9th World Congress on Controversies in Breast Cancer Latin America (CoBrCa)

Lima, Peru

September 12-13, 2025

Congress Program & Abstracts

Timetable

Friday, September 12, 2025	
08:00-08:15	Congress Opening
08:15-09:30	**Session 1:** Neoadjuvant therapy
09:30-10:15	**Mid-Morning Industry Symposium:** Controversies in neoadjuvant and adjuvant management of triple negative breast cancer *Supported by MSD*
10:15-10:45	*Coffee break, poster viewing and exhibition visit*
10:45-11:45	**Session 2:** Surgery
11:45-12:45	**Session 3:** Screening
12:45-13:45	*Lunch break, poster viewing and exhibition visit*
13:45-14:15	**Session 4:** Case discussion Redefining the management of early-stage breast cancer
14:15-15:45	**Session 5:** HER2+ve disease
15:45-16:30	**Mid-Afternoon Industry Symposium:** HER2-low and ultra-low in metastatic breast cancer *Supported by AstraZeneca*
16:30-16:50	*Coffee break, poster viewing and exhibition visit*
16:50-17:50	**Session 6:** HR+ve Metastatic Breast Cancer (MBC)
17:50-19:00	Poster Session
19:00-21:00	Welcome Reception at the Terrace (La Terraza)

Timetable

Saturday, September 13, 2025	
08:30-09:30	**Session 7:** ER+ breast cancer
09:30-10:15	**Mid-Morning Industry Symposium** Limitations of clinicopathology and why DCISionRT is changing practice in DCIS radiation decisions *Supported by PreludeDx and Ambios*
10:15-10:45	*Coffee break, poster viewing and exhibition visit*
10:45-11:45	**Session 8:** Triple negative breast cancer
11:45-12:15	**Session 9:** Case Discussion Early HER2 breast cancer: When less is more – a case report
12:15-13:15	**Session 10:** Reducing the risk
13:15-14:15	*Lunch break, poster viewing and exhibition visit*
14:15-15:45	**Session 11:** Adjuvant endocrine therapy
15:45-16:30	**Mid-Afternoon Industry Symposium:** Optimizing the management of early HR+ breast cancer: Evidence and perspectives *Supported by Novartis*
16:30-16:50	*Coffee break, poster viewing and exhibition visit*
16:50-17:50	**Session 12:** Locoregional management
17:50-18:00	Congress closing and award presentations for best poster

Welcome Letter

We are delighted to welcome you to the exciting joint venture between the World Congress on Controversies in Breast Cancer (CoBrCa) and leading Peruvian medical societies which brings about the 9th CoBrCa Congress - Latin America taking place at the JW Marriott Hotel in Lima, Peru from September 12-13, 2025.

This collaboration marks a significant milestone in bringing together international expertise and local knowledge to address the most pressing challenges in breast cancer. The CoBrCa Congress, renowned for its excellence in addressing current clinical controversies in a multidisciplinary manner, partnered with Peru's leading organisations in breast cancer care, creates a unique opportunity for professionals from across the globe and Latin America to come together. This synergy promises to foster exchange of knowledge, provide valuable networking opportunities, and enhance the global perspective on the latest advances in breast cancer treatment and research.

We are delighted to have assembled a stellar international and national faculty and thank all those who have agreed to participate and those who have submitted abstracts.

We would like to thank the supporters, without whose backing, this congress could not take place, as well as all of you who have travelled from across the country or the world to attend the congress.

We look forward to your participation in the sessions and trust that it is an informative and enjoyable experience.

Enjoy your time in the magnificent city of Lima.

Sincerely,
CoBrCa 2025 Organizing Committee

Chairpersons
Luis Pinillos, *Peru*
Henry Gomez, *Peru*
Mauricio León, *Peru*

CoBrCa Chairpersons
Javier Cortes, *Spain*
Richard De Boer, *Australia*
Bruce Mann, *Australia*
Alastair Thompson, *USA*

General Information

Congress Venue
JW Marriott Hotel Lima
Mal. de la Reserva 615, Miraflores Lima 18, Peru

Language
The official languages of the Congress are Spanish and English.
Presentations which are given in Spanish will be translated into English and presentations given in English will be translated into Spanish.
Participants will be provided with headphones for this purpose.

Registration Desk
The Registration Desk will be open at the JW Marriott Hotel Lima, 4th Level, Foyer area, outside San Martin Room during the following hours:

Thursday, September 11, 2025	14:00-18:00
Friday, September 12, 2025	07:00-18:00
Saturday, September 13, 2025	08:00-18:00

Name badge
All participants are kindly requested to wear their name badges throughout the Congress in order to be admitted to the lecture halls and scheduled activities.

Certificate of attendance (non CME/CPD)
Certificates of attendance will be sent electronically to all registered participants after the congress.

Exhibition
The exhibition will be open from 08:30 on Friday, September 12 and will be open during session hours. Lunch and coffee breaks will be held in the exhibition area on Friday, September 12 and Saturday, September 13.

Speakers' Presentation Centre
All speakers and oral presenters are requested to bring their presentation/s stored on a USB data stick to the AV technician who will be available at Registration Desk located on the 4th level, Foyer area, outside San Martin Room. Slides should be created in 16:9 (widescreen).

Poster Display
Posters can be viewed on the 4th Level, Foyer Area, throughout the congress. Posters will be presented digitally.

Clothing
Business casual for all occasions

Liability
The Congress Secretariat and Organizers cannot accept liability for personal accidents or loss or damage to private property of participants either during or directly arising from the 9th World Congress on Controversies in Breast Cancer (CoBrCa). Participants should make their own arrangements with respect to health and travel insurance.

CoBrCa

Scientific Program

Friday, September 12, 2025

08:00-08:15 **Congress Opening**

Welcome message on behalf of the Congress chairpersons
Bruce Mann, *Melbourne, Australia*
Henry Gomez, *Lima, Peru*
Luis Pinillos, *Lima, Peru*
Alastair Thompson, *Houston, TX, USA*
Mauricio León, *Lima, Peru*

08:15-09:30 **Session 1: Neoadjuvant therapy**

Chairpersons: **Bruce Mann,** *Melbourne, Australia*
Carlos Vallejos, *Lima, Peru*

08:15-08:45 **DEBATE:** That cT1cN0 HER2+ve should have Neoadjuvant Systemic Therapy (NAST)
08:15 **Yes: Javier Cortes,** *Madrid, Spain*
08:25 **No: Richard de Boer,** *Melbourne, Australia*
08:35 Discussion

08:45-09:00 **DIDACTIC:** Imaging before and during NAST
Karla Sepulveda, *Houston, TX, USA*

09:00-09:30 **DEBATE:** That endocrine therapy is neoadjuvant treatment of choice for ER+ve/HER2-ve disease
09:00 **Yes: Antonio Llombart,** *Valencia, Spain*
09:10 **No: Henry Gomez,** *Lima, Peru*
09:20 Discussion

09:30-10:15 **Mid-morning Symposium**
Supported by MSD

Topic: Controversies in neoadjuvant and adjuvant management of triple negative breast cancer
Speaker: **Luis Schwarz,** *Lima, Peru*

10:15-10:45 *Coffee break, poster viewing and exhibition visit*

10:45-11:45 Session 2: Surgery

Chairpersons: **Luis Pinillos,** *Lima, Peru*
Rafael Vázquez, *Mexico City, Mexico*

10:45-11:15 **DEBATE:** Breast conservation, not mastectomy, should be the standard of care for T2 cancers
10:45 **Yes: Stuart McIntosh,** *Belfast, UK*
10:55 **No: Nereida Esparza,** *Mexico City, Mexico*
11:05 Discussion

11:15-11:45 **DEBATE:** Radiation therapy should be given to all women under 70 having breast conservation for invasive cancer
11:15 **Yes: David Martínez,** *Medellin-Antioquia, Colombia*
11:25 **No: Mauricio León,** *Lima, Peru*
11:35 Discussion

11:45-12:45 Session 3: Screening

Chairpersons: **Liana Falcón,** *Lima, Peru*
Gerardo Castorena, *Mexico City, Mexico*

11:45-12:15 **DEBATE:** Is there still a role for mammography in the era of advanced imaging?
11:45 **Yes: Karla Sepulveda,** *Houston, TX, USA*
11:55 **No: Cilia Farias,** *Lima, Peru*
12:05 Discussion

12:15-12:45 **DIDACTIC:** Artificial Intelligence to advance breast cancer screening
Karla Sepulveda, *Houston, TX, USA*

12:45-13:45 Lunch break, poster viewing and exhibition visit

13:45-14:15 Session 4: Case discussion
Redefining the management of early-stage breast cancer

Case Presenter/ Moderator: **Pamela Rebaza,** *Lima, Peru*

Panel of experts:
Medical oncologist: **Zaida Morante,** *Lima, Peru*
Imager: **Rosa Cebrian,** *Lima, Peru*
Surgeon: **Yanet Carrasco,** *Arequipa, Peru*
Radiation oncologist: **Joseana Ayala,** *Lima, Peru*
Pathologist: **Andrea Gomero,** *Lima, Peru*
Medical oncologist: **Antonio Llombart,** *Valencia, Spain*
Surgeon: **Stuart McIntosh,** *Belfast, UK*

