CONFERENCE ABSTRACTS

NCoBC 35th Annual Interdisciplinary Breast Cancer Conference

Committee Chair: Dr. Asha Bhatt
Committee Co-Chair: Dr. Winnie Henderson

Conference Date:
March 28-30, 2026
Conference Location:
Huntington Convention Center in Cleveland, OH, USA

Category I

Evaluating the Reach and Educational Impact of a Public Oncology Webinar Series in South Africa: A Model for Accessible Cancer Education

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Objective: Accessible, community-driven education is critical to improving early detection and survivorship outcomes in breast cancer. The Breast Care Centre of Excellence (BCCE) in South Africa launched a webinar series in 2025 to raise public awareness and support survivorship education. This study evaluates the programme's community reach, engagement, and responsiveness with the aim of guiding future digital education initiatives in oncology to increase community awareness.

Materials and Methods: A retrospective analysis of 14 webinars held between January and October 2025 was conducted. Engagement metrics included registrations (n = 1,731), live attendance (n = 1,179), public reach via information-page interactions (n = 9,073), and unique on-demand views (n = 733). Attendance trends and engagement were analysed.

Results: Across 14 sessions, 1,179 live attendees were recorded from 1,731 registrations, a 68.1% conversion rate. The programme achieved substantial public visibility, with 9,073 page interactions, indicating strong community interest beyond direct attendees. Unique views (n = 733) represented a 59.3% extended reach beyond live participation, extending educational access over time. This is significant, as only 70% of the webinars were made available for on-demand viewing after the event, further reinforcing the programme's reach. Webinars on nutrition and personalised oncology generated the highest engagement and sustained replay interest, highlighting demand for practical, actionable, and lifestyle-relevant oncology education.

Conclusion: The BCCE's public oncology webinar series represents a cost-effective, scalable, and culturally adaptive model for cancer education in low- and middle-income settings. High registration-to-attendance conversion, broad community reach, and sustained asynchronous engagement demonstrate durable audience interest and growing public trust. Future programmes will incorporate structured follow-up surveys to measure knowledge retention and behavioural change at 4–6 weeks, and expand cross-disciplinary sessions (e.g., oncology × nutrition) to deepen educational continuity and impact.

Keywords: Public awareness; breast cancer; survivorship; nutrition; personalised oncology; South Africa; webinar; health literacy

Category I

NQMBC Crosses the Ocean: A Quality Program Adopted in China

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Objective: The National Quality Measures for Breast Centers (NQMBC) originated as an idea in 2003 by the National Consortium of Breast Centers (NCBC) board who felt that increased attention was warranted, initiated by the institute of medicine, to measure, evaluate and improve the quality of breast cancer care. To serve the widespread membership of NCBC, any quality assessment program would need to be web-based so that no matter where your breast center was located, your center could assess their own level of their quality care performance. The focus of quality performance was on the level of care actually delivered for each performance measure. The NQMBC is a set of quality measures including each discipline in the breast center; imaging, surgery, pathology, medical oncology, radiation oncology, genetics, navigation and the newly added inflammatory breast cancer.

Materials and Methods: The NQMBC looks at real time data from participating breast centers across the country. Once a center's data on a particular is entered into the NQMBC, the website immediately provides comparisons with other centers' performance. The results show the submitted center's data and the comparison 25th, 50th and 75th percentile performance of all the other centers who have submitted data on that measure. A center can identify the level of performance on that specific measure and decide whether improvement is neded or congratulations is deserved. All data is confidential and hot shared with any other center. No patient data is used.

Results: Recently a government grant was awarded to a group headed by Aurora Inc., striving to improve the quality of care provided in China. Experts in breast cancer care were identified to aid in this effort. Many clinicians from China have been sent for two-month observerships to Montefiore-Einstein Medical Center to see how the US approaches breast cancer. To assess the quality of care provided, the NQMBC was chosen to assess the resultant quality of care it in at least three large breast centers in China. In-person exchanges occurred this last month to initiate the integration of NQMBC as a measure of their quality breast cancer care. Goals of these three facilities is to achieve the level of a quality breast center of excellence.

