ACIBADEM ÜNİVERSİTESİ

SAĞLIK BİLİMLERİ DERGİSİ

Volume: **13** (Supplement **2**) October **2022**

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Acıbadem University Health Sciences Journal is indexed in ULAKBİM TR Dizin, EBSCO and Türkiye Atıf Dizini.

Cover image: Prof. Dr. Erkmen Böke (1939-2014):

He was born in Izmir in 1939. He graduated from Ankara University Faculty of Medicine in 1962. In 1970, he received his General Surgery specialty from Heidelberg University, Germany. After returning to Turkey, General Surgeon at Hacettepe University in 1970, also in 1973, took/finished the Thoracic and Cardiovascular Surgery Specialty. He was appointed Associate Professor in 1976 and Professor in 1982 at the same university. Between 1982-1988, he worked as the Chief Physician of Hacettepe University Hospitals. Speaking German and English, Prof. Dr. Böke is married and has two children.

Prof. Dr. Böke opened his firsttwo personal oil painting exhibitions at Hacettepe University Ahmet GÖĞÜŞ Art Gallery in 2005 and 2007, the third one at the Arsuz İskender Sayek House under the name "Flowers of FÜSUN" and the fourth one at the Ankara Elele Art Gallery in 2011. Prof. Dr. Erkmen Böke participated in seven group exhibitions.

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ACIBADEM ÜNİVERSİTESİ
SAĞLIK BİLİMLERİ DERGİSİ

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BREASTANBUL
THE CONFERENCE
2022

OCTOBER 13-15, 2022
WYNDHAM GRAND LEVENT, ISTANBUL - TURKIYE

BREASTANBUL 2022
accredited with
20
European CME Credits

The BREASTANBUL 2022, Istanbul, Turkey, 13/10/2022-15/10/2022 has been accredited by the European Accreditation Council for Continuing Medical Education (EACCME®) with 20 European CME credits (ECMEC®s).

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BREASTANBUL THE CONFERENCE

BREASTANBUL

THE CONFERENCE

2022

SCIENTIFIC PROGRAMME

Oct 13th 2022

BREAST SURGERY INTERNATIONAL
ONCOPLASTIC BREAST SURGERY COURSE (HALL C)
Wyndham Grand Levent, Istanbul

Course Directors: **Omar Z. Youssef, Bahadir M. Gulluoglu & Cihan Uras**

08:00 - 13:00 **Opening**
Addressers: **Kerstin Sandelin & Bahadir M. Gulluoglu**

LIVE SURGERY
Moderator (at the Auditorium): **Shawna Willey**
Moderator (at the Theatre): **Hasan Karanlik**
Tutors: **Farid Meybodi, Omar Z. Youssef, Cihan Uras, Halil Kara, A. Enes Arikan, Enrico Vigato & Hasan Karanlik**

Case at Theatre 1: SSM/NSM with subpectoral/prepectoral implant reconstruction with or without meshes/ADMs
Case at Theatre 2: Therapeutic mammoplasty

13:00 - 14:00 **LUNCH**

14:00 - 14:30 **INDUSTRY-SPONSORED CONFERENCE: What we learned after 1450 ADM-assisted prepectoral breast reconstructions**
Chair: **Cihan Uras**
Speaker: **Enrico Vigato**

SESSION I: THE SURGICAL ART BEHIND BREAST IMPLANTS
Chairs: **Ali Ilker Filiz & Kerstin Sandelin**

14:30 - 14:45 Prepectoral versus retropectoral breast implant reconstruction; who wins?
Speaker: **Maurizio Nava**

14:45 - 15:00 Implant-based breast reconstruction: Surgeon & patient perspectives
Speaker: **Yazan Masannat**

15:00 - 15:15 How to optimize aesthetic outcomes in implant-based breast reconstruction
Speaker: **Giuseppe Catanuto**

15:15 - 15:30	Nipple sparing mastectomy and implant reconstruction in large and ptotic breast Speaker: **Farid Meybodi**
15:30 - 16:00	Discussion / Q&A
16:00 - 16:30	**COFFEE BREAK**
	SESSION II: WHEN EXPERIENCE MATTERS FOR OUTCOME Chairs: **Sibel Ozkan Gurdal & Shawna Willey**
16:30 - 16:45	Extreme oncoplasty: The alternative path Speaker: **Omar Z. Youssef**
16:45 - 17:00	Tips & tricks during nipple-areola sparing mastectomy Speaker: **Shawna Willey**
17:00 - 17:15	Managing complications Speaker: **Nicola Rocco**
17:15 - 17:30	Towards standardization of oncoplastic surgery training; Future perspectives Speaker: **Kerstin Sandelin**
17:30 - 17:45	Discussion / Q&A
17:45 - 18:00	Remarks & Adjourn Addressers: **Omar Z. Youssef & Bahadir M. Gulluoglu**
18:00	**CLOSURE**

BREAST IMAGING COURSE (HALL E)

Course Directors: **Gul Esen Icten, Levent Celik & Erkin Aribal**

SESSION I: WHAT IS THE CONTRIBUTION OF AI IN THE REAL WORLD?

Moderators: **Gul Esen Icten & Levent Celik**

09:15 - 09:20	**Opening**
09:20 - 09:40	Role of AI in mammography and tomosynthesis Speaker: **Nico Karssemejer**
09:40 - 10:00	Case-based review of AI in mammography Speaker: **Levent Celik**
10:00 - 10:20	Case-based review of AI in ultrasound Speaker: **Erkin Aribal**
10:20 - 10:30	Discussion / Q&A
10:30 - 11:00	**COFFEE BREAK**

SESSION II: CONTRAST ENHANCED MAMMOGRAPHY

Moderators: **Aysenur Alafatli & Sebnem Orguc**

11:00 - 11:20	Technique, implementation and interpretation Speaker: **Eva Fallenberg**
11:20 - 11:40	Indications, advantages and challenges Speaker: **Eva Fallenberg**
11:40 - 12:10	Case-based review Speaker: **Sibel Kul**
12:10 - 12:30	Discussion: Will CESM take the place of MRI?
12:30 - 14:00	**LUNCH**

SESSION III: MANAGEMENT OF NON-MASS LESIONS

Moderators: **Serap Gultekin & Sibel Kul**

14:00 - 14:25	Non-mass lesions in mammography Speaker: **Sebnem Orguc**
14:25 - 14:50	Non-mass lesions in US Speaker: **Seda Aladag Kurt**
14:50 - 15:15	Non-mass lesions in MRI Speaker: **Serap Gultekin**
15:15 - 15:40	Case-based radiologic-pathologic correlation in non-mass lesions Speaker: **Gul Esen Icten**
15:40 - 16:00	Discussion / Q&A
16:00 - 16:30	**COFFEE BREAK**

SESSION IV: RADIOLOGIC MANAGEMENT OF PATIENTS UNDERGOING NEOADJUVANT CHEMOTHERAPHY

Moderators: **Fahrettin Kilic & Erkin Aribal**

16:30 - 16:50	How to prepare patients for therapy Speaker: **Fahrettin Kilic**
16:50 - 17:10	How to monitor treatment Speaker: **Sibel Kul**
17:10 - 17:30	Case-based review of challenges in radiological evaluation Speaker: **Aysenur Alfatli**
17:30 - 17:35	Closure

BREAST CARE NURSING COURSE (HALL D)

Course Directors: **Maria Noblet, Claire Ryan, Sevil Guler & Ozgul Karayurt**

WELCOME

Introduction of Speakers
Claire Ryan, Macmillan Consultant Nurse Metastatic Breast Cancer
Maria Noblet, Consultant Nurse Breast Cancer
Rosalyn Yates, Matron Oncology Services

09:15 - 09:30 **Housekeeping**
Agenda
Objectives of the Day

Speaker: **Claire Ryan**
Chairs: **Sevil Güler, Ozgul Karayurt & Claire Ryan**

09:30 - 10:30 **SESSION I: PATIENT NAVIGATION AND COMMUNICATION**
Chairs: **Sevil Güler, Ozgul Karayurt & Claire Ryan**

09:30 - 10:30 Navigating a breast cancer diagnosis
Speaker: **Maria Noblet**

10:30 - 11:15 Communication between nurse and patient navigating a breast cancer diagnosis
Speaker: **Rosalyn Yates**

11:15 - 11:45 **COFFEE BREAK**

SESSION II: BREAST CANCER DIAGNOSIS AND TREATMENT: THE ROLE OF NURSING

Chairs: **Ozgul Karayurt & Maria Noblet**

11:45 - 12:30 Navigating surgery and treatment
Speaker: **Claire Ryan**

12:30 - 13:00 Discussion / Q&A

13:00 - 14:30 **LUNCH**

SESSION III: LIVING WITH AND BEYOND CANCER - THE ROLE OF NURSING
Chairs: **Sevil Guler & Ozgul Karayurt**

14:30 - 15:30 New ways of working with patients living with and beyond cancer
Speaker: **Maria Noblet** *(Live video conference)*

15:30 - 16:15 Interventions for consequences of treatment
Speaker: **Claire Ryan**

16:15 - 16:45 COFFEE BREAK

SESSION IV: LIVING WITH AND BEYOND CANCER - THE ROLE OF NURSING
Chairs: **Sevil Guler & Ozgul Karayurt**

16:45 - 17:30 Impact of caring for patients with cancer. How do we look after ourselves?
Speaker: **Rosalyn Yates**

17:30 - 18:00 Closing remarks and summary of learnings for the day
Speaker: **Maria Noblet** *(Live video conference)*

CONFERENCE OPENING CEREMONY

Whyndam Grand Levent, **(HALL A)**

18:15 - 18:30 Welcome Address
Speaker: **Cihan Uras**

18:30 - 19:15 Prof. Dr. Cemalettin Topuzlu Conference
Chairs: **Nil Molinas Mandel, Hilal Unal**

Priorities in breast cancer research
Speaker: **Hope S. Rugo**

Oct 14th 2022 | HALL A

SESSION I: INNOVATION FOR BETTER OUTCOME
Chairs: **Levent Celik & Necati Ozen**

08:30 - 08:45	Artificial intelligence for breast imaging: How far have we come? Speaker: **Nico Karssemeijer**
08:45 - 09:00	Breast shape analysis for outcome after breast reconstruction Speaker: **Giuseppe Catanuto**
09:00 - 09:15	Augmented reality to guide breast surgery Speaker: **Pedro F. Gouveia**
09:15 - 09:30	Patient avatars: Virtual reality for surgeons Speaker: **Fabien Reyal**
09:30 - 09:45	Deep-learning for precision medicine: Promises & limitations Speaker: **Andreas Boss**
09:45 - 10:00	Discussion / Q&A
10:00 - 10:30	**COFFEE BREAK**

SESSION IV: RECONSTRUCTION & RADIOTHERAPY
Chairs: **Nuran Bese & Burcu Celet Ozden**

10:30 - 10:50	Defining surgical standards for conserving mastectomies Speaker: **Yazan Masannat**
10:50 - 11:10	Defining standards for reconstructed chest wall irradiation Speaker: **Philip Poortmans**
11:10 - 11:30	Challenges for radiation oncologist after BCS: How to define the boost/APBI volume for reconstructed versus non-reconstructed breast Speaker: **Atif Khan**
11:30 - 11:50	Immediate reconstruction in the previously irradiated breast: A safe algorithm to reduce complications Speaker: **Fabien Reyal**
11:50 - 12:10	Technical modifications in implant-based reconstruction to improve outcome following PMRT Speaker: **Maurizio Nava**
12:10 - 12:30	Discussion / Q&A

12:30 - 13:30 **LUNCH**

13:30 - 14:15 **SATELLITE SYMPOSIUM**

MENTOR
PART OF THE Johnson & Johnson FAMILY OF COMPANIES

Structured breast implant selection:
Introducing the Mentor Breast Implant Selection Hub
Speaker: **Burcu Celet Ozden**

14:15 - 15:00 **SATELLITE SYMPOSIUM**

FARMANOVA

Clinical and molecular perspectives in
HR+ HER2- advanced breast cancer treatment: Valamor & Pimreva
Moderator: **Mahmut Gumus**
Speaker: **Ozlem Sonmez**

SESSION VII: LONG-TERM IMPLANT-BASED RECONSTRUCTION COMPLICATIONS

Chairs: **Sukru Yazar & Erdem Guven**

15:00 - 15:15 How to manage excess skin and NAC in implant based breast reconstruction: A safe algorithm to reduce-complications
Speaker: **Maurizio Nava**

15:15 - 15:30 Management of infected breast implants
Speaker: **Farid Meybodi**

15:30 - 15:45 How to minimize complications in ADM/mesh assisted breast reconstruction?
Speaker: **Yoav Barnea** *(Live video conference)*

15:45 - 16:00 How to handle seroma
Speaker: **Burcu Celet Ozden**

16:00 - 16:15 Secondary breast implant surgery: What's new?
Speaker: **Marc Pacifico** *(Live video conference)*

16:15 - 16:30 En-bloc capsulectomy and explantation: Patient selection; When and why?
Speaker: **Yoav Barnea** *(Live video conference)*

16:30 - 16:45	Scientific Committee on Health, Environment and Emerging Risks (SCHEER) Statement on Safety of Breast Implants in Relation to ALCL: Personal comments Speaker: **Moustapha Hamdi** *(Live video conference)*
16:45 - 17:00	Discussion / Q&A
17:00 - 17:30	**COFFEE BREAK**
	SESSION X: AUTOLOGOUS RECONSTRUCTIVE SURGERY Chairs: **Bulent Sacak & Mehmet Bayramicli**
17:30 - 17:45	Therapeutic mammaplasty: The plastic surgeon's view Speaker: **Albert Losken**
17:45 - 18:00	Correction of late volumetric defects after BCS Speaker: **Moustapha Hamdi** *(Live video conference)*
18:00 - 18:15	Second choice after DIEP flap loss Speaker: **Chris Andree**
18:15 - 18:30	Prophylactic LV bypass with immediate breast reconstruction Speaker: **Jaume Masia**
18:30 - 18:45	Immediate-delayed autologous (IDEAL) breast reconstruction with DIEP flap Speaker: **Chris Andree**
18:45 - 19:00	Sensate breast reconstruction with innervated flaps: Myth or reality? Speaker: **Jaume Masia**
19:00 - 19:15	Discussion / Q&A

Oct 14th 2022 | HALL B

SESSION II: SYSTEMIC TREATMENT IN EARLY DISEASE
Chairs: **Adnan Aydiner & Idris Yucel**

08:30 - 08:45 Life without genomic classifiers: Who deserves adjuvant chemotherapy?
Speaker: **Sana Al-Sukhun**

08:45 - 09:00 Estimating risk of recurrence in early disease: Did genomic classifiers solve the whole puzzle?
Speaker: **Devrim Cabuk**

09:00 - 09:15 Who should get extended adjuvant endocrine treatment?
Speaker: **Ozge Gumusay**

09:15 - 09:30 Adjuvant CDK inhibitors: Ready for prime time?
Speaker: **Guiseppe Curigliano** *(Live video conference)*

09:30 - 10:00 Discussion / Q&A

10:00 - 10:30 COFFEE BREAK

SESSION V: EARLY DISEASE
Moderators: **Ozlem Sonmez, N. Zafer Canturk & Bulent Karabulut**

10:30 - 10:40 Emerging role of biomarkers in early stage disease
Speaker: **Peter Dubsky**

10:40 - 10:50 Advances in intraoperative radiotherapy
Speaker: **Jayant Vaidya** *(Live video conference)*

10:50 - 12:30 CASE PANEL: Navigating early stage HR+ disease with emerging data from genomic predictors
Panelists: **Guiseppe Curigliano** *(Live video conference)*, **Selcuk Seber, Peter Dubsky, Jayant Vaidya** *(Live video conference)*, **Zerrin Calay, Senem Alanyali, Aysenur Alfatli**

12:30 - 13:30 LUNCH

13:30 - 14:15 **SATELLITE SYMPOSIUM**

Valentis® for life Prosigna BREAST CANCER ASSAY

Chair: **Fatma Tokat**

Prosigna Update: The importance of molecular subytpes

Speakers: **Kelly Marcom, Fatma Tokat, Ahmet Sezer**

14:15 - 15:00 **SATELLITE SYMPOSIUM**

Valentis® for life FDA APPROVED GUARDANT360 CDx

Chair: **Ozlem Er**

Clinical utility of comprehensive liquid biopsy in advanced Breast Cancer

Speaker: **Shiroma De Silva-Minor**

SESSION VIII: DCIS

Chairs: **Abut Kebudi & Merdan Fayda**

15:00 - 15:15 Unorthodox approach for DCIS
Speaker: **Fiona Gilbert**

15:15 - 15:30 Extent of surgery for DCIS
Speaker: **Shawna Willey**

15:30 - 15:45 Individualizing radiotherapy for DCIS
Speaker: **Gul Alco**

15:45 - 16:00 Magnitute of clinical benefit with endocrine treatment: Who should be treated?
Speaker: **Sevilay Altintas**

16:00 - 16:15 Discussion / Q&A

16:15 - 17:00	**Case Panel: Multidisciplanary approach for patients with DCIS and LCIS** Moderator: **Omar Z. Youssef** Panelists: **Sevilay Altintas, Fiona Gilbert, Sitki Tuzlali, Gul Alco, Shawna Willey**
17:00 - 17:30	**COFFEE BREAK**
	SESSION XI: HER2+ DISEASE Chairs: **Nil Molinas Mandel & Handan Onur Topuzlu**
17:30 - 17:50	Unresolved issues in HER2 testing Speaker: **Fatma Tokat**
17:50 - 18:10	Crossing the line: De-escalation and undertreatment Speaker: **Gul Basaran**
18:10 - 18:30	De-escalation strategies for radiotherapy in HER2+ patients Speaker: **Evrim Tezcanli & Tjon A Meeuw**
18:30 - 18:50	New treatment landscape in metastatic HER2+ breast cancer Speaker: **Rupert Bartsch** *(Live video conference)*
18:50 - 19:05	Discussion / Q&A

Oct 14th 2022 | HALL C

SESSION III: METASTATIC BREAST CANCER: MANAGEMENT OF ADVANCED DISEASE
Chairs: **Sevil Guler & Necdet Uskent**

08:30 - 08:50	Care planning in advanced disease Speaker: **Seref Komurcu**
08:50 - 09:10	Clinical trials in advanced disease Speaker: **Burcu Cakar**
09:10 - 09:30	Role of breast nurse in advanced disease Speaker: **Claire Ryan**
09:30 - 09:50	Good clinical practices: The real world experience Speaker: **Claire Ryan**
09:50 - 10:00	Discussion / Q&A
10:00 - 10:30	**COFFEE BREAK**

SESSION VI: METASTATIC BREAST CANCER: SUPPORTIVE MEASURE
Chairs: **Ozgul Karayurt & M. Umit Ugurlu**

10:30 - 10:55	End of life care: When and how to implement? Speaker: **Rosalyn Yates**
10:55 - 11:20	Nutrition in advanced disease Speaker: **Dilsat Bas**
11:20 - 11:45	Different perspectives: Family members and caregivers Speaker: **Berna Sabrioglu**
11:45 - 12:10	Increasing awereness for advenced disease: Global studies and societies Speaker: **Sema Erdem**
12:10 - 12:30	Discussion / Q&A
12:30 - 13:30	**LUNCH**

13:30 - 14:15 **SATELLITE SYMPOSIUM**

Genekor
oncotypeDX Breast Recurrence Score

Decision-making impact of OncotypeDx in hormone receptor positive/HER2 negative early BC: Real life stories
Speaker: **Gul Basaran**

14:15 - 15:00 **SATELLITE SYMPOSIUM**

GEN ERA

A multicenter validation of a novel HRD decentralized solution
Speakers: **Pierre Naibo & Sandra Peregrin**

SESSION IX: METASTATIC BREAST CANCER: 360° APPROACH
Moderator: **Kemal Kuscu**

15:00 - 16:00 **Panel: Holistic approach to metastatic breast cancer**
Moderator: **Kemal Kuscu**
Panelists: **Gul Basaran, Ozan Bahcivan, Duygu Hicdurmaz & Gokhan Akbulut**

16:00 - 17:00 **Panel: Complementary therapies in breast cancer: Yes or No**
Moderator: **Gulbeyaz Can**
Panelists: **Vildan Kocatepe & Dilek Yildirim**

17:00 - 17:30 **COFFEE BREAK**

SESSION XII: NURSING CARE IN RARE SITUATIONS OF BREAST CANCER
Chairs: **Gulbeyaz Can & Serap Yucel**

17:30 - 17:50 Breast cancer in male
Speaker: **Sema Kocan**

17:50 - 18:10 Breast cancer in pregnancy
Speaker: **Yasemin Nazli**

18:10 - 18:30 Breast cancer in elderly
Speaker: **Arzu Tuna**

18:30 - 18:50 Breast cancer in very young patient
Speaker: **Fatma Arikan**

18:50 - 19:05 Discussion / Q&A

Oct 14th 2022 | HALL D

EARLY BIRD BREAKFAST SESSION
Moderators: **Kerstin Sandelin & Vahit Ozmen**

07:30 - 08:30	How to get your paper published?
08:30 - 12:30	**FREE TIME**
12:30 - 13:30	**LUNCH**
13:30 - 15:00	**FREE TIME**

SESSION: FREE PAPERS
Chairs: **Aykut Soyder & Mehmet Sagir**

15:00 - 15:15	Post-mastectomy chest wall defects: More than a single solution Presenter: **Mahmoud A Alhussini**
15:15 - 15:30	Tailoring the nipple-areolar complex pedicle for reduction mammoplasty - individualising patient care and safety Presenter: **Peter Andrew Barry**
15:30 - 15:45	Hatchet design rotation flaps for central, lower central complex partial breast defects after breast conservation surgery Presenter: **Shalaka Joshi**
15:45 - 16:00	The use of artificial intelligence for pre-op marking in oncoplastic breast surgery Presenter: **Azadeh Joulaee**
16:00 - 16:15	Transposition flap from lateral chest wall for outer half breast defects: A reliable alternative to LD and perforator-based flaps Presenter: **Shalaka Joshi**
16:15 - 16:30	Axillary management of breast cancer patients with isolated chest wall recurrence after mastectomy Presenter: **Geok Hoon Lim**
16:30 - 16:45	Intraoperative ultrasound-guided tailored axillary surgery after neoadjuvant therapy in node-negative breast cancer patients Presenter: **Hakan Balbaloglu**
16:45 - 17:00	Use of axillary ultrasound-guide breast cancer management in the genomic assay era Presenter: **Geok Hoon Lim**

17:00 - 17:30	**COFFEE BREAK**
	SESSION: FREE PAPERS Chairs: **Mehmet Akif Ozturk & Halil Kara**
17:30 - 17:45	Linking gene expression and mutation to identify new therapy targets Presenter: **Balazs Gyorffy**
17:45 - 18:00	Fat loss solutions for overweight breast cancer patients with sleep disturbances Presenter: **Diana Artene**
18:00 - 18:15	Demographic and clinical features of patients with metastatic breast cancer: a retrospective multicenter registry study of the Turkish Oncology Group Presenter: **Izzet Dogan**
18:15 - 18:30	The increased creatinine level secondary to use of CDK 4/6 inhibitor and endocrine therapy: Real-life data Presenter: **Merve Keskinkilic**
18:30 - 18:45	The role of next-generation sequencing in the examination of breast cancer genetics in BRCA1/2-negative cases Presenter: **Nuh Zafer Canturk**
18:45 - 19:00	Adjuvant endocrine therapy adherence and affecting factors in breast cancer survivors Presenter: **Yasemin Uslu**

Oct 15th 2022 | HALL A

SESSION XIII: NEOADJUVANT TREATMENT - 1
Chairs: **Ertugrul Gazioglu & Fuat Demirelli**

08:30 - 08:45	Is it possible to omit chemotherapy in HR+ early breast cancer? Speaker: **Sana Al-Sukhun**
08:45 - 09:00	Controversies in neoadjuvant systemic treatment of triple negative cancer patients with early disease Speaker: **Sibylle Loibl**
09:00 - 09:15	Preoperative radiation therapy: To whom and when? Speaker: **Philip Poortmans**
09:15 - 09:30	Defining & identifying complete response with imaging Speaker: **Eva Fallenberg**
09:30 - 09:45	De-escalation of surgery after NAC: Where are we now? Speaker: **Peter Dubsky**
09:45 - 10:00	Discussion / Q&A
10:00 - 10:30	**DEBATE** Chairs: **Mahmut Muslumanoglu & Mustafa Tukenmez**
10:00 - 10:10	Axillary dissection should be standard for all ypN+ patients following NAC Speaker: **Jayant Vaidya** *(Live video conference)*
10:10 - 10:20	Axillary dissection should **NOT** be standard for all ypN+ patients following PST Speaker: **Philip Poortmans**
10:20 - 10:30	Discussion / Q&A
10:30 - 11:00	**COFFEE BREAK**

SESSION XVI: PANEL

Moderators: **Taner Korkmaz, Gul Basaran & Varol Celik**

11:00 - 12:30 Case-based discussions on neoadjuvant treatment
Panelists: **Sibylle Loibl, Burcu Cakar, Senem Alanyali, Ekrem Yavuz, Gul Esen Icten, Pedro F. Gouveia, Ugur Ozbek**

12:30 - 13:30 LUNCH

13:30 - 14:15 SATELLITE SYMPOSIUM

Expanding Options Beyond Conventional Therapy in HR+ Breast Cancer to Overcome Unmet Needs

PER® Physicians' Education Resource, LLC Global, LLC

Chair: **Hope S. Rugo**

Current management options for HR+/HER2 - metastatic breast cancer
Speaker: **Giuseppe Curigliano** *(Live video conference)*

Evolving management paradigms for high-risk, early-stage, HR+/HER2- breast cancer
Speaker: **Ozge Gumusay**

SESSION XIX: ADVANCED DISEASE

Chairs: **Murat Dincer & Serkan Keskin**

14:15 - 14:30 Molecular tumor board in decision making: Not less, not more, just right
Speaker: **Erhan Gokmen**

14:30 - 14:45 The evolving role of CTC and cfDNA in the follow up of advanced breast cancer
Speaker: **Cemil Bilir**

14:45 - 15:05 Managing resistance to endocrine treatment for metastatic disease in clinical practice
Speaker: **Leyla Ozer**

15:05 - 15:25 Changing landscape of metastatic triple negative breast cancer treatment
Speaker: **Hope S. Rugo**

15:25 - 15:45 Ablative radiotherapy for oligometastatic disease and beyond
Speaker: **Anusheel Munshi**

15:45 - 16:15 Discussion / Q&A

16:15 - 16:45 **COFFEE BREAK**

SESSION XXII: PANEL
Moderators: **Yesim Eralp, Basak Oyan Uluc & Fatih Aydogan**

16:45 - 18:15 TNBC in populations with limited resources; the role of local treatment in oligometastatic breast cancer
Presenter: **Ozde Melisa Celayir**
Panelists: **Sana Al-Sukhun, Fatih Selcukbiricik, Serap Yucel, Handan Kaya, Neslihan Cabioglu & Serap Gultekin**

18:30 - 18:45 **CLOSING CEREMONY AND AWARDS**

Oct 15th 2022 | HALL B

SESSION XIV: HIGH RISK WOMEN & PREVENTION
Chairs: **Pinar Saip, Zerrin Ozgen & M. Ali Gulcelik**

08:30 - 08:45 Clinical implications of hereditary panel testing beyond BRCA pathogenic variants in routine practice?
Speaker: **Banu Arun**

08:45 - 09:00 Radiotherapy for patients with germline high and moderate-risk pathogenic variants
Speaker: **Atif Khan**

09:00 - 09:15 Contralateral mastectomy versus breast conserving surgery in patients with mutations beyond BRCA
Speaker: **Kerstin Sandelin**

09:15 - 09:30 Discussion / Q&A

09:30 - 10:30 PANEL
Moderators: **Ozlem Er & Yazan Masannat**
Multidisciplanary approach for hereditary breast cancer and high risk mutation carriers
Presenter: **Murat Sari**
Panelists: **Banu Arun, Berna Oksuzoglu, Atif Khan, Ahmet Yesilyurt & Kerstin Sandelin**

10:30 - 11:00 COFFEE BREAK

SESSION XVII: HOW TO SCREEN PATIENTS WITH INCREASED RISK FOR BREAST CANCER

Chairs: **Gul Esen & Sebnem Orguc**

11:00 - 11:20	Risk stratification: Is it important? Speaker: **Fiona Gilbert**
11:20 - 11:40	Adjunctive US screening: How and why? Speaker: **Erkin Aribal**
11:40 - 12:00	Contrast-enhanced mammography: Does it have a role? Speaker: **Eva Fallenberg**
12:00 - 12:20	MRI screeening in the post-DENSE era: Why, who, when? Speaker: **Fiona Gilbert**
12:20 - 12:30	Discussion / Q&A
12:30 - 13:30	**LUNCH**
13:30 - 14:15	**SATELLITE SYMPOSIUM** Latest trends and practices in biopsy and lesion localization Speaker: **Erkin Aribal**

GE Healthcare

SESSION XX : LOCO-REGIONAL TREATMENT IN EARLY DISEASE

Chairs: **Seher Demirer & Didem Colpan Oksuz**

14:15 - 14:30	Targeted axillary dissection: The new standard for axillary management? Speaker: **Michael Knauer**
14:30 - 14:45	Radiotherapy for patients with minimal axillary lymph node involvement (Nmic/N1) Speaker: **Atif Khan**
14:45 - 15:00	Accelerated partial breast irradiation for low-risk breast cancer patients Speaker: **Anusheel Munshi**
15:00 - 15:15	Discussion / Q&A

15:15 - 16:15 **DEBATE**
Chairs: **Vahit Ozmen & Nuran Bese**

15:15 - 15:25 Conventional fractionation should be used in breast cancer treatment
Speaker: **Ferah Yildiz**

15:25 - 15:35 Conventional fractionation should **NO LONGER** be used in breast cancer treatment
Speaker: **Philip Poortmans**

15:35 - 15:45 Discussion / Q&A

15:45 - 15:55 Conserving mastectomy is absolutely safe for breast cancer patients
Speaker: **Nicola Rocco**

15:55 - 16:05 Conserving mastectomy is **NOT** safe for breast cancer patients
Speaker: **Orit Person** *(Live video conference)*

16:05 - 16:15 Discussion / Q&A

16:15 - 16:45 **COFFEE BREAK**

SESSION: SELECTED PAPERS
Chairs: **Mehmet Velidedeoglu & Sibel Kul**

16:45 - 17:00 The immune microenvironment characterisation and dynamics in hormone receptor-positive breast cancer before and after endocrine therapy
Presenter: **Gizem Oner**

17:00 - 17:15 Prognostic nutritional Index (PNI) in patients with HR + HER-2 negative metastatic breast cancer treated with CDK 4/6 inhibitor + endocrine therapy as a useful prognostic indicator
Presenter: **Merve Keskinkilic**

17:15 - 17:30 A randomized clinical trial: The effects of preoperative protein restricted diet and physical activity on tumor characteristics and progression of early breast cancers
Presenter: **Nuh Zafer Canturk**

17:30 - 17:45 The role of shearwave elastography in prediction of tumor infiltran lymphocyte rate in breast cancer
Presenter: **Yasemin Kayadibi**

17:45 - 18:00 The effectiveness of the artificial intelligence on discriminating benign and malignant lesions on mammography
Presenter: **Ismail Tirnova**

18:00 - 18:15 Diagnostic accuracy of transpara artificial intelligence system for histopathological subtypes, lesion size and receptor properties of breast cancer: A single center study
Presenter: **Omer Ozcaglayan**

Oct 15th 2022 | HALL C

SESSION XV: SURVIVORSHIP - I
Chairs: **Ukke Karabacak & Cem Yilmaz**

08:30 - 08:45 Use and impact of breast cancer survivorship care plans
Speaker: **Yasemin Uslu**

08:45 - 09:00 Antihormone therapies and management of adverse effects
Speaker: **Mustafa Bozkurt**

09:00 - 09:15 Genetic counseling for patients and family members
Speaker: **Maria Noblet** *(Live video conference)*

09:15 - 09:30 Lymphedema
Speaker: **Menekse Ozgur Inbat**

09:30 - 10:30 Discussion / Q&A

10:30 - 11:00 COFFEE BREAK

SESSION XVIII: SURVIVORSHIP - II
Chairs: **Onur Dulgeroglu & Yasemin Uslu**

11:00 - 11:20 Nutrition in survivor patient
Speaker: **Evrim Tezcanli & Tjon A. Meeuw**