14:15-15:45 **Session 5: HER2+ve disease**

Chairpersons: **Adriana Freitas,** *Santa Catarina, Brazil*
Javier Cortes, *Madrid, Spain*

14:15-14:45 **DEBATE:** Do anthracyclines still have a place in the treatment of early stage HER2+ve BC?
14:15 **Yes: Antonio Llombart,** *Valencia, Spain*
14:25 **No: Richard de Boer,** *Melbourne, Australia*
14:35 Discussion

14:45-15:15 **DIDACTIC:** Understanding HER2 low disease – how to diagnose/how to treat?
14:45 **Diagnose: Nirmala Pathmanathan,** *Sydney, Australia*
14:55 **Treat: Luis Schwarz,** *Lima, Peru*
15:05 Discussion

15:15-15:45 **DEBATE:** Axillary radiation is better than surgery for residual node positive disease after neoadjuvant treatment
15:15 **Yes: Gustavo Luyo,** *Lima, Peru*
15:25 **No: Stuart McIntosh,** *Belfast, UK*
15:35 Discussion

15:45-16:30 **Mid-afternoon Symposium**
Supported by AstraZeneca

Topic: HER2-low and ultra-low in metastatic breast cancer
Speakers: **Silvia Falcón,** *Lima, Peru* and **Enrique Alanya,** *Lima, Peru*

16:30-16:50 *Coffee break, poster viewing and exhibition visit*

16:50-17:50 **Session 6: HR+ve Metastatic Breast Cancer (MBC)**

Chairpersons: **Daniel Lee Kay Pen,** *Lima, Peru*
Natalia Valdivieso, *Lima, Peru*

16:50-17:20 **DEBATE:** Endocrine therapy should be given as 1st line therapy for ALL patients with ER+ve MBC
16:50 **Yes: Gerson Mejia,** *Cochabamba, Bolivia*
17:00 **No: Walter Li,** *Lima, Peru*
17:10 Discussion

17:20-17:50 **DIDACTIC:** What to do after first progression of ER+ breast cancer on three continents: Change ET, CDK4/6i or SERDS?
17:20 **Javier Cortes,** *Madrid, Spain*
17:27 **Richard de Boer,** *Melbourne, Australia*
17:34 **Natalia Valdivieso,** *Lima, Peru*
17:41 Discussion

17:50-19:00 **Poster session**

19:00-21:00 **Welcome Reception (La Terraza)**

Saturday, September 13, 2025

08:30-09:30 **Session 7: ER+ breast cancer**

Chairpersons: **Enrique Bargallo,** *Mexico City, Mexico*
Alastair Thompson, *Houston, TX, USA*

08:30-09:00 **DEBATE:** In postmenopausal women who are candidates for extended therapy, only an aromatase inhibitor should be used
08:30 **Yes: Gerson Mejia,** *Cochabamba, Bolivia*
08:40 **No: Silvia Falcón,** *Lima, Peru*
08:50 Discussion

09:00-09:30 **DEBATE:** Postmenopausal women with clinical T1N0 ER+ breast cancer do not need axillary surgery
09:00 **Yes: Pamela Rebaza,** *Lima, Peru*
09:10 **No: Bruce Mann,** *Melbourne, Australia*
09:20 Discussion

09:30-10:15 **Mid-morning Symposium**
Supported by PreludeDx and Ambios

Topic: Limitations of clinicopathology and why DCISionRT is changing practice in DCIS radiation decisions
Speaker: **Bruce Mann,** *Melbourne, Australia*

10:15-10:45 *Coffee break, poster viewing and exhibition visit*

10:45-11:45 **Session 8: Triple negative breast cancer**

Chairpersons: **Richard De Boer,** *Melbourne, Australia*
Stuart McIntosh, *Belfast, UK*

10:45-11:15 **DEBATE:** That all stage 2 TNBC patients should be treated according to the Keynote 522 regimen
10:45 **Yes: Javier Cortes,** *Madrid, Spain*
10:55 **No: Henry Gomez,** *Lima, Peru*
11:05 Discussion

11:15-11:45 **DIDACTIC:** TNBC subtypes: How do we use them to help patient outcomes?
Nirmala Pathmanathan, *Sydney, Australia*

11:45-12:15 **Session 9: Case discussion**
Early HER2 breast cancer: When less is more - a case report

Case Presenter/ Moderator: **Ronald Limon,** *Santa Cruz de la Sierra, Bolivia*

Panel of experts: Medical oncologist: **Natalia Valdivieso,** *Lima, Peru*
Imager: **Liana Falcón,** *Lima, Peru*
Surgeon: **Andy Pantoja,** *Trujillo, Peru*
Radiation oncologist: **Alberto Lachos,** *Lima, Peru*
Pathologist: **Franco Doimi,** *Lima, Peru*
Medical oncologist: **Javier Cortes,** *Madrid, Spain*
Medical oncologist: **Richard de Boer,** *Melbourne, Australia*

12:15-13:15 **Session 10: Reducing the risk**

Chairpersons: **Karla Sepulveda,** *Houston, TX, USA*
Mauricio León, *Lima, Peru*

12:15-12:45 **DEBATE:** All women under 50 with gene mutations should be offered bilateral mastectomy
12:15 **Yes: Pamela Rebaza,** *Lima, Peru*
12:25 **No: Stuart McIntosh,** *Belfast, UK*
12:35 Discussion

12:45-13:15 **DEBATE:** All women presenting with nodal disease should have radiation therapy after mastectomy
12:45 **Yes: Oscar Niño De Guzman,** *Cochabamba, Bolivia*
12:55 **No: Valentina Ovalle,** *Santiago, Chile*
13:05 Discussion

13:15-14:15 *Lunch break, poster viewing and exhibition visit*

14:15-15:45 **Session 11: Adjuvant endocrine therapy**

Chairpersons: **Nirmala Pathmanathan,** *Sydney, Australia*
Rafael Vázquez, *Mexico City, Mexico*

14:15-14:55 **Pitching the test in five minutes: Why this test is "best"**

14:15 **PAM 50**
Javier Cortes, *Madrid, Spain*

14:25 **Oncotype/ODX**
Henry Gomez, *Lima, Peru*

14:35 **Mammaprint**
Alastair Thompson, *Houston, TX, USA*

14:45 **Pathology**
Henry Guerra, *Lima, Peru*

14:55-15:15 **DIDACTIC:** Risk assessment (summary) for ER+ breast cancer
Antonio Llombart, *Valencia, Spain*

15:15-15:45 **DEBATE:** That all young women treated with OFS should be given an aromatase inhibitor
15:15 **Yes: Alastair Thompson,** *Houston, TX, USA*
15:25 **No: Richard De Boer,** *Melbourne, Australia*
15:35 Discussion

15:45-16:30 **Mid-afternoon Symposium**
Supported by Novartis

Topic: Optimizing the management of early HR+ breast cancer: Evidence and perspectives
Speaker: **Henry Gomez,** *Lima, Peru*

16:30-16:50 *Coffee break, poster viewing and exhibition visit*

16:50-17:50 **Session 12: Locoregional management**

Chairpersons: **Pamela Rebaza,** *Lima, Peru*
Alastair Thompson, *Houston, TX, USA*

16:50-17:20 **DEBATE:** That patients with heavy axillary nodal disease pre-NACT should have axillary dissection irrespective of response to NACT
16:50 **Yes: Enrique Bargallo,** *Mexico City, Mexico*
17:00 **No: Bruce Mann,** *Melbourne, Australia*
17:10 Discussion

17:20-17:50 **Case discussion: Focusing on locoregional management**

Case Presenter/ Moderator: **Mauricio León,** *Lima, Peru*

Panel of experts: Medical oncologist: **Luis Orrego,** *Lima, Peru*
Imager: **Pilar Montenegro,** *Lima, Peru*
Surgeon: **Oscar Niño De Guzman,** *Cochabamba, Bolivia*
Radiation oncologist: **Juan Manuel Trejo,** *Lima, Peru*
Pathologist: **Henry Guerra,** *Lima, Peru*
Surgeon: **Alastair Thompson,** *Houston, TX, USA*
Surgeon: **Stuart McIntosh,** *Belfast, UK*

17:50-18:00 **Congress closing and Award presentation**

Bruce Mann, *Melbourne, Australia*
Henry Gomez, *Lima, Peru*
Luis Pinillos, *Lima, Peru*
Alastair Thompson, *Houston, TX, USA*
Mauricio León, *Lima, Peru*

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Poster presentations

Adjuvant endocrine therapy

RIBOCICLIB IN HR+/HER2− ADVANCED BREAST CANCER: A REAL-WORLD STUDY FROM A PUBLIC HOSPITAL IN SOUTHERN PERU
Livia Lucila Martinez Ocola, *Peru*