Conclusion: Three main medical centers in three separate provinces, each serving a population of over 100 million, have agreed to integrate the NQMBC quality program as a measure of their breast care. This long-term pilot program has positive implications to improve the level of breast care in China, and a valuable extension of the international use of NQMBC.

Keywords: NQMBC; China; international

Category I

Cancer Genetic Risk Assessment (CGRA) Certification: Outcomes from the First Six Years

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Objective: Integrating cancer genetics, genomics and cancer risk assessment is increasingly relevant to the care of patients and there is a need for clinicians across practice disciplines to acquire and demonstrate knowledge and clinical competency in cancer genetics and cancer risk assessment. National Consortium of Breast Centers (NCBC's) certification program in Cancer Genetic Risk Assessment (CGRA) is a voluntary nationally (NCCA) accredited, examination-based certification program created to provide the assurance that healthcare providers with certification in CGRA possess the knowledge, skills and competency to provide cancer risk assessment services to patients and families. The certification has achieved recognition by national accrediting organizations (National Accreditation Program for Breast Centers/Commission on Cancer) and payor policies. NCBC's CGRA certification was developed by a multidisciplinary committee of dedicated breast care, oncology, and cancer genetics professionals and approved by NCBC's board of trustees. Testing first became available in May 2020 with testing opportunities provided throughout the year. Testing options include both remote and in-person examination. The target audiences for certification are physicians, advanced practice providers, nurses and other skilled health care practitioners who care for at-risk unaffected and affected patients and their families. Here we describe demographics and outcomes from the first six years of certification examination availability.

Materials and Methods: A retrospective cohort of CGRA examination takers was collected from May 2020 (initial examination availability) through December 2025. Analyzed data includes total number of examination takers, pass/fail rates, and professional background and practice setting of the passing cohort. Descriptive statistics were used for analysis.

Results: 2020–2025

Total number of CGRA examination takers: 235

Total number (percent) passed: 207/235 (88.1%); failed: 28/235 (11.9%)

Professional background of CGRA certificants:

APRN - 109/207 (52.7%)

RN - 37/207 (17.9%)

PA - 30/207 (14.5%)

MD - 26/207 (12.6%)

RT - 5/207 (2.4%)

Practice focus of CGRA certificants:

Oncology - 132/207 (63.8%)

Surgery - 26/207 (12.6%)

High Risk/Genetics - 16/207 (7.7%)

Gynecology - 14/207 (6.8%)

Breast Center - 12/207 (5.8%)

Radiology - 4/207 (1.9%)

Primary Care - 1/207 (0.5%)

Other - 2/207 (<1%)

Conclusion: During the first 6 years of CGRA certification eligibility, a notable number of healthcare providers and other healthcare professionals have sought and obtained certification in CGRA through NCBC's CGRA certification program. Seventy percent of all certificant holders have a professional background in nursing. Two-thirds of all certificant holders are advanced practice providers, including advanced practice nurses/nurse practitioners and physician assistants. Twelve percent of certificant holders are physicians and two percent comprise radiologic technologists. The most prominent practice setting for certificant holders is oncology comprising approximately two-thirds of all represented specialties, followed by surgery at approximately twelve percent. Many other specialty practice settings are represented, including the screening and preventive care spaces. In conclusion, the CGRA certification is a sought-after credential appealing to a broad range of healthcare providers/professionals across practice disciplines allowing for a diverse patient population, both affected and unaffected, to obtain competent cancer genetic and cancer risk assessment-related care.

Keywords: CGRA; test outcomes

Category I-A. Breast Center Office Operations: Coordinating Clinical Programs

Shifting Breast Cancer Diagnosis to Earlier Stages Through Program Alignment with National Accreditation Program for Breast Centers (NAPBC) Standards

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Objective: Nationally, approximately 66% of breast cancers are diagnosed at an early stage (0–II). Review of the 2022 analytic breast cancer cases at HCA Florida Ocala Hospital demonstrated an early-stage diagnosis rate of 65%, slightly below the national benchmark. In 2023, breast oncology physician stakeholders aligned the program with National Accreditation Program for Breast Centers (NAPBC) standards, pursuing accreditation in 2024. The objective was to improve breast oncology program quality, shift diagnoses to earlier stages, and enhance patient outcomes.