11:20 - 11:40 Pregnancy in survivor patient
Speaker: **Selin Ozaltin**

11:40 - 12:00 Body image and changing roles
Speaker: **Duygu Hicdurmaz**

12:00 - 12:20 Survivorship: Patient experience
Speaker: **Inci Gultekin**

12:20 - 12:30 Discussion / Q&A

12:30 - 13:30 LUNCH

SESSION XXI: NGOS AND INTERNATIONAL SOLIDARITY
Moderator: **Esra Urkmez Uzel**

13:30 - 14:10 The power of international networks
Speaker: **Krisztina Toth** *(Live video conference)*

14:10 - 14:30 From Turkey to Europe: International network experience
Speaker: **Yesim Tuncer**

14:30 - 15:00 **COFFEE BREAK**

SESSION XXIII: PROCESSES, SOLUTIONS AND PROJECTS PRODUCED BY CANCER PATIENTS AND NGOS DURING THE PANDEMIC IN TURKIYE

Chair: **Seral Celik**

15:00 - 15:20 Individuals living with cancer in Turkiye and the covid-19 pandemic research
Speaker: **Gurkan Sert**

15:20 - 15:40 ONKOVAN from the perspective of patient rights during the pandemic process experience
Spekaer: **Asli Ortakmac**

15:40 - 16:00 Be a hero / live
Speaker: **Dida Kaymaz**

16:00 - 16:30 **COFFEE BREAK**

SESSION XXIV: ROUNDTABLE MEETING

Synergy: Getting Stronger Together

Chairperson: **Fisun Onen**

Participants: **Cancer Fighters Association,**
Cancer Control Association,
Europa Donna Turkiye,
Uludag Oncology Solidarity Association,
Hope And Life Association,
Cancer-Free Life Association,
Turkish Cancer Association,
Dance With the Cancer,
Young Savings Association,
Metamazon Metastatic Breast Cancer Association,
Society for Breast Health,
Turkish Society of Medical Oncology,
Turkish Society of Surgery, Turkish Society of Oncology Nursing

Oct 15th 2022 | HALL D

EARLY-BIRD CRITICAL-THINKING SESSION
Moderator: **Ashutosh Kothari**

07:30 - 08:30 Difficult surgery cases: How did I manage?
Panelists: **Atakan Sezer, Guldeniz Karadeniz Cakmak & Anand Koppiker**

08:30 - 10:00 COFFEE BREAK

10:00 - 11:00 FREE TIME

SESSION: FREE PAPERS
Chairs: **Ayfer Ay Eren & Aysegul Gemici**

11:00 - 11:15 Performance of radiologists when interpreting breast screening mammography: A study from the Middle East
Presenter: **Mohammad A Rawashdeh**

11:15 - 11:30 Contributions of AI in the daily workflow of a breast imaging clinic
Presenter: **Damla Su Aydin**

11:30 - 11:45 Clinical and pathological characteristics of AI-missed cancers
Presenter: **Mustafa Ege Seker**

11:45 - 12:00 Comparison of automated breast ultrasound and handheld ultrasound egarding time savings and operational costs in the workflow of a breast clinic
Presenter: **Sila Ulus**

12:00 - 12:15 Estimating the skin flap thickness with breast MRI: A case series of 438 skin and nipple-sparing mastectomies with implant reconstructions
Presenter: **Cem Osman Yilmaz**

12:15 - 12:30 Analysis of skin flap thickness after skin-sparing and nipple-sparing mastectomy
Presenter: **Seda Eroz**

12:30 - 13:30 LUNCH

13:30 - 14:15 FREE TIME

SESSION: FREE PAPERS
Chairs: **Aziz Yazar & Faysal Dane**

14:15 - 14:30	Pushing the limits of breast conservation therapy with extreme oncoplasty: Requires good planning and collaboration Presenter: **Berkay Kilic**
14:30 - 14:45	Prognostic factors affecting survival in early stage unifocal Luminal B human epidermal growth factor 2-negative and triple negative breast cancers Presenter: **Ekrem Ferlengez**
14:45 - 15:00	Direct-to-implant reconstruction with tutopatch in 391 breasts Presenter: **Mehmet Sagir**
15:00 - 15:15	Immunotherapy experience in patients with breast cancer: A single-center experience Presenter: **Feride Yilmaz**
15:15 - 15:30	Impact of oncotype DX recurrence score on clinical outcome: Single center real-life experience with median 87 months follow up Presenter: **Gul Basaran**
15:30 - 15:45	The relationship between mamographic density and pathological response in patients with local advanced breast cancer receiving neoadjuvan chemotherapy Presenter: **Eda Caliskan Yildirim**
15:45 - 16:45	**COFFEE BREAK**
16:45 - 18:15	**FREE TIME**

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2022

ORAL PRESENTATIONS

[O-01]
POST-MASTECTOMY CHEST WALL DEFECTS: MORE THAN A SINGLE SOLUTION

Mahmoud A Alhussini[1], Ahmed T. Awad[1], Nasser Ghozlan[2], Mohamed M. Soffar[2], Ahmed M. Abo Zeid[2], Mohamed S. Heikal[1], Mahmoud Shalaby[1]

[1]Alexandria University, Faculty of Medicine, Surgical Oncology Unit, Alexandria, Egypt
[2]Alexandria University, Faculty of Medicine, Plastic Surgery Unit, Alexandria, Egypt

Background: chest wall defects (CWD) after breast surgery is not uncommon. Reasons for theses defects include locally advanced breast cancer, male breast cancer, radio-necrosis, etc. Surgeons adopted many techniques to overcome the resulting defect by skin grafts, pedicled and perforator flaps, etc. This study aimed at assessing different techniques used for management of CWD with pros and cons of each.

Materials and methods: A retrospective study including patients with pre-operative anticipated CWD who were operated at our institution(s). Items that were assessed included: indication of surgery, size of the defect, surgical procedure, operative time, post-operative complications and timing of adjuvant treatment.

Results: 78 patients including 3 males were included in the period from January 2012 to December 2021. Tables 1 and 2 illustrate the indication of surgery and the procedure that was performed. Direct tension closure is simple and easy, suitable for small defects. Yet, this might result in early wound breakdown with subsequent delay in adjuvant treatment if any. Skin grafts is a fast technique that can be used in critically ill patients but cosmetic outcome is much inferior to other techniques and timing for wound healing was troublesome. Pedicled flaps were reliable with minimal postoperative complications. They can manage sizable defects. However, they are time consuming and might not be suitable to many patients. Fascio-cutaneous flaps were ideal in many patients and were able to cover large defects, suitable in many conditions and average time intra-operatively without the need for a nearby plastic surgeon. Perforator flaps were time consuming procedures with ability to cover small defects only.

Conclusions: CWD need to be anticipated prior to surgery. Different solutions are available and should be tailored to different patients' conditions. Fascio-cutaneous flaps might be the ideal in many situations that face breast surgeons without the need to complex plastic procedures.

Keywords: chest wall defects, post-mastectomy coverage, locally advanced breast cancer

Table 1: illustrates the distribution of the underlying disease that indicated surgery resulting in CWD

	LABC without bleeding or fungation	Radio-necrosis	Male breast cancer	Recurrence after previous total mastectomy	Local recurrence after previous BCS	Bleeding or fungation in metastatic/non-metastatic disease	Phylloides disease	others
Number of patients indicated	23	5	3	6	12	17	7	5

Table 2: illustrates the numbers of procedures performed

	Direct tension closure	Split thickness skin graft	Pedicled musculocutaneous flaps LD / TRAM	Fascio-cutaneous flaps TE/TA/SEAP	Perforator flaps (TDAP)
Number of procedures	11	9	26	29	3

LD: latismuss dorsi flap, TRAM: transverse rectus abdominous muscle flap, TE: Thoraco-epigastric flap ,TA: Thoraco-abdominal flap , SEAP: superficial epigastric artery perforator flap, TDAP: thoracodorsal artery perforator flap

[O-02]
TAILORING THE NIPPLE-AREOLAR COMPLEX PEDICLE FOR REDUCTION MAMMOPLASTY - INDIVIDUALISING PATIENT CARE AND SAFETY

Lorenza Caggiati, Samantha Chen, Rachel Louise O'connell, Katherine Krupa, Katerina Dorothy Claudia Micha, Peter Andrew Barry

Royal Marsden Hospital, Breast Unit, Sutton, United Kingdom

Background: Reduction mammoplasty for cancer resection, therapeutic mammoplasty, (TM) aims to preserve the nipple areolar complex (NAC) on a planned vascularized pedicle facilitating more extensive cancer resection. For tumours located inferiorly, a superior or supero-medial NAC pedicle is desirable and – depending on tumour location, a laterally-based pedicle may be preferable.

Several authors have studied NAC vascularization patterns in cadavers, MRI or CT angiography. Basaran et al[1] evaluated sixteen patients with severe gigantomastia, marking the vessel locations before surgery by using colour doppler imaging.

We mapped NAC vascularization in patients undergoing TM to allow individual tailoring of the NAC pedicle optimizing ease of mobilization with minimization of venous congestion.

Methods: We obtained approval (SE1188) for a prospective feasibility study involving 20 patients. Following mark-up of the reduction including NAC pedicle design (for all non-inferior-based pedicles) by the surgeon, mapping by acoustic doppler and colour doppler imaging was carried out by the independent researcher (LC). Key vessels were marked and surgeons (including trainees) were allowed to modify the NAC pedicle plan accordingly. User satisfaction (Likert scale) as well as patient outcomes were assessed.

Results: Of 17 patients (28 breasts) the surgeon found mapping a useful technique to permit greater flexibility in NAC pedicle mobilization in all cases. In 3 patients the pedicle was modified from supero-medial to medial due to absence of a superior pedicle. We document the distances by which the initially planned pedicle was able to be 'back-cut' to facilitate mobilization.

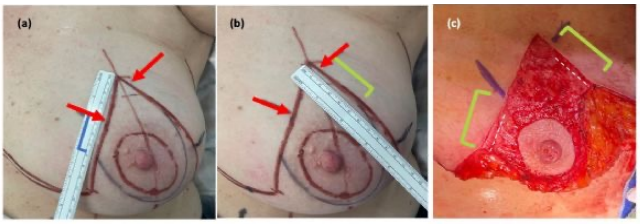
Conclusions: Pre-operative mapping of the NAC pedicle improves predictability of arterial supply patterns and facilitates surgery performed by trainees and consultants and will also prove indispensable in re-reduction surgery.

References: 1. Başaran K et al PRS. 2011 Oct;128(4):252e-259e.

Keywords: nipple-areola pedicle, doppler, mapping, therapeutic mammoplasty

Figure 1 NAC

Figure 1 Supero-medial NAC pedicle (a) pre-operative distance measured from medial pedicle limb to medial artery, (b) to superior artery from lateral pedicle limb & (c) length of back-cuts (white dotted lines) permissable to both medial and superior arterial supply from pedicle outline to allow greater mobilization of NAC for inset.



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[O-03]
HATCHET DESIGN ROTATION FLAPS FOR CENTRAL, LOWER CENTRAL COMPLEX PARTIAL BREAST DEFECTS AFTER BREAST CONSERVATION SURGERY

Dushyant Jaiswal, Shalaka Joshi, Badwe Rajendra
Tata Memorial Hospital, Parel, Mumbai

Introduction: Oncoplastic breast surgery (OBS) is safe in appropriately selected patients. Central and lower central breast defects pose a particular problem in small to moderate sized breasts. We describe a local flap using breast and lateral chest wall fat combining both the principles of volume displacement and replacement in a hatchet design for reconstruction of complex central breast defects.

Methods: We describe 10 patients who underwent OBS with local flap with hatchet design between January 2020 and June 2022.

Surgical method: This design works best for central defects with or without areola excision, combined with upper (inferiorly based) or lower pole defect (superiorly based). Adequate bulk in lateral chest wall (skin and fat), amenable to tension free primary closure is mandatory. It is a good choice in breast not suitable for solely volume displacement procedure like Grissoti, mastopexy or reduction mammoplasty, when only displacement is insufficient and replacement with an LD myo-cutaneous flap an overkill. The 'Hatchet design' combines elements of rotation flap and VY advancement. The two blades of hatchet are de-epithelised, stacked onto each other and filled into the defect. The 'leading edge' of the hatchet, closer to the defect is 'volume displaced' into the defect. The 'lagging edge' from the lateral chest wall is 'volume replaced' into the primary or secondary defect.

All 10 patients had a Hatchet design flap- 6 superiorly based and 4 were inferiorly based. There was no morbidity in any of them with good post-operative cosmetic outcome.

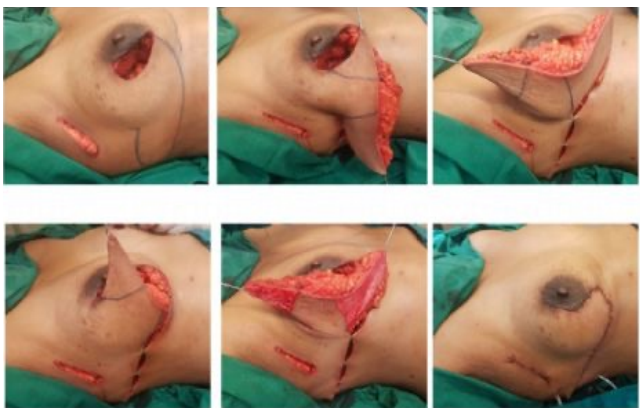
Conclusion: A Hatchet design random pattern flap combining rotation and V-Y advancement principles is an effective and reliable option in selected cases.

Keywords: central and lower central quadrant breast defects, local flap for OBS, rotation V-Y advancement

Left lower central, inner and retroareolar defect reconstructed with Hatchet design flap from lateral chest wall

38 years old lady with a 3 cm tumour in the lower inner, central and retroareolar region in a B cup breast. A rotation, V-Y advancement flap was planned in a Hatchet design to fill the defect with partial de-epithelization of both the edges of the hatchet

Right retroareolar and outer central breast defect reconstructed with Hatchet design local flap



45 years old woman with an excision biopsy scar in right peri-areolar region with underlying residual disease had wide excision of cavity with axillary sampling. She had a B-cup breast and centrally placed defect. A superiorly based Hatchet design local rotation flap with an element of V-Y advancement was used to cover the defect with both edges of the hatchet used as de-epithelized filler.

[O-04]
THE USE OF ARTIFICIAL INTELLIGENCE FOR PRE-OP MARKING IN ONCOPLASTIC BREAST SURGERY

Azadeh Joulaee[1,2], Soroush Valinia[3], Soodabeh Joolaee[2,4], Mahnaz Sharifi[2], Niloufar Rajaeepour[2,5]
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[5]Shahid Beheshti University of Medical Science, North Public Health Center, Tehran, Iran

It is more than 16 years that we are using mammoplasty and mastopexy techniques for conservative surgery in large tumors instead of mastectomy. These techniques are operative-dependent and need a lot of experience to avoid surgical complications that can delay adjuvant therapy and rise medico legal complaint against surgeon. As pre-operative markings have an essential role in final outcome, we have planned to use artificial intelligence as an educational aid for the rapid improvement of learning curve. In this study we are reporting phase I results to evaluate the accuracy of pre-op markings by artificial intelligence.

Material-Method: Before surgery, 3D digital evaluation is done to calculate breast volume as well as final desired volume. Then surgical marking plan is designed for each breast and was printed by 3D printer to be used for surgical marking. In the operative theater, marking was first done with a single expert surgeon. Then 3D printed plan is used for marking with a different pen color. In the presence of surgeon and IT man, two drawing are compared by two observer to find the differences..

Results: Between Dec 2021 and March 2022, this technique was used for 71 breasts in 38 patients. (Five patients had unilateral surgery). All the surgeries were planned by superomedial nipple-areolar flap. Seven items were used to compare two drawings. Site and size of further areola, medial and lateral vertical limbs, medial and lateral horizontal drawing. Medial and lateral angles joining horizontal drawing to IMF.

Regardless breast volume and the volume of resection, there was 98.6% concordance between drawing by artificial intelligence and expert surgeon. For areola, artificial intelligence had more accurate marking to give us complete circle for final result.

Conclusion: It seems that artificial intelligence can help us to train breast surgeon for doing reduction mammoplasty/mastopexy.

Keywords: artificial intelligence, mammoplasty, mastopexy, marking

[O-05]
TRANSPOSITION FLAP FROM LATERAL CHEST WALL FOR OUTER HALF BREAST DEFECTS- A RELIABLE ALTERNATIVE TO LD AND PERFORATOR-BASED FLAPS

Shalaka Joshi, Dushyant Jaiswal, Jessicka Shah, Nita Nair, Qurratulain Chougle, Vani Parmar, Badwe Rajendra
Tata Memorial Hospital, Parel, Mumbai, India

Introduction: Oncoplastic breast surgery (OBS) is safe for appropriately selected patients. However, oncological principles need to be adhered to, especially in higher stage disease. We previously described a transposition flap from lateral chest wall for outer quadrant breast defects. We present an updated analysis of the utility of this flap at a high-volume tertiary care center in India.

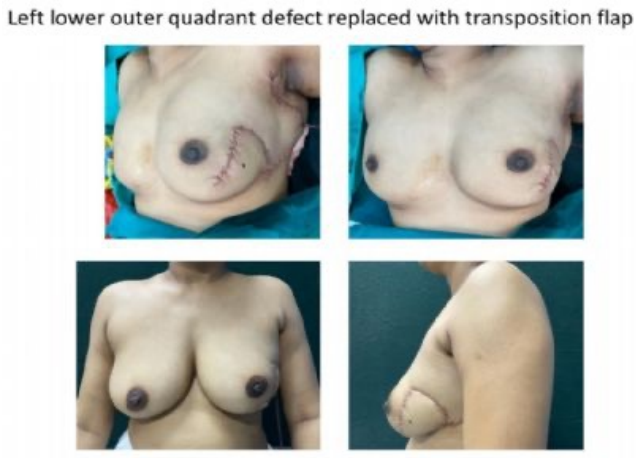
Methods: We report 127 cases of transposition flap done between April 2016 and July 2022. Patients with adequate redundant lateral chest wall fat and skin fold were chosen for the flap. Use of handheld doppler device for perforator identification or using magnification was not deemed necessary.

Results: Out of 127, 72 had surgery first and 55 were operated post neoadjuvant chemotherapy. The median age of the cohort was 48 years (25-75). Eighty-eight patients had early breast cancer (T1/2, N0/1), 38 were locally advanced (T3/4, N2/3) and 1 had DCIS. The quadrant location was- upper-outer 63, upper central 28, lower outer 23 and central 13 patients. The mean and median BMI was 26.48 and 25.96 respectively. The median pT was 2.65 cm and 2.5 cm in those who had surgery-first and post-chemotherapy respectively. Thirty-three (45.83%) in the surgery-first group and 27/55 (49%) in the post-chemotherapy group were pathologically node-positive. Four (3%) patients required margin revision. In 23 (18%) patients, there was minor wound complication such as seroma, infection, gape. Most were managed conservatively, and only 10 (7.8%) required re-suturing under LA. All patients had post-operative whole breast radiation with tumor bed boost. Clinical fat necrosis was identified in 2 patients, mammographic features of fat necrosis were seen in 12/66 (18%) patients.

Conclusion: Transposition flap utilizing angiosomal blood supply and subdermal plexus is a reliable alternative to LD and other perforator-based flaps for outer quadrant, especially in larger tumors without compromising on oncological principles.

Keywords: oncoplastic breast surgery, local flaps, partial breast reconstruction

Left lower outer quadrant defect replaced with transposition flap



The patient had 4 cm mass in the left lower outer quadrant close to skin anteriorly which was replaced with lateral chest wall transposition flap

Left outer central defect reconstructed with transposition flap- 2 year follow-up clinical and mammography images

The patient was operated for outer central quadrant large defect and had refused bilateral reduction surgery. The transposition flap was completely de-epithelized and buried. This is the 2 years post-operative, post-radiation result.

Clinico-pathological characteristics of 127 patients

Clinico-pathological characteristic	-	N=127	%
Age	Median (range)	48 (25-75)	-
Menopausal status	Pre/Peri	67	52.8
	Post	60	47.2
BMI	Median	25.96	-
	Mean	26.48	-
Surgery type	Upfront	72	56.7
	Post-chemotherapy	55	43.3
Clinical stage	OBC	88	69.3
	LABC	38	30
	DCIS	1	0.7
Quadrant location	Upper outer	63	49.6
	Upper central	28	22
	Lower outer	23	18.1
	Central	13	10.3
Histological type	Invasive ductal	118	93
	Invasive lobular	8	6.3
	Ductal carcinoma in situ	1	0.7
Pathological T size	Upfront- median and range	2.65 (0-6.5)	-
	Post-chemotherapy - median and range	2.5 (0-6.7)	-
Number of axillary nodes dissected	Upfront- median and range	16.5 (2-34)	-
	Post-chemotherapy- median and range	17 (10-40)	-
Number of axillary nodes positive	Upfront- median and range	1 (0-13)	-
	Post-chemotherapy - median and range	1 (0-12)	-
Positive axillary nodes	Upfront	33/72	45.8
	Post-chemotherapy	27/55	49
Margins positive	Upfront	2/72	2.8
	Post-chemotherapy	1/55	1.8

[O-06]
AXILLARY MANAGEMENT OF BREAST CANCER PATIENTS WITH ISOLATED CHEST WALL RECURRENCE AFTER MASTECTOMY

Geok Hoon Lim[1], Veronica Siton Alcantara[1], Ruey Pyng Ng[2], Me Me Win Htein[1], Qing Ting Tan[1], Swee Ho Lim[1], Zhiyan Yan[1]

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Introduction: NCCN guidelines on the axillary management of breast cancer patients with isolated chest wall recurrence after mastectomy is unclear. Though sentinel lymph node biopsy (SLNB) is possible and may be considered, there is limited data on its usefulness. We aimed to determine if axillary restaging surgery was required in this group of patients who developed operable isolated chest wall recurrences after mastectomy.

Methods: Breast cancer patients treated at a tertiary institution from 1st September 2005- 31st October 2017 and developed isolated chest wall invasive recurrences after mastectomy were retrospectively reviewed. We excluded patients with bilateral cancers, concurrent regional or distant metastases, patients without surgery for their chest wall recurrences and patients who were lost to follow-up. The demographics, pathological data and second recurrences were collected from a prospectively maintained database and compared between patients with axillary lymph node dissection (ALND), SLNB and no axillary operation.

Results: Of the 1841 patients who underwent mastectomy, 26 (1.4%) patients developed isolated chest wall recurrences. 22 eligible patients were analysed. The mean age at diagnosis of the recurrence was 54.7 years (range:37-84). 1,2 and 19 patients had ALND, SLNB and no axillary operation respectively. On mean follow-up of 38.3 months, no axillary recurrences were noted.

Conclusion: In breast cancer patients with isolated chest wall recurrences after mastectomy, axilla restaging surgery can be safely omitted with no increased axillary recurrences on medium term follow-up. This finding could refine existing guidelines in the management of the axilla for patients with chest wall recurrences after mastectomy.

Keywords: breast cancer, mastectomy, recurrence, axilla staging

[O-07]
INTRAOPERATIVE ULTRASOUND GUIDED TAILORED AXILLARY SURGERY AFTER NEOADJUVANT THERAPY IN NODE NEGATIVE BREAST CANCER PATIENTS

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Background: In the era of precision medicine, the evidence confirmed the dominance of tumor biology on the prognosis of breast cancer. However, axillary status persists as one of the major determinants of long-term outcome. In clinically node negative (cN0) patients, sentinel lymph node biopsy (SLNB) exists as an option via dual agent mapping after neoadjuvant systemic therapy (NST). Moreover, targeted or tailored axillary surgery (TAS) concepts has been advocated to de-escalate axillary surgery employing excision of preinserted clipped node or palpation-guided removal of suspicious nodes with SLNB procedure. The aim of the presented study is to evaluate the feasibility of intraoperative ultrasound guided (IOUS)-TAS which is a novel technique for axillary staging in cN0 patients after NST.

Methods: A prospective observational study was conducted in pN1 patients who had nodes clipped before NST and converted to cN0. SLNB was performed using radiocolloid and patent blue dye. The clipped node was retrieved by IOUS guidence. After removal of SLNs, axillary palpation and IOUS-guided axillary imaging was performed to determine the presence of suspicious nodes. If a palpably or sonographically positive node identified, the patient underwent excision.

Results: Thirty-four patients were included. SNB identification rate with dual agent mapping was 94.11%. Nodal pCR was confirmed by 82.35% of patients. Additional suspicious nodes were determined in 7 patients via IOUS-TAD and 4 patients via axillary palpation. A total of 5 case had metastatic foci in the lymph node excised, 1 of which were macrometastasis, 1 micrometastatis and 3 isolated tumor cells. The median number of additional excised lymph node was 3 (range 1-6).

Conclusion: IOUS-TAS is a feasible concept to identify patients with axillary residual disease after completion of conventional axillary staging after NST that can selectively reduce residual disease with much less radical surgery than axillary dissection.

Keywords: neoadjuvant systemic treatment, targeted axillary dissection, tailored axillary surgery, introaperative ultrasound

[O-08]
USE OF AXILLARY ULTRASOUND TO GUIDE BREAST CANCER MANAGEMENT IN THE GENOMIC ASSAY ERA

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Chemotherapy is conventionally offered to non-stage IV breast cancer patients with metastatic axillary nodes. However, the recent RxPONDER trial showed that chemotherapy can be omitted in patients with 1-3 metastatic nodes if the 21-gene assay recurrence score is <= 25. Aim of the study was to investigate if ultrasound (US) can help determine which group of patients can potentially skip chemotherapy with upfront surgery followed by gene assay testing instead of undergoing neoadjuvant chemotherapy. This is the first study, to the best of our knowledge, which examined the use of axillary ultrasound to guide neoadjuvant chemotherapy or upfront surgery and gene assay in this subgroup of patients.

Methods: T1-3, node positive, hormone receptor-positive and HER2-negative breast cancer patients >= 50 years old with axillary clearance were reviewed from 2 centres. Patients with neoadjuvant chemotherapy and bilateral cancers were excluded. Number of US-detected abnormal axillary nodes, demographic and histological parameters were correlated with the number of metastatic nodes found on surgical histology.

Results: 138 patients were included, mean age 62.5 years (range: 50-85). Average tumour size was 34.5mm (6-130mm). On logistic regression and ROC analysis, the number of US-detected abnormal nodes was statistically significant ($p<0.001$) for predicting limited nodal burden (ROC AUC = 0.7135). US cut-offs of 5, 6 and 8 abnormal nodes had respective probabilities of 0.057, 0.026 and 0.005 for <4 metastatic nodes with zero false predictions.

Conclusion: A cut-off of <=5 US-detected abnormal nodes can help guide on the choice between upfront surgery or neoadjuvant chemotherapy for this group of patients with limited nodal burden. Adopting the practice of documenting the number of abnormal nodes (up to 5) as part of loco-regional staging with ultrasound is useful.

Keywords: breast cancer, axillary ultrasound, RxPONDER trial

[O-09]
LINKING GENE EXPRESSION AND MUTATION TO IDENTIFY NEW THERAPY TARGETS

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Background: New molecular targeted therapies can improve the prognosis of breast cancer cases. For this, linking mutations to transcriptome changes enables the identification of genes with druggable potential. Here, our aim was to link mutation and gene expression changes by utilizing a large integrated database.

Methods: A training-test approach was used by employing two independent dataset including genomic and transcriptomic data: The Cancer Genome Atlas (TCGA) and METABRIC cohorts. Raw data were obtained from the Genomic Data Commons and the European Genome-Phenome Archive. For the gene expression datasets, quantile normalization was performed using the preprocessCore package. Mutations were filtered based on the judgment of Mutect2 as well as additional hard filters of at least 20x coverage and the presence of the alteration in at least five reads. Mann-Whitney nonparametric test was run across all genes. Genes with significant expression changes between the two cohorts were selected based on the P-value and mean fold change (FC) differences between the mutated and wild-type cohorts. False discovery rate (FDR) was computed to correct for multiple hypothesis testing. Significance was set at FDR<5%.

Results: The entire integrated database utilized 3,065 breast cancer tumors with genomic and transcriptomic data. The genes with the highest proportion of overlap between transcriptomic fingerprint were found for mutations in PIK3CA, TP53, and GATA3. The four most strongly upregulated genes in TP53 mutant tumors were SERPINB4, SERPINB3, PI3, and C6orf15 (FC = 1.56, 2.25, 12.05, and 2.55, respectively). In PIK3CA mutated tumors, the three strongest upregulation was present in UG2B28, ACE2, and CST4 (FC = 2.34, 2.25, and 2.1, respectively). In GATA3 mutated tumors, validated higher expression was observed in C8orf34, TRH, and MSMB (FC = 6.85, 3.91, and 5.07, respectively).

Conclusion: Here, we present a pipeline for the discovery of new therapy targets in breast tumors harboring specific mutations.

Keywords: biomarker, transcriptomics, gene expression, mutations, druggable targets

[O-10]
THE ROLE OF NEXT-GENERATION SEQUENCING IN THE EXAMINATION OF BREAST CANCER GENETICS IN BRCA1/2-NEGATIVE CASES

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Objective: Breast cancer is the most prevalent malignancy in women worldwide. Although mutations in the BRCA1/2 genes are responsible for the majority of hereditary breast cancer cases, a substantial proportion of patients are negative for mutations in these genes. Nevertheless, advances in sequencing technologies enable parallel examination of multiple genes and detailed analyses of underlying causes of breast cancer. Therefore, this study aimed to detect variations in non-BRCA genes and investigate the underlying genetic causes of susceptibility to breast cancer.

Materials-Methods: Ninety-six patients without pathogenic mutations in the BRCA1/2 genes who met the inclusion criteria were enrolled in the study, and 34 genes were analyzed using next-generation sequencing (NGS) for genetic analysis. The detected gene variations were classified according to the relevant guidelines as follows: pathogenic, likely pathogenic, and clinically significant, i.e., variants of uncertain significance and investigated on the basis of the clinical results of the cases.

Results: Based on the ClinVar database or American College of Medical Genetics criteria, a total of 55 variants of 16 genes were detected in 43 (44.8%) of the 96 patients included in the study. The pathogenic variants were found in the TP53, CHEK2, and RET genes, whereas the likely pathogenic variants were found in the CHEK2, FGFR1, FGFR3, EGFR, and NOTCH1 genes. While 85% of the variations were missense mutations, the incidence of frameshift, in-frame deletion and insertion, stop-gain, initiator codon and intron mutations was low.

Conclusions: The examination of non-BRCA genes in patients that met the established criteria for hereditary breast cancer but were negative for BRCA1/2 mutations provided additional information for approximately 45% of the families. The results of the present study suggest that NGS is a powerful tool for investigating the underlying genetic causes of occurrence and progression of breast cancer.

Keywords: hereditary breast cancer, NGS, non-BRCA genes

[O-11]
DEMOGRAPHIC AND CLINICAL FEATURES OF PATIENTS WITH METASTATIC BREAST CANCER: A RETROSPECTIVE MULTICENTER REGISTRY STUDY OF THE TURKISH ONCOLOGY GROUP

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Objective: We present data from the multicenter registry study of the TOG for MBC over a 10-year time span in a real-world setting.

Methods: This was a retrospective registry study aimed to analyze demographic data and outcome of adult MBC patients in 2 cohorts based on date of metastatic diagnosis (Cohort I: 01/2010 – 12/2014; Cohort II: 01/2015 – 12/2019).

Results: Out of 1381 patients analyzed, 52.3% presented with recurrent disease, (47.9% vs 56.1% in Cohorts I and II, respectively; p<0.001). HER2(+) was the largest subgroup with de-novo presentation (63.4 vs 48.7% in Cohorts I and II, p=0.007). 51.7% (n=143) of patients recurring within two years had TNBC. Patient characteristics and outcomes are summarized in Tables I and II.

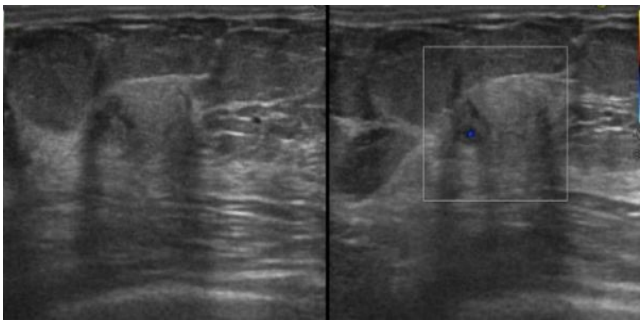
Median progression-free survival (PFS) with 1st line treatment were: HR(+) vs HER2(+) vs TNBC; 19 vs 18 vs 10 months, respectively (p<0.001). Chemotherapy was the preferred initial treatment in HR(+) patients, especially in the de-novo group for both cohorts (51.2% vs 46.3%). Only a minority of patients in Cohort II had access to CDK inhibitors (6.3%). Dual-HER2 blockade was more frequently used in Cohort II (p<0.001), resulting in a significantly higher PFS in the de-novo group (Cohort II vs I; 29 vs 17 months, p=0.037).

