

4th INTERNATIONAL ISTANBUL BREAST CANCER VIRTUAL CONFERENCE

October 17-18, 2020

Virtual Conference

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Abstract Book

Organized by



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INVITATION

Dear Colleagues,

Due to current situation under COVID19 pandemic, recently we decided to run the International Istanbul Breast Cancer Conference namely BREASTANBUL in a new on-line format with a new name "BREASTANBUL Virtual 2020". For the audience's convenience, we revised the original dates of the meeting and changed them to weekend days, 17 and 18 October 2020.

Originally, BREASTANBUL is the brand of scientific convention exclusively focusing on breast cancer and brings all related disciplines together to promote and discuss the cutting-edge research with the goal of strengthening collaborative management of the disease and enhancing patient care by all means.

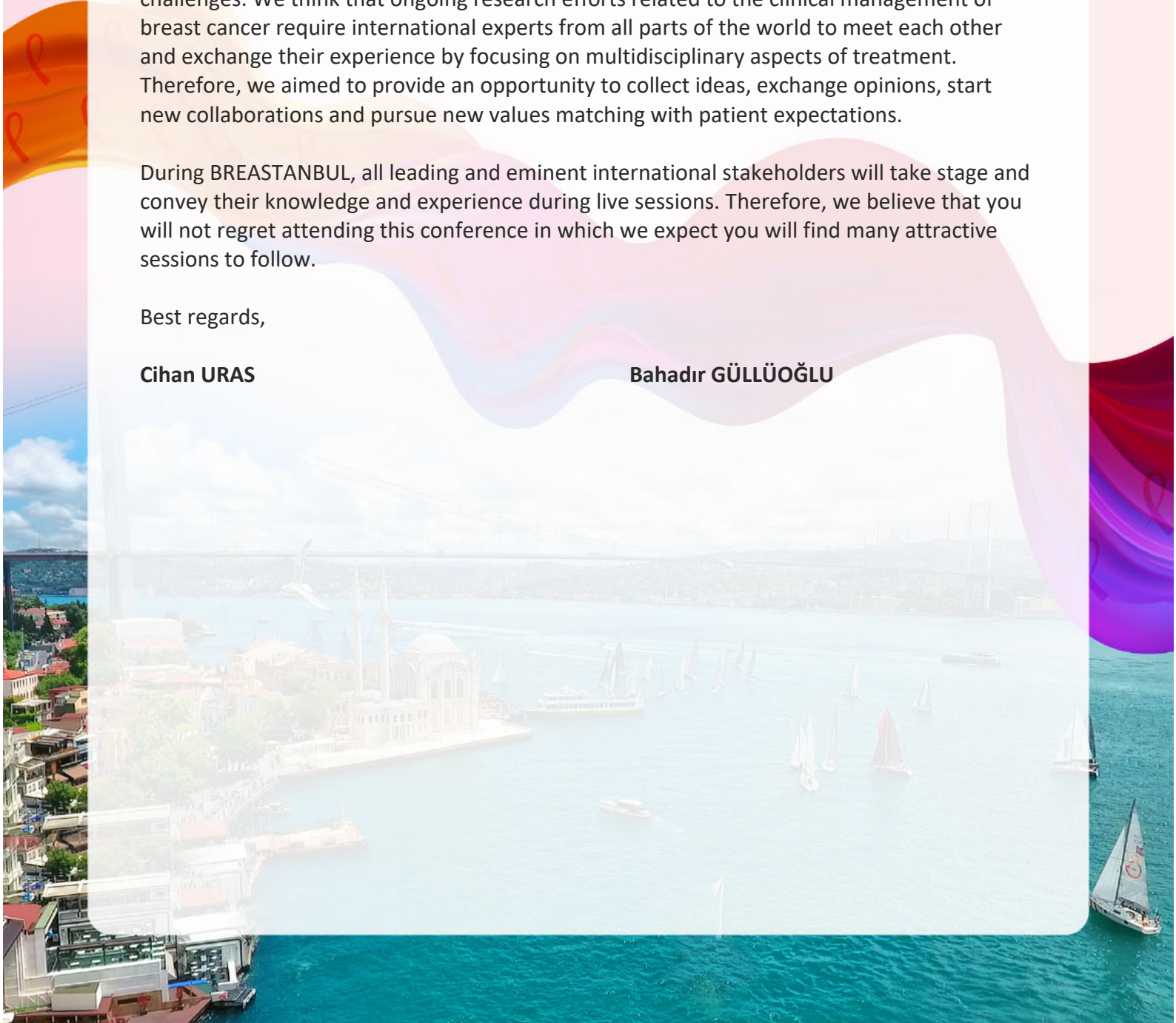
As the tradition, BREASTANBUL is organized every two years as a significant platform convening professionals to make them discuss recent scientific findings and clinical challenges. We think that ongoing research efforts related to the clinical management of breast cancer require international experts from all parts of the world to meet each other and exchange their experience by focusing on multidisciplinary aspects of treatment. Therefore, we aimed to provide an opportunity to collect ideas, exchange opinions, start new collaborations and pursue new values matching with patient expectations.

During BREASTANBUL, all leading and eminent international stakeholders will take stage and convey their knowledge and experience during live sessions. Therefore, we believe that you will not regret attending this conference in which we expect you will find many attractive sessions to follow.

Best regards,

Cihan URAS

Bahadır GÜLLÜOĞLU



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GENERAL INFORMATION

Dates

October 17-18, 2020 between 10 AM and 8 PM Turkish local time (GMT+3).

Conference Language

English

Certificate of Attendance

Participants may download their electronic attendance certificates after the conference.

Conference Help Desk

A help desk at Virtual Lobby will be open during congress dates.

Abstract Submission

Abstracts can be submitted via congress official web site. Submission deadline is 15 August 2020 23:59 (GMT+3).

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- ❖ For those until 20 August 2020, the refund will be 50% of the paid registration fee.
- ❖ For those after 20 August 2020, no refund will be granted.

All refunds will be processed after the congress.

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Oral Abstracts

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OP-01

Were we able to reduce cardiac doses in breast cancer radiotherapy over time?

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INTRODUCTION:

Cardiac toxicity due to radiotherapy (RT) in breast cancer has been an issue for many years. Studies published showed that after 2014-2015, cardiac doses were significantly decreased. In this study, we aimed to review the heart and left coronary artery doses over the years in patients received breast cancer radiotherapy.

MATERIALS-METHODS:

Four-hundred-thirty-six breast cancer patients of two radiotherapy centres treated between the years 2010 and 2018 were included. The mean heart doses (HeartDmean-HDM) and left coronary artery mean doses (LDM) were analysed using non-parametric tests. Treatment group characteristics were presented in the Table 1. Conventional RT(CRT) was 50Gy/2Gy in 5 weeks, hypofractionated RT(HRT) was 40,05Gy/2,67Gy in 3 weeks. Boost was applied as 10-16Gy/2Gy for CRT and 10Gy/2,5Gy for HRT.

RESULTS:

HDM was found as 101 ± 83 cGy, and LDM was 286 ± 209 cGy for the entire group. HDM was significantly lower in patients with BCS (91 ± 57 cGy) than those with mastectomy (127 ± 124 cGy) ($p < 0.000$). Field-in-field intensity modulated RT(FIF-IMRT) technique significantly reduced the doses compared to the volumetric applications (97 ± 60 cGy vs 242 ± 349 cGy; $p = 0.002$). HDM was significantly increased with lymphatic RT (108 ± 55 cGy vs 80 ± 112 cGy; $p < 0.000$). Addition of internal mammary (MI) volumes to supra and axillary lymphatics did not make a significant difference in HDM ($p = 0.073$). No significant effect of boost was observed ($p = 0.67$). When HDM values were evaluated together for all years, the "time" factor was accepted as the years before and after 2014 since nonparametric tests indicated a significant difference for this period. Results for all treatment groups were given separately in Table 2. For both right sided CRT, right sided HRT and left sided CRT, HDM values were significantly lower after the year 2014. There was a trend favouring after 2014 in the group of left sided HRT, but there were only 35 patients in this group. HDM was reduced in all groups if there was BCS, FIF-IMRT application and no MI RT, no nodal RT.

DISCUSSION:

Considering the reviews made in different years, the change in mean heart doses occurs. The study which reviewed 149 studies, covers the years 2003-2013, found that the left side HDM was 5.4 Gy and the right side HDM 3.3 Gy. In another study covering 1958-2001, the left side HDM was 6.6 Gy, and the right side was 2.9 Gy, the doses increase significantly when lymphatic irradiation and especially MI RT is performed. More recent studies including 2012-2015 and 2014-2017, HDM decreased significantly from 2.19 Gy to 1.65 Gy and 4.6 Gy to 2.6 Gy, respectively over the mentioned period of years. In our study, in left side CRT, HDM was 1.74 Gy before 2014, and 1.3 Gy after 2014; and 1.0 and 1.19 Gy respectively for the right side.

CONCLUSION:

All effort should be spent to lower the cardiac doses.

Keywords: Radiotherapy, Cardiac toxicity, Time period

OP-02

Anxiety and depression level and body appreciation of breast cancer patients who had oncology physician and nurse led education during postoperative radiotherapy

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INTRODUCTION:

In this study, we have investigated effect of education on anxiety and depression levels and body perception of breast cancer patients during postoperative radiotherapy (RT) led by physicians and oncology nurse.

MATERIAL-METHODS:

Ethical approval was obtained from institutional ethical committee. In this prospective study we have enrolled 50 patients with written consent who were operated and had indication for RT (n = 50). Hospital Anxiety and Depression Scale (HAD-A1 and HAD-D1) and Body Appreciation Scale (BAS-1) were applied to patients after first examination. Then the patients had education on these topics: steps of radiotherapy, side effects and precautions, simulation, main points in simulation, deep breathing for patients operated on the left chest, significance of crunches, doing deep breathing exercise, the factors in skin care during RT, lymphedema, protection from lymphedema, making a breast self-examination, importance of inspection, importance of preventive health screenings and its intervals, importance of nutrition and activity in breast cancer. In line with the demands of patients, they had dietician and psychiatry support. However, radiotherapy skin reactions that may develop on the patient's skin during treatment was followed up regularly and complaints were answered. HAD (HAD-A2, HAD-D2) and BAS (BAS-2) were applied again after RT completed.

RESULTS:

Mean HAD-A1 was 4.9 (0 -15) SD 0.36, whereas HAD-A2 was 1.6 (0-5) SD 1.56. HAD-D1 resulted with average 3.7 (0-16) SD at 3.89 and HAD-D2 with mean 1.08 (0-5) SD 1.17. BAS-1 resulted mean 44.50 (33-50) SD 4.67 and BAS-2 with 46.68 (36-50) SD 3.74. HAD-A scores for 39 patients had decreased with only one increased and 10 remained same. Comparison of anxiety before and after treatment were made by Wilcoxon test; statistically it was found decreased significantly (p <0.05). HAD-D scores of 5 patients over 11 points returned to normal in second test. While HAD-D scores of 35 patients had decrement, 3 patients had mild increase and 12 remained stable. There was a statistically significant improvement in the depression scale (p<0.05). After the treatment, BAS scores had statistically significant increase (p<0.05).

DISCUSSION:

Anxiety in 3 patients and depression in 5 patients were high but regressed to normal. BAS scores had increment. Patients having regularly information had decreased anxiety and depression scales. It has been found increase in BBS scores.

CONCLUSION:

HAD-A, HAD-D and BAS scales helped monitoring positive effect of information on patients on RT.

Keywords: Breast cancer, Radiotherapy, Hospital anxiety depression scale, Body appreciation scale, Breast cancer education nurse.

OP-03

Integration of whole slide imaging in surgical pathology: Analysis of sentinel lymph nodes

Orhun Cig Taskin, Ayse Armutlu, Nilgul Kapucuoglu

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INTRODUCTION:

Whole slide imaging (WSI) is an FDA approved diagnostic tool that provides pathologists an alternative for conventional microscopic examination. Although WSI has significant potential to improve pathology practice, its use is relatively limited in Turkey. In this study, we aimed to analyse the efficiency and effectiveness of WSI and compare those to conventional microscopy in order to determine its equivalency. For this purpose, we chose to examine sentinel lymph nodes, due to the labour-intensive nature of the process.