Breast cancer genetics

STREAMLINED PATHWAYS TO EMBED GENETIC TESTING INTO EXISTING BREAST CANCER MDT
Lynne Mann, *Australia*

Breast imaging

VALUE OF A MACHINE LEARNING MODEL COMBINING CLINICAL FEATURES AND MULTIPARAMETRIC MRI IN PREDICTING BENIGN AND MALIGNANT CHARACTERISTICS OF BI-RADS 4 LESIONS
Jiangyong Shi, *China*

DCIS

RISK FACTORS FOR RECURRENCE OF NON-METASTATIC DUCTAL CARCINOMA OF THE BREAST
Jose Richard Tenazoa Villallobos, *Peru*

Locoregional therapy

ASSOCIATION BETWEEN THE NOTTINGHAM PROGNOSTIC INDEX AND 5-YEAR ACTUARIAL SURVIVAL IN BREAST CANCER LUMINAL A. VIRGEN DE LA PUERTA HIGH COMPLEXITY HOSPITAL 2019-2022
Jose Richard Tenazoa Villallobos, *Peru*

COSMETIC OUTCOMES WITH THREE HYPOFRACTIONATED ADJUVANT RADIOTHERAPY SCHEDULES IN PATIENTS WITH BREAST CANCER
Budhi Singh Yadav, *India*

Molecular assays

REAL-WORLD VALIDATION OF ONCOTYPE DX® IN NODE NEGATIVE BREAST CANCER: A COMPARATIVE ANALYSIS WITH TAILORX
Ryan Rodgerson, *United Kingdom*

IS THE ONCOTYPE DX® VALIDATED FOR REAL-WORLD USE IN NODE-POSITIVE BREAST CANCER? A RETROSPECTIVE COHORT STUDY
Ryan Rodgerson, *United Kingdom*

Neoadjuvant therapy

NEOADJUVANT THERAPY FOR BREAST CANCER: A REGIONAL AUSTRALIAN EXPERIENCE
Ruwangi Udayasiri, *Australia*

COMPARISON OF THE EFFICACY OF SENTINEL LYMPH NODE BIOPSY AND AXILLARY LYMPH NODE DISSECTION IN BREAST CANCER PATIENTS AFTER NEOADJUVANT THERAPY
Meiling Xu, *China*

Precision oncology

ASSESSING THE BIOMARKER POTENTIAL OF A PANEL OF MICRORNA IN LUMINAL A AND B BREAST CANCER IN A PERUVIAN POPULATION
Carla Bernal Espinoza, *Peru*

METABOLOMIC ANALYSIS OF BREAST CANCER IN COLOMBIAN PATIENTS: EXPLORING MOLECULAR SIGNATURES IN DIFFERENT SUBTYPES AND STAGES
Andrea Del Pilar Hernandez Rodriguez, *Colombia*

BREAST TISSUE NANOMECHANICS SIGNATURE AIDS ACCURATE BREAST CANCER DIAGNOSIS AND SUPPORTS BETTER-INFORMED TREATMENT DECISIONS
Carolina Ortiz Velez, *Switzerland*

LOW IMPACT BREAST RECONSTRUCTION (LIBRRE): A MULTI CENTRIC ANALYSIS OF 900 PATIENTS UNDERGOING DELAYED AUTOLOGOUS FAT GRAFTING
Kais Razzouk, *France*

Prevention

CONTRAST-ENHANCED MAMMOGRAPHY ENHANCED WITH ARTIFICIAL INTELLIGENCE FOR BREAST CANCER PREDICTION: A SYSTEMATIC REVIEW WITH EVALUATION PROBAST
Wagner Rios-Garcia, *Peru*

DECREASED RISK OF BREAST CANCER ASSOCIATED WITH METFORMIN TREATMENT
Jose Richard Tenazoa Villallobos, *Peru*

PROGNOSTIC FACTOR ASSOCIATED WITH RECURRENCE IN MALIGNANT PHYLLODES TUMOR: RETROSPECTIVE COHORT OF CASES TREATED AT THE INSTITUTE OF NEOPLASTIC DISEASES PERIOD 2000-2020ª
Jose Richard Tenazoa Villallobos, *Peru*

Screening

COMPARISON OF CLINICAL BREAST EXAM AND BEXA BREAST EXAM FOR DETECTION OF BREAST ABNORMALITIES IN COLOMBIAN WOMEN AGED 40–49 YEARS
Steffi Katheryn Gonzales, *Peru*

EXPLORATION OF SERUM METABOLITES ASSOCIATED WITH MAMMOGRAPHIC DENSITY AS A RISK FACTOR FOR BREAST CANCER
Gabriela Lopez Molina, *Colombia*

USE OF ARTIFICIAL INTELLIGENCE FOR BREAST CANCER SCREENING IN LATIN AMERICA AND THE CARIBBEAN: A SYSTEMATIC REVIEW WITH TRIPOD-AI EVALUATION
Wagner Rios-Garcia, *Peru*

Symptom management

OUR EXPERIENCE WITH LOCALIZING SENTINEL LYMPH NODES VIA MAGTRACE (SPIO) COMPARED TO CONVENTIONAL METHODS, INCLUDING TECHNETIUM-99M (TC-99M) AND BLUE DYE (BD)METHODS, FOR METASTATIC BREAST CANCER
Maryam Barkat, *United Kingdom*

Triple negative breast cancer

PROGNOSTIC FACTORS ASSOCIATED WITH AXILLARY RECURRENCE WITH SENTINEL NODE-NEGATIVE BIOPSY IN BREAST CANCER T1 - T2, N0
Jose Richard Tenazoa Villallobos, *Peru*

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Abstracts

LIST OF POSTERS

Adjuvant endocrine therapy

RIBOCICLIB IN HR+/HER2− ADVANCED BREAST CANCER: A REAL-WORLD STUDY FROM A PUBLIC HOSPITAL IN SOUTHERN PERU

Livia Lucila Martinez Ocola[1], Maria Luisa Suarez Lima[1], Carolina Liz Duenas Galarza[1]
Arequipa, Hospital Goyeneche, Arequipa, Peru

Problem statement: Ribociclib has shown efficacy in clinical trials for hormone receptor-positive, HER2-negative (HR+/HER2−) advanced breast cancer; its performance in real-world settings may vary due to differences in patient characteristics, treatment adherence, toxicity, and outcomes. Describing its use in public hospitals is essential to inform clinical practice and guide internal improvements. **Methods:** A retrospective, observational study was conducted at the Oncology Department of Goyeneche Hospital in Arequipa, Peru, including patients with HR+/HER2− breast cancer who received ribociclib between 2024 and 2025. Clinical records were reviewed to collect demographic, clinical, therapeutic, and safety data. Tumor response was assessed using RECIST 1.1 criteria, and adverse events (AEs) were graded according to CTCAE v5.0.
Results: Of 23 patients who initiated ribociclib, 21 met inclusion criteria. All were female, with a mean age of 56 years, and 57.7% were postmenopausal at the start of treatment. Most patients were from Arequipa (47.6%), followed by Puno (23.8%); with 19.1% diagnosed at stage II, 47.6% at stage III disease and 33.3% at the metastatic stage. The majority had ECOG 1 (74.4%). Ribociclib was used for recurrence during adjuvant endocrine therapy (55.9%), after early relapse (10.8%), or as second-line treatment in metastatic settings (33.3%). It was combined with Fulvestrant in 75% of cases and with anastrozole in 25%. The average treatment duration was 9.3 months. Partial response was observed in 9.5%, stable disease in 61.9%, and progression in 28.6% of patients, primarily in bone. AEs occurred in 98.4%, with neutropenia being the most frequent (85.7%), followed by fatigue (23.8%), elevated liver enzymes (19.0%), nausea (19.0%), and anemia (14.3%). Grade 3–4 AEs occurred in 51.9%. Dose reductions and temporary interruptions were required in 49.9% and 72.3% of patients, respectively. Permanent discontinuation occurred in 23.8%, mainly due to disease progression, and only one case was due to poor tolerance. **Conclusion:** In this real-world setting, ribociclib demonstrated manageable toxicity and disease control in the majority of patients with HR+/HER2− breast cancer. Neutropenia was common but rarely severe, and treatment discontinuation due to intolerance was rare. These findings support the feasibility of ribociclib use in public hospital settings in Peru.

