient has shown benefits.

Keywords: Communication; Diagnosis; Breast Cancer; Treatment Adherence; Doctor–Patient Relationship.

https://doi.org/10.29289/259453942021V31S2027

MAMMOGRAPHY SCREENING IN A STATE OF MIDWESTERN BRAZIL: AN ECOLOGICAL STUDY

Leonardo Ribeiro Soares[1], Rosangela da Silveira Corrêa[1], Rosemar Macedo Sousa Rahal[1], Danielle Cristina Netto Rodrigues[1], Suzana Alves Bastos[2], Rodrigo Massakatsu Nishiharu Tanaka[3], Lucy Aparecida Parreira Marins[3], Ruffo Freitas-Junior[1]

[1]Centro Avançado de Diagnóstico da Mama, Teaching Hospital, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Coordenação de Fiscalização de Estabelecimentos Assistenciais de Saúde, Diretoria de Vigilância Sanitária e Ambiental, Secretaria Municipal de Saúde de Goiânia – Goiânia, (GO), Brazil.
[3]Coordenação de Monitoramento e Fiscalização de Radiação Ionizante, Gerência de Vigilância Sanitária de Produtos e Serviços de Saúde, Superintendência de Vigilância em Saúde, Goiás State Health Department – Goiânia, (GO), Brazil.

Objective: To evaluate breast cancer screening according to demographic data, number, and geographical distribution of mammography units, screening coverage, and technology available. **Method:** This is an ecological study carried out among diagnostic centers with functioning mammography machines. We included all centers offering mammography in 2019. Correlations between the municipal human development index (HDI) and breast screening coverage were evaluated and the age of available equipment was compared between the public (SUS) and the private healthcare sector. Results were compared with a 2008 study. **Results:** In Goiás, 164 mammography units were operational, with 66 (40%) serving the SUS. Overall, the proportion of women/unit was 7,008/1 aged 40–69 years and 3,949/1 for women aged 50–69 years. Approximately 400,896 scans were performed — a mean of 200 scans/month (5–1,000) or 9 scans/day. Screening coverage was 83.2%, with 17.1% of these scans being performed within the SUS. The HDI correlated moderately but not significantly with screening coverage. There was no statistically significant difference in the mean age of the equipment between the SUS (14.29±7.79 years) and the private sector (15.17±7.67 years). When compared with the 2008 results, there was a decrease in the percentage of conventional units from 75.7% to 6%, an increase in computed radiography systems from 24.3% to 86.7%, and the introduction of digital radiography (7.3%). **Conclusions:** In 2019, breast-screening coverage in Goiás reached 83.2%, with 17.1% being conducted within the SUS. The geographical distribution of mammography units is heterogeneous and productivity is low. Compared with 2008, availability is increased and the standard of the equipment is improved.

Keywords: Breast Neoplasms; Early Detection; Mass Screening; Mammography; Health Care Delivery.

https://doi.org/10.29289/259453942021V31S2028

THE INFLUENCE OF THE NAVIGATING NURSE BEFORE THE DIAGNOSIS AND START OF TREATMENT OF PATIENTS AFFECTED BY BREAST CANCER IN THE CITY OF GOIANIA (GO), BRAZIL

Bruna Gonçalves Queiroz[1,2], Ruffo Freitas-Junior[1,2]

[1]Araujo Jorge Cancer Hospital, Gynecology and Breast Sector Goiânia (GO), Brazil.
[2]Universidade Federal de Goiás, CORA - Centro Avançado de Diagnóstico da Mama – Goiânia (GO), Brazil.

Objective: To evaluate and measure the time reduction in days between diagnosis and the start of treatment in patients guided by the navigating nurse or in patients attending outpatient clinics in a cancer referring Hospital. **Methodology:** This is a retrospective, analytical cohort study. The study was carried out in a specialized cancer hospital located in the city of Goiânia, GO. Data collection was performed at the Gynecology and Breast Service (SGM), using the data available in the medical records of women who were seen for the first time during the period from August 2018 to July 2019. Patients who met the eligibility criteria were classified into two groups (i.e., navigated and un-navigated). The data were analyzed using the SPSS version 23 statistical package, adopting a significance level of 5% ($p<0.05$), and the nonparametric test (Mann–Whitney U-test). **Results:** In total, 59 patients were included in the study. The patients aged 40–59 years (50.8%). There was a significant reduction in the mean delay in the group of patients guided by the navigating nurse: between the first consultation until the procedure (biopsy) for the diagnosis of breast cancer performed from 82.97 (SD 131.99) to 19.05 (SD 32.84) days, $p=0.023$; from the first consultation to the biopsy result from 105.41 (SD 137.94) to 30.95 (SD 36.92) days, $p=0.002$; and from the procedure to the biopsy result from 22.43 (SD 17.42) to 11.91 (SD 10.09) days, $p=0.002$. **Conclusion:** The performance of the navigator nurse provided an important reduction in different time intervals, allowing greater agility in the assistance and management of women with breast cancer, in a cancer referral hospital.

Keywords: Oncology; Nursing Navigation; Nurse Navigator; Navigation in Cancer Care; Patient Navigation.

https://doi.org/10.29289/259453942021V31S2029

EFFECTS OF RESISTANCE TRAINING ON MUSCLE PERFORMANCE AND FUNCTIONAL CAPACITY IN BREAST CANCER SURVIVORS

Weder A. Silva[1], Rafael Alves[1], Vitor Marques[1], Naiany Pereira[1], Ellen Gomes[1], Carlos Vieira[1]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.

Purpose: The aim of this study was to analyze the effects of different resistance training (RT) volumes on muscle strength and functional capacity in breast cancer survivors (BCS) undergoing hormone therapy (tamoxifen® oranastrozol). **Methods:** A total of 13 untrained women breast cancer survivors were randomized to one of the following TR groups: high resistance training volume (HRTV: 6 women; 57.0±8.3 years old; height: 1.59±0.0 m; body mass 63.7±7.61 kg) or low resistance training volume (LRTV: 7 women; 55.1±7.4 years old; height: 1.58 ±0.0 m; body mass: 59.8±15.1 kg). Participants performed a full-body RT routine (e.g. leg press, bench press, lat pulldown, stiff, and sit-up) once a week for 8 weeks. All exercise sets were performed until momentary muscle failure within a range of predefined repetitions in both groups HRTV (12–15 repetitions) and LRTV (6–8 repetitions), in a total of three sets for each exercise. Upper and lower limb strength was evaluated by the 10-repetition maximum test using the bench press and leg press, respectively. Functional capacity was assessed by the Timed Up and GO test. **Results:** Both groups showed changes in performance variables (bench press — $F=36.35$, $p<0.001$ and leg press — $F=87.42$, $p<0.001$), and in functional capacity ($F=13.84$, $p=0.003$), regardless of protocol used (HRTV and LRTV), with no differences between groups. **Conclusion:** Both protocols used in the present study (HRTV and LRTV) when prescribed in a supervised manner and in minimum weekly doses can contribute to the increase in strength of upper and lower limbs in a similar way and, consequently, can provide improvements in the functional capacity of BCS under hormone therapy treatment.

Keywords: Exercise; Hormone Therapy; Resistance Training.

https://doi.org/10.29289/259453942021V31S2030

HEREDITARY BREAST AND OVARIAN CANCER PATIENTS HAVE A FAMILY HISTORY OF CANCER OUTSIDE THE SPECTRUM OF THE SYNDROME, MIMICKING LYNCH AND LI–FRAUMENI SYNDROMES

Elisângela de Paula Silveira Lacerda[1], Rebeca Mota Goveia[1], Paula Francinete Faustino Silva[1], Thais Bonfim Teixeira[2], Ruffo de Freitas-Junior[2]

[1]Laboratório de Genética Molecular e Citogenética, Instituto de ciências Biológicas I, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Centro Avançado de Diagnóstico da Mama, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Patients with pathogenic variants (PV) in the BRCA1 and BRCA2 genes have hereditary breast and ovarian cancer syndrome (HBOC). Some patients with HBOC have a family history (FH) of different types of cancer not related to the syndrome. The objective of this study was to observe the FH profile of cancer in patients with HBOC syndrome. A total of 123 patients treated at the Advanced Breast Diagnostic Center (CORA) with clinical criteria suggestive of HBOC syndrome were selected according to the National Comprehensive Cancer Network (NCCN). The collection of 4 ml of blood was performed, which was subjected to DNA extraction and PV analysis in the BRCA1 and BRCA2 genes by next generation sequencing. The data were analyzed using the Sophia DDM and Ion Reporter software. The variants were considered to be pathogenic according to the ACMG criteria. It was found that among 123 patients analyzed, 19 had HBOC syndrome, of whom 5 were related. Thus, we had 16 families with HBOC syndrome. Among the 16 families, 14 (87.5%) had FH from cancers related to HBOC syndrome, 9 (56.25%) had FH from cancers not related to HBOC syndrome, and 1 (16.25%) did not have FH cancer. A total of 8 (50%) of families with HBOC also met the NCCN criteria for other hereditary cancer syndromes, 3 (18.75%) for Li–Fraumeni syndrome (LFS) and HBOC, 3 (18.75%) for Lynch syndrome (LS) and HBOC, and 2 (12.5%) for HBOC, LFS, and LS. The most common cancers observed outside the common spectrum of HBOC syndrome in families were stomach cancer (25%), intestine (18.75%), liver (18.75%), and skin (18.75%). These data suggest the importance of a complete assessment of FH in patients with HBOC syndrome to better understand its relationship with the predisposition to different types of cancer.

Keywords: HBOC; Hereditary Breast Cancer; Li–Fraumeni Syndrome; Lynch Syndrome; NGS.

https://doi.org/10.29289/259453942021V31S2031

RISK FACTORS FOR PERIPHERAL NEUROPATHY INDUCED BY CHEMOTHERAPY IN WOMEN WITH BREAST CANCER AND THEIR CORRELATION WITH QUALITY OF LIFE: A SYSTEMATIC REVIEW

Victor Domingos Lisita Rosa[1], Diego Vinícius Gonçalves Santana[1], Amanda Laíza dos Reis Mota[1], Lanuscia Morais de Santana[1], Fernando Santos de Azeredo[1], Rosemar Macedo Sousa Rahal[1], Maria Cecilia Monteiro Dela Vega[1], Ruffo de Freitas-Junior[1]

[1]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: Chemotherapeutic-induced peripheral neuropathy is one of the most common side effects of breast cancer treatment. Such a condition impacts on quality of life and has repercussions in treatment. The aim of this study was to correlate, by literature review, the risk factors and impact of peripheral neuropathy in women with breast cancer treated with taxanes. **Methodology:** This is a systematic review to assess the risk factors associated with peripheral neuropathy related to taxane. The literature review consisted of searching the MEDLINE database. The terms used were "neuropathy" or "chemotherapy" or "breast cancer" or "taxane," using filters in accordance with the inclusion criteria. Only randomized controlled clinical trials were included in the selection, with full text available in the database, in English, published in the last 5 years, with women above 19 years old with breast cancer. **Results:** Six trials were included in this literature review. In total, 3,026 patients were evaluated and the main outcomes were to assess the main risk factors related to the short- and long-term effects of chemotherapy-induced peripheral neuropathy. Bandos et al. showed 41.9% of peripheral neuropathy within 2 years after starting treatment. Quintela et al. showed that patients with telomeric shortening had more toxicity related to paclitaxel. Hagoiwara et al. showed that peripheral neuropathy influenced lower scores on the quality of life scale. Ciruelos et al. showed greater delay and dose reduction in patients with neuropathy. Lam et al. showed a rate of neuropathy grade ≥1 in 67% of women. **Conclusions:** The results include presenting symptoms of peripheral neuropathy before the start of chemotherapy, the cumulative dose of the taxane agent, female gender, advanced age, body surface area, and hyperglycemia predispose to taxane-induced peripheral neuropathy. The heterogeneity between individuals with regard to susceptibility to taxane-induced peripheral neuropathy can be attributed to individual genetic differences.

Keywords: Breast Cancer; Neuropathy; Chemotherapy.

https://doi.org/10.29289/259453942021V31S2032

EVALUATION OF BONE MINERAL DENSITY LOSS IN PATIENTS WITH BREAST CANCER USING AROMATASE INHIBITORS AS ADJUVANT ENDOCRINE THERAPY: 5-YEAR FOLLOW-UP

Marcelo Antonini[1], Gisela Rosa Franco Salerno[1], Natalia Daniela Kovalinski Vieira[1], Mariana Soares Cardoso[1], Matheus de Paula Solino[1], Odair Ferraro[1], Reginaldo Guedes Coelho Lopes[1]

[1]Mastology Department, Hospital do Servidor Público Estadual Francisco Morato de Oliveira – São Paulo (SP), Brazil.

Objective: To verify the impact of the use of aromatase inhibitors in postmenopausal women undergoing treatment for breast cancer, to evaluate the progression to osteopenia and osteoporosis, and to assess bone loss. **Methodology:** This is a cohort, prospective study with 76 women with positive hormone receptor (RH+) breast cancer before and after the beginning of the use of aromatase inhibitors (AI). After approval of the project by the ethics committee, the mineral density of the lumbar spine (L1–L4), the neck of the femur, and the total femur were analyzed by image examination and the average standard deviation for the young adult (T-score) was calculated in all patients before and after 6 months and 5 years of the use of AI by classifying them into three groups: osteoporosis, osteopenia, and normal. The data were analyzed initially by the KS test to determine the normality of the sample and later by ANOVA considering $p \leq 0.05$. **Results:** Before the use of AI, 38 (54%) patients had a normal exam, and 32 (45%) had osteopenia and no osteoporosis. After 6 months of treatment, 34 (49%) had normal examination, 30 (43%) had osteopenia, and 6 (8%) had osteoporosis; after 5 years, 26 (37%) had normal examination, 38 (55%) had osteopenia, and 6 (8%) had osteoporosis; no patient with normal bone density developed osteoporosis. There was a significant loss of bone mass in the femur of -7.88 after 5 years (p=0.001), in the femoral neck of -5.76 after 6 months (p=0.019) and -9.41 after 5 years (p=0.000). There was no significant change in the column (p=0.054). **Conclusion:** Bone loss in postmenopausal women after 6 months and 5 years may be related to the use of aromatase inhibitors.

Keywords: Breast Neoplasms; Aromatase Inhibitors; Bone Density.

https://doi.org/10.29289/259453942021V31S2033

IMPORTANCE AND IMPACT OF ONLINE COURSES FOR TRAINING PRIMARY HEALTH CARE PROFESSIONALS IN THE SCREENING, IDENTIFICATION, AND MANAGEMENT OF MAMMALIAN PATHOLOGIES/BREAST CANCER

Alexandre Villela de Freitas[1], Lucas Stathiacos e Castella[2], Carolina Abreu de Rezende[2], Ana Jéssily Camargo Barbosa[3], Tânia Silva de Melo[4]

[1] Hospital Ministro Costa Cavalcanti – Foz do Iguaçu (PR), Brazil.
[2]Acadêmicos de Medicina, Centro Universitário das Américas – São Paulo (SP), Brazil.
[3]Coordenação da Educação Permanente, Atenção Básica da Secretaria de Saúde de Foz do Iguaçu – Foz do Iguaçu (PR), Brazil.
[4]Gerente do Programa de Saúde da Mulher, Secretaria de Saúde de Foz do Iguaçu – Foz do Iguaçu (PR), Brazil.

Introduction: Brazil is currently living in a scenario of epidemiological transition in health. Simultaneous occurrence of diseases is common to those of developed and underdeveloped countries, thus, facing a major challenge in planning and managing efficient public health policies that cover ongoing transitions. The increase in life expectancy leads to an increase in the incidence of chronic-degenerative diseases such as cancer. The use of the Internet for lectures, courses, and questionnaires, due to agility, low cost, wide reach, and excellent use of responses has been demonstrated as an excellent tool for research and teaching. **Objective:** The aim of this study was to assess the importance and impact of conducting online training courses for primary health care professionals in the screening, identification, and management of breast diseases/breast cancer. **Methodology:** This is all cross-sectional and descriptive, carried out through the selection of 80 physicians and 100 nurses from primary health care in the municipality of Foz do Iguaçu by virtual communication and link to attend the course with mastological content elaborated from the Mastology Treaty of the Brazilian Mastology Society. Online lecture was held by shared platform with later discussion and clarification, application of a virtual questionnaire on the perception of the importance of the lecture content in their daily activities, and assimilation of the content. The value of the answers to the questionnaire was determined according to the profession and time of graduation. **Results:** We observed a higher access among nursing professionals when compared with physicians, 46%×28%. The group of physicians, mean age of 39.7 years, ranging from 28 to 56 years, equally distributed between 3 and 5 years, 5 and 10 years, and more than 10 years were formed. Regarding nursing, the groups with mean age of 36.9 years, ranging from 23 to 57 years, predominantly professionals with more than 10 years were formed (60.9%). All participants found this study useful or very useful for their professional activities. We observed a performance higher than 75% in correct answers to the questions in 61% and 56% of medical professionals and nurses, respectively, and close to 80% with performance higher than 50% in both groups. Among themselves related to the lowest rate of correct answers were the exclusion of self-examination as a measure of prevention and the higher rate are the indications of breast ultrasound complementary to mammography. **Conclusion:** Online courses for primary care professionals can be considered a useful tool in the training process, with low cost, good results, and great acceptance.

Keywords: Breast Cancer; Training; Tracking; Primary Health Care; Online.

https://doi.org/10.29289/259453942021V31S2034

AN IN SÍLICO ANALYSIS DETECTED MEMBERS OF THE PLECKSTRIN HOMOLOGY-LIKE DOMAIN FAMILY B AS POTENTIAL PROGNOSTIC BIOMARKERS IN PATIENTS WITH BREAST CANCER

Renan Gomes do Nascimento[1,2,3]

[1]Faculty of Medicine, Universidade de São Paulo (FMUSP), São Paulo, São Paulo, Brazil;
[2]Eight of December Hospital Complex – Guarulhos (SP), Brazil.
[3]Faculdade Anhanguera – Guarulhos (SP), Brazil.

Objectives: Despite advances in the molecular classification of breast cancer, our understanding of the pathophysiology of the disease is still limited mainly due to the considerable intratumoral heterogeneity. Thus, hundreds of other candidates for biomarkers are being investigated and studied for possible implications for diagnosis, prognosis, and personalized therapy. In this context, members of the Pleckstrin homology-like domain family B (PHLDB), which is composed of three genes located on different chromosomes: PHLDB1 (11q23.3), PHLDB2 (3q13.2), and PHLDB3 (19q13.3), are under investigation by different research groups as potential biomarkers in different types of cancer. It has been reported that the altered expression of these genes is involved in the tumorigenic process. In this study, we sought to understand the prognostic and predictive value of genes from the PHLDB family as potential biomarkers in breast oncology. **Conclusions:** Our findings provide new insights into the potential role of PHLDB family members as clinical predictors in breast cancer. Unlike what has already been described in the literature, it appears that members of the PHLDB family are potential tumor suppressor genes in breast cancer. Further clinical and experimental studies are needed to better understand the relationship between the expression of the members of the PHLDB family and the tumorigenic process of the breast and its prognostic and predictive values in breast cancer.

Keywords: Biomarkers; Breast Cancer; PHLDB.

https://doi.org/10.29289/259453942021V31S2035

PUBLICATION RATE OF SCIENTIFIC PAPERS PRESENTED AT THE LARGEST EVENT ON BREAST CANCER RESEARCH IN LATIN AMERICA

Leonardo R. Soares[1,2,3], Sergio Nascimento[1,2,3], Rosemar M. S. Rahal[1,2], Ruffo Freitas-Junior[1,2], Herik J. de S. Pimentel[3], Tágara O. Kamimura[3]

[1]School of Medicine, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Advanced Center for Breast Diagnosis, Teaching Hospital, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[3]School of Medicine, Centro Universitário Alfredo Nasser – Goiânia (GO), Brazil.

Objective: The present study aimed to determine the publication rate of papers presented at the Brazilian Breast Cancer Symposium (BBCS) and trends associated with publication over that time frame. **Methods:** This was a retrospective, observational study evaluating scientific papers presented at the BBCS between 2012 and 2017. All the abstracts presented at the event within this time frame were recorded. Next, a search for papers was made using online databases (BIREME/LILACS and MEDLINE/PubMed) and in the curricula of the authors on the Lattes platform. The data collected were analyzed using the SPSS statistical software program. Significance level was defined as $p<0.05$ for the entire statistical analysis. **Results:** Overall, 543 abstracts of papers presented at the BBCS between 2012 and 2017 were included. Of these, 112 (20.6%) had been published in an indexed journal, mostly in English (67.0%), in journals with an impact factor of 2.0–3.0 (42.1%), and ≥1 year after presentation at the event (75.9%). The factors associated with publication were: study conducted in a public institution ($p=0.01$), oral or commented poster presentation ($p>0.001$), and study concerning rehabilitation following breast cancer ($p=0.04$). The publication rate of papers varied to a minimum extent over the period ($p=0.07$). Conversely, the impact factor of the publications increased significantly between 2012 and 2017 ($p=0.04$). **Conclusions:** The publication rate of papers presented at the BBCS is low and remains consistent over the study period despite academic incentives and substantial awards. Studies conducted in public educational institutions, presented in the form of an oral presentation and addressing rehabilitation after breast cancer, were associated with the highest publication rate.

Keywords: Breast Neoplasms; Bibliometrics; Research Report; Journal Article.

https://doi.org/10.29289/259453942021V31S2036

PROGNOSTIC SIGNIFICANCE OF PD-L1 EXPRESSION IN BREAST CANCER

Magno Belém Cirqueira[1,2], Carolina Rodrigues Mendonça[1], Leonardo Ribeiro Soares[3], Maria Auxiliadora de Paula Carneiro Cysneiros[1,2], Régis Resende Paulinelli[3], Marise Amaral Rebouças Moreira[1,2], Ruffo de Freitas-Junior[1,3]

[1]Health Sciences Program, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Department of Pathological Anatomy, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[3]Mastology Program, Department of Obstetrics and Gynecology, University Hospital, Universidade Federal de Goiás – Goiânia (GO), Brazil.

The institution where the work was done: Hospital das Clínicas of the Universidade Federal de Goiás (UFG).

Objective: To investigate the immunohistochemical expression of programmed cell death ligand 1 (PD-L1) in female invasive mammary carcinoma and to analyze the association of PD-L1 expression with clinicopathological characteristics, overall survival, and disease-free survival. **Methodology:** The expression of PD-L1 and its association with the main clinicopathological parameters have been evaluated in 232 cases. The Cox regression model was used to assess the possible association of PD-L1 expression with overall survival and disease-free survival. **Results:** A total of 58 cases (28.7%) were positive for PD-L1 expression. There is an association between PD-L1 expression with tumor size, negative hormone receptors, and triple-negative molecular subtype. Negative estrogen receptor and nodal status (≥10 positive lymph nodes) were associated with a reduction in overall survival, and the latter was associated with a lower disease-free survival. Luminal A tumor phenotype demonstrated a greater overall survival (p=0.042). Despite the significant association with unfavorable clinical and pathological characteristics in univariate and multivariate analyses, no significant correlation was observed between the expression of PD-L1 and overall or disease-free survival. **Conclusions:** Our data indicate that PD-L1 expression was associated with unfavorable clinical-pathological variables, such as greater tumor size, negative hormone receptors, and a greater number of metastatic nodes. No prognostic value was observed for the expression of PD-L1 in relation to overall survival or disease-free survival.

Keywords: Breast Cancer; PD-L1; Prognostic; Immunohistochemistry.

https://doi.org/10.29289/259453942021V31S2037

THE CHALLENGE OF SURVIVAL OF PATIENTS WITH METASTATIC DE NOVO BREAST CANCER

Fernanda Perez Magnani Leite[1], Gisele Aparecida Fernandes[1], Allan Alves Fernandes[1], Maria Paula Curado[1], Solanges Moraes Sanches[1], Fabiana Baroni Alves Makdissi[1]

[1]AC Camargo Cancer Center – São Paulo (SP), Brazil.

Introduction: Breast cancer is the most common cancer in women worldwide, whose treatment is increasingly effective with survival above 90% in initial tumors, while it ranges from 20% to 40.8% in metastatic tumors. However, metastatic breast cancer persists and the survival of these women and treatments remain a challenge for oncology. **Objective:** To analyze the prognostic factors associated with the survival of patients with metastatic de novo breast cancer. **Material and Methods:** This is a retrospective cohort of women with stage IV (metastatic) breast cancer, conducted from January 1, 2000 to 31 December 2012, treated at the AC Camargo Cancer Center. The overall 5-year survival (OS) by using the Kaplan–Meier product-limit estimator and the differences between the curves and Cox multiple regression by using log-Rank method were observed. **Results:** Out of 265 patients analyzed, 182 (68.7 %) were alive at the end of the follow-up. The 5-year survival rate was 29.9%. There was a significant difference in survival rates, according to the categorized age (≤50 years, 51–70 years, and ≥71 years; p<0.046), primary breast tumor surgery (mastectomy and quadrantectomy; p<0.001), exclusive hormone therapy or multimodal treatment (p<0.001), chemotherapy when used in conjunction with radiotherapy, hormone therapy, target therapy, or surgery (p<0.088), treatment initiation period 2000–2005 and 2006–2012 (p<0.004), education, where the greater the school degree, the greater the survival (p<0.001), and luminal tumors (p<0.003). In multiple regression, surgery (p=0.001), chemotherapy (p=0.038), hormone therapy (p<0.001), luminal tumors (p=0.03), having HER2 tumor and using target therapy (p=0.001) and have been treated in the period from 2006 to 2012 (p=0.043) remained as predictive factors for a better prognosis. **Conclusion:** Patients undergoing resection of the primary tumor had longer survival and better prognosis.