MATERIALS-METHODS:

Hematoxylin&eosin stained slides of 56 sentinel lymph nodes of 53 patients were retrieved and digitally scanned. All slides were reviewed separately with both microscope and WSI by 3 pathologists (1 senior), with a wash-out period of one month between the two methods. Diagnoses and time were recorded. Finally, a consensus session was made to determine final diagnoses, which were then compared to the priors rendered by 3 pathologists using 2 separate methods. Inter and intraobserver variability was calculated using with Kappa statistics.

RESULTS:

Mean age of 53 women was 52.8 years. According to final diagnoses, among 56 lymph nodes, 25 were negative, 16 were macrometastasis, 14 were micrometastasis and 1 was isolated tumour cells. When diagnoses were grouped as negative or positive, kappa values of pathologists were 1,00 (NK), 0,85 (OT) and 0,92 (AA) using a microscope; and 0,96, 0,96 and 0,92 using WSI, respectively. Under this classification, intraobserver variability was 0,96, 0,89 and 0,85; respectfully. When macrometastasis was excluded, kappa values of pathologists were 0,90, 0,74 and 0,79 using a microscope; and 0,90, 0,94 and 0,80 using WSI. Under this classification, intraobserver variability was 0,90, 0,78 and 0,76; respectfully. If isolated tumour cells were grouped with negative cases, kappa values of pathologists were 0,94, 0,91 and 0,85 using a microscope; and 0,94, 0,97 and 0,91 using WSI. Mean consumed time was longer with WSI (mean period was 311, 400 and 357 seconds for microscopy vs. 819, 635 and 524 seconds for WSI). As a general observation, pathologists expressed they felt much more comfortable with conventional microscopy. However, measurement tools of WSI were found very utile.

CONCLUSION:

WSI is equivalent to conventional microscopy. Inter and intraobserver variabilities -calculated with different groups of diagnosis- were found good-very good. The longer analysis period in WSI was linked to the learning process of the pathologists. The overall experience can be improved with practice and additional tools like artificial intelligence.

Keywords: Breast, Pathology, Sentinel lymph node, Whole slide imaging

OP-04

Prediction of genomic test score: A pathology/digital pathology-based model in early stage hormone receptor positive breast cancer

Fatma Tokat

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INTRODUCTION:

In recent years, multigenic tests widely used in determining breast cancer subgroups and clinical treatment protocols. Evaluating the recurrence of cancer is crucial to take precautions. However, genomic tests can be costly and are not available in many countries. The Prosigna Assay analyses the activity of 58 genes (called the PAM50 gene signature) to estimate the risk of recurrence of early-stage, hormone-receptor-positive breast cancer. Based on these activity levels, Prosigna test results are reported as a risk of recurrence (ROR) score from 0 to 100. This study focuses on comparing the ROR Score of the Prosigna test with the histopathologic parameters and developing a proposed model.

MATERIALS-METHODS:

The proposed method offers an equation to predict the ROR score by using histopathological and immunohistochemistry (IHC) data of patients. To form this equation, a dataset that consists of 19 histopathological and IHC data, Prosigna test results and ROR scores of each 69 patients were obtained. After applying the feature selection algorithm, the linear regression model was fitted to the dataset by using selected 7 features. The information of 49 patients was used for training purpose and the rest was used to test the trained model. Figure 1 indicates the steps of this proposed algorithm. The highly correlated histopathological data with Prosigna test results were used to obtain a multivariate linear regression model that forms a linear equation and determines the coefficients of independent histopathological data. Figure 2 demonstrates the obtained form of equation and ROR score equation based on that form

RESULTS:

The ROR score of patients might be calculated with the help of this equation. The coefficient of determination or goodness of fit value is 0.60 which means that the model is reliable to explain all observed variations. Variables which highly correlate with prosigna result are Ki67, mitosis_grade_1, PHH3, mitotic index, histological_grade_1, histological_grade_3 and nuclear grade_3. The patients were categorized whose predicted ROR score is low than 40 as low, higher than 60 as high, and the rest as intermediate. Moreover, the agreement between the proposed model and the Prosigna test results was %95.

DISCUSSION:

This study showed a high correlation between the proposed model and the Prosigna results. However, our dataset should be expanded by adding histopathological data of new patients for a comprehensive validation study.

CONCLUSION:

In summary, this study demonstrates that the proposed model can be used treatment decision in the patients who cannot undergo genomic testing.

Keywords: Breast cancer, Genomic test, Pathology

OP-05

Psycho-social needs assessment of Turkish women in breast cancer treatment: A qualitative study

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In this project our aim is to explore and understand the social-psychological needs of women with breast cancer going through treatment. It's evident in the literature that the treatment process is long with side effects and is taxing on the individual who experiences much emotional turmoil as they encounter their mortality and experience many emotions. For this reason, social- psychological care should be a part of a successful treatment plan (Rodrigues et.al., 2016).

Multidisciplinary approach to breast cancer treatment process has recently been emphasized as a way to improve the quality of life for patients. An important step in this approach is to identify the needs of patients which can vary from culture to culture. Worldwide studies exploring the needs have identified the following areas: Communication, gathering information, social networks, needs for identity and childcare and other household needs (The Institute of Health Research, 2001). Being a part of social networks and having resources for social-psychological needs is most important for achieving optimum psychological wellbeing (Sanson-Fisher et. al., McIlmurray et. al).

Despite many studies demonstrating the social-psychological needs of cancer patients, such studies are limited in Turkey and psychological care is either non-existent or is offered once, as a routine check-up. In order to fill this gap, current study explored the social-psychological needs of women at a private hospital in Istanbul with the goal of identifying the universal and culture-specific needs of women in treatment for breast cancer. 99 women, the majority of whom were between the ages of 40-59 participated in this qualitative study.

Object Content Test (Wingate, A.L. & Lackey, N.R. (1989) a non-structured interview asking participants what comes to mind when they think of their needs, was used to gather data. In face to face interviews, participants were allowed to explore their needs and beyond, as they wanted. Data were analysed using MAXQDA2020 program.

Five need categories were identified including, psychological, social, physical, practical and informational. Even though the categories were universal in nature, culture specific aspects emerged in subthemes including who is expected to address various needs and how by whom it should be delivered.

As an example, specific to Turkish data were the expectations from oncologists/medical doctors who were expected to play the role of a psychologist in conveying information regarding diagnosis and its emotional impact. Cultural expectations and the need for understanding the role of psycho-oncological interventions will be discussed.

Keywords: Psycho-social needs assessment, Qualitative analysis, Breast cancer, Women

OP-06

ABUS vs HHUS in screening: Compatibility for lesion detection

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OBJECTIVE:

We aimed to evaluate the diagnostic performance of an automated breast ultrasound system (ABUS) versus handheld ultrasound (HHUS) in the detection and BI-RADS characterization of lesions in screening patients.

MATERIALS-METHODS:

After ethical approval, from August 2017 to August 2019, 576 consecutive patients were enrolled in this prospective study. On the same day, patients underwent ABUS followed by HHUS. Three breast radiologists participated in this study. The number of lesions, lesion types, and BI-RADS categorization of both ABUS and HHUS examinations of each patient were recorded. Benign lesions were followed for at least 6 months. The level of agreement between the two ultrasound systems in terms of lesion number and BI-RADS category were analysed statistically.

RESULTS:

ABUS and HHUS detected 1005 and 1491 cystic and 270 and 336 mass lesions in 576 patients, respectively. ABUS and HHUS detected 29 and 48 suspicious cases. Thirty two of 48 suspicious lesions underwent core needle biopsy whereas eight malignant lesions were detected by both methods. Remaining 16 lesions were followed with a mean 14 months. The mean size of lesions detected by HHUS and ABUS were 7.67 mm (range 2.1-41 mm) and 7.74 mm (range 2-42 mm) respectively. The agreement for detection of cystic lesions between two methods was good (kappa: 0.620 p<0.001). The agreement of two methods for mass lesions was fair (kappa: 0.546 p<0.001). There was a good agreement between the two methods for detecting malignancy (kappa=0,602 p<0.001).

CONCLUSION:

The agreement of ABUS and HHUS for cystic and malignant lesions were good. Although ABUS detected fewer lesions compared to HHUS, both methods detected all malignant lesions. ABUS is a reliable method for the lesion detection in screening US.

Keywords: ABUS, HHUS, Breast tumors, Screening, BI-RADS

OP-07

The impact of metabolic syndrome on wound complications after breast cancer surgery

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INTRODUCTION:

Metabolic syndrome (MS), a metabolic disorder in which risk factors such as obesity, insulin resistance, hypertriglyceridemia, low HDL, and hypertension are clustered, has been showed to be associated with an increased risk of breast cancer (BC). In MS, complications such as wound infection, incision opening, hematoma or seroma formation and surgical site infection are common. The aim of our study is to define the impact of MS and the timing of chemotherapy on postoperative outcomes after different types of surgical intervention.

MATERIALS-METHODS:

A retrospective data analysis was performed on 83 out of 94 early stage BC patients who were admitted to the hospital between April 2019 and 2020 who required adjuvant chemotherapy. 9 patients with early wound complications before the chemotherapy program, and patients with rheumatologic and dermatological diseases were excluded from the study. Patients were divided into two groups, 28 patients (group 1) fulfilling MS criteria, and 55 patients having no MS. All the wound complications encountered after the beginning of the chemotherapy protocol were recorded from hospital database.

RESULTS:

The most common wound complications encountered in the enrolled study population were seroma, infection, abscess and wound dehiscence. 12 patients (42.8%) from group 1 and 11 patients from group 2 (20 %) were developed wound complications in either breast or axillary operation site, 3rd week on average after the first chemotherapy session (1-11 week). Group 1 has statistically higher wound infection rate compared to group 2 in patients undergoing breast-conserving surgery and axillary dissection ($p=0.03$, $p<0.001$). The need for re-intervention for wound complications (abscess drainage, re-suturation) was also significantly higher in group 1 ($p=0.001$). The longer the axillary drain was retained the more the axillary wound infection was encountered ($p<0.036$). The shorter time period between surgery and first chemotherapy was also found to affect wound infection rate in group 1. There was no significant difference between groups in mastectomised patients and patients who had undergone sentinel lymph node biopsy. Within the group 1 obesity, insulin resistance and low HDL levels were found to be the primary factors affecting wound healing, with a significant positive correlation with surgical site infection (HR=0.65, 95%CI: 0.23-1.11; $p=0.03$, $p=0.01$ and $p<0.01$).

CONCLUSION:

Wound healing in MS patients is complicated due to the changes in the cytokines, growth factors and immune system that are effective in the healing process. Timing of adjuvant chemotherapy should be adjusted regarding metabolic parameters of the patients.

Keywords: Breast cancer, Metabolic syndrome, Surgery, Wound complications

OP-08

Sentinel lymph node biopsy after nipple sparing mastectomy in early postoperative period: Is it feasible?

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PURPOSE:

Axillary lymph node status is one of the most important prognostic factors for breast cancer. Sentinel lymph node biopsy (SLNB) after mastectomy is highly controversial. There is not enough data about SLNB in early period after nipple sparing mastectomy (NSM). This study investigated feasibility of SLNB in early postoperative period of NSM.

MATERIALS-METHODS:

Patients who were operated for breast cancer in Maslak Acibadem Hospital between 2009-2018 were searched retrospectively. Results of SLNB as second session in patients whose final pathology report revealed breast carcinoma after contralateral/bilateral prophylactic mastectomy (BCPM), and mastectomy for benign lesion.

RESULTS:

In early period (median 14 days) after NSM, SLNB was performed by intradermic radioisotope injection in five patients with occult breast cancer in BCPM and in one patient with breast cancer in final pathology of benign pre-diagnosed mass. In five (80%) patients, SLNB was performed while in one patient axillary lymph node dissection (ALND) was performed due to undetectability of SLN. In one patient micrometastasis was observed, while no metastasis was observed in other patients including the one who had underwent ALND. No complication due to SLNB was detected. No recurrence and distant metastasis were detected in a mean follow-up of 34.95 (11-62) months. While SLNB did not change treatment of patients with contralateral occult carcinoma, other patients had hormonal therapy due to negative SLNB.

