

**APPROVED PAPER FOR ORAL PRESENTATION****MAIN AUDITORIUM****MACHINE LEARNING CAN RELIABLY PREDICT MALIGNANCY OF BI-RADS 4A AND 4B BREAST LESIONS BASED ON CLINICAL AND ULTRASONOGRAPHIC FEATURES**

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**Objective:** To establish the most reliable machine learning model to predict malignancy in BI-RADS; 4a and 4b breast lesions, and optimize the negative predictive value to minimize unnecessary biopsies. **Methodology:** We included clinical and ultrasonographic attributes from 1,250 breast lesions from four Institutions classified as BI-RADS; 3, 4a, 4b, 4c, 5 and 6. We selected the most informative attributes to train the models in order to make inferences about the diagnosis of BI-RADS; 4a and 4b lesions (validation dataset). Using the best parameters and hyperparameters selected we tested the performance of nine models and 1530 ensemble models.

**Results:** The most informative attributes were shape, margin, orientation and size of the lesions, the resistance index of the internal vessel, the age of the patient and the presence of a palpable lump. The highest mean NPV was achieved with XGBoost (93.6%). The final performance of the best ensemble model was: NPV= 96.4%, sensitivity= 81.5%, specificity= 84.1%, PPV= 46.8%, f1-score= 59.5% and the final accuracy= 83.7%. Age was the most important attribute to predict malignancy. The use of the final model associated with the patient's age would reduce in 51% the number of biopsies in women with BI-RADS; 4a or 4b lesions. **Conclusion:** Machine learning can predict malignancy in BI-RADS; 4a and 4b breast lesions identified by the US, based on clinical and ultrasonographic features. Our final prediction model would be able to avoid 51% of the 4a and 4b breast biopsies, without missing any cancers.

**Keywords:** ultrasonography, mammary; machine learning; artificial intelligence; image-guided biopsy

## MANAGEMENT OF LOCOREGIONAL LYMPH NODE METASTASIS FROM OCCULT BREAST CANCER

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**Objective:** Occult breast cancer (OBC) is a occasional condition. Regarding to small number of cases in studies, the gain of treatment with mastectomy remains controversial. This study aims to determine the treatment and prognosis of OBC patients with locoregional lymph node metastasis (LNM). **Methodology:** We analyzed patients registered in the Oncologic Clinic of Azerbaijan Medical University between 2007 and 2021, with locoregional LNM as well as a bilateral negative mammography, ultrasonography and MRI of the breasts. Overall survival (OS) was compared by treatment groups (ALND+R - axillary lymph node dissection and radiotherapy; ALND+MAST±RT - axillary lymph node dissection, mastectomy with or without radiotherapy). **Results:** Among 36 patients, 28 were treated by ALND+RT, 8 by ALND+MAST±RT. The median follow-up for these patients in the treatment groups was 12.5 years and 10.3 years, respectively. There was no notable difference in OS between treatment groups. **Conclusion:** The prognosis was analogous in OBC patients with various treatment ways. This supports the possibility of avoiding mastectomy in these patients.

**Keywords:** Occult breast cancer

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**PINK APP: STRATEGY FOR RESOLVING BREAST CANCER SCREENING ACTIONS ACCORDING TO THE ITABERAÍ PROJECT**

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**Objective:** Introduction: the ITABERAÍ Project is a phase III multicenter randomized clinical trial that deals with Intervention through Training of Community Health Agents (ACS) Based on Evidence of Tracking in Physical Examination of the Breast. This work aims to develop an application for a mobile device as a strategy for resolving ACS actions in breast cancer screening, based on the ITABERAÍ Project. **Methodology:** Methodology: the application was developed to be installed on the tablet used by the ACS, who works in the Primary Health Care Network in the city of Itaberaí. The graphical interface of the application was developed in Dart/Flutter and for the Back End part Python programming language was used, together with its Flask framework for the creation of the API (Application Programming Interface), responsible for making the communication between the database data and the application. For the relational database, the MySQL software was used. The variables used to build the application were: sociodemographic data, life habits, anamnesis, previous examinations and information about the physical breast examination of women aged 40 years or older, residing in the municipality of Itaberaí. For analysis, the database will be exported to the REDCap Platform (Research Electronic Data Capture). **Results:** Results: the application was validated with 235 entries, it is currently in version 1.5 and in use by 75 ACS. In the four months of use, 1963 women were registered, 1261 (64%) in the Control Group and 702 (36%) in the Intervention Group. **Conclusion:** Conclusion: the Pink APP proved to be easy to use and effective for collecting, storing and exporting data for analysis, which can help improve and manage public policies.

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



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

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**Objective:** To carry out the cost-minimization analysis between the VAB and the lumpectomy.

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

**Keywords:** Calcifications; Vacuum-assisted stereotactic biopsy; Breast cancer; Diagnosis.

**DIGITAL BREAST TOMOSYNTHESIS ADDED TO SYNTHETIC MAMMOGRAPHY (DBT + s2D) IN WOMEN WITH PARTIALLY FATTY OR HETEROGENEOUSLY DENSE BREASTS (PATTERNS 2 AND 3 ACR BI-RADS): SYSTEMATIC REVIEW, META-ANALYSIS AND CLINICAL OUTCOMES IN BRAZILIAN BREAST CANCER SCREENING.**

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**Objective:** Compare DBT + s2D to digital mammography (DM) in breast cancer screening of women with breast patterns 2 and 3 ACR BI-RADS and evaluate the clinical outcomes in Brazil. **Methodology:** Systematic review and meta-analysis (PRISMA) comparing DBT+s2D with DM in women between 40 to 69 years old with breast patterns B and C of ACR BI-RADS 5th Edition eligible for biennial breast cancer screening. The Medline, PubMed, Embase and Cochrane data base were searched at 06/09/2022 for the descriptors: digital breast tomosynthesis, digital mammography and breast cancer combined to Boolean AND or OR. To estimate outcomes between the screening strategies, a hybrid decision analytic tree with a Markov transitional model was built. **Results:** 18 publications from 11 studies were included, two randomized clinical trials and the others, prospective or retrospective observational studies. The detection cancer rate (DCR) of DBT+s2D was 1.35 (RR,  $p<0.001$ ), the detection invasive cancer rate (DICR) was 1.48 (RR,  $p<0.001$ ), the recall rate (RR) was 0.81 (RR,  $p=0.028$ ) and the biopsy rate was (BR) 0.89 (RR,  $p=0.303$ ), the positive predictive value for recall (PPV1) was 1,64 (RR;  $p<0.001$ ) when compared to DM. For every 10,000 screening exams, 49 biopsies and 69 recalls would be avoided with DBT+s2D. DBT+s2D would have a lower rate of interval cancer (0.13% for DBT+s2D and 0.19% for DM), while it would detect more patients in the early stage of breast cancer (TNM 1 0, 74% for DBT+s2D and 0.45% for DM). DBT+s2D would present superior results regarding the number of false-positives and true-negatives. For every 10,000 screens, 79 false-positives would be avoided, and 80 more true-negatives would be identified when compared to DM. **Conclusion:** DBT + s2D breast cancer screening for women with breast patterns B and C BI-RADS would improve Brazilian screening outcomes when compared to mammography.

**Keywords:** Digital breast tomosynthesis, digital mammography and breast cancer

**PRELIMINARY RESULTS OF BREAST CANCER SCREENING BASED ON PHYSICAL BREAST EXAMINATION BY COMMUNITY HEALTH AGENT (ACS) – PROJETO ITABERAÍ.**

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**Objective:** Introduction: the ITABERAÍ Project is a study that deals with Intervention through Training of Community Health Agents (ACS) Based on Evidence of Tracking in Physical Examination of the Breast. Objective: to present preliminary results of breast cancer screening carried out by Community Health Agents (ACS) in women aged 40 years or older, according to the ITABERAÍ Project. **Methodology:** Methodology: Phase III multicenter randomized clinical trial, whose observation unit was data from women aged 40 years or older, without a diagnosis of breast cancer, who consented to participate in the study and were registered by the ACS in the Pink Application. For randomization, the Family Health Team (ESF) of each ACS was considered and these were randomly allocated into Control Group and Intervention Group. The physical examination of the breast performed by the ACS was considered as an Intervention. **Results:** Results: Until now, 1261 women have participated in the study, 1259 (64.2%) from the CG and 702 (35.8%) from the IG. The mean age was 56.8, in the CG it was 56.7 years  $\pm 11.22$  and in the IG it was 57.1 years  $\pm 11.18$  ( $p=0.47$ ). Of the total number of women, 85.5% reported not having health insurance, 78.5% seek medical assistance annually, 73% do not perform physical activity, 88.4% declared not to be a smoker, 92.7% did not use alcohol, 65% had a high IMC and 75.7% reported having had a mammogram at some point in their lives. There was no significant difference in these variables between groups. A total of 174 (24.8%) altered cases were identified in the physical examinations performed by the ACS, and of these, 2 (1.1%) cases with diagnostic confirmation of breast cancer after biopsy. **Conclusion:** Conclusion: Preliminary results show that trained Community Health Agents can support breast cancer screening and generate information that can support decision-making and optimize public spending on health.

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

**SENTINEL LYMPH NODE BIOPSY VERSUS NO AXILLARY SURGERY IN EARLY BREAST CANCER CLINICALLY AND ULTRASONOGRAPHICALLY NODE NEGATIVE: A PROSPECTIVE RANDOMIZED CONTROLLED TRIAL – VENUS TRIAL EARLY RESULTS AFTER 3.5 YEARS OF STUDY INCEPTION**

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**Objective:** The VENUS trial is an ongoing prospective, multi-center, non-inferiority randomized controlled clinical trial aimed at comparing the disease-free and overall survival of T1-2 N0 M0 breast cancer patients subjected to either a) sentinel lymph node (group sentinel) or b) no axillary surgery (group no-sentinel). This is a partial report on the initial data so far collected 3.5 years after the trial started. VENUS differs from previous similar trials in that women undergoing mastectomy and neoadjuvant chemotherapy are accepted. **Methodology:** The protocol was approved by the local research ethics committee (CAAE: 068051 18.2.0000.5404). Initial axillary status was ascertained through physical examination and axillary ultrasound. Randomization is being stratified by age and clinical tumor size. Secondary endpoints include regional recurrence free survival, axillary recurrence rate, axillary morbidity rate, ultrasound accuracy and cost-effectiveness. The sample size was estimated at 800 participants. Primary and secondary endpoints will be reported after 5 years of follow-up of the completed cohorts. VENUS trial is registered in Clinical Trials (Identifier: NCT05315154) and ReBEC (Identifier: RBR-8g6jbf). **Results:** As of February 2023, 176 patients were enrolled and 156 were randomized to the sentinel (84 patients) and no-sentinel (72 patients) groups. Current mean follow-up time is 18.57 (+ 8.52) months. Patients are statistically evenly distributed across study groups regarding age and molecular subtype. Sentinel lymph node positivity in the sentinel group was 17.8% (1.19% isolated tumor cells, 3.57% micrometastasis, 11.90% 1-3 macrometastasis, and 1.19% > 4 macrometastasis). There were no axillary recurrences in both groups. **Conclusion:** Up until now, with nearly 20% of the trial completed, VENUS showed no significant difference regarding its posted objectives in women undergoing or not sentinel lymph node dissection.

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



## ONCOLOGICAL OUTCOMES OF SELECTIVE AXILLARY DISSECTION USING CARBON AS A MARKER

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**Objective:** The use of axillary marking before neoadjuvant systemic therapy (NST) is a field of controversy in patients with positive lymph nodes (LN). Several methods were tested leading to a reduction in the false negative rate compared to the sentinel lymph node (SLN), adding precision. The aim of this study is to evaluate oncological outcomes in patients undergoing selective axillary dissection with pre-NST marking with 4% carbon. **Methodology:** A prospective study was carried out in patients with cT1-T4, cN1-N2 breast cancer who underwent analysis of suspected LNs and concomitant marking with 4% carbon. After NST, the marked LNs were identified and resected associated with SLN biopsy. The oncological outcomes identified were overall survival (OS), specific survival (SE), distant disease-free survival (DDFS), axillary recurrence (AR) and local recurrence (RL). **Results:** 168 patients were analyzed over a median time of 49 months. Axillary dissection was omitted in 89 (50.6%) cases. Five/168 (2.9%) had AR. There was a significant association between axillary dissection and AR (0 vs. 6%  $p = 0.012$ ). The DDFS was 140/168 (83.3%), SG 158/168 (94%) and SE 158/163 (96.9%). **Conclusion:** The use of carbon as a marker in selective axillary dissection is a reliable, low-cost and easy-to-perform material. Among the oncological events, AR should not be used for post-downstaging axillary evaluation analysis, since it is a rare event and is not necessarily related to OS or DDFS.

**Keywords:** Breast cancer, neoadjuvant treatment, sentinel lymph node biopsy, selective axillary dissection, axillary surgery

**WHAT HAPPENS IN RESIDUAL DISEASE AFTER NEOADJUVANT CHEMOTHERAPY? EFFICACY OF A NOVEL IN VITRO BREAST CANCER CHEMORESISTANCE PLATFORM TO DEMONSTRATE HIGH RESISTANCE TO DRUGS**

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**Objective:** Our preliminary study aims to validate the efficacy of a novel in vitro chemoresistance platform to demonstrate tumor resistance in residual disease after neoadjuvant treatment for breast cancer. **Methodology:** Patients with invasive BC who presented residual disease after neoadjuvant chemotherapy (NACT) were included. Fresh tumor samples were collected during surgery and dissociated to obtain the tumor cells. The tumor cells were cultured in the chemoresistance platform with doxorubicin, epirubicin, paclitaxel, docetaxel, and cyclophosphamide, and after 72h cell viability was evaluated. The test result is defined based on cell viability as low (< 40%), medium (40-60%), and high (> 60%) resistance. **Results:** Samples from 20 patients with residual disease after NACT were tested in the chemoresistance platform. Regarding molecular subtypes: 9 tumors were triple negative (45%), 6 Luminal (30%), 4 LuminalHER2 (20%), and 1 HER2 (5%). Sixteen (80%) patients responded partially to NACT, and four (20%) presented disease progression. Most (80%) of the patients used ACT (doxorubicin + cyclophosphamide + paclitaxel) chemotherapy regimen, 10% only paclitaxel, and 10% doxorubicin plus cyclophosphamide. The chemoresistance platform demonstrated that tumors treated with doxorubicin, paclitaxel, and cyclophosphamide in neoadjuvant setting presented high rates of resistance to the drugs (94.7% showed high resistance to paclitaxel, 58% to doxorubicin, and 52.6% to cyclophosphamide). In addition, we investigate if the tumor becomes more resistant to drugs from the same class (taxanes and adriamycin) of the treatment already used by the patients and evidenced 93.7% of high resistance to docetaxel and 50% to epirubicin. **Conclusion:** This preliminary finding highlighted the efficacy of the in vitro chemoresistance platform to demonstrate the acquisition of resistance during neoadjuvant chemotherapy and suggests a role of acquired resistance in the worse prognosis of patients with residual disease after NACT.

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

**HIGH RISK OF METABOLIC DYSFUNCTION IN NON-OBESE BREAST CANCER SURVIVORS**

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**Objective:** To evaluate the metabolic profile of non-obese women with breast cancer compared to non-obese women without cancer. **Methodology:** A cross-sectional comparative clinical study was carried out with the inclusion of 260 women (according to sample calculation). The main group consisted of 130 women with a body mass index (BMI) < 30kg/m<sup>2</sup>, with a histological diagnosis of breast cancer, stages I to III, aged between 45-75 years, in amenorrhea &#8805; 12 months and without cardiovascular disease (CVD) established. The control group consisted of 130 women with the same inclusion criteria, without breast cancer. The groups were matched by age, BMI and time since menopause and compared in a 1:1 ratio. Clinical, anthropometric and biochemical data were collected. Women who had three or more diagnostic criteria were considered to have metabolic syndrome (MS): WC > 88 cm; triglycerides (TG) > 150 mg/dL; HDL cholesterol < 50 mg/dL; blood pressure > 130/85 mmHg; glucose > 100 mg/dL. For statistical analysis, the Student's t-test, the Gamma Distribution (asymmetric variables), the Chi-square test and logistic regression (odds ratio-OR) were used. **Results:** In assessing the factors that affect the metabolic profile, a higher occurrence of MS and blood pressure impairment was observed among women treated for breast cancer when compared to controls (30.8% vs. 20.0%, and 25.4% vs 14.6%, respectively) (p<0.05). A higher proportion of women treated for breast cancer also had higher than desirable levels of total cholesterol and blood glucose in the comparative analysis (56.2% vs 43.1% and 29.2% vs 15.4%, respectively) (p<0.05). In the risk analysis of metabolic dysfunction, adjusted for age and time since menopause, women with breast cancer had a significantly higher risk for MS (OR=2.76, 95% CI 1.48-5.15), increased blood glucose OR=2.69, 95% CI 1.46-4.96) and blood pressure (OR=3.03, 95% CI 1.51-6.10). In the analysis of the subgroup with BMI <25kg/m<sup>2</sup>, the main group had a higher occurrence of metabolic syndrome when compared to the group without breast cancer (n=53) (17.2% vs 1.9%, respectively, p=0.007). Women with a BMI<25kg/m<sup>2</sup> had significantly higher values for WC (82.6±8.5 vs 79.9±6.4 cm, p=0.048), SBP and DBP (129.2±17.1 and 77.7 ±8.8 mmHg vs 118.2±15.1 and 73.6±8.8 mmHg, p=0.0002 and p=0.01, respectively) and blood glucose (99.7±32.5 vs 86.6±7.6 mg/dL, p=0.0002) when compared to women with the same BMI. **Conclusion:** Non-obese women treated for breast cancer were at high risk for metabolic dysfunction, expressed by the higher prevalence of MS, hypertension and diabetes when compared to women without breast cancer. The risk remains in the subgroup with ideal BMI.

**Keywords:** breast cancer, metabolic syndrome, diabetes, hypertension, obesity.

**MAMMAPRINT™ 70-GENE SIGNATURE WITH ULTRALOW-RISK PROFILE - CHARACTERISTICS AND RESULTS IN THE AGEMA-BRA COHORT**Fabio Postiglione Mansani<sup>1</sup>, Ruffo de Freitas Junior<sup>2</sup><sup>1</sup> Universidade Estadual de Ponta Grossa|Ponta Grossa|Paraná|Brazil<sup>2</sup> Universidade Federal de Goiás|Goiânia|Goiás|Brazil

**Objective:** Analyze the clinical characteristics and outcomes of the ultralow-risk population of the AGEMA-BRA study and compare with data from the MINDACT study. **Methodology:** Retrospective study of patients submitted to genomic risk assessment by the 70-gene MammaPrint™ signature, in the Brazilian population, in a database provided by GenCell, from 2016 to 2020 (AGEMA-BRA study). Patients with an MP score > 0.355 were considered ultralow-risk. To verify the association between qualitative variables, the chi-square test was used. Study approved by the research ethics committee of the State University of Ponta Grossa (CAAE: 12194219.4.0000.0105) **Results:** Population under analysis corresponds to 951 patients, of which 542 (57.1%) were at genomic low-risk, with 144 (15.2%) at ultralow-risk (ULR). Clinical characteristics and outcomes were available for 251 patients with follow-up (FU) of 42 months, all low-risk patients (nULR and ULR) were alive, with one living with disease in each group (nULR and ULR). Univariate analysis of epidemiological, anatomopathological and immunohistochemical characteristics was performed. In this analysis, only the tumor grade reached statistical significance (p 0.004) demonstrating in the nULR patients 13.7% G1, 67.7% G2 and 18.5% G3 and in the ULR cases 34% G1, 59.6% G2 and 6, 4% G3. The other parameters analyzed did not reach statistical significance. **Conclusion:** Comparative analysis between the epidemiological, anatomopathological and immunohistochemical characteristics of patients with nULR and ULR proved to be very similar with statistically significant difference only in tumor grade. In the MINDACT study, size, tumor grade, and progesterone receptor positivity reached significance. The evaluation of the outcomes, with a mean FU of 42 months, did not show relevance between nULR and ULR, probably due to the low aggressiveness of the disease (which is linked to the late risk of relapse) and to the sample size. Analysis with larger FU and in a larger universe of patients is necessary to confirm these results.

**Keywords:** Breast cancer; adjuvant therapy; hormonal antineoplastics; genomic profiling.

**QUALITY OF LIFE IN BRAZILIAN WOMEN WITH EARLY BREAST CANCER ON ADJUVANT ENDOCRINE THERAPY**

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**Objective:** This study aims to evaluate quality of life (QOL) in woman with early breast cancer treated with adjuvant endocrine therapy and to explore its relationships with patients' clinical and social characteristics, type and time on endocrine therapy and site of treatment (public vs private health service). **Methodology:** Women with a past history of early-stage estrogen-receptor positive invasive carcinoma of the breast on adjuvant endocrine therapy for at least 6 months were invited to participate of this study. To assess QOL while on therapy, patients were assessed with EORTC QLQ-C30 and QLQ-BR23 questionnaires. Demographic and clinical information were reviewed from medical records. Data collection performed using RedCap software and statistical analyzes were performed on the software R (R Core Team (2022)). **Results:** From June 2021 to March 2023, a total of 212 patients from 6 institutions (2 public and 4 private) were evaluated. Median age was 56,7 years-old. A total of 51 (24.1%) patients were premenopausal, 138 (65.1%) received (neo)adjuvant chemotherapy and mean time on endocrine therapy was 3.7 years. A total of 115 patients (54.2%) were on aromatase inhibitors, 31 on ovarian suppression (14,6%) and 66 on tamoxifen (31,1%). Domains of emotional functioning 64,9 (standard deviation – SD 28,4), cognitive function 65.4 (31.9), future perspective 56.8 (35.3), sexual functioning 19,9 (21,9) and sexual enjoyment 47.2 (28.0) were affected in this cohort. Premenopausal women presented with significantly lower scores for emotional functioning (54,6 vs 68,2 = p 0.003) and cognitive functioning 56.5 vs 68.2, p = 0.022 than postmenopausal women. Among premenopausal patients, ovarian suppression contributed for lower scores in cognitive and social functioning domains. **Conclusion:** This study showed significant impairment of QOL of women on adjuvant endocrine therapy, especially in premenopausal women.