Breast cancer genetics

STREAMLINED PATHWAYS TO EMBED GENETIC TESTING INTO EXISTING BREAST CANCER MDT

Lynne Mann[1,5], Danielle Kirby[2,3], Christina Girgis[2,4], Megan Brennan[1,4], James French[1], Elisabeth Elder[1], Farid Meybodi[1], Jeremy Hsu[1], Eleanor Handel[2], Abiramy Ragunathan[2], Shweta Srinivasa[2,4]
[1]*Breast Cancer Institute, Westmead Hospital, Westmead, Australia*
[2]*Department of Familial Cancer, Westmead Hospital, Westmead, Australia*
[3]*Department of Clinical Genetics, The Children's Hospital at Westmead, Westmead, Australia*
[4]*School of Medicine, University of Sydney, Sydney, Australia*
[5]*School of Medicine, University of Notre Dame Australia, Sydney, Australia*

Problem statement: Patients with newly diagnosed breast cancer often require timely genetic testing (GT) to inform treatment decisions. Traditional models relying on referral to familial cancer/cancer genetics services (FCS) for both pre and post-test counselling are not scalable due to increasing testing demand. To address this, we piloted a model enabling breast surgeons to initiate GT within the multidisciplinary team (MDT) framework. **Methods:** From April 2024 to June 2025, patients were flagged at the MDT by genetics clinicians for GT. Criteria for GT included adjuvant PARPi eligibility or 10% chance of underlying pathogenic variant (PV) (triple negative breast cancer (TNBC) ≤60, breast cancer ≤40, bilateral breast cancer with one 50, male). Breast surgeons and other non-genetics staff obtained consent and arranged GT (BRCA1, BRCA2, PALB2, ATM, CHEK2, RAD51C, RAD51D, TP53, BARD1, PTEN). Results were discussed within 3 weeks for those planned for upfront surgery, and post-neoadjuvant systemic therapy for those undergoing neoadjuvant treatment. Results were returned by the surgical team and cases involving PVs had follow-up from FCS. MDT clinicians received video-based training and ongoing education during MDT discussions. Process improvements addressed early implementation barriers, such as result tracking and provision of detailed consent and sample collection forms. **Results**: Of 110 patients flagged, 96 proceeded with mainstream GT. Patients who didn't proceed either did not end up meeting testing criteria (2), declined mainstream GT (4), or never had their sample collected (7). Common testing indications included PARPi eligibility criteria (55), breast cancer ≤40 (32) and TNBC (13). Majority of patients (84) were consented by the surgical team, and only 3 patients required pre-test FCS contact. Average turnaround-time from sample collection to result was 27 days. Eight individuals (7.2%) had PVs in BRCA1 (2), BRCA2 (4), PALB2 (2), and ATM (2). All patients with PVs were seen by FCS within 15 days of result disclosure. **Conclusion**: Embedding genetic testing into the breast cancer MDT was feasible and effective. The streamlined process enabled timely access to results, minimised FCS workload, and improved clinical workflow without compromising quality. This model is scalable and sustainable, supporting the growing need for GT in oncology care.

Breast imaging

VALUE OF A MACHINE LEARNING MODEL COMBINING CLINICAL FEATURES AND MULTIPARAMETRIC MRI IN PREDICTING BENIGN AND MALIGNANT CHARACTERISTICS OF BI-RADS 4 LESIONS

Jiangyong Shi,
Radiological Department, The Ninth People's Hospital of Chongqing, Chongqing, China

Objective: This study aims to assess the effectiveness of a machine learning model that combines multiparametric MRI with clinical features to differentiate between benign and malignant lesions classified as BI-RADS 4. **Results:** Among the 132 lesions, 45 were malignant and 87 benign. Independent predictive factors for malignant BI-RADS 4 lesions included mean kurtosis value (MK) (OR=16.952, 95% CI 3.322–46.348, P=0.023), age (OR=1.123, 95% CI 1.042–1.256, P=0.006), and enhancement type of the lesion (OR=0.035, 95% CI 0.005–0.336, P=0.005). The areas under the curve (AUC) for the SVM and RF models were 0.785 (95% CI 0.597–0.698) and 0.847 (95% CI 0.628–0.750), respectively. The RF model demonstrated superior specificity (79.0%) and accuracy (75.9%), indicating its overall predictive performance is higher. **Conclusion:** The machine learning model based on multiparametric MRI combined with clinical features shows significant potential in diagnosing the benign and malignant characteristics of BI-RADS 4 lesions.

DCIS

RISK FACTORS FOR RECURRENCE OF NON-METASTATIC DUCTAL CARCINOMA OF THE BREAST

Jose Richard Tenazoa Villallobos[1,2], Edgar Fermin Yan Quiroz[1,2], Mery Nancy Villarreal Gonzalez[2], Perlita del Rocio Mariet Rodriguez Huancajulca[1,2]
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[2]*La Libertad, Essalud, Trujillo, Peru*

Problem statement: To determine whether primary tumour size, lymph node stage, hormonal status, HER2 status, and molecular classification are risk factors for the recurrence of non-metastatic ductal carcinoma of the breast. **Methods:** An analytical, retrospective case-control study was carried out, in which 99 patients with ductal carcinoma of the breast were included, according to selection criteria which were divided according to the presence or absence of recurrence. The chi-square test and the odds ratio were calculated. **Results:** No significant differences were observed regarding the variables age, type 2 diabetes mellitus, obesity or hypertension between patients with non-metastatic ductal carcinoma of the breast with or without recurrence (p0.05). In the bivariate analysis, positive lymph node status, negative hormonal status,

positive HER2 2 and triple-negative molecular classification were recognised as risk factors for recurrence of non-metastatic ductal carcinoma of the breast (p0.05). In the multivariate analysis, positive lymph node status, negative hormonal status, positive HER2 2 and triple-negative molecular classification were recognised as risk factors for recurrence of non-metastatic ductal carcinoma of the breast (p0.05). **Conclusion:** Primary tumour size, lymph node stage, hormonal status, HER2 status, and molecular classification are risk factors for recurrence of non-metastatic ductal carcinoma of the breast.

Locoregional therapy

ASSOCIATION BETWEEN THE NOTTINGHAM PROGNOSTIC INDEX AND 5-YEAR ACTUARIAL SURVIVAL IN BREAST CANCER LUMINAL A. VIRGEN DE LA PUERTA HIGH COMPLEXITY HOSPITAL 2019-2022ya

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Problem statement: To demonstrate the association between the Nottingham Prognostic Index (NPI) and five-year actuarial survival in patients with Luminal A subtype breast cancer treated at the Virgen de la Puerta High Complexity Hospital during the period 2019-2022. **Methods:** Cohort, retrospective, longitudinal, observational and analytical study. Women aged 18 to 75 years with breast cancer subtype Luminal A (ER+, PR+/-, HER2-, Ki67% 20%) in clinical stages I-III were included. The NPI = (0.2 x larger tumour diameter) + histological grade + number of metastatic lymph nodes was calculated, divided into two groups according to (≤ 3.4 vs. 3.4). Kaplan-Meier curves, log-rank test and Cox regression were used. **Results:** Of 85 patients, 23.5% had an NPI ≤ 3.4 and 76.5% had an NPI 3.4. Overall survival was 94.1%, with 95% for NPI ≤ 3.4 and 93.8% for NPI 3.4, with no statistically significant difference in the log rank test (p = 0.474). However, in the Cox multivariate model, NPI was significantly associated with lower survival (p = 0.012; HR = 2.85; 95%CI: 1.25 – 6.25). **Conclusions:** Although the bivariate analysis did not show a statistically significant association between IPN and five-year actuarial survival, the multivariate model evidenced its prognostic value in this homogeneous cohort of patients with Luminal A subtype breast cancer.

COSMETIC OUTCOMES WITH THREE HYPOFRACTIONATED ADJUVANT RADIOTHERAPY SCHEDULES IN PATIENTS WITH BREAST CANCER

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Problem statement: Hypofractionated adjuvant radiotherapy is becoming a new standard in patients with breast cancer. Here we present cosmetic outcomes with three hypofractionated adjuvant radiotherapy schedules in patients with breast cancer. **Methods:** Breast cancer patients post breast conservation surgery were included in this prospective study. These patients were part of two randomised trials (HRBC NCT04075058 and HYPART NCT04472845). Patients were treated with a radiotherapy dose of 40 Gy in 15 fractions over 3 weeks, 34 Gy in 10 fractions over 2 weeks and 26 Gy in 5 fractions over 1 week. Boost dose delivered was 8 Gy in 2 fractions over 2 days with sequential or simultaneous integrated boost technique. Patients were treated with a 2D (dimesional) or 3D technique. Cosmetic analysis was done at baseline and at 3 years after radiotherapy by the physcian using NSABP/ HARVARD/ RTOG breast cosmesis grading scale. **Results:** Between June 2015 and December 2023, 600 breast cancer patients were included; 141, 308 and 151 in the 3 week, 2 week and 1 week schedules, respectively. Mean age of the patients was 47 years (18-75 years). Baseline characteristics of the patients were comparable in the three schedules. Boost was delivered in 81 (57.5%), 165 (53.6%) and 117 (77.5%) patients in the 3 week, 2 week and 1 week schedules, respectively. Modalities used to deliver boost was electrons and photons in 34 (24%), 56 (18%) and 40 (26.5%); and 107 (76%), 252 (82%) and 111 (73.5%) patients in 3 week, 2 week and 1 week schedules, respectively. Boost volume was 218.56±36.27, 212.62±40.03 and 223.62±39.78 in 3 week, 2 week and 1 week schedules, respectively. At 3 years, cosmetic outcome was excellent/good and fair/poor in 127 (90%), 294 (95.5%) and 125 (82.8%) and 14 (10%), 14 (4.5%) and 26 (18.2%) patients (p=0.005), respectively in 3 week, 2 week and 1 week schedules, respectively. **Conslusion:** Cosmetic outcome was better with the 2 week radiotherapy schedule. Worst cosmetic outcome was observed with 1 week radiotherapy schedule.