CONCLUSION:

SLNB in early postoperative period of NSM can be performed by intradermic radioisotope injection. However, further studies are needed to see feasibility of SLNB in early postoperative period of NSM.

Keywords: Nipple sparing mastectomy, Occult breast carcinoma, Radioisotope, Sentinel lymph node biopsy

OP-11

Clinical and pathologic characteristics of Turkish breast cancer patients screened with BRCA1, BRCA2 or 26-gene inherited cancer panel testing: Single institution experience

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BACKGROUND:

BRCA1 and BRCA2 mutations are responsible for two thirds of hereditary BC. Germline genetic testing for BC susceptibility has evolved from a single-gene analysis to a multigene panel testing. Identification of a pathogenic mutations in BRCA and other panel genes represent an important therapeutic opportunity today.

MATERIALS-METHODS:

We reviewed clinical and pathologic characteristics of BC patients who were referred to our center between 2014-2020 and undergone BRCA1, BRCA2 or 26-gene inherited cancer panel testing based on NCCN criteria for hereditary breast/ovarian cancer testing. We recorded the frequency of pathogenic mutations and its relationship with clinical and pathologic factors. Panel test included BARD1, BRIP1, MLH1, MSH2, RAD51C, RAD51D, MRE11A, RAD50, NBN, EPCAM, MSH6, PMS2, MUTYH, CHEK2, BLM, XRCC2, CDH1, PTEN, MEN1, ATM, PALB2, STK11, FAM175A genes.

RESULTS:

A total of 621 breast cancer patients with BRCA1, BRCA2 or 26-gene inherited cancer panel test have been identified. Twenty percent of the patients were consulted as a second opinion and 80% of patients have regular follow-ups at our center. Sixty-two % of tests were performed by Genetics Department at our center and 67% of all tests were multigene panel tests. Median age of the patients was 42 (22-87), 163 patients were <35 years old, 76 % were premenopausal. Sixty-eight % patients had early stage, 23% had locally advanced and 11% had metastatic disease. There were 5 male patients, 7 patients had bilateral BC, one patient had DCIS. Twenty % of patients had triple negative, 62% had ER positive and 18% had Her-2 positive BC. Seventy out of 72 patients with TN tumours were <60 years of age, 29% had family history of breast, ovarian, pancreatic, and prostate cancer in first degree relatives and 6 % patients were <45 years old. Majority of patients have more than one indication for testing. There were 8 VUS in the group of 205 patients who had only BRCA1/2 mutation analysis, 276 (46%) VUS in the panel testing group. Seventy-eight (13%) patients had pathogenic BRCA1 and/or BRCA2 mutations, 55 patients had pathogenic mutations in non-BRCA panel genes. Nine patients had more than one pathogenic mutation. The most commonly mutated non BRCA-genes were ATM (n: 10), MUTHY (n: 8) CHEK2(n: 8), PALB2(n: 7), p53 (n: 6). Among patients with pathogenic mutations 57 % had ER positive, 30 % had TN and 13 % had Her-2 positive disease. Thirty-one % of patients with TN tumours have pathogenic mutations, 8% of them were BRCA mutations. TP53, PALB2 and CHEK2 mutations were more frequent in HR positive disease. Ninety-three patients had prophylactic mastectomy and 35 patients had prophylactic salpingo-oophorectomy. Age <35 (p:0.002), triple negative subtype (p: 0.005) and menopausal status (p:0.001) were significantly associated with having pathogenic mutations in multivariate analysis.

CONCLUSION:

Two thirds of BC patients <35 years-old and one third of patients with TN tumours have pathogenic germline mutations when they were screened in line with NCCN criteria at our center in Istanbul.

Keywords: Breast cancer, BRCA, Panel testing

OP-12

Association between insulin dependent type-2 diabetes and neoadjuvant chemotherapy response rates in locally advanced breast cancer patients

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INTRODUCTION:

Type 2 diabetes (T2D) is a growing public health problem with a global prevalence of 8.3%, and approximately 16% of breast cancer (BC) patients have T2D. T2D contributes to both the development and poor prognosis of BC. Sustained hyperglycemia, hyperinsulinemia, insulin resistance, hyperinsulinemia-related increase of insulin-like growth factor-1, and oxidative stress due to chronic inflammation are the main underlying mechanisms in the progression of cancer. The aim of this study was to assess the impact of T2D on the complete pathological response (pCR) rates of patients receiving neoadjuvant chemotherapy (NAC) for different molecular subtypes of locally advanced BC.

MATERIALS-METHODS:

This study was conducted with 164 patients with receiving NAC for different molecular subtypes of BC, 60 patients with T2D undergoing insulin treatment (group 1) and 104 patients without hyperglycemia (group 2). Sociodemographic characteristics, tumour stage, grade and morphology, lymph node status, receptor status, Ki 67 and basal Hb A1c levels were assessed before the treatment. HbA1c values were determined at the end of the NAC, just prior to surgery. All parameters were evaluated for pCR rates. A comparative analysis regarding the pCR was performed between groups.

RESULTS:

The sociodemographic characteristics, including age and BMI were similar for both groups. No significant differences in the distribution of tumour stage, grade, lymph node and receptor status and Ki 67 levels were noticed between the study groups. The variables significantly and independently associated with pCR were tumour size, lymph node status, Ki 67 and HbA1c levels prior to surgery ([OR]=0.78, 0.33, 0.65 and 0.21 respectively). In subgroup analysis within the group 1, HbA1c level was found to be associated with pCR in triple (-) and HER2 (+) subgroups; a significantly lower HbA1c was detected in these two subgroups with pCR. For these triple (-) and HER 2 (+) subgroups, the ROC curve analysis calculated by Youden index, showed that the optimum HbA1c level cut-off value was 8.1%.

CONCLUSION:

NAC has been increasingly used for selected locally advanced BC patients in clinical practice with a growing rate of pCR achieved especially in some subgroups with good prognostic index. Poor glycemic control seems to interfere with response rates to NAC so all BC patients with T2D should be checked periodically for blood glucose level during ongoing chemotherapy protocol.

Keywords: Breast cancer, Type-2 diabetes mellitus, Neoadjuvant chemotherapy, Pathological complete response

OP-13

Comparison of different Ki-67 cut-off values in breast carcinoma trucut biopsies with prognostic parameters in mastectomy specimens

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INTRODUCTION:

Ki-67 proliferation index is an important prognostic marker in breast carcinoma. It is especially useful in estimating the risk of recurrence for Luminal A-like from Luminal B-like tumours. The Ki-67 cut-off point for differentiating these two categories has changed over time. Also, there are different studies using different cut-off points for estimating the prognostic role of Ki-67. Therefore, we aimed to compare different cut-off points in trucut biopsies with the prognostic parameters in mastectomy specimens.

MATERIALS-METHODS:

87 patients who have both performed trucut biopsies and mastectomies in our institution, are included in this study. Different Ki-67 cut-off values are used according to different studies and guidelines. First, Ki-67 is divided into 3 categories as <14, 14-19 and >20 according to Viale et al. Second, Ki-67 is divided into 5 categories as <14, 14-19, >20, >25 and >30. We compared Ki-67 with estrogen receptor (ER), progesterone receptor (PR), grade and other prognostic parameters (pT, pN, linfovacular invasion and perineural invasion) in mastectomy specimens.

RESULTS:

The age of patients ranged from 37 to 91. 14% were pre/peri menopausal and 86% were postmenopausal. Ki-67 with 3 subgroups and Ki-67 with 5 subgroups had nearly similar statistically significant results except for C-erb-B2 expression. Ki-67 with 3 subgroups had statistically correlation with C-erb-B2 but not with Ki-67 with 5 subgroups. Both of the Ki-67 subgroups had statistically significant correlation with grade, molecular subtype, ER and PR ($p < 0.05$). No statistical correlation was found between Ki-67 sugroups and pN, PT, lymphovascular invasion (LVI) and perineural invasion (PNR).

DISCUSSION:

Breast cancer is a heterogenous disease with several biological subtypes. Conventional prognostic factors such as tumour size, grade is not sufficient for treatment decision. In the neoadjuvant setting, Ki-67 predicts the likelihood of pathological complete response to chemotherapy. The appropriate cut-off point is still a matter of debate among oncologists. Hence, the most suitable cut-off point for Ki-67 in clinical practice is widely investigated. When we compared the two Ki-67 cut-off values, we found no difference in pT, PN, LVI or PNR. We only found difference in C-erb-B2 expression. So, we think that there is no need for further subgrouping high Ki-67 proliferation index after 20%.

CONCLUSION:

Ki-67 is very important in molecular subtyping of breast carcinoma and deciding neoadjuvant and adjuvant chemotherapy. But we think that Ki-67 has no predictive value in trucut biopsies for estimating pT and pN in mastectomy specimens.

Keywords: Breast carcinoma, Ki-67 cut-off, Molecular subtypes, Prognostic parameters

OP-14

The importance of radiological locations in the treatment of breast cancer with brain metastasis

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INTRODUCTION:

Leptomeningeal, calvarial, parancimal and dural metastatic disease are an uncommon complication of metastatic breast cancer. Although radiotherapy (RT), and systemic chemotherapy are accepted treatment modalities, the prognosis is poor and efficacy data are limited. In this study we wanted to evaluate potential predictors of survival in this patient group.

MATERIALS-METHODS:

Breast cancer patients with cranial metastasis diagnosed by MRI in a 10-year period (2007-2017) were identified from electronic patient records. PFS and OS estimates were calculated using Kaplan-Meier method, with planned sub-group analysis by treatment modality. Cox regression was employed to identify significant prognostic variables.

RESULTS:

We identified 35 eligible patients; all female, median age at LMD diagnosis 54 years (range 32-75). Five patients (14.3%) were ER positive/HER2 negative; 9 (25.7%) were HER2 positive, and 3 (8.6%) were triple negative. While initial management of leptomeningeal disease (LMD) was most commonly stereotactic body radiotherapy, dural and calvarial metastatic disease was whole brain RT. Twenty-two patients (61.1%) underwent targeted chemotherapy. From diagnosis of LMD, the median PFS was 57 months and median OS was 103 months. Patients with dural and calvarial metastatic disease, the median PFS was 37 months (95%CI 31-42.1 months) and median OS was 62 months (95%CI 40-83 months). On multivariable analysis, triple negative histology, concomitant brain metastases, dural and calvarial involving the brain were associated with poor OS.

CONCLUSION:

Breast cancer patients with dural and calvarial with concomitant brain metastases have the poorest prognosis.

Keywords: Breast, Radiology, Brain

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PP-01

Neutrophil / lymphocyte ratio – thrombocyte / lymphocyte ratio: A predictor of axillary lymph node metastasis in breast cancer patients?

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BACKGROUND:

This study evaluated the relationship between preoperative neutrophil / lymphocyte ratio - platelet / lymphocyte ratio, clinicopathological, radiological factors, and axillary lymph node metastasis in stage I-III breast cancer to determine if axillary surgery can be safely omitted in selected patients.

MATERIALS-METHODS:

The study included 158 Stage I-III breast cancer patients operated on at Baskent University Zubeyde Hanım Research Center between 2011 and 2018. The incidence of axillary lymph node metastasis was correlated with clinical, radiological, pathological, and laboratory (neutrophil count to lymphocyte count, platelet count to lymphocyte count) findings by univariate and multivariate analyses. Sensitivity and specificity calculations, positive predictive value, negative predictive value, positive and negative Likelihood Ratio (accuracy ratio), and exact accuracy were calculated for neutrophil/lymphocyte ratio cut-off values of 3.5 and 1.

RESULTS:

Neutrophil and platelet values were significantly higher in patients with lymph node metastasis. Neutrophil / lymphocyte ratio - platelet / lymphocyte ratio values were higher in patients with axillary lymph node metastasis, but this was not statistically significant. Axillary lymph node metastasis was not associated with age, lymphocyte, monocyte count, estrogen receptor, progesterone receptor, or c-erb B2 status. The incidence of axillary lymph node metastasis was statistically significantly higher in the presence of lymphovascular invasion. Sensitivity, specificity, positive predictive value, and negative predictive value were 93.85%, 16.67%, 44.9%, and 78.9% respectively for axillary lymph node metastasis while the neutrophil / lymphocyte ratio was ≥ 3.5 . Specificity, sensitivity, positive predictive value, and negative predictive value were 97.78%, 9.23%, 75.0%, and 59.9% respectively for axillary lymph node metastasis while the neutrophil / lymphocyte ratio < 1 .