Keywords: Breast Cancer; Survival; Metastasis.

https://doi.org/10.29289/259453942021V31S2038

HIGH NEUTROPHIL-TO-LYMPHOCYTE RATIO IS PROGNOSTIC FACTOR IN EARLY-STAGE BREAST CANCER PATIENTS

Leonardo Fleury Orlandini[1], Franklin Fernandes Pimentel[1], Jurandyr Moreira de Andrade[1], Francisco José Cândido dos Reis[1], Leticia De Mattos-Arruda[2], Daniel Guimarães Tiezzi[1,3]

[1]Setor de Mastologia, Departamento de Ginecologia e Obstetrícia, Faculdade de Medicina de Ribeirão Preto, Universidade de São Paulo – Ribeirão Preto (SP), Brazil.
[2]Iriscaixa, IrsiCaixa, Hospital Universitari Trias i Pujol, Ctra. de Canyet – Badalona, Spain.
[3]Centro de Pesquisa Avançada em Medicina, União das Faculdades dos Grandes Lagos – São José do Rio Preto (SP), Brazil.

Objectives: We aimed to explore the association of a readily available biomarker of systemic inflammation, the neutrophil-to-lymphocyte ratio (NLR), with breast cancer survival. **Methodology:** We undertook a single-centered retrospective study of patients with stages I–III breast cancer from 1999 to 2013. Clinicopathological data were collected before receiving any type of treatment. Survival analysis was performed using Cox regression models and Kaplan–Meier curves. **Results:** The cutoff value for NLR was set at 4.0 (NLRhigh ≥ 4 and NLRlow < 4). Of 1,700 patients included in this study, 121 (7%) had NLRhigh. Median for NLRhigh was 5.0 (4.0–34) and 1.9 (0.18–3.99) for NLRlow. Patients with NLRhigh were associated with more stage III at diagnosis (55% vs. 36%, p<0.01). Kaplan–Meier curves with log-rank tests at 10 years revealed a significant shorter disease-free survival (DFS) (p=0.02) and worse overall survival (OS) (p<0.001) for women with NLRhigh compared to those with NLRlow. Multivariate analysis revealed that NLR greater than 4 was independently correlated with shorter OS (HR 2.09, 95%CI 1.02–4.2, p=0.04). Furthermore, a subgroup of obese women with NLRhigh (classified as body mass index ≥30 kg/m^2) had the shortest DFS and the worst OS in the cohort (p<0.001). **Conclusion:** Pretreatment NLR greater than 4 was correlated with worse prognosis in breast cancer. Interestingly, a subgroup of obese patients with NLRhigh had the shortest survival, showing the state of chronic inflammation observed in obese women may influence immune system and the prognosis in breast cancer. Prospective studies are needed to define the best cutoff values and introduce this inflammatory biomarker in clinical use.

Keywords: Breast Cancer; Neutrophil-to-Lymphocyte Ratio; Inflammatory Blood Markers; Prognosis; Survival.

https://doi.org/10.29289/259453942021V31S2039

PALB2 MUTATION IN A 31-YEAR-OLD WOMAN: A CASE REPORT

Júlia R. S. do Ó[1], Joaquim F. Fernandes[1], Rafael C. E. Segato[1], Frank L. B. Rodrigues[1], Ana Cláudia G. Lima[1], Nilceana M. A. Freitas[1], Deidimar C. B. Abreu[1], Leandro G. Oliveira[1]

[1]Instituto Goiano de Oncologia e Hematologia – Goiânia (GO), Brazil.

Introduction: Oncogenetics advances allow to identifying the relationship between many genes and breast cancer (BC). The PALB2 (partner and localizer of BRCA2) gene is intimately involved in DNA damage response, and although very rare, heterozygous mutations are highly penetrant for BC. There are not enough studies to define the ideal follow-up and management of the patients with BC. **Case Report**: A 31-year-old female, G0P0A0, presents complaining of a lump in her right breast with no family history of cancer. A breast ultrasound was performed and revealed BI-RADS3. Core biopsy revealed a grade 3 ductal infiltrate carcinoma, with micropapillary features. Immunohistochemistry testing detected estrogen receptor (100%), progesterone receptor (3%), negative HER2 (–), and Ki67 (proliferation marker) (15%). The patient presented with a breast mass (8 cm × 8 cm), nipple inversion, and clinically was N1. Magnetic resonance imaging of the breast showed right axillary lymph node enlargement of 1.1´1.6 cm, and retroareolar and lateral quadrants of the right breast distortions. Because of diffuse skin thickening and nipple retraction, the disease was classified as cT4N1. She received neoadjuvant chemotherapy (weekly paclitaxel followed by dose-dense doxorubicin and cyclophosphamide) with concomitant ovarian suppression. Genetic testing for ovarian cancer and BC found the pathogenic variant c.2164_2168del, p. (Met723Valfs*21), in heterozygosity in the PALB2 gene and interpreted based on the clinical picture and the classification of variants of the American College of Medical Genetics. A right mastectomy with pathologic complete response in the breast and a micrometastasis node 1.5 mm/10 (ypT0N1mic) was conducted. Prophylactic left adenomastectomy was negative for malignancy. In the adjuvant setting, radiotherapy and endocrine therapy with ovarian suppression and aromatase inhibitor for 5 years were scheduled. **Conclusion**: The critical role of PALB2 in DNA repair increases the risk for BC and contralateral BCs. There is no evidence of adverse outcomes or toxicity with the use of radiotherapy in PALB2 carriers. Locoregional management and prophylactic decisions should be made on the basis of conventional clinicopathologic factors and international guidelines recommendations.

Keywords: PALB2; Breast Cancer; Oncogenetics; Gene Mutation.

https://doi.org/10.29289/259453942021V31S2040

THIRD AND FOURTH IPSILATERAL AND CONTRALATERAL PRIMARY BREAST CANCER IN A COHORT OF WOMEN TREATED FROM 2000 TO 2015 AT AC CAMARGO CANCER CENTER

Ariane Silva da Rocha[1], Maria Paula Curado[1], Gisele Aparecida Fernandes[1]

[1]Hospital AC Camargo Cancer Center – São Paulo (SP), Brazil.

This study aims to describe the clinical and pathological characteristics in women with breast cancer with three or four ipsilateral and contralateral malignant tumors. The second primary malignant neoplasm of the breast is a condition in which the frequency of occurrence is around 50%, mainly in young women. The occurrence of the third and fourth neoplasms is rare, between 0.73% and 11.7%. This is a retrospective cohort study of women with breast cancer from 2000 to 2015. We identified 375 women with second primary breast tumor, of which 6 (1.6%) had three and four new primary breast cancer. Of the six cases with three and four neoplasms, three cases occurred in the QIE (lower left quadrant), overlapping lesion in two cases, and two cases in the QSE (upper left quadrant). Zero clinical and pathological staging was observed in two cases, I in two cases, IIA in two cases, and IA in one case, invasive lobular carcinoma in four cases, and invasive ductal carcinoma in three cases. The molecular subtype luminal occurred in four cases, HER2 overexpressed in three cases, estrogen receptor and HER2 were negative in three cases, and progesterone positive in three cases. The time of diagnosis between the first, third, and fourth tumor ranges from 2 to 72 months. Therefore, more studies are needed on the third and fourth malignant breast tumors as it is a rare entity in patients whose genetic and molecular characteristics are poorly known.

Keywords: Breast Cancer; Tumor Biomarkers; Breast Neoplasms.

https://doi.org/10.29289/259453942021V31S2041

SOCIODEMOGRAPHIC AND LIFESTYLE ASPECTS VERSUS ACCESS TO TREATMENT FOR PATIENTS WITH BREAST CANCER AT A CANCER CENTER IN SÃO PAULO

José Euderaldo Costa Gomes Filho[1], Ariane Silva da Rocha[1], Gisele Aparecida Fernandes[1], Rossana Verónica Mendoza López[1], Maria Paula Curado[1]

[1]AC Camargo Cancer Center – São Paulo (SP), Brazil.

Sociodemographic and lifestyle aspects versus access to breast cancer treatment — Single Health System (SHS) and Supplementary Health — were evaluated in a prospective cohort of patients with breast cancer. This is a cross-sectional study with 705 patients. As compared with sociodemographic characteristics, 56.5% (n=398) of the patients were seen through Supplementary Health, and for both SHS and Supplementary Health patients, there is a higher frequency of women aged above 50 years, with 62.2% (n=191) and 51% (n=203) (p=0.002); married, 48.2% (n=148) and 66.6% (n=265) (p<0.001); white, 69.4% (n=213) and 82.1% (n=325) (p<0.001); and for the level of education, 37.1% (n=114) of those with SHS had completed high school and 55.7% (n=221) (p<0.001) of those with Supplementary Health had completed college. The first mammogram occurred between the ages of 18 and 40 years, 72.5% (n=206) of the SHS participants and 88.6% (n=342) (p<0.001) for Supplementary Health; own housing for 90.6% (n=278) and 89.4% (n=354) (p<0.001); denied tobacco use, 65.5% (n=201) and 74.7% (n=296) (p=0.005); and alcohol consumption, 87.6% (n=269) and 77.2% (n=305) (p<0.001). However, there was no difference regarding previous diagnosis of breast cancer in 55.3% (n=114) and 64% (n=178) (p<0.001) and the type of care; eutrophic body mass index was 38.4% (n=118) and 42.1% (n=167) (p=0.079), respectively. Access to SHS and supplementary health care, age above 50 years, married, white, level of education, age at first mammogram, home ownership, smoking habits, and consumption of alcoholic beverages were significantly different; BMI was not different in the two groups. Therefore, the lifestyle of SHS and Supplementary Health patients was statistically different in this cohort of patients.

Keywords: Breast Cancer; Lifestyle; Public Health.

https://doi.org/10.29289/259453942021V31S2042

CLINICAL AND PATHOLOGICAL CHARACTERISTICS AND MOLECULAR SUBTYPES IN A PROSPECTIVE COHORT OF PATIENTS WITH BREAST CANCER ACCORDING TO ACCESS TO TREATMENT: SUPPLEMENTARY HEALTH CARE VERSUS UNIFIED HEALTH SYSTEM

José Euderaldo Costa Gomes Filho[1], Ariane Silva da Rocha[1], Gisele Aparecida Fernandes[1], Rossana Verónica Mendoza López[1], Maria Paula Curado[1]

[1]AC Camargo Cancer Center – São Paulo (SP), Brazil.

The aim of this study was to describe the clinical and pathological characteristics and molecular subtypes in a prospective cohort of patients with breast cancer based on access to treatment — Supplementary Health Care versus Unified Health System (UHS). This is a cross-sectional study aligned to a prospective cohort developed at Hospital AC Camargo Cancer Center with 705 female patients, aged between 18 and 93 years and diagnosed with breast cancer. They had access to treatment by Supplementary Health (56.5%, n=398). Tumor topography for both UHS and Supplementary Health group include higher right breast, 53.4% (n=164) and 50.8 (n=202) (p=0.226); sublocation in the upper outer quadrant, 40.4% (n=124) and 52.3% (n=208) (p<0.001); T1 clinical staging, 37.8% (n=116) and 42.2% (n=168) (p<0.001); N0, 50.5% (n=155) and 54.3% (n=216) (p=0.109); and M0, 95.1% (n=292) and 93.5% (n=372) (p=0.667), respectively. For both UHS and Supplementary Health, pathological classification T1, 44.6 (n=137) and 46% (n=183) (p<0.001); the presence of regional lymph nodes and distant metastasis showing no difference in N0, 59.6% (n=183) and 54.8% (n=218) (p=0.451); M0, 93.8% (n=288) and 95% (n=378) (p=0.306); invasive ductal carcinoma, 81.4% (n=250) and 84.9% (n=338) (p<0.001); histological grade 2, 42.7% (n=131) and 44.5 (n=177) (p<0.001); nuclear grade 3, 60.3% (n=185) and 59.5% (n=237) (p=0.421); HER2 negative, 73.2% (n=216) and 79% (n=313) (p<0.001); estrogen positive, 80.4% (n=246) and 76.9% (n=306) (p=0.228); progesterone positive, 80.4% (n=246) and 76.9% (n=306) (p=0.280); Ki-67 positive, 99.6% (n=278) and 100% (n=393) (p<0.001); and molecular classification defined as Luminal B, 56.8% (n=167) and 50% (n=328), respectively. Access to treatment by UHS or Supplementary Health demonstrated significant difference in tumor sublocation, clinical and pathological T staging, morphology, histological grade, HER2, and Ki76, whereas there was no difference for clinical and pathological N and M staging, nuclear grade, estrogen, progesterone, and molecular classification.

Keywords: Breast Cancer; Tumor Biomarkers; Molecular Biology.

https://doi.org/10.29289/259453942021V31S2043

PRE- AND POSTMENOPAUSAL BREAST CANCER IN COMPARISON OF CLINICAL AND PATHOLOGICAL FEATURES, HISTOLOGY, BIOMARKERS, AND MOLECULAR CLASSIFICATION

José Euderaldo Costa Gomes Filho[1], Ariane Silva da Rocha[1], Gisele Aparecida Fernandes[1], Rossana Verónica Mendoza López[1], Maria Paula Curado[1]

[1]AC Camargo Cancer Center – São Paulo (SP), Brazil.

The aim of this study was to analyze the clinical and pathological evolution, morphology, hormonal biomarkers (estrogen, progesterone, HER2, and Ki-67), and molecular classification in pre- and postmenopausal patients (age ≤50 years and >50 years). This is a cross-sectional study of 705 female patients with breast cancer. A total of 55.9% (n=394) of patients were above 50 years, whereas 44.1% (n=311) were aged 50 years or below. The laterality of the tumor was similar in both age groups on the right side, 50.2% (n=156) for premenopausal and 53.3 (n=210) for postmenopausal (p=0.226), as was the anatomical sublocation in the external upper quadrant, 44.9% (n=140) for premenopausal and 48.7% (n=192) for postmenopausal (p=0.063). As for T clinical staging, 37% (n=115) were classified as T2 in premenopausal while 47% (n=185) as T1 in postmenopausal (p<0.001); N0, 46.3% (n=144) and 57.6% (n=227) (p=0.043); M0, 92.3% (n=287) and 95.7% (n=377) (p=0.072); and pathological grade T1, 41.8 (n=130) and 48.2% (n=190) (p=0.056); N0, 52.4% (n=163) and 60.4% (n=238) (p=0.121); M0 94.9% (n=374) and 93.9% (n=292) (p=0.332); invasive ductal carcinoma, 86.5% (n=269) and 81% (n=319) (p=0.134); histological grade 2, 42.1% (n=131) and 44.9 (n=177) (p<0.001); nuclear grade 3, 67.2% (n=209) and 54.1% (n=213) (p=0.002); HER2 negative, 75.7% (n=234) and 77.2% (n=295) (p=0.062); estrogen positive, 78.4% (n=243) and 78.4% (n=309) (p=0.731); progesterone positive, 70.6% (n=219) and 68.8% (n=271) (p=0.503); Ki-67 positive, 99.7% (n=303) and 100% (n=368) (p=0.005); and molecular classification defined as luminal B, 57.8% (n=178) and 49% (n=187) (p=0.009), respectively. We observed that in pre- and postmenopausal women with breast cancer, there was no difference in characteristics, anatomical location, and T staging. However, there was a significant difference in histological grade, nuclear grade, and the molecular subtype and staging.

Keywords: Breast Cancer; Tumor Biomarkers; Molecular Biology.

https://doi.org/10.29289/259453942021V31S2044

THE RECORD LINKAGE TECHNIQUE AS ALTERNATIVE FOR CAPTURING OF INFORMATION IN CANCER REGISTRY: APPLICATION IN A DATABASE OF BREAST CANCER CASES

Stela Verzinhasse Peres[1], Paola Engelmann Arantes[2], Alexandre Muxfeldt Ab'Saber[3], Daniel Luiz Gimenes[4], Maria Paula Curado[2], René Aloisio da Costa Vieira[5,6]

[1]Fundação Oncocentro de São Paulo – São Paulo (SP), Brazil.
[2]AC Camargo Cancer Center – São Paulo (SP), Brazil.
[3]Fundação Oncocentro de São Paulo – São Paulo (SP), Brazil.
[4]Grupo Oncoclínicas – São Paulo (SP), Brazil.
[5]Hospital de Câncer de Muriaé – Muriaé (MG), Brazil.
[6]Fundação Pio XII Hosp de Câncer de Barretos – Barretos (SP), Brazil.

Background: Studies that analyze biomarkers as prognostic factors are scarce due to the high cost of the examination in low-income populations. **Objective:** The aim of this study was to describe the sociodemographic variables, clinical, treatment characteristics, and molecular subtype from women with breast cancer through probabilistic and deterministic record linkage between Hospitalar Cancer Registry and Immunohistochemistry Laboratory database at the Oncocenter Foundation of São Paulo (FOSP). **Methods:** To obtain a complete follow-up of the patients, a link was made between the two bases of FOSP. The deterministic linkage, using the examination number, was applied between the database composed of hormonal receptors and the Ki-67 antigen versus the database formed by the HER-2 receptor, stored in the immunohistochemistry laboratory's (FOSP) information system. The probabilistic linkage was performed on the program OpenReclink III, version 3.1.615. The variables used in the matching process were the patient's name and date of birth. As for blocking, the variables were soundex of the first name, soundex of last name. Confirmatory variables for acceptance of a true match were, when available, mother's name, home address, Public Health System (SUS) card, and/or another personal identification document. **Results:** As result, 1,654 patients were matched. The average age was 56.8 (SD=13.2), with a median age of 56, varying between 22 and 96 years. Of these, 48% completed middle school. As for clinical characteristics, most tumors were of the ductal type (71.9%); and 7.2% of patients were presented with distant metastasis at diagnosis. Among the biomarkers, there was 25.9% for ER–, 33.9% for PR–, 85.5% negative HER-2, and 68.3% Ki-67 (≥14%). Of the molecular subtypes, the Luminal B (Her2–) phenotype was more frequent among patients and 15.2% were triple negative. **Conclusion:** The linkage techniques contributed with the completeness of information, contributing in defining the vital status of the patient.

Keywords: Medical Record Linkage; Breast Neoplasms; Biomarkers.

https://doi.org/10.29289/259453942021V31S2045

GLOBAL SURVIVAL BASED ON CLINICAL, HISTOLOGICAL, AND BIOLOGICAL TUMOR CRITERIA IN A SECONDARY PUBLIC BRAZILIAN HOSPITAL

Júlia Milhomem Mosquéra[1], Amanda Ribeiro Alves[1], Gianna Carolina Pereira Cavalli[1], Larissa Feitosa de Albuquerque Lima Ramos[1], Flávio Lúcio Vasconcelos[2]

[1]Centro Universitário de Brasília – Brasília (DF), Brazil.
[2]Hospital Regional de Santa Maria – Brasília (DF), Brazil.

Objective: To analyze the overall survival of women with breast cancer based on clinical, histological, and biological tumor data in a secondary hospital in Federal District/Brazil. **Method:** Retrospective cohort study of women diagnosed with breast cancer from 2012 to 2019, followed up until December 2020, having its data analyzed in 2021. The population studied was from the area covered of the Regional Hospital of Santa Maria (Brasília/Distrito Federal/Brazil), a secondary service, linked to the Brazilian Unified Health System. The information analyzed in this study were state at the last visit (life or dead), the presence of clinically compromised axillary lymph nodes, staging by the TNM system, location of distant metastasis (bone or visceral), histological type and grade, and tumor biological profile. Subsequently, survivals were analyzed in relation to variables previously described. The data were analyzed with the aid of the statistical package SPSS (version 26.0), with $p<0.05$ is considered significant. **Results:** This study included a total of 203 patients, of which 158 (77.8%) survived and 45 (22.2%) died. Regarding deaths, 67.5% had a clinically compromised armpit ($p<0.001$) and 50% were in stage IV ($p<0.001$). In relation to overall survival, worse survival was observed for patients with clinically suspect lymph nodes ($p<0.001$), for tumors measuring between 2 and 5 cm and tumors larger than 5 cm in relation to tumors smaller than 2 cm ($p<0.001$), and for stages III and IV compared to stages I and II ($p<0.001$). There was no worsening of survival in relation to the histological type ($p=0.39$), histological grade ($p=0.65$), location of metastases (bone and visceral) ($p=0.76$), or biological profile ($p=0.40$). **Conclusion:** There were more deaths in relation to the clinically compromised axillary state and in stages III and IV. Larger tumors, more advanced staging, and a clinically compromised armpit worsened overall survival.

Keywords: Breast Cancer; Survival, Medical Oncology.

https://doi.org/10.29289/259453942021V31S2046

PERFORMED TREATMENT IN WOMEN WITH BREAST CANCER IN A SECONDARY PUBLIC HOSPITAL IN FEDERAL DISTRICT

Amanda Ribeiro Alves[1], Julia Milhomem Mosquéra[1], Gianna Carolina Pereira Cavalli[1], Larissa Feitosa de Albuquerque Lima Ramos[1], Flavio Lucio Vasconcelos[2]

[1]Centro Universitário de Brasília – Brasília (DF), Brazil.
[2]Mastologia do Hospital Regional de Santa Maria – Brasília (DF), Brazil.

Objective: To evaluate treatments performed in women with malignant breast cancer treated at the mastology service of a public secondary-level hospital. **Method**: A cross-sectional study with women diagnosed with breast cancer from 2012 to 2019. Treatments evaluated were surgery, chemotherapy, radiotherapy, and hormone therapy. Data were analyzed using the SPSS software (vision 26.0), considering $p<0.05$ as significant. **Results**: We evaluated the data of 227 patients with tumors in stages I (10.1%), II (35.2%), III (26.9%), and IV (12.78%), with 55.5% of them between the ages of 40 and 60 years. Mastectomy was performed in 61.7% of the patients, with 84.6% not undergoing immediate reconstruction, while 12.8% undergoing late reconstruction. Techniques used were large dorsal muscle flap with prosthesis (29.4%), rectus abdominis muscle (26.5%), and only prosthesis (23.5%). Patients aged <40 years required mastectomy in detriment of the conservative approach ($p=0.04$). Forty-five percent of women underwent immediate axillary lymphadenectomy and 11.6% after positive sentinel lymph node, with 76.1% having one to three affected lymph nodes. Chemotherapy was performed in 67.0% of the patients, the majority being neoadjuvant (50.3%). Patients aged <60 years were more frequently submitted to chemotherapy ($p<0.001$). Radiotherapy was performed in 56.8% of the patients, with those aged <40 years found significant ($p=0.005$). Hormone therapy was performed in 59.0% of the patients. The mean time between diagnosis and the start of chemotherapy was 134.8±126.5 days, and the average gap between treatments (chemotherapy/radiotherapy) was 188.2±204.6 days. **Conclusion**: Mastectomy was the most performed treatment, with a small part of the patients obtaining breast reconstruction. Most patients needed some type of complementary therapy, especially the younger ones. The average time between diagnosis and treatment was longer than that recommended by current legislation. Awareness measures and better access to women with breast complaints should be emphasized, especially in younger women.

Keywords: Breast Neoplasms; Therapeutics; Medical Oncology.

https://doi.org/10.29289/259453942021V31S2047

EPIDEMIOLOGICAL PROFILE OF BREAST CANCER MORTALITY IN GOIÁS FROM 2010 TO 2019

Amanda Munik de Freitas Barbosa[1], Alexia Jesus Araujo[2], Fabrícia de Azevedo Alves[3], Sarah Carvalho Talone[3], Vanessa Leal Vitória[3], Valdirene Fernandes Moreira[3], Andrea Alves Ribeiro[3]

[1]Faculdades Fan Padrão – Goiânia (GO), Brazil.
[2]Universidade Federal de Jataí – Jataí (GO), Brazil.
[3]Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.

Objective: To describe the mortality profile for breast cancer in Goiás from 2010 to 2019. **Methods:** This is a quantitative cross-sectional descriptive study using data from the Mortality Information System. The profile was evaluated for sex, age, and year of death. **Results:** In all, 4,267 deaths occurred in the state, mainly in the municipalities of Goiânia (32.68%), Aparecida de Goiânia (7.92%), and Anapolis (6.79%). The female sex accounted for 98.85% of the deaths and the male for 1.15%. As for age, the lowest percentage is between the ages of 13 and 19, while the highest is of 50 and 59, with 26.29% of the relative frequency of deaths decays. **Conclusion:** Incentives for health promotion, prevention, surveillance, and increased coverage of mammograms in the state of Goiás can assist in the reduction of deaths from breast cancer in the state.

Keywords: Breast Neoplasms; Health Profile; Mortality; Risk Factors.

https://doi.org/10.29289/259453942021V31S2048

TRAM BREAST RETAIL RECONSTRUCTION: AN ANALYSIS IN THE LATE POSTOPERATIVE

Thainá Sobral de Andrade[1], Yasmin Alves da Cruz Figueiredo[2], Victor Araújo Felzemburgh[3], Pedro Paulo Oliveira Carneiro[4]

[1]Hospital Santo Antônio, Obras Sociais Irmã Dulce, Faculdade de Tecnologia e Ciência – Salvador (BA), Brazil.
[2]Faculdade de Tecnologia e Ciência – Salvador (BA), Brazil.
[3]Sociedade Brasileira de Cirurgia Plástica, Regional Bahia – Salvador (BA), Brazil.
[4]Universidade Federal da Bahia – Salvador (BA), Brazil.

In Brazil, breast cancer represents the second most incident cancer among women and is the major cause of death from malignant neoplasms in females. Therefore, the treatment of this pathology needs to be studied in its various aspects, one of which is aesthetic care in breast reconstruction. **Objectives:** To evaluate the late result of breast reconstruction by TRAM (transverse rectus abdominis muscle flap), in addition to comparing the assessment instruments in the post-operative period. Postoperative photographs of 13 patients who underwent breast reconstruction by TRAM at Hospital Santo Antônio in Salvador, BA, in the period 2012 and 2018 were analyzed. This is a cross-sectional observational study, with aesthetic evaluation performed using two instruments. **Results:** In general, patients have satisfactory results in the two assessment tools. Of the patients studied, 61.5% had results within the parameters established by Mallucci, whereas evaluating the domains of Garbay's criteria, the best mean result was related to the volume domain and the worst to the scar. **Conclusion:** The instruments proved to be appropriate for evaluating the patients in the study. The subjective analysis among the evaluators proved to be similar. The instrument used in morphometric analysis showed that the studied group of patients approached the parameter established as ideal.