Median overall survival (OS) was 51.0 (48.0-55.0) months for all patients [HER2(+) vs HR(+) vs TNBC; 57 vs 52 vs 27 months, p<0.001].

Conclusion: Incorporation of targeted agents within standard treatment algorithms have resulted in incremental survival gains for HER2(+) MBC patients over time, while outcome of HR(+) patients remained stable, reflecting adoption patterns of modern therapeutic options. Nevertheless, despite advances in early diagnosis and treatment, the outcome of patients with TNBC remains poor, due to early recurrences and resistance to treatment, highlighting the need for effective treatment options.

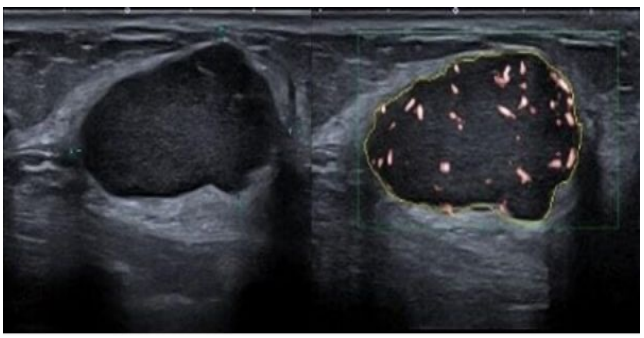
Keywords: metastatic breast cancer, demography, survival

Figure 1



56 y/o woman with dense breasts on screening mammography (not shown), which did not show any lesion. On screening US examination, a hyperechoic heterogeneous solid mass with indistinct margins was detected which showed minimal internal vascularity on Doppler imaging.

Figure 2



US demonstrates a circumscribed hypo-anechoic mass resembling a complicated cyst (left); however the lesion has internal hypervascularity on superb microvascular imaging (right).

Table 1

SHAPE r	ound/oval	11 (78.57 %)
	irregular 3	(21.43%)
MARGIN	not circumscribed	9 (64.29 %)
	circumscribed 5	(35.71 %)
DENSITY	dense	10 (71.43 %)
	isodense 4	(28.57 %)
CALCIFICATION	none	12 (85.71 %)
	present 2	(14.29 %)
BI-RADS	category 4-5	9 (64.29 %)
	category 3	5 (35.71 %)

Table 2

SHAPE r	ound/oval	15 (93.75 %)
	irregular 1	(6.25 %)
MARGIN c	ircumscribed 6	(37.50 %)
	not circumscribed	10 (62.50 %)
ORIENTATION	parallel	13 (81.25 %)
	non-parallel	3 (18.75 %)
ECHOGENICITY	iso/hyperechoic	10 (62.50 %)
	hypoechoic	3 (18.75 %)
	cyst-like	3 (18.75 %)
POSTERIOR FEATURES	none	12 (75.00 %)
	enhancement 4	(25.00 %)
VASCULARITY	vascular 6	(50.00 %)
	non-vascular 6	(50.00 %)
ELASTICITY	hard	2 (50.00 %)
	soft	2 (50.00 %)
BI-RADS	category 4-5	12 (75.00 %)
	category 3	4 (25.00 %)

US CHARACTERISTICS (n:16)

Table 1. Patient and disease characteristics

!	!	Cohort I		!	Cohort II	
!	Recurrent (n=307)	De novo (n=334)	p-value	Recurrent (n=415)	De novo (n=325)	p-value
Age, median (min-max)	46 (22-80)	49 (17-84)	<0.001	47 (20-81)	52 (23-91)	<0.001
Pathology subtypes, n (%)	n=262	n=299		n=373	n=282	
HR(+)	153 (58.4)	157 (52.5)		251 (67.3)	194 (68.8)	
HER2(+)	67 (25.6)	116 (38.8)	<0.001	77 (20.6)	73 (25.9)	0.007
TNBC	42 (16.0)	26 (8.7)		45 (12.1)	15 (5.3)	
HR(+) subgroups, n (%)	n=153	n=157		n=251	n=194	
Luminal A	59 (38.6)	69 (43.9)	0.335	99 (39.4)	65 (33.5)	0.198
Luminal B	94 (61.4)	88 (56.1)		152 (60.6)	129 (66.5)	
Stage at early disease diagnosis, n (%)	n=262		!	n=357		!
I	29 (11.1)	NA		45 (12.6)	NA	
II	98 (37.4)	NA	NA	131 (36.7)	NA	NA
III	135 (51.5)	NA		181 (50.7)	NA	
Metastatic Sites, n (%)		!	!	!	!	!
Bone-only	137 (44.6)	155 (46.4)		200 (48.2)	178 (54.8)	
Visceral	140 (45.6)	170 (50.9)	<0.001	176 (42.4)	136 (41.8)	0.003
Brain	21 (6.8)	2 (0.6)		30 (7.2)	5 (1.5)	

HR(+); Hormone receptor positive, TNBC; Triple-negative breast cancer

Table 2. Progression-free survival (PFS) and overall survival (OS) results of patients.

	COHORT I				COHORT II			
PATHOLOGY SUBTYPES	Events/total number, n	Recurrent	De-novo	p-value	Events/total number, n	Recurrent	De-novo	p-value
HR(+)								
OS	221/310	109/153	112/157		203/444	116/250	87/194	
Median (95% CI), months		49 (43-55)	57 (46-68)	0.232		48 (40-56)	52 (47-57)	0.763
PFS	285/310	141/153	144/157		365/445	211/251	154/194	
Median (95% CI), months		18 (15-21)	21 (18-24)	0.412		17 (13-21)	20 (18-22)	0.282
Luminal A								
OS	85/128	41/59	44/69		63/163	35/98	28/65	
Median (95% CI), months		53 (40-66)	70 (52-88)	0.253		76 (49-103)	53 (43-63)	0.407
PFS	116/128	54/59	62/69		133/164	85/99	48/65	
Median (95% CI), months		17 (14-20)	22 (15-29)	0.359		22 (16-28)	20 (17-23)	0.560
Luminal B		!	!	!	!	!	!	!
OS	136/182	68/94	68/88		140/281	81/152	59/129	
Median (95% CI), months		48 (40-56)	52 (45-59)	0.621		44 (39-49)	49 (43-55)	0.270
PFS	169/182	87/94	82/88		232/281	126/152	106/129	
Median (95% CI), months		21 (16-26)	17 (14-20)	0.834		15 (11-19)	21 (18-24)	0.264
HER2(+)		!	!	!	!	!	!	!
OS	117/183	43/67	74/116	0.689	51/150	30/77	21/73	0.134
1-year survival, %		86.4	89.6		!	88.2	97.3	
2-year survival, %		73.1	74.6		!	79.8	91.4	
3-year survival, %		54.3	62.0		!	68.2	84.7	
PFS	82/178	40/64	42/114		65/144	44/72	21/72	
Median (95% CI), months		12 (9-15)	17 (15-19)	0.460		20 (16-24)	29 (19-39)	0.053
TNBC		!	!	!	!	!	!	!
OS	52/68	31/42	21/26		43/59	33/45	10/14	
Median (95% CI), months		42 (32-52)	22 (11-33)	0.247		20 (14-26)	26 (13-39)	0.598
PFS	34/58	19/35	15/23		39/56	30/42	9/14	
Median (95% CI), months		15 (11-19)	9 (6-12)	0.107		7 (5-9)	8 (6-10)	0.822

!

HR(+); Hormone receptor positive, TNBC; Triple-negative breast cancer

[O-12]
CDK 4/6 INHIBITOR (PALBOCICLIB AND RIBOCICLIB) + ENDOCRINE THERAPY (ET) SECONDARY TO INCREASED IN CREATININE LEVEL; REAL LIFE DATA

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An increased level of creatinine secondary to abemaciclib,has been reported in studies. However, neither ribociclib nor palbociclib Phase 3 studies reported treatment-related creatinine elevation, so we aimed to share real-life data of our patients regarding increased level of creatinine due to these treatments.Methods: Patients aged 18 years and older, diagnosed with metastatic HR positive HER2 negative breast cancer and treated with ribociclib and palbociclib and ET combination were included in the study.Results: The median age of 106 patients included in our study was 52.45 (26.26 -90.25). Median follow-up time was 7.4 months, progression-free survival time of the patients was 11.75 months and overall survival time was 14.08 months. The mean order of use of CDK 4/6 inhibitors was 2.44. 44.3% (n=47) of the patients were de novo metastatic. 54.7 % (n=58) of the patients were using palbociclib, and 45.3% (n=48) were using ribociclib. The increase in creatinine level developed in 17.9% (n=19) of the patients. The increase in creatinine level was grade 1 in 8.5% (and=9), grade 2 in 8.5% (n=9), and grade 3 in 0.9%(n=1) of patients.63.2% (n=12) of the patients who developed creatinine elevation were using ribociclib and 36.8% (n=7) were using palbociclib. Elevated serum creatinine occurred in 25% (n=12) of patients using ribociclib and 12.1% (n=7) of patients using palbociclib.The relationship between elevated serum creatinine, age, ECOG PS, number of comorbidities, basal serum BUN, creatinine, BUN/creatinine ratio, uric acid, and GFR levels are shown in Table-1.No dose reduction or treatment discontinuation was made in any of the patients due to level of creatinine.Conclusions: Increase in serum creatinine secondary to ribociclib and palbociclib treatments has not been previously reported. In our study, it was revealed that the increase in creatinine was not associated with age and ECOG PS, but with the number of kidney function tests and comorbidities.

Keywords: CDK 4/6 inhibitor, increase in creatinine, palbociclib, ribociclib

Tablo 1: Factors associated with increased in serum creatinine

Factors	Increase in level of creatinine / Normal level of creatinine Total N (19/ 87) n (%)	P value
Age <65 year >= 65 year	12/68 (63.2%) 7 /19 (36.8%)	P=0.140
ECOG PS 0 1 2	11/65 (74.7%) 5 /17 (19.5%) 3 /5 (5.7%)	p=0.218
Number of comorbidity Absent >= 1	2 /53 (10.5 %) 15 /34 (89.5%)	p=<0.001
BUN <13.5 mg/dl >=13.5 mg/dl	3 / 49 (15.8 %) 16/38 (84.2%)	p=0.001
Creatinine <0.66 mg/dl >=0.66 mg/dl	2 /46 (10.5%) 17/41 (89.5 %)	p=0.001
BUN/Creatinin ratio <19.95 >=19.95	12/82 (63.2%) 7 /5 (36.8%)	p=0.001
GFR <96.05 ml/dk >= 96.05 ml/dk	2/ 38 (10.5%) 17/ 49 (89.5 %)	p=<0.001
Urıc acid < 4.69 mg/dl >= 4.69 mg/dl	4 / 44 (23.5 %) 13/ 35 (76.5%)	p=0.015

[O-13]
FAT LOSS SOLUTIONS FOR OVERWEIGHT BREAST CANCER PATIENTS WITH SLEEP DISTURBANCES

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Obesity lowers efficacy during chemotherapy, Anastrozole and Fulvestrant treatments and increases side effects during all stages of breast cancer treatment. By the detrimental metabolic impact, sleep quality is one of the factors important to address when trying to help these patients improve their oncologic outcome.

Seeking solutions, we randomised 50 overweight ER+ breast cancer patients with sleep disturbances –of which 16 with depression– to follow a diet high in protein, calcium, omega-3 fatty acids, pre- and probiotics (D) or the diet and a Karolinska type sleep journal intervention (D+SJ) for 8 weeks. Based on their answers, we asked patients to follow set sleeping and wake-up hours and to not sleep during the day.

8 patients from the D+SJ group left the study, 5 being depressive. D group lost 2.31±2.86% body fat (BF, p= 0.001), and 0.76±1.16% visceral fat (VF, p=0.001); with no muscle loss and no statistical differences between patients with or without depression. D+SJ group lost 2.16±2.35% BF (p= 0.002), and 0.86±1.24% VF (p=0.005) with no muscle loss; but depressive obtained no statistically significant results neither for weight loss, nor for fat loss.

Besides the overtiring effect of the sleep journal intervention, the negative results observed in patients with depression can be explained by 3 factors. First, the sedative effect of antidepressants affects both the mind and the body, depressive patients reporting less drive to practice sport. Second, antidepressants decrease eating pleasure – many compensating this with overeating followed by self-imposed restrictive dieting. And third, depression associates leptin resistance, increasing cravings and decreasing satiety which can lead to episodes of emotional eating.

Overweight breast cancer patients with sleep disturbances improve body composition after increasing sleep quality. But nutrition and sleep journal interventions alone are insufficient in patients with depression, physical exercise and psychologic support being essential to counteract obesity.

Keywords: breast cancer and obesity, sleep disturbances, metabolic impact of antidepressants, eating behavior impact of depression, oncology nutrition

Body composition comparison based on depression

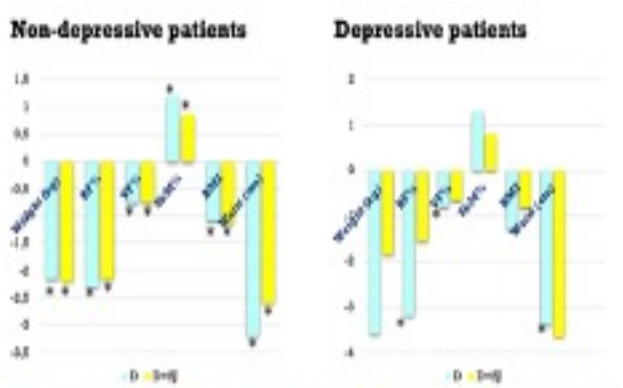

FIG. 2: BODY COMPOSITION COMPARISON BASED ON DEPRESSION

There was no fat loss difference between patients with or without depression in the Diet group, but depressive patients in Diet+Sleep Journal group obtained no statistically significant results neither for weight loss, nor for fat loss.

Weight and fat loss comparison between groups

Group	Depression	W (kg)			BF%			VF%		
		Mean	SD	P	Mean	SD	P	Mean	SD	P
Diet	No (n=19)	2.16	2.51	0.001*	2.31	2.86	0.001*	0.76	1.16	0.001*
	Yes (n=6)	3.62	3.77	0.099	3.20	2.48	0.045*	0.80	0.44	0.018*
Diet + SJ	No (n=12)	2.21	2.93	0.007*	2.16	2.35	0.002*	0.76	0.97	0.005*
	Yes (n=5)	1.86	3.67	0.269	1.56	3.08	0.268	0.66	0.81	0.102

FIG. 1: WEIGHT AND FAT LOSS COMPARISON BETWEEN GROUPS

Diet group lost 2.31±2.86% body fat (BF, p= 0.001), and 0.76±1.16% visceral fat (VF, p=0.001). D+SJ group lost 2.16±2.35% BF (p= 0.002), and 0.86±1.24% VF (p=0.005) - both groups with no muscle loss.

[O-14]
ADJUVANT ENDOCRINE THERAPY ADHERENCE AND AFFECTING FACTORS IN BREAST CANCER SURVIVORS

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Aim: Treatment with adjuvant endocrine therapy (AET) reduces the recurrence and mortality of early hormone receptor – positive (HR+) breast cancer in both pre- and postmenopausal females. Five years of AET safely reduces 15-year risks of breast cancer recurrence and death. The aim of this study was to investigate AET adherence and affecting factors in breast cancer survivors.

Methods: Designed as a descriptive and prospective study, this research was conducted in 2019-2020 with the participation of 531 breast cancer survivors who women treated at the Senology Institute of a hospital in Istanbul. Inclusion criteria were having completed treatment for early HR+ breast cancer, being prescribe AET, being aged 18 years or above. The data were collected via the Patient Information Form and Morisky Medication Adherence Scale-8 (MMAS-8).

Results: The mean age of the participants was 44.92±6.50 years, and the mean duration of AET use was 834.4±685.72 days. The mean total score of the women's MMAS-8 score was 6.86±1.39. Women's current age (p=0.006), age at diagnosis (P=0.002), employment status (p=0.028), chronic disease status (P=0.018), drug-induced changes in the formation of emotional state and sexual arousal (P=0.012, P=0.004) and side effects to affect the daily lives (p<0.001) were found to effect treatment adherence.

Conclusion: A score of MMAS-8 >= 6 is defined as a person's compliance with the treatment. The treatment compliance of the women participating in the study was high. However, the individual characteristics of women and the side effects of the treatment affect their medication compliance. In order to increase compliance with this treatment that reduces the risk of mortality, nurses should explain the importance of the medication to women, identify and eliminate factors that affect compliance, and inform women about evidence-based interventions (medication box, reminders, etc.) that will increase drug compliance.

Keywords: adjuvant endocrine therapy, breast cancer survivors, hormonal therapy, medication adherence

[O-15]
PERFORMANCE OF RADIOLOGISTS WHEN INTERPRETING BREAST SCREENING MAMMOGRAPHY: A STUDY FROM THE MIDDLE EAST

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Purpose: The variability in radiologists' performance when reading mammograms is a concern across both screening and diagnostic mammography. Identifying causal factors for this variability is a first step toward optimizing diagnostic accuracy. This study aims to monitor diagnostic accuracy amongst Jordanian mammography readers and identify parameters linked to higher levels of performance.

Materials and Methods; In this study, we have used the BreastScreen Reader Assessment Strategy (BREAST) platform to allow 27 radiologists to read a case set of 60 digital mammograms, of which 20 cases included cancers. Each case consisted of the four standard craniocaudal (CC) and mediolateral oblique (MLO) projections. All radiologists were licensed to read mammograms at their workplaces. Each reader was asked to locate any malignancies, provide a confidence rating based on a scale of 1-5, and identify the type of appearance. All images were displayed on an 8 MP monitor, supported by radiology workstations with full image manipulation facilities. Results were evaluated using receiver operating characteristic (ROC) analyses and the area under the curve (AUC). Demographics were obtained from each radiologist regarding their experience, qualifications, breast reading activities, and physical characteristics, and these were correlated against ROC scores using Spearman techniques.

Results: The mean ROC curve (AUC) was 0.78 (95% confidence interval (CI): 0.75, 0.82). Higher performance was directly related to number of years since professional qualification (r=0.69; p = 0.001), number of years reading breast images (r= 0.62; r= 0.005) and number of mammography images read per week (r= 0.57; p= 0.015). On the other hand, higher performance was inversely linked to the frequency of reading other modalities per week (r= - 0.48; p= 001). No other statistical differences were significant.

Conclusion: Radiologists' performance can be improved by increasing the number of mammogram reads per week, and by focusing their duties on mammogram reading.

Keywords: breast imaging, mammography, cancer, radiologists

[O-16]
CONTRIBUTIONS OF AI IN THE DAILY WORKFLOW OF A BREAST IMAGING CLINIC

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Objective: To compare breast density and Breast Imaging Reporting and Data System (BI-RADS) classifications of radiologists with various experience levels and artificial intelligence.

Materials-Methods: In this retrospective study, mammograms (MMG) of 506 patients who were admitted to a single breast imaging clinic between April and July 2022 were evaluated by five radiologists with four different levels of experience in breast radiology. A commercial AI assigned MMGs an overall score between 0-100, depending on the likelihood of malignancy. A risk score threshold was established at 23.17 to necessitate recalls. A total of 115 patients required additional imaging modalities and 14 pathologically confirmed cancers were detected.

Intraclass classification coefficient (ICC) estimates and their 95% confidence intervals were obtained for density scores with and without AI's scores. Correlation tables for each reader for both density and cancer risk was created. Paired simulations of all readers per the routine screening protocol were performed and recall rates were assessed.

Results: ICC estimates showed good reliability between readers with and without the inclusion of AI (ICC=0.781 with AI and ICC=0.842 without AI, p-value < 0.001 for both) regarding breast density and moderate reliability among radiologists for cancer risk (ICC=0.567, p-value<0.001). AI density classifications were less dense compared to radiologists of all experience levels. Simulations with AI as a second-reader recalled 7.7±0.85% of patients compared to two radiologists' 5.49±0.59% recall rate, which resulted in 1.6±0.48 more cancers being detected.

Conclusions: These findings suggest that AI tends to downgrade breast density scores and using AI as a second reader in screening programs may enable the diagnosis of more cancers but at the cost of a greater recall rate.

Keywords: mammogram, breast cancer, artificial intelligence, breast density

Breast Density Classification Correlation Table

professionel experience respectively, while number 6 represents AI system.

BI-RADS Classification Correlation Table

BI-RADS Classification Correlation Table. Numbers from 1-5 represent radiologists according to their professionel experience respectively, while number 6 represents AI system.

[O-17]
CLINICAL AND PATHOLOGICAL CHARACTERISTICS OF AI-MISSED CANCERS

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Objective: To evaluate AI-detected and missed breast cancers' tumor characteristics and patient demographics.

Materials-Methods: In this retrospective study, 381 pathology-confirmed cancer cases from a single radiology clinic were analyzed. All mammograms (MMG) were analyzed with a commercial artificial intelligence-computer-assisted diagnosis (AI-CAD) system during the initial evaluation. This AI-CAD system assigned MMGs an overall score between 0-100, depending on the likelihood of malignancy. A risk score threshold was established at 23.17 with 90% specificity in order to attain similar recall rates to radiologists. This threshold correctly labeled 79.2% but failed to detect 20.8% of cancers. Tumor and patient-related characteristics were evaluated. The need for informed consent was waived by the ethics committee in this retrospective study. As all cases in this study are pathology-confirmed cases, these findings are not indicative of the AI-CAD's accuracy but rather the characteristics of cancers that can be detected with this AI-CAD. Normality, skewness, and kurtosis of the data were inspected where applicable. Mann-Whitney U test, chi-squared test, Fisher's exact test, and two proportion Z test were used for association interpretation.

Results: AI-detected cancers were more likely to have microcalcifications (RR=1.13, p-value ~ 0.03), and 1.32-fold larger in size than non-detected cancers (p-value < 0.001). There were no differences in demographic information, presentation, breast density, history of breast surgery, tumor size, ER, PR and HER2 status, Ki-67 levels, as well as molecular subtypes.

Conclusions: This study showed that AI-CAD system is more likely to detect cancers with microcalcifications and/or tumors that are relatively larger.

Keywords: artificial intelligence, breast cancer, mammogram, breast cancer characteristics

[O-18]
COMPARISON OF AUTOMATED BREAST ULTRASOUND AND HANDHELD ULTRASOUND REGARDING TIME SAVINGS AND OPERATIONAL COSTS IN THE WORKFLOW OF A BREAST CLINIC

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Objective: Breast ultrasound can detect additional cancers compared to mammography alone. Handheld ultrasound (HHUS), performed by radiologists, requires high training, is time consuming, and lacks reproducibility and standardization. Automated breast ultrasound (ABUS) is performed by technicians. It provides standardized acquisition protocols with separation of image acquisition and interpretation, improving reproducibility and reducing operator dependency and radiologist workload. The aim of this study is to evaluate the radiologists time savings and operational costs of ABUS versus HHUS.

Materials and Methods: This study was approved by our Institutional Review Board, and the informed consent was waived. One hundred fifty-three patients (age range: 21-81 years) underwent both HHUS and ABUS. The time required for the ABUS scanning and radiologist interpretation and the combined scanning and interpretation time for HHUS for screening and diagnostic exams was recorded. One-way ANOVA test was used to compare the methods, and Cohen Kappa statistics were used to achieve the agreement levels. Finally, the cost of the methods was compared by completing a cost analysis.

Results: The overall mean examination time required for ABUS examination was 676.2 seconds SD±145.42, the mean scan time performed by the technologists was 411.76 seconds SD±67.79, and the mean radiologist time was 234.01 seconds SD±81.88. The overall mean examination time required for HHUS was 452.52 seconds, SD±171.26, and the mean scan time and radiologist time were 419.62 seconds, SD±143.24.

The reduced time translated into an annual savings of 7,369 TL/month, and the clinic comprehended a 22% savings in operational costs with ABUS.

Conclusions: The radiologist's time is decreased with ABUS in screening cases. The time savings persist regardless of the type of exam (screening or diagnostic). While a second-look conventional ultrasound is required for diagnostic cases, ABUS still saved radiologists time by enabling a focused approach instead of the complete evaluation of both breasts.

Keywords: automated breast ultrasound, handheld ultrasound, radiologist, time savings, operational cost

[O-19]
ESTIMATING THE SKIN FLAP THICKNESS WITH BREAST MRI, A CASE SERIES OF 438 SKIN AND NIPPLE SPARING MASTECTOMIES WITH IMPLANT RECONSTRUCTIONS

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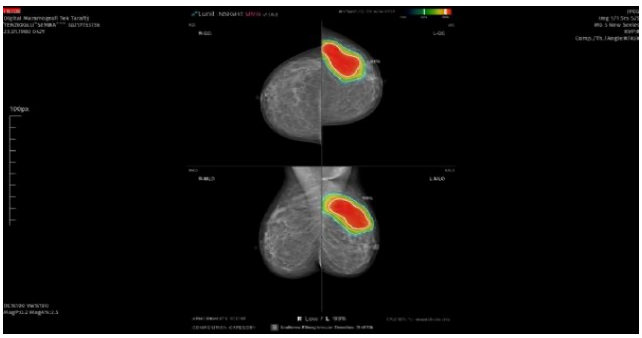
For many years MRI is a necessary tool for detecting multifocality and multicentricity in breast cancer patients to select surgical procedure. As the number of skin sparing and nipple sparing mastectomy demands increased and these surgeries became more available, several skin complications increased after implant reconstruction. These complications were mainly skin necrosis, which were generally found to be related with skin thickness and implant size selection. The surgery industry created some several products to deal with these complications with mesh technologies, acellular dermal matrices, low weight implants, but no product could prevent a complication of a thin skin flap. The main solution to prevent complications is still, a well planned surgery before operation. The thickness of skin, determining the tumor and duct distance to subcutaneous vascular and neural bodies are the most important points to take care of. In order to prevent or decrease skin complications beginning from 2016, MRI subtraction images and simple distance measurements were observed in 438 skin sparing and nipple sparing mastectomies with implant reconstructions. Implant types (size, weight and texture), nipple preserving modalities (on flap NAC or a free graft technique) were considered according to MRI based measurements. The DCIS component of tumors were carefully inspected to perform immediate or delayed procedure and also axillary involvement were considered to understand the possible effects of post surgery irradiation on skin quality. 438 procedures, 337 nipple sparing, 101 skin sparing were planned with MRI. Complication rates were investigated, total implant failure was 3 cases, partial skin necrosis were 28 cases, NAC necrosis were 14. Only 3 cases of total implant failure were delayed to a second procedure of latissimus dorsi reconstruction. MRI is an important tool for planning mastectomy and reconstruction procedures.

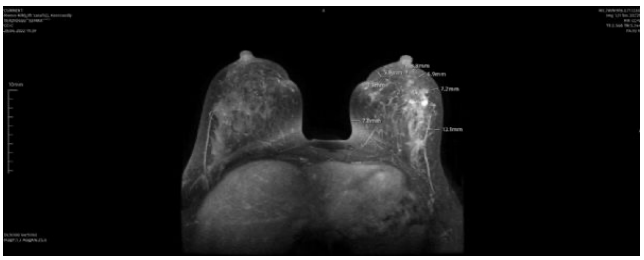
Keywords: implant reconstruction, mastectomy, breast cancer, complication prevention in bresat surgery, MRI in breast surgery planning

AI reported MAmmogram



AI reported mammogram is a promising tool in breast surgery. The coloured images of AI reported mammogram may show the surgeon of targeted resection margins

Preoperative Measurements



The measurements of lesion and skin distance is considered in subtraction images of MRI

[O-20]
ANALYSIS OF SKIN FLAP THICKNESS AFTER SKIN-SPARING AND NIPPLE SPARING MASTECTOMY

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Purpose: Residual breast tissue (RBT) after skin-sparing mastectomy (SSM), and nipple-sparing mastectom (NSM) might be a risk factor for local recurrence or development of new cancer. Skin flap thickness (SFT) has shown to be an indicator of RBT. In this study, SFT of breast cancer patients who underwent post-mastectomy radiotherapy (PMRT) after SSM, and NSM followed by early implant reconstruction were evaluated.

Methods-Materials: 94 women treated with a median age of 41.64±7.73 years, were retrospectively analysed. SFT was measured by a single radiologist using CT images, which were obtained for PMRT planning (Somatom 2x192, Siemens). Each breast was measured according to clock positions on axial images, 12 corresponding measurements were made including the retro areola. 13 measurements on axial and 3 on sagittal plane were done to decrease the error due to inhomogeneity. Skin itself and muscle were not included in measurements. The impact of variables age, menopause, body mass index (BMI), localization, surgery, axillary intervention, number of dissected lymph nodes, size, and pathological type on the STF were examined using logistic regression models (IBM SPSS18 © Copyright Inc)

Results: Median SFT of breast and primary tumor area were 5,6 mm and 6 mm consecutively. Patients with invasive ductal histology had high STF than lobular. 6.29 mm (IQR 25-75:4.49-8.9) vs 3.44mm (IQR 25-75: 1.63) -5.2) (p=0.031). Median SFT was also higher in patients who received chemotherapy than who did not (p=0.020). A positive correlation was found between patients with a high BMI and increased SFT(p=0,006). None of the variables had an impact in multiparametric tests.

Conclusions: This study demonstrated that SFT could be variable and prevalent.Considering oncological safety, a thin flap with no RBT should be obtained particularly at the primary tumor site.

Keywords: skin, flap, thickness

Patient characteristics

Table 1. Patient characteristics

Variables	All patients (n=94)
Age (years), mean±SD	41,64±7,73
BMI (kg/m²), mean±SD	24,21±3,42
Menopoz, n(%)	21(22,3)
Laterality, n(%)	
Right	41(43,6)
Left	53(56,4)
Localization, n(%)	
Unknown	8(8,5)
Sağ ADK	3(3,2)
Sağ AİK	5(5,3)
Sağ Santral	10(10,6)
Sağ ÜDK	14(14,9)
Sağ ÜİK	5(5,3)
Sol ADK	8(8,5)
Sol AİK	5(5,3)
Sol Santral	7(7,4)
Sol ÜDK	22(23,4)
Sol ÜİK	7(7,4)
Tumor size, median(IQR)	30(21-50)
Aksiller diseksiyon, n(%)	65(69,1)
Aksillanın durumu, median(IQR) (n=65)	18(13-23)
SNLB, median()QR) (n=29)	3(3-4)
Cerrahi, n(%)	
Nipple protective	54(57,4)
Skin protective	40(42,6)
Endokrin tedavi, n(%)	72(76,6)
KT, n(%)	86(91,5)
Histolojik tanı, n(%)	
İnvazif duktal karsinom	75(79,8)
İnvazif lobüler karsinom	12(12,8)
Diğer	7(7,4)
Neoadjuvan, n(%)	40(42,6)
Cerrahi, n(%)	
CU	79(84)
Others	15(16)
Skin flap thickness (birim?), median(IQR)	
Sagittal 12	5,6(3,6-7,7)
RA	5,3(2,8-8)
Sagittal 6	5,6(3,4-9,3)
Orjinlenme flep kalınlığı	5,65(4,16-8,9)
Tümör yeri flep kalınlığı (n=86)	6(3,5-8,3)

[O-21]
THE IMMUNE MICROENVIRONMENT CHARACTERISATION AND DYNAMICS IN HORMONE RECEPTOR-POSITIVE BREAST CANCER BEFORE AND AFTER ENDOCRINE THERAPY

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Background: Oestrogen receptor positive (ER+)/HER-2 negative breast cancer (BC) is considered to be an immunologically cold tumour. Therefore, the tumour microenvironment (TME) of ER+/HER-2 negative BC is understudied. The aim of this study is to investigate the TME and the immune response during neoadjuvant endocrine therapy (NET) and to correlate this with the treatment response in a real life setting.

Methods: Expressions of immune checkpoint receptors and immune cells were examined immunohistochemically in pre- and post- NET on a cohort of 56 ER+/HER-2 negative BC patients. They were treated with tamoxifen (n=16) or an aromatase inhibitor (n=40) for a median duration of 6 months (1-32) months. Monoclonal antibodies for PDL-1, PD-1, TIM-3, LAG-3, CTLA-4, CD4, CD68 and FOXP3 were performed. All staining procedures were done according to validated protocols and scoring was done by a pathologist specialized in breast cancer. Positivity was defined as staining >1% on TILs. Response to NET was evaluated according to tumour size change on imaging and Ki-67 change.