Molecular assays

REAL-WORLD VALIDATION OF ONCOTYPE DX® IN NODE NEGATIVE BREAST CANCER: A COMPARATIVE ANALYSIS WITH TAILORX

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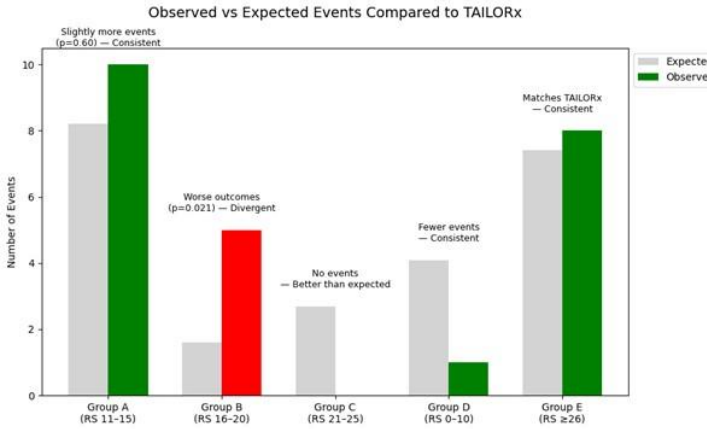
[1]Sparano JA et al. TAILORx trial: endocrine vs chemoendocrine therapy in HR+/HER2− breast cancer

Problem statement: The TAILORx[1] trial established Oncotype DX® as a key tool for guiding chemotherapy decisions in node negative, hormone receptor-positive, HER2-negative breast cancer. While its prognostic utility is well supported in clinical trials, its real-world validation remains limited. This study evaluates Oncotype DX® performance in a real-world cohort and compares outcomes with TAILORx[1]-defined risk groups.

Methods: We conducted a retrospective cohort study using prospectively collected data of 388 node-negative patients who underwent Oncotype DX® testing between 2015 and 2024 in a tertiary referral cancer centre. Patients were stratified into five groups based on TAILORx[1] criteria: Group A (Age 50, RS 11-25), Group B (Age ≤ 50, RS 11-15), Group C (Age ≤ 50, RS 16-25), Group D (RS 0-10 all ages), Group E (≥ 26 all ages). Treatment data (Endocrine Therapy [ET] vs. Chemotherapy + ET [CET]) and survival outcomes were analysed using Kaplan-Meier, log-rank tests and cox regression. **Results:** Group A (n=151) showed slightly more events than expected (10 observed vs. 8.2 expected), but outcomes remained consistent with TAILORx[1], which found no chemotherapy benefit in this group. Group B (n=22) had significantly worse outcomes than expected (HR 6.51, p=0.021), contrasting with TAILORx[1], where this group had excellent survival with ET alone. Group C (n=42) had no events, suggesting better-than-expected outcomes. Group D (RS 0–10) also showed fewer events than predicted. Group E (RS ≥26) outcomes aligned with TAILORx[1], supporting chemotherapy use. Multivariable analysis identified CET (HR 4.25, p=0.034) and intermediate risk (HR 9.31, p=0.036) as significant predictors of poorer outcomes, likely reflecting treatment selection bias.



Conclusions: Our real-world data largely aligns with TAILORx[1], confirming the prognostic value of Oncotype DX® in node-negative patients. However, worse-than-expected outcomes in group B suggest biological heterogeneity or treatment adherence issues. These findings support continued use of Oncotype DX® for risk stratification and highlight the need for careful clinical judgement in younger patients. Larger studies are warranted to validate these trends.

IS THE ONCOTYPE DX® VALIDATED FOR REAL-WORLD USE IN NODE-POSITIVE BREAST CANCER? A RETROSPECTIVE COHORT STUDY

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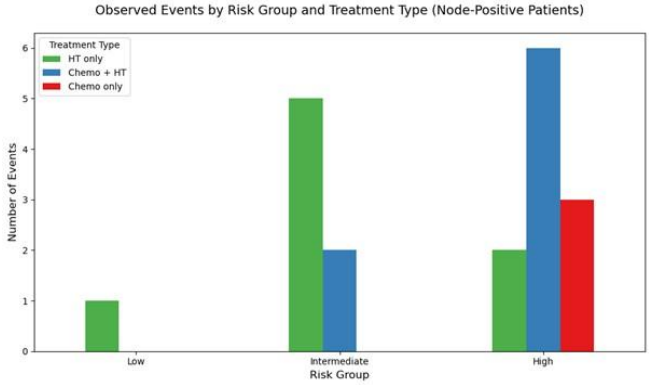
[1]Kalinsky K et al. RxPONDER (SWOG S1007), RS ≤25, HR+/HER2−, node+ BC. Cancer Res. 2023;83(5 Suppl):GS1-01

Problem statement: The Oncotype DX® assay is a validated prognostic and predictive tool for breast cancer, with evidence supporting its utility over a 9-year follow-up. The RxPONDER[1] trial further confirmed its clinical relevance in a controlled setting. However, its performance in real-world clinical practice remains underexplored. This study evaluates the application of Oncotype DX® in routine care using RxPONDER[1] criteria and determines whether its prognostic value remains in real-world data. **Methods:** We conducted a retrospective cohort study using prospectively collected data from Node-positive patients at the Norfolk and Norwich University, a tertiary referral cancer centre treating 650 breast cancer patients per year (2015-2024). Eligible patients were hormone receptor-positive, HER2-negative breast cancer patients with 1-3 positive lymph nodes and available Oncotype DX® scores. Treatment and survival data were extracted from hospital records. Patients were stratified by menopausal status and recurrence score. Kaplan-Meier curves and Cox regression analyses assessed outcomes and compared with RxPONDER[1] findings. **Results:** 282 patients were included. Chemotherapy was administered to all high-risk premenopausal patients (24.1%) and selectively to intermediate-risk patients based on additional clinical factors. In post-menopausal patients (75.9%), chemotherapy was primarily reserved for high-risk cases. High Oncotype DX® scores (25) were significantly associated with poorer outcomes (HR 6.59, 95% CI 1.39-31.15, p = 0.017), intermediate scores (11-25) showed a non-significant trend (HR 2.38, p = 0.265). Endocrine therapy adherence was the strongest independent predictor of survival (HR 0.012, p = 0.004). Chemotherapy plus endocrine therapy (CET) showed no statistically significant benefit after adjustment (HR 1.82, p = 0.5) These findings align with RxPONDER[1]: chemotherapy showed no significant benefit in postmenopausal patients, but some benefit in premenopausal patients.



Conclusions: Oncotype DX® remains prognostic in node-positive patients and real-world outcomes mirror RxPONDER[1] findings. Our study highlights the importance of endocrine therapy adherence and supports continued use of Oncotype DX® for guiding chemotherapy decisions in clinical practice. Larger cohort real-world studies are needed.

Neoadjuvant therapy

NEOADJUVANT THERAPY FOR BREAST CANCER: A REGIONAL AUSTRALIAN EXPERIENCE

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Problem statement: This study evaluates the effectiveness of neoadjuvant systemic therapy (NAST) in breast cancer patients at Goulburn Valley Health, with a focus on the prevalence of pathological complete response (pCR) across different molecular subtypes. The aim is to identify subtype-specific responses, compare local outcomes to major clinical trials, and support more personalised treatment approaches to improve outcomes and care quality. **Methods:** A retrospective audit was conducted on breast cancer patients who received NAST between January 2019 and June 2024. Eligible patients were identified through oncology and surgical databases. Data collected included demographics, tumour characteristics, treatment regimens, and surgical outcomes. The primary outcome was pCR. Descriptive statistics were used to summarise patient data, and univariate analyses assessed associations between tumour subtype and pCR. Multivariable logistic regression was planned to adjust for potential confounding variables, with significance set at p 0.01. **Results:** Of 50 patients treated with NAST, 32% achieved pCR. The highest pCR rates occurred in HER2-positive (57.1%) and triple-negative (53.8%) patients who completed therapy. No pCR was observed in hormone receptor-positive, HER2-negative cases. Multivariable analysis was not performed due to a lack of significant confounders and low subgroup variability. **Conclusion:** NAST is most effective in HER2-positive and triple-negative breast cancers. These findings support molecular subtype-based treatment planning and highlight the need for improved biomarkers to guide therapy selection and predict response in clinical practice.