Materials and Methods: Three initiatives were implemented to align with NAPBC standards.

• A dedicated bi-weekly multidisciplinary breast cancer conference was established for prospective case review, involving radiology, pathology, surgery, medical oncology, radiation oncology, and genetic counseling. Post-operative pathology was also reviewed to confirm adjuvant treatment plans, re-excision needs, and supportive service referrals.

• A high-risk women's program (HRWP) launched in June 2023, incorporating cancer risk assessments for mammography patients and offering point-of-care genetic testing for those meeting National Comprehensive Cancer Network criteria. Identifying high-risk patients and coordinating follow-up in clinic enabled personalized screening and surveillance.

• Outmigration was addressed as a quality initiative through improved breast imaging access, enhanced nurse navigation, and targeted outreach to referring providers.

Results: Outcomes on the three components above demonstrated:

• Breast cancer conference case presentations increased 62% in 2023 compared to prior year, with continued growth of 10% in 2024 and 16% in 2025.

• Prospective pathology review of outside biopsies identified four non-concordant cases between 2023–2025, resulting in changes to surgical management.

• The HRWP achieved 98% assessment completion rate, identified over 1,000 patients with elevated Tyrer-Cuzick scores, and detected more than 150 pathogenic mutations. Program care coordination enabled cascade family testing, a 69% increase in breast magnetic resonance imaging utilization from 2023–2025, and personalized surveillance plans.

• Breast cancer outmigration decreased from 71% in 2024 to 62% in 2025.

Conclusion: Alignment with NAPBC standards resulted in a 9% improvement in early-stage breast cancer diagnosis, increasing from 66% in 2022 to 75% in 2023, and sustaining at 73% in 2024. The HRWP emerged as the program's primary service differentiator and continues to drive early detection and quality outcomes. Completion of 2025 abstraction is anticipated to demonstrate continued improvement.

Keywords: Early stages; standards

Category I

Eight-year Post-accreditation Outcomes Following Implementation of an Oncoplastic-dedicated Surgical Team and Digital Same-day Oncology-surgery Workflow: Sustained Breast-conserving Therapy Rate of 96% Ten Years Post-initiation

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Objective: After international accreditation in 2016, a structured oncoplastic service was introduced at our multidisciplinary breast centre, incorporating a dedicated surgical team, integrated oncology anaesthetic clinic, and direct digital communication pathways between oncology, radiology, and surgery. This initiative aimed to optimise breast-conserving therapy (BCT) utilisation, reduce theatre delays, and enhance margin clearance through coordinated imaging, localisation, and intraoperative assessment.

Materials and Methods: A retrospective analysis was performed of all malignant breast surgeries (2016–2024). Service development milestones included:

- **2016–2018:** Establishment of oncoplastic unit and protocol alignment.
- **2019–2020:** Integration of real-time radiology support and pre-surgical localisation workflow.
- **2021–2024:** Implementation of a secure digital oncology-surgery same-day referral system, intraoperative radiology communication, and in-theatre pathology review.

Procedures were categorised as BCT (wide local excision/oncoplastic BCT) or mastectomy. Yearly and aggregate BCT rates were calculated.

Results: Over the eight years post-accreditation, the proportion of patients treated with BCT rose from 54.5% (2016) to 96.1% (2024). Key transitional improvements included:

- **Pre-digitisation period (2016–2020):** Mean BCT 64.1%, reflecting gradual integration of oncoplastic principles.
- **Digital workflow period (2021–2024):** Mean BCT 90.8% (1,423/1,567 cases; 95% confidence interval 89.3–92.1).

Margin clearance rates exceeded 90% in all recent years. The adoption of MRI-guided magnetic marker placement, same-day oncology-to-surgery referral, and intraoperative radiology-pathology collaboration were associated with a sustained rise in BCT utilisation and reduction in re-excision rates.

Conclusion: Ten years after program inception, the integration of a dedicated oncoplastic surgical team, real-time digital oncology-surgery pathways, and multimodal intraoperative support has resulted in a sustained BCT rate of 96%, exceeding international benchmarks. This model demonstrates how combining accreditation standards, workflow digitisation, and subspecialist coordination can deliver durable service-wide improvements in breast-conserving outcomes.