Results: The median age was 61.02 (37–90) years. Diameter of tumour size decreased with a median of 4.5(Q1:1%- Q3:13.2%) ($p< 0.001$) and the value of Ki-67 value decreased significantly after NET ($p<0.001$). An increase in PD-L1 expression after NET showed a trend towards significant ($p=0.088$) and CD-4+ T cells significantly increased after NET (Wilcoxon signed rank $p=0.03$). A good response to NET defined as a decrease in tumour size and/or decrease of Ki-67 was found to be associated with a longer duration of NET, a change of CD4+T-cells, and a higher number of CD68+ tumour-associated macrophages before the start of NET.

Conclusion: The immune microenvironment plays an important role in ER+/HER-2 negative BC. NET influences the composition and/or functional state of the infiltrating immune cells. Furthermore, changes in the immune microenvironment are also associated with treatment response.

Keywords: hormone receptor positive breast cancer, neoadjuvant, endocrine therapy, tumor infiltrating lymphocytes, biomarkers

Comparison of continuous and categorical parameters before and after NET.

	Continuous parameters (median (min-max))	Continuous parameters (median (min-max))	
	Before NET	After NET	p value
Tumour Size	23.5 (6-65)	13 (0-70)	<0.001
Ki-67	15 (1-45)	3 (1-45)	<0.001
sTIL	5 (1-85)	5 (1-80)	0.08
CD-68	15 (5-40)	10 (5-50)	0.11
CD-4	5 (1-13)	10 (1-70)	0.03
FOXP3	22.5 (0-60)	15 (1-60)	0.14
FOXP3/CD-4	2.307 (0-15)	1 (0.03-12)	0.04
	Categorical parameters n (%)	Categorical parameters n (%)	
	Before NET	After NET	p value
PD-L1	4 (9)	11 (25)	0.088
PD-1	8 (18)	15 (34)	0.16
CTLA-4	10 (23)	12 (27)	0.69
TIM-3	28 (64)	23 (52)	0.53
LAG-3	19 (43)	29 (66)	0.22

Comparison of the continuous parameters was done using Wilcoxon signed rank test. Comparison of the categorical parameters was done using a Chi-square test. sTIL: stromal tumour infiltrating lymphocytes and NET: neoadjuvant endocrine therapy. Bold values denote statistical significance at the $p < 0.05$ level.

[O-22]
PROGNOSTIC NUTRITIONAL INDEX (PNI) IN PATIENTS WITH HR + HER-2 NEGATIVE METASTATIC BREAST CANCER TREATED WITH CDK 4/6 INHIBITOR + ENDOCRINE THERAPY AS A USEFUL PROGNOSTIC INDICATOR

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Background: The prognostic nutritional index (PNI), calculated as serum albumin(g/L) + 5 x total lymphocyte count (109/L), is a simple and applicable marker used to evaluate nutritional and immune status, with prognostic and predictive value in various solid cancers. In our study, we aimed to reveal the predictive and prognostic value of PNI in breast cancer patients who treated CDK 4/6 inhibitor + endocrine therapy, which was not previously reported in the literature.

Method: In the study, patients with HR + HER-2 negative metastatic breast cancer who received endocrine therapy with ribociclib and palbociclib were evaluated retrospectively. The optimal cutoff value of PNI by mean value stratified patients into a low-PNI group (<50.4) and a high PNI group (>=50.4).

Results: The median age of 106 patients included in our study was 52.45 years (26.26 -90.25). Characteristics of the patient population are shown in Table-1. Median follow-up duration was 7.4 months, duration of PFS was 11.75 months and duration of OS was 14.08 months. When the prognostic value of PNI on OS was evaluated, the median OS duration of the group with PNI >50.4 was statistically longer than the group with PNI< 50.4, at 24.41 months versus 15.96 months (p=0.016) (Figure-1). Of the patients, 42.5% (n=45) had partial response, 15.2% (n=16) had a stable response, 20.8% (n=22) had progressed, and the response status of 21.7% (n=23) was unknown. When the predictiveness of PNI on response was evaluated, numerically, although not statistically significant, the response rate of the patients in the PNI >50.4 group was higher than the PNI <50.4 group (61.1% vs 53.8%, respectively) (p=0.301). 91.5% (n=97)of the patients are still alive.

Conclusion: This study showed for the first time that PNI has predictive and prognostic value in metastatic breast cancer patients treated with CDK 4/6 inhibitor, as in other solid cancers.

Keywords: CDK 4/6 inhibitor, palbociclib, prognostic nutritional index (PNI), prognostic factor, ribociclib

Fıgure-1: According to PNI mOS (Kaplan Meier Analysis)

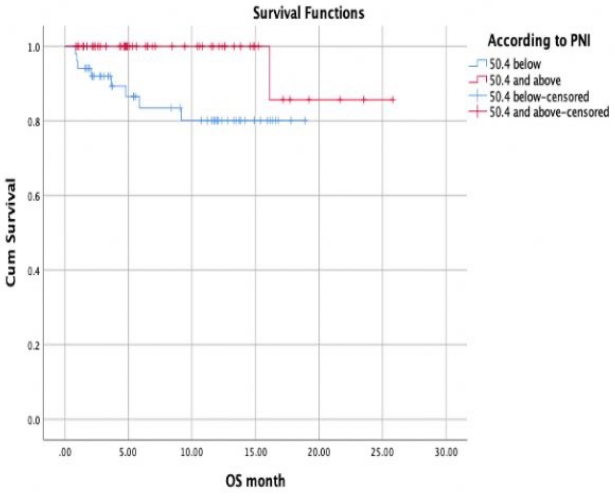

Table-1: Sociodemographic and Clinicopathologic Caracteristics of Patients

Characteristics (All of group) n	(%)
Sex Female Male	 103 (97,1 %) 3 (2,9 %)
Performance Status ECOG PS 0 ECOG PS 1 ECOG PS 2	 76 (71.7 %) 22 (20.8 %) 8 (7.5 %)
Comorbidity None One Two or more	 55 (51.9 %) 27 (25.5%) 24 (22,6 %)
Menopause Status Postmenopausal Premenopausal Perimenopausal	 80 (75,5%) 22 (20.8%) 1 (0.9 %)
Histological Subtype Invasive ductal carcinoma (IDC) Invasive carcinoma Invasive lobular carcinoma (ILC) Mixed type (IDC+ ILC) Mucinous Tubulolobuler Unknown	 31 (29.2 %) 26 (24.5 %) 15 (14.2 %) 15 (14.2 %) 4 (3.8. %) 1 (1,2 %) 14 (13,2 %)
Metastasis Site Bone Lymph node Liver Lung Brain Others (pleura,adrenal,cardiac,bone marrow, meninges,skin)	 84 (79.2 %) 71 (67 %) 32 (30,2 %) 29 (27.4 %) 5 (4.7 %) 21 (19,8 %)
CDK 4/6 Inhibitor Choice Palbociclib Ribociclib	 58 (54.7%) 48 (45.3 %)

[O-23]
A RANDOMIZED CLINICAL TRIAL: THE EFFECTS OF PREOPERATIVE PROTEIN RESTRICTED DIET AND PHYSICAL ACTIVITY ON TUMOR CHARACTERISTICS AND PROGRESSION OF EARLY BREAST CANCERS

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Introduction: This study examines the changes in tumor characteristics and progression in patients with early-stage breast cancer from diagnosis until surgery through a protein-restricted diet and physical exercise.

Materials-Methods: Eighty patients diagnosed with breast cancer in our clinic and clinically stage I-II were divided into two groups. Patients in the study group were given an isocaloric protein-restricted (7%) diet and 10,000-step walking exercise every three days under the guidance of a dietitian. The patients in the control group were also given an isocaloric 21% protein diet. Blood was drawn from the patients on the morning of the first day of diet and the morning of the surgery day. Serum markers such as IGF-1, TNFα, FGF, VEGF, insulin, and sex hormones were checked from blood samples. In addition, the patients' tumor diameters and histopathological Ki67 ratios were compared before and after diet.

Results: The results were compared separately within the ER (+), PR (+), HER2 (-), Luminal A, and Luminal B HER2 (-) subgroups. It was observed that the tumor diameters of the patients in the control group increased, and Ki67 ratios increased until the day of surgery, while there was no significant increase in tumor size and Ki67 ratio in the study group. In addition, a significant decrease was detected in the IGF-1, TNFα, and VEGF levels of the patients in the study group.

Conclusion: The prolongation of the process from the time of diagnosis to the day of surgery in patients with breast cancer may adversely affect the prognosis of the tumor. In cases such as the Covid 19 pandemic, preoperative herpes labialis infection, and upper respiratory tract infection, where this process may be prolonged, it may be possible to reduce or stop tumor progression by making protein-restricted diet and physical activity.

Keywords: breast cancer, protein-restricted diet, Ki67, IGF-1, VEGF

[O-24]
THE ROLE OF SHEARWAVE ELASTOGRAPHY (SWE) IN PREDICTION OF TUMOR INFILTRAN LYMPHOCYTE (TIL) RATE IN BREAST CANCER

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Introduction and Aim: We aimed to investigate the role of parameters obtained by shearwave elastography (SWE) in predicting the ratio of tumor infiltrating lymphocyte (TIL), which is an important prognostic biomarker in breast cancer.

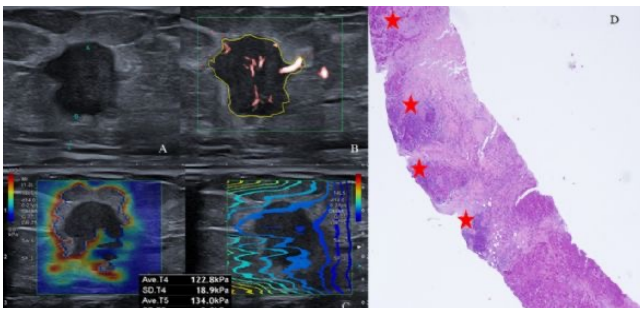
Materials-Methods: After the approval of the university ethics committee, 105 lesions in the BI-RADS-5 category were included in our study. B-mode sonographic characteristics (shape, orientation, contour features and echo pattern), qualitative (stiff-rim sign) and quantitative (E-mean, E-ratio) features obtained by SWE, were noted. The histopathological features of the lesions and the percentage of TIL were determined. Lesions were classified as TIL low (<10%) and TIL high (>10%). Optimum cut-off values were determined according to Youden index. Sensitivity, specificity, negative predictive value and positive predictive values were calculated to determine the TIL rate of the methods.

Results: While the TIL rate was higher at the cut-off value of 10% in a total of 22 of 105 lesions, this rate was lower than 10% in 83 of them. There was no significant difference between the two groups in terms of B-mode imaging characteristics. According to SWE characteristics, E-mean value was significantly higher in the high TIL group (mean 140±17.7 kPa) than in the low group (mean 108.3±35.4) (p=0.001). Stiff rim sign was observed significantly higher in the high TIL group (p=0.001). According to ROC analysis, the area under the curve (AUC) in predicting the TIL ratio of the stiff rim sign was 0.827, the specificity was 70%, the sensitivity was 95%; for the Emean131 kPa cut-off value, AUC was 0.803, specificity was 73%, sensitivity was 82%.

Conclusion: Determination of preoperative TIL rate is very important in predicting patient prognosis and benefit from therapeutic agents. Adding both qualitative and quantitative features of SWE elastography to B-mode USG are helpful techniques in predicting the TIL rate.

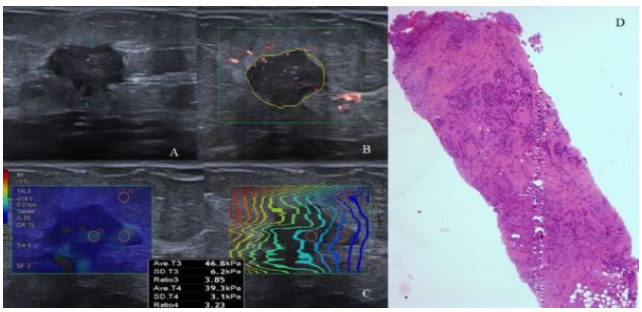
Keywords: breast cancer, shearwave elastography, tumor infiltrating lymphocyte

Figure 1



A 49-year-old patient with palpable mass, a 21x14mm, irregularly, hypoechoic mass 2 cm away from the areola at the 9 o'clock position of the left breast on USG (A). On the Superb microvascular imaging (B), it is noted that vascularization increased. On SWE (C), a 'stiff rim' sign is observed around the lesion. Elasticity values taken from the perilesional area were measured as E-mean 122 and 134 kPa. The biopsy result was reported as invasive ductal carcinoma (grade 2, ER: positive, PR: positive, Cerb-2: negative, Ki-67: 16% and TIL ratio: 15%) in histopathological examination (D)

Figure 2



A 67-year-old patient with palpable mass, a 15x11 mm mass lesion with irregular contours in the periareolar area at the 10 o'clock position of the right breast (A) on USG. Superb microvascular imaging (B) shows a slight increase in vascularization in the lesion. On SWE (C), a relatively homogeneous color coding is observed throughout the lesion as well as around the lesion. It is measured as 47kPa in its highest area of elasticity. The result of tru-cut biopsy was reported as invasive ductal carcinoma (grade: II, ER: positive, PR: positive, Cerb-2: positive, Ki 67 15%, TIL rate 1%).

[O-25]
THE EFFECTIVENESS OF THE ARTIFICIAL INTELLIGENCE ON DISCRIMINATING BENIGN AND MALIGNANT LESIONS ON MAMMOGRAPHY

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Objective: We aimed to evaluate the early results of the artificial Intelligence system on discriminating benign and malignant lesions in our center.

Material-Method: The use of Fujifilm AMULET Innovation™ breast tomosynthesis system with Lunit Insigh™ MMG_v1.1.6.1 Artificial Intelligence(AI) unit at Başkent University Istanbul Hospital started as of 2022. AI comments for all mammograms were recorded prospectively. Patients with microcalcifications interpreted by the breast radiology team as BIRADS 4 and above were investigated. Within this group, AI interpretations were examined in patients diagnosed after surgical resection of tissue. AI's effectiveness in distinguishing between benign, proliferative and malignant lesions was evaluated retrospectively. Patients with palpable lesions, patients with tissue diagnosis via tru-cut biopsy preoperatively and patients with obvious findings of malignancy on mammography were excluded from the study.

Results: Total of 952 mammograms were performed for 465 patients in a 6-month period. Surgery was performed for 18 lesions in 15 patients. Pathological reports revealed 4 benign (Group-1), 10 proliferative (Group-2) and 4 DCIS-malignant (Group-3) lesions. Mean AI risk value was 15% (11-17) for Group-1, 16% (0-47) for Group-2 and 46% (24-81) for Group-3(p=0,0001) (Table-1). Distributions were analyzed for comparison of continuous measurements, wherein the Kruscall-Wallis and the Mann-Whitney U was used for variables with non-parametric distribution. We compared least-squares means post hoc with use of the Bonferroni multiple-comparisons procedure. In the ROC analysis, the cut-off value for DCIS risk was calculated as 37.2% (85.7% specificity and 75% sensitivity).

Conclusion: Finally, AI is not yet to be expected to take an main role in the decision-making processes in healthcare. However, in the light of our findings and literature, we conclude that AI may take a more active role in the clinical decision-making processes in the near future as a result of technological advances.

Keywords: artificial intelligence, mammography, breast, cancer

Statistical Analysis

!	1		2		3		!
:	N	Med (Min-Max)	N	Med (Min-Max)	N	Med (Min-Max)	p
AI (%)	4	15 (11-17) 1	0	16(0-47) 4		46 (24-81) 0	,0001

[O-26]
DIAGNOSTIC ACCURACY OF TRANSPARA ARTIFICIAL INTELLIGENCE SYSTEM FOR HISTOPATHOLOGICAL SUBTYPES, LESION SIZE AND RECEPTOR PROPERTIES OF BREAST CANCER: A SINGLE CENTER STUDY

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Objectives: Artificial intelligence (AI) is an important diagnostic tool that has started to be used in breast radiology,especially in screening mammograms.Our aim in this study was to evaluate performance of Transpara AI system in different histopathological subtypes, lesion size, receptor properties and breast density in patients with breast cancer.

Material-Methods: This study is a single-center study and includes cases diagnosed from October 2018 to May 2022. A total of 368 patients and 391 cancer cases were included in study. In cancer cases histological subtype, mass size, receptor properties obtained from pathological specimens and breast density observed in mammography were compared with Transpara scores.

Results: Number of histological subtypes of cases compared with Transpara 10 score were 52 vs 47 (90%) were Ductal carcinoma in situ (DCIS), 301 vs 235 (78%) were intraductal carcinoma (IDC), 32 vs 20 (62.5%) were intralobular carcinoma (ILC) and 6 vs 6 (100%) were other cancer subtypes. When pathological dimensions of cases were compared with Transpara 10 score, <20mm lesions (T1 tumor) were 151 vs 114 (75.5%), 20-50mm (T2 tm) lesions were 135 vs 117 (79.3%) and>50mm (T3 and T4 tm) lesions were 17 vs 14 (70.6%). Lesion localizations compared to Transpara 10 score were 29 vs 22 (75.9%) in lower inner quadrant, 50 vs 36 (72%) were in lower outer quadrant, 39 vs 36 (92.3%) in retroareolar region, 102 vs 73 (71.6%) were upper inner quadrant and 230 vs 183 (79.6%) were in upper outer quadrant. When receptor specifics were compared with Transpara 10 score, Cerb-B2 were 38 vs 27 (71%), estrogen were 193 vs 153 (79.3%) and progesterone were 180 vs 143 (79.4%). K-67 values were compared with Transpara 10 score, 80% for 0-20, 77% for 20-40, 66% for 40-60, 78% for 60-80 and 66% for 80-100.

Conclusion: Although there are minor differences, Transpara is a diagnostic tool with high accuracy in all histopathological subtypes, localization and receptor properties of breast cancer.

Keywords: artificial intelligence, breast cancer, mammography

[O-27]
PROGNOSTIC FACTORS AFFECTING SURVIVAL IN EARLY STAGE UNIFOCAL LUMINAL B HUMAN EPIDERMAL GROWTH FACTOR 2 NEGATIVE AND TRIPLE NEGATIVE BREAST CANCERS

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Objective: We aimed to investigate the prognostic factors effective on five-year follow-up survival rates in poor unifokal early stage hormone status (%1<= Estrogen receptor/ER)/ Progestron receptor (PR) of 10%) Luminal B, human epidermal growth factor 2-negative (her-2 negative) (PLHNBC), rich unifokal hormonal status (ER/PR>=10%) Luminal B, her-2 negative (RLHNBC) and Triple negative breast cancers Unifokal (TBC).

Materials-Methods: Between 2010 and 2015, 480 patients were screened and 190 patients who met the criteria were compared by grouping TBC (n:47), PLHNBC (n:15) and RLHNBC (n:128). SPSS 26.0 program was used in the analysis.

Results: The mean age of the (n:190) patients included in the study was 54.5 (SD=13.3) and 38.5% (n:73) underwent mastectomy, 61.6% (n:117) breast-conserving surgery. The most common histological type was invasive ductal carcinoma in 77.4% (n:147) and axillary lymph node metastasis in 46.8% (n:89). The mean tumor diameter was 2.5 (SD=1.1) and the histological grade (G) distribution was 3.7% (n:7) G1, 46.8% (n:89) G2, 49.5% (n:94) G3. The follow-up period of the patients was 77.4% (SD=25.3) months, and recurrence/metatasis was observed in 16.8% (n:32), while metastases to visceral organs were the most common in 46.9% (n:15). 72.2% (n:141) of the patients were in remission, and the mortality rate associated with the disease was 10% (n:19).

The distribution of the grouped patients was PLHNBC (n:15) 7.9%, RLHNBC (n:128)67.4% and TBC (n:47) 24.7%, respectively. There was a significant difference in tumor size (p=0.010), pathological T category (p=0.006. This difference was due to the difference between the TBC AND RLHNBC group. In the TBC group, tumor size (p=0.002), pathological T category (p=0.003), histological grade (p0.001) were high.

Conclusion: More aggressive oncological treatments may be required in cases of clinical behavior similar to TBC and PLHNBC with low ER/PR density. Tumor size (p=0.002), pathological T catogory (p=0.003), histological grade (P0.001) were significantly higher and different from each other when comparing RLHNBC with high TBC and ER/PR density.

Keywords: breast, cancer, surgery

[O-28]
PUSHING THE LIMITS OF BREAST CONSERVATION THERAPY WITH EXTREME ONCOPLASTY: REQUIRES GOOD PLANNING AND COLLABORATION

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Objective: Extreme Oncoplasty (EO) is a new promising concept in breast conserving surgery, using level II oncoplastic techniques in selected patients requiring mastectomy. We aimed to assess the long-term clinical and oncological outcomes in patients undergoing EO.

Material- Methods: Eighthy-six patients with unifocal (UF) /cT3 or MFMC (Multifocal-Multicentric) cancer on preoperative imaging treated by oncoplastic breast conserving surgery (OPBCS) including therapeutic reduction mammoplasty (TRM), vertical scar, racquet and round block mammoplasty, Grisotti flap between 2009 and 2021 were collected. Preoperative tumor parameters, clinical outcomes, rate of local recurrence, survival and patient satisfaction were analysed.

Results: Eighty-six patients (median age 51 years) who had a median follow-up of 75 (8-154) months underwent extreme oncoplastic breast conserving surgery (eOPBCS) of which 31 (36%) had cT3 and 55 (64%) MFMC. Seventy-two patients (83.7%) had invasive cancer, 2 (2.3%) had pure ductal carcinoma in situ (DCIS). Median UF tumor size was 58 mm (51- 100) on imaging and 51 mm (50- 60) on final pathology. Median tumor span MFMC was 65 mm (53- 95) on imaging, whereas median of the largest tumor size was 30 mm (22- 60) on final pathology. Thirty-five patients (40,7%) received neoadjuvant treatment, none achieved a complete clinical response. Seventy-one patients (82,5%) were ER positive, 17(19,7%) were HER2 positive, 8 (9,3%) were TNBC Four patients (4,6%) required surgery for positive margins. (3 re-excisions, 1 completion mastectomy). No major complications were observed. Three local recurrence (3.4%) were noted and 10 (11.6%) had distant metastasis. Eight died due to breast cancer. The cosmetic outcome was excellent in 37 (43%) and good in 44 (51%) patients.

Conclusions: EO may be a good option in patients requiring mastectomy. Appropriate patient selection, multidisciplinary approach and patient consent is essential. Further studies is needed to examine the longer-term oncologic and cosmetic results of this approach.

Keywords: extreme oncoplasty, multifocal/multicentric, unifocal

Characteristics of patients

All patients	N= 86
Age, years, median (range)	51 years (27- 91)
Bra Cup Size	
B	20 (23.2%)
C	41 (47.6%)
D	19 (22.2%)
>D 6	(6.9%)
Tumor Characteristics	
Unifocal tumor (>50 mm), n	31 (36%)
MFMC, n	55 (64%)
Size on imaging m	edian (range)
Unifocal tumor	58 mm (51- 100)
Span of MFMC tumor	65 mm (53- 95)
Size on final pathology m	edian (range)
Unifocal tumor	51 mm (50- 60)
The largest tumor median size for MFMC	30 (22- 60)
Histological Type	
Invasive ductal	56 (65.1%)
Invasive lobular	10 (11.6%)
Mixt (Ductal+ Lobular) 6	(6.9%)
DCIS 2	(2.3%)
Other	12 (13.9%)
Specimen weight, gr, median	243 gr (86- 945)
Surgical procedure	
Therapeutic reduction mammoplasty (TRM)	47 (54.6%)
Vertical scar	20 (23.2%)
Racquet mammoplasty	8 (9.3%)
Round block mastopexy (Benelli) 4	(4.6%)
Grisotti flap	7 (8.2%)
Contrlateral symmetrization	26 (30.2%)
Positive margins	4 (4.7%)
Re-excision 3	(3.5%)
Completion mastectomy	1 (1.2%)
Median fallowu-up, months, (range)	75 months (range 8-154)
Local recurrens 3	(3.4%)
Distant metastasis	10 (11.6%)
Death	8 (9.3%)
Due to breast cancer 6	(6.9%)
Other 2	(2.4%)

[O-29]
DIRECT-TO-IMPLANT RECONSTRUCTION WITH TUTOPATCH IN 391 BREASTS

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Objective: Tutopatch obtained from bovine pericardium is an alternative graft material to acellular dermal matrix. In this presentation, it was aimed to determine the early and late complications of patients who underwent direct-to-implant reconstruction with a permanent implant using tutopatch, to evaluate the tissue integration potential of tutopatch and to investigate its reliability.

Materials-Methods: Patients who underwent nipple-sparing mastectomy between 2015-2021 were evaluated retrospectively. Patients who underwent direct-to-implant reconstruction with permanent implant using tutopatch in 391 breasts were included in the study. Early (first 60 days) and late (after 60 days) complications in patients were evaluated. As early complications: hematoma, seroma, ischemia and necrosis of mastectomy flaps, infection, non-vascularization of tutopatc; In the late period: ripling, seroma formation, infection, capsular contracture were examined.

Results: Of 262 patients, 20 were prophylactic and 242 were therapeutic mastectomy. The mean age of the patients was 44.1 years. Early period: Seroma developed in 5 breasts, 2 breast was evacuated under general anesthesia. Skin circulatory problem developed in 42 breasts, NAC in 26 breasts, and incision line in 6 breasts. Partial loss of NAC in one breast and total loss of NAC in two breasts. Post-infection implant loss developed in 2 breasts. Tutopatch was not found to be vascularized in 3 breasts whose drain amount did not decrease despite 6 weeks after the operation and it was removed. Late period: ripling in 19 breasts, seroma developed in 4 breasts. Seroma developed after radiotherapy in 3 breasts, and in one of these patients, infection was added to the seroma and implant loss occurred. Infection developed in 6 breasts resolved with antibiotic therapy. Baker 3-4 capsule contracture developed in 3 breasts.

Conclusion: Tutopatc is a graft material with high tissue integration and can be used safely in direct-to-implant reconstruction with permanent implant.

Keywords: breast reconstruction, tutopatch, direct-to-implant reconstruction, nipple-sparing mastectomy

[O-30]
THE RELATIONSHIP BETWEEN MAMOGRAPHIC DENSITY AND PATHOLOGICAL RESPONSE IN PATIENTS WITH LOCAL ADVANCED BREAST CANCER RECEIVING NEOADJUVAN CHEMOTHERAPY

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Objective: In our study, we aimed to investigate the relationship between mammographic density category and pathological complete response (pCR) in patients with locally advanced breast cancer (BC) who received neoadjuvant chemotherapy.

Materials-Methods: The population of the study consisted of 98 (n=98) BC patients who applied to Dokuz Eylül University Hospital Medical Oncology outpatient clinic for diagnosis and treatment between 2018-2021. Mammographic density at diagnosis is categorized according to BI-RADS 5th Edition. Independent sample t-test was used to compare independent groups, and Chi-square test was used to analyze categorical variables. The results were evaluated at the 95% confidence interval and the significance level was $p<0.05$.

Results: The mean age of the patients was 53+-13.3. Most of the patients were in the intermediate mamographic density (MD) breast class. A total of 77.5% of the patients were BI-RADS b or c; only 10.2% were categorized as a and 12.2% as d. Patients with less dense breast composition (MD category a+b) were significantly older than patients with more dense breasts (MD category c, d) ($p = 0.001$). When patients were divided according to the BI-RADS classification (a/b vs. c/d), there was no statistical difference in performing pCR between patients with high MD and patients with low MD (p=0.684 (95% CI 0.67-0.69)

Conclusions: Considering the individual response to NACT, there is a need for markers that predict which patients will respond well to the treatment applied. In previous studies, conflicting results were obtained in the relationship between mammographic density value and treatment response. In our study, MD is not an independent predictive marker of response to breast cancer NACT. Larger studies are needed to perform subgroup analyses based on surrogate subtype to make MD useful as a predictive biomarker in the neoadjuvant clinical setting.

Keywords: density, pathological complete response, breast cancer

Relationship Between Mammographic Density and Pathological Complete Response

		pCR			
		No n(%)	Yes n(%)	Total	p value
Density	a	7(12.2)	3(7.3)	10(10.2)	0.627
	b	18(31.5)	17(41.4)	35(35.7)	
	c	27(47.3)	14(34.1)	41(41.8)	
	d	5(8.7)	7(17)	12(12.2)	
Density groups	(a+b)	25(43.8)	20(48.7)	45(45.9)	0.684
	(c+d)	32(56.1)	21(51.2)	53(54)	

HR(+); Hormone receptor positive, TNBC; Triple-negative breast cancer

[O-31]
IMMUNOTHERAPY EXPERIENCE IN PATIENTS WITH BREAST CANCER: A SINGLE-CENTER EXPERIENCE

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Breast cancer is the most common cancer among women and the second leading cause of mortality, after lung cancer. In hormone-positive (HR+) breast cancer, especially in later stages, chemotherapy and hormone treatment agents are utilized. Triple-negative breast cancer (TNBC), on the other hand, is the subtype of breast cancer targeted by immunotherapy (IO), given the small number of medicines which can be used for treatment. In our study, we evaluated the survival data of 10 patients treated with immune checkpoint inhibitors (ICIs) in our center.

Patients with hormone receptor-positive or triple-negative breast cancer treated with ICI at the Hacettepe University Oncology Institute between September 2019 and September 2021 were analyzed by their histological type of tumor, previous treatments, clinical characteristics, and survival data. The study was approved by the Hacettepe University Ethics Committee. SPSS v26.0 was utilized for statistical analyses.

Ten patients were included in the study. The mean age at diagnosis was 54.80±11.39. Seven of them were HR+, while three had TNBC. Two patients received one line, and the remaining patients received three and subsequent lines of chemotherapy before IO. The median follow-up was 5.23 months. Median PFS and median OS were 2.06 and 3.40 months, respectively. OS of the two patients who received up to two lines of chemotherapy before ICI was 19.56 months, whereas OS of the patients who received three and subsequent lines was 2.80 months. OS for patients with HR+ breast cancer was 2.80 months, while it was found as 19.56 months for TNBC patients.

IO appears to be an agent with promising efficacy against triple-negative breast cancer. While hormonal therapies reduce the requirement for additional treatment agents in HR+ breast cancer patients, ICIs seem to be more effective in the TNBC patient group, where targeted treatment options are limited, as demonstrated in our study.

Keywords: breast cancer, triple-negative, hormone-positive, immunotherapy, checkpoint inhibitor

[O-32]
IMPACT OF ONCOTYPE DX RECURRENCE SCORE (RS) ON CLINICAL OUTCOME: SINGLE CENTER REAL-LIFE EXPERIENCE WITH MEDIAN 87 MONTHS FOLLOW UP

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Background: Oncotype Dx testing has been extensively validated in early breast cancer (BC) patients with ER positive Her-2 negative tumors to predict the risk of distant recurrence. We evaluated the impact of Oncotype Dx RS on adjuvant chemotherapy (CT) decision-making and clinical outcome in routine clinical practice.

Methods: RS, patient and tumor characteristics, adjuvant therapy details and clinical information including relapse patterns and overall survival were retrospectively collected for 202 patients who had Oncotype DX testing between 2008-2022 at our center.

Results: Median age was 47, one patient was male, one patient had bilateral BC and 65% were premenopausal. Fifteen %, 69% and 16 % of patients had low (<11), intermediate (11-25) and high (>25) RS respectively. Median tumor size was 15mm, 78% and 12% had grade 2 and 3 tumors respectively. Seventy-six % of patients had breast conserving surgery, 81% had invasive ductal histology, 70% had node negative, 21% had node positive disease, 9% of patients had micrometastatic nodal involvement. Forty-five % patients had a post-RS decision change from adjuvant CT+endocrine therapy (ET) to only ET and 4% patients had a post-RS decision change from ET to CT+ET. With a median 87 months follow up 15 (7.4 %) patients had recurrences: 9 (4.5%) had distant recurrence (DR), 4 patients had ipsilateral local recurrence and 2 patients had contralateral BC. Among 9 patients with DR, 2 had high, 2 had low and 5 had intermediate RS. Five out of 9 patients with DR received adjuvant CT. Overall, five patients died, 3 of them died due to a non-breast cancer related cause. Two patients who died due to metastatic disease had high RSs and received adjuvant CT+ET

Conclusion: Despite personalized treatment approaches with genomic tools, relapse risk continues in patients with ER positive Her-2 negative BC with low-intermediate genomic risk.

Keywords: breast cancer, oncotype-DX, survival

BREASTANBUL

THE CONFERENCE

2022

POSTER PRESENTATIONS

[P-01]
SURGICAL CHALLENGES OF A HUGE BREAST TUMOR IN ADOLESCENT FEMALE

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A 13 year old female, presented with the left breast mass that rapidly progressed to be a huge size within 6 months making her breast reach at the umbilical level. This case referred from another health care facility to our tertiary hospital (Breast Care Center). Imaging studies including Mammogram, Ultrasound and MRI were done. MRI showed small breast tissue volume pushed medially by a huge tumor size. Multiple biopsies were negative for malignancy and had controversies between fibroadenoma and PASH (Pseudoangiomatous Stromal Hyperplasia).