CONCLUSION:

For axillary lymph node metastasis, neutrophil, platelet counts, lymphovascular invasion status, radiological and pathological mass size, and presence of radiological axillary lymphadenopathy are the statistically significant independent variables. They provide information that can help surgeons decide on the treatment of breast cancer patients with certain neutrophil / lymphocyte ratio values (neutrophil / lymphocyte ratio < 1 and neutrophil / lymphocyte ratio ≥ 3.5).

Keywords: Neutrophil / lymphocyte ratio, Thrombocyte / lymphocyte ratio, Lymph node metastasis, Breast cancer

PP-04

The effect of self-care and selected factors on quality of life in women with lymphedema associated with breast cancer

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INTRODUCTION:

This study was conducted to examine the effect of self-care and selected factors on the quality of life in women who develop lymphedema due to breast cancer.

MATERIALS-METHODS:

In this descriptive and cross-sectional study, the sample was composed of 101 women who developed breast cancer-treatment related lymphedema. Data were collected by Sociodemographic and Clinical Characteristic Form, Lymphedema Quality of Life Scale (Arm) and Lymphedema Self-Care Scale Related to Breast Cancer. The data were gathered using face-to-face interviews and patients' file records. Data was analysed by number, percentage, mean and multiple regression analysis.

RESULTS AND CONCLUSION:

The women who have lymphedema scored between 35 and 71 point from the quality of life scale, and the mean score was 52.63 ± 11.81 . A statistically significant relationship was found between lymphedema life quality scale mean score and lymphedema self-care scale mean score ($p < 0.05$). 68.3% of the participants in the study have information about lymphedema, it was discovered that for 63.8%, the source of information about lymphedema was from nurses, and 56.5% reported having an insufficient level of information. The information status of lymphedemic women made a significant difference on the quality of life during the mean time following the diagnosis of breast cancer, the time following the diagnosis of lymphedema, the stage of lymphedema, the presence of additional chronic diseases and self-care scores ($p < 0.05$).

Keywords: Breast cancer, Lymphedema, Self-care, Quality of life, Nursing

PP-09

Accuracy of magnetic localisation device placement and retrieval in breast cancer patients from a single internationally accredited breast centre in Johannesburg, South Africa

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INTRODUCTION:

A variety of techniques are used to localise breast cancers prior to breast surgery. One such technique involves the placement of a magnetic device (Magseed). Studies to date have assessed the safety, usefulness, and retrieval ease of these devices. The aim of the study was to conduct a review of Magseed placement and ease and efficacy of retrieval across varying depths within the breast. Of interest when assessing the demographics of the average South African women's' breast size it is larger in comparison to European breast sizes (~1500mm in Africa and ~327mm in Europe). This study looks at the magnetic device placement data from one radiology unit in a multi-disciplinary unit consisting of 4 radiology units over a 6-month period which sees 450 newly diagnosed breast cancer patients per year and places an average of 340 per 6-month period

MATERIALS-METHODS:

The device used and analysed in this study is constructed of medical grade stainless steel magnetised, 1x5mm in size and can be implanted long term. The seeds were placed both under ultrasound guidance and stereotactically, there were no complications at the time of placement. Measurements of distances from the nearest perpendicular skin surface were provided by the radiologist. Post placement ease of localisation and retrieval of the magnetic seed markers was assessed by confirmation of the presence of the magseed(s) in the specimen by Sentimag probe and confirmation visualised by intraoperative radiology (Biovision) and intra-operative pathology.

RESULTS:

To date, we have recorded and measured 70 patients totalling 88 seeds placed. All of the seeds were localised during surgery and retrieved without difficulties reported by surgeons. The use of intraoperative radiology confirmed retrieval of all seeds in all patients. The minimum placement depth was 8.33mm, the maximum placement depth was 87mm and the average placement depth was 34.56mm.

DISCUSSION:

Our data shows that Magseeds can be placed across a wide range of breast sizes and at variable depths with no complications or difficulty experienced during intraoperative localisation and retrieval of the seeds.

CONCLUSION:

The data collected and the demographic analysed, shows that magnetic marker placement and retrieval is possible across a wide range of depths in the breasts without complications. Surgeons reported ease of transcutaneous localisation. A 100% retrieval rate was reported. In all cases clear margins were achieved with aid from audio and count from Sentimag probe, intraoperative radiology and intraoperative pathology.

Keywords: Magseed, Placement, Breast

PP-10

Magseed localisation for loco-regional breast and lymph node recurrences: Placement prior to chemotherapy allows focused removal of the initially diseased tissue

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INTRODUCTION:

Loco-regional recurrences: defined as a breast cancer diagnosis on core biopsy in patients having previous same-side breast cancer either in the breast or regional lymph nodes. The setting of no systemic metastases provides oncology dilemmas as to the order and type of treatment. Multi-disciplinary meeting decision may suggest chemotherapy prior to surgery (biological subtypes: HER 2; triple neg; high Ki 67% luminal B). Prior to chemotherapy, localisation of the diseased tissue is important so as to ensure accurate retrieval. V/twirl markers with resultant need for wire placement is the current standard. Magseed is a nonradioactive inducible magnetic seed that received clearance for breast lesion localisation by the U.S. Food and Drug Administration in 2016. The aim of this study was to assess the accurate placement and retrieval of a Magseed into a radiologically suspicious loco-regional recurrence in patients requiring chemotherapy. To assess the ease of localisation and removal of the recurrence post-chemotherapy, with the use of the detector.

MATERIALS-METHODS:

Patients with loco-regional recurrence that had been assessed in the multidisciplinary meeting as requiring chemotherapy, as well as being potential candidates for surgery post-chemotherapy, were referred for placement of a Magseed prior to commencing chemotherapy or during the course of treatment. The seed was placed by a senior radiologist in the unit. Fourteen patients have currently completed chemotherapy and surgery. Five patients had more than one Magseed placed. Giving a total seed placement number of 19 seeds.

RESULTS:

Seed localisation with the Sentimag probe was successful in all cases. Retrieval was confirmed with reading from the detector, as well as radiological confirmation of the seed within the node after excision. Across these patients we found a 100% placement; all seeds were found and localised with the aid of the sensor. The retrieval rate however was recorded at 94.4%. In one case the lymph node had undergone fibrosis, and the seed was found next to the lymph node. The maximum number of days between the seed placement and subsequent surgery was 249 days.

DISCUSSION AND CONCLUSION:

Magseed is successful in localising and retrieving loco-regional recurrences in patients requiring surgery post chemotherapy. Localisation prior to or during chemotherapy is accurate. Retrieval is possible due to high recordings on the sensor in all cases. Magseed thus provides the treating clinician with an alternative to conventional radiological markers with the added benefit of a single placement to retrieval methodology.

Keywords: Magseed, Recurrence, Neoadjuvant chemotherapy

PP-14

Localizing the clipped tumour and clipped node in patients with node-positive breast cancer treated with neoadjuvant chemotherapy: Single center experience

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AIM:

Clip placement into primary breast tumour and positive node in patients with breast cancer treated with neoadjuvant chemotherapy (NAC) allows conservative surgery. Our aim was to evaluate the performance of preoperative imaging guided localization of clipped tumour and clipped axillary lymph node.

MATERIALS-METHODS:

Institutional ethical committee approval was obtained. In last two years, all breast cancer patients with biopsy positive breast tumour and axillary lymph node clipped at the time of diagnosis who underwent NAC followed by surgery were retrospectively evaluated.

RESULTS:

Data of 67 female breast cancer patient (67 clipped breast tumour, and 57 clipped node) were retrospectively evaluated. After chemotherapy, clipped tumour was easily localized with ultrasonography (US) or mammography guidance. All breast clip localization procedures were done successfully. Of the 57 clipped nodes, 45 (79%) were localized with US guidance successfully. In 12 patients, clipped node was not visible by sonography. Computed tomography (CT) guided wire localization was performed as an alternative localization method. Remaining 12 US-negative clipped nodes were localized successfully with CT guidance. Removal of clipped tumour and clipped node were confirmed with specimen radiography.

DISCUSSION:

In this study, clipped breast tumour identification rate was 100% with US or mammography. Clipped node identification rate was 79% with US. Ultrasonography is not a perfect method for clipped node localization. Computed tomography is a useful alternative imaging tool for identification and localization of sonographically nonvisible clipped nodes.

Keywords: Breast cancer, Imaging guided wire localization, Lymph node metastasis, Neoadjuvant chemotherapy

PP-15

Synchronous mucinous and invasive ductal carcinoma of the breast in a male patient; A case report

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Breast cancer is rare in men and the most common type of breast cancer in men is invasive ductal carcinoma, as in women. Only 0.6% of all breast cancers occur in men and breast cancers constitute less than 1% of male malignancies. It is generally seen in older ages and it has been shown to be more common in the 6th decade.

Mucinous breast cancer is not a common type of cancer in women. It constitutes 1.3% - 5.4% of all breast cancers. Mucinous breast cancers are usually small and low grade at the time of diagnosis, and often no lymph node metastasis is detected. Therefore, 5-year cancer-related survival is 94% and 10-year survival is 81%. Mucinous breast cancers are even more rare in men. In a study, breast cancer patients who were diagnosed within screened who had been diagnosed in an 11 year period, 130 of them had mucinous breast carcinoma, and 2 of these patients were found to be male. In another study, male breast cancers from 7 different centers in 23 years were screened and 2 of 118 male breast cancer patients were found to have mucinous carcinoma (1,8%).

Here, we present a case of synchronous mucinous and invasive ductal carcinoma in a male patient. A 70-year-old male patient was admitted to our clinic in December 2018 with a mass in his left breast. When the mastectomy specimen was examined, a second tumoral focus with a long diameter of 1.4 cm was detected in the middle quadrant in addition to the 2.2 cm long tumour in the upper outer quadrant. Tumour found in the upper outer quadrant was evaluated as grade 2 mucinous carcinoma. The middle quadrant tumour was grade 2 invasive ductal carcinoma.

Keywords: Male breast cancer, Mucinous breast cancer, Invasive ductal carcinoma, Synchronous breast cancer

PP-16

Nonpalpable breast masses marking with methylene blue before operation

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We wanted to define a technique that is easy to apply in terms of cost and technique in nonpalpal breast lesions. The pathological non-palpabl mass followed by ultrasound or mammography will be guided by the dental needle with an ultrasound accompanied by methylene blue injection half an hour before the operation and will guide the process about the limits of the target surgery area during surgery.

At the age of 42, in the national mammography screening program, a 9-10 mm diameter hyperechoic mass with a deeply located pectoral muscle adjacent to the lower edge of the left breast areola was evaluated as a BRADS-4.

The preoperative 1% methylene blue 2cc. 5cc injector was diluted with isotonic.27 G, 4 cm dental needle was stained with ultrasound with 2 cc. It was ensured that the lesion was completely removed. 1-2 cm 3 another breast tissue was excised from the nearest surgical margin.

Ultrasound dyeing technique is advantageous because of the disadvantage of wire marking, because it displaces the wire, is painful for the patient, and the learning curve is long. Marking the mass with methylene blue prior to surgery; is a cheap, reliable and easy imaging method in nonpalpable breast mass cases.

Keywords: Breast mass, Marking, Methylene blue.

PP-18

Breast complaints in children and the effect of family history

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BACKGROUND:

To evaluate the correlation of physical examination, radiological and pathological findings of children and adolescents who applied for breast related complaints.

MATERIALS-METHODS:

Children and adolescents with breast complaints between January 2016 and December 2019 were analysed retrospectively.