Keywords: Oncoplastic; workflow; South Africa

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Category II

Hereditary Cancer Genetic Testing for All? A Retrospective Analysis on Genetic Mutations Found in Individuals Not Meeting NCCN® Guidelines

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Objective: Hereditary cancer genetic testing has been routinely recommended for individuals whose personal or family history meets the National Comprehensive Cancer Network® (NCCN®) guidelines. Midstate Radiology Associates (MRA) implemented universal risk screening in 2021 using the Ambry CARE Program®. This digital tool collects personal and family history, applies NCCN® guidelines, and identifies patients meeting criteria for hereditary breast, ovarian, pancreatic, prostate cancer, Lynch syndrome, and familial adenomatous polyposis. However, many individuals fall outside these guidelines or have limited knowledge of their family history. To address this gap, all patients were offered genetic testing regardless of guideline eligibility. This study analyzes four years of data from 15 MRA sites throughout Connecticut, where all were offered hereditary cancer genetic testing after risk assessment.

Materials and Methods: A retrospective analysis was conducted across MRA sites from 11/1/2021 to 10/20/2025 to evaluate patients who underwent hereditary cancer genetic testing and tested positive for a pathogenic variant. Testing was performed using Ambry Genetics' CancerNext-Expanded® Hereditary Cancer Panel, which includes 77 genes. The primary outcome was the proportion of positive cases among individuals not meeting NCCN® guidelines. Secondary analyses stratified this cohort by personal and family cancer history, age, ethnicity, and positive gene distribution.

Results: A total of 8,100 individuals underwent genetic testing; 58% (4,731) met NCCN® guidelines, and 42% (3,369) did not. Among all tested, 801 were positive for a pathogenic variant: 66% (539) met NCCN® criteria, while 34% (262) fell into the non-guideline cohort (NGC). Within the 262 NGC positives, 60 reported no personal or family cancer history; 32 had a personal cancer diagnosis (40% breast cancer, 38% non-melanoma skin cancer); and 65% (170) had family history that did not meet NCCN® criteria. The cohort was predominantly White/Caucasian (74%), with smaller representation from Hispanic/Latino (6.5%) and Black/African American (3.4%). Most pathogenic variants were found in older adults, with the highest representation in ages 60–69 (26%) and 50–59 (24%), while those under 40 accounted for only ~15%. The most frequent genetic mutation in the NGC was *MUTYH* (20%), followed by *CHEK2* (16%). Genetic mutations were also present in the following genes: *APC, ATM, BAP1, BARD1, BRCA1, BRCA2, BRIP1, CDH1, CDKN2A, CFTR, CHEK2, FH, FLCN, HOXB13, LZTR1, MBD4, MITF, MLH1, MSH2, MSH3, MSH6, MUTYH, NBN, NF1, NTHL1, PALB2, PMS2, POT1, RAD51C, RAD51D, SDHA, SDHB, SDHD, SMAD4,* and *VHL*.

Conclusion: These findings support the potential value of expanded or universal genetic testing strategies, particularly in populations with limited family history or those outside current clinical criteria.

Keywords: Genetic testing; guidelines

Category II-C. Patient Care and Support

Impact of 6-Week Progressive Resistance Training Program on Functional Strength and Quality of Life in Breast Cancer Survivors: Retrospective Analysis

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Objective: Persistent muscular weakness and reduced quality of life is a common treatment related adverse effect among breast cancer survivors. The benefits of progressive resistance training (PRT) for 12 weeks and longer time using 1 repetition max (RM) are well documented. This is a retrospective analysis investigating the effects of a 6-week resistance training program performed to volitional fatigue on functional strength and quality of life (QOL) in survivors.