Keywords: Breast; Mastectomy; Mammoplasty; Reconstructive Surgical Procedures; Plastic Surgery.

https://doi.org/10.29289/259453942021V31S2049

OCCULT PRIMARY BREAST CARCINOMA: A CASE REPORT

Mirella Laranjeira Nunes[1], Carlos Eduardo Caiado Anunciação[2], Vidianna Barbosa Sampaio[2], Rossano Robério Fernandes Araújo[2], Cinthya Roberta Santos de Jesus[2], Ana Leide Guerra dos Santos[2], Bruno Pacheco Pereira[2], João Esberard de Vasconcelos Beltrão Neto[2]

[1]Universidade de Pernambuco – Recife (PE), Brazil.
[2]Department of Mastology, Oswaldo Cruz University Hospital – Recife (PE), Brazil.

Introduction: Occult breast carcinoma (OBC) is the histologically proven axillary lymph node (LN) metastasis, consistent with primary breast cancer, with no identifiable primary site. It is most commonly found in women above 60 years. Owing to the absence of protocols, management is challenging. According to the *National Comprehensive Cancer* Network (NCCN), the therapeutic options are mastectomy plus lymphadenectomy with or without radiotherapy, or lymphadenectomy with breast irradiation with or without axillary irradiation. Mastectomy is often used, but advances in neoadjuvant chemotherapy have made the survival between mastectomy and conservative breast management same. The prognosis is controversial, with lymph node (LN) involvement being the main factor. **Case Report:** A 45-year-old female presents with suspicious palpable right axillary lesion at level 1 topography of 2.5 cm size on the physical examination. No breast mass was palpable. Mammography was BIRADS classification 1. Breast and axillar ultrasound done 2 months before showed benign findings on the left side and axillary LN of 2.3 cm and breast nodule of 1.1 cm × 0.9 cm on the right side. Core-needle biopsy showed fibroadenoma in the right-sided breast nodule and metastatic carcinoma in the axillary LN. Immunohistochemistry expression of the markers was consistent with breast origin and was progesterone and estrogen receptors positive and HER-2 negative. Magnetic resonance imaging (MRI) showed this atypical LN with 1.5 cm. Clinical staging is T0N1M0. Neoadjuvant chemotherapy was performed with Adriamycin, cyclophosphamide, and paclitaxel. There was tumor remission with another MRI and ultrasonography showing the node metastasis with 1 cm. Right radical mastectomy was performed. Anatomopathology showed cytoarchitectural changes due to chemotherapy, complete pathological response in the LN, and immunohistochemistry unchanged. In addition, tumorectomy were performed in the left-sided nodule, with anatomopathology showing ductal ectasia and histiocitary abscess. Radiotherapy at the supraclavicular area and tangents was performed, and tamoxifen was prescribed. The patient remained cancer free for 2 years after surgery.

Keywords: Occult Breast Cancer; Breast MRI; Breast Neoplasm.

https://doi.org/10.29289/259453942021V31S2050

ADVANCED BREAST METAPLASTIC CARCINOMA IN A YOUNG PATIENT: A CASE REPORT

Mirella Laranjeira Nunes[1], Carlos Eduardo Caiado Anunciação[2], Vidianna Barbosa Sampaio[2], Rossano Robério Fernandes Araújo[2], Cinthya Roberta Santos de Jesus[2], Ana Leide Guerra dos Santos[2], Bruno Pacheco Pereira[2], João Esberard de Vasconcelos Beltrão Neto[2]

[1]Universidade de Pernambuco – Recife (PE), Brazil.
[2]Department of Mastology, Oswaldo Cruz University Hospital – Recife (PE), Brazil.

Objective: The aim was to evaluate an atypical case due to the rare pathologic finding of metaplastic breast carcinoma in a young woman, with an aggressive pattern. **Case Report:** A 45-year-old female presented with suspicious palpable right axillary lesion at level 1 topography of 2.5 cm size on the physical examination. No breast mass was palpable. Mammography was BIRADS classification 1. Breast and axillar ultrasound done 2 months before showed benign findings on the left side and axillary lymph node (LN) of 2.3 cm and breast nodule of 1.1×0.9 cm on the right side. Core-needle biopsy showed fibroadenoma in the right-sided breast nodule and metastatic carcinoma in the axillary LN. Immunohistochemistry expression of the markers was consistent with breast origin and was progesterone and estrogen receptors positive and HER-2 negative. Magnetic resonance imaging (MRI) showed this atypical LN with 1.5 cm. Clinical staging is T0N1M0. Neoadjuvant chemotherapy was performed with Adriamycin, cyclophosphamide, and paclitaxel. There was tumor remission with another MRI and ultrasonography showed the node metastasis with 1 cm. Right radical mastectomy was performed. Anatomopathology showed cytoarchitectural changes due to chemotherapy, complete pathological response in the LN, and immunohistochemistry unchanged. In addition, tumorectomy were performed in the left-sided nodule, with anatomopathology showing ductal ectasia and histiocitary abscess. Radiotherapy at the supraclavicular area and tangents was performed and tamoxifen was prescribed. The patient remained cancer free for 2 years after surgery. **Conclusion:** Metaplastic carcinoma represents less than 1% of breast cancers. Histologically, it is invasive and has subtypes based on the proportion of squamous, mesenchymal, and heterologous elements, such as cartilage and bone. Most common in women in the fifth decade and rare in younger than 35 years old. Usually, it is triple negative and has hematogenous dissemination, with little LN involvement and more distant metastasis. There is currently no described standard treatment. Owing to aggressiveness and poor prognosis, chemotherapy and modified radical mastectomy are performed. It is often refractory to standard regimens, so chemotherapy is indicated through the extrapolation of current data to invasive ductal carcinoma. The metastasis rate is about 35% in 5 years. The main prognostic factor is the size of the tumor at the time of diagnosis, LN metastasis, and poorly differentiated tumors.

Keywords: Breast Neoplasms; Neoplasm Metastasis.

https://doi.org/10.29289/259453942021V31S2051

METASTATIC PURE MUCINOUS BREAST CARCINOMA: A CASE REPORT

Mirella Laranjeira Nunes[1], Maria Carolina da Trindade Henriques Assunção[2], Pryscila Correia de Queiroz e Silva[2], Rossano Robério Fernandes Araújo[2], Bruno Pacheco Pereira[2], Ana Leide Guerra dos Santos[2], Vidianna Barbosa Sampaio[2], João Esberard de Vasconcelos Beltrão Neto[2]

[1]Graduate Program in Health Sciences, Universidade de Pernambuco – Recife (PE), Brazil.
[2]Mastology Department, Oswaldo Cruz University Hospital– Recife (PE), Brazil.

Introduction: Pure mucinous breast carcinoma (PMBC) is rare, representing about 2% of breast cancers. Histologically, it is defined as having 90% or more of a mucinous component. It usually affects women between the ages of 55 and 60 years. Only 1% occurs in women below 35 years. It usually has positive hormone receptors (HRs); however, the positivity of HER-2 is rare. The management is not well established, being extrapolated from data on invasive ductal carcinoma. It usually presents a favorable prognosis, with rare lymph node (LN) involvement and metastasis rate of less than 15%. HR status and nodal involvement are important prognostic factors. **Case Report**: A 34-year-old female arrived at the clinic with a tumor occupying all quadrants of the left breast for 5 months, along with skin thickening and hyperemia, hardened and enlarged left axillary LN. Ultrasonography showed a lesion with indistinct limits occupying almost the entire mammary parenchyma measuring 11.1×12.8×5.5 cm, and the left LN enlarged in size, the largest measuring 3.1×1.7 cm. Bone scintigraphy and computed tomography (CT) showed suspicious metastatic lesion in the sternum, which could not be proven as metastasis due to the absence of structure to perform a biopsy. A clinical-prognostic staging IV, T4bN1Mx, was determined. Incisional biopsy diagnosed PMBC, histological grade 2. Immunohistochemistry results were HR positive, HER-2 positive (3+), and Ki67 70%. The patient was treated chemotherapy drugs such as Adriamycin, cyclophosphamide, paclitaxel, and trastuzumab. Subsequently, a modified radical mastectomy was performed. The anatomopathology of the surgical specimen showed a complete pathological response. A new CT showed partial remission of sternal metastasis. Adjunctive treatment with trastuzumab, tamoxifen, radiotherapy, and surgical castration were performed. We brought an atypical case due to the presentation of PMBC in young woman, with a more aggressive pattern, with positive HER-2, metastasis, and complete pathological response with chemotherapy.

Keywords: Breast Neoplasm; Mucinous Adenocarcinoma; Neoplasm Metastasis.

https://doi.org/10.29289/259453942021V31S2052

BREAST CARCINOMA WITH OSTEOCLAST-LIKE GIANT CELLS: A CASE REPORT

Leandro Gonçalves Oliveira[1], Ana Cláudia Gonçalves Lima[1], Sebastião Alves Pinto[2], Barbara Elisabeth Schroff[3], André Maroccolo de Sousa[4], Juarez Antônio de Sousa[5]

[1]Instituto Goiano de Oncologia e Hematologia – Goiânia (GO), Brazil.
[2]Department of Pathology, Hospital das Clínicas – Goiânia (GO), Brazil.
[3]Maternidade Municipal Aristina – Senador Canedo (GO), Brazil.
[4]Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.
[5]Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction: Breast carcinoma with osteoclastic giant cells (OGCs) is rare. According to the WHO classification, breast tumors are designated "carcinoma with osteoclast-like giant cells" and are categorized under invasive carcinoma of no special type. This distinct subtype of breast carcinoma was first described in the French medical literature by Leroux in 1931 and Duboucher et al. in 1933. We reported a case study of a woman with OGCs with an invasive ductal and papillary carcinoma. **Case Presentation:** A 69-year-old female presented with left-sided breast lump. Ultrasound study documented the well-circumscribed retroareolar hypoechoic mass, measuring 3.5 cm in greatest dimension. Computed tomography scan and bone scan showed no evidence of distant metastasis. The patient underwent left breast mastectomy and sentinel lymph node biopsy. The tissue was fixed in 10% buffered formalin and embedded in paraffin. Hematoxylin and eosin–stained sections revealed a tumor composed of papillary intracystic carcinoma with a prominent OGC component. The background stroma revealed hemorrhage and hemosiderin deposition. Left axillary sentinel lymph node was free of malignancy (pN0). Tumor cells stained negative for estrogen receptor, progesterone receptor, and HERneu-2. Ki-67 positive was approximately 30%. After surgery, this patient received taxane-based chemotherapy for four cycles and post-mastectomy radiotherapy. **Discussion**: Breast carcinoma with OGCs is characterized by the presence of OGCs admixed with malignant epithelial cells. They often showed hyperchromatic nuclei that are atypical with occasional small nucleoli and fine chromatin structure. Mitotic figures are typically rare. The mechanism for the formation of OGCs is still unknown and is at least partially attributed to tumor-induced angiogenesis and inflammatory cytokines. To date, the influence of OGCs on the prognosis of patients is still controversial. We described an old woman with a triple-negative breast carcinoma with OGCs. She remains free of recurrence, with an 18-month follow-up.

Keywords: Breast Carcinoma; Osteoclast-Like Giant Cells; Tumor Metastasis; Prognosis.

https://doi.org/10.29289/259453942021V31S2053

CLINICAL IMAGE QUALITY EVALUATION OF MAMMOGRAPHY FOR BREAST CANCER SCREENING

Flávia Vidal Cabero[1], Ruffo Freitas-Junior[2], Rosângela da Silveira Corrêa[3], Danielle Cristina Netto Rodrigues[1], Leonardo Ribeiro Soares[2], Paola Ferreira de Freitas[4]

[1]Brazilian Breast Cancer Research Network, Mastology Program, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Faculty of Medicine, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[3]National Nuclear Energy Commission/Center for Nuclear Sciences in the Midwest – Goiânia (GO), Brazil.
[4]Resident of the Mastology Program of the Women's Health Reference Center , Hospital Pérola Byington – São Paulo (SP), Brazil.

Objectives: To evaluate mammographic image quality in a real clinical practice scenario for breast cancer screening. **Materials and Methods:** Observational prospective study where images from digital mammograms from Diagnostic Service (DS) in the state of Goiás in 2019 were analyzed. A specific protocol was created based on evaluation criteria of the Brazilian College of Radiology, European Guidelines, and American College of Radiology. For each variable, score 1 was attributed to conformity and zero for nonconformity. Logistic regression model was utilized using the following independent variables: location (city vs. country), Public health system – Sistema Unico de Saude (SUS) (public vs. private), number of monthly examinations (≤300 vs. >300), device manufacturing year (≤2011 vs. >2011), and breast density (≤75% vs. >75% of the parenchyma). **Results:** Of the 163 fully functioning mammograms, 151 (92.6%) were eligible, providing 1,024 images. We evaluated 12,032 items, of which 4,096 were craniocaudal projections, 4,608 mediolateral oblique projections, and 3,328 equipment related. On the clinical image analysis as to the positioning of the patient, the higher conformity for symmetry parameters, in both projections (>90%), was observed. The conformity rate among the other parameters varied from 18.6% to 100%. In the multivariable analysis, it was observed that only the variables monthly examinations (OR 3.44; 95%CI 1.67–7.09; p=0.0008) and mammogram device manufacturing year (OR 2.46; 95%CI 1.02–5.95; p=0.04) were related to a higher conformity rate. After the percentage consolidation conformity rate per DS, as to the final clinical mammography quality, no DS presented desirable conformity (>90%), 20 DS obtained acceptable conformity (between 70% and 89%), and 10 DS presented conformity below 70%. **Conclusion:** Conformity rate of mammographic examination is extremely low and varies according to the multiple parameters analyzed. Mammographies performed at centers with less productivity (≤300/monthly) and with newer devices (>2,011) presented higher chances of conformity at the clinical imaging evaluation.

Keywords: Screening; Mammography; Clinical Quality.

https://doi.org/10.29289/259453942021V31S2054

SURVEY OF BREAST CANCER CASES: PATIENTS WHO OBTAINED A COMPLETE PATHOLOGICAL RESPONSE AFTER NEOADJUVANT CHEMOTHERAPY AT THE CANCER INSTITUTE DR. ARNALDO VIEIRA DE CARVALHO IN THE YEARS 2013 AND 2014

Fábio Francisco de Oliveira Rodrigues[1], Rebeca Belleza Ramacharaka Barros[1], Lethicia Borges Pinheiro[1], Carlos Elias Fristachi[1], Rodrigo Macedo de Carvalho[1], Ana Carolina Tretini Izar[1], Etienne de Albuquerque Bastos[1], Vinicius Miranda Borges[1]

[1]Instituto do Câncer Dr Arnaldo Vieira de Carvalho – São Paulo (SP), Brazil.

Neoadjuvant treatment in breast cancer has some advantages, in that the treatment of micrometastatic disease has increased because of the higher degree of performing conservative surgery and reducing tumor burden. The complete pathological response (CPR) is defined as the absence of invasive carcinoma in the anatomopathological study of breast tissue and axillary lymph nodes. The aim of this study is to analyze patients diagnosed with breast cancer between the years 2013 and 2014, taking into account the following variables: age, chemotherapy (type of medication and duration), CPR, and histological subtypes. Medical records were analyzed. Of 31 patients who underwent neoadjuvant chemotherapy, three obtained a CPR. Of these, two had hybrid HER2 histological subtype, one negative triple, and one Luminal A. **Method:** A study was conducted in which the eligible population was composed of women diagnosed with breast cancer (cid c50) whose treatment and follow-up was performed by the mastology team of the Dr. Arnaldo Cancer Institute. Patients who were diagnosed from 2013 to 2014 were selected. For the description of the cases, variables such as tumor subtype, age, Qt neo performance, and CPR were analyzed. Clinical and pathological characteristics were collected regarding diagnosis and type of treatment, laterality, tumor staging, and the number of compromised lymph nodes. Subsequently, the response to the end of the first treatment — Qt neo, a classification, was performed: no evidence of the disease, partial remission, disease in progression, death, or CPR. **Results:** We evaluated 163 patients diagnosed with breast cancer between 2013 and 2014 at the Dr. Arnaldo Cancer Institute and also included 31 patients who underwent Qt neo. It was observed that of these three had CPR, 68 were older than 60 years and the most common histological type was invasive ductal carcinoma.

Keywords: Breast Cancer; Neoadjuvant Chemotherapy; Complete Pathological Response.

https://doi.org/10.29289/259453942021V31S2055

EFFECTS OF RESISTANCE TRAINING ON MUSCLE STRENGTH, BODY COMPOSITION, AND ANXIETY IN BREAST CANCER SURVIVORS

Gabriel Siqueira[1], Wanderson Santos[1], Luane Siqueira[2], Naiany Pereira[1], Ellen Gomes[1], Carlos Vieira[1]

[1]Human Movement Assessment Laboratory, LAMOVH, College of Physical Education, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]College of Pharmacy, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: The aim of this study is to compare the effects of resistance training (RT) on muscle strength (MS), body composition (BC), and anxiety indicators in eutrophic, overweight, and obese breast cancer survivors (BCS). **Methodology:** Twenty-six BCS women (56.07±6.94 years old; body mass index [BMI]: 68.29±11.18 kg), who were undergoing hormone therapy, performed 8 weeks of RT once a week. The BCS were divided into three groups as follows: eutrophic (BMI ≤ 24.4 [23.72±1.41], n=9), overweight (BMI 25–29.9 [27.21±1.26], n=9), and obese (BMI ≥ 30 [33.37±2.06], n=8). For the MS, the 10-repetition maximum test (normalized 10-RM/BM) on the bench press (BP) and the leg press (LP); for BC, the dual-energy X-ray absorptiometry; and for anxiety, the state-trait anxiety inventory were performed. For overtime analysis, the paired t-test for MS and BC and the Wilcoxon test for anxiety indicators were conducted. For analyses between groups, the mean difference (Δ [post-baseline]) was calculated using the one-way analysis of variance for MS and BC and the Kruskal–Wallis test for anxiety indicators. **Results:** There were no differences between the groups. All groups improved on the BP ($p \leq 0.001$) and the LP ($p < 0.001$) overtime (eutrophic [BP, Δ=0.050±0.03; LP, Δ=0.401±0.10], overweight [BP, Δ=0.069±0.03; LP, Δ=0.406±0.15], and obese [BP, Δ=0.037±0.02; LP, Δ=0.375±0.11]). In the BC analyses, it was verified and improved only for the eutrophic BCS in the fat percentage (Δ=-1.122±1.11, p=0.016) and lean mass (Δ=0.650±0.78, p=0.036). There was a significant reduction in the state-trait anxiety in the eutrophic (Δ=-7.444±8.13, p=0.030) and obese (Δ=-9.125±9.70, p=0.042) groups. **Conclusions:** All BCS groups improved their MS. The eutrophic BCS may have a better response in BC compared with overweight and obese BCS. With regard to state-trait anxiety, the eutrophic and obese BCS groups showed better response than the overweight BCS group. The results suggest that the eutrophic BCS can present improvements in more components with a weekly session of RT; however, further studies should be performed.

Keywords: Oncology; Exercise; Strength Training; Body Composition.

https://doi.org/10.29289/259453942021V31S2056

POSITIVE RESPONSE TO ANTI-HER THERAPY FOR METASTATIC MALIGNANT BREAST CANCER: CASE REPORT

Pedro Henrique de Ávila Perillo[1], Pedro Vinicyus Novais e Souza[1], Anelize Maria Bunholli[1], Fernando Santos de Azevedo[2], Lanúscia Morais de Santana[2], Lara Letícia Gaspar Sousa[3], Julia Roberta Rodrigues de Faria[4]

[1]Faculdade de Medicina, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Centro Avançado de Diagnóstico de Câncer de Mama, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[3]Faculdade Unida de Campinas – Goiânia (GO), Brazil.
[4]Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.

Introduction: Progression-free survival in patients with HER2-positive breast cancer was significantly improved after administering dual block (DB) associated with docetaxel when compared with trastuzumab and docetaxel. This case report is about a patient with malignant breast cancer — HER2 positive — and metastatic lung and liver disease. **Objective:** The aim of this study is to report the positive response to the oncologic treatment. **Case Report:** A 43-year-old woman was diagnosed in 2011 with malignant breast cancer in early stage, i.e., cT1N0M0, with acute liver lesion not detected by tomography. She underwent upfront surgery, adjuvant chemotherapy with AC-TH schedule plus 1 year of Herceptin, and adjuvant radiotherapy. The tumor was developed again in 2015 through physical examinations, revealing metastatic lung and liver disease. She underwent first-line chemotherapy with docetaxel, Herceptin, and pertuzumab with DB maintenance. After additional physical examination, she presented an excellent response to treatment, remaining on maintenance with DB since October 2015 with an exceptional response to oncologic therapy. **Discussion:** It was observed an excellent response to treatment. Despite the poor prognosis, the patient presented a complete clinical improvement, and the treatment ensured much longer than average survival and an outstanding quality of life. **Conclusion:** Using docetaxel, Herceptin, and pertuzumab in patients with breast cancer, HER2 positivity improved the median overall survival of the patient; this confirms, albeit as an isolated case, the data from the Cleopatra study.

Keywords: Breast Cancer; Exceptional Response; Metastasis; Oncologic Treatment; anti-HER.

https://doi.org/10.29289/259453942021V31S2057

RELATIONSHIP BETWEEN ANALOGIC VISUAL SCALE FOR FEAR OF MOVEMENT AND TAMPA SCALE OF KINESIOPHOBIA APPLIED IN PATIENTS AND BREAST CANCER SURVIVORS

Vitor Marques[1], Wanderson Santos[1], Naiany Silva[1], Raquel Schincaglia[2], Carlos Vieira[1]

[1]Faculty of Physical Education and Dance, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Faculty of Nutrition, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Purpose: The aim of this study is to verify if there is a relationship between the Analogic Visual Scale (AVS; 0–10) for fear of movement and the Tampa Scale of Kinesiophobia (TSK) in patient/survivors with breast cancer. **Methodology:** Twenty-four women with breast cancer (age: 52.29±8.28 years, range: 35–64 years) attended a single day of evaluation. The fear of movement was assessed by the two psychometric measurements as follows: (1) AVS, a metric rule printed with a scale ranging from 0 ("not afraid at all") to 100 mm ("complete afraid") for using the ipsilateral limb affected by the surgical and (2) TSK, the total score ranging from 17 to 68. TSK with higher scores represents the increasing of the kinesiophobia. The TSK was transformed to the same range scale as AVS, in which 17 is 0 and 68 is 100, for comparison. The relationship between AVS and TSK was investigated with a linear regression analysis. The variability between scales was tested using the coefficient of variation (CV). **Results:** We did not find a relationship between AVS and TSK ($r=0.008$, $R^2<0.0001$, $p=0.971$). The CV was 56.52%±47.51%, with 95%CI ranging from 36.45 to 76.58. **Conclusion:** There is no relationship between AVS and TSK; hence, they should not be used interchangeably to measure the fear of movement. Therefore, general kinesiophobia may not represent the specific kinesiophobia in women with breast cancer.

Keywords: Breast Cancer; Kinesiophobia; Psychometric.

https://doi.org/10.29289/259453942021V31S2058

HANDGRIP STRENGTH AND ISOMETRIC BILATERAL BENCH PRESS FOR UPPER INTERLIMB STRENGTH ASYMMETRY IN BREAST CANCER WOMEN, WITH OR WITHOUT LYMPHEDEMA

Wanderson Santos[1], Vitor Marques[1], Naiany Silva[1], Gabriel Siqueira[1], Raquel Schincaglia[2], Carlos Vieira[1]

[1]College of Physical Education and Dance, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Faculty of Nutrition, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Purpose: The aim of this study is to compare upper interlimb strength asymmetry in breast cancer women (BCW), with or without lymphedema, using the handgrip strength test and the isometric bilateral bench press (IBBP) test. **Methodology**: Twenty-two BCW (age 52.04±8.62 years) were enrolled in a cross-sectional study, with a single-day testing. Ten participants with self-reported breast cancer – related lymphedema (BCRL) and 12 participants without BCRL were evaluated for the interlimb strength asymmetry. The average of the best three of four attempts of the handgrip strength and the IBBP was used to compare the maximal voluntary isometric contraction of each limb. To calculate the interlimb strength asymmetry, we used the following formula as a percentage: the modulus of left minus right side divided by the average between sides, then multiplied by 100. For the statistical analysis, we used the nonparametric Mann–Whitney U test for the handgrip strength and the independent t-test for IBBP. **Results:** The handgrip strength in BCW with lymphedema (27.62%±15.5%) showed a higher interlimb strength asymmetry than BCW without lymphedema (12.37%±16.29%; p=0.021). However, there was no difference in IBBP (with lymphedema 8.89%±5.81% versus without lymphedema 9.84%±7.98%, p=0.759). **Conclusion:** BCW with lymphedema might have higher interlimb strength asymmetry assessed by the handgrip strength test compared with BCW without lymphedema, but not in a multi-compound movement such as IBBP. More studies are necessary to confirm our findings.

Keywords: Oncology; Muscle Strength; Cancer, Swelling.

https://doi.org/10.29289/259453942021V31S2059

MACROSCOPIC EXAMINATION OF BREAST DENSITY CORRELATION WITH MAMMOGRAPHIC BREAST DENSITY IN BREAST CANCER–CONSERVING SURGERY: A RETROSPECTIVE ANALYSIS

Yedda Nunes Reis[1], Bruna Salani Mota[1], Marcos Desiderio Ricci[1], Carlos Shimizu[1], Fernando Nalesso Aguiar[1], Natalia Paula Cardoso[1], Edmund Chada Baracat[1], José Roberto Filassi[1]

[1]Instituto do Câncer do Estado de São Paulo, Faculdade de Medicina, Universidade de São Paulo – São Paulo (SP), Brazil.