Plan was for upfront surgery.

Our surgical challenges here are how we can reach the best outcome after a huge tumor excision with big skin excess, preserving Nipple Areola Complex and without deformities in a teenager patient.

Our surgical plan: Dealing with this breast as a Reduction Mammoplasty approach (Key wise pattern) with superomedial pedicle, keeping the right breast as a model for it. A backup plan of using tissue expander reconstruction, if we face a very small size breast tissue remaining after excision.

A nearly 900 gm capsulated fleshy mass was excised successfully, the compressed remaining breast tissue expanded to give us reasonable volume to deal with. Then reduction type design was completed with a very good out come without using the tissue expander reconstruction.

Follow up of the patient, with improving results and good matching with other breast in shape and size. The final pathology of the mass came as a giant fibroadenoma.

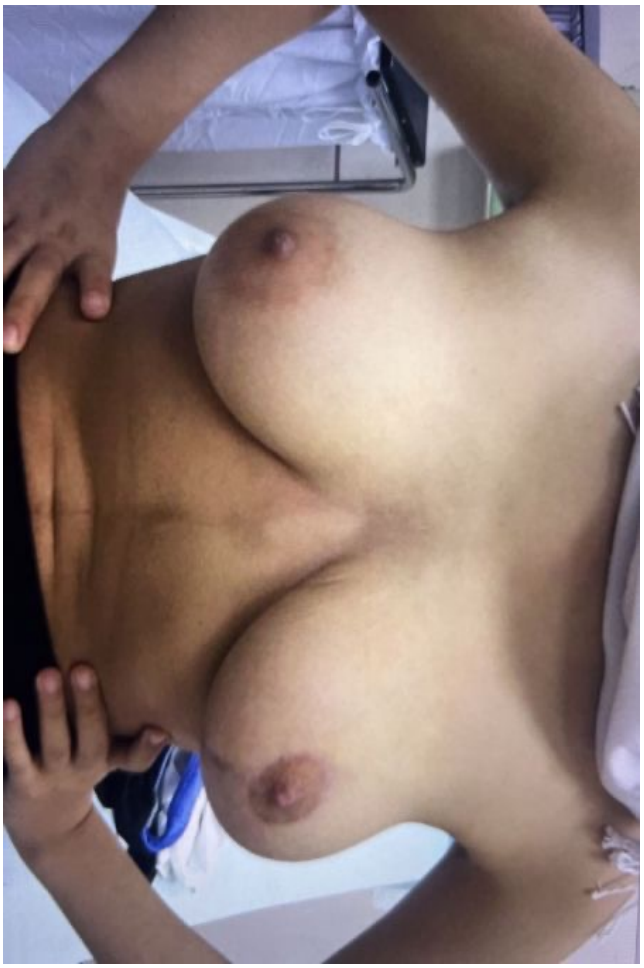
The patient and her parents were very satisfied with the final surgical results.

Keywords: teenage, huge breast mass with disfigurement, surgical approach plan, best outcome

Photo 1

pre-operative

Photo 2



Postoperative

[P-02]
A RARE CASE OF DUAL PRIMARY CANCER: RECTUM ADENOCANCER AND BREAST CANCER

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Multiple primary tumors are tumors that develop concurrently or differently from each other at different times in the same patient. In case of detection of involvement in unexpected localizations in the imagings, the possibility of a second primary tumor should be kept in mind.

Case: While a 63-year-old female patient was being examined for constipation; Colonoscopy performed on 03.2021 revealed a mass in the rectum that almost completely obstructed the lumen, and the biopsy result was reported as carcinoma. Invasive lobular carcinoma was detected in tru-cut biopsy after a mass was found in the right breast in the section entering the image field in abdominal CT. After neoadjuvant chemoradiotherapy, abdominoperineal resection (ypT2N0) and lumpectomy (ER+ PR- Her2- ypT2N0) was performed on 07.2021. After 6 cycles of docetaaxel and capecitabine treatment, radiotherapy was given to the breast and anastrazole treatment was started. The follow-up of the patient continues.

Result: Today, with the development of modern diagnosis, treatment and imaging methods, the prolongation of life expectancy; At the same time, the incidence of second primary tumor has increased as curability and survival have increased with developing cancer treatment approaches. Detection of a second malignancy is important in the choice of treatment and in the determination of the patient's surveillance. In every suspected case, a second primary cancer should be investigated.

Keywords: breast cancer, rectum cancer, dual prımary

[P-03]
ADENOID CYSTIC CARCINOMA OF THE BREAST: MULTIMODALITY IMAGING FINDINGS

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Objective: Adenoid cystic carcinoma (ACC) of the breast is a rare type of breast cancer with favorable prognosis. There is limited data on the radiological findings of this tumor in literature. The aim of this study is to determine the most common imaging features.

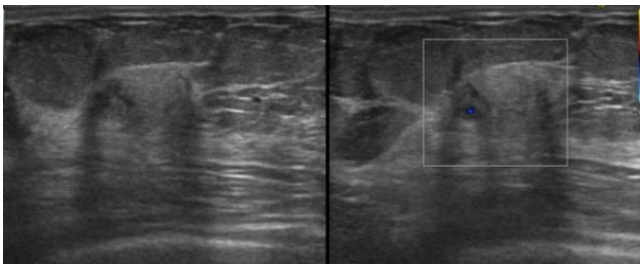
Materials-Methods: Pathological databases of seven institutions from 2009 to 2021 were retrospectively reviewed, and patients with a diagnosis of ACC of the breast were determined. Thirteen patients whose imaging studies could be recalled from the picture archiving systems were included in the study. Clinical and pathological findings as well as follow-up data were recorded.

Results: There were 16 mass lesions in 13 patients (2 multifocal cases, 1 case with recurrence). Mammography demonstrated 14 masses, while US demonstrated all. MRI was available in only 7 cases, with 8 masses. The most common findings were round or oval shape on all modalities (78.57%-93.75%). Other frequent findings were paralel orientation (81.25%), isoechoic or hyperechoic echogenicity (62.5%), high T2 signal (87.5%), restricted diffusion (71.43%), and homogeneous enhancement (62.5%). Mammography, US and MRI showed circumscribed margins resembling a benign lesion in 35.71%, 37.5% and 50% of the lesions respectively. 3 patients had a cyst-like echogenicty on US. Although there were benign features on all imaging modalities seperately, all lesions could be categorized as BI-RADS 4 or 5 when the findings were combined. However 9/16 masses were BI-RADS 4A, emphasizing the subtlity of the malignant features.

Conclusion: ACC of the breast can present with findings resembling a benign lesion on different imaging modalities. Although combination of all imaging findings correctly indicated the suspicious nature of the lesions in all cases, final classification was BI-RADS 4A in most of them. US findings of isoechoic or hyperechoic appearance, and cyst-like echogenicity have not been reported previously in literature.

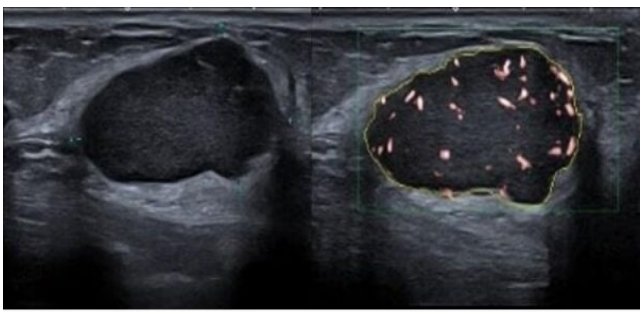
Keywords: adenoid cystic carcinoma, breast, ultrasound, mammography, MRI

Figure 1



56 y/o woman with dense breasts on screening mammography (not shown), which did not show any lesion. On screening US examination, a hyperechoic heterogeneous solid mass with indistinct margins was detected which showed minimal internal vascularity on Doppler imaging.

Figure 2



US demonstrates a circumscribed hypo-anechoic mass resembling a complicated cyst (left); however the lesion has internal hypervascularity on superb microvascular imaging (right).

Table 1

SHAPE	round/oval	11 (78.57 %)
	irregular	3 (21.43%)
MARGIN	not circumscribed	9 (64.29 %)
V	circumscribed	5 (35.71 %)
DENSITY	dense	10 (71.43 %)
	isodense	4 (28.57 %)
CALCIFICATION	none	12 (85.71 %)
	present	2 (14.29 %)
BI-RADS	category 4-5	9 (64.29 %)
	category 3	5 (35.71 %)

MAMMOGRAPHIC FEATURES (n:14)

Table 2

SHAPE	round/oval	15 (93.75 %)
	irregular	1 (6.25 %)
MARGIN	circumscribed	6 (37.50 %)
	not circumscribed	10 (62.50 %)
ORIENTATION	parallel	13 (81.25 %)
	non-parallel	3 (18.75 %)
ECHOGENICITY	iso/hyperechoic	10 (62.50 %)
	hypoechoic	3 (18.75 %)
	cyst-like	3 (18.75 %)
POSTERIOR FEATURES	none	12 (75.00 %)
	enhancement	4 (25.00 %)
VASCULARITY	vascular	6 (50.00 %)
V	non-vascular	6 (50.00 %)
ELASTICITY	hard	2 (50.00 %)
	soft	2 (50.00 %)
BI-RADS	category 4-5	12 (75.00 %)
	category 3	4 (25.00 %)

US CHARACTERISTICS (n:16)

[P-04]
NON-MASS PREDICTION OF PRIMARY BREAST LYMPHOMA: REPORT OF THREE CASES

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Background: Lymphoproliferative disorder of the breast is a rare entity that accounts for less than 1% of breast malignancies (1). It has been reported that primary breast lymphomas demonstrate mass appearance on MG at rates ranging from 69-76%. Lesions margins are commonly well circumscribed or indistinct. Asymmetry is infrequent and calcification is not an expected finding (2,3). US features are nonspesific. Lymphoma can be appear as a mass lesion, or a non-mass area in hypoechoic or heterogeneous internal echogenicity (2). These lesions are generally hypervascular on Doppler imaging (2). No specific study in the literature includes non-mass findings for lymphoma.

Objective: To present the imaging findings of primary breast lymphoma with nonmass appareance

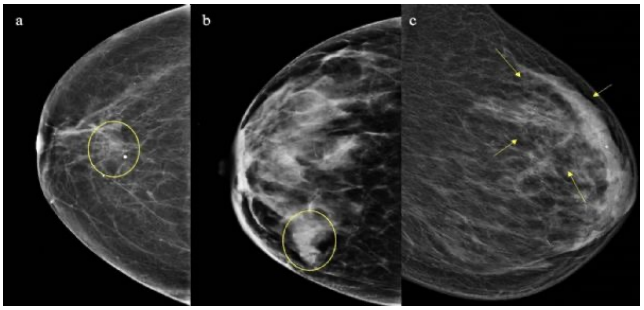
Materials-Methods: Three cases with non-mass imaging findings were included. Informed consent were obtained from the patients for sampling and using the relevant images. Patients were evaluated by mammography (MG) and grayscale and Doppler ultrasound (US).

Results: Two cases were diagnosed as diffuse large B-cell lymphoma (DLBCL), and one case was diagnosed as marginal zone lymphoma (MZL). The only MG finding was asymmetry in all lesions (Figure 1). The US apperances of DLBCLs were non-mass hypoechoic area on greyscale US with moderate penetrant feeding vessels by Doppler imaging. The lesion diagnosed as MZL was related with ductal structures with intense vascularisation. DLBCLs had high elasticity values on shearwave elastography, while MZL showed lower elasticity (Figure 2).

Conclusions: Lymphoproliferative disorders as a heterogeneous group of disease have no specific radiological findings. Diagnosis is made histopathologically in light of clinical and radiological findings. Especially in non-mass appearance, if there are suspicious findings for malignancy, the radiological-pathological correlation should be made, and multiple sampling should be done.

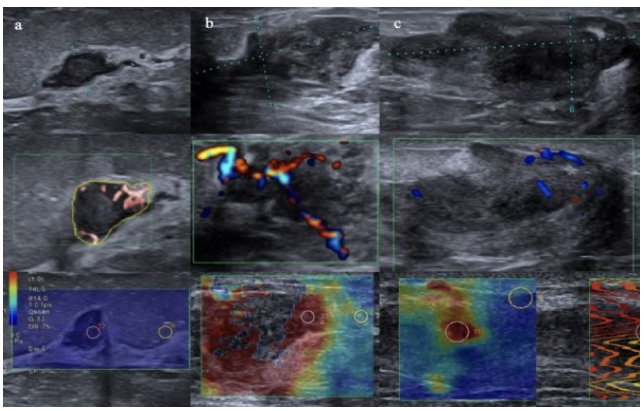
Keywords: breast lymphoma, lymphoproliferative disorder, mammography, ultrasound

psma staining, dermis venules



Asymmetry on MG imaging in all lesions a. A 60-year-old woman diagnosed with MZL (marked as yellow circle) b. A 39-year-old woman diagnosed with DBLCL (marked as yellow circle) c. A 59-year-old woman diagnosed with DBLCL (marked as yellow arrows)

Figure 2



Grayscale US, color Doppler US and shearwave elastography images through, respectively a. Ductus related MZL b. Retroareolar heterogenous hypoechoic area diagnosed as DBLCL c. Heterogenous hypoechoic area diagnosed as DBLCL with partly indistinct borders

[P-05]
SECONDARY BREAST ANGIOSARCOMA: MDT AND TREATMENT

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Background: One of the cases with uncommon type of breast cancer is angiosarcoma of the breast that accounts 0.05 percent of all breast cancer.

Objective: To report the necessity of doing a good diagnoses and importance of an effective multidisciplinary team (MDT).

Methods-Results: Patient I.M female 59 years old, is presented at the ambulatory of surgery near the Oncological Hospital at University Hospital Center "Nene Tereza" Tirane, on March 2020 to complain for a mass in her left pectoral area and lying till the sternum. In her anamnesis: she was diagnosed in November 2010 with left breast cancer T-25mm in upper lateral quadrant, conservative breast surgery and axillary dissection, biopsy N 299 T2 N0 Mo, was treated with hormone and radiation therapy; on 07/2019 she develop in the left breast a mass with black color of 5,1 cm in ultrasound, normal CT total body and tumor markers, core biopsy N 2117/19 show a suspect recidiva, underwent simply left mastectomy, final biopsy and IHC N 2677/19 show breast angiosarcoma of second grade; patients was not consulting from a regular MDT meeting (due summer holiday) but from separate doctors and was not follow by a new treatment. In recent presentation patient underwent to all laboratory and image examinations which resulted normal except: CT and ultrasound showing an irregular well vascularized mass of 6 cm and core biopsy showing recidivant angiosarcoma. In April 2020 were performed surgery (wide excision), biopsy N 1249/20 resulted angiosarcoma recidivans. This case was present in a MDT and was decide to be follow by radiotherapy treatment. Patient was assisted even by psychosocial social worker.

Conclusion: Regular MDT meeting is crucial not only for right treatment for patients but even for updating guidelines and impose to the decision making structure in health the right decision.

Keywords: breast, angiosarcoma, MDT

[P-06]
LONG-TERM RESULTS OF BREAST CANCER PATIENTS WHO RECEIVED IOERT AS BOOST DURING BCS: A SINGLE-INSTITUTION RETROSPECTIVE ANALYSIS

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Background: Intraoperative Electron Radiotherapy (IOERT) applied as Boost to the tumor bed during breast conserving surgery is advantageous in terms of local recurrence of breast cancer patients. In addition, it has other advantages over the adjuvant Boost RT such as no risk of tumor bed change, ease of sequencing radiotherapy chemotherapy, and reduced workload of the radiotherapy clinic.

Objective: To evaluate the long-term results of our patients who have been treated with this method in our institution and are still being followed up.

Materials-Methods: The 103 patients enrolled in this study received IORT equivalent to 10 Gy as Boost during BCS and were subsequently given adjuvant WBI and, if necessary, systemic therapy. These patients were analyzed using their files and hospital records. Patients were followed up for overall survival, local recurrence, distant metastasis, and cosmetic outcome (using LENT-SOMA scale).

Results: Median age was 53,5(27-74), mean follow-up time was 75 (48-106) months. The mean pathological tumor size was 18 mm (4-30), 90 of the patients present ınvasive ductal carcinoma, 8 of them were lobular and 5 of them had mixed histological structure. 93 of the patients presented histological grade II. 15 grade III; 74 patients were Luminal A-like,15 Luminal B-like,8 HER2 positive and 6 Triple negative breast cancer. According to the LENT-SOMA scale, 35 had grade 0, 42 each had grade 1, 23 had grade 2, and 2 had grade 3.

All patients underwent whole breast irradiation after surgery, 81 received chemotherapy and 90 endocrine therapy.

There was 1 local recurrence, distant recurrence was seen in 4 patients and one patient died of non-breast cancer causes.Overall Survival was %99, and event free survival %96.

Conclusion: IOERT for breast cancer treatment during BCS is a safe option with low chronic toxicity and getting better as time goes on cosmetic outcome.

Keywords: breast cancer, breast conserving surgery, boost radiotherapy, intraoperative electron radiotherapy, LENT-SOMA

Fıgur 1

Patient and tumor characteristics	N: 103
Age (median)- range (27-74)	53,5
Fallow-up time	75(48-106)
Tumor diameter(mm)	18(4-30)
T1a	3
T1b	16
T1c	66
T2	18
Histology- Invasive ductal Invasive lobular Mixt	90 8 5
Tumor grade (0-3)	2
Luminal A	74
Luminal B	15
HER2 neu positive	8
TNBC	6

Patient and tumor characteristics

Figur 2

Treatment and follow up characteristics	N: 103 Median follow-up for all patients was 75 (range 48-106) months.
BCS	103
SLNB	103
ALND	7
IOERT Dose: Gray-equivalent MU = monitor U	10/ 862
Applicator surface median(mm)	5,4 (4-7)
WBI	103
Adjuvant Chemotherapy	81
Adjuvant Endocrine Therapy	90
Local recurrence/time: 92 M	1 (Mastectomy)
Distant Metastasis Liver 1-94.M Lung 1-88.M Kidney 1- 44.M Bone (Vertebra)	4 Chemotherapy Chemotherapy Nephrectomy RT
OS DFS	99% 96%
Cosmetic outcome: LENT-SOMA Scale	75% excellent- 22% good, and satisfactory
Grade 0	35
Grade 1	42
Grade 2	23
Grade 3	2

Treatment and follow up characteristics

[P-07]
DECIPHERING THE PSYCHOMETRIC ATTITUDE TOWARDS MAMMOGRAPHY OF THE KUWAITI POPULATION: QUESTIONNAIRE BASED SURVEY AND ANALYTICS

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Breast cancer is considered the most common invasive cancer in women, as well as the second cause of cancer death after lung cancer. Thus, these results are enough to put more effort to study early detection of this disease. Screening Mammogram is most convenient, nor cost-effective, procedure for breast cancer early detection in western countries. The aim for our study is to understand Kuwaiti women attitude between age (30-70 years old) towards mammographic screening for early detection of breast cancer. A questionnaire, with a set of relevant questions which will aid in accessing the knowledge and psychological outlook towards mammography, will be given to random women within inclusion criteria of age. The answers from the questionnaire has been statistically investigated using appropriate tests aided by analytical software. According to the results obtained a conclusive idea will be derived about the notion of mammography in the Kuwaiti population.

Anticipated Research Outcomes:Barriers towards the decision making for mammography will be unraveled. The hindering factors could be fear of radiations and pain, poor understanding of mammography, negative impact of incorrect information form media about mammography and other practical barriers including transportation, language, access etc. We expect a positive correlation between the educational understanding of the diagnostic technique and willingness to perform mammography. Overall, we anticipate to understand the barriers cumulatively and enunciate a measure or action plan to mitigate the stigma associate with mammogram screening which will in turn reduce the mortality rates.

Keywords: mammogram, screening, media, culture

[P-08]
GRANULOMATOUS MASTITIS OR BREAST CANCER; A COMPARATIVE MRI STUDY

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Objective: To evaluate the MRI findings of IGM and non-mass breast cancer in order to determine if there are any findings that can help the differentiation of these two disorders.

Materials and Methods: This retrospective study included 143 women 68 of which had GM and 75 had non-mass breast cancer. Dynamic contrast-enhanced MR images were evaluated for distribution, internal enhancement patterns and kinetic curves. Presence or absence of cystic lesions with rim enhancement, fistula, skin thickening, parenchymal edema, architectural distortion and axillary lymphadenopathies, size and location of the lesions were recorded. DWI and ADC maps were analysed by a visual scale and ADC values were calculated. Shapiro–Wilk test was used to test the normality of the data. Multivariate logistic regression model was used to determine the independent predictors.

Results: Cystic lesions with rim enhancement, fistulae, multiple regional distribution, periareolar location and focal skin thickening were significangtly more common in GM ($p<0,05$). Architectural distortion, diffuse distribution, diffuse skin thickening and clumped pattern were seen in breast cancer more frequently ($p<0,05$). There was no statistical difference in DWI findings. In kinetic curve analysis, persistent enhancement was more common in GM, whereas plateau and wash-out were more common in breast cancer ($p<0,001$). Independent predictors for breast cancer were the age of the patient, diffuse skin thickening and kinetic curve types. MRI had a sensitivity, specificity and accuracy of 74,6 %, 89,7 %, 81,8%, respectively in differentiating GM from breast cancer.

Conclusion: Our findings showed that cystic lesions consistent with abscess, skin fistulae, and central location were typical for GM, whereas, distortion, diffuse skin thickening, plateau or wash-out kinetics suggest breast cancer. Although MRI is useful in differentiating GM from non-mass breast cancer, the final diagnosis should always be complemented with histopathology.

Keywords: breast cancer, idiopathic granulomatous mastitis, MRI

[P-09]
INTRODUCTION TO A NOVEL HYBRID METHOD OF ENDOSCOPIC ASSISTED NIPPLE SPARING MASTECTOMY WITH IMMEDIATE LATISSIMUS DORSI FLAP AND LIPOMODELLING IN EARLY BREAST CANCER

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Introduction: Nipple sparing mastectomy (NSM) has been proven to be oncologically safe. Technical challenges during the surgery can be reduced with the advent of the endoscopic-assisted technique. Autologous breast reconstruction using the latissimus dorsi (LD) flap alone often provides inadequate volume to achieve symmetry with the contralateral breast. Thus, the hybrid method of lipomodelling using the autologous fat transfer into the LD flap provides desirable cosmetic outcome.

Case discussion: We report a case of an early multicentric left breast cancer who was subjected to a mastectomy and sentinel lymph node biopsy. This patient has an ideal BMI, A cup size and no other health conditions. No perioperative complications were noted. She was discharged third day postoperatively. The drains were removed by the tenth day. The final oncological outcome shows a luminal A type, stage II invasive carcinoma without nodal involvement. Clear resection margins were achieved. She is currently on adjuvant Tamoxifen. Follow-up after two months shows a desirable contour and breast volume.

Discussion: The transaxillary with a small periareolar incision approach in NSM provides good cosmetic outcome without overtly visible scars in patients with smaller breasts. The endoscopic method improves the ergonomics of the operating surgeon during the resection of the retromammary space. Despite being versatile, the LD muscle undergoes atrophy and lipomodelling to the flap provides good cosmetic outcome in terms of symmetrisation. Furthermore, this technique does not affect the oncological outcome and the subsequent follow-ups for any local recurrence. However, the selection criteria for this technique need to be stringent. Pre-operative advice to patients regarding the expected outcomes and complications are important.

Conclusion: The novel hybrid method of the endoscopic-assisted NSM with immediate LD flap reconstruction and lipomodelling is an acceptable reconstructive technique. A larger cohort study is needed to report on the long-term outcome of this method.

Keywords: endoscopic mastectomy, latissimus flap reconstruction, lipomodelling, fat transfer, nipple sparing mastectomy

Postoperative photo

Good symmetrisation achieved with barely visible surgical scars (periareolar and axilla) after two months

Preoperative photo

Preoperative markings including the location of the tumour, the breast footprint and liposuction area over the medial side of the thigh

[P-10]
A RARE CASE REPORT OF CONUS MEDULLARIS METASTASIS IN A FEMALE PATIENT WITH HER2 POSITIVE BREAST CANCER

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A 61-year-old female patient was admitted to our hospital with a left palpable breast mass in October 2015. 6x5 cm irregular hypoechoic mass with angular margins was detected on ultrasound. Histological examination of the excisional biopsy of the breast mass revealed grade 2 invasive ductal carcinoma, Ki-67 proliferation index 20-25%, the fluorescence in situ hybridization (FISH) test confirmed HER2 positive (score 3+), ER 90%, PR 80% strongly positive. Left modified radical mastectomy and axillary dissection were performed. Tumour cells were seen in the axillary lymph node sampling (T3N2M0). Adjuvant chemotherapy and radiotherapy (RT) could not be applied to the patient, because she refused treatment.

The patient presented with headache, numbness in the left arm and epileptic seizure in October 2018. Cranial magnetic resonance imaging (MRI) revealed two metastatic lesions in the right posterior parietal area. Whole-brain radiotherapy (WBRT) was administered to the patient. Docetaxel and trastuzumab plus pertuzumab therapy was started. Maintenance treatment with trastuzumab plus pertuzumab and anastrozole were given. The patient was admitted to our hospital in September 2021 with paraplegia and bowel dysfunction. Spinal MRI revealed a lesion in the conus medullaris with a length of 1.37 cm, a height of 2.65 cm, and a transverse diameter of 1.25 cm, consistent with intramedullary-enhancing metastasis (Figure 1).

Laminectomy and tumour excision were performed urgently by neurosurgery for the mass in the conus medullaris. RT was applied to the T11-L2 area. After surgery and radiotherapy, the patient's muscle strength improved from 2/5 to 4/5. The patient underwent a physiotherapy program

Keywords: conus medullaris metastasis, HER-2 positive breast cancer, paraplegia

Figure 1: MRI of the spine. a) MRI of spine reveals an enhancing lesion with a maximum diameter of 2.65 cm within the conus medullaris (arrow). b) Postoperative second-month MRI of the spine after radiation therapy.

[P-11]
RECURRENT MALIGNANT FIBROUS HISTIOCYTOMA OF MALE BREAST

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Primary Breast Sarcoma is a rare disease, less than 1% of all breast malignancies. Malignant Fibrous Histiocytoma of the male breast is very rare. We present the case of a 55-year-old male who was presented with Recurrent Malignant Fibrous Histiocytoma of right breast. Computed tomography (CT) revealed a large heterogeneous solid soft tissue mass within the right breast region. Treated by simple mastectomy, Histopathology of the mastectomy showing undifferentiated pleomorphic sarcoma, grad 3, tumor measure 13 cm, follow up with oncology department for adjuvant radiotherapy and chemotherapy.

Keywords: breast neoplasms, male, malignant fibrous histiocytoma, sarcoma

[P-12]
ROLE OF ARTIFICIAL INTELLIGENCE IN THE BI-RADS CLASSIFICATION OF BREAST LESIONS DETECTED ON ULTRASONOGRAPHY

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Objective: The purpose of this preliminary study was to compare the accuracy of B-mode hand-held US and artificial intelligence (AI) (Koios DS for breast, Koios Medical) in terms of BI-RADS classification of breast lesions, and investigate the role of combining AI with B-mode US findings in clinical practice.

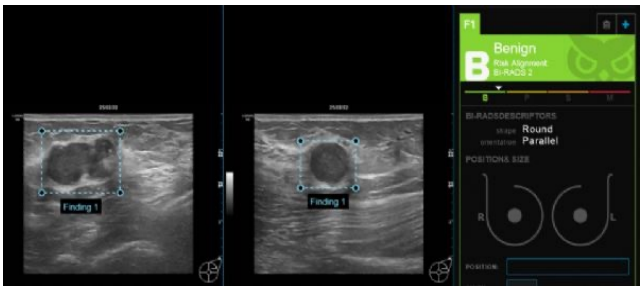
Materials-Methods: 67 patients with BI-RADS 3, 4 or 5 breast lesions who were undergoing core-needle biopsy or who were being followed with a stable benign solid lesion for at least 2 years were included in the study. Two orthogonal images of each lesion were sent to PACS and the server of AI system (Koios DS for Breast, Koios Medical) where a BI-RADS category was assigned by the AI software. Images were later recalled from PACS and a BI-RADS category was assigned to each lesion by two breast radiologists in consensus, blinded to the clinical and mammographic findings as well as the BI-RADS category assigned by AI.

Results: The sensitivity, specificity, PPV, NPV and accuracy of B-mode US were 95.83%, 60.47%, 57.50%, 96.30%, 73.13%. The same results for AI were 95.83%, 55.81%, 54.76%, 96.00%, and 70.15% respectively. There was only one false negative lesion which was assigned a BI-RADS 3 category by both systems. 15 lesions which were either BI-RADS 3 (n: 11) or BI-RADS 4a (n:4) on B-mode US were categorized BI-RADS 2 on AI, all of which were benign (figure 1). 50% of BI-RADS 3 (n:11/22) lesions were assigned a definetely benign category by AI, while 36.37% (n:8/22) were categorized BI-RADS 4.

Conclusion: Adding AI to B-mode US evaluation increases the number of BI-RADS 4 results. The real value of AI may be the 100% NPV of BI-RADS 2 results, thus reducing the number of patients needing a short term follow-up.

Keywords: breast ultrasonography, artificial intelligence, breast cancer

Figure 1



Small solid nodule in the left breast with partially indistinct margins, heteroenous structure and calcification. B-mode US: BI-RADS 4a, AI: BI-RADS 2 (fibroadenoma)

[P-13]

A HYBRID MODEL OF DEEP CONVOLUTIONAL NEURAL NETWORK AND MACHINE LEARNING IN THE ASSESSMENT OF BREAST MASSES, AXILLARY METASTASIS AND MOLECULAR SUBTYPES

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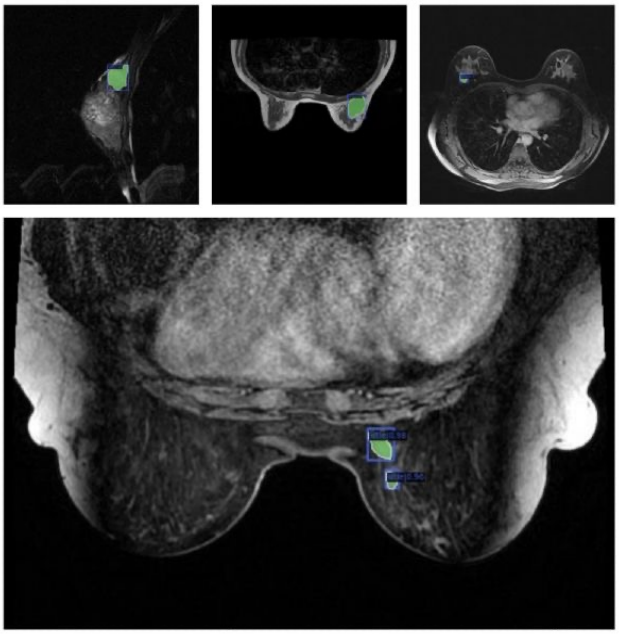
The management of breast cancer alters on various aspects including the size of the tumor, endocrine receptor (ER) status, human epidermal growth factor receptor 2 (HER2) status, axillary lymph node (LN) involvement and metastatic spread. Therefore, identification of these parameters in the pre-operative phase is pivotal, as these data offer evidence for deciding adjuvant therapy and making a surgical route, thereby facilitating pretreatment decisions. In this context, preoperative imaging paves the way of pretreatment decision-making. Recently, deep convolutional neural networks (DCNNs) have been applied to the field of medical image analysis. Furthermore, machine learning techniques are used to process structured data like physical examination findings or patient history. Innovative hybrid techniques consisting these two sub-branches together may provide critical contribution to cancer management. We are developing a novel hybrid model, which contains a data set of MRI, PET, US, digital breast tomosynthesis, mammogram images and medical histories of patients with primary breast cancer who underwent surgery for breast cancer between 2015 and 2022 at our hospital. A random and independent set will also be used for the test of the model. With this hybrid model, the presence of breast cancer, the molecular subtype of breast cancer and the presence of axillary lymph node metastasis are expected to be predicted with high performance. Preliminary results from our CNN only demo-model is found to be successful, achieving segmentation training results with 81.8% accuracy, which is promising as it was a preliminary result with a very small data proportion. Artificial intelligence based models may provide insight for both clinicians and surgeons, especially in the pre-operative phase.