Materials and Methods: This single-arm retrospective pilot analysis examined the effects of PRT in 20 breast cancer survivors (mean age 62.9±11.1 years). Participants completed PRT twice per week for six consecutive weeks. We evaluated changes in grip strength, skeletal muscle mass (SMM), lower body strength, and QOL. Participants completed pre and post measurements of grip strength, sit-to-stand test, SMM measured by bioelectrical impedance, and QOL measured by FACT-G scale. Women who had completed surgery, chemo, and/or radiation treatment within the two years preceding the study (2024–2025) were included in the program. Training sessions included 30–45 minutes of PRT along with 5 to 10 minutes of warm-up and cool-down, respectively. Intensity was standardized by training to fatigue, rather than percentage of 1RM. Paired t-tests were used to assess change in SMM and grip strength. Wilcoxon signed rank test was used to analyze change in sit to stand test, and FACT-G scores.

Results: There was a significant increase in functional lower-body strength [sit to stand: +2.50 reps, 95% confidence interval (CI) (1.54, 3.46), $p<0.001$] and bilateral grip strength [right: +3.48 lbs., 95% CI (0.11, 6.86), $p = 0.043$; left: 5.35 lbs., 95% CI (2.52, 8.18), $p<0.001$]. Positive impact on QOL was observed [FACT-G: + 7.00 points, 95% CI (1.22, 12.78), $p = 0.003$]. No significant changes were seen in SMM [+0.21 lbs., 95% CI (-0.16, 0.58), $p = 0.254$). Strength gains were not correlated with QOL improvements.

Conclusion: A 6-week resistance training program performed to volitional fatigue is an effective rehabilitation strategy for breast cancer patients. The intervention yielded significant improvements in functional lower-body strength, grip strength, and overall QOL. No changes in SMM occurred. Improvements in FACT G scores were independent of strength.

Keywords: Quality of life; muscular weakness

Category II

Characterizing Breast Cancer Prevalence Among Female SDHx Pathogenic Variant Carriers in a Laboratory Research Registry

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Objective: Germline pathogenic or likely pathogenic variants (PV/LPVs) in *SDHx* (*SDHA, SDHB, SDHC, SDHD*) cause hereditary paraganglioma and pheochromocytoma (PPGL) syndromes and are linked to other tumors, such as renal cell carcinoma (RCC) and gastrointestinal stromal tumors (GIST). As *SDHx* variants are increasingly identified on multigene panels, questions have arisen about a possible association with breast cancer (BC). Prior literature is mixed, underscoring the need for clearer characterization. This study assesses BC prevalence among female *SDHx* carriers in a large laboratory-based research registry.

Materials and Methods: We performed a retrospective cohort analysis using the Myriad Collaborative Research Registry (MCRR) v7. Females with a confirmed *SDHx* PV/LPV were included; those with co-occurring PV/LPVs in other cancer predisposition genes were excluded. Personal BC history was summarized overall and by gene. Indications for genetic testing were unavailable.

Results: The MCRR includes 222,111 females with a personal history of cancer who underwent germline testing that included the *SDHx* genes; 135,712 (61%) had BC, with a mean diagnosis age of 57 years. Among all females tested, 508 *SDHx* PV/LPV carriers were identified. Of these, 286 (56.3%) had BC, including 7 with two primary BCs (293 total). Mean age at diagnosis among carriers was 57.4 years. By gene:

- *SDHA:* 376 carriers; 218 (58%) with BC, 7 had 2 BC primaries.

Mean age of diagnosis (dx): 57.4y

- *SDHB:* 61 carriers; 32 (52.5%) with BC

Mean age of dx: 55.2y

- *SDHC:* 50 carriers; 25 (50%) with BC

Mean age of dx: 58.8y

- *SDHD:* 23 carriers; 11 (47.8%) with BC

Mean age of dx: 60.5y

Compared with the overall affected cohort, *SDHx* carriers had a lower proportion of BC (61% *vs.* 56.3%), with no gene specific enrichment and no evidence of earlier onset.

Conclusion: In a large cohort of women with cancer who underwent multigene testing, *SDHx* PV/LPV carriers did not show higher BC prevalence than the overall group, and age at diagnosis was similar. The proportion of breast cancer in *SDHx* carriers was lower, but it remains unclear whether their risk differs from the general population or if findings are incidental. Since *SDHx* is often found incidentally, breast care teams should prioritize surveillance for tumors known to be associated with *SDHx* (PPGL, RCC, and GIST) and refer patients as appropriate to genetics or specialty care. Further prospective studies with cancer-free controls are needed to define breast cancer risk in *SDHx* carriers and guide screening.