Objective: The aim of this study is to evaluate the association between mammographic breast density (MBD) and macroscopic examination of breast density (MEBD), as well as the association between MEBD and multiple clinical and tumoral characteristics. **Methodology:** The secondary (i.e., retrospective) analysis from a prospective database (BREAST-MRI trial) was performed. Patients with breast cancer stages 0 to III for breast-conserving surgery, from November 2014 to October 2018, were selected. All patients were evaluated with clinical examination, breast ultrasound, and mammography and stratified by MBD. Then, they were randomized on a 1:1 basis in two groups whether to perform breast magnetic resonance imaging. Analysis of the subset of patients' MEBD in the clinical trial was not prespecified. MEBD was estimated by calculating the ratio of stromal and fatty tissues in each breast histopathological sample, and then, patients were classified similarly to ACR BI-RADS® criteria. **Results:** A total of 431 MEBD were selected for the analysis. MEBD classification was distributed as follows: 303 (70.3%) were classified as A, 85 (19.7%) as B, 36 (8.4%) as C, and 7 (1.6%) as D. There is no association between MBD and MEBD in our breast surgical specimens, such that MEBD A, B, C, and D were associated with MBD in 22 (97.1%) of 24 A breasts, 34 (18.2%) of 187 B breasts, 26 (13.1%) of 199 C breasts, and 1 (4.8%) of 21 D breasts ($p<0.001$). Breasts with the highest fat content in the macroscopic analysis were associated with older patients, higher body mass index, multiparity, and postmenopausal status ($p=0.001$). There was no difference among groups regarding the history of hormone replacement therapy, clinical stage, and immunohistochemical. **Conclusion:** Our study shows that MEBD does not hold a close correlation with MBD, according to the ACR BI-RADS classification.

Keywords: Breast Cancer; Breast Density; Mammography; Nuclear Magnetic Resonance; Pathology.

https://doi.org/10.29289/259453942021V31S2060

BACKGROUND PARENCHYMAL ENHANCEMENT IN MRI EXAMINATION AND ITS CORRELATION WITH MAMMOGRAPHIC BREAST DENSITY AND CLINICAL AND TUMORAL CHARACTERISTICS

Yedda Nunes Reis[1], Bruna Salani Mota[1], Carlos Shimizu[1], Marcos Desiderio Ricci[1], Natalia Paula Cardoso[1], Edmund Chada Baracat[1], José Roberto Filassi[1]

[1]Instituto do Câncer do Estado de São Paulo, Faculdade de Medicina, Universidade de São Paulo – São Paulo (SP), Brazil.

Objective: The aim of this study is to investigate the correlation between background parenchymal enhancement (BPE) in magnetic resonance imaging (MRI) examination and mammographic breast density (MBD) and also the association of BPE with clinical and tumoral characteristics. **Methodology:** The post hoc analysis from a prospective database (BREAST-MRI trial) was performed. Patients with breast cancer stages 0 to III for breast-conserving surgery, from November 2014 to October 2018, were selected. All patients were evaluated with triple assessment and stratified by MBD. Then, they were randomized on a 1:1 basis in two groups whether to perform breast MRI. BPE was classified into four categories according to the ACR BI-RADS MRI (minimal, mild, moderate, and marked). The MBD was also classified according to the ACR BI-RADS (A, B, C, and D). **Results:** A total of 217 patients were included. The mean age was 57.4 years (33.7–81.7, SD 10.8). Of these, 25 (11.5%) patients had ductal carcinoma in situ (DCIS) and 192 (88.5%) had invasive breast cancer. The MBD classification was 12 (5.5%) for A, 93 (42.9%) for B, 99 (45.6%) for C, and 13 (6%) for D. The BPE classification was 105 (48.4%) minimum, 78 (35.9%) mild, 29 (13.4%) moderate, and 5 (2.3%) marked. Both MBD and BPE were similar in 63 (29%) of 217 patients and differed in 154 (71%) of 217 patients. There is no correlation between MBD and BPE (Spearman's rank of 0.240, $p<0.001$). Minimum/mild BPE breasts were more frequent in postmenopausal women ($p=0.01$). B3 lesions were identified significantly higher in moderate/marked BPE breasts ($p=0.04$). The median lesion size in breast MRI for minimum/mild BPE breasts was 2.2 cm, and the pathological median size was 2.0 cm ($p=0.001$, 95%CI). **Conclusion:** The background parenchymal enhancement does not correlate with MBD.

Keywords: Background Parenchymal Enhancement; Breast Density; Breast MRI; Mammography; Breast Cancer.

https://doi.org/10.29289/259453942021V31S2061

EXPERIENCE REPORT OF PSYCHOSOCIAL CARE TO A PATIENT WITH BREAST CANCER

Yêda Maria Silva Peixoto[1], Márcia de Faria Veloso[2], Ruffo Freitas-Júnior[2]

[1]Faculdade Estácio de Sá de Goiás – Goiânia (GO), Brazil.
[2]Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction: This study presents the experience of psychological care to women with breast cancer, attended at the Advanced Breast Diagnosis Center (CORA), Hospital das Clínicas – UFG, under supervision. **Objective:** The aim of this study is to describe the phases of greatest psychosocial impact in the treatment of patients and family members. **Methodology:** The service to EAS was started in November 2017 after, 43 years old, divorced, and provider of three minor children, receiving the diagnosis of phylloid tumor, intense anguish, fear of death, emotional lability, conflicts family and socioeconomic status, presenting a distorted perception of identity. She was mastectomized and underwent chemotherapy and a new surgery in 2018, after a recurrence of sarcoma in the sternum bone, at which point she went into palliative care. Psychological, digital, and social-technical resources were used until her death in May 2020. **Results:** An improvement was observed in the coping strategy, resolution of family conflicts, recovery of affective bonds and their identity, with the distribution of tasks of the children, and improvement of the family dialogue, including the desire to grant the guardianship of the children to her brother. **Discussion:** It is necessary to have a systemic look at the patient who arrives at the public hospital. **Considerations:** This experience was enriching due to the relevance of the role of psychology and its interventions with the multidisciplinary team, promoting a significant improvement in the psychological well-being and quality of life of the patient who arrives with real and imagined suffering aggravated by the disease and treatment.

Keywords: Psychosocial Intervention; Breast Cancer; Palliative Care.

https://doi.org/10.29289/259453942021V31S2062

"NO DRAIN" AND DAY-CASE MASTECTOMY AND AXILLARY SURGERY: OUR EXPERIENCE

Eleftherios Sfakianakis[1], Foivos Irakleidis[1], Peng Tan[1]

[1]Breast Surgery Unit, Royal Free Hospital, NHS Trust – London, United Kingdom.

Background: Seroma formation is the most common complication following breast cancer and axillary surgery, with incidence ranging from 15% to 85%. Delayed wound healing, discomfort, infection, and delay in starting adjuvant therapies are the main complications following seroma formation. Several factors have been considered responsible for seroma; however, its pathogenesis is not yet fully understood. Despite the fact that there is no clear evidence that the use of drain reduces the incidence of seroma formation, closed suction drainage following mastectomy and axillary lymph node clearance remains the standard of practice for most of the breast surgeons in the UK. Patients' discomfort, wound infection, and prolonged hospital stay are the major drawbacks of drain surgery. **Objective:** The aim of this study is to present and evaluate our experience in no drain mastectomy combined with axillary surgery. **Methodology:** Patients who underwent a simple mastectomy and axillary surgery from January 2017 to January 2021 for breast cancer were divided by a single oncoplastic breast surgeon in a tertiary Breast Unit in London, UK, into mastectomy and sentinel lymph node biopsy and axillary clearance subgroups. Parameters such as patients' demographics, performance status, tumor characteristics, hospital stay, drain status, and complications were evaluated. Mastectomy flaps were dissected using electrocautery, with thoroughly sealing of the lymphatics, and were fixed onto the chest wall with polyglactin 910 sutures, and an axillary cavity was closed by suturing clavipectoral fascia to prevent seroma formation. No drain was used in either subgroup of patients apart from a single case with bleeding disorders. **Results:** A total of 52 patients (51 females and 1 male) underwent mastectomy and axillary surgery. Of these, 32 patients had axillary clearance (axillary lymph node clearance [ALND]) and 19 had sentinel lymph node biopsy (SLNB). Of the 52 patients, 9 were <40 years old, 7 were 40–50, 11 were 50–60, and 26>60 years old. Performance status (ASA score) was as follows: ASA I: 20 patients, ASA II: 20, ASA III: 10, and ASA IV: 2 patients. A total of 42 patients had day surgery (24 in the ALND and 18 in the SLNB subgroup). The medial number of lymph node retrieval was 2.6 and 13.6 in the SLNB and ALND, respectively. In terms of complications, three patients developed seroma in the early post-op period (two in the ALND and one in the SLNB subgroup), two patients had wound infection treated with antibiotics, and three had hematoma treated conservatively. **Conclusion:** Despite the lack of clear evidence that drain reduces the incidence of seroma, the use of drain is widely accepted among surgeons when mastectomy is performed with either SLNB or axillary clearance. The data demonstrate that no drain and day-case approach in mastectomy combined with axillary surgery can be safely performed even in patients with axillary clearance, with minimum complication rates. Sealing of the lymphatics with electrocautery combined with the fixation of mastectomy skin flaps on the chest wall with plication sutures and closure of axillary dead space seems to be efficient in seroma prevention.

Keywords: No Drain Mastectomy; Reduction of Seroma; Seal of lymphatics; Plication Sutures.

https://doi.org/10.29289/259453942021V31S2063

MANAGEMENT OF THE AXILLA IN PATIENTS WITH BREAST CANCER AND ONE OUT OF ONE POSITIVE SENTINEL LYMPH NODE. CAN WE OMIT AXILLARY LYMPH NODE CLEARANCE?

Foivos Irakleidis[1], Ashutosh Tondare[1], Hisham Hamed[1], Ashutosh Kothari[1]

[1]Guy's and St Thomas' NHS Foundation Trust, Breast Surgery Unit – London, United Kingdom.

Background: Over the past three decades, the treatment of the axilla in breast cancer management continues to change. Current treatment strategies aim to achieve regional nodal control associated with reduced incidence of lymphedema and other long-term complications. In this study, we analyzed our tertiary center's database of patients who had a single retrieved sentinel node (SN) that was positive for macrometastatic disease. We focused on AMAROS trial outcomes and the future view of treating this cohort of patients with axillary radiotherapy (RT) instead of axillary node clearance (ANC). **Methods**: Both the literature review and the 5-year retrospective analysis of our database were performed, focusing on the management of the axilla in patients with breast cancer with one-in-one positive SN. **Results**: A total of 24 patients who had surgery as primary treatment had one-in-one positive SN. All patients had the clinical and radiological assessment of their axilla prior to their sentinel lymph node biopsy (SNB). In all, 92% of these patients had a complete ANC, 50% of them had zero additional positive nodes, 21% had only one additional positive node, and a further 21% had more than one additional positive node. One patient was planned for ANC but died from chemotherapy-related complications and one more patient had alternative axillary RT instead of ANC. Of note, 80% of patients who had three or more positive axillary lymph nodes following ANC had indeed evidence of advanced locoregional disease and thus would not be eligible for alternative axillary RT, as compared with one patient who had a multifocal disease, could have axillary RT but had a heavy axillary burden on ANC. Finally, 71% of patients could have been offered alternative axillary RT but had ANC instead. Fourteen patients from this group had chest wall and supraclavicular fossa RT after their initial surgery, and thus, the addition of axillary RT instead of ANC could have been offered. **Conclusion:** In patients with early breast cancer and clinically node-negative axilla, disease burden in non-SN is limited and ANC may entail overtreatment. In view of low recurrence and complication rates seen in the AMAROS trial, axillary irradiation appears to be a valid and safe alternative when compared with ANC in patients with one-in-one positive SN.

Keywords: Axillary Radiotherapy; Sentinel Lymph Node; Axillary Lymph Node Clearance.

https://doi.org/10.29289/259453942021V31S2064

LACK OF ACCESS TO GENETIC TESTING AMONG PATIENTS AT RISK OF HEREDITARY BREAST CANCER IN THE BRAZILIAN PUBLIC HEALTH SYSTEM

Tatiana Strava Corrêa[1], Renata Lazari Sandoval[1], Luiza Nardin Weis[3], Ana Carolina Rathsam Leite[1,2], Romualdo Barroso de Sousa[1,3]

[1]Hospital Sírio-Libanês, Centro de Oncologia de Brasília – Brasília (DF), Brazil.
[2]Hospital Materno Infantil de Brasília – Brasília (DF), Brazil.
[3]Instituto Hospital de Base do Distrito Federal – Brasília (DF), Brazil.

Objectives: In Brazil, patients treated in the public health (PH) system have no access to genetic testing. This study aims to explore the clinical profile of patients at risk of hereditary breast cancer (BC) in a tertiary hospital at the Federal District. **Methodology**: Patients with a previous diagnosis of BC, in treatment or follow-up at our PH service, were evaluated for the risk of hereditary BC from January to March 2021. Patients who fulfilled criteria for genetic testing, according to the National Comprehensive Cancer Network (NCCN) criteria (version 1.2020), were defined as at risk of hereditary BC. The clinical data were collected after signed informed consent. **Results**: A total of 70 patients were evaluated, and 51 patients who fulfilled the NCCN criteria for genetic testing were included in this analysis. The median age at BC diagnosis was 42 years. Invasive ductal carcinoma represented 96% of the cases. The positive hormonal receptor was present in 70.6% of the tumors (36/51) and HER-2 enriched tumors in 19.6%. Ki67 14% was found in 82.3% (42/51) of cases. Tumors were grade 2 (80%) and grade 3 (13.7%). Most patients were diagnosed at locally advanced stages: 62.7% stage IIB–IIIC, 22% stage IV, and 13.7% IA–IIA. The most frequent NCCN criteria for the hereditary BC investigation were BC diagnosis ≤45 years (66%), family history of breast/prostate/pancreatic cancer (60%), and triple-negative BC <60 years (25%). Only four patients performed genetic testing at their own costs. Two of them had positive test results (BRCA2 and TP53 pathogenic variants). **Conclusion**: This analysis showed that a high rate of patients with BC, who have the indication of genetic testing, have locally advanced or metastatic disease at the time of BC diagnosis. This is likely to lead to worst disease outcomes. Considering that approximately 10% of BC cases are associated with cancer predisposition syndromes, we expect that at least 5 of 51 evaluated patients would have positive genetic tests, which would allow the risk-reduction strategies for secondary cancers and the identification of other family members at risk.

Keywords: Hereditary Breast Cancer; Public Health; Genetic Testing.

https://doi.org/10.29289/259453942021V31S2065

MULTILINEAGE ACUTE LEUKEMIA DURING THE TREATMENT OF A PATIENT WITH BREAST CANCER WITH DOCETAXEL AND DOUBLE ANTI-HER2/NEU BLOCKADE: PERSPECTIVES AND POINTS TO CONSIDER

Jorge Illarramendi[1], María Carmen Mateos[1], Iván Quispe[1], María Cruz Viguria[1], María Teresa Zudaire[1], Amaya Zabalza[1], Jose Juan Illarramendi[2]

[1]Service of Hematology, Complejo Hospitalario de Navarra – Pamplona, Spain.
[2]Service of Medical Oncology, Complejo Hospitalario de Navarra – Pamplona, Spain.

Introduction: Associated or secondary acute leukemias (ALs) are rare complications after treatment of breast cancer (BC). There is no apparent increased risk of this complication with monoclonal anti-HER2/neu antibodies (AHAB), although most of them also receive topoisomerase inhibitors (TIs). We described the case of a patient who was diagnosed with AL during the combined treatment with two AHAB (trastuzumab [TTZ] and pertuzumab [PTZ]) without any TI. **Case Report:** A 64-year-old lady was diagnosed with stage IV HER2/neu-positive BC in April 2018. She received treatment with docetaxel plus PTZ and TTZ. Docetaxel was suspended after eight cycles with a complete radiological response (CR), and she continued receiving PTZ plus TTZ infusions every 3 weeks. In September 2020, an abnormal blood smear revealed a mixed AL, with features of myeloid, T-lymphoid, and B-lymphoid AL. The next-generation sequencing disclosed mutations in FLT3 and ASLX1. Imaging tests showed maintained CR of BC. She received induction and consolidation chemotherapy with fludarabine, cytarabine, and idarubicin, with confirmed CR by bone marrow examination and cytometry. After considering the high risk of AL relapse and good perspectives of maintaining CR of BC, a multidisciplinary conference agreed to offer allogeneic bone marrow transplantation (BMT) to the patient. She is now in the conditioning phase of the BMT. **Conclusions:** We have not found previous reports of mixed multilineage AL in patients with BC after treatment with AHAB so that no relation between them must be assumed at this time. The improved prognosis of metastatic BC with the addition of PTZ is a factor to take into account for the indication of treatments like BMT in cases of AL complicating this disease. A potential effect of graft versus BC has been described in some cases. The potential tolerance of AHAB after BMT is also another point for debate with limited evidence about it so far.

Keywords: Breast Cancer; Acute Leukemia; Mixed Acute Leukemia; Pertuzumab, Trastuzumab; Docetaxel.

https://doi.org/10.29289/259453942021V31S2066

SUCCESSFUL THERAPY OF METASTATIC BREAST CANCER WITH LIFE-THREATENING BONE MARROW FAILURE DURING THE COVID-19 PANDEMIC: REFLECTIONS ON A CASE REPORT

Jorge Illarramendi[1], Richard Breeze[1], Montserrat Outeiro[1], Idoia Mugica[1], Esteban Salgado[2], Jose Juan Illarramendi[2]

[1]Service of Hematology, Complejo Hospitalario de Navarra – Pamplona, Spain.
[2]Service of Medical Oncology, Complejo Hospitalario de Navarra – Pamplona, Spain.

Introduction: Delayed diagnoses and treatments of breast cancer (BC) have been described as a consequence of the COVID-19 crisis. Some cases may even progress to a situation of functional derangements or so-called visceral crises before the start of the treatment. We described a case of BC with life-threatening pancytopenia who needed urgent therapy during the peak of the first wave of the COVID-19 pandemic. **Case Report:** A 52-year-old lady was diagnosed with Her2/neu-positive BC with bone metastases in March 2020. During the waiting time for a positron emission tomography scan, she attended the emergency room in a very bad condition, with extreme asthenia, disorientation, and dyspnea. Altered blood analyses include severe anemia (hemoglobin 6 g/dL) and thrombocytopenia (4,000 platelets/μL) with a leukoerythroblastic reaction. Bone marrow biopsy confirmed invasion by BC. Polymerase chain reaction for SARS-CoV-2 was negative. Our hospital was collapsed at that time, with more than two-thirds of beds occupied by COVID-19 patients. On Easter Saturday (April 11), we started urgent chemotherapy with weekly reduced doses of paclitaxel (30 mg/m^2) combined with trastuzumab (TTZ). Multiple transfusions of red cells and platelets were also needed. Standard doses were implemented after an initial improvement, and pertuzumab (PTZ) was also added in combination with TTZ. After 5 months, a complete response (CR) was documented by imaging and normalization of tumor markers. Therapy has been continued with PTZ + TTZ every 3 weeks. In March 2021, she maintains a status of CR and enjoys a normal active life. **Conclusions:** Situations of hospital crises like COVID-19 require individualized and adjusted protocols and schedules to deal with abnormal situations not fulfilling classical criteria used in clinical trials. Chemotherapy and target therapy may be successful in some of these patients. The use of available supportive care measures is also the main factor for optimal results.

Keywords: Breast Cancer; Bone Marrow Invasion; COVID-19; Paclitaxel; Pertuzumab; Trastuzumab.

https://doi.org/10.29289/259453942021V31S2067

DELAY IN THE DIAGNOSIS OF INVASIVE DUCTAL CARCINOMA DUE TO AN INFECTIOUS MASTITIS: CASE REPORT

Thiago Martins de Abreu[1], Arthur Gomes Pidde[1], Pedro Henrique de Ávila Perillo[1], Silvaleide Ataides Assunção[1], Ianca Leandra Santos[2], Débora Sara de Almeida Cardoso[3]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Faculdade Unida de Campinas – Goiânia (GO), Brazil.
[3]Centro Avançado de Diagnóstico da Mama, Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction: Breast cancer is the most common cause among women, with invasive ductal carcinoma (ICD) being the most prevalent and having great phenotypic and genotypic heterogeneity and the ability to metastasize. In turn, mastitis is an inflammation in the breast region, infectious or noninfectious causes, most commonly affecting lactating women. **Objectives:** It is intended to report a case of ICD accompanied by infectious mastitis and its reverberations. **Case Report:** A 27-year-old woman presents with a clinical history of mastitis in her left breast that occurred about 3 months ago after weaning her son. She also explained about the use of antibiotic therapy, multiple previous drainages, and local complication with engorgement, edema, erythema, and purulent drainage in the surgical ostium of the left breast. A new drainage and material collection was carried out. Computed tomography of the chest indicated a solid heterogeneous lesion, dense, irregular contours, with areas of air trapping, liquefaction, and cleavage plane with the left pectoralis major muscle and ipsilateral axillary adenomegaly. Pathological pathology confirmed the hypothesis of neoplasia, indicating grade III ICD in comedonecrosis. Immunohistochemistry demonstrated triple-negative character and culture, positivity for Corynebacterium renale. She started neoadjuvant chemotherapy with reduced breast volume and absence of secretion today. **Discussion:** This is a common and problematic situation in health systems. Repeated outpatient referrals, invasive processes without resolution, aggravating the patient's case. Moreover, it is noted that mastitis has delayed the diagnosis of the neoplasm, which, depending on the delay, may result in a worse prognosis or a more aggressive or expensive treatment. **Conclusion:** The diagnostic investigation of neoplasms is of great importance in case of prolonged mastitis not responsive to treatment, due to the fact that many mastitides may come from neoplastic processes that generate the lesion, which can make this injured area conducive to bacterial proliferation.

Keywords: Invasive Ductal Carcinoma; Mastitis; Breast Cancer.

https://doi.org/10.29289/259453942021V31S2068

ANALYSIS OF EARLY MORTALITY BY BREAST CANCER IN BRAZIL AND GOIÁS FROM 2010 TO 2019

Silvaleide Ataides Assunção[1], Amanda Carlos de Lima Batista[1], Eduarda Duarte Mota Amorim[1], Giovanna Giulia de Carvalho Amoroso[1], Rebeka Gyovana Rodrigues Reis[2], Lara Letícia Gaspar Sousa[3], Rosemar Macedo Sousa Rahal[4]

[1]Faculdade de Medicina, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Faculdade Estácio de Sá – Goiânia (GO), Brazil.
[3]Faculdade Unida de Campinas – Goiânia (GO), Brazil.
[4]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction: Breast cancer is the second leading cause of death among women, affecting mainly the age group of 50–59 years, the age at which screening tests are recommended. However, it has shown a progressive incidence below 50 years. For this reason, the objective is to analyze the statistical data on early mortality from breast cancer up to 50 years, in view of possible losses in diagnosis and early management. **Methodology:** A descriptive epidemiological study, a retrospective of time series, using the data from the Mortality Information System (SIM) of the Health Surveillance Secretariat of the Ministry of Health (SVS/MS) in the period of 2010 and 2019, in Brazil and in the State of Goiás, was analyzed. Malignant neoplasms of death and women up to 50 years of age were included as causes of death. The data were compared and tabulated in Excel. **Results:** Deaths due to malignant breast cancer in Goiás, between 2010 and 2019, were 35 (20–29 years old), 306 (30–39 years old), and 766 (40–49 years old), equivalent to 26.2% of the total number of deaths in all age groups (1,107 cases). In Brazil, deaths were 1,149 (20–29 years old), 9,876 (30–39 years old), and 24,586 (40–49 years old), totaling 23.3%. **Conclusion**: According to the analysis, it is possible to point to an increase in deaths, especially for those aged 40–49 years. The lack of inclusion of women in this group interferes with the prognosis, since it makes the late diagnosis feasible and, in more advanced stages, causes less chances of cure. Possible adaptations and strategies for screening this public and coverage by public health systems must be considered.

Keywords: Breast Cancer; Early Mortality; Late Diagnosis.

https://doi.org/10.29289/259453942021V31S2069

ANALYSIS OF THE RELATIONSHIP BETWEEN SOCIAL INDICATORS AND MORTALITY FOR BREAST CANCER IN BRAZIL AND GOIÁS

Silvaleide Ataides Assunção[1], Ana Carla Moreira Miranda[1], Laura Queiroz da Silva[1], Mariana Campos Terra[1], Guilherme Augusto da Costa[1], Anelize Maria Bunholli[1], Rosemar Macedo Sousa Rahal[2]

[1]Faculdade de Medicina, Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objectives: Breast cancer is the most common cancer among the female population in the world. Socioeconomic and cultural factors are important, as underdeveloped countries have high mortality rates due to deficiencies in prevention and early detection. Thus, the objective is to verify whether there is a direct relationship between the number of deaths due to breast cancer and social indicators. **Methodology:** A descriptive study with the analysis of the secondary data on mortality from malignant breast neoplasms, relating them to social indicators of schooling, age, and color/race between the years 2010 and 2019 in the state of Goiás and in Brazil, was analyzed. The data were extracted from the Mortality Information System (SIM), ordered, and tabulated using Excel. **Results:** Socioeconomic factors, such as education, age group, race, and geographic region, were considered conditioning factors for inequalities for such neoplasia. Groups with lower socioeconomic status showed high mortality rates, either due to later diagnoses or due to greater difficulty in accessing appropriate treatments. In contrast, the population inserted in favored socioeconomic scenarios presented, at the same time, high mortality rates, not only in Goiás, but also in the Brazilian scenario in general. This situation resulted, above all, from the insertion of this female portion in the labor market and, consequently, from the acquisition of new habits and behaviors. **Conclusion:** Different variables related to socioeconomic and cultural conditions have a direct influence on the occurrence of breast cancer in women in the state of Goiás and also in Brazil. In summary, people in disadvantaged situations tend to have high mortality rates for not having access to financing health conditions, while the wealthier population also has high rates due to cultural factors and related to new habits and behaviors that are factors risk.