**Keywords:** Hormone Therapy; Breast Cancer; Quality of life; Adjuvant treatment

**ADHERENCE TO ENDOCRINE ADJUVANT THERAPY IN WOMEN WITH EARLY HORMONE POSITIVE BREAST CANCER**

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**Objective:** This study aims to evaluate adherence to adjuvant endocrine therapy in woman with early breast cancer and explore its relationships with patients' clinical and social characteristics and site of treatment. **Methodology:** Women with a past history of early-stage estrogen-receptor positive invasive carcinoma of the breast on adjuvant endocrine therapy for at least 6 months were invited to participate of this study. Adherence was assessed with questionnaire MMAS-8. Demographic and clinical information were reviewed from medical records. Data collection performed using RedCap software and statistical analyzes were performed on the software R (R Core Team (2022)). **Results:** From June 2021 to March 2023, a total of 212 patients were recruited in 6 institutions. Median age was 56 years. 29,2% were black. 24,1% were premenopause. 38,2% had stage I disease. 65,1% received chemotherapy. 16,5% received HER2 blockade. Mean duration of endocrine therapy use was 3,7 years. 115 patients (54,2%) used aromatase inhibitors. 24 patients (11,4%) had low adherence, 76 (36%) had intermediate and 111 (52,6%) had high adherence to adjuvant endocrine therapy. There is a tendency that more postmenopausal women were classified in high adherence grupo than premenopausal women (55.9% vs 42% p=0,19). There is a tendency that more woman in public service had high adherence than woman in private service (59.3% vs 50.3% p=0.07). There was no difference in adherence in relation to ethnicity, type/duration of endocrine treatment. **Conclusion:** This study for the first time show that high adherence to endocrine therapy only happens in 52.6% of patients, lower than reported in previous studies. This result draws attention because it can compromise survival. We will continue the recruitment of patients in the private service and in the public service to assess the rate of adherence in a larger population and the relationship with demographic characteristics.

**Keywords:** Hormone Therapy; Breast Cancer; Medication Adherence

**INCIDENCE OF INTERSTITIAL LUNG DISEASE AND CARDIOTOXICITY WITH TRASTUZUMAB-DERUXTECAN IN BREAST CANCER PATIENTS: A SYSTEMATIC REVIEW AND SINGLE-ARM META-ANALYSIS**

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**Objective:** We performed a systematic review and meta-analysis to assess the incidence and severity of those adverse events (AE) in metastatic breast cancer (mBC) patients treated with Trastuzumab-Deruxtecan (T-DXd). **Methodology:** We comprehensively searched Pubmed, Cochrane, and Scopus databases for randomized clinical trials (RCT) and observational cohort studies, including mBC patients with HER2-low or -positive expression who have received at least one dose of T-DXd. The DESTINY-Breast02 study was also included after its presentation at the SABCS 2022. Our meta-analysis followed the Cochrane Reviews and PRISMA statement guidelines. The statistical analysis was performed using R software, and the results are presented as pooled analysis in forest plots. **Results:** We included nine studies: three phase III RCTs, three phase II and two phase I non-RCTs, and one retrospective cohort comprising 1,443 patients with a mean follow-up of 14.9 months. The median age of our population ranged from 53 to 59 years. Most were non-Asian (40.5%) and presented with hormone-receptor positive mBC (66.8%). In a pooled analysis, the incidence of ILD was 13.0% (179 patients; 95%CI 11.0 to 13.0). Patients enrolled in phase III clinical trials had an ILD rate of 12.0%, while the observational cohort reported a numerically higher rate of 18.0%. Most ILD cases, 84.9% (152 patients), were mild (grade 1 or 2). Grade 3 or 4 AE were reported in 13 patients (7,3%), and grade 5 in 14 patients (7,8%). We assessed cardiotoxicity by the reduction of left ventricular ejection fraction (LVEF) compared to baseline measures. Decreased LVEF was seen in 3.6% (95%CI 3.0 – 5.0%), and most patients were asymptomatic. Eleven patients developed prolonged QT interval, and four had left ventricular dysfunction and cardiac failure. **Conclusion:** Our meta-analysis reinforces the importance of close vigilance for pulmonary and cardiac toxicities in mBC patients on treatment with T-DXd. Early detection and management by a multidisciplinary team following the most recent guidelines may improve the patient outcomes.

**Keywords:** Breast cancer, Metastatic breast cancer, Interstitial lung disease, Cardiotoxicity, Trastuzumab deruxtecan.

**DRUG RESISTANCE IN LUMINAL BREAST TUMORS: RESULTS OF A NOVEL IN VITRO BREAST CANCER CHEMORESISTANCE PLATFORM**

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**Objective:** The aim of our preliminary study is to validate a novel in vitro chemoresistance platform to predict response of Luminal tumors for cytotoxic drugs commonly used in neoadjuvant setting. **Methodology:** Patients with estrogen receptor (ER) positive breast cancer tumors who underwent upfront surgery were included. Fresh tumor samples were collected during surgery and dissociated to obtain the tumor cells. The tumor cells were cultured in the chemoresistance platform with anthracyclines and taxanes and after 72h cell viability was evaluated. The test result is defined based on cell viability as low (< 40%), medium (40-60%), and high (> 60%) resistance. One BC cell line (MCF-7 (luminal)) was used to confirm the response to the drugs. **Results:** Samples from 13 patients diagnosed with ER+/HER positive and/or negative undergoing upfront surgery were tested in the chemoresistance platform. Nine (69.2%) patients presented Luminal A tumors, 2 (15.4%) Luminal B, and 2 (15.4%) Luminal B/HER2. The chemoresistance platform demonstrated that samples presented more high resistance to taxanes compared with anthracyclines. In taxanes, 75% presented high resistance to docetaxel and 61.6% to paclitaxel and in anthracyclines, only 15%, and 8.3% presented high resistance to doxorubicin and epirubicin, respectively. To confirm these differences in drug response we evaluated cell survival rate of an ER-positive cell lineage (MCF-7) after the treatment with the same drugs using the IC50 (50% inhibitory concentration). In accordance with our previous results, we observed lower rates of high resistance to doxorubicin (34%) and epirubicin (37%) and higher rates using paclitaxel (58%) and docetaxel (67%). **Conclusion:** This preliminary finding highlighted the technique success of the in vitro chemoresistance platform and suggest a possible role of an intrinsic resistance in the worse response to neochemotherapy of patients with Luminal tumors.

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

**APPROVED PAPERS FOR COMMENTED POSTER****SIMULTANEOUS ROOM****ADHERENCE OF COMMUNITY HEALTH AGENTS (ACS) TO A BREAST CANCER SCREENING PROGRAM – ITABERAÍ PROJECT**

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**Objective:** Introduction: the ITABERAÍ Project is a study that deals with Intervention through Training of Community Health Agents (ACS) Based on Evidence of Tracking in Physical Examination of the Breast. Objective: to evaluate the ACS adherence to a breast cancer screening program carried out in the city of Itaberaí. **Methodology:** Methodology: clinical, controlled, randomized, multicenter, phase III trial, where the observation unit was the ACS in its Family Health Team (ESF). Randomization was performed by conglomerate, according to the geographic location of the ESF and the respective Basic Health Unit (UBS). The UBS were randomly drawn and allocated in the Control Group (CG) and Intervention Group (IG). Information on the sociodemographic profile, life habits and anamnesis were collected and analyzed. **Results:** Results: 75 ACS participated in the study, where the mean age in the CG was 46.68 years  $\pm$  8.68 and in the IG it was 49 years  $\pm$  9.33 ( $p=0.27$ ), the time working as an ACS was 17.09 years  $\pm$  7.15 in the CG and 16.38  $\pm$  8.02 in the IG ( $p=0.69$ ). There was no significant difference in educational level between groups ( $p=0.59$ ). A total of 1963 women were registered, 1261 of which by the ACS in the Control Group and 742 in the Intervention Group ( $p=0.01$ ). **Conclusion:** Conclusion: at the beginning of the study, there was greater adherence by the ACS in the Control Group compared to the ACS in the Intervention Group. This may configure the need for greater training of the ACS of the Intervention Group, both to perform the physical examination and in the aspect of how to approach the woman for her inclusion in the study.

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

**KINESIOTHERAPY AND QUALITY OF LIFE AFTER BREAST CANCER SURGERY:  
A SYSTEMATIC REVIEW WITH META-ANALYSIS**Leonardo Ribeiro Soares<sup>1</sup>, Matheus Gonçalves Ribeiro<sup>1</sup><sup>1</sup> Federal University of Goiás (UFG)|Goiânia|Goiás|Brazil

**Objective:** To verify whether kinesiotherapy has influence on the quality of life of women with breast cancer in the postoperative period. **Methodology:** This is a meta-analysis conducted under the recommendations of Cochrane and PRISMA. The search was carried out in the PubMed, Cochrane and Regional Portal of the Virtual Health Library databases, searching for randomized and observational studies that compared the performance of kinesiotherapy protocols versus the non-performance in patients undergoing breast cancer surgery. The evaluated outcomes were global health status, physical function, emotional function and social function. Statistical analyzes were performed using the RevMan 5.1.7 program; and heterogeneity was evaluated with  $I^2$ . **Results:** A total of 190 patients were included in four studies, with a mean age of 54.28 ( $\pm 9.91$ ) years. Of this sample, 139 (73.16%) underwent mastectomy. Three studies performed a before-after evaluation and one study evaluated intervention versus non-intervention in two different groups. Among the evaluated outcomes, global health status (Std. MD 0.78; 95% CI 0.13-1.43;  $p=0.02$ ;  $I^2=87\%$ ) and social function (Std. MD 0.53; 95% CI 0.14-0.92;  $p=0.007$ ;  $I^2=56\%$ ) showed significant results favoring kinesiotherapy. As for the outcomes physical function (Std. MD 1.05; 95% CI 0.04-2.15;  $p=0.06$ ;  $I^2=94\%$ ) and emotional function (Std. MD 0.53; 95% CI 0.36-1.42;  $p=0.25$ ;  $I^2=91\%$ ) we did not observe statistical significance. **Conclusion:** Kinesiotherapy can improve the quality of life of women undergoing surgical treatment for breast cancer, especially in terms of overall health status and social functioning. Physical function and emotional function were not benefited by the intervention, but the inclusion of new studies and the increase in the sample size can reverse this result.

**Keywords:** Breast cancer, Kinesiotherapy, Mastectomy, Quality of life, Physiotherapy

**ACCURACY OF STEREOTACTIC VACUUM-ASSISTED BREAST BIOPSY FOR INVESTIGATING SUSPICIOUS CALCIFICATIONS IN 2,021 PATIENTS A PUBLIC HOSPITAL IN BRAZIL**

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**Objective:** to evaluate the accuracy of vacuum-assisted stereotactic biopsy (VASB) in the investigation of non palpable suspicious calcifications. **Methodology:** it was a retrospective study from July 2012 to December 2020, in which 2,021 women with suspicious calcifications detected on mammography (BI-RADS 4 and 5) had VASB performed at Hospital Estadual Pérola Byington, São Paulo, Brazil. Fragments were obtained and sent to anatomopathological study; a metal clip was placed on the biopsy site. Four groups were analyzed, based on the biopsy results: benign, precursor lesions, Ductal Carcinoma In Situ (DCIS) and Invasive Ductal Carcinoma (ICD). **Results:** patients median age was 55y (49-63y). Pathology results on VASB were classified respectively as benign n=1,340 (66.3%), precursor lesions n=84 (4.1%), DCIS n=441 (21.8%) and ICD n=156 (7.7%). The 60 patients with results benign on VASB, because anatomopathological disagreement, surgery was performed, with the following results: benign n=30 (50%), ICD e DCIS n=21 (35%) e precursor lesions n=9 (15%). The sensitivity of the method was 91.7 %, specificity was 97.1%, false negative rate was 3%, positive predictive value was 92.4%, negative predictive value was 96.9%. **Conclusion:** the VASB method has a good accuracy to distinguish lower and higher risk lesions groups comparing to the gold standard. It has high predictive value in both benign and malignant lesions, guiding therapeutic planning.

**Keywords:** Calcifications; Vacuum-assisted stereotactic biopsy; Breast cancer; Diagnosis.

**PERIODONTAL DISEASE AS A RISK FACTOR FOR BREAST CANCER: A CASE-CONTROL STUDY BASED ON A COMPREHENSIVE CLINICAL PERIODONTAL EVALUATION**

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**Objective:** Evaluate the risk association related to periodontal disease and breast cancer performing a prospective case-matched control study. **Methodology:** It was a prospective controlled study, performed to evaluate the possible association with PD and breast cancer. The Institutional Board for Ethics in Research approved the study (CAAE: 08989019.9.0000.5437). This case-control was designed a 1:1 propensity study included 64 voluntaries with breast cancer before treatment and 64 women volunteers with no cancer. The cases and matched controls were recruited from the Barretos Cancer Hospital. For matching, cases and controls were matched by age, income families, education and smoking status (considered former smoker or current smoker). All of the patients interviewed participated voluntarily and signed an informed consent form. For both groups, women, over 40 years old, at least 17 teeth, no history of familial breast cancer, no prior cancer and no history of breast cancer in the family. For case group, patient with breast cancer diagnosis and who knew about their breast cancer diagnosis were included. For control group, patient without cancer diagnosis and normal mammographic examination, or if altered, the final finding, showing absence of neoplasm or risk for breast cancer. For data collection of periodontal parameters, the instrument available in the online version through the website Periodontalchart-online.com/pt developed by the University of Bern, Switzerland, was used. Periodontal indices were measured with the aid of a model periodontal probe from the University of North Carolina. PD indices were considered according to the parameters described by the American Academy of Periodontology. **Results:** A total of 128 research participants were included in the study, in two groups, 64 participants without cancer (control group) and 64 patients with breast cancer (case group). The groups were similar related to age, income, education and smoking. Evaluating oral health parameters, the groups were different. Case group were associated with better related to frequency of tooth brushing per day, daily mouthwash uses but worse oral parameters evaluated by mean plaque index, bleeding on probing, periodontal probing depth. PD was significantly associated with BC for all case definitions ( $P < 0.001$ ). In the multivariable analysis, periodontitis was significantly associated with breast cancer in sample of severe and moderate periodontitis. Women diagnosed with moderate periodontitis having for times higher odds of having breast cancer than women without periodontitis. And women with severe periodontitis having ten times higher odds of having BC. **Conclusion:** A possible increased risk of breast cancer diagnosis in women with active PD, when compared to women without PD. Researchers have developed studies with the referred objective as an alternative to carry out the prevention of pathologies through an important oral health action. New studies need to be carried out to corroborate the findings to formulate public health policies.

**Keywords:** breast neoplasms; periodontal disease; prevention and control; odds ratio; observational study; case-control studies

**SCREENING AND DIAGNOSIS OF BREAST CANCER IN OLDER WOMEN IN BRAZIL: WHY SHOULD RECOMMENDATIONS BE RECONSIDERED?**

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**Objective:** Breast cancer is considered one of the current challenges of population aging. Nevertheless, there is disagreement about screening in older women over 70 years of age due to the lack of prospective, controlled and randomized studies that include women of this group. The aim of this work was to evaluate Brazilian data on mammography screening and staging of breast cancer in women over 70 years. **Methodology:** This was an ecological time series study. Information on screening and staging of breast cancer in the Unified Health System (SUS) in women over 70 years of age was analyzed and compared with the group aged 50 to 69 years in Brazil and its five regions from 2013 to 2019. The secondary database was compiled with information from the Outpatient Information System of the Informatics Department of the SUS, the Oncology Brazil Panel, the Brazilian Institute of Geography and Statistics, the Supplementary Health the Supplemental Health Agency and the Online Mortality Atlas. Trends in rates of mammography screening and clinical staging of breast cancer were analyzed. **Results:** In the regression analysis, a more significant decline in follow-up was observed in the 70-plus group, with an APC of -3.5 ( $p < 0.001$ ), compared with the 50- to 69-year-old group APC -2.2 ( $p = 0.010$ ). There was a trend toward an increase in advanced stage, but it was more pronounced in the 70-plus group. Clinical staging analysis revealed a higher incidence of stages III and IV in the elderly population (44.3%) compared with the 50-69 years age group (40.8%;  $p < 0.001$ ). **Conclusion:** Considering the aging of the Brazilian population and the heterogeneity of the functional and cognitive status of older women, mammography screening in the group over 70 years of age in SUS needs to be better discussed in the context of public policy implementation.

**Keywords:** Breast cancer, clinical staging of breast cancer, breast cancer screening, mammography screening, Brazil, elderly women, aging

**BREAST CANCER BIOMARKERS OF RESISTANCE TO NEOADJUVANT CHEMOTHERAPY**

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**Objective:** To identify possible biomarkers of resistance to neoadjuvant chemotherapy (NACT) in breast cancer (BC). **Methodology:** We evaluated microarray gene expression data of BC samples before NACT from 3 public datasets of the Gene Expression Omnibus database. We performed differential expression analyses comparing patients who presented partial versus pathological complete response (pCR) to NACT in each dataset. Differentially expressed genes with an adjusted p-value less than 0.01 and a logFC greater than 1 or less than -1, identified in more than one analysis, were selected as potentially relevant to tumor resistance. **Results:** The selected datasets were GSE25055, GSE25055, and GSE20194, containing 306, 182, and 178 samples. These datasets present heterogeneous data, with different subtypes of BC (Luminal, Luminal/HER2, HER2, and triple negative) and treatments used in the NACT, such as FACT and FECT in GSE20194 and Taxol and Taxotere in GSE25065. Our differential expression analysis identified 43 genes for the dataset GSE25055, 13 for GSE25055, and 30 for GSE20194. Despite the high heterogeneity of the datasets, we identified the genes CCND2, SNX15, and TTC4, which were common to at least two analyses. The CCND2 and TTC4 genes are upregulated, while SNX15 is downregulated in patients with partial response compared with those presenting pCR. The CCND2 gene has low expression in BC and is related to a worse prognosis. Our result showed an inverse relationship; CCND2 is overexpressed in patients with a partial response to NACT. The expression of the TTC4 gene is previously known in breast tumors, and the functions of the SNX15 gene in breast tumors are still poorly understood in the literature. **Conclusion:** These results can contribute to a better understanding of the mechanisms involved in intrinsic tumor resistance to NACT, allowing the development of personalized therapeutic strategies.

**Keywords:** Breast neoplasms, neoadjuvant chemotherapy, drug resistance, gene expression

**REAL WORLD EVIDENCE OF PREDICTORS OF PATHOLOGIC COMPLETE RESPONSE AND IMPACT ON OVERALL SURVIVAL IN BREAST CANCER PATIENTS TREATED WITH NEOADJUVANT CHEMOTHERAPY**

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**Objective:** The aim of this study was to identify predictors of pathological complete response (pCR) with an impact on overall survival (OS) in patients with breast cancer (BC) treated with neoadjuvant chemotherapy (NAC). **Methodology:** This is a retrospective cohort study was conducted at the Centro de Referência em Saúde da Mulher – Hospital Pérola Byington and included women diagnosed with breast cancer between 2011 and 2020. Survival data was reported using the Kaplan-Meier method, and subgroups were analyzed using the log-rank test. The study explored complete pathological response between groups (with and without response) to identify any clinical or demographic differences. The Cox regression model will be used to analyze the relationship between independent factors and the pCR outcome, with the Hazard Ratio calculated. The study was approved by the Brazil Platform (CAAE 64633422.4.0000.5463). **Results:** The study involved 1601 patients who underwent neoadjuvant chemotherapy (NAC) and surgical treatment for breast cancer. The rate of pathological complete response (pCR) in patients who received NAC was 22.8%, while the rate of non-pCR was 77.2% ( $p < 0.0001$ ). The 5-year prognosis for patients with pCR was better, with an overall survival (OS) of 89%, compared to 61.0% in non-pCR patients (log rank  $p < 0.0001$ ). Factors related to pCR that had an impact on OS were premenopausal status (HR 0.79, 95% CI 0.64-0.98,  $p=0.032$ ), clinical stage IIB (HR 0.66, 95% CI 0.46-0.96,  $p=0.029$ ), negative hormonal receptor status (HR 1.39, 95% CI 1.13-1.71,  $p=0.002$ ), and HER-2 positivity (HR 0.79, 95% CI 0.64-0.97,  $p=0.025$ ). **Conclusion:** The pCR is a favorable prognostic factor that is associated with increased overall survival, especially in patients who are hormone receptor-negative, HER-2 positive, and in clinical stage IIB. These factors demonstrate a significant correlation between pCR and OS.

**Keywords:** breast cancer, neoadjuvant chemotherapy, overall survival, pathologic complete response, prognosis

**IMMUNOTHERAPY VACCINES FOR TRIPLE-NEGATIVE BREAST CANCER AND ITS INFLUENCE IN THE TUMOR MICROENVIRONMENT**

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**Objective:** Cancer is still a complex and debilitating disease even though advances in treatment have occurred. Triple-negative breast cancer (TNBC) is an aggressive subtype of breast cancer with a poor prognosis and occurs more frequently in young women. Due to its metastatic features and unique tumor microenvironment, TNBC treatment is limited. In this study, we evaluated how three chemotherapy drugs could be used to produce vaccines with cells under immunogenic cell death (ICD). **Methodology:** For that, 4T1-luc2 cells were treated with cisplatin (100  $\mu$ M), mitoxantrone (MTX) (15  $\mu$ M), and doxorubicin (DOX) (50  $\mu$ M) for 24h. Then, the treated cells were injected subcutaneously in tumor-bearing Balb/c females' mice, after the tumor challenge. The treatment occurred three times, once a week. During and after the treatment, primary tumor and metastatic progression were followed using the chemiluminescence technique. After five weeks of the tumor challenge, mice were euthanized and organs (liver, tumor, lungs and spleen) were collected for analysis. Additionally, the spleens were processed for flow cytometry for Treg (Regulatory T Lymphocyte) and MDSC (Myeloid Derive Suppressor Cells) analysis. **Results:** Cisplatin and MTX vaccines slowed the primary and metastatic tumor growth as well as the decreased tumor, liver, and spleen weight, while DOX vaccine slowed the metastatic tumor progression in the lungs but did not alter tumor and other organs' weight. Moreover, cisplatin and MTX vaccine increased the ratio of lymphocytes in the spleen but not DOX vaccine. All comparison was done regarding the tumor-bearing mice treated with PBS. **Conclusion:** Taken together, both MTX and cisplatin vaccines treated primary and secondary tumors probably by the increase of lymphocyte recruitment and cisplatin vaccine also has an influence in the tumor microenvironment. Finally, the therapeutical vaccine might be an interesting approach as a treatment for TNBC due to its positive effect on metastasis and tumor microenvironment, especially with cisplatin.