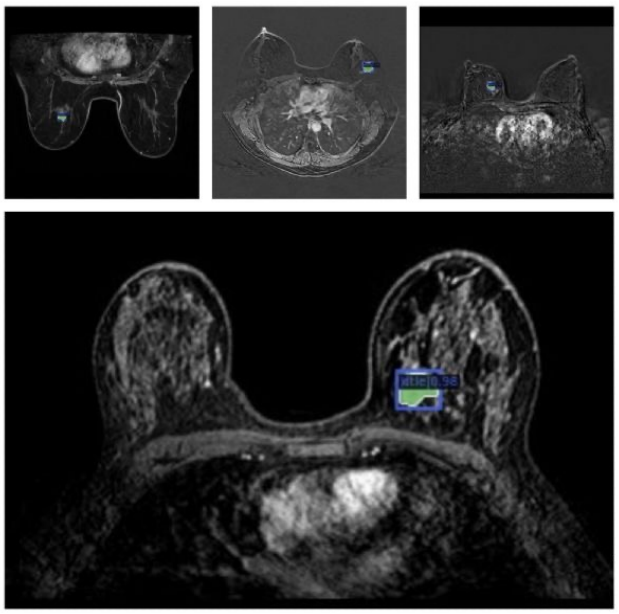
Keywords: deep learning, deep convolutional neural networks, breast cancer, axillary metastasis, molecular subtype

Figure 1



Results of our demo CNN model, which assessed breast masses in terms of malignancy successfully

Figure 2



Results of our demo CNN model, which assessed breast masses in terms of malignancy successfully

[P-14]
GORDON'S FUNCTIONAL PATTERNS MODEL BASED NURSING CARE IN PATIENT UNDERWENT MODIFIED RADICAL MASTECTOMY: A CASE REPORT

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Objective: According to the WHO (2020),10.3% of newly diagnosed cancers and 5.7% of cancer-related deaths worldwide are due to breast cancer. Breast cancer is the most common cancer in women and surgery is the most common treatment. Gordon's Functional Patterns Model(GFPM) is one of the models used in nursing care. This case report aimed to present the GFPM-based postoperative nursing care of a patient undergoing modified radical mastectomy (MRM).

Method: Data were collected based on the model. Informed consent was obtained from the patient. Nursing care prepared in line with the data will be presented with a concept map.

Results/Case: H.Y. is a 37-year-old married housewife with a primary school degree. She was admitted to an external center due to her complaint of a palpable mass in her left breast.As a result of the examinations, she was diagnosed with invasive carcinoma of the left breast and received eight rounds of chemotherapy. Later,healthcare professionals in a university hospital conducted examinations and identified a malignant solid mass in the upper inner quadrant of her left breast. Therefore,they decided that the surgery was the best option. The day before she was admitted to the clinic, she fainted due to the fear of the unknown about the surgery. She was admitted to the general surgery clinic on 09.05.2022 and had a left MRM on 10.05.2022. She needed assistance with physical care until the fourth postoperative day. She thought she had lost her sense of femininity because of her breast loss. Nursing care plans were made after the surgery and we carried out appropriate nursing interventions that were based on the nursing diagnosis. She did not develop complications during her stay in the clinic. She was discharged with two hemovack drains in the operation area on the evening of the first post-op day.

Conclusions: GFPM-based nursing care helps nurses address patients' problems more comprehensively. It also helps patients cope with those problems.

Keywords: breast cancer, mastectomy, surgical treatment, nursing model, postoperative care

[P-15]
THE 3D ULTRASOUND RECONSTRUCTION AND ELASTOGRAPHY IN THE DIAGNOSIS OF TRIPLE NEGATIVE BREAST CANCER

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Introduction: Incidence of breast cancer is in a continuos growth, more in younger patients, triple negative breast cancer(TNBC) being most invasive breast cancer with a poor prognosis.

In this study we used the advanced ultrasound techniques in diagnosis of triple negative breast cancer.

Materials And Methods: We selected a sample of 691 patients, during 2016-2021, diagnosed with breast cancer and confirmed by needle biopsy and immunohistochemical exam, 96 patients being with triple negative breast cancer in different degrees of differentiation.

For the diagnosis we evaluated breast 3D reconstruction using automated breast volume scanning (ABVS) and tissue stiffness studies by strain elastography (SE) and Shear Wave elastography (SWE), performed by two doctors.

Results: We correlated morphological ultrasound changes in 65.25% of the cases, associated coronal view retraction of the tumor in ABVS, with desmoplastic reaction of well defined cancer. More specific for TNBC was regular shape of mass and posterior echogenic halo, frequently associated with lymph node metastases.

SE was more stiff in elastogram compared with standard, in aggressive lesions.

In VTI (virtual touch imaging) we associated supraunitary ratio between elastogram and standard sizes, inversely proportional to the degree of differentiation (high ratio with low degree) in 90.25% of cases.

Using VTIQ (virtual touch imaging quantification), high stiffness, with mean velocity of elasticity of 5.80m/sec, we found 81.70% cases in invasive breast carcinoma, triple negative breast cancer.

Conclusions: ABVS and elastography(SE, VTI and VTIQ) are non invasive methods, delivering an overview of immunohistochemical subtypes of breast cancer, being a virtual biopsy.

These ultrasound techniques are very efficient for oncological approach, especially for younger patients.

Keywords: elastography, breast, cancer, ultrasound, reconstruction

[P-16]
IN A LARGE OR PTOTIC BREAST CANCER PATIENT WHICH CANDIDATE FOR MASTECTOMY WITH IMMEDIATE RECONSTRUCTION IS SKIN REDUCING MASTECTOMY WITH AUTOLOGOUS RECONSTRUCTION COSMETICALLY ACCEPTED AND LESS COMPLICATION?

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Until now, autologous immediate breast reconstruction in a large ptotic breast remains challenging with an increasing number of patients with large ptotic breast cancer requiring treatment. In this study, we aim to assess patient satisfaction and incidence of complication rate after skin-reducing mastectomy with immediate autologous reconstruction in a large or ptotic breast. The study was designed as a retrospective review of all patients with macromastia or grade II, III ptosis who underwent skin-reducing mastectomy with immediate breast autologous reconstruction from 2018 to 2021 at Damietta Cancer Center. Data were collected from medical records of the patients including oncologic details, preoperative staging, hormonal status, neoadjuvant and adjuvant therapies. Data about patient characteristics, age, gender, BMI, co-morbidity, history of smoking and other risk factors were collected. Operative details including type of mastectomy, surgery to contralateral breast, management of axilla (SNLB, ALND), type of flap used, operative time and postoperative complications were recorded. Two outcomes were assessed: 1. Patient satisfaction and 2. Incidence of complications. Patient satisfaction was assessed in two points: 1. Breast symmetry by comparing contralateral breast and 2. Nipple loss, malposition, projection & necrosis. Incidence of complication is recorded in 2 categories: Minor and major complications. In this retrospective review, we anticipated that skin-reducing mastectomy with immediate autologous reconstruction is a good option for patients with large and/or ptotic breasts with a higher rate of patient satisfaction and lower complication rates.

Keywords: skin, reducing, mastectomy

[P-17]
GOLDILOCKS MASTECTOMY: A TAILORED OPTION FOR LARGE-SIZED BREASTS

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Introduction: Goldilocks mastectomy was described for the first time by Richardson and Ma in 2012. Obese patients undergoing reconstruction with autologous flaps are at increased risk for fat necrosis, superficial skin loss, and delayed wound healing. Older patients are more likely to decline complicated reconstructive procedures. Patients with significant medical comorbidities may have frank contraindications to prolonged operative procedures. Thus, Goldilocks mastectomy offered an option of reconstruction without the need for complicated procedures or implant-based techniques. The aim of this study was to assess the feasibility and outcome of Goldilocks mastectomy in a cohort of patients.

Materials and methods: A prospective study was conducted to offer Goldilocks mastectomy to 40 female patients who were candidates for total mastectomy. Inclusion criteria were: obese patients with large ptotic breasts candidates for total mastectomy (breast cancer/prophylactic mastectomy). Exclusion criteria: inflammatory breast cancer and skin involvement with the tumor. Assessment of operative time, early postoperative complications and cosmetic outcome with a minimum of 6 months follow-up was done. Patient satisfaction was assessed simply by the Likert scale.

Results: The procedure was conducted on 52 breasts in 40 patients in the period from August 2018 to December 2021. It was performed on both sides as a prophylactic procedure in 8 patients and in bilateral disease in other 4 patients. Contralateral reduction symmetrization was performed in 16 patients. Postoperative complications encountered were minimal (30%) including seroma, superficial wound dehiscence. A single patient suffered from massive fat necrosis that necessitated revision surgery. More than 75% of the patients were satisfied or extremely satisfied. No reported local or distant recurrence in the period of follow-up.

Conclusions: Goldilocks mastectomy is a valid non-sophisticated procedure that can be offered to patients with large ptotic breasts with minimal post-operative complications and acceptable patient satisfaction.

Keywords: breast cancer, Goldilocks, immediate reconstruction

[P-18]
HOW CAN WE BUILD A PATIENT DATABASE SYSTEM THAT CAN ALSO BE USED FOR ACADEMIC PURPOSE? AN EXAMPLE FOR BREAST CANCER

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Purpose: In hospitals, patient data is recorded in hospital information management systems. These are useful in patient follow-up, but when an academic project is developed, it is difficult to reach the required data. Aim; to develop a database system that can be used both for patient follow-up and for academic products.

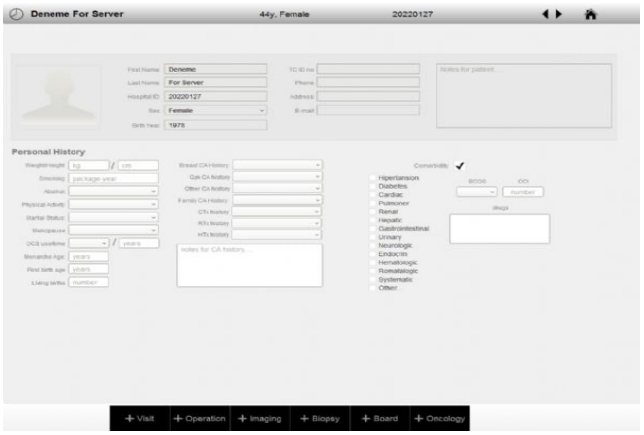
Methods: The most frequently used variables were listed and categorized by evaluating the articles on breast cancer (PubMed) and current diagnosis-treatment guidelines between 2010 and 2020. In addition, an Entity-Relationship diagram was prepared for the breast cancer patient. Different data tables were prepared for potential variables and a relational database was prepared based on the diagram (using Filemaker software). The value list was determined according to local and universal standards. After the necessary security steps, the prepared database was uploaded to online servers and access to this database was provided from different devices. Breast cancer patients treated after 2015 were recorded in the system retrospectively and prospectively.

Results: Since 2015, 640 patients who underwent surgery were recorded in the system retrospectively and prospectively. In line with the academic study plans, firstly, the data of patients who received neoadjuvant chemotherapy (NAC) were recorded. It was observed that 36 of 87 patients with clinically and/or radiologically node-positive breast cancer had axillary pathological complete response (pCR) after NAC. In addition, an average of 94% of the patient data were prospectively recorded in the system. An average of 63% of the patients' data were recorded in the system retrospectively.

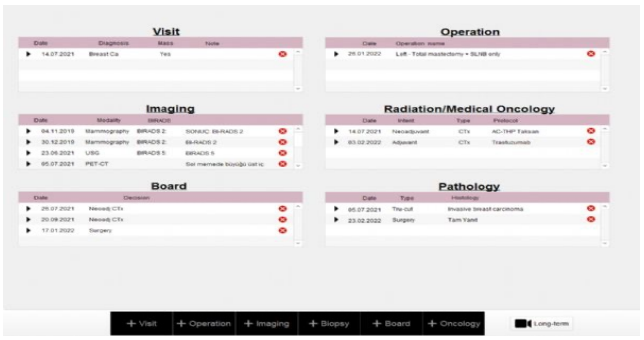
Conclusion: The breast cancer database created by the clinician and accessible via an online server is a data management system that can be used both for patient follow-up and for the production of academic products. There is a need for improvements on problems such as cost, time, educated personnel.

Keywords: breast cancer, breast surgery, database

Basic Patient Information



Flow of Events



[P-20]
OCCULT BREAST CARCINOMA: STEP BY STEP APPROACH AND SINGLE CENTER 7-YEAR EXPERIENCE

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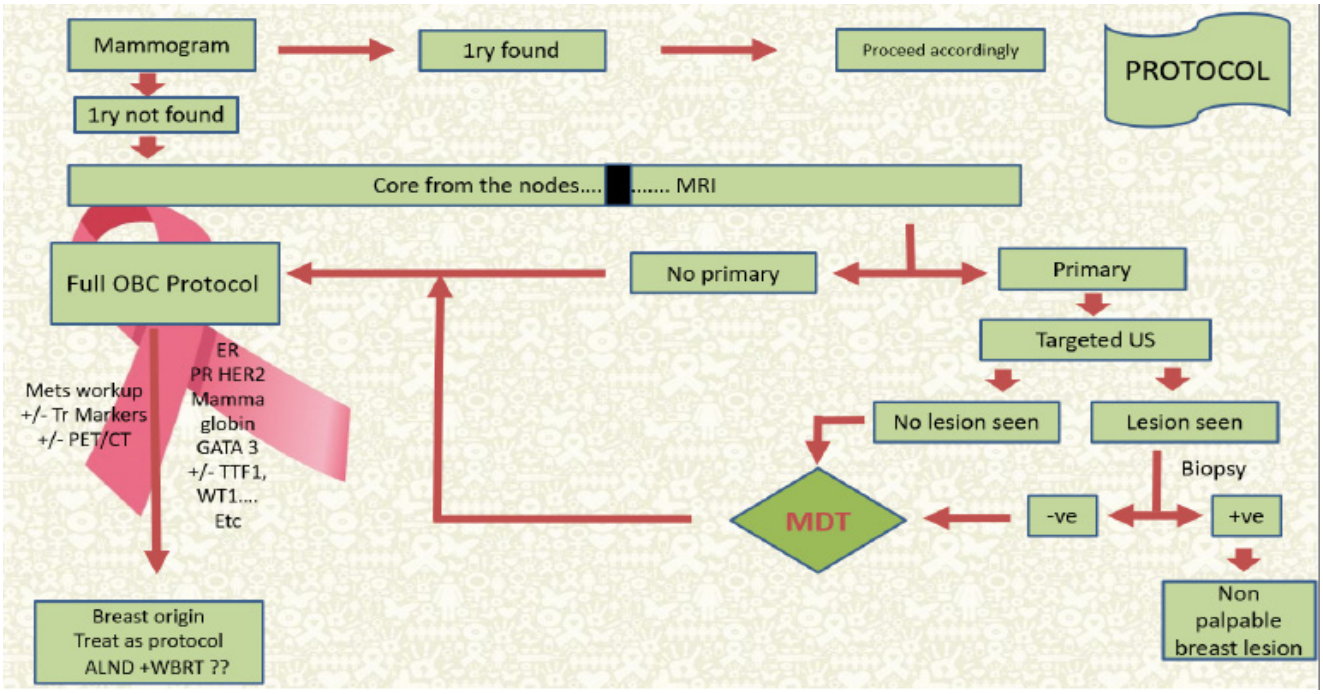
Introduction: Despite the advances in breast cancer diagnosis and management, still there is a percent of cases presenting with axillary nodal metastasis without apparent primary in the breast. The term occult breast cancer (OBC) needs clear definition and clear plan for approaching of diagnosis. This study aimed at defining a clear protocol (algorithm) for management of OBC.

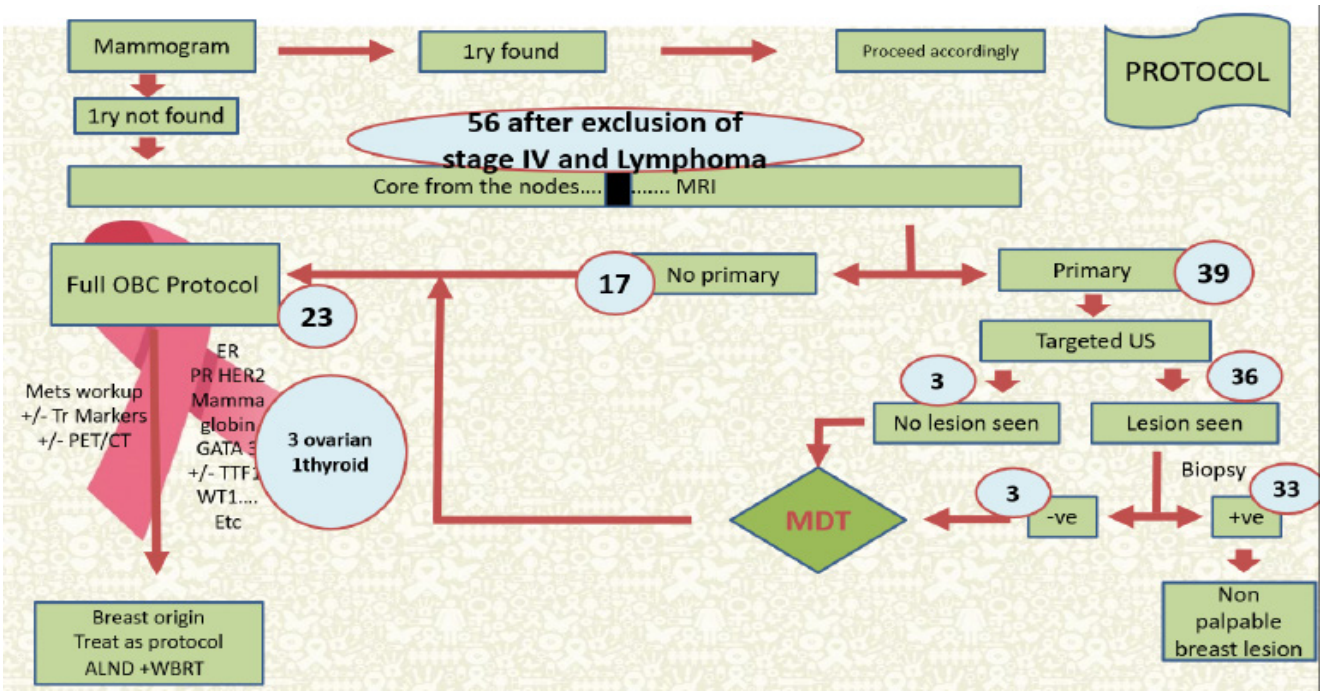
Materials and methods: This study was a prospective single-arm study aiming at studying the feasibility of applying a suggested algorithm (Figure 1) in diagnosing what is assumed to be OBC.

Results: The study extended from April 2014 until May 2021 and included 56 female patients with pathologically proven metastatic axillary nodes and normal mammography findings. Patients with stage IV disease and lymphoma were excluded. Our results were summarized in Figure 2.

Conclusions: According to our results a new definition of OBC is needed where free MRI should be mandatory in the diagnosis of OBC. A combination of MRI, IHC and targeted US is essential in management of OBC.

Keywords: breast cancer, occult carcinoma, axillary lymph nodes


Mammogram
1ry found
Proceed accordingly
PROTOCOL
1ry not found
Core from the nodes.... ..... MRI
Full OBC Protocol
No primary
Primary
Targeted US
No lesion seen
Lesion seen
Biopsy
MDT
-ve
+ve
Non palpable breast lesion
Mets workup +/- Tr Markers +/- PET/CT
ER PR HER2 Mamma globin GATA 3 +/- TTF1, WT1.... Etc
Breast origin Treat as protocol ALND +WBRT ??


Mammogram
1ry found
Proceed accordingly
PROTOCOL
1ry not found
56 after exclusion of stage IV and Lymphoma
Core from the nodes.... ..... MRI
Full OBC Protocol
23
17
No primary
Primary
39
Targeted US
3
36
No lesion seen
Lesion seen
Biopsy
MDT
3
-ve
+ve
33
Non palpable breast lesion
Mets workup +/- Tr Markers +/- PET/CT
ER PR HER2 Mamma globin GATA 3 +/- TTF1 WT1.... Etc
3 ovarian 1thyroid
Breast origin Treat as protocol ALND +WBRT

[P-21]
CLINICOPATHOLOGICAL FEATURES OF PATIENTS WITH BRCA MUTATION

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Background: Mutations in BRCA1 and BRCA2 are the most common genetic mutations in hereditary breast cancers. The aim of this study is to analyze the clinicopathological features of BRCA mutant MC and OC patients followed in the Medical Oncology Clinic of Kocaeli University.

Method: BRCA mutation testing has been offered to BC patients who fulfill the NCCN Breast Cancer Genetic Assessment Criteria. Mutation analysis of BRCA 1 and 2 genes were performed by Next Generation Sequencing and the presence of large genomic rearrangements is investigated by Multiplex Ligation-dependent Probe Amplification.

Results: Pathogenic BRCA 1 or 2 mutations were detected in 29 of 220 patients who were tested for the BRCA mutation. Fifteen(52%) of 29 patients had BRCA1 mutations. The median age was 42 (25-63) years and 20 patients were premenopausal. Thirteen patients (45%) were under the age of 40. Only OC was detected in two patients; MC and OC in one patient; and only MC was detected in 25 patients. All three patients with OC had stage 3c and hormone receptor-positive serous carcinoma. 3 patients had bilateral MC. Of the patients with MC, 67%(n: 18) were early stage, 30%(n: 8) were locally advanced, and one patient was metastatic at the time of diagnosis. The hormone receptor and Her-2 amplification status of two patients were unknown. Of the remaining 25 patients, 48%(n:12) had hormone receptor-positive, 44%(n:11) had triple-negative, 8%(n:2) had Her-2 positive tumors. While 9 patients were triple-negative in BRCA1 mutation carriers, only two patients were triple-negative in BRCA2 carriers.

Conclusion: BRCA 1 and 2 mutations were observed in 13% of our patient population. Most patients were young, had early stage and hormone receptor-positive BC. Identification of pathogenic mutations is important for clinical management of patients and also for breast and ovarian cancer prevention in the mutation carrier family members.

Keywords: BRCA1, BRCA2, breast neoplasms, ovarian neoplasms

[P-22]
EXCLUSIVE BREASTFEEDING AND FAMILY INFLUENCES IN RURAL NIGERIA: A QUALITATIVE STUDY

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Exclusive breastfeeding has been recognised as an important public health tool for the primary with traditional and religious leaders so as to modify and/or discourage practices that involve instrument, a total of fourteen respondents comprising breastfeeding women and family from practices; and learning to breastfeed. Given how the family participate and influence infant familiarity of family members on breastfeeding recommendations and also endeavour to work Interviews were audio taped, transcribed, and analysed using seven analytic procedures. Four family knowledge of exclusive breastfeeding; collective sense of duty; family beliefs and practice. As a social institution and more importantly the basic unit of society, the aim of this recommended exclusive breastfeeding for the first six months after delivery, followed by feeding practices, it is suggested that public health education must aim at increasing the introduction of complementary foods and continued breastfeeding for 24 months or more. Even themes emerged in relation to the forms of family influences on exclusive breastfeeding: prevention of child morbidity and mortality. Consequently, the WHO and UNICEF have UCH in the southern in Nigeria participated in this study. All rural Nigeria. Using a qualitative method with unstructured interviews as data collection or run into severe problems due in part to poor understanding of the several influences on the so, however, efforts to promote exclusive breastfeeding have either achieved limited successes study was to seek an in-depth understanding of family influences on exclusive breastfeeding in feeding newborns with herbal teas and ritual concoctions.

Keywords: exclusive breastfeeding, family, nigeria, influence, rural community

[P-23]

ADJUVANT HIGH-DOSE CHEMOTHERAPY AND PERIPHERAL BLOOD STEM CELL TRANSPLANTATION IN HIGH-RISKBREAST CANCER PATIENTS: SINGLE CENTER AND 20-YEAR FOLLOW-UP RESULTS

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[6]Retired
[7]Yeditepe University, Faculty of Medicine, Deparment of Medical Oncology, Istanbul, Türkiye
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Purpose: High-dose chemotherapy (HDCT) and autologous stem cell transplantation (ASCT) approach for adjuvant therapy in breast cancer (BC) didn't show a significant survival benefit in short-term follow-up. Long-term follow-up data of these studies is rare. We wanted to share our long-term single center experience.

Methods: Patients who were treated with HDCT+ASCT for adjuvant treatment of BC between March 1997 and June 2004 were evaluated retrospectively.

Results: Fifty-six patients were included. All patients were Stage 3C (axillary lymph node involvement >=10). All patients received HDCT+ASCT treatment following CAF or CEF chemotherapy. After HDCT, patients received adjuvant radiotherapy and endocrine therapy was given to appropriate patients.

The mean age was 43.9 (26-67). Forty-two patients (75%) were premenopausal. Fourteen patients (25%) had triple negative breast cancer (TNBC). Seventeen patients (30%) had HER2 positive BC. Hormone receptor positive BC patients were thirty (53.5%). The CNV (80%) regimen (cyclophosphamide, mitoxantrone and etoposide) was preferred most frequently as the HDCT regimen. Analyzes were made based on the last follow-up date of 15.08.2020. Median follow-up was 130 months (4.1 - 286).

Mortality in the first 100 days was 5.3%. Thirty-two patients died during the follow-up period. Three of the patients who died died due to non-cancer causes. BC-specific overall survival (OS) was 42.9%. OS in cases with TNBC was 45.7%. This rate was 28.6% in the total of patients with non-TNBC (p=0.55). The median OS was 221 months in the TNBC and 120 months in the non-TNBC (p=0.33). In the late period, secondary malignancy was found in five patients (8.9%) and cardiovascular disease in seven patients (12.5%). Twenty-four patients are still being followed up without cancer-recurrence.

Discussion: Based on these long-term follow-up results, HDCT+ASCT may be a treatment alternative again in patients with axillary lymph node involvement >=10. Especially TNBC patients can benefit more this modality.

Keywords: high dose chemotherapy, breast cancer, adjuvant treatment

[P-25]
EVALUATION OF 24-HOUR RHYTHM HOLTER FINDINGS IN BREAST CANCER PATIENTS TREATED WITH RIBOCICLIB

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Objective: Ribociclib, a cyclin-dependent kinase (CDK) 4/6 inhibitor, has been shown to improve the progression-free survival in patients with hormone receptor (HR)-positive,human epidermal growth factor receptor 2 (HER2)-negative metastatic breast cancer in combination with an endocrine agent. Frequent electrocardiographic monitoring is recommended during the treatment due to the QT prolongation effect. However the effects of ribociclib treatment has not been evaluated with rhythm holter monitoring.

Material-Method: 42 female metastatic breast cancer patients were included in the study. Rhythm holter ECG was performed before starting treatment with ribociclib and after 3 months of the treatment initiation. QTc were calculated prior to treatment initiation; on day 14 of cycle 1, at the beginning of cycle 2 and 3. Patients with known cardiac arrhythmia, ischemic heart disease, diseases causing QT prolongation or using QT prolonging drugs were excluded.

Results: The mean age of the patients was 56.36±12.73, 50%(n=21) of them had de novo metastatic disease. 52.4%(n=22) of the patients were using ribociclib in combination with fulvestrant and 47.6% (n=20) with aromatase inhibitors. 26.2%(n=11) of the patients were using tobacco, 14.3%(n=6) had diabetes mellitus and 31%(n=13) had hypertension. 26(61.9%) patients experienced grade 1-2 neutropenia, 12(28.5%) patients had grade 3 neutropenia requiring dose reduction. 4(9.5%) patients had grade 1 hepatotoxicity, 1(2.4%) patient had grade 3 hepatoxicity requiring dose reduction, and 1(2.4%) patient required permanent discontinuation of the treatment due to the severe hepatotoxicity. None of the patients developed cardiotoxicity. When the rhythm holter results before and in third month of the treatment were compared, there was no statistically significant difference.

Conclusion: This is the first study evaluating effects of ribociclib treatment on cardiac rhythm with holter ECG. The study highlighted cardiac safety profile of ribociclib.

Keywords: breast cancer, cardiotoxicity, QT prolongation, rhythm holter ECG, ribociclib

[P-26]
TISSUE PROTEOME ANALYSIS REVEALED ASSOCIATION AMONG CANCER, IMMUNE SYSTEM RESPONSE AND THE IDIOPATHIC GRANULOMATOUS MASTITIS

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Idiopathic Granulomatous Mastitis (IGM) is a disease that clinically mimics breast cancers by displaying symptoms of pain, edema, erythema, nipple discharge, nipple retraction, breast skin and fistula. Although the basis of IGM is considered to be formed by autoimmune responses or infections the molecular mechanism playing formation and progress of IGM is not exactly known. Therefore, in this study, we aimed to investigate molecular mechanisms underlying IGM formation, progress, and recurrence by monitoring the changes at the proteome level. Protein extracts prepared from IGM (n=15) and within-control tissues (n=15) were subjected to nHPLC followed by LC-MS/MS proteomic analysis.

Label free quantification analysis revealed that sixty proteins displayed significant changes in their abundance between the two groups. Those proteins were classified based on their role in metabolic pathways using DAVID and STRING web-based bioinformatics tools. Based on DAVID analysis, 16 of the differently regulated proteins were associated with the immune system, while the other 17 proteins involved in cancer metabolism. STRING analysis provided a different perspective and showed that five of the differentially regulated proteins specifically associated with combined immune deficiency while the other proteins were involved in insulin response and neutrophil degranulation.

This study is one of the very few studies that investigated the changes at the proteome level in breast tissues from IGM with respect to the controls, while many genomic or transcriptomic studies can be found in the literature. For the first time, we have shown the relationship of IGM with the immune system at the protein level and also underlined the cancer-like behavior of the disease. Furthermore, some of the proteins that were pointed out in here may have a value as diagnostic markers for IGM although further studies are needed to shed more light into the pathogenesis of the disease.

Keywords: idiopathic granulomatous mastitis, proteomics, LC-MS

[P-28]
CHANGE IN PROTEIN PROFILE IN LYMPH NODE METASTASIS IN BREAST CANCER

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[2]Kocaeli University, School of Medicine, Department of General Surgery, Kocaeli, Türkiye

Lymph node metastasis of breast cancer is worth to investigate for breast cancer poor prognosis and low survival rates. There are distinct subgroups of breast cancer can be classified as TNBC, HER2OE, LNA and LNB. Each subgroup has specific lymph node metastasis characteristics that have to considered separately. In this study we aimed to investigate proteomic profile of metastatic lymph nodes hiç belongs to four different subgroups compared to the controls. For this, breast tumor tissue, lymph node metastasis tissue and healthy lymph node tissue were taken from each patient. After protein extraction from each tissue sample, the protein pools were prepared as breast cancer pool, healthy lymph node pool and metastatic lymph node pool for each experimental subgroup. Each pool was loaded into 17cm NL pH 5-8 IPG strips. After passive rehydration and focusing, total 24 strips were placed onto SDS-PAGE gels. The gels were stained with colloidal Coomassie blue. Protein spots that were found regulated were selected and cut via spot cutter. Spots that were cut digested with trypsin according to in gel tryptic digestion protocol. The protein peptides were analyzed by MALDI. 53 spots for LNA, 43 spots for LNB, 58 spots for HER2OE and 70 spots for TNG were cut and identified. In the results of TNG group, glycolysis and gluconeogenesis pathways were upregulated in KEGG pathways together with biosynthesis of amino acids in biological processes. In LNB group together with glycolysis and gluconeogenesis pathways, oxidation reduction process and ATP production were also upregulated in biological processes. On the other hand, in LNA group, glycolysis and gluconeogenesis pathways, carbon metabolism, glucagon signaling pathways and antigen processing pathways were found upregulated in KEGG pathways. In HER2 OE group, in biological processes, cellular response to organic substance, chemical stimulus and cytokine stimulus pathways were upregulated distinctively.

Keywords: breast cancer, lymph node, metastasis

[P-29]

CASE SERIES ANALYSIS OF MALIGNANT AND NON MALIGNANT BREAST LESIONS IN NORTHWESTERN INDIA: A FIVE YEAR RETROSPECTIVE ANALYSIS OF 8604 BREAST LESIONS FROM NORTHWESTERN INDIA

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Aims and Objectives: To study the distribution of breast malignant and non malignant lesions in North western India over five years.