Keywords: Breast Cancer; Social Indicators; Inequalities.

https://doi.org/10.29289/259453942021V31S2070

PALLIATIVE CARE IN BREAST CANCER: CHALLENGES IN MEDICAL PRACTICE AND PROMOTING QUALITY OF LIFE

Silvaleide Ataides Assunção[1], Ianca Leandra Santos[2], Rosemar Macedo Sousa Rahal[3]

[1]Faculdade de Medicina, Universidade Federal de Goiás – Goiânia (GO), Brazil.
2Faculdade Unida de Campinas – Goiânia (GO), Brazil.
3Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objectives: Breast cancer is the main neoplasm affecting women, and in many cases, curative treatment is not feasible. In this context, it is important to work with other forms of assistance that provide symptom relief and better quality of care for these patients. Therefore, the objective of this work is to portray the importance of attention and care to patients with breast cancer, whose cure is not possible, since it generates better acceptance of the situation and a more humanized end, with less suffering, pain, and anguish. **Methodology:** This is a descriptive research carried out based on a review of the medical literature available through a survey of publications from the past 12 years in the PubMed, Lilacs, and MedLine databases. The following descriptors were used: palliative care, home care, and breast cancer. **Results:** From the analysis performed, it can be seen that approximately 30% of patients diagnosed with breast cancer have some depressive disorder. This fact occurs due to the shock of the news of having an extremely serious disease, due to the disorders arising from the treatment or the progression of the disease itself. When assessing patients with breast cancer, who have palliative care at home, this percentage drops to approximately 9%, meaning an abrupt improvement in the quality of life of these people, resulting from multiprofessional home treatment. **Conclusion:** Given this situation, it is observed that home care, though insufficiently explored, has a good response for terminally ill patients. Therefore, it appears that palliative care should be better explored by both the public and private health systems, as this tool is capable of mitigating the adversities caused by cancer and improving the quality of life of patients and their families in this difficult stage.

Keywords: Palliative Care; Home Care; Breast Cancer.

https://doi.org/10.29289/259453942021V31S2071

BENEFITS OF BREAST RECONSTRUCTION ON THE QUALITY OF LIFE OF WOMEN WITH BREAST CANCER

Silvaleide Ataides Assunção[1], Rosemar Macedo Sousa Rahal[2]

[1]Faculdade de Medicina da Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objectives: Mastectomy is the most effective form of treatment in cases of breast cancer, promoting biopsychosocial consequences to patients. Thus, the objective is to integrate and analyze data from studies carried out, highlighting the positive impact of breast reconstruction based on the available medical literature, contributing to a better understanding of the importance of such a procedure to improve the quality of the services provided. **Methodology:** This is a descriptive research based on a review of the medical literature available through a survey of publications from the past 12 years in the PubMed, Lilacs, and MedLine databases. The following descriptors were used: "reconstruction" AND "mammary" AND "benefits". **Results:** It was noted that women who underwent breast reconstruction had a high level of satisfaction with the quality of life in the psychological and social relations domains. Most of them have a medium to a very high degree of satisfaction, suggesting that the postoperative functional adaptation was not negatively affected by the additional anatomical changes imposed by breast reconstruction. There are also benefits in the sexual life of these patients, who find a degree of satisfaction between good and excellent. In the literature, there are reports of better social interaction, job satisfaction, higher levels of satisfaction, and lower incidence of depression among women who underwent immediate reconstruction after 1 year of surgery. However, such benefits do not seem to be universally found when women undergoing immediate reconstruction are compared with those treated conservatively, with quadrantectomies or lumpectomies. **Conclusion:** Breast reconstruction, in addition to being a right under Law 12.802, is a procedure that reduces the sensation of mutilation and alleviates the absence of the breast. Therefore, when indicated procedures, such as prostheses, tissue expansion or flaps, after mastectomy, reinforce the woman's self-esteem because the breast is understood in society as a fundamental characteristic for femininity.

Keywords: Breast Cancer; Breast Reconstruction; Benefits.

https://doi.org/10.29289/259453942021V31S2072

NTRK MUTATION IN ADENOID CYSTIC CARCINOMA: A RARE TYPE OF TRIPLE NEGATIVE

Silvaleide Ataides Assunção[1], Vinicius Lemos Nascimento[1], Bruno Henrique de Aguiar Brito[1], Carolina Daher de Alencar Neves[1], Laura Queiroz da Silva[1], Pedro Vinicyus Novais e Souza[1], Fernando Santos de Azevedo[2], Lanúscia Morais de Santana[2]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction: Breast cancer is one of the neoplasms that most cause death in women. Among these, there are some subtypes of greater biological aggressiveness, such as triple negative and HER overexpressed, which are associated with greater recurrence and mortality. Adenoid cystic carcinoma (ACC), salivary gland type, represents less than 0.1% of primary breast carcinomas and has indolent biological behavior and favorable prognosis compared with nonspecial triple-negative types. **Case Report:** A 51-year-old woman diagnosed with locally advanced ACC in the right breast, with negative immunohistochemistry for hormone receptors and HER2, underwent quadrantectomy with upfront axillary dissection, followed by adjuvant radiotherapy. After 12 years of diagnosis, she presented significant back pain, with magnetic resonance imaging scan evidencing bone lesion without medullary involvement in D7 and L1 suggestive of the secondary implant. Anatomopathology revealed the same histology as the primary tumor. Re-evaluation of chest tomography showed progression of pulmonary disease, 5 months after diagnosis of the first metastasis, underwent segmentectomy, with descriptive pathology identical to the initial lesion. Due to the oligoprogression and tumor type, somatic genetic research of the lung material was requested, which revealed a mutation in the NTRK gene, patient is still waiting for Larotrectinib in court. **Discussion:** The tumor has an unusual histological type, rare occurrence, slow progression course, and the absence of lymph node metastasis; the average incidence is around age 60. In this case, a young patient presented an ACC tumor with lung and bone metastasis. Due to the rarity, there is no definitive consensus regarding the ideal treatment, with the literature referring to the choice of mastectomy. **Conclusions:** Although malignant breast neoplasms and nonspecial subtypes, such as ductal and triple negative, have a poor prognosis, breast carcinoma of this aforementioned type has a favorable prognosis. The search for driver mutations in cancers of special types, together with the advances in genetic medicine, allows satisfactory results with target-specific treatments.

Keywords: Cystic Adenoid; NTRK; Breast Cancer; Triple Negative.

https://doi.org/10.29289/259453942021V31S2073

ENDOCRINE THERAPY INTAKE AND OVERALL SURVIVAL IN YOUNG WOMEN WITH BREAST CANCER

Alessandra Borba Anton de Souza[1], Beatriz Fetzner[1], Ester da Rosa[1], Gustavo Roesler[1], Isabela Albuquerque Severo de Miranda[1], Marcelle Morais dos Santos[1], Felipe Pereira Zerwes[1], Antônio Luiz Frasson[1]

[1]Pontifícia Universidade Católica do Rio Grande do Sul – Porto Alegre (RS), Brazil.

Objective: Breast cancer (BC) in young women with positive hormone receptors (HR+) has a poor prognosis. There are possible clinical and biological explanations for these findings, being partially attributed to suboptimal adherence to endocrine therapy (ET). Fertility is one of the key factors for treatment discontinuation. This study aims to estimate the adherence of ET and the overall survival (OS) rate of BC/HR+ in young patients. **Methods:** We identified women from the public health system, diagnosed with stage I–III BC presenting at one single BC Center, between January 2006 and December 2015. Using the medical records of the hospital database, we constituted a cohort of 74 women aged ≤40 years. The discontinuation rate with associated factors and OS were summarized as percentages. **Results:** A total of 51 women were BC/HR+. The mean age at diagnosis was 35 years. The median follow-up was 89 months. Among them, 45% had BC recurrence (local and/or distance), and 21% died. A total of 15% of patients interrupted the ET. The reasons for interruption were pregnancy (three patients), menstrual disorders (two patients), and irregular adherence (three patients). Tamoxifen (TMX) was prescribed in 74% of cases. About 19% switched their treatment to aromatase inhibitors. The genetic risk assessment was recommended to 58% of patients, 13% performed genetic tests, and 2% of patients carried out the pathogenic mutation in the high-risk BC genes. **Conclusion:** This cohort showed 84% of ET intake should be improved. Pregnancy issues and irregular adherence were the main reasons for discontinuation. Considerations of 78% OS in 7 years are that TMX was the only ET for most of the cohort, and it is considered undertreatment according to the current recommendations, and the low rate of genetic tests performed leads unrecognized high risk of potential recurrence in women with hereditary BC. Research in medical records should be addressed as a limitation.

Keywords: Young Adult; Women, Breast Neoplasms; Medication Adherence; Hormone Therapy; Tamoxifen.

https://doi.org/10.29289/259453942021V31S2074

EFFECTS OF CHEMOTHERAPY TREATMENT ON ANXIETY AND FATIGUE OF WOMEN WITH BREAST CANCER

Naiany Pereira[1], Vitor Marques[1], Rafael Moraes[1], Rafael Alves[1], Fabíola Mamede[1], Weder Silva[1], Wanderson Santos[1], Carlos Vieira[1]

[1]College of Physical Education and Dance, Universidade de Goiás – Goiânia (GO), Brazil.

Breast cancer is among the main types of cancer in the world. One of the treatment alternatives is chemotherapy, which in turn can cause antagonistic effects related to behavior, reflecting anxiety, and fatigue. **Objective:** The aim of this study was to evaluate the effects of chemotherapy treatment on anxiety and fatigue in women with breast cancer. **Methods:** A total of 37 women participated in the study and were distributed into two groups, namely, 19 undergoing chemotherapy for breast cancer (52±13.11 years) and 18 apparently healthy (55.8±8.37 years). All volunteers answered questions from the questionnaire related to the Piper Fatigue Scale, composed of 22 items subdivided into 4 distinct subjective dimensions, namely, affective, sensory, cognitive, and behavioral. Anxiety was assessed using the IDATE anxiety scale, an instrument that consists of two separate self-report scales: state of anxiety and trace state, each has 20 statements in which the subjects must describe how they feel. The significance level was set a priori at $p<0.05$. Additionally, to examine the magnitude effect of chemotherapy treatment, Cohen's d effect size (ES) was calculated from the difference between group scores divided by the pooled standard deviation of 20. The obtained d values were used to define the chemotherapy treatment effect as trivial ($d<0.2$), small ($0.2\leq d<0.5$), medium ($0.5\leq d<0.8$), and large ($d\geq 0.8$). **Results:** There was no difference in the levels of fatigue and anxiety between the groups ($p>0.05$). Behavior fatigue ($p=0.08$, ES=0.56), affective fatigue ($p=0.18$, ES=0.44), sensory fatigue ($p=0.09$, ES=0.55), cognitive fatigue ($p=0.34$, ES=0.31), general fatigue ($p=0.09$, ES=0.56), anxiety state ($p=0.08$, ES=0.56), and anxiety trait ($p=0.92$, ES=0.03). **Conclusion:** The results of this study show that chemotherapy treatment between the third and fourth cycles does not directly affect anxiety and fatigue in women with breast cancer.

Keywords: Breast Cancer; Chemotherapy Treatment; Anxiety; Fatigue; Women.

https://doi.org/10.29289/259453942021V31S2075

METAPLASTIC BREAST CARCINOMA: CASE SERIES

Fergus Tomás Rocha de Oliveira[1], Rafael Everton Assunção Ribeiro da Costa[1], Eduarda Norberto Siqueira[1], Ana Lúcia Nascimento Araújo[2], Sabas Carlos Vieira[3]

[1]Universidade Estadual do Piauí – Teresina (PI), Brazil.
[2]Hospital São Marcos – Teresina (PI), Brazil.
[3]Oncocenter – Teresina (PI), Brazil.

Introduction: Metaplastic breast carcinoma (MBC) is understood as a heterogeneous group of malignant tumors, which exhibits the transformation of part or its entire glandular carcinomatous component into a nonglandular component by means of epithelial and mixed mesenchymal differentiation. The MBC is a rare and aggressive breast cancer, accounting for approximately 1% of all breast tumors that have a worse prognosis. The aim of this study was to describe four cases of MBC, analyzing the progression of patients in a mean follow-up of 25 months (11–43 months). **Case series:** All patients were female. The mean age of the four cases of the series was 50 years (40–61 years). All patients had tumors that were histologically classified as metaplastic carcinoma. The mean tumor size of the series was 8.3 cm (2.2–15.5 cm). Two patients had the angiolymphatic invasion, and none had the perineural invasion. In three cases, there was an axillary node involvement. None of the cases had metastasis at the time of diagnosis. All patients underwent surgical treatment. Concerning complementary treatment, all patients underwent chemotherapy, three underwent radiation therapy, and two received hormone therapy. Three patients had systemic recurrence with metastases (i.e., all progressed to death). The study was approved by a Research Ethics Committee, under CAAE Nº 30154720.0.0000.5209. **Conclusion:** With a mean follow-up of 25 months (11–43 months), three out of four cases (75%) presented systemic recurrence with metastases (i.e., all culminating in death), and one patient is alive without evidence of malignancy.

Keywords: Medical Records; Breast Neoplasms; Recurrence; Neoplasm Metastasis.

https://doi.org/10.29289/259453942021V31S2076

ANALYSIS OF PATIENTS WITH LOCALLY ADVANCED BREAST CANCER TREATED AT ICESP

Gabriela Bezerra Nobrega[1], Bruna Salani Mota[1], Gabriela Boufelli de Freitas[1], Jonathan Yugo Maesaka[1], Rodrigo Gonçalves[1], Sérgio Mitsuo Masili Oku[1], Angela Francisca Trinconi da Cunha[1], José Roberto Filassi[1]

[1]Setor de Mastologia, Faculdade de Medicina, Universidade de São Paulo – São Paulo (SP), Brazil.

Objective: The aim of this study was to assess the oncological efficacy of breast-conserving surgery (BCS) after neoadjuvant therapy (NT) in patients with invasive locally advanced breast cancer (LABC). **Methodology:** A retrospective cohort study was conducted at the Instituto do Cancer de São Paulo Octavio Frias de Oliveira (ICESP), with LABC (Stages IIb–III) treated with NT between 2010 and 2015. The endpoints were disease-free survival (DFS), local disease-free survival (LDFS), overall survival (OS), and residual tumor volume, considering pathological complete response (PCR) as ypT0 ypN0. The multivariable analyses were performed by using the Cox proportional hazard models. **Results:** In this study, 529 patients were included. The mean age was 52.7 (51.53–53.90). All patients were submitted to NT, i.e., 95.5% was submitted to neoadjuvant chemotherapy and 4.5%, hormone therapy. The mean follow-up was 62.33 (60.01–64.65) months. The PCR was identified in 12.7%. The BCS was performed in 24.6% (130) patients versus 75.4% (399) of mastectomies (MTs). There were no differences in 13% versus 9.2% (95%CI; p=0.2) LDFS for MT and BCS. The DFS was lower at 55.4% in the MT group versus 77.7% in the BCS group (95%CI; p<0.001). The mortality rate was 29.5%. In multivariable, the following factors were associated with higher risk of mortality: non-PCR (relative risk [RR] 2.23; 95%CI 1.173–4.242; p=0.002), pathological stage 3B or 3C (RR 2.193; 95%CI 1.377–3.492; p=0.004), and Ki67>30 (RR1.8; 95%CI 1.331–2.618; p=0.000). The type of surgery had no impact on mortality (RR 1.47; 95%CI 0.945–2.298; p=0.08). **Conclusion:** In our population, the BCS does not affect the LDFS rates and mortality, which seems to be safe to perform in patients who desire to conserve the breast after neoadjuvant treatment. PCR, clinical stage, and Ki67 had an important impact on mortality.

Keywords: Locally Advanced Breast Cancer; Neoadjuvant Therapy; Pathological Complete Response.

https://doi.org/10.29289/259453942021V31S2077

ASPECTS OF BREAST CANCER DIAGNOSIS AND DELAYED TREATMENT IN BRAZIL

Isabella Inês Rodrigues Rosa[1], Alexandre Santana Valadares[1], Douglas Marques de Paula[1], Tiago Paiva Prudente[1], Maria Elvira Freitas Martins[1], Guilherme Ferreira Barros, Ana Laura de Sene Amâncio Zara

[1]Faculdade de Medicina, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: Breast cancer is one of the leading causes of death in women worldwide. Several studies highlight the correlation between delayed treatment and high mortality. However, few researchers have addressed the main reasons for long delays in the healthcare system. This study aims to analyze different aspects influencing the postponement of treatment in Brazil. **Methodology**: An ecological approach using the secondary data from the Oncology Panel of the Brazilian Unified Health System (SUS). The data were collected on February 13, 2020, and included the diagnoses of breast cancer (ICD-10: C50 and D05) from 2015 to 2020. The aspects analyzed included the waiting time for the first treatment, procedure, staging, and region. Anatomopathological diagnoses made after a surgical procedure were not included. **Results**: According to the Brazilian laws, oncological patients need to start treatment within 60 days (5). However, the data reveal that only 45.22% of breast cancer patients (stages 2–4) started the treatment within 60 days. This is more alarming when looking at the procedures. Over half of the patients submitted to chemotherapy and 76.8% submitted to radiotherapy received their treatment after 60 days from the diagnosis. Interestingly, our geographic analysis did not reveal significant disparities among regions. The lower-income regions had 49.01–57.07% of patients treated after the recommended time frame. The higher-income regions had values from 43.44% to 54.44%. **Conclusion**: Despite the knowledge that later treatments result in worse outcomes and the legal right of earlier treatment, our results show a current controversial frame in Brazil. Most patients take longer than recommended, and the worst scenario is for radiotherapy patients. No substantial differences were found among lower- and higher-income regions, although it is likely that further analysis with different approaches could be more sensitive to deny or confirm this assumption.

Keywords: Breast Neoplasms; Epidemiology; Time-to-Treatment

https://doi.org/10.29289/259453942021V31S2115

GRANULAR CELL TUMOR SIMULATING BREAST CANCER ON SCREENING MAMMOGRAM: CASE REPORT

Erika Marina Solla Negrão[1], Livia Conz[1], Silvia Maria Prioli de Souza Sabino[1], Anapaula Hidemi Uema Watanabe[1], Jane Camargo da Silva Santos Picone[1], Edmundo Carvalho Mauad[1]

[1]Barretos Cancer Hospital – Barretos (SP), Brazil.

Introduction: Granular cell tumor involving the breast parenchyma is very rare, representing between 5 and 15% of the presentations of this tumor. Due to the appearance of the image, it is confused with breast carcinoma; therefore, it can be a diagnostic challenge for medical mastologists, radiologists, and pathologists. **Presentation of the case:** We report the case of a 45-year-old woman who presented a lesion identified by ultrasound image with characteristics classified as highly suspected of malignancy (BIRADS 4c). The screening mammography detected a dense image of obscured margins, and the ultrasonography revealed a homogeneous irregular nodule with indistinct margins, located in the upper lateral quadrant of the right, posterior, and peripheral breast measuring 1.2 cm. The lesion was subjected to percutaneous biopsy, and the histological examination combined with an immunohistochemical study revealed that it was a granular cell tumor. **Conclusion:** Although the granular cell tumor of the breast is a rare breast cancer, it must be considered in the differential diagnosis of lesions detected in imaging examinations. The granular cell tumor of the breast is a benign lesion, but the radiological findings suggest a malignant tumor, clinically and radiographically impossible to establish a definitive diagnosis without a biopsy.

Keywords: Granular; Cell Tumor; Breast Neoplasm; Breast Tumors.

https://doi.org/10.29289/259453942021V31S2078

CUTANEOUS AND BONE METASTASIS OF OCCULT BREAST CANCER: CASE REPORT

Rafael Everton Assunção Ribeiro da Costa[1], Fergus Tomás Rocha de Oliveira[1], Eduarda Norberto Siqueira[1], Ana Lúcia Nascimento Araújo[2], Sabas Carlos Vieira[3]

[1]Universidade Estadual do Piauí – Teresina (PI), Brazil.
[2]Hospital São Marcos – Teresina (PI), Brazil.
[3]Oncocenter – Teresina (PI), Brazil.

Introduction: Occult breast cancer (OBC) is defined as a metastatic carcinoma that occurs mainly in the axillary lymph nodes, derived from a primary malignant breast tumor undetectable by clinical and radiological analyses. OBC is a rare disease accounting for 0.3%–1.0% of all breast cancers, which occurs more commonly at the age of around 55 years. The OBC represents a rare event (especially with the manifestation of systemic metastases) and a major diagnostic challenge. Thus, the aim of this study was to report a case of OBC with the primary manifestation of cutaneous metastases and the subsequent detection of bone metastasis. **Case report:** A 70-year-old female patient, G1P0A0, nonsmoker, non-alcoholic, with hypertension, and sedentary lifestyle, exhibited multiple metastatic cutaneous lesions in the left cervical region (2 cm), of the left breast (3 cm), left axilla (0.5 cm), left subscapular region (3 cm), and in the second and fifth left chirodactyls (using anastrozole for 1 month). Mammography, ultrasonography, and magnetic resonance imaging of the breast were performed, and no structural alterations were detected in any of these tests. Biopsy of the skin lesion of the left cervical region and immunohistochemistry also indicated positive estrogen receptors (ER), progesterone receptors (PR), and GATA-binding protein 3 (GATA-3; compatible with breast cancer metastasis), establishing the diagnosis of occult breast cancer with cutaneous metastasis. The use of anastrozole was maintained. The scintigraphy was performed, indicating bone metastasis in the right coastal arcs 8 and 9 considered stable in a new test performed 8 months later. All cutaneous metastatic lesions disappeared 2 years later, with the exception of a lesion in the left cervical region, where surgical resection was indicated. The study was approved by a Research Ethics Committee, under CAAE No 30154720.0.0000.5209. **Conclusion:** The patient exhibited an excellent response to anastrozole and is in excellent general condition with the stability of bone metastasis.

Keywords: Neoplasm Metastasis; Neoplasms; Unknown Primary; Breast Neoplasms; Medical Records.

https://doi.org/10.29289/259453942021V31S2079

RECURRENCE IN MALE BREAST CANCER: A CASE SERIES

Rafael Everton Assunção Ribeiro da Costa[1], Fergus Tomás Rocha de Oliveira[1], Eduarda Norberto Siqueira[1], Ana Lúcia Nascimento Araújo[2], Sabas Carlos Vieira[3]

[1]Universidade Estadual do Piauí – Teresina (PI), Brazil.
[2]Hospital São Marcos – Teresina (PI), Brazil.
[3]Oncocenter – Teresina (PI), Brazil.

Introduction: Male breast cancer (MBC) is a very rare disease, which accounts for approximately 1.0% of all breast cancers and around 0.17%–1.0% of all male malignancies, more common in the age group of 60 years, and 93.7% of cases of MBC are histologically classified as the invasive carcinoma of no special type (ICNS). Treatment (i.e., surgery, radiotherapy, chemotherapy, and hormone therapy) and prognosis are similar to breast cancer in women. The aim of this study was to describe five MBC cases and to analyze the occurrence of relapse in a follow-up of 88 months (36–180 months). **Case series:** The mean age of five patients of the case series was 69 years (57–88 years). All cases were histologically classified as ICNS. The mean tumor size of the series was 2.6 cm (1.0–5.2 cm). One patient of the case series presented with perineural invasion, and another case had axillary node involvement (+5/15). None of the patients had metastasis at the time of diagnosis. All patients underwent surgery. Regarding complementary treatment, one patient underwent chemotherapy, radiotherapy, and hormone therapy (i.e., a case with axillary node involvement); two others underwent chemotherapy and hormone therapy; and the remaining two cases underwent treatment only with hormone therapy. One patient had systemic recurrence with the presentation of bone metastasis (75 months of follow-up). The study was approved by a Research Ethics Committee, under CAAE No 30154720.0.0000.5209. **Conclusion:** With a mean follow-up of 88 months (36–180 months), one of the five patients in the series (20%) showed systemic recurrence with bone metastasis.

Keywords: Recurrence; Breast Neoplasms; Male; Medical Records.

https://doi.org/10.29289/259453942021V31S2080

CHANGES IN BLOOD PRESSURE IN BREAST CANCER SURVIVORS UNDER A PHYSICAL EXERCISE PROGRAM

José Jean de Oliveira Toscano[1], Kettury Maria da Silva Barros[1], Amaro Wellington da Silva[1], Naira Sabrina Ferreira da Costa[1], Vicente de Paulo Silva Moreira[1], Carlos Alencar Souza Alves Júnior[2], Diego Augusto dos Santos Silva[2]

[1]Universidade Federal de Alagoas – Maceió (AL), Brazil.
[2]Universidade Federal de Santa Catarina – Florianópolis (SC), Brazil.

Objective: The main aim of this study was to verify chronic and acute alterations in the systolic blood pressure (SBP) and diastolic blood pressure (DBP) in breast cancer survivors undergoing a physical exercise program. **Methodology:** In a reference hospital for cancer treatment in the city of Maceió, Alagoas, Brazil, a total of 24 female breast cancer survivors, 56.8 (±7.7) years old, underwent a physical exercise program. Their blood pressure was supervised through digital blood pressure monitors for the wrist, before and after the exercise sessions. To make comparisons in each session — pre- and post-exercise — the paired sample t-test analysis was applied. For the chronic effect analyses, the analysis of variance for repeated measures (ANOVA RM) was used to identify the possible differences in SBP and DBP variables, pre-exercise, throughout the 15 training sessions. A significance level of 5% was considered. **Results:** Except for the fourth and sixth sessions, it was established that the SBP levels decreased in all sessions after they were completed ($p \leq 0.05$). For DBP, there was a significant decrease only after the first three exercise sessions. Regarding chronic effects, there was a mean reduction in SBP values at rest, throughout the sessions, with a hypotensive effect above 70% from the seventh session on ($p \leq 0.05$). Regarding DBP, differences in the DBP values at rest were enhanced from the tenth session onward, with a hypotensive effect above 94%. By comparing the beginning of the program with the last session, a difference in SBP and DBP, of -9.0 and -5.5 mmHg, respectively ($p<0.01$), was identified. **Conclusion**: Those survivors who joined the physical exercise program showed a chronic and acute decrease in both SBP and DBP levels.