**Keywords:** Vaccine; Pre-clinical; breast cancer; Immunogenic Cell Death

**EVALUATION OF UPPER LIMB LYMPHEDEMA USING SPECTROSCOPIC BIOIMPEDANCE IN A BRAZILIAN POPULATION**

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**Objective:** Upper limb lymphedema secondary to breast cancer treatment is a disabling, chronic and often incurable sequel, resulting from lymphatic insufficiency. There are several methodologies for diagnosing lymphedema, such as: volumetrics (considered the gold standard), perimetry (the method most used in clinical practice due to its ease of application), perometry, lymphoscintigraphy, computed tomography, which are high-cost equipment and are not superior to others. methods, and spectroscopic bioimpedance (BIS), which allows the early diagnosis of lymphedema. Early detection is related to lower cost in the treatment of this comorbidity and less impact on the quality of life of these women, however, there are still no studies using BIS to assess lymphedema in the Brazilian population. The aim of this study was to analyze the validity of BIS as a method for diagnosing lymphedema in Brazilian women undergoing treatment for breast cancer and compare it with other methods. **Methodology:** A cross-sectional prospective study was carried out at Hospital de Amor, evaluating 462 women undergoing treatment for breast cancer, from May 2015 to January 2021. Lymphedema was evaluated using different methodologies. BIS results was compared with direct volumetry. L-Dex®61650; technology/BIS equipment from Impedimed®61650; was acquired using FAPESP grant under the number 2014 08197-0. The study was approved by local Ethics Committee under the numbers 782/2014 and CAAE 28140214.1.0000.5437. **Results:** When comparing patients with lymphedema diagnosed by direct volumetry with those diagnosed by BIS, BIS did not diagnose lymphedema in 52 of the 93 patients with lymphedema. BIS sensitivity was 44.1%, specificity 95.4%, PPV was 70.7%, NPV was 87% and Kappa was 0.459. When performing the ROC curve between BIS and volumetry, a good area under curve was obtained (AUC=0.75) and a possible cutoff point of L-DEX®8805;7.35 with sensitivity of 57%, specificity of 90.9% and Kappa value = 0.489. **Conclusion:** BIS showed low sensitivity and concordance and did not prove to be a valid method for diagnosing lymphedema in Brazilian women.

**Keywords:** lymphedema; roc curve; prospective study; breast neoplasms

**IMPACT OF THE COVID-19 PANDEMIC ON CANCER CARE IN 2020 AND 2021 IN A BRAZILIAN HEALTHCARE CENTER**Victor Domingos Lisita Rosa<sup>1</sup>, Paulo Victor Rabelo Barbosa<sup>1</sup><sup>1</sup> Hospital das Clínicas, UFG|Goiânia|Goiás|Brazil

**Objective:** Evaluate the impact of the coronavirus pandemic on the care of cancer patients in the years 2020 and 2021 compared to the pre-pandemic period in the oncology service of the Hospital das Clínicas of the Federal University of Goiás. **Methodology:** This is an observational, analytical, and cross-sectional study which was carried out by collecting data from medical records and the Internal Regulation Center database. The periods of time evaluated during the pandemic were March to May 2020 and March to May 2021. Data from these periods were compared with data from March to May 2019, a period that preceded the pandemic. The association between patients' vital status and age group, sex, tumor, treatment and staging was analyzed using Pearson's chi-square test followed by the analysis of standardized residuals whenever statistically significant differences were found. The data were analyzed using the Statistical Package for the Social Sciences, version 26.0. Significance level was set at 5% ( $p < 0.05$ ). **Results:** Compared to the pre-pandemic period, there was an increase in patient visits of 11.0% and 6.5% in 2020 and 2021, respectively. However, there was a reduction in new cases of 44.7% and 57.5% in 2020 and 2021, respectively, and these differences were statistically significant ( $p = 0.04$ ). Regarding indications for intravenous or oral therapy, a statistically significant difference was found compared to the pre-pandemic period only for the second period of the pandemic studied (2021), with a more than 2-fold increase in the prescription of oral therapy and a consequent reduction in intravenous therapy. **Conclusion:** This observational study allowed the impact of the COVID-19 pandemic to be evaluated over two different periods (2020 and 2021), with results showing a significant reduction in the number of new cases seen in the cancer center of this institute due to restrictions in the services provided including a variety of medical specialties, screening tests and elective surgery, in addition to the fact that admissions to hospital focused on patients infected with the virus. These data confirm the implications of access to treatment for cancer patients during the pandemic.

**Keywords:** breast cancer; pandemics; coronavirus.,

**COMFORT PROGRAM: ACCESSIBLE STRATEGY TO GIVE VOICE TO A LITTLE HEARD PATIENT**

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**Objective:** We analyzed the accessibility of a virtual program developed for women with advanced cancer undergoing chemotherapy treatment by the Unified Health System. We ranked the benefits of participating in the program according to the patient's experience. **Methodology:** Longitudinal study of quantitative and qualitative carried out with 78 women diagnosed with locally advanced and/or metastatic breast and gynecological cancer. All participants used the Comfort Program for at least one chemotherapy cycle over the six months of the study. We carried out a semi-structured interview to absorb the experience throughout the participation in the program. Data were analyzed with descriptive and inferential statistics, using Student's t test and Pearson's Correlation Test. Qualitative analysis was performed by two independent evaluators using Bardin's Content Analysis method. **Results:** There was no correlation between the frequency of participation in the program and social factors (age, education level and income). Most of the participants reported more about their symptoms to the oncologists (70.4%; N 57), the oncologists encouraged their participation in the program and helped with the reported symptoms (60%; N 52) and 91% (N 75) of the patients denied difficulties with understanding of the guidelines offered throughout the participation. The program was classified according to three categories: practicality with the use of the internet, welcoming space, ease of reaching help/referrals. The difficulties were related to physical discomfort, forgetfulness and the unavailability of the internet. **Conclusion:** In another study we found benefits of using the Comfort Program in the management of symptoms during chemotherapy. In this study, in addition to numbers, patients brought their own perception of the program and we identified that it is an accessible strategy, facilitating communication between patients and care providers. Regardless of the frequency of participation, women showed greater attention to discomfort, which may suggest greater tolerance to chemotherapy treatment.

**Keywords:** Telemedicine; Psycho-Oncology; eHealth Strategies; Breast Neoplasms

**CLINICAL AND PATHOLOGICAL DIFFERENCES BETWEEN HER2 LOW AND OTHER CANCER SUBTYPES IN BREAST CANCER PATIENTS**

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**Objective:** HER2 is a tyrosine kinase receptor belonging to the human epidermal receptor family and is considered an important proto-oncogene in the biology of breast carcinoma. HER2 overexpression is determined by a +3 score on the immunohistochemistry (IHC) assay. In addition, tumors with IHC results of +1 or +2 with ISH negative were defined as HER2-low. Recent studies have shown that the clinicopathological characteristics of HER2-low tumors, pointing out potential differences regarding hormone receptor status. **Objective:** To assess clinicopathological differences between cancer subtypes, as well as the survival of these patients. **Methodology:** 8,872 patients with breast cancer diagnosed between 2010 and 2019 included in the Pérola Byington Hospital database were eligible. Patients were excluded if they had bilateral disease, had participated in clinical studies, or had incomplete data. The primary endpoint was overall survival stratified by cancer subtype, secondary endpoints were clinicopathological differences between cancer subtypes and death probability. Both the t-test and the chi-square test were used to analyze the association of each variable between the groups. Multivariate analysis was used to calculate odds ratios (OR) and 95% confidence intervals (CI) for the death outcome. Cox regression was used for survival analysis, with the Log-rank method and the results were presented in a survival graph using the Kaplan-Meier method. The R software version 4.1.1 was used to perform all analyzes, with a p-value <0.05 being considered statistically significant. **Results:** 8,872 patients were included: 3,865 (43.65%) had Luminal cancer subtype, 1,840 (20.74%) HER2 Low, 1,610 (18.156%) triple negative, and 1,557 (17.55%) HER2 overexpression. In the multivariate regression (adjusted for the other evaluated characteristics), Her2 low had median of 101 months of survival compared with 96 months for triple negative. When comparing Her2 low with hormonal receptor positive versus negative we saw better survival in hormonal receptor positive (90 vs 101 p< 0.001). These data did not differ among stage. As an additional finding Ki67 is prognostic for survival and so is pCR. **Conclusion:** This study in breast cancer patients demonstrates significant differences between cancer subtypes, with a higher probability of progression to death for patients with triple negative cancer. More studies are needed to clarify the impact of these differences between cancer subtypes on response to therapy.

**Keywords:** Breast cancer, overall survival, Her2 low

**HOW LONG DOES IT TAKE TO START BREAST CANCER TREATMENT IN BRAZIL? IS THE 60 DAY LAW FULFILLED?**

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**Objective:** The aim of this study is to evaluate compliance with the law of 60 days to start breast cancer (BC) treatment in Brazil. **Methodology:** This is an ecological observational study, based on retrospective data from a National Oncology Database (DATASUS – SISCAN/Cancer Information System) that is publicly available for download. Oncological treatment data from 2017 to 2021 were selected, referring to the time from the diagnosis of breast cancer to the beginning of the first oncological treatment. Only data with all available variables were considered, an analysis was performed by federative unit and by region of Brazil. **Results:** In the 5-year study period, 202,371 patients with BC treatment in Brazil were included in the SUS, being in the north region 11,198 (5.5%), northeast region 46,775 (23.1%), southeast region 90,151 (44.6 %) , South region 41,288 (20.4%) and Midwest region 12,959 (6.4%). BC treatment in Brazil begins in 50% of patients within 60 days of diagnosis, however 16.3% take up to 90 days, 11.3% take up to 120 days and 19.% take up to 300 days and 2.6% take longer than 301 days. With regard to the regions that comply with the 60-day law, it is the North region with 65% of treatments initiated within 60 days and the one that least complies is the Southeast with 45.7%, with a significant difference between the regions ( $p=0,0363$ ). Likewise, the state that best complies is Rondônia with 84.5% and the one that least complies is Rio de Janeiro with 39.1%, with a significant difference in all states in relation to their region ( $p > 0.0001$ ). **Conclusion:** It is observed that compliance with the 60-day law is much lower than expected, where only 50% of patients in Brazil start their treatment within 60 days and in many states more than 1/4 of patients take more than 120 days to start, with an impact on prognosis.

**Keywords:** breast cancer, treatment, delay, prognosis

**PREDICTORS OF BIOPSYCHOSOCIAL DISTRESS IN WOMEN WITH LOCALLY ADVANCED AND/OR METASTATIC BREAST CANCER**

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**Objective:** To identify predictors of biopsychosocial distress in women with locally advanced and/or metastatic breast cancer. **Methodology:** Quantitative cross-sectional study carried out with 125 women with locally advanced and/or metastatic breast cancer. The Palliative Performance Scale – PPS, the Edmonton Symptom Assessment Scale – ESAS and a sociodemographic questionnaire were used. Data were analyzed using descriptive and inferential statistics. We used the Shapiro-Wilk Test and the Spearman Correlation Matrix. **Results:** The performance of patients had a mean of 39, median 40, (0-100), survival after referral to palliative care was 75.96 days, median 13 (SD 144.73; 1-618). The most intense symptoms were lack of appetite (mean 6.59; SD 3.58; 0-10), anxiety (mean 6.05; SD 3.76; 0-10) and fatigue (mean 5.86; SD 3.63; 0-10). Pain and nausea were correlated with worse performance ( $P < 0.05$ ) and distress with worse fatigue, sadness, anxiety, lack of appetite, dyspnea and malaise ( $P < 0.05$ ). Younger age was a predictor of higher levels of anxiety, malaise and distress ( $P < 0.05$ ). **Conclusion:** Our results suggest that younger patients are more prone to psychosocial distress, especially showing greater lack of appetite, anxiety and fatigue. For equitable and comprehensive care, it is necessary to implement symptom screening strategies, as well as interprofessional management, according to the correlation between experienced symptoms.

**Keywords:** Integrative Palliative Care, Emotional Distress, Breast Neoplasms.

**TUMOR PROFILE AND TREATMENT USED IN ELDERLY WOMEN WITH BREAST CANCER IN A TERTIARY REFERRAL HOSPITAL**

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**Objective:** Describe the tumor profile and treatment used in elderly women diagnosed with breast cancer treated and followed up at a tertiary referral hospital. **Methodology:** Cross-sectional study with all women aged over 60 years, survivors of breast cancer, who were being followed up at the Mastology Section of the Hospital das Forças Armadas (HFA)/Brasília/Federal District/Brazil, whose consultations were carried out between January 1, 2015 to December 31, 2021. **Results:** There were 106 women diagnosed with breast cancer after 60 years of age, 50.94% of whom were 70 years of age or older and 93.19% were symptomatic at diagnosis. Invasive ductal carcinoma of luminal subtypes predominated. Sixty-two percent were in stages I and IIa, but it was seen that in 53.84% of the cases mastectomies were performed and only 25.52% were used immediate breast reconstruction techniques. Chemotherapy, radiotherapy and hormone therapy were performed as indicated. **Conclusion:** The elderly women in the present study had mostly invasive ductal carcinoma, luminal, stages I and IIa. Mastectomy with sentinel lymph node biopsy was the most commonly performed surgery with a low percentage of immediate breast reconstruction. Age did not influence the indication of adjuvant and neoadjuvant therapies.

**Keywords:** Breast neoplasms. Aged. Mastectomy. Reconstructive Surgical Procedures. Mastectomy. Epidemiology.

**THE USE OF EPIGENETICS IN THE TREATMENT OF TRIPLE NEGATIVE BREAST CANCER, FOCUSING ON lncRNA**

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**Objective:** In triple negative breast cancer (CMTN), the standard therapeutic procedure is usually not very effective due to the aggressiveness of the disease. Therefore, it is important to identify and characterize new forms of treatment for this neoplasm. In this context, the study of the genetic material of diseases has gained notoriety among alternative forms of therapy, as long non-coding RNAs (lncRNAs) have been identified in neoplastic cells. Therefore, the aim of this study was to evaluate the use of epigenetics in the treatment of CMTN, with emphasis on lncRNAs. **Methodology:** A systematic review of the specialized scientific literature was carried out, in the PubMed database, with the descriptors: “breast cancer”, “epigenetic” and “treatment”; the Boolean operator: “AND”, and the filters: “free full text”, “adults: 19+ years” and publication date from 2021 to 2023. 32 articles were identified, with 3 included. **Results:** Epigenetics influences the treatment of breast cancer, since the lncRNA was found in neoplastic cells it was possible to monitor the prognosis of the disease. The lncRNA Uc003xsl.1 was associated with a poor prognosis, as it was related to advanced stages of CMTN, increasing the transcriptional activity of NFkB, which promotes tumor progression. On the other hand, the lncRNA LINC00472 proved to be a marker of good prognosis, as it inhibited the proliferation, invasion and migration of neoplastic cells in the CMTN. Furthermore, with regard to breast cancer, lncRNA IGF-2AS proved to be an important biomarker, as it slows tumor growth in vivo, repressing malignancy and tumor progression. Therefore, lncRNAs have gained notoriety in treatment as regulators of breast cancer tumorigenesis. **Conclusion:** Thus, the use of epigenetics in the treatment of CMTN has proven to be essential to curb neoplastic cells, since it interferes with tumor proliferation through different ways, either by influencing transcription or by slowing down growth.

**Keywords:** Breast cancer; Treatment; Epigenetics.

**BETTER AESTHETIC RESULTS AFTER ONCOPLASTIC SURGERY THAN AFTER TOTAL BREAST RECONSTRUCTION ACCORDING TO PATIENTS AND SURGEONS**

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**Objective:** Patient satisfaction after breast cancer surgery has impact on body image, sexual life, self-esteem, and quality of life, and may differ from the surgeon perception. The objective of our study was to compare the aesthetic results and satisfaction after breast conservation and oncoplastic surgery with mastectomy and total breast reconstruction. **Methodology:** We included 760 women with breast cancer or phyllodes tumor, who returned after at least 6 months from surgery or radiotherapy at two public hospitals and one private clinic between 2014 and 2022. Data were collected from medical records and patient interview, after signing the informed consent. Aesthetic outcomes and quality of life were evaluated using BREAST-Q, Harris scale, and BCCT.core software. Data were analysed using the SPSS statistical package. A p value. A p value <0.05 was considered statistically significant. **Results:** 405 (53.29%) partial reconstructions and 355 (46.71%) total reconstructions were performed. Patients undergoing partial reconstruction were older and had a higher body mass index. Patients undergoing total reconstruction had larger tumors, higher clinical and pathological staging, and more complications. There was a higher need for reparative surgeries and lipofilling in total reconstructions. Women's satisfaction with their breasts, satisfaction with the results, psychosocial and sexual well-being, satisfaction with information, and satisfaction with the reconstructive surgeon were significantly higher in the partial reconstruction group, according to the BREAST-Q. Only physical well-being was slightly higher in total reconstructions. Results were qualified as good or excellent in most cases. Physicians considered the results of partial reconstructions to be better than those of total reconstructions, although this difference was not perceived by the BCCT.core software. **Conclusion:** Women who underwent partial breast reconstruction had higher levels of satisfaction in several domains, less frequent complications, and needed fewer procedures to complete the reconstruction than women who underwent total reconstruction. Physicians were also more satisfied with partial reconstructions results.

**Keywords:** breast cancer; conservative surgery; mammoplasty; mastectomy; breast reconstruction; patient satisfaction, oncoplastic surgery.

**EXTREME ONCOPLASTY: PAST, PRESENT AND FUTURE**René Aloisio da Costa Vieira<sup>1</sup>, Regis Resente Paulinelli<sup>2</sup>, Idam de Oliveira-Junior<sup>3</sup><sup>1</sup> Hospital de Câncer de Muriaé|Muriaé|MG|Brasil<sup>2</sup> Universidade Federal de Goiás|Goiania|Goiás|Brasil<sup>3</sup> Hospital de Câncer de Barretos|Barretos|São Paulo|Brasil

**Objective:** Recently, a new paradigm has been considered for mastectomy candidates with large multifocal and multicentric tumors, designated extreme oncoplasty (EO), which has evolved into new techniques for breast-conserving surgery (BCS) to be performed in tumors with limited conditions for BCS. At present, there are few publications and there is no uniform description grouping all technical possibilities and new indications. The objective is to perform a Systematic review about Extreme Oncoplasty. **Methodology:** Based on resolution 466 from 12/12/12, it is not necessary evaluation by Ethics Committee. A systematic review was conducted to evaluate the indications and surgeries performed in the context of EO. We used PICO for article evaluation: Problem = breast neoplasm; Intervention = OS, EO, or reconstructive surgical procedures; Comparison = all; Outcome = indication and type of surgery. A literature review was performed by screening two databases (PubMed and LILACS). To evaluate articles in PubMed, we used the terms: (((("breast neoplasms"[Mesh]) AND ("surgery, plastic"[Mesh] OR "plastic surgery procedures"[Mesh] OR "mammaplasty"[Mesh] OR "mastectomy, segmental"[Mesh])) AND ("oncoplastic surgery" OR "oncoplasty" OR "oncoplastic" OR "extreme oncoplasty" OR "extreme oncoplastic" OR "regional flaps" OR "geometric compensation"))). The terms used in LILACS were "neoplasias da mama" and "procedimentos cirúrgicos reconstrutivos"; "neoplasias da mama" and "cirurgia oncoplastica ou oncoplastia". **Results:** Initially, 787 articles were identified from the PubMed database. The titles and abstracts were evaluated, and 140 articles were selected for reading. After content evaluation (30/11/2022), 39 articles were selected for this study. Specifically, for EO, 23 original articles and four comments were evaluated. Silverstein suggested the term EO and the articles selected here. Paulinelli considered the term GC using wide pattern resection and similar articles were selected. We found articles related to preoperative care, traditional indications, increased indications, casuistic and case reports. Quality of life was evaluated. In addition, four replies were published. We found two articles on LILACS, one of which was included. Classical indications were tumor larger than 5cm; multifocal and multicentric tumors, which the initial surgery to be considered was mastectomy. New indications were: (1) breast tumor unfavorable ratio; (2) extensive microcalcifications or extensive CDIS; (3) new or recurrence in irradiated breasts; (5) locally advanced breast carcinoma with partial response to chemotherapy; (6) inappropriate scare; (7) medium and low breast with ptosis. New situations are small to moderate sized non-ptotic with centrally located with breast cancer; small to moderate sized-breast and flaps. We observed new options, including general discussions, partial breast amputation, regional flaps, and other techniques. **Conclusion:** Extreme Oncoplasty represents a new paradigm related to BCS. It is important to discuss the technical possibilities, improving numbers of patients to be selected for these surgeries.

**Keywords:** breast neoplasms; breast conserving surgery; oncoplastic surgery; extreme oncoplasty

**BILOBED LICAP FOR BREAST CONSERVATION – TECHNIQUE DESCRIPTION AND TEN-YEAR RETROSPECTIVE COHORT RESULTS**

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**Objective:** The bilobed flap is a useful double transposition flap technique for covering skin defects, particularly in the face. Lateral intercostal perforator vessel flaps (LICAPs) are a valuable volume replacement oncoplastic technique for the outer quadrants. A plastic surgeon in Brazil has modified the bilobed flap for use in the breast, especially for tumors located in the upper inner quadrants. The aim of this study is to describe a new modification, called bilobed LICAP, for tumors located in the central quadrants or nearby, and our results after 10 years.