RESULTS:

118 children and adolescent patients were included. Their ages ranged from 12 to 18 years (median, 16 years). Twenty one patients had a family history of breast cancer (17.8%). The most common complaints are pain, mass, and nipple discharge. Physical examination revealed mass (41.5%), tenderness (11%), and fullness (8.5%). Thirty-nine patients were BIRADS 3 (39.4%), and 4 patients were BIRADS 4 (4%) ultrasonographic ally. Excision was applied to all patients with BIRADS 4 and 13 of 39 patients with BIRADS 3 after trucut biopsy. Pathological diagnoses of the patients with BIRADS 3 were fibroadenoma (n: 12, 92.3%) and benign phyllodes tumour (n: 1, 7.7%). In patients with BIRADS 4, 3 patients had fibroadenomas and one patient had benign phyllodes tumour. No recurrence was observed in any patients who had excision. Only 6 of the patients with positive family history had BIRADS 3 lesions, while the others were BIRADS 1. Excision was recommended in two patients and the pathological diagnoses were fibroadenoma.

CONCLUSION:

In this age group, the most common complaint was pain and mass, while physical examination was normal in nearly half of the patients. All of the pathological diagnoses were benign. The experience of the clinician and radiologist is important because there is not enough data about clinical approach to breast complaints in children and adolescents. The complaints can be related with physiological development of breast. It is important to distinguish physical findings as "disorder" or "disease". The BIRADS will be more helpful if it can be adapted to this age group. The breast cancer history in the family also creates anxiety in both children-adolescents and family. While evaluating the patients in this age group, the experience of clinician is important to increase the awareness of patients and families about normal breast development and self-breast examination.

Keywords: Breast, Children, Pathology, Ultrasonography

PP-19

The role of soluble triggering receptor expressed on myeloid cells-1 in idiopathic granulomatous mastitis

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AIM:

Triggering receptor expressed on myeloid cells-1 (TREM-1) is associated with proinflammatory responses. Also, its expression is dysregulated in autoimmune diseases. The production of many cytokines and chemokines increases with the activation of TREM-1. In the etiopathogenesis of idiopathic granulomatous mastitis immune dysregulation / autoimmunity have recently been emphasized. In this study, we aimed to investigate the role of soluble TREM-1 (sTREM-1) in patients with IGM, in which autoimmunity/immune dysregulation is thought to be a factor in etiopathogenesis.

MATERIALS-METHODS:

The study included 60 patients with a pathological diagnosis of IGM (Group P) and 25 healthy women without any disease as control group (Group C). Group P was divided into two groups: patients with active complaints and symptoms, active disease group (Group PA); and patients without complaints and symptoms, remission group (Group PR). The sTREM-1 levels were measured by human Enzyme-Linked ImmunoSorbent Assay.

RESULTS:

The sTREM-1 levels of Group P were higher than Group C ($p < .0001$). There was also a statistically significant difference between sTREM-1 levels of Groups PA, PR and C ($p < .0001$). The sTREM-1 levels of Group PA were higher than Group C ($p < .0001$). Also, sTREM-1 levels of Group PR were higher than Group C ($p = .006$). There was no statistically significant difference between Group PA and PR ($p > .05$).

CONCLUSION:

TREM-1 is thought to serve as a promising therapeutic target for autoimmune diseases. In our study it was found that the detected high sTREM levels contributed to inflammation in IGM. In particular, blockade of TREM-1 may be a treatment option in resistant or multiple recurrent patients with IGM.

Keywords: Idiopathic granulomatous mastitis, Etiopathogenesis, TREM-1

PP-20

Pseudoangiomatous stromal hyperplasia in a teenage: A case report and review of the literature

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INTRODUCTION:

Pseudoangiomatous stromal hyperplasia (PASH) is a rare benign condition of collagen proliferation. Its etiology and pathogenesis are unknown exactly. However, it is mostly seen in premenopausal and perimenopausal women and this suggests that hormonal factors play a role in the development of PASH. It is extremely rare in children and adolescents. To date, very few children or adolescent PASH patients have been reported. Herein, we present a case of PASH in a teenage and discuss in the light of the literature.

CASE:

A 13-year-old girl was admitted with the complaint of a giant mass in the left breast for 3 months. On physical examination, there was a painless mass with smoothly defined borders that fills the left breast almost completely. There was no redness or tenderness on the skin. Breast ultrasound showed multilobular mass with a size of 18 x 5 x 8 cm with well-defined margins. On breast magnetic resonance imaging, Type 1 contrast pattern was revealed. In tru-cut biopsy, anastomosing vascular-like spaces lined with flattened cells in the collagenized stroma were observed. Few ductal structures of the breast were also seen in the stroma. Immunohistochemical CD34 and Calponin were positive in the cells that lining the vascular-like spaces, while CD31 was negative. With these findings, the case was reported as PASH. The mass was totally excised for therapeutic purposes. The patient has been under follow up for 6 months without disease.

DISCUSSION:

In children and adolescents, breast-related complaints and breast masses are less frequent, unlike adults. The most common tumours in children and adolescents are fibroadenoma, benign phyllodes tumour and hamartomas. PASH is most common in premenopausal or perimenopausal women, it is rarely seen in children or adolescents. Clinically, patients may present with breast mass or breast enlargement complaints or may be detected incidentally. In our patient, a well-defined, multilobular mass was detected in both breast ultrasound and magnetic resonance imaging. Although mastectomy is an alternative treatment in diffuse PASH involvement of the breast, excision is generally reported to be sufficient. In conclusion, PASH may be seen in children and adolescents, although it is extremely rare. Pseudoangiomatous stromal hyperplasia itself can form a mass alone or accompany other lesions in the breast, or it can be detected in patients with type 1 neurofibromatosis, so the patient should be evaluated carefully.

Keywords: Breast, Children, Pseudoangiomatous stromal hyperplasia

PP-21

The role of regulatory T and B cells in the etiopathogenesis of idiopathic granulomatous mastitis

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BACKGROUND AND AIM:

Since it was defined by Kessler and Wolloch, the etiology of idiopathic granulomatous mastitis (IGM) has not yet been clearly explained. Recently, the role of autoimmunity in IGM etiology has been suggested in part because of the use of steroids in the treatment and the co-existence of erythema nodosum and some rheumatological diseases. The presence of T lymphocyte dominance, changes in cytokine levels and the changes in levels of T lymphocyte, natural killer cells and natural killer T cells subsets suggest that systemic immune dysregulation is present. In the literature, there are several studies showing the importance of both regulatory T cells (Tregs) and regulatory B cells (Bregs) in infection, inflammation and autoimmunity. The aim of this study was to evaluate the role of T- and B-regulatory cells in the pathogenesis of IGM.

MATERIAL-METHODS:

This study includes 47 patients with pathologically proven IGM (Group P) and 26 healthy subjects (Group C). The patients in Group P were divided into two groups according to whether their lesions were active (Group PA, n: 21) or in remission (Group PR, n: 26). By using flow-cytometry, the frequencies of CD3+CD4+CD45RA-Foxp3high activated Tregs (aTregs), CD3+CD4+CD45RA-Foxp3low non-suppressive Tregs, CD3+CD4+CD45RA+Foxp3low resting Tregs (rTregs), CD3+CD4+CD25+Foxp3- T-effector cells (Teff), total Tregs and Bregs were analysed in all subjects.

RESULTS:

The frequency of the Teff cells was statistically higher in Group P when compared with Group C (p=.004). The Foxp3 expression of Treg cells and the frequency of non- suppressive Tregs in Group P were statistically lower than Group C (p=.032 and p=.02, respectively). In addition, Group PR's Foxp3 expressions were statistically lower than Group C (p=.027); Group PR's aTregs ratio was statistically lower than Group PA (p=.021); and the non-suppressive Tregs ratio of Group PR was lower than both Group PA and Group C (p=.006 and p<.0001). No significant differences were seen between Group PA, Group PR and Group C in Bregs and B cell subsets.

CONCLUSION:

Significant changes in Foxp3 expression and Treg subsets were seen in patients with active IGM lesion and in remission and this shows an intrinsic defect of Tregs in patients with IGM. A larger sample size would be helpful to investigate the other effector and regulatory markers in order to determine the phenotype and function of Treg cells' subsets in IGM.

Keywords: B regulatory cells, T regulatory cells, Idiopathic granulomatous mastitis, Etiopathogenesis

PP-22

Invasive lobular breast carcinoma in accessory axillary breast tissue

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BACKGROUND:

Accessory breast tissue is an aberration of normal breast development which usually develops along the milk lines with an incidence of 2-6% in general population. Occurrence of primary breast carcinoma in ectopic breast tissue is a rare condition comprising only 0.3% of all breast cancers. We present a rare case of invasive lobular carcinoma in the accessory breast tissue.

CASE:

A 39-year-old premenopausal woman presented with a lump on her left axilla for 3 months. She had no family history and risk factor for breast cancer. On physical examination a 1 cm irregular mass was palpable in left axilla with presence of axillary breast tissue. Breast ultrasonography, mammography and magnetic resonance imaging of breast confirmed a 9 mm mass with no other lesion in breast or axilla. Core biopsy showed invasive lobular carcinoma. She was offered a surgery with excision of accessory breast tissue and sentinel lymph node biopsy. She is under follow-up after adjuvant chemotherapy and radiotherapy along with endocrine treatment.

CONCLUSION:

Accessory breast development is hormone dependent just like normal breast. Because an awareness of accessory breast tissue is lacking, clinical diagnosis of accessory breast carcinoma is frequently delayed also in concordance with being out of the image of screening. Although carcinoma in accessory breast tissue, especially invasive lobular type, is uncommon, a high index of suspicion may avoid late diagnosis. MRI should be used if there is a suspicion of carcinoma in accessory breast tissue. The overall prognosis is similar to carcinoma of normal breast in the same tumour, node, metastasis stage. Therefore, it is imperative that a lump in the axillary region should be triple assessed as in any breast pathology to rule out carcinoma in the accessory axillary tissue to achieve a potentially curable status. It is also important to evaluate for accessory tissue on the contra-lateral side because 13% of the cases are bilateral in normal breast. The preventive excision of accessory breast tissue in high risk woman can also be considered.

Keywords: Accessory breast, Axilla, Breast carcinoma, Lobular carcinoma

PP-23

Apocrine encapsulated papillary carcinoma: A rare pathology of the breast

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BACKGROUND:

Encapsulated papillary carcinoma is a variant of papillary carcinoma. Apocrine carcinomas can be considered as special variants of no special type breast carcinomas although apocrine differentiation has also been reported in several special type cancers. Apocrine encapsulated papillary carcinoma (AEPC) of the breast is a rare entity with a challenge in diagnosis. Herein, we report a 65 year old woman with a diagnosis of AEPC detected in routine breast screening.

CASE:

On breast screening mammography, a breast lesion with a diameter of 60x62 mm, was detected and ultrasound revealed a complex cystic lesion with solid component in upper-outer quadrant of her left breast. Fine needle aspiration cytology was benign. The subsequent core biopsy revealed apocrine changes with papillary structures. In breast magnetic resonance imaging the lesion was described as BIRADS 4 and surgical excision was performed. Immunohistochemically the tumour was ER, PR, CerbB2, CK5/6 and bcl-2 negative; AR, GCDP-15 positive. Absence of myoepithelial cells around the cyst and in the papillary lesion was noticed with p63 immunostaining. Ki67 proliferation index was 7% in tumour cells. The final pathological diagnosis was established as apocrine encapsulated papillary carcinoma. Later sentinel lymph node biopsy was performed in the second session. She is under follow-up with ongoing adjuvant chemo-radiotherapy.

CONCLUSION:

The clinical behaviour and malignant potential of apocrine encapsulated papillary carcinoma is unpredictable rather than completely indolent. The diagnosis is challenging for both radiologists and pathologists. The clinicians should be aware of such a rare malignancy of elderly.

Keywords: Apocrine gland, Breast carcinoma, Cysts, Papillary Carcinoma

PP-24

Lesions accompanying fibrocystic changes in the breast: A retrospective study

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INTRODUCTION:

Fibrocystic breast disease (FBD) is the most common benign condition of the breast. Although it is not usually associated with breast cancer, it is sometimes suggested that fibrocystic changes (FCs) increased the risk. The diagnosis is made by clinical examination in 50% and by histopathological studies in 90% of women. The pathogenesis of FCs is still unclear, but exaggerated response to hormones is thought to be responsible. The aim of our study is investigation of lesions accompanying FCs and conditions that may be important on the course.