Keywords: Cancer Survivors; Exercise; Arterial Pressure.

https://doi.org/10.29289/259453942021V31S2081

EVALUATION OF METABOLIC SYNDROME AND OBESITY IN BREAST CANCER SURVIVORS SUBJECTED TO INTERDISCIPLINARY APPROACH: A PROSPECTIVE COHORT STUDY

Vanildo Prado[1], Daniel Buttros, Luciana Buttros de Paula[1], Benedito de Sousa Almeida Filho[1], Heloisa Maria de Luca Vespoli[1], Carla Kamya Pessoa[1], Eduardo Pessoa[1], Eliana Aguiar Petri Nahás[1]

[1]Botucatu Medical School, Universidade Estadual Paulista "Júlio de Mesquita Filho" – Botucatu (SP), Brazil.

Objective: The aim of this study was to assess the occurrence of metabolic syndrome (MetS), obesity, and abdominal obesity during the first year after a diagnosis of breast cancer. **Methods:** This prospective observational study included women with a recent diagnosis of breast cancer. Women aged ≥40 years, with a recent diagnosis of breast cancer, were included. The clinical, anthropometric, and biochemical analyses were performed. Women with three or more diagnostic criteria were considered with MetS as follows: waist circumference (WC) > 88 cm; triglycerides (TG) ≥150 mg/dL; high-density lipoprotein <50 mg/dL; blood pressure ≥ 130/85 mmHg; and glucose ≥100 mg/dL. Obesity was considered with body mass index (BMI) > 30 kg/m^2 and abdominal obesity with WC >88cm. The measurements were carried out in three moments: first medical assessment (T0m), six months (T6m), and 12 months later (T12m). All patients underwent the interdisciplinary assessment (i.e., nutritional and psychological) at T0m. For statistical analysis, the ANOVA with repeated measures and the chi-square test of trend were used. **Results:** A total of 72 women with breast cancer were included, with a mean age of 58.4±10.7 years. In the assessment of MetS, BMI, and WC, no difference was observed in the occurrence between the three moments. When comparing the individual metabolic syndrome criteria between the three moments, there was only a statistical difference in the TG and glycemia criteria. The analysis of blood glucose showed a decrease in mean values, with a value of 106.6 mg/dL-T0m, 100.46 mg/dL-T6m, and 98.96 mg/dL-T12m (p=0.004). Regarding TG, an increase in mean values was observed, with a value of 121 mg/dL-T0m, 139.4 mg/dL-T6m, and 148.46 mg/dL-T12m (p=0.003). No cancer treatment showed an impact on the measured criteria. **Conclusion:** The interdisciplinary approach on the breast cancer survivors demonstrated a positive impact on the control of metabolic syndrome, obesity, and abdominal obesity on the first year of follow-up. Additionally, glycemic indices showed a significant decrease, but an increase in TG values was observed.

Keywords: Metabolic Syndrome; Obesity; Interdisciplinary Approach; Breast Cancer.

https://doi.org/10.29289/259453942021V31S2082

EXPERIENCE OF A PRIVATE HOSPITAL IN THE FEDERAL DISTRICT IN CRYOTHERAPY WITH A HYPOTHERMAL CAP FOR PATIENTS USING PACLITAXEL 80 MG/M² WEEKLY FOR 12 WEEKS

Patrícia Werlang Schorn[1], Juçara Motta Serafim Eliam[1], André Moreira Lemes[1], Caroli ne Alves de Souza Ramos[1], Juliana Sinezio Santos[1], Lenisa Cezar Vilas Boas[1], Elyse Carvalho Borges dos Santos de Figuerêdo[1]

[1]Hospital Santa Lucia Sul – Brasília (DF), Brazil.

Objective: Chemotherapy-induced alopecia (CIA) has a major impact on oncological patients and is reported as one of the first concerns among women, being often a condition that causes suffering. CIA is an expected adverse event in paclitaxel, an agent widely used in the treatment of breast cancer. Strategies have been used to minimize this undesirable effect, including the scalp cooling. The objective of our study was to report the frequency of the preservation of hair volu me in women who used a monodrug called "paclitaxel" at a dose of 80 mg/m^2/week for 12 weeks, using a hypothermic glycerin-based hydrogel cap in a private institution in the federal district. **Methods**: This descriptive retrospective study included 92 women with no evidence of alopecia at the beginning of monotherapy treatment with paclitaxel 80 mg/m^2/week for 12 weeks. They used a hypothermic glycerin-based hydrogel cap during the infusion of the drug. The quantification of alopecia was performed using the modified Dean scale and Common Terminology Criteria for Adverse Events version 4 (CTCAEv4). The patient characteristics such as age, type of hair, purpose of treatment, site of primary neoplasm were described. **Results**: From 2014 to 2018, 86 (93.5%) of the 92 patients who were included in the study had breast cancer. At the end of the 12 weeks of treatment, 83% of patients developed grade 1 alopecia by CTCAEv4. According to the modified Dean scale, 71% of patients were classified as alopecia grade 1, 12% as grade 2, 7.5% as grade 3, and 9.5% as grade 4. **Conclusion**: More than 80% of women, who were treated with paclitaxel weekly and used the hypothermic glycerin-based hydrogel cap, had at least 50% of their initial hair volume preserved by the two scales. These results suggest the effectiveness of the scalp cooling therapy in preventing CIA, being an important strategy to be considered to minimize the impact on the appearance and emotional damage caused by alopecia in these patients.

Keywords: Chemotherapy-Induced Alopecia; Hair; Paclitaxel; Hypothermic Cap.

https://doi.org/10.29289/259453942021V31S2083

PHYSIOTHERAPEUTIC APPROACH TO SCIENTIFIC CHANGES INVOLVED IN AXILLARY WEB SYNDROME: A CASE REPORT

Karla Ferreira do Carmo[1], Nayara Alves de Freitas Lemos[1], Ruffo Freitas-Junior[1], Suzana Fonseca Coelho e Faria[1], Osvaldo de Alcântara Braga Aidar[1], Débora Sara de Almeida Cardoso[1], Mosiah Araújo[1], Juliana Botti[2]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Lindomar Delgado Clinic – Juiz de Fora (MG), Brazil.

Objective: The aim of this study was to discuss the physiotherapeutic approach to around the scar tissue release in a patient with axillary web syndrome (AWS). **Methods**: A case report was conducted at the Mastology Program Outpatient Clinic of the Hospital das Clínicas/CORA (Advanced Center in Breast Diagnosis) at the Federal University of Goias. The study was approved by the Ethics and Research Committee of CEP-HC/UFG (opinion Nº 4,217,374), and the participant signed an informed consent form. **Case description:** A 71-year-old patient was included in the 5th postoperative (PO) period with modified radical mastectomy and left axillary lymphadenectomy for the treatment of breast cancer. She was referred to the physiotherapy service due to edema, pain, and associated to around the scar retraction. The restriction of movement of the homolateral limb was diagnosed with AWS. The approach included manual therapy through tissue mobilization, combined with lymphatic drainage and the use of functional bandages in the surgical plastron and cord region. **Result:** After three sessions, there was an improvement in edema and to around the scar retraction, gain in amplitude, and reduction in pain, regardless of the presence of a single fibrous cord. **Conclusion:** Tissue release through techniques aimed at myofascial mobilization, associated with complementary therapies, improved the malleability of the tissue, organized the deposition of collagen fibers, and lubricated the connective tissue, preventing and treating fibrosis, the factors involved in the etiology of SARS. This physiotherapeutic approach in the immediate PO proved to be beneficial in limiting dysfunction and optimizing recovery. More research is needed to understand the clinical aspect and possibilities of interventions related to AWS.

Keywords: Breast Neoplasms; Axillary Web Syndrome; Physiotherapy; Fascia.

https://doi.org/10.29289/259453942021V31S2084

ONLINE GROUP THERAPY WITH WOMEN DIAGNOSED WITH BREAST CANCER: A LOOK FROM PSYCHOLOGY PROFESSIONALS

Carolina de Souza[1], André Villela de Souza Lima Santos[1], Manoel Antônio dos Santos[1]

[1]Department of Psychology, Faculty of Philosophy, Sciences and Letters of Ribeirão Preto, Universidade de São Paulo – Ribeirão Preto (SP), Brazil.

Facing the pandemic of COVID-19 and the measures of social distancing, in order to reduce the spread of the new coronavirus (SARS-CoV-19), health services are using the technological resources to ensure the continuity of care in remote mode. In this context, the therapy group for women diagnosed with breast cancer has been adapted to the online videoconference. **Objective:** The aim of this study was to reflect on the professional psychological practice during the coronavirus disease 2019 (COVID-19) pandemic in an online group care with women with breast cancer. **Methodology:** This is a case report that joins the experiences of psychology professionals as group coordinators and internship supervisors, with reflections about a modality of telecare carried out by a health team, in the format of an online videoconference group. The experiences of the psychology team were understood in light of Martin Heidegger's existential analytics. **Results:** Coordinating a support group in the online modality proved challenging for psychology professionals. This model took some time to be adapted in order to make the professionals comfortable in making their statements and for the bond with patients to be established again. During the supervisions, the lack of practical material to be discussed among the interns was noticed, something that was slowly solved with group readings regarding the clinical practice and group dynamics, and later, with the return of the online group. **Conclusion:** Facing the pandemic threat has opened a new possibility of being-in-the-world with technological mediations of communication among people, which finds an alternative way of being-with-others in the group participation. Psychology care is characterized by offering qualified listening, directed to the embrace of the emotional demands presented. In the experiences related to COVID-19, the questioning of the existential condition leads to an increase in anguish that marks the perception of finitude and allows the subject to assume being toward death.

Keywords: Breast Neoplasms; Pandemics; COVID-19; Self-Help Groups.

https://doi.org/10.29289/259453942021V31S2085

"IT'S AS IF THERE IS NO COUPLE": EXPERIENCES OF LESBIAN WOMEN WITH BREAST CANCER AND THEIR PARTNERS IN HEALTH SERVICES

Carolina de Souza[1], Manoel Antônio dos Santos[1]

[1]Psychology Department, Ribeirão Preto School of Philosophy, Sciences and Letters, Universidade de São Paulo – Ribeirão Preto (SP), Brazil.

The model of a woman expected in health services is as follows: adult, mother, and heterosexual. Any woman who breaks this pattern is invisibilized or goes through services that are not adequate for her particular demands. Most of the time, lesbian women go unnoticed in health services, and the identification of their sexual orientation does not occur directly, in consultations with the women, but by the identification of others of characteristics considered as male gender, such as short hair, masculine way of walking, and type of clothes. **Objective:** This study aims to understand the meanings attributed by a lesbian couple to the discrimination suffered in health services. **Methodology:** This is a qualitative, cross-sectional, descriptive, exploratory study that had gender studies as theoretical references. One woman with breast cancer and her partner participated. An in-depth interview was conducted with each of the participants and, subsequently, the data were analyzed and discussed from the perspective of the inductive thematic content analysis. **Results:** The participants reported more than one experience of discrimination with the health professionals they encountered throughout the cancer treatment: sexist comments, invisibilization, and denial of the relationship of the two as a couple, among others. It can be said that women are taught, since they are born, to be mothers, to take care of others, and to "give pleasure to the other." Thus, the sexuality of women is denied, repressed, and feared. These gaps invisibilize lesbianities within the healthcare system. **Conclusion:** The findings of this study also allow us to look toward the health issues of lesbian women, whose vulnerabilities are amplified by the need to defend their dissident identities and sexualities when they are in contact with health services. Fighting the inequities experienced by lesbian women in the health sector is a challenge for the effective implementation of health rights, with respect to citizenship and dignity.

Keywords: Homosexuality; Female; Breast Neoplasms; Health Services; Discrimination.

https://doi.org/10.29289/259453942021V31S2086

CHANGES IN KI67 AS A PROGNOSTIC FACTOR AFTER NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER

Osvaldo de Alcântara Braga Aidar[1]

[1]Universidade Federal de Goiás, Faculdade de Medicina – Goiânia (GO), Brazil.

Objective: Patients with tumors that require neoadjuvant chemotherapy may have a better prognosis when there is a good response to therapy. Those who do not have a complete response are the target of studies that aim to improve overall survival, and for that, factors that guide additional therapy should be identified. This study aims to evaluate the prognostic influence of Ki67 and its variation between the values analyzed before neoadjuvant chemotherapy and after surgery in patients with residual disease. **Methods**: The medical records of 126 patients treated between 2008 and 2013 at CORA/HC-UFG with breast cancer were retrospectively analyzed. Of these, 43 patients with invasive breast carcinoma met the inclusion criteria, and the data were collected on the histological and immunohistochemical types, presence of hormone receptors for invasive breast tumors, in addition to the evaluation of age, stage, and chemotherapy medications used. Ki67 should be evaluated in the material of the diagnostic core biopsy and in the surgical specimen with residual disease after neoadjuvant chemotherapy. The monitoring of events was carried out until the cutoff date of January 1, 2019. **Results**: The high Ki67 value at diagnosis was related to a worse prognosis, while low values were related to a lower incidence of clinical events (p=0.004). The optimal value found in the receiver operating characteristic curve as a cutoff for high or low values was 25%, with the statistical significance for sensitivity and specificity (p=0.008). There was no statistical significance in event-free survival and overall survival related to the Ki67 variation assessed on biopsy and surgical specimen after neoadjuvant chemotherapy, with p=0.67 and p=0.57, respectively. **Conclusion**: The high rates of Ki67 at diagnosis are related to worse survival in patients who have undergone neoadjuvant chemotherapy and have residual disease. The variation of its values before and after neoadjuvant chemotherapy cannot be used as a predictive factor to the treatment until there are larger studies, with the standardization of its evaluation.

Keywords: Breast Cancer; Ki67; Neoadjuvant Chemotherapy; Complete Pathological Response; Residual Disease.

https://doi.org/10.29289/259453942021V31S2087

PREVALENCE OF PERIPHERAL NEUROPATHY SECONDARY TO CHEMOTHERAPY IN WOMEN WITH BREAST CANCER

Victor Domingos Lisita Rosa[1], Amanda Laíza dos Reis Mota[1], Diego Vinícius Gonçalves Santana[1], Lanuscia Morais de Santana[1], Beatriz Rocha Almeida[1], Hugo Francisco da Fonseca Neto[1], Lucas Pierson Brom Vieira[1], Ruffo de Freitas-Junior[1]

[1]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: This study aims to assess the prevalence of peripheral neuropathy in patients undergoing potentially neurotoxic chemotherapy for breast cancer. **Methodology:** This is a longitudinal study to assess the prevalence of peripheral neuropathy in women with breast cancer undergoing chemotherapy at the Hospital das Clínicas, Universidade Federal de Goiás (HC-UFG). The study was approved by the Ethics and Research Committee of HC-UFG, and all participants signed an informed consent form. For the data collection, two instruments were used, namely, Sociodemographic Form and Antineoplastic-Induced Neurotoxicity Questionnaire (AINQ). The Microsoft® Excel 2007 was used to tabulate the data, and the statistical analysis was performed using the SPSS® for Windows® program, version 22.0. **Results**: A total of 30 patients were included in this study. The average age was 51.2 years, and the sociodemographic evaluation showed that the majority of the participants were married (60%), 46.7% had one or two children, 23.3% were unemployed, and the schooling time was 9.88 years. As for the analysis of the AINQ in the three moments of the study, there was no statistical difference between the use of chemotherapy, body mass index, and age for a higher incidence of symptoms of peripheral neuropathy. The prevalence of symptoms of peripheral neuropathy in the sample was 83.3%, with orofacial symptoms being the most reported (grades 1 and 2). **Conclusion**: The study confirmed the high prevalence of neurotoxicity symptoms related to chemotherapy, both acute and chronic. The persistence of chronic symptoms suggests that, if chemotherapy-induced peripheral neuropathy (CIPN) is correctly diagnosed, it will be possible to control it early, avoiding further damage to patients.

Keywords: Breast Cancer; Neuropathy; Chemotherapy.

https://doi.org/10.29289/259453942021V31S2088

CASE REPORT: PATHOLOGICAL COMPLETE RESPONSE IN BREAST IN A PATIENT WITH METASTATIC BREAST CANCER TREATED WITH ANASTROZOLE

Paola Ferreira de Freitas[1], Renata Borges de Aquino[1], Andre Mattar[1], Jorge Yoshinori Shida[1], Luiz Henrique Gebrim[1]

[1]Pérola Byington Hospital, Women's Reference Center – São Paulo (SP), Brazil.

Background: De novo metastatic breast cancer is seldomly encountered in patients visiting doctor's clinics for the first time. This article reports a case of cervical/submandibular metastatic breast cancer treated with neoadjuvant endocrine therapy (NET) with anastrozole (ANA). **Case description:** We herein report on a patient affected by HR+, HER2–, and metastatic breast cancer treated with NET that presented after 6 months with the possibility of breast-conserving surgery due to clinical and radiological complete response, revealing after surgery pathological complete response. **Conclusion:** Even for patients with metastatic luminal breast cancer, NET with an aromatase inhibitor, especially ANA, is a good option for postmenopausal women with fewer side effects and allowing for breast-conserving surgery with less morbidity when comparing with chemotherapy and yet yielding good results.

Keywords: Breast Cancer; Metastatic Breast Cancer; Neoadjuvant Endocrine Therapy; Anastrozole.

https://doi.org/10.29289/259453942021V31S2089

ACCESS TO HEALTH SERVICES IN TOCANTINS, FROM 2009 TO 2019.

Amanda Cristina de Souza Vieira[1], Bianca Borges Martins[1], Matheus Nascimento Duarte[1], Thiago de Moura Arruda[1], Wglaison Paulo Araújo Sobral[1], Fabiana Cândida de Queiroz Santos Anjos[1], Priscila Ferreira Barbosa[1]

[1]Universidade de Gurupi – Gurupi (TO), Brazil.

Objective: The aim of this study was to analyze the distribution of access to mammography services in the Tocantins in the eight health regions of the state. **Methodology:** We used the data from the Breast Cancer Information System regarding the number of mammograms performed according to the municipality, from 2009 to 2019. The data were grouped according to the health region of each municipality, analyzing the absolute frequency. A chi-square test was applied, analyzing the significant relationship ($p<0.05$) between the number of municipalities in the region and the number of tests performed. **Results:** Among the health regions, the Bico do Papagaio has a greater representation in the number of cities, with 17.2% (n=24), followed by the Cerrado Tocantins-Araguaia, with 16.5% (n=23). During the period, 91,059 mammograms were performed, with one region: 33.2% (n=30,249) in the Capim Dourado; 19% (n=17,307) in the Middle North Araguaia; 13% (n=11,372) in the Ilha do Bananal; 11% (n=10,177) in the Bico do Papagaio; 8% (n=7,152) in the Cantão; 6.7% (n=6,083) in the Southeast region; 6.6% (n=6,005) in the Cerrado Tocantins-Araguaia; and 2.5% (n=1,978) in the Amor Perfeito. There was a significant difference between the variables ($p<0.05$), where it is clear that the second smallest region in the number of municipalities, Capim Dourado (10%), has the highest number of tests performed. **Conclusion:** The accelerated urbanization had, as one of its main consequences, an accentuation of social inequalities, such as which can be elucidated in the centralization of resources. The principle of equity in access to the examination is neglected once more examinations were performed in the region with less representation in the municipalities, but with the greater technological development. It is possible to see a demand for the development of public policies, in order to reduce the economic and social divergences that hinder health promotion.

Keywords: Mammography; Public Health; Health Equity.

https://doi.org/10.29289/259453942021V31S2090

EPIDEMIOLOGICAL RELATIONSHIP BETWEEN HORMONE REPLACEMENT THERAPY AND BREAST CANCER

Amanda Cristina de Souza Vieira[1], Antônio Pedro Oliveira de Vasconcelos[1], Jaqueline Maria Pinheiro de Araujo[1], Juliana Comin Müller[1], Larissa de Cassia Afonso Magalhães[1], Renato Duarte da Silva[1], Ricardo Baroni Vieira[1], Fabiana Candida de Queiroz Santos Anjos[1]

[1]Universidade de Gurupi – Gurupi (TO), Brazil.

Objective: The aim of this study was to epidemiologically analyze the hormone replacement therapy (HRT) and the emergence of breast cancer. **Methodology**: This is an article review from the databases such as LILACS, SciELO, Bireme, and Medscape, utilizing the keywords: menopause, HRT, breast cancer and complications, employing the use of connectors when necessary. This review aims to elucidate what has been published in the last years about the usage of hormone therapy and the emergence of breast cancer since there are disagreements between the literature. **Results**: The analysis displayed positive effects during the usage of HRT, such as maintenance of bone density, prevention of fractures, and cardiovascular events in patients with no previous changes in this system, and also showed us a strong relationship between HRT and the incidence of breast cancer in menopausal women with a focus into the imposing time of use ratio. Meanwhile, this development risk of breast CA can be reduced in the long run with the withdrawal of the previously initiated therapy. The progesterone HRT has been shown to have lower risks in association with estrogen than when compared with the association of synthetic progestins and estrogen. Associations have similar results for oral and skin HRT. In patients using the postmenopausal hormone therapy, the risk of mortality from breast cancer was reduced in patients with exposure for a maximum of 5 years, more than 5–10 years, or more than 10 years. **Conclusion**: In view of the exposure, it is considered that the HRT is more beneficial than malefic to the life and health of women. Meanwhile, the risk of breast CA goes up while the HRT time stretches over the years. Thus, it is necessary to individually evaluate the benefits and risks to better identify the therapy that should be utilized.

Keywords: Menopause; Hormone Replacement Therapy; Breast Cancer and Complications.

https://doi.org/10.29289/259453942021V31S2091

RELATIONSHIP BETWEEN SOCIOECONOMIC FACTORS AND FNA RESULTS BY THE REGIONS OF BRAZIL

Amanda Cristina de Souza Vieira[1], Bianca Borges Martins[1], Matheus Nascimento Duarte[1], Thiago de Moura Arruda[1], Wglaison Paulo Araújo Sobral[1], Fabiana Cândida de Queiroz Santos Anjos[1], Priscila Ferreira Barbosa[1]

[1]Universidade de Gurupi – Gurupi (TO), Brazil.

Objective: The aim of this study was to analyze a prevalence relationship between the results of breast cytopathological examinations and the regions of Brazil. **Methodology:** This is a retrospective, epidemiological, and cross-sectional study, where the data were obtained from the Breast Cancer Information System, regarding the results of breast cytopathological examinations performed by fine-needle aspiration (FNA), from January 2009 to July 2015. The Brazilian North, Northeast, Southeast, South, and Midwest regions were selected. The FNA result variables selected were as follows: benign negative malignancy processes, compatible undetermined malignancy, suspect for malignancy, positive for malignancy, and inconsistent information. The collected data were tabulated and treated statistically to determine the absolute prevalence, analyzing the percentage relationship between the results of the FNA and social conditions of the regions. **Results:** In total, 63,240 cytopathologies were reported by FNA in Brazil, the region with the highest prevalence of this examination was the Southeast, with 39% (n=24,618), followed by the Northeast, with 30.3% (n=19,162), being the North, the lowest prevalence of notifications, 2.6% (n=1,665). Among the results of the FNA, the highest frequency of the examinations resulted in a benign result, representing 88% of the total (n=55,685). The highest incidence of biopsies positive for malignancy was in the Southeast, 8.3% (n=2,056). **Conclusion:** The Southeast has greater socioeconomic development, which contributes to an increase in risk factors for women in the region, such as a lower number of pregnancies, as well as postponing it. The results found leave room for further investigation, given that populous regions, such as the North, and with significant population aging, such as the Midwest and the South of Brazil, reported a very small number of biopsies performed, which may reflect failures in public health policy, difficulty in accessing the test or underreporting of this procedure.

Keywords: Biopsy; Needle; Risk Factors; Breast Neoplasms.

https://doi.org/10.29289/259453942021V31S2092

RELATIONSHIP BETWEEN THE AGE RANGE OF MAMMOGRAPHY AND THE BI-RADS CLASSIFICATION FOUND IN PATIENTS WITHOUT RISK FOR NEOPLASIA

Amanda Cristina de Souza Vieira[1], Bianca Borges Martins[1], Matheus Nascimento Duarte[1], Thiago de Moura Arruda[1], Wglaison Paulo Araújo Sobral[1], Fabiana Cândida de Queiroz Santos Anjos[1], Priscila Ferreira Barbosa[1]

[1]Universidade de Gurupi – Gurupi (TO), Brazil.

Objective: The aim of this study was to analyze a relationship between the age range of mammography and BI-RADS, in patients without a high risk for neoplasia. **Methodology:** This is an epidemiological, cross-sectional, and retrospective study, based on the data from the Breast Cancer Information System, with the variables as follows: period, from January 2009 to July 2015; age group, from 30 to above 70 years old, distributed in groups of 10 years; BI-RADS category, from 0 to 6; high risk, not high risk. The collected data by using the chi-square test, with a significance level of 0.05. **Results**: A total of 4,419,869 cases were observed. The age group that most performed the examination was 40–49 years old, representing 40.2% (n=1,777,924), followed by the age group 50–59 years old, with 29.5% (n=1,305,317). The age group that did the least was above 70 years, with 5.9% (n=257,338). Among the BI-RADS classification, it can be noted that categories 1 and 2 were the most prevalent, with 45.8 and 40.3%, respectively. There was a significant difference ($p<0.05$) in the incidence rates of all BI-RADS classification between the age groups: 30–39, 60–69, and above 70 years. The age groups of 40–49 and 50–59 years did not show a significant difference ($p>0.005$) in any of the BI-RADS classifications. **Conclusion**: It was observed in this research that there is no significant difference between the BI-RADS of mammograms performed in patients aged 50–59 and 40–49 years. In this context, the need for further investigation into the effectiveness of public health policy in effect is highlighted, where the likely increase in public costs with a greater number of mammograms does not equate to costly cancer treatment.