COMPARISON OF THE EFFICACY OF SENTINEL LYMPH NODE BIOPSY AND AXILLARY LYMPH NODE DISSECTION IN BREAST CANCER PATIENTS AFTER NEOADJUVANT THERAPY

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Purpose: Sentinel lymph node biopsy (SLNB) has evolved from its initial application in early breast cancer to encompass patients with locally advanced breast cancer undergoing neoadjuvant therapy (NAT). The roles of axillary lymph node dissection (ALND) and SLNB in clinically node-positive (cN+) breast cancer patients receiving NAT remain a subject of ongoing debate. This study aims to evaluate the impact of SLNB and ALND on recurrence and survival in breast cancer patients who transitioned from node-positive to pathological node-negative (ypN0) status following NAT. **Methods:** A retrospective analysis was conducted involving 218 breast cancer patients who converted to axillary node-negative (ycN0) status after NAT between January 2008 and December 2018. The study compared overall survival (OS), disease-free survival (DFS), ipsilateral axillary node recurrence, and postoperative complications—specifically, arm lymphedema and shoulder stiffness—between the SLNB and ALND groups. **Results:** The SLNB and ALND groups comprised 90 and 128 patients, respectively. The median follow-up duration was 62 months (range: 6–158) for the SLNB group and 102 months (range: 2–164) for the ALND group. The 5-year OS and DFS rates were 95.8% and 94.2% (p = 0.467) for SLNB, and 88.2% and 86.9% (p = 0.712) for ALND. Coregional recurrence occurred in seven patients (7.7%) in the SLNB group and eight patients (6.25%) in the ALND group. The incidence of ipsilateral axillary recurrence was low in both groups (1.2–2.5%), with distant metastasis observed in 8 (8.9%) and 9 (7.0%) patients in the SLNB and ALND groups, respectively. Furthermore, patients in the ALND group were more likely to experience edema and shoulder stiffness compared to those in the SLNB group (35 [27.3%] versus 12 [13.3%], p = 0.007), with a threefold increase in incidence (20 [15.6%] vs. 5 [5.6%], p 0.001). **Conclusion:** For breast cancer patients who transition to ycN0 status following NAT, SLNB presents a safe oncological alternative to ALND.

Precision oncology

ASSESSING THE BIOMARKER POTENTIAL OF A PANEL OF MICRORNA IN LUMINAL A AND B BREAST CANCER IN A PERUVIAN POPULATION

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Problem statement: Breast cancer is a leading cause of cancer-related mortality among women in Peru. Early and accurate diagnosis is crucial for improving patient outcomes. In search of

more effective diagnostic tools, microRNAs have emerged as promising biomarkers due to their stability in biological samples and their involvement in cancer-related pathways. This study aims to evaluate the biomarker potential of miR-451a, miR-21, miR-660, and miR-486-3p in breast cancer by analyzing their expression levels and discriminatory power among Luminal A, Luminal B, and control groups in a Peruvian population. **Methods:** This observational case-control study focused on early-stage breast cancer, including 36 controls, 32 Luminal A, and 43 Luminal B patients. Total RNA was extracted using a silica column-based purification method, followed by polyadenylation and cDNA synthesis. Relative quantification was performed with SYBR Green-based qPCR and the ΔΔCt method. Statistical analysis included Kruskal-Wallis for group comparisons and ROC curve analysis with AUC calculations to assess biomarker sensitivity and specificity. **Results:** Significant differences were observed in the expression of miR-21 and miR-486-3p compared to controls (n = 35 and n = 21, respectively). For miR-21, a 7.4-fold decrease in expression was observed in Luminal A patients (n = 26) compared to controls (n = 35) (p 0.05). miR-486-3p showed a 1.97-fold increase in expression in Luminal A patients (n = 16) compared to the control group (n = 21) (p 0.05) and Luminal B patients (n = 23) (p 0.01). No significant differences were found in miR-660 and miR-451a. miR-486-3p showed an AUC of 0.717 (sensitivity: 61.9%, specificity: 86.7%) for Luminal A vs. control, and 0.762 (sensitivity: 73.3%, specificity: 78.3%) for Luminal A vs. B. When combined with miR-21, the AUC improved to 0.81 (sensitivity: 85%, specificity: 70%) for Luminal A vs. control, and to 0.83 (sensitivity: 70%, specificity: 90%) for Luminal A vs. B. **Conclusion:** miR-486-3p and miR-21 demonstrated potential for distinguishing Luminal A from the control group, with a sensitivity of 85% and specificity of 70%. However, only miR-486-3p showed significant differences between Luminal A and Luminal B, with a sensitivity of 70% and specificity of 90%.

METABOLOMIC ANALYSIS OF BREAST CANCER IN COLOMBIAN PATIENTS: EXPLORING MOLECULAR SIGNATURES IN DIFFERENT SUBTYPES AND STAGES

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[4]*Hospital Universitario Mayor-Mederi, Breast Cancer Department, Bogota, Colombia*
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Problem statement: Breast cancer is a neoplasm characterized by high heterogeneity, influenced by intrinsic molecular subtypes and clinical stage, aspects that remain underexplored in the Colombian population. **Methods:** This study aimed to characterize the metabolic alterations associated with subtypes and disease progression using an untargeted metabolomics approach in a group of newly diagnosed, treatment-naive Colombian women. Samples were analyzed using LC-QTOF-MS (Liquid Chromatography–Quadrupole Time-of-Flight Mass Spectrometry) and GC-QTOF-MS (Gas Chromatography–Quadrupole Time-of-Flight Mass Spectrometry), along with amino acid profiling to improve metabolite coverage. **Results:** Alterations consistent with previous studies were identified; however, the Luminal B subtype showed elevated levels of long-chain acylcarnitines and higher concentrations of free fatty acids compared with the other subtypes. It also presented elevated levels of carbohydrates and essential glycolytic intermediates, suggesting that this subtype may adopt a hybrid metabolic phenotype characterized by increased glycolytic flux and enhanced fatty acid catabolism. TNM staging analysis showed progressive metabolic reprogramming of breast cancer. In advanced stages, a sustained increase in phosphatidylcholines and a decrease in lysophosphatidylcholines were observed, reflecting lipid alterations associated with key roles in tumor progression. In early stages (I-II) in comparison with healthy controls, plasma metabolites with high discriminatory power were identified, such as pyrrolidone glutamic acid, ribose, and glycerol, which are associated with energy and carbohydrate metabolism dysfunctions. **Conclusion:** These results highlight metabolomics as a promising tool for early diagnosis, clinical follow-up, and molecular characterization of breast cancer.

BREAST TISSUE NANOMECHANICS SIGNATURE AIDS ACCURATE BREAST CANCER DIAGNOSIS AND SUPPORTS BETTER-INFORMED TREATMENT DECISIONS

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Problem statement: Early and accurate diagnosis of breast cancer (BC) is critical; however, it faces limitations from biopsy methods, including false-negative rates and a limited ability to predict tumor behavior. These gaps lead to delayed diagnoses and hinder personalized treatment planning. This study investigates the ARTIDIS device, a nanomechanical profiling platform based on Atomic Force Microscopy for near-patient use. ARTIDIS aims to improve diagnostic precision by characterizing the biomechanical properties of biopsy samples identifying aggressive tumors and therapeutic responses. **Methods:** This single-center prospective study was conducted at the University Hospital Basel, involving 545 patients who underwent breast biopsies. A total of 588 biopsy samples were analyzed using the ARTIDIS device. The measurements were processed through ARTIDISNET, a data integration platform designed to correlate tissue biomechanics with histopathological findings, clinical parameters, and treatment outcomes. **Results:** Of the analyzed breast tissue samples, 62.1% were classified as benign or uncertain, 36.9% as malignant, and 1% as unassignable. ARTIDIS demonstrated 96% sensitivity, 78% specificity, and an AUC of 0.94 for malignancy detection based on nanomechanical scores. This accuracy is maintained even in samples with less than 5% neoplastic tissue. The device effectively identified aggressive tumor subtypes, achieving 83% sensitivity, 82% specificity, and an AUC of 0.86 for distinguishing Luminal-B tumors. It differentiated between B3 (uncertain), B2 (benign), and B5a/B5b (malignant) lesions, promising to reduce overtreatment of B3 cases. In patients undergoing neoadjuvant therapy, ARTIDIS predicted treatment response with 100% sensitivity, 82% specificity, and an AUC exceeding 0.9. In a subgroup of 31 patients receiving neoadjuvant therapy, key nanomechanical parameters, specifically dissipation and adhesion, exhibited strong associations with pathological response. The combined analysis of these markers enhanced predictive accuracy, particularly in identifying pathological complete response within the Luminal-B subtype, addressing a critical clinical gap. **Conclusion:** This study elucidates the potential of ARTIDIS in differentiating between benign and malignant breast lesions while identifying aggressive subtypes. Moreover, its capacity to correlate nanomechanical signatures with therapy responses underscores its predictive value in guiding treatment decisions. These findings affirm ARTIDIS's clinical validity as a diagnostic and predictive instrument in BC care, with further validation underway in the ANGEL trial.