MATERIALS-METHODS:

Radiology and pathology results of the patients admitted to General Surgery Breast Polyclinic in 2019 were scanned retrospectively from Bezmialem Vakif University Hospital data (Bizmed). Patients who were radiologically diagnosed with heterogeneously and extremely dense breasts which may obscure small masses or lower the sensitivity of mammography, based on ACR BI-RADS Atlas (5) were included. We investigated the additional lesions, lesion characteristics, histopathological evaluations and connection with etiologic factors.

RESULTS:

In this study, 393 female patients were included (227 premenopausal, 166 postmenopausal). 45 were ≤ 40 and 348 were > 40 years old. Among the premenopausal patients, 46 had dense fibrocystic changes, 103 had benign mass, 54 had suspicious microcalcifications and 24 had malignant mass in mammography. Biopsy results were found to be significantly malignant (23 pts, 95.8%) in the patient group whose mammography also showed lesions suspicious for malignancy ($p < 0.001$). Among the postmenopausal patients, 26 had dense fibrocystic changes, 69 had benign mass, 49 had suspicious microcalcifications and 22 had malignant mass in mammography. In the patient group with malignant mass on mammography, biopsy results were found to be significantly malignant (21 pts, 95.5%) ($p < 0.001$).

DISCUSSION:

FBD is accepted to be a benign condition, but since fibrocystic breasts have the potential to contain malignant lesions that are hard to identify in dense tissue, we should be alert in the light of these data about the importance of screening and monitoring patients.

CONCLUSION:

In women with FBD, evaluation of mammography needs experience because of the dense structure of the breasts decreasing the sensitivity and accompanying lesions should be evaluated carefully. It is beneficial to use additional radiological methods like magnetic resonance imaging to increase sensitivity.

Keywords: Fibrocystic breast disease, Fibrocystic changes, Breast cancer, Dense breast

PP-25

Is there still a real connection between the age and time of menopause with breast density?

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OBJECTIVE:

The aim of this study is to evaluate the mammographic breast density of the patients according to age and menopausal status.

MATERIALS-METHODS:

Patients over 40 years old who came to the routine mammography follow-up in our clinic between June 2019 and June 2020 were included in the study. Patients who underwent breast surgery, received radiotherapy to the breast, and had breast prostheses were excluded. Hormone replacement therapy and menopause duration was also questioned for postmenopausal patients. In mammographic examination, breast densities were categorized according to ACR-BIRADS 5th edition (A. The breasts are almost entirely fatty, B. There are scattered areas of fibroglandular density, C. The breasts are heterogeneously dense, D. The breasts are extremely dense). The patients were divided into two groups as Group-1 and Group-2 according to lipomatous and dense breast structure, respectively. Cases with breast density as A and B were considered as Group-1, and cases with breast density as C and D were considered as Group-2.

RESULTS:

A total of 216 cases, 119 premenopausal, and 97 postmenopausal were included in the study. The average age of premenopausal cases was 45 ± 3.5 , and the average age of postmenopausal cases was 57.8 ± 7.7 . The mean age of Group-1 cases was 56.7, and Group-2 cases were 48.4 years. Breast density was significantly higher in premenopausal cases than in postmenopausal cases ($p < 0.05$). The average menopause duration of postmenopausal Group-1 cases was 10 years, and Group-2 cases was 6.5 years. Although there was no statistically significant difference between breast density and mean menopause duration between the two groups, it was higher in Group-1 cases ($p > 0.05$).

DISCUSSION:

It is known that increased extensive mammographic density is associated with breast cancer and increases the risk of cancer 4-5 times. There are many factors that affect breast density. It has been shown in studies that breast density decreases as the age progresses. However, it is still a question mark that although breast density decreases in the post-menopausal period, the risk of breast cancer increases with age and more than half of breast cancer is seen over 50 years of age and after the menopause.

CONCLUSION:

Despite the involution, it is still a controversy that more than half of the breast cancer cases are in the postmenopausal period; as the menopausal period progresses, the breast density type is prone to shift from type C or D to type A or B.

Keywords: Mammography, Breast density, Age, Menopause, Breast cancer

PP-26

Breast metastasis of multiple myeloma: Case report

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INTRODUCTION:

Metastasis to the breast from an extra-mammary tumour is an infrequent cause of a breast mass; however, both primary breast cancer and metastasis to the breast should be considered as differentiating diagnosis in a patient with a history of malignancy. Approximately only 0.4-6.6% of breast tumours are metastasis to the breast. It is very rare due to poor vascularization of breasts and intense fibrous tissue content. The most common extra-mammary cancers that metastasize to the breast are lymphoma/leukemia, melanoma, and rhabdomyosarcoma. We present a case of multiple myeloma patient presenting with masses in her breast and finally diagnosed as breast metastasis of myeloma, which is very rare.

CASE REPORT:

A 65-year-old woman consulted the general surgery clinic for multiple palpable breast mass with a history of multiple myeloma. On physical examination, multiple lumps were detected in both breasts. In mammography, there were multiple masses with the largest size of 45x34 mm diameter. Breast ultrasonography showed solid circumscribed multiple hypoechoic masses. Computerized tomography (CT) was also showed numerous spheric shaped mass in the breasts. The patient underwent percutaneous core breast biopsy, and the pathology was consistent with multiple myeloma metastasis (CD38 and CD138 diffuse positive plasma cell infiltration into the breast tissue).

DISCUSSION:

Although breast cancer is one of the most common malignancies in women, the breast is an unusual region for metastasis from extramammary tumours. Metastasis of contralateral breast carcinoma is the most common cause of breast metastasis. Except for contralateral breast cancer metastasis, the most common metastasis to the breast are due to malignant melanoma, lymphoma, lung cancer, ovarian carcinoma, soft tissue sarcoma, gastrointestinal and genitourinary tumours. Multiple myeloma metastasis to the breast is very rare, and the presence of breast metastases is a poor prognostic factor for myeloma. Clinical findings such as pain, tenderness, and discharge are not common. The lesions that metastasize to the breast may appear on mammography similar to primary breast cancer. Still, they are more likely to be multiple, often bilateral, and form a nidus of tumour cells that are usually round with fairly well-defined margins. Radiologically metastases to the breast can be misdiagnosed as fibroepithelial tumours due to their sonographic imaging features.

CONCLUSION:

In conclusion, although metastasis to the breast is rare, it should be kept in mind in especially with circumscribed multiple masses in cases with known primary malignancy.

Keywords: Breast neoplasm, Mass, Metastasis, Multiple myeloma

PP-27

What are the new findings in mysterious disease: Idiopathic granulomatous mastitis?

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BACKGROUND:

To review demographic and clinical features of patients, and the success rates of different treatment approaches of idiopathic granulomatous mastitis (IGM).

MATERIALS-METHODS:

134 patients diagnosed as IGM pathologically and treated by a single breast surgeon were retrospectively analysed. The patients' demographic and clinical features, and treatment approaches were evaluated.

RESULTS:

The age of the patients ranged from 21 to 68 years (median age, 33.5 years). Nearly half of the patients were between the ages of 31-40 (49.3%). The time between the occurrence of symptoms and the last delivery was evaluated, it was < 24 months in 25 patients (23.1%), 24 to 48 months in 51 patients (38.1%), and > 48 months in 52 patients (38.8%). The difference was statistically significant ($p = .002$). Although there was no statistical difference, seasonal fluctuations were noticed. In late spring and summer, the incidence was slightly higher. Bilateral disease was present in 10 (7.5%) patients. Seven patients (5.2%) had erythema nodosum. The treatment approaches were conservative (n: 42), surgical procedures (n: 48), steroid treatment (n: 18) and combined therapy (surgical procedure plus steroid treatment, n: 24). Median recovery time for conservative approaches was lower than combined therapy ($p < .0001$). Recurrence disease developed in 10 patients (7.7%). There was no statistical difference between the recurrence rates in patients with different treatment approaches.

CONCLUSION:

There are many differences in clinical settings of patients with idiopathic granulomatous mastitis and seasonal fluctuations suggest the possibility of an immunological disorder rather than a surgical disease. Although it is common in some regions, the etiopathogenesis is still unclear. A classification is needed for evaluating the severity of patients in order to standardize the plan for the optimal treatment approach.

Keywords: Idiopathic granulomatous mastitis, Etiopathogenesis, Treatment

PP-29

To what extent has pandemic changed the treatment and approach of breast cancer? A single-center experience

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INTRODUCTION:

The COVID-19 outbreak poses unprecedented challenges to clinicians in the management of breast cancer patients. With introduction of almost all of the resources of the health system for pandemics, it has been tried to determine how to use the limited resources in cancer patients, whether who will be postponed or emergently operate during the pandemic. Herein, we aim to evaluate and compare the diversity between the surgical quantity, type, and operative strategies in breast cancer patients during the acute phase of the pandemic and non-pandemic period.

MATERIALS-METHODS:

The study included patients who were operated in our General Surgery Clinic for breast cancer, which is the acute period of pandemic between mid-March 2020 and mid-May 2020, and non-pandemic two months' time interval prior to this period. The patients were compared in terms of their demographics, time interval between neoadjuvant chemotherapy to surgery, number of patients operated, types of surgery, having reconstruction, the usage of supplemental methods (frozen section, wire guide, ROLL) and dual mapping for SLNB (lymphoscintigraphy, targeted axillary mapping (TAD)).

RESULTS:

Forty-seven (73%) patients were treated before the pandemic, while 17 (27%) patients were undergone surgery during the pandemic. The mean age of the patients before and after the pandemic was 47 ± 12.4 and 51 ± 8.6 years. The Time interval from post-neoadjuvant to surgery between the two groups was not different. While the rates of BCS and mastectomy were 72% and 28% before the pandemic, 35%, and 65% for BCS and mastectomy ($p=0.007$). Although 19% of the patients had TAD and 15% of them had wire guidance, we couldn't able to perform these procedures in the pandemic period. Frozen section couldn't use for evaluating SLNB furthermore, breast reconstruction couldn't be done. Patients who operated in the pandemic period were mostly breast cancer patients completed neoadjuvant therapy.

DISCUSSION:

It is critical for physicians to understand the rapidly changing conditions and available resources as well as risks/benefits of various treatments for patients. Decision making of which patient to operate must depend on the priority categories defined in the guidelines. Although we operated our patients according to these priority categories, patients' access to the hospital and meet the appropriate specialist become difficult in the acute phase of the pandemic. This process induced variations in surgical strategies and practices of our patients.

CONCLUSION:

When pandemic and similar health problems prevail in the coming years, it's obvious that we need to be more prepared and equipped for these circumstances.

Keywords: Breast cancer, Covid-19, Surgery

PP-30

A rare benign lesion of the breast: Hemangioma

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INTRODUCTION:

Benign vascular tumours of breast include hemangioma, lymphangioma and angiolipoma, malign vascular tumour include hemangiosarcoma and hemangiopericytoma has some diagnostic challenge because of to not have pathognomonic radiological or clinic features. Hemangioma of the breast is a rare benign vascular tumour accounting for 0.4% of all breast tumours. It is found approximately 1.2% of mastectomy specimen and 11% of post-mortem specimens in females.

CASE:

A 31 years old female presented to our clinic with a 2 month history of left mastalgia. She had no family history. In clinical examination, we could not find any palpable lesion in bilateral breast. No axillary lymphadenopathy or nipple discharge was observed. We performed ultrasonography (US) and releaved 15 x 5 mm hypoechoic lesion with smooth borders in the upper outer quadrant of the left breast. Then patient underwent dynamic contrast-enhanced magnetic resonance imaging (MRI). MRI demonstrated sagittal T2W fat sat image demonstrates hyperintense, oval mass with smooth margins in the upper quadrant of the left breast. Post-contrast fat sat T1W early and delayed contrast enhanced images show progressive peripheral enhancement with more centripetal fill in. It was consistent with type 2 curve. Since these findings were suspected of malignant breast cancer, a US-guided fine needle aspiration was performed and in aspiration analysed CD34, CD31, D240 positive. This analyse result was suggestive of hemangioma. The day before surgery non palpable lesion marked by US with Tc 99 sulphur colloid. In operation marked lesion was excised totally. In histopathological examination, the lesion is characterized by the proliferation of well-differentiated vessels of varying sizes. The vascular channels can be interconnecting but are most often non-anastomosing. The vessels are lined by endothelial cells sharing neither substantial nuclear atypia nor mitotic activity.