**Methodology:** From 2013 to 2023, we identified 37 patients submitted to this technique, with large malignant breast tumors near or involving the skin in the central quadrants or nearby, who did not have ptosis or did not wish to correct it, and for whom this new modified bilobed flap technique avoided mastectomy. These patients were operated on by the same breast oncoplastic surgeon in different institutions, and this is part of a research project approved by our ethical committee (n. 2.322.212). **Results:** The mean patient age was 56.23 ( $\pm 13.57$ ) years, and the estimated breast volume was 350 ( $\pm 124.74$ ) g. Twenty-four (88.89%) women had grade 0 or 1 ptosis. The mean specimen weight was 105.89 ( $\pm 127.00$ ) g, and the mean clinical tumor size was 45.00 ( $\pm 16.49$ ) mm, with tumors up to 75mm. There were 13 (35.14%) tumors larger than 5cm and one multicentric tumor. Thirty-four (91.89%) patients had invasive ductal carcinomas. Round incisions over the tumor were performed in 36 (97.30%) cases, and the skin was preserved, and part of the flap de-epithelialized in one case. Nipple areola complex was removed due to clinical involvement in 19 (51.35%) cases. In two of these cases, the nipple and areola were immediately reconstructed with contralateral free grafting. Twenty patients (54.05%) required neoadjuvant chemotherapy, and ten (27.03%) received adjuvant chemotherapy. Four patients received anti-HER therapy (13.04%) and 20 (86.96%) hormone therapy. Three (8.11%) patients underwent immediate contralateral mastopexy due to previous asymmetry. Radiotherapy was indicated in all cases. Eighteen patients (88.24%) received hormone therapy. There were 3 (8.11%) minor complications, including one case of hyperemia treated with antibiotics, one small hematoma treated clinically, and one case of palpable lump and retraction due to fat necrosis in a patient with previous mammoplasty. There was one case of focally positive margin, treated with radiotherapy, without re-excision. Intraoperative pathological margin evaluation was performed in 14 (46.77%) cases. There were no cases of dehiscence, skin necrosis, seroma, enlarged scars, thromboembolism, or other complications. All patients were satisfied, and none of them required surgical revision. There were no cases of conversion to mastectomy. Nineteen (51.35%) patients returned after radiotherapy for aesthetic follow-up and evaluation with the oncoplastic surgeon. The rest continued their follow-up with other surgical or clinical oncologists. In a median follow-up of 20 (13-66) months, there were no cases of local recurrence, metastasis, or death. According to the BREAST-Q, patient satisfaction with their breasts was 74.41 ( $\pm 17.92$ ), satisfaction with the results was 91.06 ( $\pm 11.89$ ), psychosocial well-being was 80.19 ( $\pm 17.12$ ), sexual well-being was 75.92 ( $\pm 24.63$ ), physical well-being was 68.25 ( $\pm 14.05$ ), satisfaction with information was 84.64 ( $\pm 15.83$ ), and satisfaction with the surgeon was 97.67 ( $\pm 6.95$ ). Aesthetic results were rated as good or excellent in 17 (89.47%) cases by the Harris scale and in 14 (73.68%) by the BCCT.core



software. **Conclusion:** The new technique allowed for breast conservation in all cases, even those requiring large central resections on proportionally small breasts with limited ptosis. The procedure resulted in high rates of free surgical margins, good or excellent symmetry in most cases, no need for surgical revisions, and few complications.

**Keywords:** Bilobed, LiCAP, Breast Conservation

# BBCS BRAZILIAN BREAST CANCER SYMPOSIUM 2023

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**SCREENING FOR OCULAR TAMOXIFEN TOXICITY VERSUS NEUROLOGICAL METASTASIS IN BREAST CANCER: A SYSTEMATIC REVIEW**

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**Objective:** A systematic review was carried out comparing the clinic and management of tamoxifen retinopathy and neurological metastasis after breast cancer. **Methodology:** In this study, we performed a systematic review of the literature. We searched for relevant papers published in electronic databases PubMed, Lilacs, SciELO and ScienceDirect, from 2004 to 2023. We used the keywords “tamoxifen” AND “retina” AND “breast cancer” AND “neural metastasis” and similar operative words in Portuguese and Spanish. The work was done according to PRISMA guidelines, on march, 2023. After eligibility criteria, we included 16 papers. **Results:** Tamoxifen (TAM) has application in breast cancer due its effects on upregulation of transforming growth factor B (TGF-B) and downregulation of insulin-like growth factor 1 (IGF-1), preventing a tumor growth and appearance of metastasis. Moreover, TAM binds to estrogen receptors present in breast and neural retina tissue. While the risk of metastases, including neurological tumors, implies a powerful reason to prescribe TAM, we must keep pharmacovigilance on ocular toxicity, that starts with retinopathy, progressing to corneal changes and neuritis – all with symptoms that mimics neoplastic and paraneoplastic symptoms on nervous tissue. Even though the retinopathy is associated with high doses of TAM, the ocular toxicity isn't derisory, coursing in visual impairment symptoms, dry eye and paracentral corneal opacities – all these being reversible upon discontinuation of the medicine, unlike neoplastic disease. **Conclusion:** Although the use of low dose of tamoxifen performs safely for the majority of people, there's a myriad of oftalmic events that can cause anxiety in routine appointments, both for the health team and for the patient. With that in mind, we must advocate for greater attention on early screening of symptoms and cost-benefit evaluation of dose maintenance to minimize side effects and promote better quality of life.

**Keywords:** Breast Neoplasms. Neoplasm Metastasis. Pharmacovigilance. Tamoxifen. Toxicity. Vision Disorders.

**NEGATIVE IMPACT OF ADJUVANT ENDOCRINE THERAPY ON SEXUAL FUNCTION IN BREAST CANCER SURVIVORS**

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**Objective:** Evaluate the sexual function of postmenopausal breast cancer survivors compared to women without breast cancer. Assess the impact of adjuvant breast cancer treatment on sexual function. **Methodology:** A cross-sectional study was conducted with 178 breast cancer survivors, stages I-III, age 45-70 years, amenorrhea &#8805;12 months and sexually active, compared to 178 women with the same inclusion criteria, but without breast cancer. The groups were paired by age and menopause time, ratio 1:1. Sexual function was assessed using the Female Sexual Function Index (FSFI), consisting of six domains (desire, arousal, lubrication, orgasm, satisfaction and pain), in which a total score &#8804;26.5 indicates sexual dysfunction. For statistical analysis, the t-student test, the chi-square test and logistic regression (odds ratio-OR) were used. **Results:** Women with breast cancer had poorer sexual function in the desire domain ( $p=0.002$ ). There were no significant differences between groups in the other FSFI domains and in the total score ( $p>0.05$ ). Breast cancer survivors had a higher occurrence of sexual dysfunction (64.6% with a total score &#8804; 26.5) when compared to the control group (51.6%) ( $p=0.010$ ). Risk analysis adjusted for age and time since menopause showed a higher risk of sexual dysfunction in breast cancer survivors than women without cancer (OR 1.98, CI 95% 1.29-2.96,  $p=0.007$ ). And among Breast cancer survivors, the use of endocrine therapy was associated with a higher risk of sexual dysfunction (OR 3.46, CI 95% 1.59-7.51,  $p=0.002$ ). **Conclusion:** Postmenopausal breast cancer survivors had a higher risk of sexual dysfunction when compared to women without breast cancer, impacted by the use of endocrine therapy for the treatment of breast cancer.

**Keywords:** breast cancer, menopause, sexual dysfunction

**SERUM HEMOGLOBIN AND RELATION TO THE STAGING OF PATIENTS WITH BREAST CANCER BEFORE THE START OF RADICAL RADIOTHERAPY**Lara Cristina Ferraz<sup>1</sup><sup>1</sup> IDOMED Medical School|Angra dos Reis|Rio de Janeiro|BRAZIL

**Objective:** To assess serum hemoglobin levels and whether this is associated with worse staging in patients with breast cancer indicated for radiotherapy treatment. **Methodology:** Prospective, descriptive, and longitudinal study with patients with breast cancer referred for radical radiotherapy, through the evaluation of blood hemoglobin and its initial staging. **Results:** We evaluated 40 patients with a mean age of 63.7 years (30-81 / 95%CI 60.4-67 / SD  $\pm$  10.3). Mean serum hemoglobin was 12.6 g/dl (9-15.3 / 95%CI 12.1-13.1 / SD  $\pm$  1.4). Four patients (10%) stage Ia, 9 patients (22.5%) stage Ib, 9 patients (22.5%) stage IIa, 11 patients (27.5%) stage IIB and 7 patients (17.5%) stage IIIa were observed. A cohort was made between patients, grouping them, in Group 1 with 13 patients (32.5% - stage Ia and Ib), group 2 with 20 patients (50% - stage IIa and IIB), and group 3 with 7 patients (17, 5% - stage IIIa). The mean hemoglobin in group 1 was 13.9 g/dl (95%CI 13.4-14.4 / SD  $\pm$  0.9), mean hemoglobin in group 2 was 12.5 g/dl (95%CI 12.3 -12.7 / SD  $\pm$  0.5) and in group 3 mean hemoglobin was 10.4 g/dl (95%CI 9.3-11.5 / SD  $\pm$  1.2) ( $p < 0.001$ ); demonstrating the existence of a statistically important relationship between worse staging and lower plasma hemoglobin levels. **Conclusion:** Patients with a worse prognosis may have lower plasma hemoglobin levels, which may demonstrate greater tumor aggressiveness in these patients.

**Keywords:** Anemia, Breast Neoplasms, Prognosis, Radiotherapy, Hemoglobins

May 18 - 20, 2023

**COVID-19 AND BREAST CANCER IN ELDERLY WOMEN IN BRAZIL**

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**Objective:** There are no publications on the impact of the COVID -19 pandemic on screening and clinical staging of breast cancer in women over 70 years of age. In Brazil, women over 70 years of age are not the target group for whom the Unified Health System (SUS) recommends mammography screening. The present study aims to evaluate the impact of the pandemic in Brazil on screening and clinical staging of breast cancer in women of this age group. **Methodology:** This is an ecological time series study. Data and trends, as well as staging of breast cancer in older women in the SUS, from 2013 to 2021, in Brazil and its regions were analyzed. The secondary database was created with information from the Outpatient Information System of the Informatics Department of the SUS, the Oncology Brazil Panel, the Brazilian Institute of Geography and Statistics, and the Supplementary Health Agency. **Results:** In 2018-2019, 16,035 cases of breast cancer were reported nationwide, representing a decrease of 3.75%, and 15,434 cases were reported in 2020-2021. Screening tended to decrease with APC -7.3 (CI -11.3- -3.2;  $p < 0.004$ ). The proportion of advanced cases exceeded that of initial cases in Brazil overall. There was an increasing trend for stages III and IV, with a coefficient of determination ( $r^2$ ) of 0.86 ( $p < 0.001$ ) and a percentage increase of 9.4% of cases ( $p < 0.001$ ). **Conclusion:** During the pandemic, there was a significant decrease in the number of mammograms and a significant increase in older patients with advanced tumors. It is important to provide screening and treatment services for breast cancer in women over 70 years of age so as not to neglect the needs of these older women.

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

**INFLUENCE OF SURGICAL CLIP AND ONCOPLASTY ON BREAST, HEART AND LUNG VOLUMES IRRADIATED DURING BOOST RADIOTHERAPY IN BREAST CANCER**

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**Objective:** To evaluate the irradiated volumes of the breast, heart and lung, considering the presence of the surgical clip and the oncoplasty techniques **Methodology:** Retrospective study of women submitted to boost radiotherapy tumor bed after breast conservative surgery between January/2011 and January /2021. Statistical analysis using Student T Test (95%CI;  $p < 0,05$ ). It was considered volumes of lung and heart relative to 40% of prescribed dose in the boost radiation planning (V40 Lung) (V40 Heart) and 100% in the breast and boost volume (V100 Breast) (V100 Boost), which were compared by oncoplastic techniques and surgical clips using the dose-volume histogram (DVH) in three-dimensional conformal radiotherapy (3DRT). **Results:** This study evaluated 183 women. For the entire group, regardless of the oncoplasty, when the patient was clipped, there was a significant difference between the mean boost volumes. In the group of patients without oncoplasty, there was a significant difference between the mean boost volumes: V100 Boost= 95.66 cm<sup>3</sup> (PD±42) in the presence of 1 to 2 clips and V100 Boost=90.99 cm<sup>3</sup> (PD±34) in the presence of 3 or more clips, when compared to non-clipped: V100 Boost=255.23cm<sup>3</sup> (PD±162)( $p < 0.001$ ), and the difference in mean breast volumes was also significant, in the presence of 1 to 2 clips, V100 Breast=233.31 cm<sup>3</sup> (PD±122), when compared to non-clipped breast : V100 Breast=368.71cm<sup>3</sup> (PD±232) ( $p = 0.032$ ). There was no statistically significant difference in the mean heart and lung volumes analyzed. **Conclusion:** The presence of the clip significantly reduced the mean boost volume for the entire group. For those who did not undergo oncoplasty, the presence of the clip made it possible to reduce the mean volume of the breast, when 1 to 2 clips were inserted. In those undergoing oncoplasty, the presence of the clip increased the cardiac volume. There was no significant difference in the mean lung volumes. **Keywords:** breast cancer, radiotherapy, reinforcement, tumor bed, surgical clip, oncoplastic techniques

**APPROVED PAPERS FOR E-POSTER****TV'S SESSION - EXHIBITION AREA****IS BREAST-CONSERVING SURGERY FOR PATIENTS WITH LOCALLY ADVANCED BREAST CANCER WHO HAVE UNDERGONE NEOADJUVANT THERAPY ASSOCIATED WITH A BETTER SURVIVAL RATE?**

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**Objective:** It is known that the breast conserving surgery (BCS) is oncologically safe on breast cancer after neoadjuvant treatment (NAT). Besides that, recent data imply in better overall survival in early breast cancer, but it remains uncertain in locally advanced breast cancer (LABC). The aim of this study was to compare the superiority of the BCS on LABC after NAT when compared with mastectomy (MS). **Methodology:** It is a single center retrospective cohort with 530 patients with LABC who received NAT and underwent surgery, BCS or MS, between 2010 and 2015. Outcomes: overall survival (OS), disease-free survival (DFS) and local disease-free survival (LDFS). **Results:** We included 530 patients with a median follow-up of 79 months. From these, 24.6% underwent BCS and 75.4% MS. BCS has higher pathological complete response rate than MS, 22.3% vs. 10%,  $p < 0.001$ , respectively. About distant recurrence rates, BCS were 15.4% and MS 36.8% with OR 0.298; 95% IC 0.177 – 0.504. The local recurrence rates were 9.2% and 9.5% with OR 0.693; 95%IC 0.347-1.383 for BCS and MS respectively. The 6-year OS rates for BCS and MS were 81.5% and 62%, respectively ( $p = 0.000$ ). In OS multivariate analysis, MS had worse predictive value (OR 1.678; 95% CI 1.069 - 2.635;  $p = 0.024$ ) when compared with BCS. **Conclusion:** We concluded that BCS presents a better OS than mastectomy on LABC after NAT, improving OS in 32%.

**Keywords:** Breast Neoplasms; Neoadjuvant Therapy; Local Disease; Mastectomy, Segmental; Survival Rate

**HIGH-GRADE BREAST SARCOMA IN A YOUNG PATIENT – CASE REPORT**

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**Objectives:** Report a case of breast sarcoma in a young patient. **Methodology:** Case Report about a patient followed throughout her treatment from diagnosis, with detailed anamnesis and physical examination being performed, as well as complementary tests for diagnosis confirmation and appropriate treatment. **Introduction:** Primary breast sarcoma is a rare type of cancer, accounting for less than 1% of breast cancers<sup>1</sup>. They originate from mesenchymal tissue<sup>2</sup>, the mean age of patients varies between 51-75 years, with most being poorly differentiated<sup>3</sup>. However, it can present as an invasive disease with high metastatic potential and resistance to conventional treatments<sup>4</sup>. **Case report:** Female, 25 years old, presented in Dec/2016 with a 18x15cm mass in the right breast. underwent ipsilateral mastectomy, lymphadenectomy, and thoracectomy. Histopathology revealed high-grade sarcoma, staged pT3N0. Chemotherapy with ifosfamide and doxorubicin, 4 cycles, and radiotherapy, 30 fractions, were proposed, ending in Aug/2017. In Nov/2019, she presented with pulmonary progressive disease (PD), and was treated with docetaxel and gemcitabine, 6 cycles, with a partial response, until it was suspended due to toxicity. Started maintenance therapy with gemcitabine, 3 cycles, and presented with new pulmonary PD in Nov/2020. Second-line therapy with 2 cycles of epirubicin was initiated. After the third pulmonary PD in Jan/2021, she underwent oral cyclophosphamide for 3 cycles. In Jun/2021, after a new PD in the lungs, fourth-line palliative therapy with pazopanib was proposed and started in Aug/2021, maintaining treatment until death in Sep/2021. **Conclusion:** Surgery is the preferred modality for curative treatment of sarcoma, and adjuvant radiotherapy is typically added to surgery as standard treatment for high-grade lesions. Adjuvant chemotherapy is considered a treatment option, especially for large tumors or those with lymph node involvement. Palliative chemotherapy should follow protocols used in soft tissue sarcoma and can help reduce tumor size, relieve symptoms, and improve life quality.

**Keywords:** Breast Cancer, Sarcomas

**CHEMOTHERAPY TREATMENT CHANGES MUSCLE ACTIVATION, BUT NOT THE PERCEPTION OF EFFORT ON WOMEN WITH BREAST CANCER**

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**Objective:** Analyze the effects of chemotherapy cycles on muscle activation and rated perceived exertion on women with breast cancer. **Methodology:** Twenty-one women divided into a treatment group (TG) (47.2 ± 11.3 years old) and control group of women without cancer (CG) (53.7 ± 6.3 years old). The women in the TG had been diagnosed with breast cancer and were performing chemotherapy (anthracyclines®). Muscle activation (MA) analyses were performed and rated perceived exertion (RPE) between the 2nd and 3rd cycle of chemotherapy (Baseline) and post-treatment (4rd cycle). The miotec® 200 model electromyograph was used to evaluate the MA, root mean square values of the rectus femoris and vastus medialis muscles were analyzed during the sit to stand test, as well as the RPE at the end of the test (Borg scale). Data is presented as mean and standard deviation. The anova two-way test was used to compare the means between the moments and groups using the pos-hoc Bonferroni. The significance level was defined at  $p < 0.05$ . **Results:** The TG and CG differed at baseline in the MA of the vastus medialis (188.2 ± 125.3 and 313.6 ± 142.7, respectively;  $p = 0.02$ ) and rectus femoris (138.3 ± 63.1 and 298.5 ± 176.9, respectively;  $p = 0.01$ ). Just like in the post-treatment MA of the vastus medialis (172.7 ± 121.2 and 352.3 ± 198.3, respectively;  $p = 0.01$ ) and rectus femoris (150.5 ± 66.8 and 406.6 ± 282.1, respectively;  $p = 0.00$ ). However, no significant changes were found in the RPE between TG and CG in the baseline (10 ± 2.7 and 11 ± 2.8, respectively;  $p = 0.33$ ) and post-treatment (11.8 ± 3.3 and 11.7 ± 3.1, respectively;  $p = 0.98$ ). **Conclusion:** Chemotherapy seems to significantly change MA, but not RPE on women with breast cancer when compared to healthy women.

**Keywords:** neuromuscular performance, breast cancer, muscle activation.

**CASE REPORT. COHORT OF MALE BREAST CANCER PATIENTS IN A TERTIARY CENTER OF SANTIAGO, CHILE**

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**Abstract:** Objective: Breast cancer is rare in men, accounting for less than 1% of all breast cancer diagnoses. Compared to females, it usually occurs at an older age, in a more advanced stage and with positive estrogen receptors. The objective of this paper is to report 5 cases of breast cancer in men diagnosed at the San Borja Arriarán Clinical Hospital in Santiago de Chile between 2017 and 2022. The epidemiological, clinical, therapeutic and evolutionary profiles are analyzed. The median age was 70 years, the evolution time to diagnosis was 8 months. In 4 cases the reason for consultation was self-palpation of a breast tumor and in one case due to axillary adenopathy. Four cases presented as cT1-T2 N0 and one case as T1N3M1(cutaneous) (mean size 28 mm). The histology was infiltrating ductal carcinoma (3 cases), one case of papillary cancer, and one of adenocarcinoma. The prognostic factors were positive estrogen and progesterone receptor in 4 cases (infiltrating and papillary ductal carcinoma) and triple negative in 1 case (adenocarcinoma, metastatic debut). Treatment was surgery in 4 cases (total mastectomy with sentinel lymph node biopsy) and adjuvant radiotherapy and hormone therapy. The patient with metastatic debut was treated with palliative radiotherapy and chemotherapy. Follow-up of the 5 cases has been maintained. There are no deaths to date, but there was one case of visceral progression during hormone therapy.

**Keywords:** male breast cancer

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**CLINIC AND PATHOLOGIC CHARACTERISTICS OF BREAST CANCER IN YOUNG WOMEN TREATED AT BRAZILIAN HEALTH SYSTEM IN CAXIAS DO SUL**Vitória Michelin<sup>1</sup>, Maximiliano Kneubil<sup>1</sup>, Janaina Brollo<sup>1</sup><sup>1</sup> Hospital Geral de Caxias do Sul|Caxias do Sul|Rio Grande do Sul|Brasil

**Objective:** To evaluate the clinical and pathological characteristics, performed treatments and clinical outcomes in patients diagnosed with BC treated at “Sistema Único de Saúde” (Brazilian Health System) in a city in the south of Brazil. **Methodology:** Observational, retrospective, descriptive, and cross-sectional epidemiological study through review of medical records of patients aged less than or equal to 40 with BC treated at the Mastology Department of two public hospitals in Caxias do Sul city. **Results:** From a pool of 136 patients analyzed, most diagnoses (86.8%) was performed by self-examination, and the median time between the onset of symptoms and the search for specialized care was 2.1 months. Most tumors (52.9%) were diagnosed in advanced stages (stages IIB, III and IV) and the most common subtype was Luminal B (26.3%), followed by triple negative (23%). Patients with triple negative BC had a 3.8 times greater risk of disease progression when compared to luminal A subtype ( $p = 0.042$ ) (HR 3.8 (1.1 – 3.4)). Regarding surgical treatment, 55.2% underwent a mastectomy and among these patients, 97% received breast reconstruction. During this period, 11 (8%) patients had locoregional recurrence, 38 (28%) patients had disease progression, and 19 (14%) patients died. The estimated 5-year disease-free survival was 64.2%, and the estimated 5-year overall survival was 83%. Patients younger than 30 years had a 2.5 times greater risk of death from BC ( $p = 0.048$ ) (HR 2.5 (1.01 – 6.16)). **Conclusion:** It is essential to know social, clinical, and pathological profiles of young patients with BC to optimize diagnoses and treatments in young patients by health care teams.