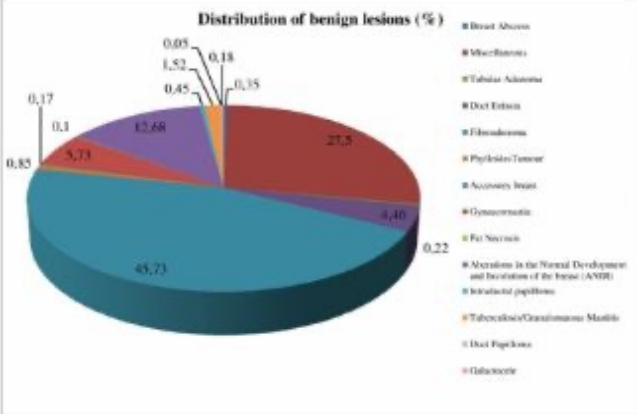
Materials and Methods: A case series analysis was conducted on 8604 breast pathologies obtained from four major diagnostic centres in Eastern Rajasthan.Historical patient records were anlysed. These included histologically proven benign and malignant breast lesions. Distribution of types, age and sex was noted.

Results:- There were 5985 lesions (69.56%) in benign group and 2619 (30.43 %) in malignant group. Women formed most of the study group 92.73% (7978) and men 7.27 % (626). Men formed 9.47 % of benign lesions group while just 2.25 % of malignant lesion group (p<.001) Amongst benign lesions, most common were Fibroadenomas 45.73 % (2737) followed by Aberrations in the Normal Development and Involution of the breast (ANDI) 12.68 %(759), and gynaecomastia 5.73% (343). The most common age group was <= 20 years for fibroadenomas and Gynaecomastia whereas 31-40 years for Aberrations in the Normal Development and Involution of the breast (ANDI). Amongst malignant lesions, most common was Infiltrating duct carcinoma(not otherwise specified) with 32.72 %(857) followed by Infiltrating duct carcinoma (moderately differentiated) 26.84 %(703). The age group most common to both Infiltrating duct carcinoma (IDC) and Infiltrating lobular carcinomas(ILC) was 41-50 years. Second most common age group was 51-60 years for Infiltrating duct carcinoma whereas 31-40 years for Infiltrating lobular carcinomas.Amongst breast lesions in men, male breast carcinoma formed 2.25%(59) of overall breast lesions and gynaecomastia formed 5.04% (302).

Discussion and Conclusion: Benign lesions are commoner in teens and early twenties. While malignant lesions are kept as first differential in women above 40 years. More epidemiological studies are required to elicit correlation, if any, in the North Western Indian context.

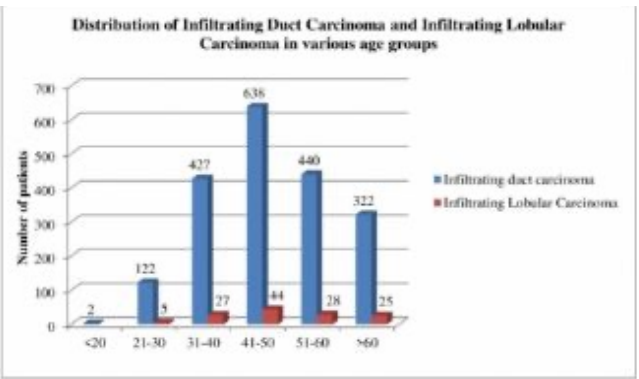
Keywords: breast cancer, epidemiology, india, pathology, surgery

Distribution of benign lesions



Mean age for benign lesions was 31.06 SD12.41 years and for malignant lesions was 49.29 SD12.43 years. Amongst benign lesions, most common were Fibroadenomas 45.73 % (2737) followed by Aberrations in the Normal Development and Involution of the breast (ANDI) 12.68 %(759), and gynaecomastia 5.73% (343). The most common age group was <= 20 years for fibroadenomas and Gynaecomastia whereas 31-40 years for Aberrations in the Normal Development and Involution of the breast (ANDI).

Distribution of malignant lesions with age



Amongst malignant lesions, most common was Infiltrating duct carcinoma (IDC) which formed 80.71 % (2114/2619) of all malignant lesions. Second most common malignancy was Infiltrating Lobular carcinoma 5.38 % (141/2619). Further amongst four types of Infiltrating Ductal carcinomas, most common was Infiltrating duct carcinoma (not otherwise specified) with 32.72 %(857) followed by Infiltrating duct carcinoma (moderately differentiated) 26.84 %(703). The age group most common to both Infiltrating duct carcinoma (IDC) and Infiltrating lobular carcinomas(ILC) was 41-50 years. Second most common age group was 51-60 years for Infiltrating duct carcinoma whereas 31-40 years for Infiltrating lobular carcinomas.

Distribution of benign lesions and malignant lesions

	Benign	Malignant	total no. of patients
number of patients	2619	5985	8604
percentage of patients	30.43	69.56	

Distribution of lesions in men

!	Number	percentage of all lesions	Mean Age
Malignancy 5	9	2.25	57.81 years
Gynaecomastia	302 5	.04	28.68 years
intraductal papilloma	1 0	.01	67.00

[P-30]
ARE SYRIAN REFUGEES BREAST CANCER PATIENTS DIFFERENT FROM TURKISH CITIZENS? IS IT MYTH OR REALITY?

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Objective: Clinical observation of Syrian refugees (SR) cancer patients are different than Turkish citizens(TC) both in clinicopathological features and disease course. The aim of this observational retrospective study is to compare clinicopathologic features as well as disease course of SR breast cancer patiets to TC counterpart

Meterial and Methods: This study was retrosepctive observational study include 490 breast cancer patients from monocenter in Turkey between 2014-2021.

Results: Syrian refugees ratio was 88/490 (%18), median age at diagnosis was 44 years for SR while in TC population 49 years (p:0,006). There was no difference between intrinsic subtypes, Luminal subtype 45.5% to 54.4%, HER 2 positive 39.8% to 34.3%, Triple negative14,8% to 11.3% in SR and TC respectively. Histopathologic type in SR and TC were predominant invasive ductal carcinoma (90.6%,84% respectively). Ratio of denovo metastatic was 20/87 (23%) in SR while in TC population 85/398(21.3%) (p>0,05), in this population Luminal subtype was 6/20 (30%) in SR,49/84(58.1%) TC (p:0,02) Both in SR and TC group grade 2 is most prominent(66 % and 59,2% respectively) and no statistical difference between groups. Upfront operation in patients who should offered neoadjuvan chemotheraphy was 33.3%(11/33) in SR, 43/170(25.4%) in TC population (p>0,05). Median days to reach neoadjuvant chemotheraphy(ChT) in SR it was 47(16-75) while TC 37(3-141) p>0,05. In upfront operated patients, median days to surgery in SR was 42(14-165)while in TC was 40(11-134) p>0,05. In metastatic setting median days to initiate ChT in SR was 38(14-118) while in TC it was 41(11-141) p>0,05.

Conclusion: SR were younger than counterparts but intrinsic and histopathologic subtypes were similar in both group. Denovo metastatic ratio and neoadjuvant approach are similar between groups showed SR could reach oncologic treatment equally to Turkish counterpart. When looking treatment delay in SR there was no difference in time to initiate treatment.

Keywords: breast cancer, clinicopathological features, Syrian refugees

Characterics of patients

!	Syrian refugees (SR)	Turkish citizens (TC)
Number (%)	88/490(18%)	402/409 (82%)
Age (median/age) 4	4	49
Luminal	40/88 (45.5%)	216/397(54.4%)
HER-2 +	35/88(39.8%)	136/397(34.3%)
Triple negative	13/88(14.8%)	45/397 (11.3%)
Denovo metastatic	20/87 (23%)	85/398(21.3%)
Grade 1 2	/47 (4.2%)	30/228 (13.2%)
Grade 2	31/47 (66%)	135/228 (59.2%)
Grade 3	14/47(29.8)	63/228(27.6%)
Neoadjuvant ChT* 1	1/33 (33.3%)	43/170 (25.4%)
Time to neoadjuvant ChT(days)** 4	7	37
Time to surgery(days)*** 4	2	40
Time to metastatic ChT(days)****	38	41

**patient operated who should offered neoadjuvant ChT **time from diagnosis to neoadjuvant ChT ***time from diagnosis to surgery for upfront operated patients ****time from diagnosis to ChT in denovo metastatic patients*

[P-31]
PATHOLOGIC COMPLETE RESPONSE AND PERIPHERAL INFLAMATORY BIOMARKERS IN TRIPLE NEGATIVE BREAST CANCER

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Objectives: Pathologic complete response (pCR) is prognostic factor and nowadays used as one of end point especially in neoadjuvant triple negative breast cancer studies. Inflamatory biomarkers such as neutrophil to lympocyte ratio (NLR), platelet to lympocyte ratio (PLR), systemic immune-inflammation index (SII), pan-immune inflamation value (PIV) has been used as prognostic factor in various cancer including breast cancer. In this study, we want to search association between pCR and these inflamatory biomarkers in triple negative breast cancer.

Material-Methods: This retrospective study analysed 37 triple negative breast cancer patients treated with neoadjuvan chemotheraphy (ChT) in two center in Turkey. Pretreatment peripheric blood values used for calculating NLR(neutrofil/lympocyte), PLR(platelet/lympocyte), SII (platelet x neutrophil/lympocyte), PIV (platelet x neutrophil x monocyte/lympocyte). According to median values patient calssified into high and low groups, difference between median values of these parameters in pCR patients and non-pCR patients were calculated by Mann-Whitney U test and logistic regression test.

Results: 16 patients had pCR while 19 patients had non-pCR. Median PIV value was 365.06 (125.9-3640), when compare pCR patients versus non-pCR patients median PIV values were 395 to 304 respectively p>0,05. Median NLR value was 2,16(0.78-5.52), median NLR value of patients with pCR was 2,0 while it was 2,49 in non-pCR p>0,05. Median PLR value was 124.8 (45,6-344), in pathologic complete responder it was 117 while in non pathologic complete responder it was 133 p>0,05. Median SII was 666.3 (242.2-2205.29), in patients with pCR median SII was 614,8 while in non- pCR same value was 709.5 p>0,05.

Concluisons: Peripheral inflammatory biomarkers are prognostic in breast cancer as well as other cancers but we found that they are not predictive to pCR. The need of found predictive factor for pCR remain pivotal.

Keywords: breast cancer, triple negative, inflamatory biomarkers

[P-32]
IMPORTANCE OF PROSTATE-SPECIFIC MEMBRANE ANTIGEN IN PAGET'S DISEASE OF THE BREAST

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Objective: In this study, the relationship of prostate specific membrane antigen (PSMA), a type-2 transmembrane glycoprotein, with the Her-2 Receptor and prognosis of the disease in cases with Paget's Disease of the Breast was investigated.

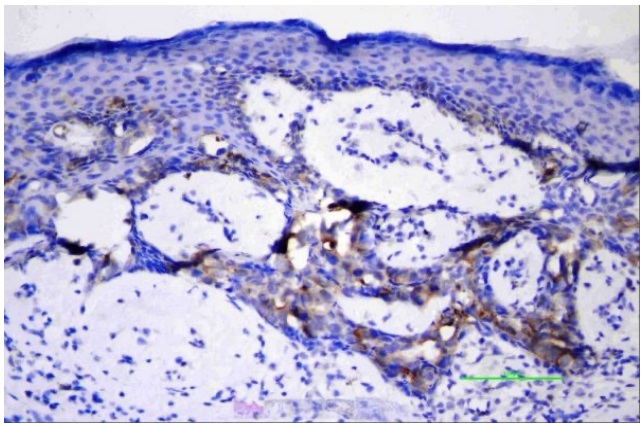
Methods: The data of 14 patients diagnosed and treated with Paget's disease of the breast between July 2013 and March 2020 in the General Surgery Clinic of Süleyman Demirel University were evaluated retrospectively.

Results: After the pathological diagnosis was made, all patients underwent modified radical mastectomy. Paget's disease was found together with invasive ductal carcinoma in one patient, and Paget's disease was found together with ductal carcinoma in situ in 7 patients (50%). Staining in malignant tissue with PSMA was detected in only two patients. The normal dermis venules of other patients were stained with PSMA. In the subsequent follow-ups, lung and bone metastases were detected. The other patient stained with PSMA showed weak PSMA expression in malignant epidermal cells in the epidermis (The patient's tumor invasion grade was T2, there was no axillary lymph node metastasis, ki-67 expression was 10%, estrogen, progesterone and HER2 receptor were positive.

Conclusion: Although studies showing the relationship between PSMA and breast malignancies are limited and there is no literature information; The presence of high grade and distant metastasis with ki-67 in two patients with staining with PSMA in our study supports the opinion that PSMA is considered as a bad prognostic factor and should be included in routine immunohistochemical studies in Paget's disease.

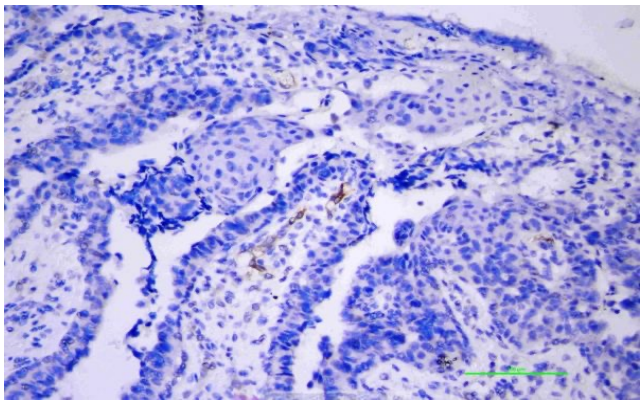
Keywords: Paget's disease of the breast, prostate specific membrane antigen (PSMA), HER-2

psma staining, dermis venules



PSMA staining in normal dermis venules

psma staining, malignant tissue



Strong PSMA staining in malignant tissue

[P-33]
PATTERNS OF BREAST CANCER SECOND RECURRENCES IN PATIENTS AFTER MASTECTOMY

Geok Hoon Lim[1], Veronica Siton Alcantara[1], Ruey Pyng Ng[2], Raymond Ng[3], John Carson Allen[4], Me Me Win Htein[1], Swee Ho Lim[1], Zhiyan Yan[1], Qing Ting Tan[1]

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Introduction: Little is known about second recurrences in breast cancer patients, especially in patients with mastectomy. We aimed to determine the risk factors, prevalence and patterns of second recurrence in mastectomy patients after first recurrence.

Methods: Stage I-III breast cancer patients treated at a tertiary institution from 1st September 2005- 31st October 2017 and developed first and second recurrences after mastectomy were retrospectively reviewed. We excluded patients with bilateral cancers and who were lost to follow-up. The demographics, pathological and recurrence data were collected from a prospectively maintained database and analysed.

Results: Of the 1619 mastectomy patients, 214 (13.2%) patients developed recurrences at a mean 39.9 months from primary cancer diagnosis. 23, 8 and 183 had isolated chest wall recurrences (CWR), regional and systemic metastases respectively. Excluding 2 CWR patients without surgery, second recurrences occurred in 3/21 (14.3%) and 3/8 (37.5%) in patients with CWR and regional metastasis at 27.7months (range: 5-42) and 32 months (range: 18-40) respectively. In both groups, systemic metastasis as second recurrence occurred within 2 years after first recurrence while locoregional second recurrences occurred later. No risk factors for second recurrence were identified.

Conclusion: In patients with mastectomy, second recurrences occurred in 20.7% of patients with treated locoregional first recurrence, with no risk factors identified. Systemic metastases manifesting as second recurrence occurred in the first 2 years after first recurrence. Continued clinical surveillance and restaging patients in the first 2 years after first locoregional recurrence may enable early prognostication and treatment with the newer metastatic drugs.

Keywords: breast cancer, mastectomy, recurrence, staging

[P-34]
DOES THE SIZE OF CHEST WALL RECURRENCE AFTER MASTECTOMY MATTER IN BREAST CANCER PATIENTS?

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Background: One of the manifestations of recurrence after mastectomy is the presentation of chest wall lesion. However, it is unclear if the size of the chest wall recurrence (CWR) is related to the presence of systemic metastasis in these patients. We aimed to determine if the size of the CWR could affect the outcome in these patients.

Methods: Stage I-III breast cancer patients who underwent mastectomy and developed invasive ipsilateral CWR were included. Patients with bilateral mastectomy were excluded. Demographic, radiologic and pathological data were analysed between patients with CWR and simultaneous systemic metastasis versus those with CWR but without systemic metastasis.

Results: Of the 1619 patients treated with mastectomy, 214 (13.2%) patients developed recurrences. 57/214 (26.6%) patients had invasive ipsilateral CWR. 48 patients were analysed after exclusion of patients with missing data. Mean age at diagnosis of first cancer and at recurrence were 55.2 years (32 - 84) and 58.5years (34 - 85) respectively. 26/48 (54.2%) had CWR with simultaneous systemic metastasis. Mean CWR size was 30.7mm (6-121) and 21.4mm (5.3-90) for the patients with simultaneous systemic metastasis and those without respectively (p=0.441). Grade (p=0.0008) and nodal status (p=0.0009) at primary diagnosis, grade (p=0.0011) and progesterone receptor (PR) (p= 0.0487) at recurrence were statistically significant for systemic metastasis in patients with CWR.

Conclusion: Biologic factors such as grade of primary and recurrent cancer, PR of recurrent cancer and nodal status at primary diagnosis, instead of CWR size, were associated with systemic metastasis in patients with CWR. Regardless of CWR size, systemic staging should be performed.

Keywords: breast cancer, size, mastectomy, recurrence

[P-36]
SUPERVISED PATIENT TO PATIENT SUPPORT: AN INNOVATIVE LOW COST PROJECT TO SUPPORT NEWLY DIAGNOSED BREAST CANCER PATIENTS IN IRAN

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Breast cancer patients` support is a fundamental part of multidisciplinary team work approach. Since 2014, breast cancer ranks the first cancer in Iranian population. Young (< 50) or very young (< 40) in there active social, sexual and familial period are the majority.

In 2015 low cost supervised patient to patient care since diagnosis until the end of treatment was designed.

Material-Method: Based on data captured from 406 breast cancer patients, the needs are defined as Financial (for diagnosis, treatment, reconstructive surgery and genetic test) and psychological support.

Seven survivors, all free of disease for at least two years were selected as volunteers for 3 systems:

1) HAMI: Supporters in chemotherapy room with unique appearance, pink scarf, minimal make up and healthy hair as the first ones who prepare the patient for chemotherapy by listening to them, touching their hand during venous access procedure, offering them healthy cold and hot drinks, nuts, fruits and change the ambience by book reading, knitting, singing, dancing, … during the injection time. As the future model of each newly diagnosed patient they convince them the curative potential of breast cancer and transient nature of treatment side effects like hair loss.

2-HAMRAH: Comrade supporters respond patients` calls and help them to get through the different steps of treatment.

3-HAMZAD: Twin supporters are those comrades with special situation like pregnancy, very young age or being non-married at the time of diagnosis. They take care of new patients with the same situation.

Results: Seven volunteers in March 2015, are now 43 in June 2022. Three has died (metastasis). One has left. Chemotherapy room visit was discontinued two months after COVID pandemic until now. Phone support has been continued.

Total 738 breast cancer patients and their families are supported in their fight against breast cancer.

Keywords: breast, cancer, patients`support

[P-37]
THYROID INVOLVEMENT IN BREAST CANCER PATIENTS STAGED WITH F-18 FDG PET-CT

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Purpose: The prevalence of incidental thyroid F-18 FDG uptake is approximately 2.5%. This prevalence in healthy subjects (3.1%) is higher than that in patients with suspected or known cancer (2.3%). The thyroid cancer risk is 29.5%, and it is higher in cancer screening patients (40.7%). The focal uptake pattern and the calcifications are associated with even higher risk of malignancy. The aim of this study is to evaluate thyroid involvement in patients who underwent F-18 FDG PET-CT for breast cancer staging.

Material and methods: The perioperative PET-CT findings of 163 consecutive breast cancer patients in 2020 were evaluated in terms of thyroid involvement retrospectively.

Results: In PET-CT, thyroid involvement was not detected in 99 (61%) patients in the study. Diffuse involvement was detected in 50 (31%) patients. Nodular involvement was found in 9 (5%), calcified nodular involvement in 3 (2%), and calcification in 2 (1%) patients.

Fine needle aspiration cytology (FNAC) was performed in 6 (42%) of 14 patients with nodules and/or calcifications. Four patients with malignant cytology, 1 patient with benign cytology and 1 patient without FNAC were operated on. Postoperative pathological examination revealed papillary carcinoma in 4 patients (30%). The SUV-max values of these patients with cancer were found to be higher than those with benign cytology.

Conclusions: Although the number of patients included in our study is limited, the presence of noduler uptake with high SUVmax and/or calcification correlates with a higher rate of thyroid malignancy. When noduler and/or calcified thyroid involvement is detected, further examination with FNAC should be performed.

Keywords: breast cancer, thyroid, F-18 FDG PET-CT

[P-38]
THE CONTRIBUTION OF INTRAOPERATIVE SPECIMEN IMAGING TO SURGICAL MARGIN EVALUATION IN WOMEN WITH BREAST CANCER

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Objective: To determine the contribution of specimen imaging to the intraoperative surgical margin(SM) evaluation in cases undergoing breast conserving surgery (BCS) for breast cancer(BC) and to compare imaging findings with intraoperative histopathological evaluation and final histopathological results.

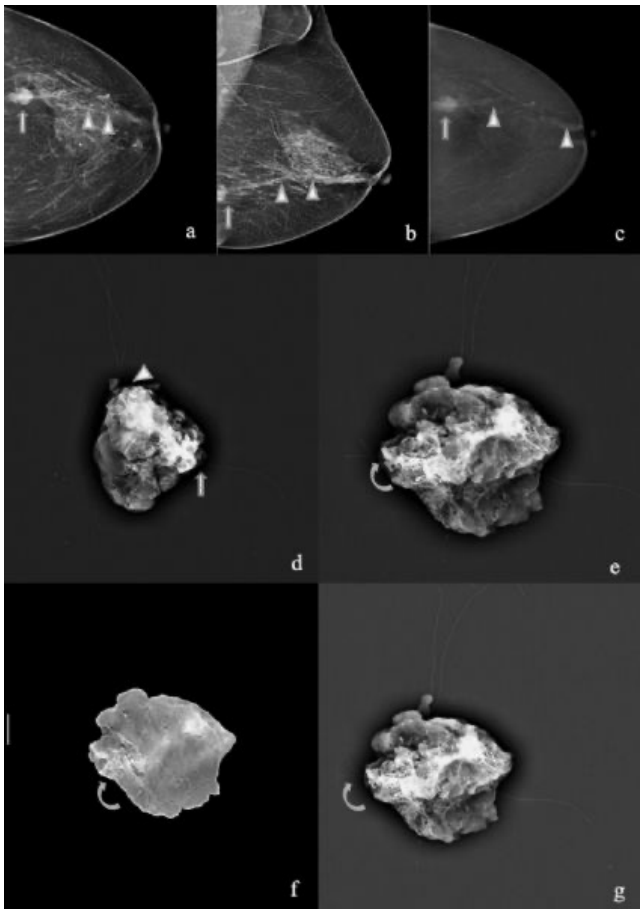
Materials and Methods: Ninety-two patients who underwent BCS due to BC between September 2020 and April 2022 were prospectively included in the study.We implemented specimen radiography and tomosynthesis in all cases.If the lesion could not be visualized by these methods,specimen ultrasonography was performed. The radiological margin considered was 2 mm.Pathologists performed a gross macroscopic evaluation on all specimens in the intraoperative pathology evaluation.Frozen section examination or imprint cytology was performed in cases that could not be decided by gross macroscopic evaluation.The diagnostic performance of intraoperative imaging and intraoperative histopathological assessment was evaluated by calculating sensitivity,specificity,positive predictive value and negative predictive value according to the final histopathological surgical margin status of the initial specimen obtained before targeted re-excisions.

Results: Before targeted re-excisions,38 SM were positive in 18 patients.The sensitivity/specificity were 83.3%/70.3% of the intraoperative imaging, and on SM level,these rates were 60.5% and 93.4%, respectively.The sensitivity/specificity were 83.3%/50% of the intraoperative histopathological evaluation, and on SM level,these rates were 84.2% and 89.1% respectively.On SM level,the sensitivity of intraoperative histopathological evaluation was higher than intraoperative imaging, and the specificity of intraoperative imaging was higher than intraoperative histopathological assessment.In ductal carcinoma in-situ cases,the sensitivity of intraoperative imaging was 71.4%, and the specificity was 93.2%.Intraoperative imaging had lower sensitivity in invasive lobular cancer cases than in non-lobular cancer cases. The intraoperative histopathological evaluation assessed 3 cases with microcalcification and in-situ component as a false negative. We evaluated all of these cases as true positive.

Conclusion: Intraoperative specimen imaging with a threshold of 2 mm is a valuable method to reduce the reoperation rate in BCS.

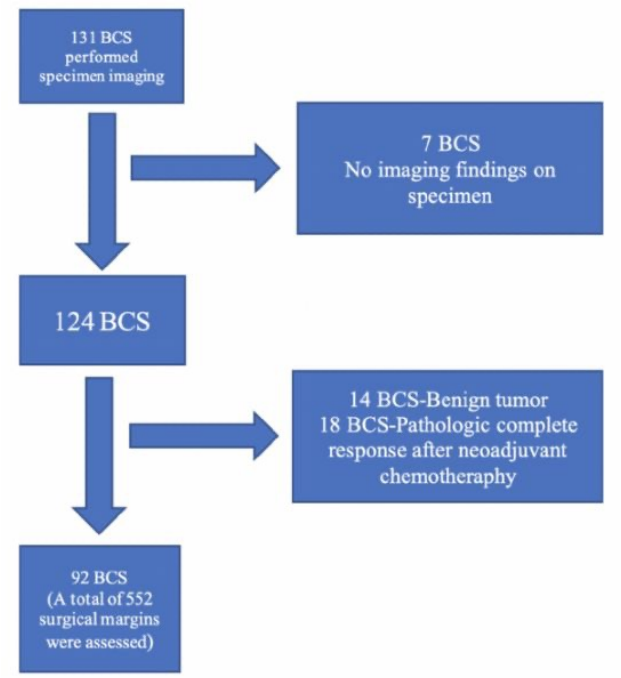
Keywords: breast cancer, breast conserving surgery, surgical margin, ductal carcinoma in-situ

Figure 1



60-year-old female patient.CC and MLO mammograms show a high-density mass with an indistinct margin in the lower outer quadrant(arrow) and segmental-regional microcalcifications(arrowhead) anterior to the mass(a,b). CC recombined mammogram demonstrates enhancing mass(arrow) and microcalcifications(arrowheaad)(c).Two-dimensional radiographs of the specimen show anterior (arrow), lateral (arrowhead), and superior (curved arrow) positive surgical margins(d,e).The tomosynthesis image depicts positive superior(curved arrow) surgical margin(f). Two short surgical silk (curved arrow) indicate the superior surgical margin(g). Intraoperative imaging indicated that anterior, superior, and lateral surgical margins were positive, while intraoperative histopathological evaluation indicated that surgical margins were negative. The surgeons performed anterior, superior, and lateral re-excisions with intraoperative imaging guidance. In the postoperative histopathological examination, it was determined that additional tumor tissue was removed from the re-excisions made from the superior and lateral surgical margins. No tumor was observed in the anterior re-excision material. The final histopathological examination achieved a negative surgical margin (invasive ductal carcinoma and DCIS).

Flow diagram of patient population



Comparison of intraoperative radiology and intraoperative pathology evaluation on surgical margin level

!	İntraoperative radiological evaluation	İntraoperative radiological evaluation	İntraoperative pathological evaluation	İntraoperative pathological evaluation	p
Total surgical margin	n=552	95%CI	n=552	95%CI	
Positive surgical margin	n=38 (%6.9)		n=38 (%6.9)		!
Sensitivity (%)	60.5	(58.2-62.9)	84.2	(79.9-88.5) 0	.02
Specificity (%)	93.4	(93-93.7)	89.1	(88.8-89.5) 0	.015
PPV (%)	40.4	(38.8-41.9)	36.4	(35.2-37.5) 0	.629
NPV (%)	97 (	96.6-97.4)	98.7	(98.3-99.1) 0	.064
Accuracy (%)	91.1	(90.8-91.5)	88.8	(88.5-89.1) 0	.193

PPV:Positive predictive value, NPV:Negative predictive value CI:Confidence interval

Patient and tumor characteristics

!	n	%
Premenopausal 3	5	38
Postmenopausal 5	7	62
With neoadjuvant chemotheraphy	27	29
No neoadjuvant chemotheraphy 6	5	71
Breast density A 4	4	
Breast density B 3	6	39
Breast density C 4	2	46
Breast density D 1	0	11
Mass 5	5	60
Non mass or microcalcificiation	37	40
Pure invasive carcinom 4	9	53
Invasive carcinom and DCIS	36	39
Pure DCIS	7	8
Invasive ductal carcinoma	71	77
Invasive lobular carcinoma	10	11
Pure DCIS	7	8
Mixed invasive carcinoma	2	2
Cribriform carcinoma	1	1
Mucinous carcinoma	1	1
Luminal A 2	4	28
Luminal B 4	8	57
HER 2 (+)	5	6
Triple negative	8	9

[P-39]
IDIOPATHIC GRANULOMATOUS MASTITIS: CASE SERIES AND ULTRASOUND FEATURES REVIEW

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Objective: Diopathic granulomatous mastitis (IGM) is one of the relapsing breast diseases and it may be indistinguishable from breast carcinoma in ultrasound (US) and other imaging modalities.

Material-Methods: In this retrospective study, we assessed the imaging features of 26 untreated patients who had a final pathologic diagnosis of IGM and who underwent high-resolution ultrasound (US) and color Doppler.

Results: The patients were 24 to 52 years old an average of 34. Most of the cases had left-sided lesions (21/26, about 80.8%) and no patient had bilateral involvement. Over half of the patients (53.8%) had pain in presentation. The most common sign was a palpable abnormality (in 53.8% of the cases) and only one patient had signs of skin retraction. Skin changes such as redness, swelling, and sinus tract formation were other common signs. The most common Ultrasonography shapes were oval and irregular, both with a percentage of 47.1%. Mass margins were mostly indistinct (70.6%). Heterogeneous internal echogenicity was seen in 71.4%. Increased echogenicity of the surrounding fat in 84.6%, posterior enhancement in 57.7%, peripheral vascularity in 30.8%, and subcutaneous fluid collections in 19% of the cases. Internal vascularity was seen in 7% of the cases.

Conclusion: In IGM, increased echogenicity of perilesional fat is a common ultrasound feature (84.6%) while perilesional fat edema has not been mentioned in other studies. Other ultrasound features of IGM are indistinct heterogeneous masses with tubular extension and subcutaneous collection. They may help in the diagnosis of IGM in a proper clinical setting although the radiologist should suggest tissue biopsy to exclude other differential diagnoses.

Keywords: Idiopathic granulomatous mastitis, breast disease, breast cancer, breast ultrasound

Figure 1

Ultrasound image of a 43-year-old woman who had mass sensation in the left breast shows Heterogeneous irregular areas with tubular extension.Theses findings were classified as representing a BI-RADS category 4 lesion, which was suspected of mastitis with low suspicion for malignancy. Ultrasound-guided biopsy revealed IGM.

[P-40]
RISK ASSESSMENT CAN BE USED AS BREAST CANCER AWARENESS TOOL IN DEVELOPING COUNTRIES

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Despite other adult cancers, breast cancer starts its peak at 25 years instead of 45. It is the first cancer that increases when median age increases. The majority of patients in these young countries are young (< 50) or very young (< 40) not eligible for mammography screening though low governmental health budget cannot support high technology national screening programs.

This is alarming because breast cancer awareness culture in developing countries is also very low.

In this study, we are presenting a low-cost approach to increase breast cancer awareness through a risk assessment tool.

Material-Method: The project is started in October 2019, during 6714 KM provincial breast cancer awareness tour of Tehran Committee against Breast Cancer in 18 of 31 seats of provinces in Iran with breast cancer survivors. Risk assessment tool is used to classify the women as normal or high risk according to their personal or familial history. Breast health program and self-care is given though our Instagram for signs of cancer and the way to do monthly self-exam. Thereafter the tool was used for all the women in office.

Results: Total 4520 women are evaluated, 430 healthy women in our provincial tour, 2850 cancer and 1240 non-cancer patients.

10.36-14% (cancers) of patients were categorized as high risk of which 4-6.7% (cancer patients) were candidates for genetic consultation and testing.

Conclusion: Risk assessment seems a good approach to remind any woman of any age, marital status, pregnant or lactating with or without familial history can develop breast cancer and must be aware. These primary results encouraged us to prepare an application to help the women know their risk for breast cancer. It helps them for their monthly home check-ups and gives them personalized breast health program and imaging centers and breast specialists 31 provinces of Iran.

Keywords: breast cancer, risk assessment tool, awareness

[P-43]
CHIMERIC ALT PLUS TFL PERFORATOR FLAP FOR BREAST RECONSTRUCTION POST RADICAL MASTECTOMY WITH LARGE SKIN DEFECTS

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Objective: To study the utility of ALT plus TFL perforator flaps, either as chimera or two free flaps, for coverage of post mastectomy skin defects.