DISCUSSION:

It is important to distinguish benign hemangiomas, from malignant tumours such as hemangiosarcoma with a 3-year survival of 38%. In the evaluation of hemangiosarcomas with preoperative FNA biopsy, a 37% misdiagnosis as hemangioma. It shows the importance of total excision and pathological examination of the entire mass in suspicious cases.

Keywords: Breast, Hemangioma, Cavernous

Reconstructive management of a giant malignant phyllodes tumour with an augmentation mastopexy technique

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INTRODUCTION:

Phyllodes tumours (PT) constitute a minor group of breast tumours, their incidence being less than 1% of all malignant breast tumours. Phyllodes tumours are categorized as benign, borderline, and malignant according to their histological features. In the presence of large tumours, the surgical excision of the mass may result in disfigurement of the breast requiring reconstruction.

CASE:

Herein we report a case of a 28-year-old female patient with a malignant phyllodes tumour in her right breast. The treatment plan was designed as resection of the tumour with a safe surgical margin followed by reconstruction with an augmentation mastopexy technique in which the breast implant is supported with a dermoglandular flap (Balcony technique).

DISCUSSION:

Although PTs are seen rarely among the breast tumours, their course of nature might be challenging for both the surgical and reconstructive team. The high recurrence rate, necessity of radiotherapy, chemotherapy or both are some disadvantages affecting the final outcome. The treatment plan should be established in a multi-disciplinary fashion. Immediate reconstruction should be considered whenever it is possible.

CONCLUSION:

In selected cases, depending on the location and the size of the tumour, the resultant dead space and the excessive skin can be managed in accordance with a relevant augmentation mastopexy technique.

Keywords: Phyllodes tumour, Breast reconstruction, Augmentation mastopexy

PP-37

Multimodality imaging features of augmented breast via AQUAfilling gel injection: An imaging challenge

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INTRODUCTION:

Augmentation mammoplasty is commonly performed by the insertion of a silicone or saline implant which requires general anesthesia. Fillers also can be used instead of implants as an easier procedure for breast augmentation with only local anesthesia. AQUAfilling gel (Biomedica, Czech Republic) is a hydrophilic gel composed of 98% sodium chloride solution (0.9%) and 2% cation copolyamide. There are several complications of this filler in the literature. This case report describes multimodality imaging features of breast augmentation using AQUAfilling gel injection without complication. We report that the filling material causes difficulty in radiological imaging.

CASE REPORT:

A 40-year-old woman who had had breast augmentation 2 years ago via AQUAfilling Gel injection was referred to the radiology department due to palpable mass on the upper outer quadrant of the right breast. Mammography revealed a bilateral lobulated isodense mass in the retroglandular area. There were no significant radiological findings to meet the palpable mass on ultrasound. Ultrasound showed a bilateral hypoechoic fluid collection with internal echoes between fibroglandular tissue and fascia of the pectoralis muscle. Breast magnetic resonance imaging (MRI) was performed due to suspicion of physical examination. Since there was no finding on to explain the palpable mass in the breast MRI, an annual follow-up was suggested considering the finding was related to breast augmentation. AQUAfilling gel injection was hypointense in T1-weighted images and hyperintense on T2-weighted images. On subtraction contrast-enhanced T1-weighted dynamic series there was no enhancement of filling material. Diffusion-weighted images showed that ADC values of filling material was $2.4 \text{ mm}^2/\text{sec} \times 10^{-3}$ (Figure 6) on 3-T MR with 2 b values ($b = 50, 800 \text{ s/mm}^2$). There were no features of migration complications of scattering material surrounding tissues in our case.

DISCUSSION:

Imaging findings of AQUA filling gel are similar to polyacrylamide gel. To our knowledge, no reports have described MRI findings of AQUA filling gel breast augmentation without any complication. In our case, there is no evidence of complications of this procedure both clinically and mammographically, but it necessitated additional imaging modalities of ultrasound and MRI with extra cost.

CONCLUSION:

Besides complications or concerns about its toxicity, the difficulty in breast imaging is another aspect that should be considered in using AQUA filling gel on breast augmentation.

Keywords: Filling gel, Mammography, Ultrasound, Magnetic resonance imaging

PP-39

A case of primary neuroendocrine carcinoma of the breast in a patient previously treated for invasive ductal carcinoma

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INTRODUCTION:

Neuroendocrine carcinoma (NEC) of the breast is very uncommon; representing less than 0.1% of all breast cancers and less than 1% of neuroendocrine tumours. However, Metastatic NEC to the breast is a more common condition. Primary NEC of the breast can be warranted when the presence of a non-mammary primary site is clinically ruled out or an associating in situ cancer component is histologically detected.

CASE PRESENTATION:

49 y/o female patient with a breast cancer history applied for her routine follow-up examinations. She had breast conserving surgery 5 years ago with a diagnosis Luminal B type bifocal invasive ductal carcinoma. Her current mammography showed a developing round mass with indistinct margins and eccentric heterogenous microcalcifications. US examination revealed a 7mm circumscribed microlobulated, hypoechoic solid mass with internal septations and an adjacent 3mm round shaped hypoechoic lesion with ill-defined margins. Shear wave elastography of the lesion showed stiffness of the lesion (194 kPa). On breast MRI, DWI didn't show diffusion restriction. The lesion displayed initial fast contrast uptake, washout kinetics with intralesional non enhancing areas representing cystic-necrotic changes. US guided core needle biopsy revealed invasive cancer of the breast but final tissue diagnosis after surgery revealed neuroendocrine tumour without axillary metastasis. FDG-PET and DOTA- PET did not show any extramammary activity.

DISCUSSION:

This case differs from pervious reported cases in many ways. First, the patient had invasive ductal carcinoma of the same breast located in the same quadrant 5 years ago. Tumour recurred with a completely different histology but with a similar immune phenotype. This may support the hypothesis that neuroendocrine breast tumours may arise from the pre-existing endocrine cells but are rather the result of the differentiation process within breast carcinoma. Second, to our knowledge there is no report in the literature describing distinguishing imaging findings. This case showed circumscribed round mass with internal septations mimicking a benign lesion on US. MRI showed lack of restricted diffusion on DWI which was not reported before.

CONCLUSION:

Primary NEC of the breast is a very rare entity. Presence of microcalcifications, lack of restricted diffusion in MRI, benign morphology in US and a previous history of invasive carcinoma of the same breast are remarkable features of this case.

Keywords: Breast, Invasive ductal carcinoma, Neuroendocrine carcinoma, Mammography, Breast MRI, Ultrasound

PP-40

Pleomorphic invasive lobular cancer of the breast presenting with orbital metastasis: A case report

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Orbital metastasis from breast cancer is very rare and is reported with a frequency of 0.2 % in the literature. We present a case of pleomorphic invasive lobular cancer initially presenting with a misdiagnosed orbital metastasis.

A 75-year-old female patient applied to an ophthalmologist in November 2019 with the left eye pain and blurred vision. On examination, enophthalmos, a decrease in orbital fatty tissue and restriction in eye movements were detected. Orbital MRI showed thickening of the extraocular muscles and edema in the surrounding adipose tissue, enophthalmia. These findings were evaluated in favour of idiopathic orbital inflammation (orbital pseudotumor).

The patient was invited for follow-up 2 weeks after cortisol treatment was initiated. The patient claimed that cortisol treatment alleviated her complaints in the first month, but defined exacerbation of her complaints de novo after the first month. About 6 months later, she applied to the ophthalmologist with the complaint of double vision in the left eye. As her complaints did not respond to the treatment and clinical findings progressed, the patient was referred to a breast clinic to be examined for a possible breast cancer.

Mammography and supplemental US examination was performed. She had a prior mammogram 3 years ago. She did not have any family history for breast cancer or breast cancer related cancers such as ovarian or prostate cancer. Her mammography showed an asymmetry at the axillary tail of the left breast which was not seen on her prior mammograms. Her US examination showed an irregular mass of 10x7 mm in size with indistinct borders. There was an associating lymph node of 12x14 mm in size with an asymmetric cortical thickness of 7 mm in the left axilla at level 2. pathologically proven metastatic lymph node with cortical thickening in the left axilla. pathologically proven metastatic lymph node with cortical thickening in the left axilla. Core needle biopsy was performed to both the axillary lymph node and the breast mass. Her biopsy revealed a grade 3 pleomorphic invasive lobular carcinoma and axillary carcinoma metastasis. Neoadjuvant chemotherapy was started with the diagnosis of stage 4 breast cancer with orbital metastasis after evaluation by the breast tumour board.

Keywords: Pleomorphic lobular, Breast cancer, Orbital metastasis, MRI

PP-44

How do breast cancer patients present following COVID-19 early peak in a breast cancer center in Turkey

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INTRODUCTION:

COVID has placed an unprecedented burden on healthcare systems around the world. Treatment approaches and follow-up practices have been modified based on regional dynamics of each center. Most patients with BC preferred to delay or cancel their treatments, follow-ups. Screening and diagnostic interventions were delayed during the peak.

MATERIALS-METHODS:

We aimed to see whether the presentation patterns were different right after the early COVID peak in May and June at our BC center and compared it with the same period in the last 3 years. We reviewed patient and treatment characteristics retrospectively.

RESULTS:

The number of patients who were consulted at our center in 2017-2020 was 47, 53, 42, and 36, respectively. There was a decline in the number of consulted patients in May and June 2020 compared to last 3 years. In 2020, 18 out of 36 patients had breast surgery and evaluated for adjuvant therapy. Eleven patients needed neoadjuvant approach and five patients were presented with metastatic disease. Patient and treatment characteristics in May and June 2017-2020 were shown in table 1. The distribution of tumour subtypes (luminal, Her-2 positive and triple-negative) in May and June 2020 were not different from that of 2017 to 2019. Fewer patients received adjuvant chemotherapy for early stage disease and more patients received endocrine therapy for metastatic disease in May and June 2020 compared to the last 3 years. All patients received neoadjuvant chemotherapy in 2017 and 2018; approximately 20% patients received neoadjuvant endocrine therapy in 2019 and 2020. There were no DCIS/ LCIS presentation in 2020.

CONCLUSION:

Fewer patients were consulted in May and June 2020 as expected compared to same period in the last 3 years. Oncologists preferred endocrine therapy to chemotherapy in May/June 2020 regardless of the stage of the disease. We need more follow up to see the real impact of COVID-19 pandemic on presentation and treatment outcomes of BC patients.

Keywords: COVID, Breast cancer, Follow-up

PP-45

The effects of modified lymphoscintigraphy techniques on sentinel lymph node biopsy success during the COVID-19 pandemic period

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INTRODUCTION:

Sampling of the sentinel lymph node (SLN) in breast cancer provides accurate information about the condition of the axilla in 95% of cases. Technically in detecting SLN, radioactive substance, dyers or both are used. Sentinel nodes detected by scintigraphic imaging during the preoperative period can be found with the help of gamma probe and/or after the injection of dyers to the breast during surgery, the stained duct in the axilla and subsequently the dyed lymph node can be observed and surgically removed. During the COVID-19 (Coronavirus disease 2019) pandemic, delayed images were not taken in lymphoscintigraphy to reduce the risk of transmission by shortening the waiting time in our center. In this study, the effects of early and delayed lymphoscintigraphic images and only early images on our clinical practice were evaluated.

MATERIALS-METHODS:

In the COVID-19 pandemic period it was decided by the surgical and nuclear medicine teams not to take delayed images in order to shorten the waiting time and hence reduce the risk of viral spread and transmission. Our study aimed to investigate the effects of delayed images on SLN biopsy by comparing the two groups. In this study patients who underwent SLNB due to early-stage breast cancer at University of Health Sciences, Ankara Oncology Training and Research Hospital during the COVID-19 pandemic period (March/April/May 2020) and within 3 months before the pandemic were evaluated.