**Keywords:** Breast cancer; Young women; Clinic characteristics; Epidemiology

**NON-IMMUNE HEMOLYTIC ANEMIA IN A PATIENT WITH ADVANCED BREAST CANCER ON CAPECITABINE - A RARE ADVERSE EVENT**

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**Abstract:** Background: Stage IV triple negative breast cancer has a high mortality rate, and the treatment strategy will be based on the presence of biomarkers, disease burden, need for a response rate and treatment tolerability. Among the various management modalities and effective treatments, capecitabine is a frequently used option due to its known benefits and relatively good tolerance. However, there are several commonly known adverse effects when using capecitabine, including non-immune hemolytic anemia, a very rare and unexpected side effect. Capecitabine is a form of fluoropyrimidine that is hypothesized to affect the structure of the red blood cell membrane, resulting in the destruction of these cells. Case report: A 71-year-old woman with stage IV triple-negative breast cancer with bone and skin metastases, negative PDL1 and germline mutations in BRCA1/2, with progression disease at first line chemotherapy. Capecitabine was started at a dose of 2,000 mg/m<sup>2</sup>/day, and after two cycles, she developed cytopenia, in addition to increased bilirubin and LDH, leading to the suspicion of hemolysis. She was evaluated by the hematological medical team with complementary tests such as reticulocytes, haptoglobin and coombs D, the latter negative. Medullary infiltration was ruled out. Capecitabine has been suspended for 15 days, with normalization of tests. When it was reintroduced, there was a new alteration in laboratory tests. In the end, it was decided to permanently discontinue the drug, despite the clinical and radiological response. Final Comments: We present a very complex and challenging clinical case of a patient with metastatic breast cancer undergoing palliative treatment. Although the patient's disease was controlled with the use of capecitabine, cytopenia developed with suspected medication-induced non-immune hemolytic anemia. This shows the usual complexity of treating patients with drugs that have both acute and chronic side effects.

**Keywords:** advanced breast cancer; adverse event; capecitabine; hemolytic anemia; triplo negative

**THE IMPACT OF THE PANDEMIC ON BREAST CANCER SCREENING IN BRAZIL**

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**Objective:** To analyze the impacts of the COVID-19 pandemic on the screening of breast cancer cases in Brazil. **Methodology:** Epidemiological, descriptive, quantitative and comparative study. The Department of Informatics of the Unified Health System (DATASUS) was used. Data from the Cancer Information System - SISCAN (cervix and breast) were selected, in which the selected option was “mammography - by patients”. The geographic coverage selected was “Brazil by region, state and municipality”. The periods analyzed were from 2018 to 2022. Due to the onset of the COVID-19 pandemic in 2020 in Brazil, the years 2018 to 2019 were analyzed as pre-pandemic, 2020 and 2021 as pandemic interval and 2022 as post-pandemic in order to compare the respective periods. **Results:** In 2018, 2,751,104 screening mammography exams were performed, of which 24,374 were BI-RADS 4,5 or 6. In 2019, of the 3,303,248 exams, 29,645 were of the same classification; in 2020 (1,825,626), 21,464; in 2021 (2,623,895), 28,733; in 2022(3,222,436), 35,149. It is noted that there was a decrease in the number of mammograms during the pandemic period, but with an increase in the number of BI-RADS of suspicious lesion, indicating prioritization of patients with risk factors. In the year 2022, a greater number of exams and suspicious injury reports compared to the pre-pandemic and pandemic period. **Conclusion:** There was a reduction in the number of mammography exams during the pandemic, contributing to time-consuming diagnoses and an increase in cases of advanced tumors in the immediate post-pandemic period. Thus, the impact caused by the COVID-19 pandemic on public health in Brazil is notorious.

**Keywords:** cancer; epidemiology; pandemic; covid; mammography; BI-RADS.

**BREAST NEOPLASM WITH DISTINCT HISTOLOGICAL SUBTYPES – A CASE REPORT**

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**Abstract:** Introduction: Breast cancer is a heterogeneous disease, divided into many subtypes, the most common being invasive ductal. Breast tumors can be derived from epithelial tissue or mesenchymal cells. Most malignant breast tumors are made up of a single type of tumor. Cases where there are two or more types of malignant tumors occurring at the same time are rare. We report a case with different types of malignancies i.e. non-special invasive ductal carcinoma, metaplastic carcinoma and squamous cell carcinoma occurred together. Case report: Woman, 56 years old, with no family history of gynecological neoplasia, sought care referring to a painful and erythematous nodule in her left breast for about 25 days. On physical examination, a 15x11cm, slightly mobile nodule, irregular borders was noticed in the left breast and palpable axillary lymph nodes. The mammogram showed an isodense nodule, internal calcifications, measuring 10.2x9.4x7.2cm, in the superolateral quadrant (QSL) of the left breast (ME) - BIRADS V. The central biopsy showed non-special invasive breast carcinoma (NOS), triple negative, and Ki67 30%. She underwent neoadjuvant chemotherapy and five months after the start, she showed evidence of tumor progression. The tumor was ulcerated and occupying the entire QSL of ME and on palpation of the armpit, multiple hardened lymph nodes on the left. Left radical mastectomy with axillary lymphadenectomy was performed. The anatomopathological examination of the specific specimen revealed different tumor types: ulcerated and moderately differentiated squamous cell carcinoma, invasive metaplastic breast carcinoma, with a negative immunohistochemical profile for RP, ER and HER2, positive cytokeratin 7 and 70% Ki67. Two months after the mastectomy, she had tumor recurrence and underwent a new surgical approach. Plastron histopathology showed squamous cell carcinoma infiltrating skin, negative estrogen and progesterone receptors and positive p63. She underwent Radiotherapy and is currently being followed up, with no signs of recurrence.

**Keywords:** Breast malignant tumor; metaplastic carcinoma; squamous cell carcinoma; invasive ductal carcinoma

**A REMOTE, FULLY ORIENTED PERSONALIZED PROGRAM OF PHYSICAL EXERCISE FOR WOMEN IN FOLLOW-UP AFTER BREAST CANCER TREATMENT IMPROVES BODY COMPOSITION AND PHYSICAL FITNESS**

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**Objective:** This study aimed to evaluate the efficacy of an individualized remote exercise program on the improvement of body composition and physical fitness of a heterogeneous group of patients who completed breast cancer treatment. **Methodology:** This prospective study included 107 women aged 18 to 60 years, shortly after curative treatment for localized breast cancer at the Erasto Gaertner Cancer Hospital (HEG) in Curitiba, PR, Brazil. Body composition, maximal oxygen uptake, and muscle resistance were evaluated after nine months of intervention while considering adherence to the program, level of physical activity, presence of binge eating disorder, tumor classification, and treatment type. **Results:** Seventy-eight women (72.8 %) adhered to the training program. Adherent participants showed significant changes in body mass ( $-4.3 \pm 3.6$  kg;  $p=0.0001$ ), body mass index ( $-1.6 \pm 1.5$  kg/m<sup>2</sup>;  $p=0.0001$ ), body fat ( $-3.4 \pm 3.1\%$ ;  $p=0.0001$ ), VO 2 max ( $7.5 \pm 2.0$  ml/(kg.min);  $p=0.0001$ ), and abdominal resistance ( $11.2 \pm 2.8$  reps;  $p=0.0001$ ). In contrast, these variables did not change significantly in the non-adherent group. Among the adherent participants, those sub-classified in the severe binge group showed a more noticeable reduction in body mass, BMI, and body fat ( $p=0.05$ ) than those in the non-binge group. The manuscript (not published) was recently accepted for publication in the journal Sports Medicine and Health Science. **Conclusion:** Individualized remotely-guided physical exercise programs can improve the body composition and physical fitness of women undergoing post-breast cancer surveillance, regardless of pathological history or treatment.

**Keywords:** breast neoplasm; exercise training; physical therapy modalities, body weight changes, physical functional performance

**DESMOID BREAST FIBROMATOSIS OCCURRING AFTER RECONSTRUCTIVE SURGERY SIMULATING CARCINOMA: A RARE CASE REPORT**

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**Abstract:** INTRODUCTION: Desmoid fibromatosis is a rare tumor, representing less than 0.2% of all breast tumors, characterized by clonal fibroblastic deep soft tissue, locally aggressive growth and high incidence of recurrence (between 24% and 77% in 10 years). It is associated with trauma or surgical procedures of the breast and presents similarity to breast carcinoma. Diagnostic criteria are histological and breast imaging techniques are non-specific. The treatment is surgical with complete excision and safety margin, varying according to the studies, from 0.5 to 3 cm to avoid recurrences, which, when they occur and reach vital organs, cause 8% of mortality. CASE REPORT: Female, 56 years old, with infiltrating ductal carcinoma in the upper lateral quadrant of the left breast, measuring 2.0 cm, high nuclear grade, triple negative and acquired at the age of 53. She underwent neoadjuvant chemotherapy, quadrantectomy with negative sentinel lymph node biopsy and radiotherapy. Two years after, returned with a recurrence in the lower lateral quadrant of the left breast, measuring 1.0 cm. Despite the negative genetic study for pathogenic variants, she opted for bilateral mastectomy and immediate reconstruction (prostheses and dermal matrix), the one on the right being prophylactic. There was infection on the right, rejection, and loss of the prosthesis. After 1 year, presented with a bearable nodule, immobile and adhered to the chest wall, measuring 2.2 cm on the lateral border of the pectoral muscle, on the right, confirmed by chest tomography and magnetic resonance imaging. Submitted to mammotomy whose biopsy showed low-grade spindle cell in the inferolateral quadrant. A segmental resection was performed, whose anatomopathological and immunohistochemical studies confirmed the diagnosis of fibromatosis in the right breast, positive reaction to the beta-catenin antibody, measuring 2.5x2.5 cm and free elastic margins. She is being followed up at the outpatient clinic, with no signs of recurrence.

**Keywords:** Breast neoplasm; Desmoid fibromatosis ; Breast cancer; Surgical breast reconstruction

**THE IMPACT OF THE COVID-19 PANDEMIC IN THE CONTEXT OF BREAST CANCER: A SYSTEMATIC REVIEW**

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**Objective:** This review intends to clarify the relationship between the pandemic of COVID-19 and the increase in cases and in the worsening of the prognosis of breast cancer, in Brazil and in the world. **Methodology:** A systematic literature review was carried out from the PubMed database, with the descriptors: “pandemic” and “breast cancer”, with the Boolean operator: “AND”, and the filters: “full text”, with publication date 2021 and 2022, in women only, in the English language. 10 scientific articles were identified. **Results:** The COVID-19 pandemic increased existing barriers to access to screening, treatment and emotional support services for breast cancer. Changes in health recommendations and less urgent appointments have led to a decrease in cancer screening rates, which resulted in late diagnoses and worse outcomes for patients. It is valuable to emphasize the importance of improving access to breast cancer screening services during health crises such as the pandemic, implementing safe and effective strategies to mitigate its effects. In addition, the fear and stress of contracting the virus while attending health units, on top of the delays in diagnosis and treatment faced during the crisis, negatively impacted the mental health of patients. The insecurity when dealing with a malignant neoplasm was amplified by the pandemic and resulted in an increase of this biological factor that greatly interferes with cancer prognosis. **Conclusion:** The COVID-19 pandemic imposed a drop in screening, diagnosis and follow-up of breast cancer. The health system suffered the impact of the pandemic, leaving care for other diseases to be neglected, and patients stopped seeking health services for other morbidities, such as breast cancer. Health professionals must be aware of and must work to minimize the harm of negligence with this cancer during times of crisis, as occurred with COVID-19.

**Keywords:** Breast cancer; Pandemic; COVID-19.

**DIFFUSE B-CELL LYMPHOMA IN THE MALE BREAST: A RARE CASE REPORT**

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**Abstract:** INTRODUCTION: Lymphomas are a heterogeneous group of cancers derived from the immune system, characterized by increased proliferation of lymph nodes or secondary lymphatic tissue. Breast involvement by lymphoma is uncommon, representing only 0.1% of malignant breast lesions. Clinical similarities with breast cancer make preoperative diagnosis of breast lymphoma difficult. Histologically, most primary breast lymphomas (PML) are of the B-cell type. The treatment of PML is based on the recommendations for the treatment of lymphomas of other locations according to the histological type, staging and characteristics of the patient. CASE REPORT: Male, 83 years old, with no family history of breast cancer, with Alzheimer's disease. He presented at the mastology outpatient clinic referring to a tumor in the right breast, with progressive growth. He reported having performed several treatments, including antibiotics, without improvement, in a breast lesion. He denied fever, night sweats and weight loss. On physical examination, he had multiple nodular, hardened and erythematous lesions in almost the entire right breast, some with an ulceration area, located in the medial quadrants, measuring about 15 x 11 cm. Palpable axillary lymph nodes measuring 1.5 cm. A mammography showed a regular, isodense nodule measuring 5.0 cm in the central region of the right breast - BIRADS 4. He underwent a core biopsy, with histopathology compatible with diffuse large B-cell lymphoma in the right breast and immunohistochemistry with CD20 expression, MUM1, MYC and 90% audience rating (Ki67). PET-CT showed a large cutaneous and subcutaneous mass in the right breast measuring 15.8 x 4.8 x 9.2 cm, bilateral axillary lymphadenopathy and sparse areas of skin thickening. He was referred to the oncology service, which started chemotherapy using the R-MINI-CHOP protocol (Rituximab; Cyclophosphamide; Doxorubicin; Vincristine and Prednisone). Currently, it has shown a good response to chemotherapy treatment, with remission of the lesions.

**Keywords:** Breast neoplasm; Male breast cancer; lymphoma, B-Cell

**FROM DIAGNOSIS TO BEGINNING BREAST CANCER TREATMENT: A STUDY ABOUT TIME IN A REFERENCE PRIVATE HOSPITAL IN SÃO LUÍS – MA, BRAZIL**

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**Objective:** To determine the time interval from diagnosis to initiation breast cancer treatment and to investigate factors associated with its delay. **Methodology:** Observational, descriptive, and retrospective study with analysis of medical records between January 2015 and December 2019, carried out in a private oncology referral hospital in São Luís - MA. Patients diagnosed with breast cancer (International Classification of Diseases-10 C50) were included. A total of 21 variables of epidemiological, clinical, and tumor characteristics were analyzed. The absolute and relative frequencies of categorical and numerical variables were calculated. The chi-square test was performed to compare categorical variables and the Student's t-test was to compare numerical variables. The significance level was  $p < 0.05$ . **Results:** There were 112 cases analyzed, 100% female, and 82.1% started treatment within 60 days of diagnosis. The mean time from diagnosis to treatment was 42.5 days ( $SD \pm 24.3$ ), a median of 39 days. The year 2017 presented the majority of diagnosed cases (24.1%). The mean age at diagnosis was 51.9 years ( $SD \pm 12.7$ ), and most were 60 years or older (29.7%). In 82.4% of the cases, the tumor was diagnosed at an early stage, and most were luminal A and B tumors (52.8%). In 64.4% of the cases, the treatment was started with surgery. Factors related to the delay in starting treatment were obesity and starting with surgery ( $p=0.007$ ). **Conclusion:** Our results are similar to those of developed countries. In the population studied, the factors related to delay were: obesity and starting treatment with surgery. Possible factors that contribute to these results would be the bureaucracy involved in the authorization of private health plans, the difficulty of navigating patients through the hospital system, and the comorbidities associated with obesity.

**Keywords:** Breast Cancer. Time-to-Treatment. Private Hospital

**TWO PATHOGENIC VARIANTS IN A PATIENT WITH CERVICAL AND BREAST CANCER: CASE REPORT**

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**Abstract:** INTRODUCTION: The presence of two pathogenic germline variants in hereditary cancer is an uncommon event. We report a case of a Brazilian patient from Teresina, Piauí who developed breast and cervical carcinoma with pathogenic variants in BRCA2 and MUTYH genes. CASE REPORT: A 25-year-old female patient in 2012 underwent a radical hysterectomy with pelvic lymphadenectomy without ovarian preservation for treatment of histologic grade 2(G2) squamous cell carcinoma(SCC) of the cervix, FIGO stage IB2. Histopathology of the surgical specimen revealed SCC, G2,stromal invasion 16mm, 4.5cm in diameter, compromised parametrium, 6 lymph nodes without metastasis and normal ovaries. She received pelvic radiotherapy and brachytherapy associated with platinum-based chemotherapy. In 2017 she was diagnosed with histologic grade 1 invasive breast carcinoma of no special type in the right breast. Immunohistochemistry revealed it was a Luminal B tumor (Estrogen receptor(ER)+ 90%, Progesterone receptor(PR) + 80%, Human epidermal growth factor(HER2) 1+, Ki-67 40%), stage IA(T1N0M0). Neoadjuvant chemotherapy with doxorubicin and cyclophosphamide(AC, 4 cycles) followed by paclitaxel(12 cycles) was performed. The patient underwent segmental mastectomy and sentinel lymph node research and histopathology revealed complete pathological response and negative sentinel lymph node RCB(residual cancer burden) 0. Background of 3 pregnancies and 3 deliveries, with no case of neoplasia in the family. In 2023, multigene test for hereditary predisposition to cancer was performed, in which two pathogenic variants were detected being one in BRCA2 gene( c.8725A>T ) and the other in MUTYH(c.1187G>A ). Currently with no evidence of active disease and on schedule for colonoscopy, endoscopy and bilateral risk-reducing mastectomy. CONCLUSION: In young patients with multiple cancers, a search for pathogenic variants related to hereditary cancer predisposition syndromes should be offered, as in the present case.

**Keywords:** BRCA2 Gene; Uterine Cervical Neoplasms; Breast cancer.

**COMPARISSON OF FUNCTIONAL PERFORMANCE AND KINESIOPHOBIA BETWEEN MASTECTOMY AND QUADRANTECTOMY IN BREAST CANCER SURVIVORS**

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**Objective:** This study aimed to compare the functional performance and kinesiophobia, of breast cancer survivors who underwent a mastectomy and quadrantectomy **Methodology:** Participated the study 27 women separate into Mastectomy group (MG) (n = 13; age: 51,00 ± 7,83) and Quadrantectomy group (QG) (n= 14; age: 53,50 ± 9,33). The functional performance was evaluated by the DASH, the kinesiophobia it was evaluated by the Tampa Scale. The inclusion criteria were being in menopause, not participating in any regular program of resistance exercises in the last 6 months, having undergone mastectomy or breast quadrantectomy and not having metastasis Data normality was assessed by the Kolmogorov-Smirnov test. The unpaired test-t was used to compare the kinesiophobia and The Mann-Whitney test was used to compare the groups for the variables that did not present normal distribution in the disabilities arm of shoulder and hand, the significance level was defined a priori at p <0.05. **Results:** There was no significant difference between groups on functional performance (MG: 20.8 ± 1.9; QG: 23.1 ± 2.1 p= 0.63) and kinesiophobia (MG: 41.3 ± 9.5; QG: 40.2 ± 9.9 p= 0.75) **Conclusion:** The current results suggest that surgery types a similar impact on the functional performance and kinesiophobia of women who are survivors of breast cancer.

**Keywords:** cancer; fear; psychobiological profile



**TRIPLE NEGATIVE BREAST CANCER: A HISTORY OF EVOLUTION IN TREATMENT AND PROGNOSIS AND WOMEN'S QUALITY OF LIFE**Gustavo Moreira Andrade<sup>1</sup><sup>1</sup> Pontificia Universidade Catolica de Goias|Goiânia|Goiás|Brasil

**Objective:** This present study aims to show the progress in the treatment of triple negative breast cancer and the impact on the prognosis and quality of life of women. **Methodology:** A systematic literature review was carried out from the PubMed database, with the descriptors “Breast cancer triple negative”, “Treatment” and “Quality of life” with the Boolean operator “AND”, and the filters: “full text”, with a publication date of 2012, 2013, 2022 and 2023, only in women, in the English language. 29 articles were found. **Results:** In 2012-2013 the treatment for triple negative cancer was based on the combination of monoclonal antibodies (bevacizumab) with chemotherapy (eribulin), both for tumors in early stages and for metastases, or a radical mastectomy. Both treatments were extremely aggressive for women, with direct consequences on their physical and mental health, since these treatments meant the loss of an organ that symbolizes femininity and the patient's self-perception as a woman, in addition to excessive hair loss, dryness mucous membranes and skin, changes in appetite and severe asthenia. In the years 2022-2023, in addition to the therapeutic strategies used 10 years earlier, there was the discovery and advancement in immunotherapy (pembrolizumab), a treatment aimed at activating the immune system against installed cancer. However, the current treatment is about 20 times more expensive than the old one. **Conclusion:** It was evident that there were small changes in the treatment of triple negative breast cancer, since there was only the discovery and implementation of immunotherapy, but this small advance allowed a great improvement in the quality of life of patients during treatment. However, this advance is, currently, for a small group of patients, since the world reality is that most patients are unable to pay for immunotherapy and continue with the outdated and archaic therapeutic plan of 10 years ago, continuing with the same complications and heavy consequences on their physical and mental health.

**Keywords:** Breast cancer triple negative; treatment; quality of life

**INVASIVE LOBULAR BREAST CARCINOMA PRESENTING HEPATIC CARCINOMATOSIS: A CASE REPORT**

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**Abstract:** Metastatic carcinomatosis to the liver is a pattern of malignant infiltration that tends to provoke liver fibrosis. It is a rare complication of multiple types of solid tumors and often seen in the absence of a discrete tumor mass in the liver. We report the case of a patient who presented the rare diagnosis of metastatic carcinomatosis for liver from breast cancer. A woman at the age of 42 years with invasive lobular carcinoma, pT3 pN0 M0, positive immunohistochemistry 70% for estrogen receptor and 30% progesterone, HER2 and E-cadherin negative and Ki67 of 5%. The patient during the fourth year of adjuvant hormone therapy with tamoxifen presented an increase in serum tumor marker (CA 125: 17 to 130), with no evidence of systemic disease on imaging tests. Due to the slightly cirrhotic contour of the liver on a computed tomography, a liver biopsy was performed for investigation. The early diagnosis of occult and diffuse dissemination to the liver was made by means of a percutaneous liver biopsy showing invasive breast cancer cells, with immunohistochemistry compatible with metastasis of lobular breast carcinoma, positive for hormone receptors and doubtful for HER-2, with KI67 of 20%. Metastatic carcinomatosis, unlike lesions of discrete liver masses, may not be detectable with imaging tests, and often biopsy or autopsy are needed to confirm the diagnosis. This case highlights a rare and difficult to early diagnosis pattern of hepatic carcinomatosis due to lobular breast carcinoma.