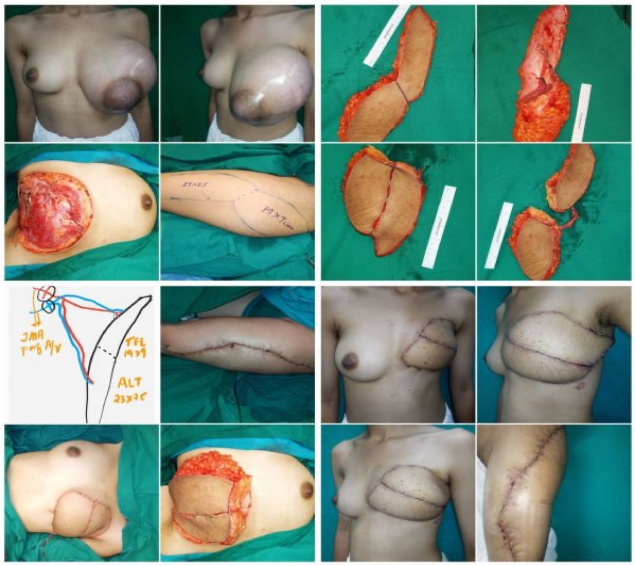
Material-Methods: Retrospective audit of four cases in whom two skin islands each, based on ALT and TFL perforators were used, to resurface chest wall as the primary objective and reconstruct breast as a secondary objective. There was inadequate bulk in back (for LD flap) and abdomen (for pedicle TRAM/VRAM or DIEP) to achieve the same. The thighs were bulkier but would entail large skin grafts and less volume if only ALT territory was harvested.

Results: The skin defects, post radical mastectomy for large fungating lesions, ranged from 300 to 400 cm2. One case had recurrent phyllodes tumour, rest three had IDC breast. The ALT and TFL perforator-based skin islands were used as chimeric flaps in three and separate free flaps in one case. No vastus lateralis or tensor fascia lata muscle were harvested. Nerves to VL were preserved in all cases. All four flaps with eight islands survived completely and uneventfully. No venous or arterial thrombotic or haemorrhagic event occurred. All flaps healed uneventfully. All cases received radiation on time. All donor sites closed primarily without undue tension and no breakdown occurred in late post operative period.

Conclusion: In select cases large volume, large surface area, robust vascularity and perforator-based flaps can be safely harvested from the thigh with primary closure based on the ALT and TFL perforators together either as a chimeric flap or separate free flaps. They can be used to resurface chest wall or even reconstruct breast in select cases.

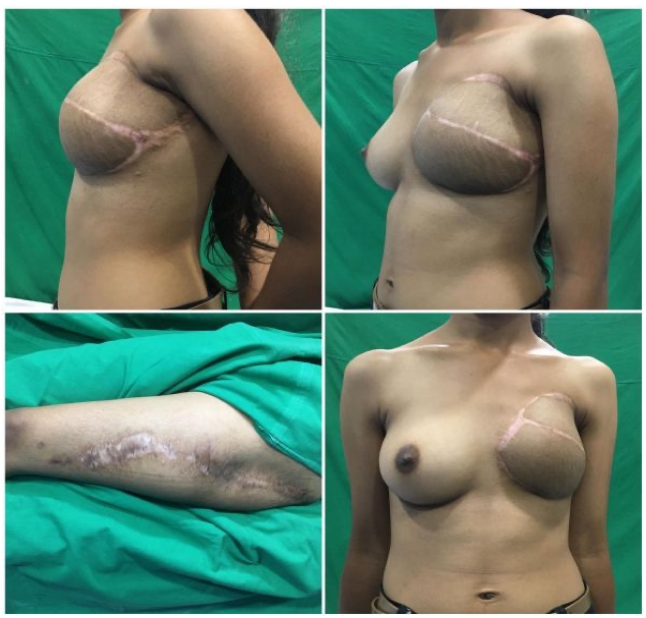
Keywords: post mastectomy reconstruction, large skin defects, chimeric ALT/TFL free flap

Chimeric ALT/TFL flap for post-mastectomy reconstruction



16 years woman with recurrent malignant phyllodes of left breast requiring large skin resection. The lady did not have adequate donor site tissue in abdomen, hence chimeric ALT/TFL free microvascular flap was used to cover the defect as well as provide reasonable cosmesis.

Post-operative, post-radiation clinical images of left sided post-mastectomy chimeric ALT/TFL flap



This is a post-radiation therapy image of the same patient with reasonable cosmesis

[P-45]
A NEW METHOD FOR SENTINEL LYMPH NODE DETECTION: FLUORESCEIN AND BLUE LIGHT

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Objective: The combination of radio-colloids (99mTc) and blue dye is the best method for sentinel lymph node biopsy (SLNB) nowadays. However, there are concerns about the associated exposure to radiation. In addition, the agents and equipment required in the combined technique are complex and expensive, so there are certain restrictions on their use. Although many new methods are used in sentinel lymph node detection, most are costly and challenging to reach. Fluorescence is widely used as a diagnostic tool in ophthalmology and optometry.

We aimed to evaluate the feasibility and safety of fluorescein for SLNB in breast cancer.

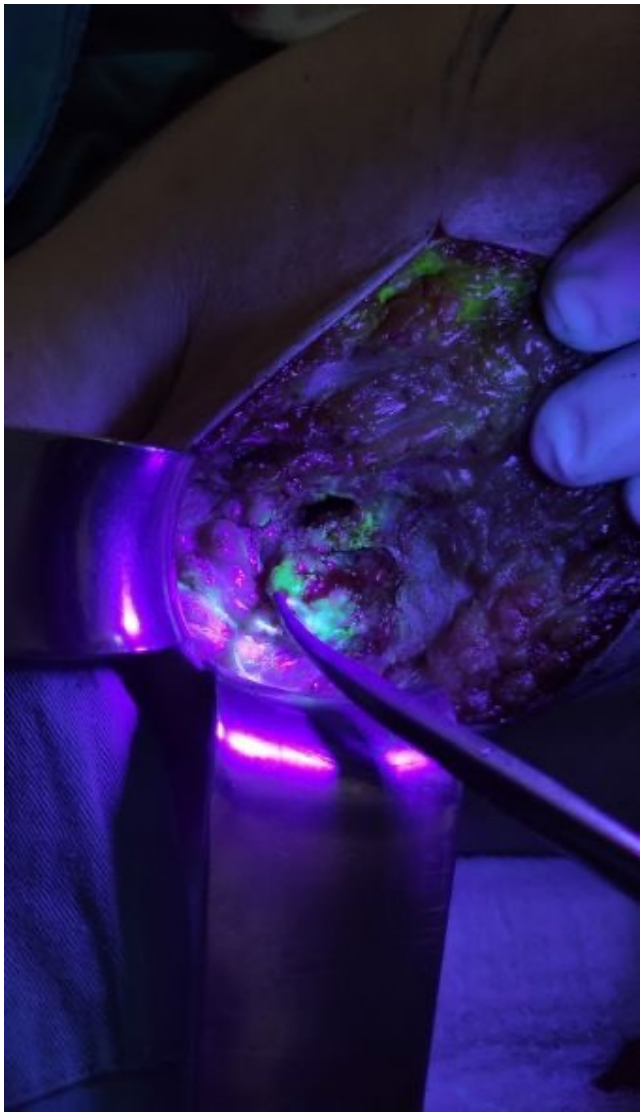
Materials and Methods: In this study,a dual combined method,one for 99mTc and the other for fluorescein, was applied to 10 patients diagnosed with breast cancer. Thus, the possibility of unsuccessful sentinel lymph node detecting with fluorescein was eliminated. 1 ml solution containing 100 mg/ml fluorescein was diluted with 4 ml saline solution and injected under the periareolar skin approximately 7 minutes before the incision. LED light source with a wave range of 395 – 400 nm (UV A) was used to view the lymph node dyed with fluorescein.

Results: In two patients,we could not find lymph nodes stained with fluorescein. Only lymphatic channels were marked on that patients. With 99mTc, an average of 3.3 lymph nodes was detected. An average of one lymph node was detected with fluorescein. All lymph nodes stained with fluorescein were also detected by gamma probe. There were no allergic reactions or complications related to fluorescein in the patients.

Conclusions: SLNs using fluorescein and blue UV light were visualized in 8 of 10 patients (80%). We consider it feasible and safe to detect SLNs using fluorescein and blue LED light. This technique allows SLNs to be seen with the naked eye. It is easy to use and cost-effective.

Keywords: sentinel lymph node biopsy, fluorescein, fluorescent, blue light

Figure 1



SLN stained with fluorescein

Figure 2

SLN stained with fluorescein

[P-47]
AXILLARY REVERSE MAPPING USING INDOCYANINE GREEN AND ISOSULFAN BLUE TECHNIQUE IN SENTINEL LYMPH NODE BIOPSY AFTER NEOADJUVANT CHEMOTHERAPY IN A BREAST CANCER CASE

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Objective: Neoadjuvant chemotherapy (NAC) can potentially eliminate breast and axillary disease in selected patient groups. Risk factors associated with lymphedema, including NAC, have been reported. In cases after NAC, the axillary reverse mapping (ARM) technique can reduce the incidence of postoperative upper extremity lymphedema by identifying and preserving lateral axillary lymphatic drainage during sentinel lymph node biopsy (SLNB). We aimed to present our case in which we performed ARM using indocyanine green (ICG) and isosulfan blue techniques in the detection of SLN after NAC.

Materials-Methods: The SLNB procedure was performed with a binary mapping technique that included isosulfan blue and ICG injection. Periareolar isosulfan blue was applied for SLN detection during the operation and ICG was used for ARM from the medial side of the arm. It was detected with ICG optical laser module dual fluorescence probe and Spy Elite fluorescence imaging system (Figure-1). We then performed a frozen section analysis.

Results: A 67-year-old female patient underwent surgery after NAC for cT2N1 breast cancer. To protect the lateral axillary lymph nodes, subcutaneous ICG was applied to the left arm and two axillary lymph nodes were detected with the SPY device and were preserved. After that, when SLNB was performed, four stained and two unstained lymph nodes were excised and sent for frozen examination. We performed axillary dissection when four metastatic lymph nodes were found as a result of frozen.

Conclusions: The main cause of lymphedema is probably impaired lymphatic drainage of the upper extremities after axillary surgery. Loss of ARM nodes may be associated with lymphedema after axillary surgery. The ARM technique emerged based on the hypothesis that preservation of ARM nodes can reduce lymphedema formation by distinguishing between upper extremity and breast lymphatic drainage. The ARM technique can help differentiate non-sentinel ARM nodes and reduce unnecessary ARM node resection.

Keywords: sentinel lymph node, indocyanine green, isosulfan blue

ICG optical laser module dual fluorescence probe and Spy Elite fluorescence imaging system monitoring

[P-48]
PREDICTORS OF PATHOLOGIC COMPLETE RESPONSE TO NEOADJUVANT CHEMOTHERAPY IN HER2 POSITIVE BREAST CANCER

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Objectives: The human epidermal growth factor receptor 2 (ERBB2, HER2, or HER2/neu) is a trans-membrane tyrosine kinase receptor that is overexpressed in approximately 20% of breast cancers. The use of the anti-HER2 monoclonal antibodies Pertuzumab and Trastuzumab in association with chemotherapy has achieved a higher percentage of pathologic complete response (pCR) than conventional chemotherapy. The purpose of our study was to identify factors that could affect the therapeutic response of patients with breast cancer and HER2 overexpression.

Material and Methods: The study evaluated 820 breast cancer patients' data sets dates between 2015-2022. Clinicopathologic variables of 128 HER2 breast cancer patients are detailly compared in terms of complete response to the neoadjuvant setting. Considering the age distribution of the patients, 53.1% were under the age of 50. Our breast-conserving surgery rate was 43.8%, and our mastectomy (including SSM and NSM) rate was 56.3%. It was observed that 95.2% of our patients, whose average follow-up period was 42 months, survived and 8 of them died. Breast pCR was 43.8%, while pathologic lymph node (LN) response was detected in 56.8% of those LN (+) patients ($p<0.05$). In the presence of preoperative metastases, the PCR decreases to 7.7% ($p<0.05$). Hormone receptor positivity has a significant decrease in complete response, especially in patients with progesterone receptors. However, there was a statistical difference in LN regression. The pCR was found to be 38.2% in luminal B patients, and 56.4% in pure HER2 patients. The PCR rates increase to 54.4% in patients with Ki-67 score > 15 ($p<0.05$).

Conclusion: The pCR rates with HER2 targeted treatment strategy are high and comparable to the literature. In our study, apart from the data compatible with the literature, we observed that the elevation of the progesterone receptor negatively affected pCR specifically.

Keywords: breast cancer, HER2, neoadjuvant, pathologic complete response

[P-49]
IMMEDIATE BREAST RECONSTRUCTION FOR POSTMASTECTOMY PATIENTS

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Introduction: After mastectomy for breast cancer, breast reconstruction can be performed in the early or late period. The major advantage of immediate breast reconstruction; It is the only operation, the cost is low and the body appearance is not deteriorated.

Material Method: We retrospectively searched patients who were operated for breast cancer in our hospital between June 2020-2022. Forty-two patients who underwent early reconstruction after postmastectomy were included in this study.

Results: The median age of the patients was 44 years (30-68). Seven (16%) patients were in the postmenopausal period. Twenty-one of them received neoadjuvant chemotherapy. Latissimus dorsi myocutaneous flap was applied to 3 (7%) patients, latissumus dorsi flap and implant to 2 (4%) patients. In the remaining patients, reconstruction was performed with an implant. Nipple sparing mastectomy was performed in 29 (69%) patients, skin sparing mastectomy in 6 (14%), and skin reducing mastectomy in 2 (4%). The prosthesis was placed under the pectoral muscle in 19 (45) patients and over the muscle in other patients. Inframammary fold incision was used in 1 (2%) patient, omega incision in 4 (9%), and lateral incision in the rest 32 (76%). Anatomical prosthesis was used in 16 (38%) patients and round prosthesis in 39 (92%). Postoperative complications occurred in 11 (26%) patients. Four (9%) patients had wound dehiscence and secondary suturing was required in 3(%) of them. Partial nipple ischemia detected in 2 (4.5%) patients. We had to remove the prosthesis in 5 (11.9%) patients. Implant exposure following radiotherapy was developed in 3 (7%) patients, prolonged seroma in one. The cause was occurrence of hemorrhage after a fall in other patient. 19 (45%) patients received adjuvant RT.

Conclusion: In the treatment of postmastectomy patients, early breast reconstruction is a good option with acceptable complication rates.

Keywords: breast reconstruction, immediate reconstruction, implant after postmastectomy

[P-50]
A NEW GUIDING STRUCTURE IN SENTINEL LYMPH NODE BIOPSY: BARIŞ'S VEIN

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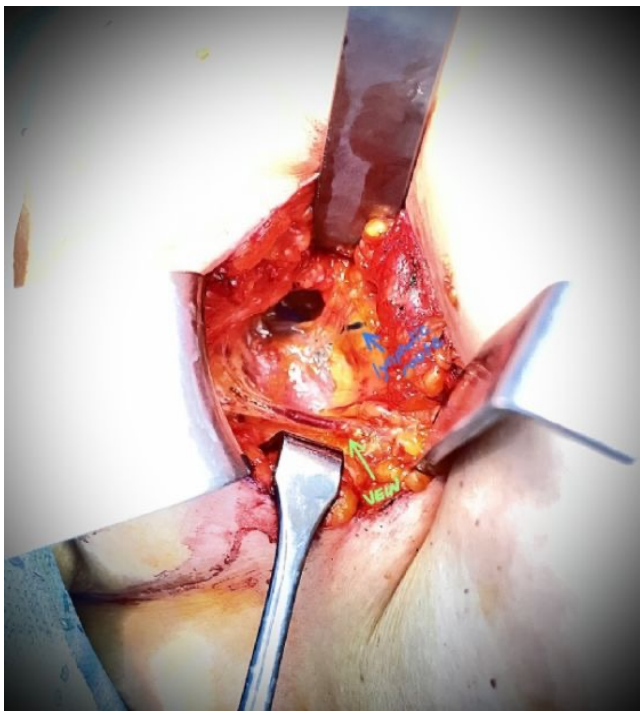
Introduction: In breast cancer patients, axillary node status is the most significant prognostic factor besides primary tumor size and grade. Sentinel lymph node biopsy (SLNB) has been established as the gold standard for axillary staging and replaced axillary lymph node dissection as a regional nodal staging tool in clinically and radiologically negative breast cancer. The SLNB provides sufficient nodal staging information to guide further therapy while protecting the patient from ALND. For this reason, it is essential to make the SLNB correctly and effectively. Here, we aim to describe an anatomical structure (Barış's vein) that may help to find the sentinel node while performing SLNB in our clinic furthermore, according to our knowledge this vein has never been described before.

Technique description: With the previously described SLNB technique, the axillary fatty plane containing the nodal structures is reached after the skin, subcutaneous fat, and clavipectoral fascia is passed through the incision, made just below the hairline.The vein we determined is a superficial vein, with a horizontal course between the lateral thoracic vein and the thoracodorsal vein. When you notice this vein, you can almost constantly find the blue-stained lymph node if you direct your dissection plane not inferiorly but superiorly, towards the axillary apex. This vein (the vein of Barış) helps as a guide in finding the blue-stained lymphatic and lymph node in the axilla, especially in those who have started the SLNB procedure. Slnb will be located in the fatty axillary plane approximately 1-2 cm superior to this vein.

Conclusion: While SLNB remains an indisputably important part of breast cancer, it is crucial to locate the sentinel node accurately. The described vein (the vein of Barış) draws attention as an anatomical formation that assists the SLNB application as an existing, not yet specifically named and defined anatomical guide.

Keywords: breast cancer, sentinel node biopsy, anatomy, new named structure

The vein and lymphatic route



The vein position

[P-51]
A RARE CASE: NEUROENDOCRINE CARCINOMA OF THE BREAST

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Introduction: Primary neuroendocrine carcinomas (NEC) of the breast are very rare tumors. The diagnosis of primary mammary NEC is very difficult, since there is no evidence that neuroendocrine cells are normally present in the histopathology of the breast. The diagnosis is made by IHC pathological examination, clinical follow-up and further imaging, and showing that it does not originate from extramammary tissues. Here, a case with primary breast NEC is presented.

Case: 58-year-old female, tru-cut biopsy for a palpable mass in the left breast in October 2021 found ER,PR and Cerb 2: negative, Ki67-99% compatible with small cell NEC. PET CT taken for staging: A pathologically increased F-18 FDG uptake was observed in a 38x34 mm sized nodular mass lesion, in the midline of the left breast lower quadrant. It suggested a primary tumor. A few metastatic lymph nodes with increased F-18 FDG uptake were observed in the left axilla. The patient was given 4 courses of cisplatin etoposide because the primary breast was NEC. Although partial regression was observed in the primary breast in PET CT taken for response evaluation, the patient was operated because the axillary involvement progressed. In the left mastectomy material, the tumor was diffusely infiltrative, IHC findings, NEC morphology, and all surgical margins were found intact. Brain metastasis was detected in the brain MRI examination taken during this period. Due to the progression, 2nd line topotecan chemotherapy was planned.

Conclusion: The incidence of NEC, which is a rare breast cancer subtype, varies in different series. It is unclear how NEC affects the prognosis differently from other breast cancers. Since primary solid NEC of the breast is very rare, we think that case sharing is important since our clinical experience will be limited. Extensive studies are needed to clearly reveal the frequency, treatment and prognosis of primary NEC of the breast.

Keywords: breast cancer, neuroendocrine carcinoma, NEC

[P-52]
IS IMAGE-GUIDED AXILLARY LYMPH NODE BIOPSY AN ALTERNATIVE TO SENTINEL LYMPH NODE BIOPSY AFTER NEOADJUVANT CHEMOTHERAPY

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Background: Evaluation of the axilla after neoadjuvant chemotherapy (NAC) in patients with breast cancer is still controversial. We hypothesize that the accuracy of FNAB after neoadjuvant chemotherapy may be modified in the decision of axillary intervention.

Methods: Patients who were diagnosed pathologically axillary lymph node positive breast cancer were included in the study. FNAB was performed from the positive nodes before NAC, and then clips were placed to the same lymph node. After NAC was completed, FNAB was performed from the same lymph node before the operation. Sentinel / targeted axillary lymph node dissection was performed and completion axillary lymph node dissection was done in patients with positive sentinel / targeted lymph node biopsy.

Results: FNAB result was positive in 33 of 84 patients who underwent FNAB. SLNB results of these patients were positive and axillary lymph node dissection (ALND) was performed. SLNB was negative in 38 and positive in 5 of 43 patients with negative FNAB results. FNAB with negative diagnosis carried a 11.6% risk of malignancy, suspicious / non-diagnostic 9.5%, and positive a 100% risk of malignancy (100% positive predictive value [PPV]). The false negative rate was found to be 11%. The sensitivity and specificity were 76.2% and 97.6% respectively; diagnostic accuracy was 86.9%.

Conclusion: Negative FNAB result does not exclude metastatic carcinoma. With 100% PPV, ALN dissection can be safely planned after a positive FNAB result, avoiding SLN biopsy, reducing management costs and shortening time interval to definitive therapy.

Keywords: breast cancer, surgery, IIAB, axilla

[P-53]
UNUSUAL LOCALIZATION OF RENAL CELL CARCINOMA METASTASIS IN THE BREAST – RARE CASE REPORT

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Introduction: Renal cell carcinoma represents about 2% of all malignant tumors in adults. Metastases of the primary tumor in the breast make up about 0.5-2%. Renal cell carcinoma metastases in the breast are extremely rare and have been recorded in the literature as sporadic case reports. In this paper, we present the case of a patient with breast metastasis of renal cell carcinoma 11 years after primary treatment.

Case: 82-years-old women who had right nephrectomy due to renal cancer in 2010, in August 2021 felt a lump in the right breast and a clinical examination revealed a tumor at the junction of the upper quadrants of the right breast, about 2 cm, movable towards the base, vaguely limited, with a rough surface. Axillas were without palpable lymph nodes. Mammography describes a circular relatively clearly contoured lesion in the right breast. Ultrasound shows an oval, lobulated lesion 19x18mm at the upper quadrants with strong vascularization, without posterior acoustic phenomena. A CORE biopsy was performed, and the histopathological findings and the obtained immunophenotype indicate metastatic, clear cell carcinoma of renal origin. Metastasectomy was performed. Histopathologically, the tumor is without desmoplastic stroma, mainly made of alveolar-solid arrangements of large, moderately polymorphic cells, bright and abundant cytoplasm, round-vesicular cores with focally prominent nuclei. Immunohistochemically, tumor cells are diffusely positive for CD10, EMA and Vimentin, and negative for CK7, TTF-1, Renal cell antigen and E-cadherin. With a normal postoperative course, she was discharged on the third postoperative day. After one year, no new signs of the spread of the underlying disease were observed at regular follow-ups.

Conclusion: Although rare, the breast can be a site for metastases and this should be considered especially in patients with a history of malignancy in other regions.CORE-biopsy and pathohistological analysis are mandatory for the diagnosis of breast tumors.

Keywords: renal cell carcinoma, metastasis, breast, metastasectomy

[P-54]
CHALLENGES IN RADIOTHERAPY PLANNING IN BREAST CANCER PATIENT WITH PACEMAKER – A CASE REPORT

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Introduction: An increasing number of patients with implantable cardiac devices undergo radiotherapy, due to upsurge of average life expectancy rate. The pacemaker proximity to irradiation site provide a unique challenge in radiotherapy planning and current recommendations for these patients have limitations.

Case: 76-year-old female patient, who had a pacemaker implanted in 2012 due to AV block grade II and reimplanted on left side, in 2020 (St Jude Medical Indurity PM2162, DDDR mode) was diagnosed with stage IIIA (T3N1M0) right breast invasive ductal carcinoma. Initial management consisted of neoadjuvant anthracycline- and taxane-based chemotherapy regimen, followed by mastectomy and ipsilateral axillar lymph node dissection. Due to tumor size and 3/14 positive lymph nodes with extracapsular extension, treatment continued with postoperative radiotherapy and aromatase inhibitor. Radiotherapy plan included IMRT tehnique with recommended immobilisation devices, in consultation with patient's cardiologist and pacemaker manufacturer. Dose prescribed to right chest wall was 5000 cGy/25 fractions and regional lymph nodes 4800 cGy/24 fractions. With 95% target volume coverage of 98.8% and dose limitation to organs at risk per QUANTEC recommendations (with particular attention to maximum and mean heart dose), maximum dose (118.3 cGy) and minimum distance of PRV (5mm) pacemaker device to isodose lines of 200 cGy and 500 cGy was considered. IMRT treatment required avoidance of dose delivery through device. Local protocol, in absence of in vivo dosimetry, requested patient's monitoring on a weekly basis, by cardiologist, with electrocardiograms obtained prior to, during, and after radiotherapy course as well as monthly check-up by cardiologist for pacemaker malfunction, in six-month period following radiotherapy.

Conclusion: Radiotherapy treatment of pacemaker-dependent, breast cancer patient, require cooperation between radiation oncologist, cardiologist and the pacemaker manufacturer, prior to initiating treatment.Pacemaker function and the patient's cardiac status must be monitored and with respecting recomendationes, patient can be treated safelly with radiation therapy.

Keywords: pacemaker, breast cancer, radiotherapy

[P-55]
A UNIQUE CASE OF HER2 POSITIVE PLEOMORPHIC CARCINOMA OF THE MALE BREAST

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Introduction: Male breast cancer is present in about 1% of all cases. The ductal type occurs most often, rarely papillary, lobular and other histological variants. Here we present a unique case of pleomorphic carcinoma of the male breast, which in women accounts for less than 0.1% of all forms of ductal carcinoma.

Case: A 78-year-old man, farmer, chronic alcoholic, visited a oncologist because of the appearance of a palpable nodule with reddening of the skin in the left breast. Clinical examination, ultrasound and mammographic findings indicated the existence of a possibly malignant tumor, which is why a radical surgical intervention with intraoperative diagnostics and dissection of the axillary lymph nodes was performed. Macroscopically, the tumor was circumscribed, graywhitish, largest diameter was 44mm. Microscopically, more than 50% of tumor parenchyma consisted of multinucleated, giant-cell forms, immunohistochemically positive for CK7,CK8,E-cadherin, negative for vimentin and CD68, without expressing receptors for estrogens and progesterone, and with over-expression of HER-2. Polygonal, round and spindle-like cells were less common, while the desmoplastic stroma was permeated with a rich mononuclear infiltrate. The proliferative index was high, with 65% Ki-67 positivity. Of the 10 analyzed, metastatic deposits were present in five lymph nodes. The therapeutic board prescribed chemo-radio-immunotherapy, which the patient received. Twenty-months after the diagnosis, the patient dies due to complications arising from the relapse of the disease in the form of multiple diagnosed brain metastases.

Conclusion: Pleomorphic carcinoma is an extremely rare histological type of breast carcinoma that is presented in the literature in smaller series in women, and its occurrence in the male population is referred to only once. Because of the aggressive course and poor outcome, it requires careful microscopic analysis and immunophenotyping, which would allow differentiation from the pleomorphic variant of lobular carcinoma and ductal carcinoma rich in osteoclast-like giant cells.

Keywords: male breast cancer, pleomorphic breast cancer, immunophenotype

[P-56]
THE ROLE OF ONCOGEN-INDUCED CELL SENESCENCE IN MALIGNANT TRANSFORMATION AND BREAST TUMOR PROGRESSION

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Introduction: Despite the importance of certain prognostic factors, their value in assessing outcomes and determining treatment strategies for breast cancer patients is limited. Therefore, the definition of new molecular biomarkers, especially those involved in oncogen-induced cell senescence, could provide a more reliable approach for prediction of the prognosis of this disease. The aim of this study was to examine the expression of markers p16, p53, p21, pRb and GLB1 in benign and malignant breast changes, as well as their participation in malignant transformation.

Patients and Methods: The research included the analysis of tissue material of benign and malignant changes in patients operated at the University Clinical Center Kragujevac. All macro and micromorphological prognostic factors (histological type and grade of tumor, size, nodal status, desmoplasia, necrosis, mononuclear reaction, etc.) were defined on H&E stained preparations. Immunohistochemically, using antibodies (p16, p53, p21, pRb, GLB1) tissue expression of markers were determined by a semiquantitative reading of a positive reaction. By defining cut-off values, cancers were classified into positive and negative groups for each analyzed marker.

Results: The expression of all markers increased with the progression of cytological changes in the epithelium. Their expression positively correlated with various changes in the breast, with the proliferative index and HER2+ tumors. The expression of p16, pRb, p21, GLB1 is the highest in HER2+ breast cancers, while the expression of p53 is the highest in TNBC. A significant correlation was found between the expression of p16 and p53, p21 and pRb, p21 and GLB1, as well as between pRb and GLB1 in invasive cancer.

Conclusion: The analyzed markers play an important role in proliferation, malignant transformation, as well as in the progression of breast cancer, which recommends them for further research and possible use for diagnostic, prognostic and predictive purposes.

Keywords: breast cancer, cellular senescence, cyclin-dependent kinase inhibitor p16, tumor suppressor protein p53, cyclin-dependent kinase inhibitor p21

[P-57]
CONTRIBUTION AND PERFORMANCE OF LOW-COST MOBILE MAMMOGRAPHY UNIT AND BREAST CANCER DETECTION RATE IN UNDERSERVED POPULATION OF RURAL AND URBAN AREAS OF SINDH, PAKISTAN

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In Pakistan, there is no organized screening mammography program & screening practices are very low due to lack of accessibility and affordability. That is why, advanced-stage presentation of breast cancer is common.

Objective: The main objective of the study was to assess performance and patient outcomes in audit of low-cost screening mammography from Jan 2019-March 2021 and comparison of results with American College of Radiologists (ACR) recommendations.

Materials-Methods: The study setting was the mobile mammography unit, located in Aga Khan Maternal and Child Care Centre, Hyderabad. All Computed Radiology (CR) screening mammograms performed among 1102 asymptomatic women of 40 years - 75 years of age.

Results: The breast cancer detection rate was 11 cases per 1,000 mammograms which is much higher than that reported by the NMD National Mammography Database (CDR of 3.43 per 1000). Median age of cancer diagnosis was 55 years (range 29-63 yrs). Ductal carcinoma in situ was found in 3 (25 %) and invasive breast cancer in 9 (75%) of cases. 3 (37.5%) had stage 0 and 5 (62.5 %) had stages 1& 2. Minimal cancer (< 10 mm) was reported in 5 (41.6%) cases. Positive predictive values (PPV1) for abnormal interpretations was 1.6%, PPV2 for biopsy conducted was 40% and PPV3 for biopsy performed was 75%. The recall rate was very high (72%).

Conclusion: The high cancer detection rate and high recall rate in the study are important findings to draft screening mammography guidelines for Pakistani women. Multicenter research with larger sample size is needed to analyze cost-effectiveness of using subsidized screening and implementing it in other areas which can address the issues of cost, remoteness and dearth of mammogram machines.

Keywords: breast cancer, screening mammography, cancer detection rate, positive predictive value

Tab 1. Sociodemographic, reproductive & clinical characteristics of women in screening mammography at low-cost mobile mammography unit 2019-2021 (n=1102)

Characteristics	n %
Age *	49.9 (8.7)
Menarche in years *	13.4(1.4)
Age of mother at first born *	23.8(4.7)
Age of mother at last born*	30.6(5.0)
Parity as categorical <3 > 3	 253 (39.8) 382 (60.2)
Marital status Married Single/divorced/widow	 1050 (95.3) 38 (3.5)
Breastfeeding Yes No	 611 (88.8) 77 (11.2)
Previous Mammogram Yes No	 196 (27.4) 519 (72.6)
Family history of breast cancer Yes No	 153 (21.9) 534 (76.3)
Menopausal status premenopausal postmenopausal	 508(46.3) 589 (53.7)
OCPs use Yes No	 97 (8.8) 879 (79.8)
HRT use Yes No	 29 (4.2) 665 (95.8)
Abbreviations: OCPs oral contraceptive pills, HRT hormonal replacement therapy *mean	

Tab 2. Pathologic characteristics of breast biopsies performed in screening mammography at low-cost mobile mammography unit 2019-2021

Measurement and Data	n(%)
Biopsy results Malignant Benign Unknown	 12(40) 4 (13.3) 14 (46.7)
Breast Cancer stage 0 I II	 3 (37.5) 2 (25) 3 (37.5)
Minimal cancer (<10mm) Yes No Unknown	 5 (41.6) 0 7 (58.4)
Axillary lymph node status Negative Positive Unknown	 3 (25) 3 (25) 6 (50)

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