Keywords: Mammography; Clinical Protocols; Primary Prevention.

https://doi.org/10.29289/259453942021V31S2093

BREAST CANCER IN YOUNG PATIENTS: PROGNOSTIC AND PROFILE EPIDEMIOLOGICAL ANALYSIS IN A TERTIARY HOSPITAL

Amilcar Alves Assis[1], Mauro Passos[1], Rodrigo Kouzak[1], Karoline Evangelista[1], Natasha Caldas[1]

[1]Hospital de Base do Distrito Federal – Brasília (DF), Brazil.

Breast cancer is the second most prevalent and first in mortality in Brazilian women. Its incidence has increased in recent years in all age groups. According to the Instituto Nacional do Câncer in 2019, 59,700 new cases of breast cancer are expected, with an estimated risk of 56.33 cases per 100 women. The diagnosis of breast cancer is more frequent in women after 50 years of age; it is estimated that only 25% of all cases occur in women below the age of 50 years; however, there was a literature consensus that tumors in this young age group have a worse prognosis, both because they are biologically more aggressive and because of affect women outside the screening age group in Brazil; thus, the rate of locally advanced disease at diagnosis in this age group is considerably higher. It is suggested that early onset breast cancer is related to different etiological factors, histopathological aspects, and clinical outcomes, as compared to postmenopausal breast cancer. Thus, age becomes an important prognostic factor. Since breast cancer is a curable pathology, the type of therapeutic approach also varies, with proposed treatment tends to be more aggressive. With the advent and increasing availability of genetic tests, predisposition of breast cancer has increased the number of indications for prophylactic mastectomies, especially in younger age groups or notably in patients with known pathological mutations in BRCA1 and BRCA2 genes. However, the literature is still controversial regarding its impact on overall survival. Breast cancer diagnosed before the age of 50 years is a behavioral disease, with prognosis and approach very different from that diagnosed in postmenopausal women. Therefore, it is important to know the profile of these patients to provide optimal treatment and achieve the best outcomes.

Keywords: Breast Cancer; Young Women; Premenopause.

https://doi.org/10.29289/259453942021V31S2094

IMPACT OF BREAST RECONSTRUCTION ON MORTALITY AFTER BREAST CANCER: SURVIVAL ANALYSIS IN A COHORT OF 620 CONSECUTIVE PATIENTS

Bernardo Pinheiro de Senna Nogueira Batista[1], Suzana Sales de Aguiar[1], Ana Carolina Padula Ribeiro-Pereira[1], Rosalina Jorge Koifman[1], Anke Bergmann[1]

[1]National Cancer Institute – Rio de Janeiro (RJ), Brazil.

Background: Access to breast reconstruction is a complex and poorly understood aspect of survival. In the United States, although the rate of immediate reconstruction has tripled in the past 20 years, less than 40% of women undergoing a mastectomy will do so as part of the same procedure. Although there is common understanding that breast reconstruction is oncologically safe, published data on its impact on survival show conflicting and unjustified observations. **Methods:** We performed a secondary survival analysis in a fixed cohort of 620 consecutive patients who underwent mastectomy between August 2001 and November 2002 in a publicly financed tertiary cancer center. **Results:** Median follow-up was 118.4 months (6–172). Of the 620 patients, 253 (40.8%) died during follow-up. And 94 (15.2%) patients underwent breast reconstruction. An unadjusted Cox regression model with breast reconstruction as a time-dependent covariate showed a 60% reduction in the risk of death for patients who underwent reconstruction (crude HR=0.4; 95%CI 0.25–0.65; p<0.001). When adjusted for potential confounders registered in the primary study, the risk reduction was 44% (adjusted HR=0.56; 95%CI 0.34–0.92; p=0.02). **Conclusion:** Access to breast reconstruction is associated with better survival after mastectomy. Although encouraging, these observations lack biological plausibility and inferences, suggesting that any causal effect is probably driven by confounding and/or interaction with unmeasured variables. The magnitude of the observed association, however, might suggest that, in settings where access to breast reconstruction is severely limited, patient selection for breast reconstruction could be an important drive of the observed association.

Keywords: Breast Neoplasm; Mammoplasty; Survival; Measures of Association; Confounding Factors.

https://doi.org/10.29289/259453942021V31S2095

FAT GRAFTING AFTER RADIOTHERAPY AND BREAST IMPLANT

Paulo Roberto Moura de Sousa[1], Mauricio de Aquino Resende[1], Ailton Joioso[1], Raimundo Jovita Araujo Bonfim[1], Carlos Eduardo Witoslawski Breda[1]

[1]Amaral Carvalho Hospital – Jaú (SP), Brazil.

This is a case report of reconstruction of the right breast and aesthetic improvement of the left breast, in a 52-year-old smoker woman, with bilateral breast cancer, neoadjuvant chemotherapy, modified radical mastectomy on the right, quadrantectomy with left, lymphadenectomy, and radiotherapy (RT). She sought the Amaral Carvalho Hospital for reconstructive surgery after 6 years of treatment. She underwent fat grafting (FG) with 237 mL on the right breast and 90 mL on the left breast and correction of the left areola. After 6 months, a retromuscular tissue expander was placed on the right, and remodeling of the breast and correction of the surgical scar are done on the left. After 8 months of achieving expansion with 350 mL of saline solution, the tissue expander was replaced by a wide base anatomical prosthesis with 485 mL and a 225 mL nonanatomical round prosthesis additive to the left. RT makes breast reconstruction difficult, as it gives better results with myocutaneous flaps. FG has a regenerative effect on irradiated tissues. Historically, reconstruction with autologous tissue is preferable to reconstruction with implantation in patients irradiated after mastectomy, as it presents less reoperation (16.6% vs. 37.0%, $p<0.0001$), total complications (30.9% vs. 41.3%, $p<0.0001$), and reconstructive failure (1.6% vs. 16.8%, $p<0.0001$). Radiodermite affects more than 90% of patients treated with RT. The dermis is affected with an increase in fibrosis, reduction in the number of capillaries, and irregular distribution. FG is able to reverse these changes. FG improves the characteristics of irradiated tissue, restores elasticity, and allows breast reconstruction with an implant without a myocutaneous flap.

Keywords: Fat Graft; Radiotherapy; Breast Reconstruction; Breast Implant.

https://doi.org/10.29289/259453942021V31S2096

BREAST IMPLANT–ASSOCIATED ANAPLASTIC LARGE CELL LYMPHOMA (BIA-ALCL): A CASE REPORT WITH ATYPICAL SYMPTOMS

Elisana Maria Santos Caires[1], Régis Resende Paulinelli[1], Miliana Tostes Lucatto[1], Eneida Ribeiro Marinho[1], Henrique Moura de Paula[1]

[1]Hospital Araújo Jorge – Goiânia (GO), Brazil.

The BIA-ALCL is a rare type of T-cell lymphoma CD30+ e AKL–, occurring more common in women with Allergan-textured implants. It presents most frequently as a late-onset accumulation of seroma fluid between the implant and less frequently as a palpable tumor mass, with malignant cells infiltrating through the capsule and surrounding tissue with potential lymph node and systemic involvement. This article describes a case report of a 65-year-old female patient with BIA-ALCL complaining of erythema in her right breast for almost 7 months. She agreed no family history of cancer and no fever. The patient was diabetic type 2, dyslipidemic, and postmenopausal taking estrogen therapy. She had undergone a breast augmentation with 215 mL polyurethane-coated implants 15 years ago. Imaging revealed right axillary lymph node enlargement, thickening of the breast parenchyma, and minimal periprosthetic seroma. The initial suspicion was infection wherefore she was submitted removal of the implants, partial capsulectomy on the right side, and total contralateral capsulectomy. Immunochemistry confirmed BIA-ALCL CD30+ e AKL– on the right and no disease on the left. Bacterioscopy was negative. A complementary surgical procedure involving removal of all the right capsules, resection of axillary palpable nodes, and reconstruction was necessary to achieve a bilateral oncoplastic mastopexy. The final diagnosis was BIA-ALCL confined capsule with negative margins and none axillary lymph nodes involvement, staging IB. No adjuvant treatment was necessary. The patient remained symptom free during follow-up examinations, and she desires a new breast augmentation.

Keywords: Breast implant-associated anaplastic large cell lymphoma; Breast implants; Lymphoma.

https://doi.org/10.29289/259453942021V31S2097

THE IMPORTANCE OF SURGICAL TRAINING IN THE AESTHETIC IMPACT OF BREAST CARE AT HOSPITAL GERAL DE PALMAS

Nilo Coelho Santos Júnior[1], Bruno Garcia Simões Favaretto[1]

[1]Universidade Federal do Tocantins – Palmas (TO), Brazil.

Objectives: In view of the prominent incidence and morbidity (especially cosmetic and psychological) associated with breast cancer, it was intended to demonstrate the evolution of the surgical approach of this pathology in women operated at the Hospital Geral de Palmas (HGP), in the pre- and post-training course in breast oncoplasty (BO) by mastologists. **Methodology**: A retrospective cohort study of surgery for breast cancer in women performed from July 2013 to June 2016 at the HGP. The study criteria were based on patients' identification and respective age, date of surgery, and the type of surgery, either reconstructive or radical. The number of reconstructive surgeries was compared between the period before the end of the training (pre-course, July 2013, to December 2014) and the period that followed (post-course, January 2015 to June 2016). The descriptive statistics and the comparison of the variables were analyzed using the software IBM®SPSS® Estatistics 20.0. The Kolmogorov–Smirnov test was used for normality analysis and the one-sample chi-square test for expected distribution with one degree of freedom (DF). The association between the type of surgery and the period (pre- or post-course) was assessed with Pearson's chi-square (χ^2-P) and its subsequent continuity correction (CC), likelihood ratio (λLR), and Fisher's exact test by linear-by-linear association (FEL-LA). Significance level α=5% was adopted. **Results**: Records of 94 surgeries performed before and 134 after training were found. Of these, the percentage of reconstructive practices increased from 5.3% (2013–2014) to 53.7% (2015–2016), with a significant association with the completion of training in BO (χ^2-P=57.891; CC=55.747; λLR=67.533; FEL-LA=57.637; DF=1; p<0.001). **Conclusion**: The training in BO provides better aesthetic conditions and, therefore, better quality of life after surgery, in addition to allowing assistance to more patients, regardless of the plastic surgery team dedicated to oncoplastic procedures.

Keywords: Mastectomy; Breast Cancer; Mammoplasty.

https://doi.org/10.29289/259453942021V31S2098

COMPARATIVE ANALYSIS BETWEEN IMMUNOHISTOCHEMISTRY PATHOLOGICAL SUBTYPING AND MAMMAPRINT® GENETIC SIGNATURE IN PATIENTS WITH BREAST CANCER IN BRAZIL: A PILOT STUDY

Fabio Postiglione Mansani1, Mariane Marcelino Fernandes1, Mario Rodrigues Montemor Netto1, Cristiane da Costa Bandeira Abrahão Nimir2

[1]Universidade Estadual de Ponta Grossa – Ponta Grossa (PR), Brazil.
[2]Laboratorio FEMME – São Paulo (SP), Brazil

Introduction: Immunohistochemistry, in breast cancer samples, measures the expression of biomarkers such as estrogen receptor (ER), progesterone receptor (PR), HER2, and Ki67. Using the positivity or negativity of the receptors and the Ki67 value, this method, along with the histological results, allows the doctors to classify the tumors into four types as follows: Luminal A, Luminal B, HER2, and basal/triple negative. Genetic signature is a tool involving in numerous studies in this area; however owing to the difficulty of access to the tests, its usefulness is still limited. MammaPrint® was the first test approved by the Food and Drugs Administration (FDA) in 2007 to measure prognostic value associated with breast cancer recurrence and classify patients with breast cancer into "low risk" or "high risk" of developing metastases within the first 10 years after diagnosis and elucidates the patient's need for adjuvant chemotherapy. It categorizes tumors into subtypes based on biological homogeneity. This study aims to analyze the concordance between the results of immunohistochemistry pathological subtyping and MammaPrint®, which is accompanied by BluePrint®, for the classification and stratification of luminal breast cancer. **Material and Methods**: Data were collected from the medical records of 19 patients in the Instituto Sul Paranaense de Oncologia (ISPON) who presented immunohistochemistry and genetic test compatible with luminal tumors. Immunohistochemistry was evaluated through hormone receptors, HER2 and mainly Ki67, as defined by the 2013 St. Gallen guidelines (50% of the sample were centrally assessed). For classification by the genetic test, BluePrint® provided the molecular subtype data and MammaPrint® stratified the risk, establishing Luminal A tumors as low risk and Luminal B as high risk. The concordance between the immunohistochemical classification and the genetic test was evaluated with the nonparametric McNemar-Bowker test. The Ki67 cutoff value predictive for recurrence risk compared with MammaPrint® was accessed by the ROC curve. **Results**: The results showed that, on one side, only 33.3% of patients classified as Luminal A by immunohistochemistry were also classified by the genetic signature as Luminal A. On the other side, on the tumors classified as Luminal B, 60% presented agreement between the classifications. Overall agreement among the tests was 47.3%. The cutoff value found for Ki67 predictive of tumor recurrence risk was ≤5, with a sensitivity of 100% and a specificity of 33%. The agreement between hormonal receptors and HER2 with BluePrint® was 100%. **Conclusion**: This study provides preliminary data regarding the prognostic and predictive value of genetic and molecular tests — represented by MammaPrint®/BluePrint® and immunohistochemistry—in a sample of Brazilian population, evidencing a discrepancy between the methods. The cutoff value of Ki67 predictive for recurrence risk remains under discussion, since there is no standardization of its measurement methodology. As a result, new studies could be developed, with larger and multicentric samples.

Keywords: Breast Neoplasms; Gene Expression Profiling; Immunohistochemistry; Prognosis; Genomic Test; Breast Cancer Recurrence.

https://doi.org/10.29289/259453942021V31S2099

ANALYSIS OF A SERIES OF INVASIVE BREAST CANCERS PERCUTANEOUS COMPLETELY RESECTED (ICPR) BY VACUUM-ASSISTED BIOPSY (VAB) OR EXCISION (VAE) AND ITS CLINICAL IMPLICATIONS

Henrique Lima Couto[1], Carolina Nazareth Valadares[1], Aleida Nazareth Soares[1], Vivian Resende[1], Paola Hartung Toppa[1], Bernardo Ferreira de Paula Ricardo[1], Tereza Cristina Ferreira de Oliveira[1], Douglas de Miranda Pires[1]

[1]Clínica Radiológica Ambulatorial Redimasto, Redimama Ltda – Belo Horizonte (MG), Brazil.

Objectives: To evaluate ICPR by VAB or VAE and its clinical implications. **Methodology**: A retrospective analysis of ICPR by VAB/VAE from January 4, 2017, to September 10, 2020, confirmed no tumor on surgical pathology. Age, imaging, pathological features, guidance approach (ultrasound × stereotaxis), and procedure (VAB × VAE) were analyzed using paired t test. This study was approved by Ethical Committee. **Results**: Twenty-one ICPR were found, patients' age ranged from 35 to 91 years (mean 61.57); 14 (66.7%) invasive cancer (IC) (12 ductal and 2 lobular), 6 (28.6%) IC associated with ductal carcinoma in situ (DCIS), 1 (4.7%) IC associated with DCIS with comedonecrosis; 5 (23.8%) nuclear grade (NG) 1, 14 (66.7%) NG2, and 2 (9.5%) NG3; 10 (47.6%) histologic grade (HG) 1, 9 (42.9%) HG2, and 2 (9.5%) HG3; 2 (9.5%) pN1sn (one and two nodes metastatic); 1 (4.8%) multicentric; 3 (14.3%) recurrences; 12 (57.1%) Luminal A, 5 (23.8%) Luminal B, 2 (9.5%) Luminal Her, 1 (4.8%) HER2 positive, and 1 (4.8%) triple negative; 19 (90.5%) VAEs and 2 (9.5%) VABs; 21 (100%) guided by ultrasound (US); 18 (85.7%) masses, and 3 (15.3%) masses associated with calcifications; and tumor size on image (TI) ranged from 4 to 11 mm (mean 7.5 mm; SD 1.9 mm) and 3 to 11 mm on pathological VAB/VAE specimen (TV) (mean 5.7 mm; SD 1.9 mm; $p<0.001$). **Conclusion**: It is possible to percutaneously complete resect invasive cancers (ductal or lobular), of any IMQ subtype, smaller than 11 mm, although 9.5% harbors metastatic sentinel nodes. Staging (TNM) should be based on TV, although TI can be used in the absence of TV. Despite TI larger than TV, there is no clinical relevance. For prospective trials of ICPR, selecting criteria should be VAE for US masses, less than 11 mm, of less aggressive subtypes.

Keywords: Breast Neoplasms; Biopsy; Needle; Ultrasonography; Interventional.

https://doi.org/10.29289/259453942021V31S2100

SUCCESSFUL RECOVERY OF BREAST CANCER SCREENING AND DIAGNOSIS RATES DURING COVID-19 PANDEMIC BY ADOPTING THE RECOMMENDATIONS OF THE BRAZILIAN COLLEGE OF RADIOLOGISTS (CBR), THE BRAZILIAN FEDERATION OF GYNECOLOGISTS AND OBSTETRICIANS (FEBRASGO), AND THE BRAZILIAN MASTOLOGY SOCIETY (SBM): DATA FROM A PRIVATE BREAST UNIT IN BELO HORIZONTE, BRAZIL

Henrique Lia Couto[1], Nayara Carvalho de Sá[1], Rachel Saraiva Teatini Selim de Sales[1], Tereza Cristina Ferreira de Oliveira[1], Patrícia Martins Gomes El Bacha[1], Shirley das Graças Ferreira[1], Gabriel de Almeida Silva Junior[1], Carolina Nazareth Valadares[1]

[1]Clínica Radiológica Ambulatorial Redimasto, Redimama Ltda – Belo Horizonte (MG), Brazil.

Objectives: To present the results of adopting CBR/FEBRASGO/SBM recommendations for breast cancer screening and diagnosis during 2020 COVID-19 PANDEMIC on mammograms (MMG), breast ultrasound (BUS), breast biopsy (BB), and cancer diagnosis (CD) rates. **Methodology**: Comparing by month the total number of MMG, BUS, BB (composed of fine needle, core, and vacuum procedures), and invasive and in situ cancers diagnosis (CD) performed at Redimama, a private breast unit from Belo Horizonte Brazil, that adopted CBR/FEBRASGO/SBM recommendations for breast cancer screening and diagnosis during the 2020 COVID-19 pandemic year to 2019 same period. **Results**: In April 2019, 391 MMG, 714 BUS, 223 BB, and 22 CD were performed, compared with 115 (29.4%) MMG, 313 (43.8%) BUS, 116 (52%) BB, and 11 (50%) CD in 2020. A continuous and fast recovery occurred along the time. In 2019 first semester, 2241 MMG, 4229 BUS, 1214 BB, and 84 CD were performed, compared with 1,903 (88.7%) MMG, 4,227 (99.2%) BUS, 1,044 (86%) BB, and 92 (109.5%) DC in 2020. In 2019, 4,424 MMG, 10,395 BUS, 3,304 BB, and 231 CD were performed, compared with 4,561 (110.79%) MMG, 11,549 (120.72%) BUS, 3,011 (91.13%) BB, and 226 (97.83%) CD in 2020. In 2019, the median size in image (T) by MMG/BUS for invasive cancers (IC) was 18.18 mm, from CD 184 (79.66%) were IC, and 47 (20.4%) ductal carcinoma in situ (DCIS) compared to a T of 18.2 mm, 191 (86.52%) IC, and 35 DCIS in 2020. **Conclusion**: Adopting the CBR/FEBRASGO/SBM recommendations for breast cancer screening and diagnosis results to recovery the prior pandemic levels. Recovery of MMG and BUS is faster and shows a "J" curve compared with recovery of BB and CD that shows a "´U"` curve with a delay. This strategy should be adopted in Brazil in order to maintain breast cancer screening and diagnosis.

Keywords: Breast Neoplasms; Screening; Mammograms; Breast Ultrasound; Biopsy.

https://doi.org/10.29289/259453942021V31S2101

GENETIC EVALUATION OF MICROCALCIFICATIONS AS A PROGNOSTIC FACTOR

Nancy Ferreira[1], Darley Ferreira[1], Thais Ferreira[1]

[1]Barão de Lucena Hospital – Recife (PE), Brazil.

Introduction: Breast cancer is the most recurring type of cancer among women, with reduced mortality at an initial stage of lesion. From a radiological perspective, perceived microcalcifications may be associated with histological findings such as proliferative injuries with or without atypical features and ductal carcinoma in situ. Currently, percutaneous and vacuum biopsies allow for the correlation between anatomoradiological and identification of previous lesions and those that offer the risk of cancer. No biomarker has been established to predict the risk of cancer in women diagnosed with benign mammary disease. Doing so could strengthen the possibility of stratifying the individual risk of benign injuries for cancer. The platelet-derived growth factor receptor A (PDGFRA) plays its part in tumor oncogenesis, angiogenesis, and metastasis, and its activation is found in some kinds of cancer. In contrast, DNA methylation standards are initial changes to the development of cancer and may be helpful in its early identification, being regulated by a family of enzymes called DNMTs (DNA methyltransferase). **Methods**: The aim of this study was to evaluate the profile of BI-RADS® 4 and 5 mammary microcalcification women carriers and determine the level of the gene expression of possible molecular markers in 37 patients with mammary microcalcification (paraffin blocks) and 26 patients with breast cancer (fresh in RNA later tissue) cared for at the Hospital Barão de Lucena's Mastology Ambulatory. Anatomoradiological aspects along with clinical findings have been evaluated , and percentage rates have been calculated. The PDGFRA and DNMTs (DMNT3a) gene expressions have been established using quantitative polymerase chain reaction (qPCR), with the use of β-actin as reference gene. **Discussion**: In the patients with mammary microcalcification, the average age was 55.9; predominantly white-skinned subjects ($p<0.014$). Most of them were mothers ($p<0.001$) and breastfeeding ($p<0.001$), and the average menarche age was 13. The subgroups that presented greater significance were patients classified BI-RADS® in category IV (67.6%) and histological findings of nonproliferative lesion ($p<0.001$). Lesions of the ductal carcinoma in situ type (100%) presented positive estrogen and progesterone receptors, and 94.6% have undergone sectorectomy surgery by prior needling ($p<0.001$). The most damaged breast was the left one (62.2%), and the most affected quadrant was the top lateral one (59.5%) ($p<0.001$). There was no family history in 83.8% of the cases. In the tested microcalcification samples, it was not possible to observe the expression of PDGFRA. Nevertheless, 15 out of 37 patients with microcalcification showed an increase in the gene expression of DMNT3a, most of them greater than Luminal and triple-negative cancer types. **Conclusion**: The data presented here highlight the improvement on the description of BI-RADS® 4 subclassification in order to better conduct the clinical decision and also demonstrated the potential of DNMTs evaluation in microcalcification samples as a strategy to access the understanding about the role of these molecules in the breast cancer development.

Keywords: Benign Mammary Disease; Biological Risk Factors; Mammary Neoplastic; Mammography; Gene Expression.

https://doi.org/10.29289/259453942021V31S2102

RECONSTRUCTION OF THE THORACIC WALL WITH EPIPLOON AND ABDOMINAL LOWER DERMOCUTANEOUS RETAIL IN ANGIOSARCOMA MAMMARY

Darley Ferreira[1], Nancy Ferreira[1], Thais Ferreira[1]

[1]Department of Mastology and Reconstruction, Barão Lucena Hospital – Recife (PE), Brazil

Introduction: Breast angiosarcoma is a very rare and highly aggressive lesion, with an incidence of 0.5% to 1%. Berg et al. recognized two groups of sarcoma: the first group includes malignant phylloid cysts, lymphomas, and hemangiosarcomas, and the second group includes stromal sarcomas, fibrosarcomas, leiomyosarcomas, histiocytomas, and giant cell sarcoma. Angiosarcomas are lesions of indefinite and friable masses, with a mean age of 35 years. **Case Report:** A 35-year-old man from Paulo Afonso-PE presents complaining of breast lump. He underwent tumorectomy and confirmed fibroadenoma and phylloids with atypia and mitosis. A battery of tests such as mammography (MMG)/ultrasonography (USG) confirmed the presence of a 1.5-cm nodule in the breast. In addition, a new segmental resection surgery was performed, in which histopathological results confirmed a low-grade malignant phylloid cystosarcoma and demanding margins. The patient was proposed a new surgical of simple mastectomy with immediate reconstruction with silicone implant and latissimus dorsi flap. Finally, the surgery was performed and the histopathological result was the absence of residual neoplastic tissue, with an area of scar fibrosis and typical ductal hyperplasia. After recovery, the patient was referred to clinical oncology and radiotherapy, but both had no indication for adjuvant therapy. After 1 year, the patient returned to perform the symmetry of the opposite breast and reconstruction of the nipple–areola complex. In her follow-up, there were no changes in her examinations. After 2 years, she returned with a breast USG examination, which demonstrated an image nodular 1.5 cm adjacent to breast prosthesis and magnetic resonance imaging suggested the same image. A core was performed, confirming a recurrent malignant variant tumor. The tumor evolved very quickly, and the surgery was performed with an enlarged resection of the entire large and small pectoral and inclusion of the skin. For correction of the deformity, the rotation of the large epiploid with a lower abdominal dermocutaneous flap was used. **Conclusion:** The use of a technique with the large epiploid to cover the chest wall associated with a lower abdominal dermocutaneous flap presented a good alternative to correct chest wall deformity.