Keywords: *SDHx*; germline

Category III. Breast Disease Diagnosis and Management

Category III-A. Diagnostic Imaging

Category III-A.1. Screening and Diagnostic Mammography

Integrating Genetic Testing, Combined Polygenic Risk, and Family History Assessment to Improve High-Risk Breast Cancer Identification in a Community Breast Imaging Center

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Objective: This initiative evaluated whether the Tyrer-Cuzick (TC) v8 model alone is sufficient for breast cancer (BC) risk assessment compared to a comprehensive strategy incorporating detailed family history intake, germline multigene panel testing, and a combined risk score (CRS) that integrates TC with a polygenic score validated for all ancestries. The aim was to determine whether this integrated approach more accurately identifies individuals at increased risk for breast and other cancers in a community breast imaging center and better supports personalized screening and management decisions.

Materials and Methods: Beginning in November 2020, Singing River Health System implemented a comprehensive breast risk assessment program that combined TC modeling, multigene germline testing, and CRS into its breast imaging program. During routine mammography, patients completed TC and were screened for genetic testing eligibility based on NCCN guidelines. Eligible patients received a telephone-based family history review and genetic education, followed by same day blood sample collection after consenting to testing. Testing included a germline multigene panel and CRS to determine individualized BC risk. After results were available, a nurse navigator reviewed results and guideline-based recommendations with patients. Program outcomes were analyzed to determine clinical management implications and to identify individuals who would not have met high-risk criteria using TC alone.

Results: From November 2020 through December 2025, TC results were determined for 3,017 patients; eligible patients underwent germline genetic testing and CRS. Among these, 895 (30%) required changes in medical management despite having a TC-estimated lifetime BC risk <20% as follows:

- 75 (8.3%) carried a pathogenic variant.
- 186 (20.7%) had lifetime BC risk >20% based on CRS.
- 634 (70%) required modified management after expanded family history was obtained during counseling.

Downstream clinical actions that have the potential for meaningful impact on breast cancer outcomes included:

- 175 risk-reduction counseling visits.
- 103 breast MRIs for patients whose CRS revealed a lifetime BC risk >20%.
- 63 gastroenterology consults resulting in 26 colonoscopies.

Conclusion: A multifaceted risk assessment program integrating TC with CRS and germline genetic testing identified substantially more individuals requiring high-risk management than TC alone. This approach revealed patients who benefited from guideline recommended surveillance, preventive interventions, and specialty referrals, many of whom would have been missed using TC as a standalone assessment. These findings support the value of integrated genetic, polygenic, and family history-based evaluation within community imaging centers.

Keywords: Genetic testing; high-risk

Category III-A. Ultrasound

Breast Cancer-related Lymphedema: A Comparative Ultrasound Study of Shear Wave Elastography and B-mode Measurements for Assessing Lymphaticovenous Anastomosis

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Objective: Lymphedema grading relies on subjective and indirect objective measures. Ultrasound shear wave elastography (SWE) provides a quantitative, non-invasive assessment of tissue stiffness (Young's modulus, E), which may reflect disease severity and improve objectivity in staging lymphedema. This pilot study (NCT 05613946) evaluates the utility of SWE and B-mode skin and subcutaneous thickness for grading upper extremity lymphedema in patients with treated breast cancer undergoing lymphaticovenous anastomosis (LVA) surgery.

Materials and Methods: Nine patients with upper extremity lymphedema secondary to breast cancer underwent ultrasound preoperatively (baseline) and six months following LVA. Soft tissue thickness and stiffness were measured in the affected limb and contralateral unaffected limb (control). Imaging findings were correlated with routinely collected objective metrics, including limb volume and bioimpedance spectroscopy.