RESULTS:

147 patients were included in our study, and they were divided into two groups, before pandemic (BP) and pandemic period (PP). As a result of statistical analysis when delayed images were taken by lymphoscintigraphy, increased uptake was observed and information about drainage pathways and SLN numbers were obtained in 12/74 (16.2%) patients. Although sentinel lymph node detection rate was 97.4% in BP and 90.4% in PP, the difference was not statistically significant. It was found that the sensitivity, NPD and accuracy of the SLNB procedure performed after taking delayed images was higher. It was also observed that more SLNs were removed in the SLNB procedure after taking delayed images, but the difference did not reach a statistically significant level.

CONCLUSION:

We believe that if technically possible, delayed images taken during the lymphoscintigraphy can assist the surgeon in terms of SLN detection and the number of SLNs removed.

Keywords: Breast Cancer, Lymphoscintigraphy, Pandemics

PP-46

Breast parenchymal density: Does it effect oncological outcomes in conventional BCS and OPS?

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INTRODUCTION:

Mammographic breast density (MBD) has been investigated as a risk factor for many years and has been determined to increase the risk of breast cancer in many studies. MBD is accepted as a parameter to be considered in oncoplastic surgery (OPS). Volume displacement techniques requiring wide glandular dissection are known to be more difficult to apply in patients with low density and fatty breast structures, as they are considered to be more prone to complications such as fat necrosis. Therefore, this study was aimed to investigate the effect of MBD on the surgical effectiveness of different techniques applied for breast-conserving surgery (BCS).

MATERIALS-METHODS:

We investigated the data of 460 patients who were prospectively registered in the database of the center between 2007-2017 and who were treated with level II OPS and conventional lumpectomy due to invasive breast cancer.

RESULTS:

Considering the correlation between the operation and the variables, there was statistically significantly less reoperation in the oncoplastic surgery group ($p=0.033$). Mean surgical margin was 11.01 mm in the OPS group and 9.17 mm in the BCS group, with a statistically larger surgical margin in the OPS group ($p=0.011$). Regarding the correlation between breast density and the variables, reoperation rates were statistically significantly lower in fatty breasts ($p=0.001$). In addition, late complications occurred in 76 patients with fatty breasts (fat necrosis in 52 and granulation in 24) and in 42 patients with dense breasts (fat necrosis in 15 and granulation in 27), which was statistically significant ($p<0.001$). Considering early complications, only hematoma was found to be more common in dense breasts, with statistical significance ($p=0.03$). Regarding the surgical margin, mean distances were 10.59 mm infatty breasts and 9.70 mm in dense breasts.

CONCLUSION:

In the present study, increased MBD was found to be associated with closer surgical margins and increased reoperation rates, albeit with a reduced risk for late complications. We think that level II OPS can eliminate this handicap in terms of surgical margin and reoperation in dense breasts.

Keywords: Breast Cancer, Oncoplastic Surgery, Breast Density

PP-47

The clinical utility of autoantibodies in patients with idiopathic granulomatous mastitis

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BACKGROUND:

The etiopathogenesis of idiopathic granulomatous mastitis (IGM) is still controversial. However, recently autoimmunity and immune dysregulation have been emphasized. The aim of this study is to investigate the clinical utility of autoantibodies; which are useful in diagnosis and/or follow-up of some autoimmune diseases; in patients with IGM.

MATERIALS-METHODS:

Rheumatoid factor (RF), anti-nuclear antibody (ANA), anti-double stranded DNA antibody (anti-dsDNA), anti-cyclic citrullinated peptides antibody (anti-CCP), and perinuclear anti-neutrophil cytoplasmic antibody (pANCA) levels were investigated in pathologically diagnosed IGM patients (Group IGM) and age-matched healthy women (Group C). IGM patients were divided into two groups as those with active complaints and symptoms (Group IGMA) and those without any clinical and radiological findings (Group IGMR).

RESULTS:

While, in Group IGM, the positivity of RF, ANA, anti-dsDNA, pANCA, and anti-CCP were 13.1%, 3.3%, 1.6%, 0% and 3.3% respectively; in Group C, they were 13.3%, 0%, 0%, 0% and 0% respectively. The differences were not statistically significant ($p > .05$). In Groups IGMA, IGMR and C; RF positivity were 10%, 16.1% and 13.3% respectively. The ANA positivity of Groups IGMA, IGMR and C were 0%, 6.5% and 0% respectively. Groups IGMA, IGMR and C's anti-dsDNA positivity were 0%, 3.2% and 0% respectively. In all groups pANCA was negative. The anti-CCP positivity of Groups IGMA, IGMR and C were 6.7%, 0% and 0% respectively.

CONCLUSION:

Our findings did not support the clinical utility of autoantibodies including RF, ANA, anti-dsDNA, pANCA, and anti-CCP in patients with either active or passive status of granulomatous mastitis.

Keywords: Autoantibody, Idiopathic granulomatous mastitis, Rheumatoid factor

PP-49

Prognosis and outcome in young women less than 40 years of age with brain metastasis from breast cancer

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INTRODUCTION:

Quality of life and life expectancy are significantly reduced in young patients with brain metastasis from breast cancer. However, development of new approaches in radiotherapy, chemotherapy agents, and drugs targeting specific molecule, survival is expected to increase for these young women. Therefore, we evaluated our results in this group.

MATERIALS-METHODS:

We identified 24 breast cancer patients treated for brain metastases were <40 years old among 140 patients with breast cancer. All patients received whole brain radiotherapy plus local and systemic therapy.

RESULTS:

A total of 24/140 patients, median age 38 years (range 26–39) with a median follow-up of 51.5 months (range 4–172) were identified. While median overall survival was 50 months, disease free survival was 31. All patients had extra-cranial metastasis. We observed no significant difference of higher KPS, extra-cranial metastasis and primary tumour control as significant prognostic factors for improved survival in multivariate analysis.

CONCLUSION:

Whole brain radiation therapy plus surgery or radiosurgery and improved systemic therapy appears to represent the key to a better outcome. More aggressive treatments might be indicated in young women for the prolonged survival.

Keywords: Young age, Breast cancer, Brain metastasis, Radiotherapy

PP-50

The usability of sentinel lymph node biopsy in breast cancer patients with a previous reduction mammoplasty

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INTRODUCTION:

Sentinel lymph node biopsy (SLNB) is a minimally invasive method for axillary treatment in breast cancer (BC) patients. Aesthetic breast augmentation and breast reduction surgery are frequently performed mainly in western countries. Studies in patients who previously had amplification mammoplasty performed have shown that SLNB can be safely administered. The aim of this study is to evaluate the usability of SLNB in patients with BC who previously had reduction mammoplasty performed.

MATERIALS-METHODS:

The patients' files who had SLNB for BC between 2011-2016 were evaluated retrospectively. The patent blue dye was used for SLNB in our clinic. The patients who had previously had reduction mammoplasty performed were included in the study group. Patient age, tumour pathology type, pathologic result of the lymph nodes, stage, grade, hormonal receptor status, and HER 2 status were recorded. Disease free survival was evaluated in all patients.

RESULTS:

There were 4 patients who had a previous reduction mammoplasty performed. All the patients were stage 1 BC according to the TNM staging system of AJCC. The mean time between reduction mammoplasty and SLNB was 8,25 years. The mean resected sentinel lymph node number was three and there was no lymph node metastasis in any of the patients. The mean follow-up time of the patients was 63 months. There was no local or systemic recurrence after the follow-up period in patients who were included in the study.

CONCLUSION:

SLNB can be safely applied in a BC patient after reduction mammoplasty in the early or late period.

Keywords: Breast cancer, Sentinel lymph node biopsy, Reduction mammoplasty

PP-51

The experiences of a patient with mastectomy and breast care nurse in pandemic

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The virus disease called COVID-19 has turned into a pandemic today and caused anxiety in individuals. Individuals may postpone the examination and control of their symptoms and diseases other than COVID-19, especially due to the fear of getting sick from hospitals. However, since it is not known how long the pandemic will last, the treatment and follow-up process of patients with breast cancer should not be interrupted.

The diagnosis and treatment process of breast cancer is a situation that creates difficulties for the individual, causing physical problems and psychosocial crisis. Women need someone to adapt to the diagnosis of cancer, loss of the breast and the treatment process, to develop methods of dealing with the problems they experience at every stage of the diagnosis and treatment process of breast cancer and to prevent problems.

Starting from the breast cancer diagnosis stage, the breast care nurse, who is with the patients and supports them continuously, has a special place. In this study, the experiences of a patient with mastectomy and breast care nurse during the pandemic process are shared.

Keywords: Breast care nurse, Experience, Patient, Pandemic.

PP-52

A validity and reliability study of the Turkish version of the body image after breast cancer questionnaire

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This study, which is descriptive, cross-sectional and methodological in nature, was performed to adapt the "Body Image Breast Cancer Scale (BIBCQ)" to Turkish and to determine the body image and factors affecting women with breast cancer. The data of the study was collected between 06/12/2017 and 06/12/2018 at an educational and Research Hospital in Istanbul. Sampling included 500 patients diagnosed with breast cancer. The data were collected with patient identification data form and MKBIO. The scale consists of six sub-dimensions: vulnerability, body stigma, limitations, body concerns, transparency and arm concerns.

The study examined the validity of language, scope and structure for the validity of BIBCQ. Confirmatory factor analysis the factor loads of substances vary between 0.276-0.951, explaining 50.58% of the total variance. It was determined that the conformance indices of the confirmatory factor analysis were good and acceptable. The total cronbach α reliability coefficient of the scale is 0.672, while the sub-dimension cronbach α coefficients range from 0.618 to 0.841.

The test was retested to determine the invariance against time. The scale found the correlation coefficient between the first test and the last test was 0.912($p<0.001$). BIBCQ was found to be a valid and reliable tool for the Turkish community. 44.2% of women were between the ages of 51-70, 69% were married, 41.6% had a high school degree, 79.6% had a median income, and 80.2% had children. The total score of BIBCQ is 153.49 ± 9.45 . The difference between the lower size scores of patients with breast cancer according to their identification and disease characteristics was analysed and significant difference was found in some of them.

Keywords: Breast cancer, Body image, Nursing, Cultural adaptation, Validity, Reliability

PP-53

Is there a correlation between ADC values determined by diffusion weighted MR imaging and Ki67 values?

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PURPOSE:

Diffusion of water molecules is restricted in malignant breast lesions due to cellular proliferation. It is possible to quantify diffusion restriction by ADC maps in diffusion weighted magnetic resonance imaging (MRI). Ki67 is a proliferation index which is closely associated with tumour growth rate and prognosis. High Ki67 values can lead oncologists to recommend neoadjuvant chemotherapy, but they are usually determined from biopsy material, which may or may not represent whole histology. The purpose of this study was to compare ADC and Ki67 values in order to search for a correlation, which can give a clue about proliferation and prognosis at the time of diagnosis and help determine appropriate therapy.

MATERIALS-METHODS:

Consecutive 30 patients with breast cancer who had undergone breast MRI followed by surgery between April 2020 and August 2020 were retrospectively evaluated. All MRI examinations were performed with 1.5T machine (Siemens Avanto Fit). Diffusion weighted imaging was performed using EPI sequence (b values 0 and 800). Ki 67 values were determined by digital pathological evaluation from surgical specimens. ADC values were determined from ADC maps by placing a ROI that matched the size of the tumour, without including surrounding benign breast tissue. Three measurements were made from each mass and minimum, maximum and mean ADC values were recorded. Average mean ADC and Ki67 values were correlated using Pearson correlation and student-t tests.

RESULTS:

Mean ADC values ranged between 0.037 and 1.448. Ki67 values ranged between %1 and %80. There was no statistically significant correlation (Pearson correlation score=%19.6, p=0.299). Cut-off value of 20 was chosen to group Ki67 values as low or high and t-test was used to correlate with ADC values, which again revealed no significant correlation (p=0.331).

CONCLUSION:

We found no significant correlation between mean ADC and Ki67 values in this study. This may be due to the low number of cases and wide range of ADC and Ki67 values in this small group. There are varying results in literature on this topic. We will continue our study with a larger number of cases including minimum ADC values in comparison.

Keywords: Diffusion MRI, ADC values, Ki67 values

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