**Keywords:** Breast cancer, Lobular carcinoma, Neoplastic metastasis.

**ONCOPLASTIC SURGERY FOR PAGET'S DISEASE OF THE BREAST**

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**Objective:** Paget's disease of the breast (PDB) is a rare nipple entity associated with multifocality. Due to its location, it is necessary to resect the nipple-areolar complex. For surgery, central quadrantectomy, and for mastectomy was the treatment in the past. The feasibility of performing oncoplastic breast surgery (OBS) for PDB is unknown. The objective of this study is to evaluate the feasibility of Oncoplastic Surgery for Paget's disease of the breast. **Methodology:** This retrospective study was approved by the institutional Research Ethics Committee under numbers 657293 and CAAE 31046314.5.0000.5437. Patients with PDB treated at a tertiary cancer hospital between 2000 and 2021 were evaluated. We evaluated the factors related to the performance of OBS in PDB. In addition, the impact of OBS on local recurrence and survival was analyzed. Comparisons were made between groups using the chi-square test, Mann-Whitney U test, and Kaplan-Meier method. To assess the impact factor of the variables on the performance of OBS, logistic regression was performed. **Results:** Eighty-five patients were evaluated. OBS was performed in 69.4% (n=59), and of these, 16 (27.2%) were symmetrized with a contralateral surgery. Mastectomy without reconstruction was performed in 28.3% of the patients. The main procedure performed was mastectomy with reconstruction (44.7%), and the preferential technique for immediate reconstruction was skin sparing mastectomy with prosthesis, and for late reconstruction, latissimus dorsi. BCS was performed in 27.0%, mainly with plug-flap technique (OBS). Age was associated with the use of OBS, wherein patients aged 40-49 were associated with a higher rate of OBS ( $p = 0.002$ ; odds ratio 3.22). OBS did not influence local recurrence ( $p=1.000$ ), overall survival ( $p=0.185$ ), or cancer-specific survival ( $p=0.418$ ). **Conclusion:** OBS improves the quality of surgical treatment in PDB without influencing local recurrence or survival.

**Keywords:** Paget's disease, mammary; breast neoplasms; breast reconstruction; plastic surgery; oncoplastic surgery

**MULTIDISCIPLINARY TREATMENT AFTER DOXORUBICIN EXTRAVASATION:  
IMPROVEMENT OF RANGE OF MOTION IN THE ELBOW JOINT**

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**Abstract:** INTRODUCTION: Chemotherapy extravasation is an infrequent complication with challenging consequences for the patient and the care team. Doxorubicin is a chemotherapeutic used in the treatment of breast cancer, being classified as a DNA-binding vesicant agent; and its spillage into the interstitial space can lead to severe tissue damage. The acute condition includes pain, hyperemia, edema, ulceration and necrosis in the region, evolving with fibrosis, restriction of range of motion (ROM) and other chronic sequelae. OBJECTIVE: To describe the multidisciplinary treatment of a case of Doxorubicin extravasation with ROM restriction in the elbow joint. REPORT: Female, 29 years old, with invasive ductal carcinoma, cT2N1M0, with luminal phenotype B. Initiated neoadjuvant chemotherapy with AC scheme (Doxorubicin + Cyclophosphamide). There was a suspicion of extravasation in the peripheral access (cubital fossa) during the application of Doxorubicin in the first cycle. Topical treatment with corticosteroids was started, but the patient developed burning sensation, edema and local hyperemia. In the following days, oral corticosteroids, antibiotics and dimethylsulfoxide (DMSO) were added, followed by physiotherapy. Despite partial improvement, the patient evolved with skin hyperpigmentation, tissue fibrosis, restriction of elbow extension movement and arm retraction at 90°, making it difficult to perform domestic and daily activities. After oncological surgical treatment, Zetaplasty was performed on the affected arm; with an increase in range of motion of about 20°. Subsequently, with the intensification of physiotherapy and pilates sessions, the patient achieved a global improvement of 30° and returned to most daily activities. Thus, we describe a case of Doxorubicin extravasation with chronic sequelae, which was managed by a multidisciplinary team. In this context, physiotherapy played a key role in improving the patient's ROM and returning to daily activities.

**Keywords:** Breast cancer; Chemotherapy; Physiotherapy

## OVERALL SURVIVAL IN PATIENTS WITH SECOND PRIMARY BREAST CANCER

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**Objective:** To analyze overall survival of patients with second primary synchronous and metachronous breast cancer. **Methodology:** A retrospective cohort study of women with second primary breast cancer, diagnosed between 2000 and 2015, was conducted. The cases were drawn from the Cancer Hospital registry and classified according to the hospital registry rules for second primary cancers. The second primary breast tumor was defined as synchronous or metachronous according to diagnosis of the second cancer: ≤ 6 months of first tumor and >6 months after first tumor, respectively (Newman et al. 2001). Survival curves were estimated using the Kaplan-Meier method. **Results:** A total of 11,922 women with breast cancer were identified between 2000 and 2015. Of these cases, 3.24% (375) had second primary breast cancer, comprising 60.8% (228) synchronous and 39.2% (147) metachronous tumors. Regarding age of the patients, they were predominantly in the 60 years age accounting for 39.9% (91) of synchronous and 48.3% (71) of metachronous cases, with mean patient age of 55 years for synchronous and 59 years for metachronous tumors. Overall, 5-year survival in women with synchronous breast cancer was 86.5% (CI 79.69% - 91.21%) and with metachronous cancer was 82.1% (CI 73.71% - 88.10%), while 10-year survival was 69% for both synchronous and metachronous. **Conclusion:** There was no difference in overall survival of patients with second primary synchronous and metachronous at five and ten years after treatment. However, in this cohort we were not able to investigate the genetics profile to identify the presence of associated genetic syndromes, a factor which can modify our findings.

**Keywords:** Survival. Breast cancer. Second primary breast cancer.

**FOLLOW UP OF A LI-FRAUMENI SYNDROME CASE**

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**Abstract:** Introduction: Li Fraumeni syndrome(LFS) is responsible for about 1% of hereditary breast cancers(BC). We presente case report of a young woman with synchronous osteosarcoma and BC. Case report: NOB;23 years old. Mother dead with BC 36 years old and sister dead due neuroblastoma 2 years old. Was referred at 2021 for nodule in left breast which ultrasound showed irregular nodule 1.5x1.2x1.3cm BIRADS®5 and anatomopathological invasive carcinoma of non-special histological type(NST), estrogen receptor 80%, progesterone receptor 100%, Her2 negative, Ki67 60% cT1N0. It was associated with a lesion in the alveolar mucosa with bleeding and deformity of oral cavity which anatomopathological high histological osteosarcoma-T1N0. Surgical treatment was performed: maxillectomy of meso and bilateral infrastructure+tracheostomy+ reconstruction with microsurgical flap of the fibula and, then, left adenomastectomy+sentinel lymphnode biopsy+prosthesis /reconstruction. Surgical anatomopathological results in central/medullary high-grade conventional osteosarcoma chondroblastic 7.3x6.1x3.9cm, free surgical margins and 04 cervical lymphnodes free of neoplastic involvement, and invasive breast carcinoma NST with medullary characteristics 1.8x1.3cm, free margins and absence of metastasis in 02 sentinel lymphnodes -pT1pN0. Genetic test resulted in pathogenic mutation TP53 gene, position chr17:7.674.257, consequence p.Tyr236HisENST00000269305. Adjuvant chemotherapy was docetaxel+cyclophosphamide. Two years after the treatment, she is taking tamoxifem, scheduled for contralateral adenomastectomy, maintain high risk follow-up. There is no signal of any cancer disease. Discussion: LFS is autosomal dominant inheritance of high penetrance. The diagnosis is based on identification of pathogenic variant in TP53 gene. It is related to several tumors diagnosed at an early age. BC is the most common cancer and affects 27-31% of patients. Osteosarcoma corresponds to 3%-16% of cases, usually occurring before age of 30. The prognosis of patients does not differ from those with sporadic cancer. They must be monitored by multidisciplinary team, screening with annual whole body/breast MRI and mammography, colonoscopy every 05 years. Genetic counseling is essential.

**Keywords:** Li-Fraumeni Syndrome; Osteosarcoma; Breast Neoplasms

**THE INFLUENCE OF NEOADJUVANT CHEMOTHERAPY RESPONSE IN LOCAL RECURRENCE OF BREAST CANCER PATIENTS UNDERGOING NIPPLE SPARING MASTECTOMY**

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**Objective:** Our study aims to examine the influence of response to neoadjuvant chemotherapy (NACT) in local recurrence of a heterogeneous cohort of breast cancer patients who underwent nipple-sparing mastectomy (NSM) with immediate breast reconstruction. **Methodology:** We evaluated 101 breast cancer patients undergoing 194 NSM after NACT between January 2004 and December 2020. The data was retrospectively evaluated by the medical chart, and the patient's follow-up was updated during the appointments. **Results:** The patient's median age was 42.9 years. The majority of patients (90.2%) underwent bilateral procedures, and the reasons for the surgery in the contralateral breast were: 18.8% diagnosis of high penetrance gene mutation, 4.9% breast cancer in both breasts, 2% atypia, and 74.3% asymmetry/patient option. Breast reconstruction was performed using silicon prosthetic implants for 98 (97%) patients and with a tissue expander for only 3 (3%) patients. Luminal tumors were more prevalent (43.5%), followed by triple negative (32.8%), Luminal/HER2 (17.8%), and HER2 (5.9%). A complete response to NACT was observed in 23.5% of the patients, and 76.5% presented partial response. In the mean follow-up of 50 months, six (5.9%) patients were diagnosed with local recurrence (LR) as the first event, and achieving a partial response to NACT was not correlated to local relapse ( $p = 0.5$ ). When analyzing luminal and triple negative tumors separately, we observed RPC in 9% of luminal and 36.5% of TN tumors, and all local recurrences occurred in patients with incomplete response. In luminal tumors with incomplete response to NACT was observed 2.5% of local recurrence versus 9.5% in TN demonstrating an increased LR in triple negative tumors without RPC to NACT. However, the statistical analysis did not demonstrate significance because of small sample size. **Conclusion:** A complete response to NACT is associated with a better prognosis, however, in our mixed cohort, do not interfere with the chance of developing local recurrence. Further studies with more patients analyzing separately the breast cancer molecular subtypes are needed to verify this preliminary result.

**Keywords:** Breast neoplasms, neoadjuvant chemotherapy, recurrence, subcutaneous mastectomy, drug resistance

**OLAPARIB IN THE TREATMENT OF LEPTOMENINGEAL CARCINOMATOSIS**

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**Abstract:** Leptomeningeal carcinomatosis (LC) is a complication of breast cancer that carries a poor prognosis. The median overall survival was only 3.8 months. Due to the scarcity of data on therapeutic interventions, patterns of practice vary widely. Preclinical studies have shown that PARP inhibitors penetrate the central nervous system, suggesting a possible role in treatment. We report a case of a patient with BRCA2 and LC mutation who demonstrated an excellent clinical response to Olaparib. A woman with classic lobular carcinoma in the right breast at the age of 50. Immunohistochemistry positive 100% for estrogen receptor and 70% progesterone, HER2 and E-cadherin negative. Treatment initially with quadrantectomy and expanded axillary dissection with 37/39 lymph nodes compromised, pT2 pN3 M0, adjuvant chemotherapy with 4 cycles ACdd and 12 paclitaxel, radiotherapy and letrozole since March 2019. Genetic panel with pathogenic mutation in BRCA2. At the age of 53, she presented with headache of strong intensity, peripheral facial paralysis on the right, diplopia, syncope, asthenia, and loss of performance status (ECOG: 3, previous 0). Negative systemic staging of the occasion and magnetic resonance of the skull with nonspecific white matter enhancement. Lumbar puncture with positive cerebrospinal fluid for oncotic cytology. He underwent radiotherapy in the total skull with 30Gy, followed by Olaparib. After 5 months, she presented complete remission of symptoms and negative oncotic cytology of cerebrospinal fluid. Our patient with leptomeningeal metastasis in the context of breast cancer with BRCA2 mutation maintained a complete clinic to Olaparib after 22 months of therapy, her response suggests efficacy of Olaparib, and its survival far exceeds the reported medians for CL in breast cancer. In conclusion, the present process supports a potential role of PARP inhibitors in the treatment of LC and other CNS metastases of breast cancer in patients with hereditary BRCA mutations.

**Keywords:** Breast cancer; BRCA2 genes; PARP inhibitor

**COMPARISON OF BI-RADS® CLASSIFICATION OF MAGNETIC RESONANCE SCREENING WITH BI-RADS® FOR MAMMOGRAPHY AND ULTRASONOGRAPHY**

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**Objective:** To compare BI-RADS® Magnetic Resonance Imaging (MRI) in relation to BI-RADS® Mammography (MMG) and Ultrasonography (USG) from previous exams, determining the level of agreement between the three methods. **Methodology:** Retrospective cross-sectional study of examinations of women with indication for MRI in an imaging clinic in the city of Goiânia - GO, from 2021 to 2022. The sample was divided according to the BI-RADS® classification into two groups, one with low suspicion for the classifications 1, 2 and 3 and another of high suspicion for classifications 0, 4, 5 and 6. The distribution of the sample profile in patients with BI-RADS® MRI low suspicion and high suspicion was tested by applying the Pearson's Qui square test, relative frequency and absolute frequency. Data were analyzed using the Statistical Package for Social Science (SPSS – 26.0) with a significance level of 5% ( $p < 0.05$ ). **Results:** A total of 294 MRI scans were evaluated, of which 136 (46.3%) had previous MMG and 158 (53.7%) previous USG. Comparing the BI-RADS® MRI classification with the BI-RADS® of previous high-suspicion exams, it was observed that both were concordant ( $p < 0.01$ ), with 60% BI-RADS® MMG and 57.1% USG. Regarding the change in the BI-RADS classification, in the 17.8% of the BI-RADS® of the MMG and USG exams as low suspicion after MRI, it changed to high suspicion; 18.7% of BI-RADS® from MMG and USG exams as high suspicion after MRI changed to low suspicion; 11.6% of BI-RADS® from MMG and USG exams as high suspicion after MRI had alteration, but remained in high suspicion; 51.7% of BI-RADS® from MMG and USG exams as low suspicion after MRI had alteration, but remained in low suspicion. **Conclusion:** Comparison of BI-RADS® MRI with BI-RADS® from previous exams shows the agreement factor in the detection of high suspicion for breast analysis.

**Keywords:** Breasts; Mammography; Magnetic Resonance; Ultrasound.

**REPORT OF A SERIES OF CASES OF BREAST CANCER DURING PREGNANCY IN A PUBLIC HOSPITAL IN SANTIAGO DE CHILE**

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**Objective:** The objective of this study is to report 14 cases of breast cancer during pregnancy and puerperium at the San Borja Arriarán Clinical Hospital in Chile between 2016 and 2022. Analyze type of treatment, response to treatment and possible complications of pregnancy associated with chemotherapy. **Methodology:** Retrospective descriptive analysis of a database of breast cancer diagnosed and treated during pregnancy and the puerperium. They were considered prognostic factors, stage, type of treatment, clinical and pathological response are analyzed, gestational age at delivery and newborn weight, in addition to post-treatment follow-up. **Results:** The average age was 33 years. In 10 patients the diagnosis was during pregnancy and 4 during the puerperium. In all cases the suspicion was clinical due to a palpable tumor. Percutaneous biopsy showed 100% infiltrating G2 and G3 ductal carcinoma. The most frequent immunohistochemical profile was luminal B, followed by triple negative. Stage III was the most frequent at diagnosis. There were 12 patients who received complete treatment and were kept in follow-up. One stage IV patient died during treatment. There were 5 patients who progressed with distant metastases. There was an extreme preterm labor due to preeclampsia. The average newborn weight was 2968g. **Conclusion:** This series is consistent with the majority of publications where diagnosis is evidenced in locally advanced stages, with unfavorable histology and prognostic factors. In our series there was no repercussion of chemotherapy treatments in the fetoplacental unit.

**Keywords:** Breast cancer in pregnancy, chemotherapy in pregnancy

## HEREDITARY CANCER SYNDROMES IN PATIENTS WITH SECOND PRIMARY BREAST CANCER

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**Objective:** Evaluate the presence of Hereditary Cancer Syndromes (HCS) in patients with diagnosis of two primary breast carcinomas and analyse the frequency of pathogenic variants in high- and moderate-penetrance genes. **Methodology:** A retrospective unicentric cohort of patients with diagnosis of two primary breast cancers, diagnosed between January 2000 to December 2020, at A.C.Camargo Cancer Center, Brazil. Association between categorical variables were analysed by chi-squared test or Fisher's exact test. For survival curves, it was used Kaplan-Meier Method and Log-rank test to describe survival curve differences. **Results:** Medical records of breast cancer patients were reviewed from 2000 to 2020 and a frequency of 600 patients with two primary breast tumors (metachronous or synchronous) was observed. In total, 190 patients (31.7%) performed genetic testing and 5.8% (35 patients) presented a pathogenic or likely-pathogenic germline variant in cancer predisposing genes. **Conclusion:** Our results revealed a low rate of genetic testing among patients with two primary breast cancers in a cancer center and a frequency of carrier patients lower than expected.

**Keywords:** Breast Cancer; Hereditary Cancer Syndromes; Cancer Predisposition Gene

May 18 - 20, 2023

**SKIN SPARING MINI DORSI FLAP**

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**Objective:** The fat grafted latissimus dorsi muscle flap has become an excellent option for immediate or late post-mastectomy autologous breast reconstruction. The latissimus dorsi flap without skin island can be used in immediate reconstruction after skin and nipple-sparing mastectomy, as there is no need to replace the skin on the breast. The work presented here describes a new approach of the Mini flap of the dorsal fat graft in the total breast reconstruction after skin- and nipple-sparing mastectomy in patients with small and medium-sized breasts, eliminating its classic scar from the removal of the island of skin on the side of the thorax. **Methodology:** Initially, a skin and nipple-sparing mastectomy is performed through an incision in the lateral portion of the inframammary fold. Then, through the same incision, the latissimus dorsi muscle is identified. The muscle is sectioned at its insertions and transposed to the mastectomy bed. The inferior, medial and superior portions (tendon) of the muscle are preserved (mini flap). Liposuction is performed on the abdominal wall and/or thighs and the fat graft is performed in several planes such as a skin flap from the mastectomy, intramuscular in the pectoralis major and in the latissimus dorsi flap. **Results:** This new method was performed in five cases. The average duration of the total procedure (mastectomy + axillary approach + reconstruction) was 296 minutes (270 – 330), the average breast weight was 350 g (205 – 458) and the average volume of fat grafted was 234 ml (190 – 270). We had 2 cases of seroma in the donor area. **Conclusion:** The lipofilled skin-sparing mini dorsi flap allows small and medium-sized breasts to be completely reconstructed with autologous tissue without scarring on the back, without the need to change position and without the complete removal of the latissimus dorsi muscle.

**Keywords:** Abdominal Wall, Back, Beds, Breast, Cicatrix, Lipectomy, Mammoplasty, Mastectomy, Methods, Muscles, Nipples, Patients, Pectoralis Muscles, Seroma, Skin, Superficial Back Muscles, Tendons, Thigh, Thorax, Tissue Donors, Tissues, Transplants, Work

**EPIDEMIOLOGICAL AND HISTO-MOLECULAR PROFILE OF PATIENTS WITH BREAST CANCER WHO UNDERWENT GENETIC TESTING IN A TERTIARY CLINIC IN NORTHEASTERN BRAZIL**

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**Objective:** To describe the epidemiological and histo-molecular profile of patients with breast cancer (CAM) who underwent genetic testing at an oncology clinic in northeastern Brazil. **Methodology:** Retrospective cohort of patients with CAM who underwent genetic testing from 1998 to 2022 at a tertiary clinic in northeastern Brazil and who underwent multigene panel testing for hereditary cancer predisposition syndromes. **Results:** Data were collected from 208 patients, of which 122 had CAM. Of these, 14.75% were BRCA1, 11.47% BRCA 2, 15.57% VUS, 4.09% were other high penetrance mutations and 54.12% did not have mutations. The most prevalent histological type was non-special carcinoma (42.62%) and the second was carcinoma in situ (37.70), 3.27% micropapillary, 5.73% lobular and 0.81% inflammatory. The most prevalent molecular type in the sample was HER 2 (44.26%) and Triple negative was the second most prevalent (16.39%), 40% corresponds to luminal HER 2 and Luminal. However, among the BRCA 1 and 2 mutations, the most prevalent molecular type was the Triple Negative (34.37% of a total of 32 BRCA 1 and 2). The age with the most prevalent CAM was the range of 35-45 with 32.78%. In addition, 99% of the patients were female and 1% were male (only one male), 43.4% of the tumors were grade 2 and 55.73% of the lymph nodes were not involved, with 17.2% of the only 1 affected lymph node. **Conclusion:** It is concluded that the most significant mutations are in the BRCA 1 and 2 genes with the Triple Negative molecular type being the most prevalent in these genes, showing that the results corroborate the data already existing in the literature, as well as the importance of the genetic panel for the best individualization and optimization of treatments.

**Keywords:** Breast cancer, genetic testing, epidemiology.



## EMOTIONAL SUPPORT FOR WOMEN WITH BREAST CANCER - NEW APPROACHES

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**Objective:** The objective of the Overcoming Project (OS) is to work alongside integrative medicine to increase the perception of personal well-being, quality of life, resilience, and happiness in women diagnosed with breast cancer (CM). Focused on emotional education, it is structured by support groups that promote positive psychology training and coaching sessions.