Keywords: Sarcoma; Breast Câncer; Breast Reconstruction.

https://doi.org/10.29289/259453942021V31S2103

SOCIODEMOGRAPHIC AND LIFESTYLE FACTORS IN PRE- AND POSTMENOPAUSAL PATIENTS WITH BREAST CANCER

José Euderaldo Costa Gomes Filho[1], Ariane Silva da Rocha[1], Gisele Aparecida Fernandes[1], Rossana Verónica Mendoza López[1], Maria Paula Curado[1]

[1]AC Camargo Cancer Center – São Paulo (SP), Brazil.

To analyze pre- and postmenopausal patients with breast cancer with regard to sociodemographic factors. This is a cross-sectional study with 705 patients with breast cancer. Patients aged 50 years and older accounted for 55.9% (n=394), whereas those aged 50 years or younger accounted for 44.1% (n=311). For both pre- and postmenopausal patients, there is greater proportional access through the Unified Health System (SUS), 62.7% (n=195) and 51.5% (n=203) (p=0.002); married, 65.9% (n=205) and 52.8% (n=208) (p<0.001); white ethnicity, 75.9% (n=236) and 77 (n=302) (p=0.623); and undergraduate level, 48.1% (n=149) and 40.1% (n=158) (p<0.001). For 82.7% (n=272) of the SUS participants and 80.9% (n=276) of those with complementary health care (p<0.001), the first mammogram was performed between the ages of 18 and 40 years; own housing for 74.2% (n=230) and 85.6% (n=333) (p<0.001), denied tobacco use, 78.1% (n=243) and 64.8% (n=254) (p<0.001); and alcohol consumption, 76.2% (n=237) and 86.2% (n=337) (p<0.001); the reference of cancer cases in the family occurred in 55.9% (n=118) and 63.7% (n=174) (p=0.300); however, breast cancer cases were reported in only 44.1% (n=93) and 36.3% (n=99) (p=0.187); the body mass index (BMI) was considered eutrophic, 43.7% (n=136) and 37.9% (n=149) (p<0.001). The pre- and postmenopause results showed differences regarding access to treatment, marital status, education, housing, first mammogram, alcohol and tobacco consumption, and BMI. Therefore, sociodemographic and lifestyle factors show a difference in patients with breast cancer in pre- and postmenopause.

Keywords: Breast Cancer; Lifestyle, Public Health.

https://doi.org/10.29289/259453942021V31S2104

NECROTIZING FASCIITIS IN A UNUSUAL SITE: A CASE REPORT

Icrad Casimiro[1], Sabrina Ribas Freitas[1]

[1]Hospital Universitário de Santa Maria, Universidade Federal de Santa Maria – Santa Maria (RS), Brazil.

Case Report: A 56-year-old woman, multiparous patient, diabetic, hypertensive and tabagist, and taking insulin, metformin, losartan, propranolol, hydrochlorothiazide, and aspirin presents to a clinic. She also had a previous surgery for extraction of a duodenum carcinoma and a nodule in lower lateral quadrant of right breast about 15 years ago, which on previous ultrasound was hyperechoic, with heterogeneous content, measuring about 27×18.5×25 mm. Upon arrival at the hospital, the patient had an ulcerated lesion with a central necrotic area in the lower outer quadrant of the right breast, with drainage of bloody secretion and a foul odor, and a generalized hyperemia in the region of the right breast. On physical examination, the patient had local hyperemia and areas of fluctuation in lateral quadrants. There were no palpable lymph nodes. The results of her initial laboratory investigations showed a leukocytosis and an increased erythrocyte sedimentation rate and C-reactive protein. A computed tomography scan of the breast, chest, and abdomen showed massive subcutaneous emphysema in the right breast, extending from the subcutaneous region of the anterolateral and abdominal chest wall to the right iliac fossa, associated with diffuse densification of the muscular fascia and adjacent subcutaneous tissue. She was treated with intravenous broad-spectrum antibiotics that included 1 g of oxacillin and 1.5 g of metronidazole. She underwent surgical debridement for 3 consecutive days, starting 24 hours after hospital admission. She was recommended 1 g of ceftriaxone and amphotericin B along with antibiotic therapy. At the second surgery, a wound tissue was collected for histopathological examination discarding malignancy. Five weeks later, wounds appeared clean, healing with pink granulation tissue. **Conclusion:** This case shows that early diagnosis and management of necrotizing fasciitis of the breast can be lifesaving and may allow for breast conservation. Early aggressive debridement combined with antibiotic therapy resulted in successful wound healing and preservation of tissue with a satisfactory cosmetic outcome.

Keywords: Necrotizing; Fasciitis; Fascia; Infection.

https://doi.org/10.29289/259453942021V31S2105

INVASIVE DUCTAL CARCINOMA IN A PATIENT WITH LI-FRAUMENI SYNDROME: A CASE REPORT

Gabriel Baêta Branquinho Reis[1], Hugo Francisco da Fonseca Neto[1], Alice Jardim Zaccariotti[1], Daniel Bispo de Sousa[1], Silvaleide Ataides Assunção[1], Thiago Martins de Abreu[1], Fernando Santos de Azevedo[2], Lanúscia Morais de Santana[2]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction/Objectives: Breast cancer is one of the most common malignancies among women, with 10% resulting from genetic predisposition. Li-Fraumeni syndrome is an autosomal dominant disease that predisposes to multiple primary tumors and is responsible for less than 0.1% of breast cancers, being considered in early-onset tumors. The aim of this report was to describe a fast evolution of three primary tumors in a young patient with Li-Fraumeni syndrome, including ductal breast carcinoma. **Case Report**: In 2017, a 27-year-old female patient was diagnosed with malignant cancer of the right breast, Luminal HER KI67 70%, clinical stage IV (liver and lung), underwent first-line cancer treatment, maintaining endocrinotherapy and Double Block, with a positive genetic panel test for TP53 mutation, inferring SLF. In 2018, screening colonoscopy showed colon adenocarcinoma, pT53pN1, treated with total colectomy with ileal pouch, followed by suspension of endocrinotherapy and maintenance of Double Block and adjuvant FOLFOX. At the end of chemotherapy, endocrinotherapy was adopted again. Reassessment tests showed partial response in the liver, but the primary nodules were unchanged. Biopsy after thoracoscopy described lung adenocarcinoma, pT3pN2, submitted to adjuvant with Gemzar and Navelbine, followed by Double Block and interruption of endocrinotherapy. It evolved with the appearance of nodules in the right breast, suggestive of progression of breast disease, under treatment with Xeloda, Herceptin, and Perjeta, showing good clinical response. **Discussion**: Breast cancer in young people increases the possibility of heredity, thus raising the need for investigations of genetic syndromes. Although rare, the identification of FHL brings an important implication for the genetic counseling. Early diagnosis is the best form of management, enabling the preventive screening and intervention of multiple malignancies. **Conclusion**: Cases of breast cancer in young women should raise a suspected diagnosis of Li-Fraumeni syndrome, which can change the therapeutic and investigation of other cancers at an early stage.

Keywords: Li-Fraumeni Syndrome; Breast Cancer.

https://doi.org/10.29289/259453942021V31S2106

AN ATYPICAL PRESENTATION OF BREAST CARCINOMA HER2

Lais Martins Queiroz[1], Pedro Henrique Ávila Perillo[1], Vinicius Catenassi Pereira Santos[1], Maria Carrijo Cunha Câmara[1], Lyna Maria Alves da Costa[2], Fernando Santos de Azevedo[3], Lanúscia Morais de Santana[3]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil
[2]Universidade de Rio Verde – Aparecida de Goiânia (GO), Brazil.
[3]Hospital das Clínicas, Universidade Federal de Goiás – Goiânia (GO), Brazil.

Introduction and Objectives: HER-2 overexpression occurs in 20% to 30% of invasive breast carcinomas. Even in localized disease, it is considered aggressive and can spread rapidly if not treated early. This report depicts the case of a patient with Luminal HER breast cancer with extensive cutaneous and lymph node disease, without visceral metastasis. **Case Report:** A 58-year-old woman with a lesion in the anterior thoracic region, ulcerated, painful, and friable to manipulation, with approximately 13 cm in the largest axis, initially diagnosed as dermatofibrosarcoma protuberans. The lesion evolved with rapid progression in size, 17 cm in the longest axis, and was re-biopsied, revealing invasive breast carcinoma with positive immunohistochemistry for ER (90%), RP (50%), HER2+ (3+), positive FISH, and Ki67 (20%). Staging examinations, extensive disease in the anterior thoracic region and right lymph node, other examinations were negative for visceral metastatic disease. **Discussion:** This case presents an atypical evolution of Luminal HER breast carcinoma in which the unusual clinical presentation delayed diagnosis. Unlike the identified common presentation, in this case, an extensive ulcerated and friable lesion on the anterior chest wall with extensive cutaneous and lymph node involvement is observed. Furthermore, we emphasized the relevance of the pathological findings for the correct identification of the tumor, since after reanalysis, the diagnosis of dermatofibrosarcoma protuberans was disregard, and the presence of molecular breast carcinoma subtype luminal HER was identified, which brings changes in prognosis and therapy. **Conclusion:** Therefore, a completely atypical manifestation of a luminal malignant HER mammary neoplasm, without visceral disease, is perceived. Furthermore, the importance of the clinical and pathological findings in the diagnosis and therapeutic management for the case resulting from atypical clinical manifestations is emphasized. Therefore, the importance of this report to expose a completely anomalous manifestation of breast cancer, which without a good investigation would receive incorrect treatment, is noted.

Keywords: Breast Carcinoma; Metastasis.

https://doi.org/10.29289/259453942021V31S2107

A 29-YEAR-OLD PREGNANT WOMAN WITH METASTATIC BREAST CANCER: A CASE REPORT

Ranier Colbek Nascimento[1], Sabrina Ribas Freitas[1]

[1]Hospital Universitário de Santa Maria, Universidade Federal de Santa Maria – Santa Maria (RS), Brazil.

Pregnancy-associated breast cancer (PABC) is defined as a breast cancer diagnosed during pregnancy, lactation, or in the first postpartum year. PABC is a rare complication that occurs in approximately 0.01% to 0.03% of all pregnancies. The difficulty in diagnosis worsens the prognosis. D.G., 29-year-old, female, noted a mass in her right breast in June 2020. One month later with 13+4 weeks' gestation, she presented to the obstetrics emergency with recurrent episodes of lower back pain. She was released home with pain relief and was instructed to realize a mammography due to the presence of a 4-cm mass on physical examination of the right breast. Patient returned 12 days later with severe low back pain, a BIRADS 4C mammography, and multiple liver lesions in total abdomen ultrasound. Core-needle biopsy demonstrated a stage II invasive ductal carcinoma with hormone receptors positive and human epidermal growth factor receptor 2 positive. There is involvement of the axilla and intramammary lymph nodes. Magnetic resonance imaging of the lower back and sacroiliac joint was performed and found multiple lesions suspected of metastasis in the inferior thoracic vertebrae, lumbar vertebrae, sacrum, ilium, and femurs. Computed tomography (CT) of the thorax identified a 2.3×1.8 cm irregular lesion in the right breast compatible with the primary neoplasm. Chemotherapy was initiated till she was 31 weeks' gestation. After childbirth, she reinitiates chemotherapy. Three months later, the patient has convulsive episodes. Cranial CT was done and found multiple lesions compatible with brain metastasis, so she initiated brain radiotherapy. PABC can present itself as a challenging situation with nonspecific symptoms and at an advanced stage. Therefore, it is important to have the PABC in our list of differential diagnoses in this patient.

Keywords: Breast Cancer; Pregnancy.

https://doi.org/10.29289/259453942021V31S2108

THE IMPACT OF EDUCATION ON BREAST CANCER SURVIVAL IN THE STATE OF SÃO PAULO

Raissa Janine de Almeida1, Carolina Terra de Moraes Luizaga2, José Eluf-Neto2,3, Eduardo Carvalho Pessoa1, Amanda de Moraes Mamede Chiarotti1, Rainer de Almeida Souza1, Cristiane Murta-Nascimento1

1Universidade Estadual Paulista "Júlio de Mesquita Filho", Medical School – Botucatu (SP), Brazil;
2Fundação Oncocentro de São Paulo – São Paulo (SP), Brazil.
3Faculty of Medicine, Universidade de São Paulo – São Paulo (SP), Brazil

Objectives: To estimate 5- and 10-year breast cancer–specific survival probabilities of patients admitted in the hospital-based cancer registry (HBCR) of the Fundação Oncocentro de São Paulo (FOSP, in Portuguese) and to assess the prognostic factors for this neoplasm. **Methods:** Historical cohort study that included women with breast cancer included in HBCR-FOSP and diagnosed between 2002 and 2012. The event of interest was breast cancer–specific mortality. Living cases at the end of follow-up (December 31, 2017), loss to follow-up, and death other than that due to breast cancer were considered censored on the date of the last contact or date of death. Descriptive analysis and survival analysis were performed using the Kaplan–Meyer method. Survival curves were compared using the log-rank test. HR and 95%CI were estimated using Cox proportional hazards model. This study was approved by the Human Research Ethics Committee of the Botucatu Medical School, São Paulo State University, Brazil. **Results:** The HBCR-FOSP registered 53,146 cases of invasive breast cancer between 2002 and 2012. The median age at diagnosis was 55.9 years. The 5- and 10-year breast cancer–specific survival for the entire cohort was 76.1% (95%CI 75.7–76.5) and 64.8% (95%CI 64.2–65.3), respectively. In the multivariate analysis, the factors clinical stage and educational level were with the greatest impact on survival. The other factors associated with prognosis were age at diagnosis, histological type, and year of diagnosis. **Conclusion:** The results show that patients in more advanced stages and with less level of education have a higher risk of death from breast cancer. Besides, these findings may contribute to the development of policies for the identification of breast tumors at earlier stages.

Keywords: Breast Neoplasms; Survival Analysis; Prognosis.

https://doi.org/10.29289/259453942021V31S2109

THE INFLUENCE OF POSITIONING ON THE QUALITY OF BREAST MAGNETIC RESONANCE IMAGES

Camila Leal Diniz[1], Ilse Franco de Oliveira[1], Ruffo de Freitas-Junior[1], Cristina Pinto Naldi Ruiz[2], Paulinelly Messias de Almeida[2], Rosemar Macedo Sousa[1]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Clínica São Marcelo – Goiânia (GO), Brazil.

Objective: To evaluate and adapt the positioning pattern of patients to perform breast resonance, allowing for greater comfort and better image quality. **Methodology:** Prospective study of qualitative evaluation with an experience report carried out with a volunteer without a clinical history of breast disease, in three different brand devices (X, Y, and Z) with coils dedicated to the examination, all of them having four-channel bilateral synergy. **Results:** In the X equipment test, the coil was coupled to a head coil, with specific support for the head and neck regions, providing greater stability for the area, which caused greater patient comfort. In the three pieces of equipment (X, Y, and Z), the arms were extended forward with specific supports. However, there was a need for greater care with the region, because during the examinations, these supports were not enough and caused discomfort in the shoulder region, which was hampered by the position and overload due to the examination time. In equipment Y, an artifact is formed due to poor positioning and the breasts had to be repositioned, causing an increase in the examination time, which generated greater discomfort. In the three pieces of equipment, in the T2, and diffusion-weighted imaging acquisitions, there was an intense vibration of the table that caused discomfort, as this situation had not been reported before the beginning of the examination. In equipment Z, the coil does not extend along the inclined table, causing greater discomfort in the area of the sacral loin due to tension in the region. **Conclusion:** After evaluation, it was observed that the positioning interferes in the quality of the images generated and it was decided to build a Decision Matrix for standardization and adequacy.

Keywords: Breasts; Magnetic Resonance; Positioning.

https://doi.org/10.29289/259453942021V31S2110

EVALUATION OF TECHNICAL PARAMETERS FOR BREAST STUDY BY MAGNETIC RESONANCE

Camila Leal Diniz[1], Ilse Franco de Oliveira[1], Ruffo de Freitas-Junior[1], Cristina Pinto Naldi Ruiz[2], Paulinelly Messias de Almeida[2], Rosemar Macedo Sousa[1]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Clínica São Marcelo – Goiânia (GO), Brazil.

Objective: To evaluate technical adjustment parameters for the breast magnetic resonance protocol. **Methodology:** Prospective study, of a "pilot test" type, with qualitative tests in three volunteers (A, B, and C) who had different types of breasts (heterogeneous, adipose, and dense), respectively, without a clinical history of breast disease. The test examinations (X, Y, and Z) were performed in coils of bilateral synergy dedicated to the study of the breasts, containing four channels each, in 1.5 T magnetic resonance equipment. The analyzed variables included the parameters for the acquisition of the sequences of pulse, fat suppression techniques, and image acquisition plans. **Results:** The need for technical care in choosing the appropriate FOV to perform the sequences was evidenced, mainly the diffusion-weighted imaging that showed in the reconstruction of the ADC map volumetric cut of the left breast in the B examination. The FAT SAT sequences produced artifacts mainly in the B breast due to the greater volume of fatty tissue that is in direct contact with the edges of the coil, opting for its replacement by the STIR sequence. In examination A, artifact was observed due to the phase direction error in the acquisition of the sequence in STIR. The importance of adjusting the inversion time in the STIR sequences to increase the homogeneity of the magnetic field was also observed. **Conclusion:** After a qualitative analysis of the examinations and their respective parameters, the need to build a Decision Matrix to guide the operational quality standards in the breast magnetic resonance imaging examinations was observed.

Keywords: Breasts; Protocols; Magnetic Resonance.

https://doi.org/10.29289/259453942021V31S2111

QUALITY MANAGEMENT TOOLS IN A REFERENCE CENTER IN BREAST DIAGNOSIS: A PILOT STUDY

Ilse Franco de Oliveira[1], Camila Leal Diniz[1], Rosemar Macedo Sousa Rahal[1], Danielle Cristina Silva Roriz[1], Rosangela da Silveira Corrêa[1], Ruffo de Freitas-Junior[1]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.

Objective: To develop a model for Quality Management in a Reference Center for breast diagnosis. **Methodology:** Cross-sectional study of an interpretative nature of qualitative research based on research and management models. **Results**: A survey of the priority problems and the respective primary actions required was carried out with the construction of the Zero Base Goals matrix to analyze the three sources of losses for the Image sector. The Anomaly Report model was developed to identify nonconformities, their possible causes, as well as their analysis and action plans for standardization. Then, the standard operating procedures for the assignments of the monitoring and quality assurance groups of the images were built. The standard operating procedure of quality control for risk management with its possible failures and preventive actions was also prepared, as well as the form for monitoring the acquisition and processing of images, the form for monitoring and analyzing rejected images, and their respective failures. In a later stage, the technical quality standards were prepared for the phase of execution of mammographic examinations, following the quality standards determined by the regulatory agencies. For the execution phase, which comprises the stages of experimentation and development of action proposals for improvement or adaptation, some changes will be made to improve the process. **Conclusion:** The development of the Quality Management model in a Reference Center for breast diagnosis is in the phase of correction and adaptation for subsequent application, allowing for timely and relevant changes as the corresponding needs are evidenced.

Keywords: Breast; Diagnosis; Quality Management.

https://doi.org/10.29289/259453942021V31S2112

ANALYSIS OF DIFFUSION-WEIGHTED IMAGING (DWI) PARAMETERS AND ADC MAP FOR BREAST INJURY STUDY

Ilse Franco de Oliveira[1], Camila Leal Diniz[1], Rosemar Macedo Sousa[1], Cristina Pinto Naldi Ruiz[2], Paulinelly Messias de Almeida[2], Ruffo de Freitas-Junior[1]

[1]Universidade Federal de Goiás – Goiânia (GO), Brazil.
[2]Clínica São Marcelo – Goiânia (GO), Brazil.

Objective: To optimize the parameters of effectiveness of the use of the diffusion sequence in magnetic resonance imaging examinations of the breast. **Methodology:** Prospective study of qualitative analysis of the DWI sequence, performed with three volunteers (A, B, and C) in 1.5 T magnetic resonance equipment (X, Y, and Z), with bilateral synergy coil containing four channels each, dedicated to the study of the breasts for further analysis of the signal intensity parameters of the broadcasting sequence. **Results:** In the B equipment Y test, there was a cut of the nipple region of the left breast, requiring adaptation of the FOV for homogeneity of the field, allowing for better image quality and reduction of artifacts. The images from test A equipment X showed loss of signal, requiring adjustments to the matrix resolution, with a corresponding reduction in the echo time (TE) and an increase in the number of acquisitions (NEX) to optimize the signal-to-noise ratio (SNR). The choice of four-channel synergy coils in the three tests favored the greater intensity and uniformity of the magnetic field, and due to the fact that it is dedicated to the breasts bilaterally, it was possible to acquire simultaneous images, reducing the examination time. In the images acquired in the axial plane, changes were made to the phase coding, defined from left to right, to decrease cardiac and respiratory movements. **Conclusion:** After analyzing the DWI images and their respective ADC maps, there was a need to build a Decision Matrix to guide the standardization of b values to avoid the influence of the perfusion phenomenon and consequently a false representation of the tissues in the ADC map.

Keywords: Breasts; Diffusion; Magnetic Resonance.

https://doi.org/10.29289/259453942021V31S2113

EARLY TRACKING THROUGH MAMMOGRAPHY IN BREAST CANCER DETECTION IN WOMEN IN BRAZIL FROM 2015 TO 2019: EPIDEMIOLOGICAL STUDY

Antonio Márcio Teodoro Cordeiro Silva[1], Liliane Emilly dos Santos Sousa[2], Camila de Assunção Martins[1], Bárbara de Magalhães Souza Gomes[1], Jacqueline Andréia Bernardes Leão-Cordeiro[3], Fábio Silvestre Ataides[1], Cesar Augusto Sam Tiago Vilanova-Costa[4]

[1]Pontifícia Universidade Católica de Goiás – Goiânia, (GO), Brazil.
[2]Universidade Paulista – Goiânia, (GO), Brazil.
[3]Universidade Federal de Goiás – Goiânia, (GO), Brazil.
[4]Associação de Combate ao Câncer em Goiás – Goiânia, (GO),Brazil.

Objectives: To analyze the aspects of mammography in the early screening of breast cancer, in Brazil, from 2015 to 2019. **Methodology:** Descriptive epidemiological study, with secondary data extracted from the Department of Informatics of the Brazilian Unified Health System (DATASUS), through the Cancer Information System (SISCAN). Information related to mammography examinations was classified by place of care according to the clinical indication (screening or diagnosis), age group (<40–>70 years), previous mammography, high risk of breast cancer (BC), examination completion time, and the Breast Imaging Reporting and Data System (BI-RADS®), which classifies radiological findings as 0 (undefined), 1 (negative), 2 (benign), 3 (probably benign), 4 (suspect), 5 (highly suspicious), and 6 (diagnosed with cancer). **Results:** Between 2015 and 2019, 3,031,607 mammograms were performed in Brazil, of which 2,955,262 occurred by screening and 76,345 by clinical diagnostic indication. Among the screening mammograms, 63.2% were performed on women in the age group recommended by the Brazilian Ministry of Health (MS), from 50 to 69 years old. The previous history of this examination was confirmed by 2,300,995 women, where 17.5% were at high risk for BC. For the examination time, 1,396,105 mammograms took place within 30 days, and 775,971 and 859,531 over 60 days. BI-RADS was higher in category 2 (1,520,469 mammograms), followed by category 1 with 1,071,514 of mammograms, and in the target population recommended by the Brazilian Ministry of Health, the largest number of tests was concentrated in BI-RADS category 2 with 34.2%. **Conclusion:** Characterization of the main aspects involved in mammography, such as age, high risk, and among others, allows to infer that the early screening of BC when prioritized by public health policies, aiming at the promotion of women's health, impacts on the early detection and the reduction of the incidence and mortality by BC in women in Brazil.

Key words: Breast Cancer; Early Detection; Mammography; Screening.

https://doi.org/10.29289/259453942021V31S2114

THE IMPORTANCE OF PINK OCTOBER CAMPAIGN ON BREAST CANCER AWARENESS IN BRAZIL: EVIDENCE BASED ON GOOGLE TRENDS

Antonio Márcio Teodoro Cordeiro Silva[1], Jacqueline Andréia Bernardes Leão-Cordeiro[1], Cesar Augusto Sam Tiago Vilanova-Costa[1], Fábio Silvestre Ataides[1], Liliane Emilly dos Santos Sousa[1]

[1]Medicina, Escola de Ciências Médicas, Farmacêuticas e Biomédicas, Pontifícia Universidade Católica de Goiás – Goiânia (GO), Brazil.

Objectives: To assess the magnitude of the international movement "Pink October" in Google Search and YouTube, using the Google Trends tool. **Methodology:** Analyses were carried out using the Google Trends tool on Google Search and YouTube, applying the descriptor "Breast Cancer," both in English and Portuguese. Trends data were indexed from 0 to 100, where 0 is no search on the topic and 100 represents the maximum search interest for the selected period and location. Duplicate searches, repeated by the same person, were eliminated in the Google Trends statistic. **Results:** Billions of searches are performed on the Google Search and YouTube per day, and by evaluating these data, Trends can be considered one of the largest real-time data sets in the world. Examining what people search for provides a unique perspective on what they are currently interested and curious about. Throughout 2019, except for the month of October, the descriptor "breast cancer" had an average search popularity of 25 points, with a range of 18 to 46 points. However, searches for the descriptor "breast cancer" intensified substantially on October. In Google Search category, searches peaked (100 points) between October 20 and 26, while on YouTube, the peak was reached on October 13 to 19, 2019. In a time range, on August 22, 2019, the interest was 38 points; on August 29, 2019, it jumped to 82 points, reaching its maximum peak of interest on September 20, 2019; and finally, on November 3, 2019, it dropped to 46 points. These data were collected at the national level, but the same trends are perceived worldwide. **Conclusion:** Using Google Trends, evaluation was possible to perceive the importance of Pink October Campaign to encourage the population to actively participate in the fight against breast cancer, influencing the search for information about in Google Search and YouTube, thus fulfilling one of its purposes.

Keywords: Pink October; Breast Cancer; Google Trends; Google Search; YouTube.