LOW IMPACT BREAST RECONSTRUCTION (LIBRRE): A MULTI CENTRIC ANALYSIS OF 900 PATIENTS UNDERGOING DELAYED AUTOLOGOUS FAT GRAFTING

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The number of total mastectomy patients requesting breast reconstruction is increasing. However, many patients refuse this surgery because the procedures are too complex, too prone to complications. In this study, a comprehensive assessment of the results and complications of only fat grafting breast reconstruction is presented. Between 2012 and 2024, 900 fat grafting breast

reconstruction was performed in patients who previously received total mastectomy in four breast centers in france, Nice Breast Institute French Riviera, Centre du Sein Paris, Paoli Calmette Institute Marseille and Hopital Privé Saint Martin Bordeaux. These included 495 cases of delayed breast reconstruction (DBR), 207 "conversions," i.e., removal of a reconstructive implant replaced by iterative fat injections and 198 cases of immediate breast reconstruction. The patients were fully informed about the procedure`s risks and benefits before intervention. All the patients signed an informed consent. The procedure, complications, and results were analyzed on a regular basis every 3-6 months (average follow-up of 3 years. Data from 900 patients with a mean age of 53 years (25-83) were included in this study. The mean body mass index was 24,8 (19-30). 630 patients had received radiotherapy after or before mastectomy (70%). An average of 3.17 injections (2 to 7) with an average volume of 300 cc were required to finalize the breast reconstruction, with a total average injected volume of 933 cc. Simple fat transfers were performed on an outpatient basis except for bilateral or associated procedures. In 76 percent, the patients received appropriate procedures on the contralateral breast to make it symmetrical. Complications happened in 10 percent of cases, mostly minor complications like fatty cysts or much-localized Cytosteatonecrosis though in a limited number of patients, more serious problems with hematomas, abscesses, diffuse Cytosteatonecrosis or very extensive lymphoceles appeared. The findings of this study support fat transfer breast reconstruction as a safe procedure with acceptably low complications, even in patients who have received radiotherapy in their history. Furthermore, this procedure can be applied in an outpatient setting. It seems that the application and the indications of this easy and feasible procedure will be increased in the coming years.

Prevention

CONTRAST-ENHANCED MAMMOGRAPHY ENHANCED WITH ARTIFICIAL INTELLIGENCE FOR BREAST CANCER PREDICTION: A SYSTEMATIC REVIEW WITH EVALUATION PROBAST

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Problem statement: Breast cancer remains a leading cause of mortality among women worldwide. Early and accurate prediction of tumor characteristics using contrast-enhanced mammography (CEM) and artificial intelligence (AI) could revolutionize clinical decision-making. This systematic review aims to evaluate the current evidence on the use of artificial intelligence-enhanced contrast mammography for breast cancer prediction. **Methods**: A comprehensive systematic search was conducted on August 02, 2025, in four electronic databases: PubMed, Embase, Scopus, and Web of Science. Additionally, gray literature was searched, including reference lists of included studies and the first 10 pages of Google Scholar results. The review was conducted and reported by the PRISMA 2020 guidelines. All included articles underwent risk of bias assessment using the PROBAST tool. Before study selection and data extraction, a pilot training session was conducted, followed by an independent, blinded review by two trained reviewers. **Results:** Across all studies, AI-enhanced CEM demonstrated promising diagnostic performance with mean AUC of 0.84 (range: 0.62-0.95) for various predictive tasks. The highest performance was observed for predicting neoadjuvant chemotherapy response (mean AUC 0.93±0.02) and triple-negative status (mean AUC 0.89±0.02). For malignancy detection, pooled sensitivity was 89.2%±4.1% and specificity 90.8%±7.3%. Molecular subtyping showed variable performance, with Luminal (mean AUC 0.79±0.01) and HER2+ (mean AUC 0.75±0.02) predictions outperforming PR status (mean AUC 0.62±0.03). Axillary metastasis prediction achieved mean AUC 0.78±0.02. Deep learning models (mean AUC 0.86±0.05) slightly outperformed machine learning approaches (mean AUC 0.81±0.07). Studies with larger sample sizes (200 patients) showed more consistent results (AUC SD ±0.03 vs ±0.07 in smaller studies). The main limitations were retrospective designs (100% of studies), single-center data (67%), and lack of external validation (89%). Risk of bias revealing: 33% (3/9) low risk, 44% (4/9) moderate risk, and 22% (2/9) high risk studies. **Conclusion:** AI-enhanced CEM shows promising diagnostic accuracy across multiple breast cancer prediction tasks, particularly for treatment response assessment and triple-negative identification. While current results are encouraging, prospective multicenter validation is needed before clinical implementation. Standardized reporting of performance metrics and imaging protocols would enhance future comparisons. **Disclosure of Interest**: The authors declare no conflicts of interest.

DECREASED RISK OF BREAST CANCER ASSOCIATED WITH METFORMIN TREATMENT

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Objective: To demonstrate whether treatment with metformin is associated with a decreased risk of breast cancer in patients with diabetes mellitus type 2 (DM2) treated at the “Virgen de la Puerta” High Complexity Hospital during the period 2015-2023. **Material and methods:** An analytical, observational, retrospective case-control study was conducted, including 280 patients diagnosed with DM2 who attended the Gynaecology outpatient clinic between 2015 and 2023. The participants were divided into two groups: women diagnosed with breast cancer (cases) and women without this diagnosis (controls). The statistical analysis included the Chi-square test and the calculation of the Odds Ratio (OR). **Results:** The use of metformin was associated with a significant reduction in the risk of breast cancer (OR = 0.372). Furthermore, multivariate analysis showed that family history of breast cancer (ORa = 36.609; CI: 10.742 - 124.762; p = 0.000), oral contraceptive use (ORa = 14.329; CI: 3.262 - 62.956; p = 0.000) and early menarche (ORa = 22.885; CI: 2.152 - 243.331; p = 0.009) are significant risk factors for breast cancer in patients with DM2. **Conclusion:** Metformin treatment could play a protective role in the prevention of breast cancer in patients with DM2, highlighting its potential clinical relevance. **Key words:** Metformin, Breast neoplasms, diabetes mellitus (MeSH).

PROGNOSTIC FACTOR ASSOCIATED WITH RECURRENCE IN MALIGNANT PHYLLODES TUMOR: RETROSPECTIVE COHORT OF CASES TREATED AT THE INSTITUTE OF NEOPLASTIC DISEASES PERIOD 2000-2020[a]

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Background: Phyllodes tumors are a rare group of fibroepithelial neoplasms, however they show high rates of local recurrence. These are divided in benign, borderline and malignant, each of them with different behavior and prognosis. **Methods:** We carried out a descriptive, analitic and retrospective study. The estimate of overall survival (OS), runs from de date of surgery to the date of death (event of interest) or the date of the last follow-up. Patients who did not reach the event of interest will be considered censored. For calculate local recurrence-free survival (LRFS) the follow-up time included from de date of surgery to teh date of documentation of the recurrence (event of interest) or the date of the last follow-up, who did not reach the event of interest will be considered censored. Estimates of OS and LRFS were made with Kaplan-Meier method and Logrank test for evaluating differences in survival according to characteristics of interest. **Results:** A total of 159 patients with malignant Phyllodes Tumor were evaluated, with the median age being 45 years; of the total, 73% received initial surgical treatment with mastectomy vs 27% breast conservation surgery (BCS), and of this latter, a total of 14.5% patients received margin widening. The median tumor size was 12 cmand most patients had cellular atypia (78.6%), mitotic index greater than 10 mitoses/HPF (69.8%), tumor necrosis (50.3%), absence of heterologous elements (60.4%), and free margins (81.1%). Regarding systemic treatment, 10.7% received chemotherapy, and 16.4% received radiotherapy, and 26.4% received both. Out of total patients, 34 deaths were recorded, the median follow-up time for estimating OS was 36 months with a range from recurrence was documented in 45 cases (28.3%); The median follow-up time, for LRFS was 33 months. **Conclusions:** This study shows that among the most common features of recurrence are the tumor size (shorter LRFS in tumors10cm) with a p value of 0.0079; while the LRFS was higher for patients who had moderate and severe cellular atypia rather who had mild cellular atypia

(p=0.018). The OS in patients with BCS was higher than in those who received mastectomy.

Screening

COMPARISON OF CLINICAL BREAST EXAM AND BEXA BREAST EXAM FOR DETECTION OF BREAST ABNORMALITIES IN COLOMBIAN WOMEN AGED 40–49 YEARS

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Problem statement: Breast cancer (BC) is the leading cause of cancer death among Colombian women, with Cali among the highest mortality rates nationwide. In women aged 40–49—excluded from routine mammographic screening—approximately 60% of new BC cases are diagnosed at advanced stages. National guidelines rely almost exclusively on clinical breast examination (CBE), which has limited sensitivity. The Bexa Breast Exam (BBE) is a painless, radiation-free, FDA-cleared, high-resolution pressure elastography device for detecting abnormal breast masses. This study compared BBE with CBE for detecting breast abnormalities in asymptomatic women aged 40–49. **Methods:** We enrolled 280 unscreened, asymptomatic women aged 40–49 at the Clínica de Mama, Cali, Colombia. After informed consent, each underwent a routine CBE by a trained physician, followed by a quadrant-by-quadrant BBE. If either modality detected a mass, targeted ultrasound was performed and interpreted by a fellowship-trained breast radiologist. **Results:** Ten participants did not complete the study, leaving 270 for analysis. CBE detected abnormalities in 15 women, BBE in 71. Ultrasound confirmed 10 of the 15 CBE findings (accuracy 76%) and 70 of the 71 BBE findings (accuracy 99.6%). Positive predictive value was 67% for CBE vs. 99% for BBE. All CBE true positives were also detected by BBE; CBE's five false positives were correctly identified as negative by BBE. Sensitivity and specificity were higher for BBE than CBE (100% vs. 14% and 99.5% vs. 97.5%). Of the 60 masses detected only by BBE, 15% were BI-RADS 3 and 11.7% BI-RADS 4. CBE detected none of these. **Conclusion:** BBE demonstrated markedly superior accuracy over CBE for detecting breast masses in women aged 40–49, identifying 24% more confirmed cases—27% requiring biopsy or close follow-up. Given this age group's exclusion from routine mammographic screening and the limitations of CBE, these findings support integrating BBE into national screening protocols or replacing CBE as the standard of care for women in this age range. Its combination of high sensitivity, low false-positive rate, and scalability make BBE a cost-effective strategy for early detection that could significantly reduce late-stage presentation and improve survival outcomes in underserved populations worldwide.