**Methodology:** Based on prospective methodology focused on expanding emotional awareness for personal growth, it uses the following initial assessments and outcome measures as scales: Hope - Snyder, collaborators (2007) Satisfaction with Life (SWLS) - Diener, collaborators (1985) PANAS - Watson, D., Clark, and collaborators (2011) Achievements - Latham, Gary Flourishing - Diener, E.R. (2010). The work applies 30 concepts of positive psychology distributed in the acronym:

O – Objectives, dreams, human Being

V – Values, mission, engagement

E – Energy, positive Emotions

R – Roadmap, Planning

C – Communication, relationships

O – Outlier Minds

M – Making decisions, solve problems

E – Emotional remeaning

The training lasts for 7 months, and 30 tools are worked on in 1h30 online classes, where women express thoughts, feelings, behaviors, and remeanings, creating bonds of friendship and joint development. The classes are followed by individual coaching sessions. The classes and written records of coaching sessions are recorded on a proprietary technological platform, which women have access to for 1 year. **Results:** Overall average results of the 55 women served:

Increase:

Hope: 9.45%

Life satisfaction: 8.23%

Achievements: 3.56%

Flourishing: 5.42%

Motivation: 5.45

Positive emotions: 8.3%

Decrease: Negative emotions: -14.3% **Conclusion:** The work has immense potential to contribute to the emotional health and quality of life of women with CM since emotional awareness causes significant transformations for patients in physical, emotional, social, relationship, and career levels, contributing to healthier and more adherent lifestyle habits to treatment needs, in addition to the ease of scale delivery.

**Keywords:** Breast cancer, emotional support, positive psychology, overcoming, quality of life

**MAGNETIC RESONANCE STUDY OF THE BREAST: DIFFUSION SEQUENCE ANALYSIS**

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**Objective:** To evaluate the role of the diffusion sequence and respective ADC map in the study of the breast by Magnetic Resonance. **Methodology:** Retrospective cross-sectional study to evaluate additional breast MRI scan sequence. The study included exams of women with indication for MRI referred, by spontaneous demand, to a private supplementary health imaging diagnostic service in the city of Goiânia - GO, from July 2021 to January 2022. The sample was divided according to the BI-RADS® classification into two groups, one with low suspicion for classifications 1, 2 and 3 and another with high suspicion for classifications 0, 4, 5 and 6. The distribution of the sample profile in patients with BI-RADS® MRI low suspicion and high suspicion was tested by applying Pearson's chi-square test, relative frequency and absolute frequency. Data were analyzed using the Statistical Package for Social Science, (IBM Corporation, Armonk, USA) version 26.0 with a significance level of 5% ( $p < 0.05$ ). Approved by the research ethics committee. **Results:** A total of 307 exams of women with indication for breast MRI participated in the study. Of the exams analyzed, the prevalent clinical indication (33.3%) on images with restriction was a breast lump. Fifty-seven (18.6%) of the exams presented restriction to Diffusion with confirmation on the ADC map in the values of b50, b400 and b800. The distribution of the Diffusion sequence result in relation to the BI-RADS® MRI low suspicion and high suspicion showed that water restriction was concordant ( $p < 0.01$ ), occurring in 82% of the cases of high suspicion. **Conclusion:** Diffusion contributes with additional data about images of high suspicion by standard MRI.

**Keywords:** Breast; Diffusion; Magnetic Resonance.

**BREAST CANCER AND PARANEOPLASTIC DERMATOMYOSITIS: A LITERATURE REVIEW**

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**Objective:** Breast cancer (BC) is the most common malignancy in women. Contrastingly, dermatomyositis (DM) is a rare idiopathic inflammatory myopathy characterized by symmetric proximal muscle weakness and skin lesions. Gottron's papules and heliotrope are pathognomonic signs. This article aims to describe how diagnosis and treatment of patients with both diseases have been performed. **Methodology:** Since this study consists of a literature review, submission to the Research Ethics Committee was not necessary. Articles indexed in the PubMed and SciELO electronic databases were collected. Cross-sectional and retrospective observational studies were selected using the following descriptors: (Breast Cancer) AND (Dermatomyositis). Finally, 19 studies were read in full and included in this systematic review. **Results:** An underlying neoplasm is present in 50% of DM patients older than 45 years. A newly diagnosed dermatomyositis in the latter, should, therefore, be associated with an etiologic search of paraneoplastic origin. This may allow an early BC detection. This is corroborated by the significant stage 1 BC detected in patients with rheumatic diseases, according to a cohort analysis. Furthermore, cases in which DM indicated cancer recurrence have been reported. DM is associated with higher breast cancer mortality, and the most correlated histotype is invasive ductal carcinoma. Currently, there are no guidelines or randomized trials for the management of BC complicated by DM. Therapeutic management of DM is mainly based on corticosteroids and immunosuppressive agents. However, previously published case reports indicated that surgical excision of the tumor is successful, as it can stop the progression of DM and prevent deterioration of the muscle function. **Conclusion:** In conclusion, BC can feature uncommon presentations, such as paraneoplastic DM. Due to the absence of guidelines for the management of BC concomitant with DM, a multidisciplinary approach, including oncologists, dermatologists, and rheumatologists, is mandatory.

**Keywords:** Breast Cancer; Neoplasm Recurrence; Dermatomyositis; Rheumatic Diseases.

**EPIDEMIOLOGY OF MALE BREAST CANCER IN BRAZIL: AN ANALYSIS OF PATIENTS UNDERGOING TREATMENT IN THE PUBLIC HEALTH SYSTEM**

Marcelo Antonini<sup>1</sup>, Gabriel Duque Pannain<sup>1</sup>, Steffi Ferreira Bittenbender<sup>1</sup>, Andre Mattar<sup>1</sup>, Odair Ferraro<sup>1</sup>, Maria Clara Alves de Lima Brito<sup>1</sup>, Rodrigo Ferreira Rodrigue<sup>1</sup>, Reginaldo Guedes Coelho Lopes<sup>1</sup>

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**Objective:** The objective of this study is to understand the epidemiological profile of breast cancer in men in Brazil, in order to improve care for these patients. **Methodology:** This study is an ecological, observational, cross-sectional analysis based on retrospective data from the publicly available National Oncology Database (DATASUS – SISCAN/Cancer Information System). The study utilized a National Tracking Database as the primary data source. Descriptive analyses of sociodemographic characteristics of patients, including the geographic region of diagnosis and age range of affected men, were performed. The study also evaluated specific data regarding breast cancer, including clinical staging and types of treatment. The relationship between age group, staging, and treatment according to staging was also evaluated. **Results:** During the analyzed period of 2017 to 2021, a total of 4,327 cases of breast cancer in men were diagnosed and recorded in the system, representing 1.81% of all breast cancers registered during this period. The majority of cases were diagnosed in the Southeast region (41%), followed by the Northeast region (37%). In terms of age, the majority of patients were over 54 years old (68.9%), with 19.1% of patients between 40 and 54 years old, and 12% of all registered cases occurring in patients under 40 years old. Clinical examination was used to diagnose 62.8% of men, while imaging examinations were used to diagnose 37.2%. Treatment options included chemotherapy (55.7%), surgical treatment (35.6%), and radiotherapy (8.7%). **Conclusion:** Breast cancer in men is a rare disease that should not be neglected. It is often diagnosed at more advanced stages, which leads to more invasive treatments. Men with known risk factors should be advised to seek medical attention as soon as they feel a palpable retro areolar mass to ensure a prompt and accurate diagnosis. It is important to raise awareness of this disease and encourage early detection and treatment to improve outcomes for men with breast cancer.

**Keywords:** Breast cancer; Epidemiology; Men

**COHORT STUDY IN PATIENTS WITH BREAST CANCER TREATED BY  
NEOADJUVANT ENDOCRINE THERAPY AT HOSPITAL NOSSA SENHORA DA  
CONCEIÇÃO, PORTO ALEGRE, RS**

José Luiz Pedrini<sup>1</sup>, Caio Caloca Severo<sup>1</sup>, Marco Aurélio Veiga<sup>1</sup>, Gustavo Alberto Ozol de Ávila<sup>1</sup>, Martina Lichtenfels<sup>1</sup>, Mário Casales Schorr<sup>1</sup>

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**Objective:** Our study aims to analyze the outcomes of a cohort of patients from Hospital Nossa Senhora da Conceição, Porto Alegre/RS, undergoing Neoadjuvant Endocrine Therapy (NET) for breast cancer. **Methodology:** A retrospective cohort study was conducted with 28 patients diagnosed with luminal tumors (ER+/HER2-) in a tertiary care center. The patients were treated with NET based on tamoxifen, anastrozole, or letrozole and subsequently operated or not at clinical discretion. The data on histological classification, treatment time and response, and tumor progression rate were evaluated by the medical chart. **Results:** The mean patient age was 78 (45 - 91). The most common histological type was ductal (85.7%), followed by lobular (7.1%) and mucinous (7.1%). Low tumor grade (G1) was observed in 14.2% of cases, grade 2 in 71.4%, and grade 3 in 7.1%. Regarding lymph node involvement, 64.2% were NO, 32.1% N1, and 3.6% N2. The mean duration of NET was 22 months, and most patients presented tumor downstaging, with an initial mean tumor size of 3.2 cm and a final mean of 1.8 cm. At the end of the treatment, 60.7% of the patients showed a decrease in tumor size, 28.5% disease stability, and 10.7% disease progression. Of the patients with tumor regression, 21.4% had a complete pathological response to NET. These data are in line with previous literature reporting response rates between 20% and 70% after 3 to 4 months of NET, which can increase to up to 88% in 12 months. **Conclusion:** Our cohort corroborate previous literature and supports the effectiveness of NET for the downstaging of luminal breast cancer.

**Keywords:** Breast neoplasms, neoadjuvant therapy, tumor burden, estrogen receptors

**CORRELATION OF AGE GROUP AND CHARACTERIZATION OF FINDINGS  
BREAST MAGNETIC RESONANCE IMAGING WITH BI-RADS® OF HIGH AND  
LOW SUSPECTION**

Camila Leal Diniz<sup>1</sup>, Rosemar Macedo Sousa Rahal<sup>1</sup>, Ruffo de Freitas Júnior<sup>1</sup>, Ilse Franco de Oliveira<sup>1</sup>, Cristina Pinto Naldi Ruiz<sup>2</sup>, Paulinelly Messias de Almeida<sup>2</sup>, Rosangela da Silva Correa<sup>1</sup>, Lizzi Naldi Ruiz<sup>2</sup>

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**Objective:** To analyze Magnetic Resonance (MRI) BI-RADS® using criteria of high and low suspicion in relation to age group variables and imaging findings. **Methodology:** Cross-sectional retrospective study of analysis of breast MRI exams in an imaging clinic in the city of Goiânia - GO, from 2021 to 2022. The sample was divided according to the BI-RADS® classification into two groups, one with low suspicion for classifications 1, 2 and 3 and another one of high suspicion for classifications 0, 4, 5 and 6. The sample profile of patients with BI-RADS® MR low and high suspicion was tested by applying Pearson's chi-square test, relative frequency and absolute frequency, analyzed using the Statistical Package for Social Science (SPSS – 26.0) with a significance of 5% ( $p < 0.05$ ). Approved by the research ethics committee.

**Results:** A total of 307 exams with indication for MRI were evaluated. Data on the age of patients inferred that the mean was 49.1 years (Standard Deviation 11.5) and ranged from 24 to 83 years, 61 (19.9%) were aged > 60 years. When evaluating the BI-RADS® MRI results with the low and high suspicion criteria, women aged 60 years or older had a significant prevalence ( $p = 0.03$ ) of high suspicion. The concordant findings described in the examination report were: breast lump ( $p < 0.01$ ), cyst ( $p < 0.01$ ), nonspecific enhancement ( $p = 0.01$ ), post-surgical alterations ( $p < 0.01$ ), fold of the implant ( $p = 0.04$ ) and inflammatory process ( $p = 0.04$ ), prevailing findings nodule (77%) for high suspicion and cyst (11.5%) for low suspicion.

**Conclusion:** The association of BI-RADS® of high suspicion with age showed that patients aged > 60 years are more likely to have high-risk lesions; in the exams, the breast lumps presented concordance for high suspicion and the cysts concordance for low suspicion.

**Keywords:** Breast; Breast cancer; Magnetic Resonance.

**ONE S.T.E.P. TECHNIQUE TM FOR HARVESTING FAT GRAFT: A NEW TECHNOLOGY TO IMPROVE THE OUTCOME IN BREAST RECONSTRUCTION**

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**Objective:** The authors present a new technique that provides the harvest of the fat graft and conducting its immediately grafting in the breast reconstructed, after the treatment of breast cancer. **Methodology:** A total of 42 cases were performed by the senior author from April 2019 to December 2022, in patients submitted to breast reconstruction procedures in private hospitals in Goiânia, Goiás, Brazil. All patients have been submitted to surgical treatment of breast cancer in the past, whether by conservative treatment with partial resection and radiotherapy or any kind of mastectomy and implant based breast reconstruction. Some patients had adjuvant radiotherapy. The Selective Tissue Engineering Photostimulation Technique (One S.T.E.P. Technique<sup>TM</sup>) involves using a diode laser with wavelength of 1210 nanometers applied to the subcutaneous tissue from abdomen, hips, medial thighs or axillary extension, before harvesting the fat grafts. The fat graft obtained by the One S.T.E.P. technique has innovative characteristics since the laser being specific for the subcutaneous tissue, it reaches its maximum energy at the adipocytes causing them to vibrate, denaturing the connective tissue and releasing the adipocytes and stromal vascular fraction. The fat grafting was carried out immediately after the fat extraction, as an adjunct to improve the quality of the usual results, and no additional processing steps are required. The evaluation of results was performed at 40 and 90 days postoperatively. **Results:** The technique features makes it easier to aspirate the graft and preserves the cells viability. The authors observed an excellent take of the grafted fat showing great improve on the skin quality and reduced formation of oil cysts and calcifications. Some patients showed great improvement even in radiated skin. **Conclusion:** The One S.T.E.P. Technique <sup>TM</sup> is an excellent alternative to improve the quality of the fat graft in order to achieve a more aesthetic breast reconstruction.

**Keywords:** Tissue Grafting; Subcutaneous tissue; Diode laser; Breast Reconstruction; Breast Cancer

**MALE BREAST CANCER: HOW TO OPTIMIZE THE DIAGNOSIS?**

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**Objective:** Male breast cancer (MaBC) is a rare disease that represents about 1% of all cases of breast cancer (BC) in Brazil. The scarcity of screening campaigns hinders early diagnosis, directly affecting treatment and prognosis. Therefore, this study aims to increase the visibility, among health professionals, for the aforementioned disease, describing how screening and diagnosis has been performed until now. **Methodology:** The present study is a systematic literature review. Articles indexed in the electronic databases PubMed, SciELO, and ScienceDirect were collected. Studies were selected using the following descriptors and keywords: (Breast Cancer) AND (Men). **Results:** The avoidance of medical services by men, absence of guidelines for the management of MaBC and the rarity of this disease contribute to late diagnosis. The average delay in diagnosis ranges from 6 to 10 months after the onset of symptoms, and about 40% are diagnosed in stages III and IV. Clinical and radiological evaluation and tissue biopsy are essential for diagnosis. Screening should be initiated by evaluating risk factors, such as: advanced age, radiation therapy, obesity, hormone imbalance, and BRCA2 mutations. The main clinical finding is a single, retroareolar, and painless mass, usually in the left breast. It can involve axillary lymph node, and, in rarer cases, nipple retraction, papillary discharge, and ulceration can be found. Mammography in men is generally more sensitive than in women. For biopsy, Core Biopsy is the preferred method. **Conclusion:** Despite its rarity, MaBC mortality rate is higher than women BC. That may be due to unawareness of the disease among patients and lack of guidelines, possibly leading to medical negligence. Hence, careful attention for breast complaints, especially in high-risk patients, is mandatory to avoid late diagnosis. Promote public awareness about MaBC and its symptoms is also required. Furthermore, development of guidelines for diagnostic purposes would improve management of MaBC.

**Keywords:** Male Breast Cancer; Early Detection of Cancer; Diagnostic Screening Programs; BRCA2.

**EVALUATION OF THE PREVALENCE OF BREAST CANCER DIAGNOSIS BEFORE AND DURING THE COVID-19 PANDEMIC IN BRAZIL**

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**Objective:** The Coronavirus Disease 2019 (COVID-19) pandemic brought significant impacts to the healthcare system due to the new demands generated, which in turn hindered the prevalence of breast cancer diagnosis in Brazil. In this context, this study sought to investigate the prevalence of breast cancer tracking and diagnosis between the federation's regions during 2018 and 2022. **Methodology:** Cross sectional study using data collected from the Informatics Department of the Unified Health System (DATASUS) on breast cancer diagnosis between January of 2018 and December of 2022, in the regions of Brazil. The criteria for selection were the number of mammography exams, using Breast Imaging-Report and Data System (BI-RADS) score, and the number of positive histopathologic exams. The results were analyzed mathematically. **Results:** In 2020, compared with 2019, considering the number of mammography exams and malignant breast findings, there was reduction of 39,0% and 26,6%, respectively. In each region, save for the North, there was higher reduction than observed at national level. However, in 2021, there was an increase in the rate of mammography exams and malignant breast findings and, in 2022, there was the highest number of mammography exams, histopathologic exams and breast cancer diagnosis, since 2018, across the entire country. **Conclusion:** There was noticeable decrease in the number of mammography exams and histopathologic exams, particularly during 2020, and highest number of exams and diagnosis, in the last 5 years, in 2022, after the majority of the population was vaccinated and COVID-19 cases decreased. The data shows the impairment in the normal course of preventive exams in the country, considering the reduction of trips and referral to hospitals, in non-urgent cases, given the population's fear of COVID-19, consequently reducing the frequency of prevention and early breast cancer diagnosis.

**Keywords:** Breast Neoplasms; COVID-19; Mammography.

**PHYLLOID TUMOR: CLINICAL-EPIDEMIOLOGICAL PROFILE IN A REFERENCE ONCOLOGY CLINIC IN THE CAPITAL OF PIAUÍ**

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<sup>1</sup> Oncocenter|Teresina|Piauí|Brasil

**Objective:** To know the clinical-epidemiological profile of patients diagnosed with phylloid breast tumor, in the period from December 2006 to January 2023, in a reference oncology clinic in the city of Teresina-PI. **Methodology:** Observational, descriptive, quantitative and retrospective study carried out through data collection from medical records. We analyzed 982 medical records of female patients with breast cancer. Variables such as age, personal and family history of cancer, presence of pathogenic variants in the panel tested, and pharmacological and surgical interventions were analyzed, tabulated and analyzed descriptively in Microsoft Excel. The study included all the medical records of patients seen in this period, excluding those who did not have breast cancer or whose records did not provide sufficient information. The study was approved by the Research Ethics Committee, opinion number 30154720.0.0000.5209. **Results:** Of the patients diagnosed with breast cancer, those with phylloid tumors represented 0.5% of the total, with a mean age of 45 years. Four types of incident diagnoses were found, namely: borderline phylloid tumor (40%), malignant phylloid tumor associated with heterologous component of liposarcoma (20%), benign phylloid tumor (20%), and phylloid breast tumor (20%). Among the clinical characteristics, the cases that presented a survival of the patients without the disease represented 40% in opposition to the cases of survival with the disease that represented 60%, and the largest tumor size was 11.5cm **Conclusion:** In the present study, the cumulative incidence of phylloid breast tumors in women diagnosed with breast cancer in the study population from December 2006 to January 2023 was 0.5%, with the phylloid borderline tumor having the highest prevalence among the cases studied.

**Keywords:** Breast cancer; phylloid tumor.

**CHARACTERIZATION OF CHRONIC PAIN IN WOMEN UNDERGOING BREAST CANCER TREATMENT**

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<sup>1</sup> Federal University of Goiás|GOIANIA|GO|Brasil

**Objective:** To characterize chronic pain in women undergoing surgical treatment for breast cancer. **Methodology:** This is a transversal study of quantitative and qualitative basis. Data collection was performed at a tertiary breast cancer treatment center located in central Brazil. We used the McGill Pain Questionnaire structured pain assessment questionnaire in its Brazilian version (BR – MPQ) and the Visual Analogue Scale (VAS). **Results:** Ninety-nine patients were interviewed, of which 46 were included in the study. Thirty 30 (65.2%) patients underwent quadrantectomy for surgical treatment of breast cancer. A type of breast reconstruction technique was used in 26 (56.5%) patients, most of them immediately. Sentinel lymph node biopsy was performed in 45 (97.8%) patients, but 22 (47.8%) required axillary lymphadenectomy for some oncological reason. Thirty-five (76.0%) patients underwent neoadjuvant or adjuvant chemotherapy and 40 underwent radiotherapy (87.0%). We observed a predominance of intermittent and pulsating pain, with a mean intensity of 5.5 on the VAS. In the McGill questionnaire, a total score of 28.24 ( $\pm$  14.51) was observed. All participants had chronic pain of the intermittent type, starting after surgery, located in the surgery scar and in the ipsilateral arm. The sensory domain contributed the most to pain perception, with an average of 16.83 ( $\pm$  7.52). The pain assessment category was reported by 41 (89.1%) patients, followed by the sensitive (n = 15; 32.6%), miscellaneous (n = 14; 30.4%) and affective (n = 12; 26.1%). Chronic pain was predominantly characterized as pulsating, throbbing, sensitive, punishing and strong. According to the VAS, the average intensity reported was 5.52 ( $\pm$  2.61). **Conclusion:** Our study characterized chronic pain in women undergoing surgical treatment for breast cancer, which may help identify and manage this symptom.