EXPLORATION OF SERUM METABOLITES ASSOCIATED WITH MAMMOGRAPHIC DENSITY AS A RISK FACTOR FOR BREAST CANCER

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Problem statement: Assessing the risk of breast cancer is essential for personalized breast cancer detection and reducing morbidity and mortality rates. Mammographic density is a well-known risk factor that can improve the quality of risk-prediction models. However, discriminatory precision remains limited at the individual level. Serum metabolic differences based on the percentage of mammographic density could represent an innovative and useful risk identification tool in clinical practice. **Methods:** This pilot study explored the serum metabolic determinants of mammographic density as a risk factor for breast cancer in women screened at a reference hospital in Bogotá, Colombia (2021). Based on mammographic density percentages, 60 patients were classified into breast cancer risk groups: low (25%), intermediate (25–50%), and high (50%). An untargeted metabolomics approach was employed to investigate metabolic alterations associated with these risk levels, using GC-QTOF-MS (Gas Chromatography–Quadrupole Time-of-Flight Mass Spectrometry) and LC-QTOF-MS (Liquid Chromatography–Quadrupole Time-of-Flight Mass Spectrometry) for metabolomics and LC-QTOF-MS for lipidomics. To determine statistically significant differences among the MD groups, both univariate (UVA) and multivariate (MVA) analyses were performed. **Results:** Among the three density groups, only the comparison between high and low mammographic density revealed significant differences, six metabolites met the quality criteria and demonstrated good discriminatory ability (AUC 0.78): tyrosine, glycerol, monopalmitin, tetradecanoylcarnitine, prostaglandin PGE2 glyceryl ester, and ketoglutaric acid. **Conclusion:** These findings suggest that metabolic profiles could be valuable tools for improving risk assessment prediction models. However, its clinical applicability should be evaluated in future prospective studies.

USE OF ARTIFICIAL INTELLIGENCE FOR BREAST CANCER SCREENING IN LATIN AMERICA AND THE CARIBBEAN: A SYSTEMATIC REVIEW WITH TRIPOD-AI EVALUATION

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Problem statement: Breast cancer is a leading cause of female cancer mortality in Latin America and the Caribbean (LAC). Screening programs face persistent barriers in access and accuracy, and the clinical utility of Artificial Intelligence (AI) in the region remains unclear. This study systematically reviewed AI applications in breast cancer screening in LAC, with quality assessment based on TRIPOD-AI. **Methods:** A systematic review was performed following PRISMA guidelines. PubMed, Scopus, Web of Science, and LILACS were searched up to August 2025. Additionally, gray literature was searched, including reference lists of included studies and the first 10 pages of Google Scholar results. Risk of bias was assessed with TRIPOD-AI. Before study selection and data extraction, a pilot training session was conducted, followed by an independent, blinded review by two trained reviewers. **Results:** Ten studies were included, conducted in Brazil (n=6), Mexico (n=3), and Chile (n=1), enrolling a total of 460,600 participants. Study designs were predominantly retrospective (60%), followed by prospective multicenter and pilot trials (40%). Modalities evaluated included mammography (4/10), ultrasound or portable ultrasound (3/10), and clinical/laboratory biomarkers (3/10). AI models applied comprised deep learning and machine learning algorithms such as Mirai, DenseNet, Inception-v3, Ridge Regression, and Koios DS. Model performance showed AUC values between 0.64–1.0; CNN-based models reached 90% accuracy. Clinical data-driven models (e.g., CBC biomarkers, anamnesis) had moderate performance (AUC 0.62–0.75), with potential for risk stratification in resource-limited settings. Internal validation was conducted in 9/10 studies, whereas external validation was limited (3/10). According to TRIPOD-AI, deficiencies were common in data handling (70%), calibration (60%), and external testing (70%). Risk of bias was rated low in 60% and moderate in 40%. Collectively, AI demonstrated improved risk prediction, stratification, and lesion detection across multiple screening modalities in LAC. **Conclusion:** AI shows high potential to strengthen breast cancer screening in LAC, achieving robust performance in mammography and ultrasound-based models. However, insufficient external validation and methodological shortcomings limit generalizability. Strengthening adherence to TRIPOD-AI, multicentric validation, and real-world implementation is essential to translate AI innovations into equitable cancer screening strategies in the region.
Disclosure of Interest: The authors declare no conflicts of interest.

Figure 1. AI studies in breast cancer screening in LAC

Symptom management

OUR EXPERIENCE WITH LOCALIZING SENTINEL LYMPH NODES VIA MAGTRACE (SPIO) COMPARED TO CONVENTIONAL METHODS, INCLUDING TECHNETIUM-99M (TC-99M) AND BLUE DYE (BD)METHODS, FOR METASTATIC BREAST CANCER

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Problem statement: The sentinel lymph node is pivotal for the diagnosis of metastasis of breast cancer. The most common practice for identifying the sentinel lymph node (SLN) using the biopsy procedure is the use of technetium-99m (Tc-99m) labeled nanocolloid and blue dye, which was practiced nationwide in the UK until 2023. This approach, however, has its limitations, including allergic reactions, radiation exposure and shortage, and experienced doctor needs to inject it well before time causing more scheduling time for surgery New techniques like Magtrace, a superparamagnetic iron oxide (SPIO) nanoparticle, came into practice due to nation nationwide shortage of technetium-99m. **Aim:** Our study aims to evaluate Magtrace's effectiveness and side complications. **Methods:** From August 2023 to May 2025, a retrospective study involving 300 patients with node-negative invasive breast cancer requiring SLN biopsy. Inclusion criteria: breast-conserving surgeries agreed by MDT/Patient, and Exclusion criteria: Neoadjuvant breast-conserving surgery and sentinel node biopsy. Patients were randomly allocated into three groups: the experimental group received Magtrace for SLN localization, the second group received Tc-99m only, and however third group received technetium-99m and BD. We recorded various demographic and clinical factors, including age, body mass index (BMI), stage of cancer, nodal status, tumor characteristics, and side effects. **Results:** Results showed that the Magtrace group retrieved high sentinel node 95% as compared to the technetium-99 retrieved 92% whereas as dual technique group reported 93%. 10 Patients who received Tc-99m group reported Skin staining, 4 patients who received patent blue dye and technetium-99 experienced mild side effects. None of the side effects were reported in the Magtrace group. **Conclusions:** In conclusion, Magtrace offers a promising alternative to the conventional dual technique as it is cost-effective, has no side effects, and requires no need to inject by the radiologist. Further studies are warranted to validate these findings and explore Magtrace's broader applicability. **Keywords:** Technetium-99m (Tc-99m); Magtrace; superparamagnetic iron oxide nanoparticle (SPIO nanoparticle); sentinel lymph node biopsy (SLNB)

Triple negative breast cancer

PROGNOSTIC FACTORS ASSOCIATED WITH AXILLARY RECURRENCE WITH SENTINEL NODE-NEGATIVE BIOPSY IN BREAST CANCER T1 - T2, N0

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Problem statement: Demonstrate association between tumour size, margins, histological type, histological grade, oestrogen and progesterone receptors and axillary recurrence in patients with breast cancer T1-T2, N0 with negative sentinel node biopsy. **Methods:** The present study is of cases and controls nested in a cohort of 98 patients with breast cancer T1-T2, N0, with negative sentinel node biopsy, hospitalised in the Breast, Bone and Mixed Tumours Department of the Regional Institute of Neoplastic Diseases from January 1, 2014, to December 31, 2020. For the descriptive statistics, absolute frequencies and relative frequencies were used, while measures of central tendency and dispersion were used in the absolute variables. For inferential statistics, Pearson's chi-square test was used for qualitative variables, and the statistician was the Odds Ratio with a significance level of 5%. **Results:** Of the 98 patients, 3 recurrences (3.1%) were detected at 6.8 and 13 months after biopsy. Of the total recurrences, 66.7% were in the T2N0 state, 33.3% had negative oestrogen receptors, 66.7% had negative progesterone receptors, 100% showed histologic type to be infiltrating ductal carcinoma, a histological grade II, a tumour size of 2 cm or more, and margins of less than 2 mm. **Conclusions:** The risk of presenting axillary recurrence after a negative sentinel node is low, proving to be a confineable diagnostic test with a low recurrence rate, being suitable for staging and follow-up of patients.

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