**Keywords:** Breast cancer, Quadrantectomy, Mastectomy, Chronic pain.

**SCOPE OF DIAGNOSTIC AND SCREENING METHODS FOR BREAST CANCER AMONG WOMEN IN THE STATE OF PERNAMBUCO : KNOWING IN ORDER TO INTERVENE**

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**Objective:** TO KNOW THE DIAGNOSTIC AND SCREENING METHODS FOR BREAST CANCER, MADE AVAILABLE BY PUBLIC HEALTH SERVICES AND THEIR REACH AMONG WOMEN IN THE STATE OF PERNAMBUCO **Methodology:** THIS IS A CROSS-SECTIONAL, DESCRIPTIVE AND RETROSPECTIVE STUDY, WHOSE DATA WERE OBTAINED BY CONSULTING THE SISCAN DATABASE, MADE AVAILABLE BY DATASUS. THIS STUDY POPULATION CONSISTED OF FEMALE PATIENTS OF ALL AGE GROUPS IN THE STATE, FROM JANUARY TO DECEMBER 2021. THE VARIABLES WERE GROUPED TAKING INTO ACCOUNT THREE INDICATORS: MAMMOGRAPHY, CYTOLOGY AND HISTOLOGY. **Results:** A TOTAL OF 147.852 MAMMOGRAMS WERE PERFORMED, WITH THE 50-54 AGE GROUP BEING THE MOST PREVALENT. OF THE TOTAL, 145.745 WERE FOR SCREENING PURPOSES AND 2.136 FOR DIAGNOSTIC PURPOSES. OF THE MAMMOGRAPHIC REPORTS OBTAINED RESULTS WITH BIRADS 4 AND 5. THERE WAS A PREDOMINANCE BIRADS 1. THE NUMBER OF CYTOLOGY PERFORMED WAS ONLY 404, WITH THE MOST PREVALENT AGE GROUP BETWEEN 45-49 YEARS, WITH 180 TUMORS OF SOLID TYPE, WHERE 12, 6% WERE POSITIVE, SUSPECTED OR INDETERMINATE FOR MALIGNANCY. ACCORDING TO THE HISTOPATHOLOGICAL REPORT, THE RATE OF MALIGNANT BREAST LESIONS WAS APPROXIMATELY 47,92 %, WITH PREVALENCE IN THE AGE GROUP BETWEEN 45-49 YEARS. ONLY 1.810 OF THE LESIONS COULD BE DIAGNOSED BY IMAGING AND 879 WERE PALPABLE ON CLINICAL BREAST EXAMINATION **Conclusion:** THE PRESENT STUDY DEMONSTRATED THE NEED TO EXPAND THE AGE GROUP RECOMMEND BY THE MINISTRY OF HEALTH FOR BREAST CANCER SCREENING, FOR AN EARLIER ONSET, FROM THE AGE 40. IN ADDITION, THE SCOPE OF DIAGNOSTIC METHODS IS STILL FRUSTRATING, AS A SMALL NUMBER OF WOMEN PROGRESS IN THE INVESTIGATION

**Keywords:** BREAST NEOPLASMS, WOMENS HEALTH, SCREENING DIAGNOSIS

**PATHOLOGIC COMPLETE RESPONSE AND EFFICACY WITH NEOADJUVANT ANTHRACYCLINE FOLLOWED BY PACLITAXEL, TRASTUZUMAB AND PERTUZUMAB IN PATIENTS WITH HER 2-POSITIVE EARLY BREAST CANCER: A REAL WORLD EXPERIENCE OF BRAZIL**

Leandro Gonçalves Oliveira<sup>1</sup>, Ana Claudia Gonçalves Lima<sup>1</sup>, Frank Lane Braga Rodrigues<sup>1</sup>, Alexandre Marchiori<sup>1</sup>, Rosemar Macedo Sousa Rahal<sup>2</sup>, Deidimar Cassia Batista Abreu<sup>1</sup>, Lays Costa Marques<sup>1</sup>, Felipe Marcio Araujo Oliveira<sup>1</sup>

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**Objective:** Compared with other subtypes of breast cancer, a higher percentage of HER2-positive patients achieve a pathologic complete response (pCR) to neoadjuvant chemotherapy (NACT). Most randomized studies of neoadjuvant therapy in HER2-positive breast cancer have employed anthracycline and taxane-based NACT regimens. In the aggregate, these studies suggest a pCR rate approaching 50% among patients with operable HER2-positive disease receiving anthracycline, taxane, and trastuzumab-based therapy (AC-TH). In the phase II TRYPHAENA study, the pCR rate reported for the docetaxel, carboplatin, trastuzumab, and pertuzumab (TCHP) regimen was 64% compared with 55% among those treated with an anthracycline-based regimen (FEC-THP), a difference that was not statistically significant. Anthracycline-free regimens are currently preferred as NACT in international guidelines but, in the Brazilian reality, anthracyclines regimens as AC-THP are still widely used. As a practical example, a portion of patients with locally advanced disease need to start NACT but depend on ISH (in-situ hybridization) result to HER-2 directed therapy. **Methodology:** A retrospective analysis was performed of patients treated with AC-THP in the neoadjuvant setting in a Brazilian breast cancer center in Goiânia, Goiás. A medical record review was conducted of patients treated with AC-THP in the neoadjuvant setting and at least 1 year of follow-up after surgery. Data on patient demographics, stage of breast cancer, systemic therapy, pathology reports and surgical data were collected. **Results:** Information from 44 patients were reviewed and were evaluable for total pCR (tpCR, ypT0/is ypN0). Average age was 50.3 years (range 28–75 years, with 18% over 65 years old). HER2 positivity by IHC 3+ was achieved in 80% of patients and 20% had IHC 2+ and ISH positive. In the 63.4%, the estrogen receptor (ER) positivity was > or = 10% and 38.6% and 25% had clinical stage IIB and IIA respectively. Overall, 35 (80%) received AC dose-dense, 18 patients (41%) underwent lumpectomy and 26 (59%) underwent mastectomy. The average number of nodes removed in SNB patients (86.3%) was 3 compared with 15.5 in ALND patients (13.7%). A tpCR occurred in 31/44 (70.5%) patients overall and in 14/16 (87.5%) patients with HR-negative or weak and in 17/28 (60.7%) HR-positive disease. After average 44.2 months of follow-up, 95.45% of patients were still free of breast cancer recurrence ( 2 relapses) and the overall survival was 100%. **Conclusion:** In the report from Memorial Sloan Kettering Cancer Center in 2017, tpCR occurred in 41/57 (72%) patients. In the cohort A from Berenice trial, the pCR rate was 61.8%. Cross-trial comparisons should be interpreted with caution given the differences in patient populations, but based in this report, our real world results were at least comparable with randomized trials and with results from developed countries.

**Keywords:** her2-positive, neoadjuvant, breast cancer, pertuzumab, anthracycline

**PHYSIOTHERAPY IN THE IMMEDIATE POST-OPERATIVE BREAST CANCER: A PRIMARY CARE PROPOSAL**

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**Objective:** The aim of this study is to verify whether the primary care strategies carried out by physiotherapy in the immediate postoperative period of breast cancer are effective.

**Methodology:** Retrospective study of consultations carried out in the breast ward by the Physiotherapy service, including screening of consultations from February 2019 to February 2023. The data analyzed were: age, education, marital status, parity, hormonal status, diagnosis, dominant limb, type of surgery, condition of the scar, need for referral to physiotherapeutic care and the physiotherapeutic strategies adopted at that time. The study was approved by the Brazil Platform (CAAE 56561222.9.0000.0084). **Results:** 122 files were analyzed, 12 (9.8%) were excluded due to missing data; mean age was  $51.66 \pm 16.2$  years, 31 (28%) had completed high school, 43 (39%) were married, 26 (23%) were nulliparous and 58 (51%) menopause. As for the diagnosis, 78 (70%) discovered it through self-examination and only 28 (25%) through mammography, 45 (40%) had cancer on the dominant side. Quadrantectomy was the most common surgical type 40 (36%), followed by sectorectomy 21 (19%) and lymph node dissection was present in 11 (10%). Inflammatory signs were not identified in 58 (52.7%) and 69 (62.7%) were referred for physiotherapy. All women were instructed to freely maintain upper limb movements, taught to perform simple free active movements at home for the prevention of lymphedema, being reinforced by delivery of educational material. After a week, it was observed that all of them had no signs of lymphedema and or upper limb movements loss

**Conclusion:** Performance of physiotherapy in the immediate postoperative period is extremely relevant in caring for the scar/hydration of the skin and in stimulating free active exercise that may prevent the development of lymphedema or even functional limitation due to kinesiophobia. Delivery of educational material, as well as physiotherapeutic follow-up at the time of chemotherapy/radiotherapy enhances the positive results.

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

**MALE BREAST CANCER: A PUBLIC HEALTH PROBLEM THAT STILL LACKS PREVENTION AMONG MEN**

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**Objective:** This work aims to bring epidemiological information about male breast cancer and also prevention importance in this group. **Methodology:** For this purpose, data from the Department of Informatics of the Unified Health System (DATA-SUS) were used, in which cases were investigated by gender according to the year of diagnosis of breast cancer in Brazil, between the years 2013 and 2022. **Results:** Breast cancer (BC) is the second most prevalent cancer in the world. In Brazil, BC will represent, according to the National Cancer Institute, it is estimated that between 2023 and 2025, 10.2% of all types of cancer in the country. Furthermore, it is common knowledge that BC also affects male population, representing 1% of cases, however its incidence has increased significantly throughout the world, including in our country in the last decade. Thus, there was a significant increase in the analysed data during this period of time, in which, respectively, we had between 2013-2022, 229, 267, 255, 274, 268, 482, 1021, 1059, 1493 and 848 cases of male breast cancer. Moreover, when analyzing breast cancer screening and combat campaigns in Brazil, it appears that they, for the most part, dialogue only with women, leaving an illusion that men should not be concerned with this category of cancer. In addition, studies reveal that male breast cancer patients had worse survival outcomes compared to female patients. **Conclusion:** Therefore, we conclude that public policies, emphatic and educational campaigns are necessary, which explain the reality of male breast cancer, with the intention of informing its risks, in an attempt to increase screening, thus reducing the incidence and mortality of breast cancer in men.

**Keywords:** Disease Prevention, Epidemiology, Male Breast Cancer.

**SURVIVAL ANALYSIS OF PATIENTS WITH 10 OR MORE AXILLARY LYMPH NODES COMPROMISED BY BREAST CANCER**

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**Objective:** To evaluate survival in patients with 10 or more compromised axillary lymph nodes.

**Methodology:** This is a retrospective cohort study in a private oncology clinic in Teresina, Piauí, Brazil in the period 1999 to 2023, where medical records of 12 patients with breast cancer who had 10 or more compromised axillary lymph nodes were analyzed. The following variables were observed: patient age, histological type of tumor, tumor size, lymphatic invasion, vascular invasion, perineural invasion, number of lymph nodes dissected, number of axillary lymph nodes compromised, treatment with radiotherapy and/or chemotherapy, occurrence of recurrence and/or metastasis, and patient survival. Survival functions were calculated using the Kaplan-Meier method. This study was approved by the Research Ethics Committee of the Universidade Estadual do Piauí (CEP-UESPI), Teresina-Piauí, Brazil, opinion number 4.311.835. **Results:** The mean age of the patients was 58.66 years. The mean tumor size was 4.6 cm. There was a predominance of invasive carcinoma of the non-special histological type (10 - 83.33%), followed by invasive lobular carcinoma (1 - 8.33%) and invasive tubular carcinoma (1 - 8.33%). As for lymphovascular invasion, 6 of the patients(50%) had vascular invasion, 7 patients(58.33%) had lymphatic invasion, 3 patients(25%) had perineural invasion. The mean number of LAX compromised was 13.17, while the mean number of lymph nodes dissected was 20.25. Of the 12 patients, 9 were treated with radiotherapy(75%) and 10 were treated with chemotherapy(83.33%). From the total, 6 patients (50%) had some form of recurrence, and of these, 4 progressed to death. Distant metastasis occurred in 4 patients (30%). **Conclusion:** The survival rate in a time interval of 5 years for the patients with 10 or more compromised axillary lymph nodes was 51.6%.

**Keywords:** Survival Analysis; Lymph Nodes; Breast cancer.

**METABOLIC SYNDROME AS A RISK FACTOR FOR THE DEVELOPMENT OF BREAST CANCER IN WOMEN AND ITS IMPACT IN PROGNOSIS**

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**Objective:** Metabolic syndrome (MS) is a complex metabolic disorder. The aforementioned main components are systemic arterial hypertension, insulin resistance, obesity and dyslipidemia. Highly acclaimed evidence supports the hypothesis that MS may be associated with breast cancer (BC) development and worse prognosis. The increasingly incidence rates of both MS and BC seem to corroborate this theory. This article aims to assess the association among MS and BC development, later diagnosis and worse prognosis. **Methodology:** An inclusive literature review was conducted in PubMed and SciELO. **Results:** Firstly, excess of adipose tissue characteristic of MS not only enhances the expression of pro-inflammatory factors but also increases aromatization process. The latter is a neuroendocrine change that occurs in adipocytes and leads to greater estrogen synthesis, which increases the risk for the development of BC. It was concluded that MS is an independent risk factor for BC with relative risk (RR) 1.75%. MS is also associated with more aggressive and poorer differentiated tumors. Women with MS have higher rates of BC in stages III and IV. Furthermore, hyperinsulinemia and hyperglycemia are directly related to axillary lymph node involvement, high histological grade and late staging. Moreover, it is known that women diagnosed with both MS and BC have worse oncologic prognosis. The aforesaid is exemplified by the increased recurrences and decreased survival in BC associated with high fasting plasma insulin levels. Additionally, obese women with BC have a worse prognosis and a higher risk of developing a second primary BC. **Conclusion:** As mentioned above, MS is significantly associated with an increased risk, invasive progression and adverse outcomes of BC due to the neuroendocrine changes, namely abnormal estrogen levels. It is therefore strongly recommended to adhere to dietary strategies and regular physical activities in order to prevent MS. Consequently, there would be a possibility of reducing the incidence rates of BC.

**Keywords:** Metabolic Syndrome, Breast Cancer, Lymph Node Metastasis, Aromatase, Estrogen Effects.

**RADIOTHERAPY AND BREAST CANCER: THE RISKS OF MALIGNANCIES SECONDARY TO BREAST CANCER TREATMENT IN PATIENTS WITH LI-FRAUMENI SYNDROME**

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**Objective:** This study aims to highlight the risks of malignancy induced by radiotherapy in the treatment of patients with breast cancer with Li-Fraumeni syndrome. **Methodology:** To this end, a literature review was carried out in the PubMed scientific database, using the descriptors: “Li-Fraumeni syndrome”, “TP53 gene” and “Malignancies secondary to radiotherapy”, and as an inclusion criteria, it was used: works in Portuguese and English, not duplicated and between the years 2016 to 2023, with the intention of using the most recent sources for the search result. **Results:** DNA damage by ionizing radiation is the main mechanism of radiotherapy action, therefore, disturbances in DNA repair can result in increased sensitivity to cancer treatment recessive radiosensitivity, for example, patients with Li-Fraumeni Syndrome. This is an autosomal dominant inherited disease that is usually associated with abnormalities in the P53 tumor suppressor protein (TP53) gene, located on chromosome 17p13. That said, the risk of malignancies correlates with the type of TP53 germline pathogenic variant, with the TP53 p.R337H mutation being particularly prevalent in Brazil. According to published study in the journal Breast Cancer Research and Treatment, the risk of radiation-induced malignancy associated with Li-Fraumeni Syndrome was higher for sarcoma and thyroid cancer in 12% of patients studied. **Conclusion:** Thus, when initiating radiotherapy treatment, early molecular diagnosis, with the intention of finding the Li-Fraumeni syndrome, and careful assessment of the risks and benefits of treatment are essential for these patients, considering that the physician must always care for the well-being of the patient and, above all, do not cause harm to the patient.

**Keywords:** Breast Cancer, Li-Fraumeni Syndrome, Radiotherapy.

**SPECIAL BREAST TUMORS: CLINICAL-EPIDEMIOLOGICAL PROFILE IN A REFERENCE ONCOLOGY CLINIC IN THE CAPITAL OF PIAUÍ**

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**Abstract:**

**Objective:** Know the clinical and epidemiological profile of patients diagnosed with special breast tumors, in the period from December 2006 to January 2023, in a reference oncology clinic in the city of Teresina-PI. **Methodology:** Observational, descriptive, quantitative and retrospective study carried out through data collection from medical records. 982 medical records of female patients with breast cancer were analyzed. Variables such as age, personal and family history of cancer, presence of pathogenic variants in the panel tested, and pharmacological and surgical interventions were analyzed, tabulated and analyzed descriptively in Microsoft Excel. The study included all the medical records of patients seen in this period, excluding those who did not have breast cancer or whose records did not provide sufficient information. The study was approved by the Research Ethics Committee, advice number 30154720000005209. **Results:** Of the patients diagnosed with breast cancer, those with special breast tumors represented 1.42% of the total, with a mean age of 56 years. Four types of incident diagnoses were found: papillary carcinoma (35.7%), mucinous (28.6%), metaplastic (21.4%), and medullary (14.2%). Among the clinical characteristics, the most common stage was stage IIA (78.6%), followed by stage IIB (7.1%). Most patients had well differentiated (50%) or moderately differentiated (21.4%) tumors with negative lymph node involvement. In two of the three cases diagnosed as metaplastic carcinoma, large tumors 9.2 and 15.5 cm in length were observed, with recurrence in both cases. All cases of mucinous carcinoma had the RE+/RP+ pattern. **Conclusion:** In the present study, the cumulative incidence of special breast tumors in women diagnosed with breast cancer in the study population from December 2006 to January 2023 was 1.42%, and of this total 35.7% were of the carcinoma type papillary carcinoma.

**Keywords:** Breast cancer; Rare subtypes of breast cancer, Special Breast Tumors.

## RECONSTRUCTION IMMEDIATE OR DELAY IN SUS HOSPITAL

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**Objective:** To understand the epidemiological profile of women with breast cancer who underwent breast reconstruction in a reference hospital in the state of Pernambuco

**Methodology:** This is an observational, retrospective research with an analytical character and descriptive approach. The data were collected through a questionnaire sociodemographic and clinical-surgical history of patients with breast carcinoma, and then analyzed by SPSS software, version 18 with the percentages of the categories evaluated by the Chi - square test, considering the significance level of 5%. The comparison of analyses was significant ( $p < 0.005$ ), showing that the profile described is the most frequent in the group of patients evaluated. This search was submitted and approved by the Ethics and Research Committee on Human Beings of Fundação Amaury de Medeiros, CAAE: 42457420.1.0000.5193, **Results:** A non-probabilistic sample of 400 records was obtained in ten years at a tertiary hospital in Recife (PE), most of them with mean age between 46 and 59 years (45.3%), brown (61.1%), married (79.1%), with education until high school (60.7%), household professionals (45%), non-smokers (84.9%), who do not consume alcohol (94.9%) and had immediate reconstruction after mastectomy (70.3%).

**Conclusion:** The findings support that patients with high educational levels are likely to undergo immediate breast reconstruction. Pointing out that the socioeconomic level significantly influences the rates of breast reconstruction after mastectomy.

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

**MAMMARY PAGET'S DISEASE: CLINICAL-EPIDEMIOLOGICAL PROFILE IN A REFERENCE ONCOLOGY CLINIC IN THE CAPITAL OF PIAUÍ**

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**Objective:** To identify the clinical and epidemiological profile of patients diagnosed with Breast Paget's Disease from December 2006 to January 2023 in a reference oncology clinic in the city of Teresina, PI, Brazil. **Methodology:** Observational, descriptive, quantitative and retrospective study conducted by collecting data from medical records. We analyzed 982 medical records of female patients with breast cancer. Variables such as age, personal and family history of cancer, presence of pathogenic variants in the panel tested, and pharmacological and surgical interventions were analyzed, tabulated and analyzed descriptively in Microsoft Excel. The study included all the medical records of patients seen in this period, excluding those who did not have breast cancer or whose records did not provide sufficient information. The study was approved by the Research Ethics Committee, opinion number 3015472.0.0000.05209. **Results:** Of the patients diagnosed with breast cancer, those with the mammary form of Paget's disease represented 0.3% of the total. In two of the three cases Paget's disease was associated with invasive ductal carcinoma and there was one case of Paget's tumor. The mean age was 57 years, and two cases were in postmenopausal women. Among the clinical characteristics, the degree of differentiation most commonly found was G3 (66.7%), followed by G2 (33.3%). All patients had RE+/RP+ pattern. **Conclusion:** In this study, the cumulative incidence of Paget's tumor of the breast in women diagnosed with breast cancer in the study population from December 2006 to January 2023 was 0.3%, and of this total 66.7% were associated with invasive ductal carcinoma.

**Keywords:** Breast Cancer; Paget's Disease of the Breast; Women.

**PREPECTORAL BREAST RECONSTRUCTION. REPORT AFTER 4 YEARS OF FOLLOW-UP. EXPERIENCE OF A CHILEAN TERTIARY GENERAL HOSPITAL**

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**Objective:** Implant-based breast reconstruction (IBBR) has become the leading method for Immediate breast reconstruction worldwide, for several years using the sub-pectoral plane. Post mastectomy radiotherapy (PMRDT) and breast reconstruction is associated with complications including implant lost and animated breast deformity. This last one, can be avoid using pre-pectoral plane IBBR. The objective of this report is to show a 4 years' experience and results on Pre-Pectoral IBBR (PPIBBR) at a University Clinical Hospital. **Methodology:** The data was collected prospectively from a personal Data-Base. Selection criteria were based upon oncological considerations, multidisciplinary committee evaluation and indication of Mastectomy. Distance of tumors from skin and a proper subcutaneous fat thickness was evaluated. A review of general comorbidities, BMI, smoking, breast weight, pathology report, complications of any kind, including implant lost and its association with radiotherapy were included. **Results:** The cohort study included 77 patients (81 PPIBBR procedures), from July 2019 to March 2023. The mean age was 47 (27-70) years. 8 patients (9.7%) were mutation carriers (4 BRCA1, 2 BRCA2, 2 TP53). 6 out of 10 patients with bilateral Breast Reconstruction, had a PPIBBR. Most of the procedures were done following the same technique and by the same senior surgeons team. Mesh was used in 38% (31/81), mostly absorbable synthetic mesh. Most complications were considered mild (14.8% n=12/81) or moderate (19.7% n=16/81) and were managed as outpatient treatment. We have only 3 breast implants lost among 81 procedures (3,7%) and only 1 was related to PMRDT prior to actual reconstruction. **Conclusion:** PPIBBR is so far a safe and feasible breast reconstructive technique, with a very low complication rate in well selected patients. It can be used for therapeutic or risk reduction purpose, the aesthetics results are mostly good an excellent according to Harris Scale evaluation and avoid the disadvantage of subpectoral implant placement.

**Keywords:** BREAST RECONSTRUCTION, PREPECTORAL, BREAST IMPLANT.