Results: At baseline, the affected limb demonstrated slightly lower soft tissue stiffness than the unaffected limb (mean dermal E: 75.4±10.6 kPa *vs.* 78.0±12.8 kPa; mean subcutaneous E: 40.8±17.7 KPa *vs.* 45.5±19.5 KPa). At six-month follow-up, dermal and subcutaneous stiffness increased, on average more in the untreated limb. Post-operative changes in stiffness showed weak to moderate positive correlation with changes in arm volume (dermal E: slope (m) = 0.02, R^2 = 0.37, subcutaneous E: slope (m) = 0.01, R^2 = 0.14) and no correlation with electrical impedance.

Baseline dermal and subcutaneous thickness were similar between limbs. At six-month follow-up, dermal and subcutaneous thickness also increased in both arms.

Treated limb volume decreased (mean Δ: -276.3±326.1 mL) and impedance increased (mean Δ: +14.7±22.3 Ohms), consistent with clinical improvement.

Conclusion: Postoperative increased in dermal stiffness and soft tissue thickness were not intuitive. Potential confounders that could explain this result include increased patient weight or variability in sonographic technique. The increasing trend for subcutaneous stiffness is noted in the literature and may be due to underlying chronic fibrosis. Additional research is warranted to clarify the role of SWE and B-mode measurements in lymphedema assessment.

Keywords: Lymphedema; B-mode measurements

Category III

An Integrative Approach to Improving Outcomes for Inflammatory Breast Cancer (IBC) Patients: Creating a Diagnostic Tool, Advocating for ICD-10-CM Codes, and Establishing a Task Force to Address Critical Research Gaps

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Objective: Inflammatory breast cancer (IBC) is a rare, highly aggressive form of advanced breast cancer that is challenging to diagnose due to its ambiguous clinical nature. Gaps in awareness in clinical and patient communities further contribute to diagnostic delays. Together these issues hinder research, leaving patients with few treatment options and poor prognoses.

Materials and Methods: To address these challenges, Susan G. Komen partnered with IBCRF and the Milburn Foundation to form the IBC Collaborative, launching a multidimensional initiative to overcome systemic barriers to IBC research and care.

Results: Early efforts focused on developing the IBC Scoring System, a quantitative diagnostic scoring rubric for IBC. Available as an online tool (komen.org/ibc-calc), the IBC scoring system is gaining global adoption, with over 7,800 users in more than 115 countries to date. Additionally, IBC-dedicated clinics, multi-institutional IBC networks and community oncology centers have reported using the tool to support clinical decision making in ambiguous patient cases. Validation studies have shown that the system can distinguish IBC from non-IBC cases (AUC-ROC 0.84; 95% confidence interval: 0.82–0.87). Additional efforts to enhance its clinical utility are underway and funded by Komen. With a diagnostic system in hand, Komen pursued formal disease recognition by engaging with the U.S Centers for Disease Control and Prevention to establish three ICD-10-CM codes (C50.A0, C50.A1, C50.A2) for IBC. Effective October 2025, use of these codes is expected to enhance tracking of IBC incidence, facilitate IBC inclusion in national health datasets and improve coordination of multidisciplinary care. In parallel, a task force was convened to identify key knowledge gaps limiting progress in IBC research and to propose actionable solutions. Through structured discussions, three priority areas in IBC biology emerged: (1) IBC onset and development, (2) detection and monitoring and (3) metastatic dissemination. The group also identified limited shared resources, data silos and the lack of open-access datasets as major obstacles and prioritized areas with high potential to improve the understanding and management of IBC.

Conclusion: Together, this integrative approach has advanced IBC research, diagnosis and care through development of a validated diagnostic tool, formal disease coding and identification of critical research gaps. Continued momentum in these areas is expected to improve IBC outcomes.

Keywords: IBC; codes; research gaps

Category III-D-4. Medical Oncology Decision Making

Patient-centric Development of Shared Decision-making Aids: The ASSESS Online Personalized Early Breast Cancer Treatment Decision Support Tool and Resource Website

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Objective: People newly diagnosed with breast cancer spend a considerable amount of time researching their diagnosis, treatment options and associated side effects. Even with access to trusted evidence-based information, such as Susan G. Komen's About Breast Cancer pages (https://www.komen.org/breast-cancer/), patients and doctors may struggle to account for the many factors in an individual's diagnosis that influence treatment and outcomes, making it hard to balance the potential benefits of therapy with the risks of side effects on a personalized basis. The discontinuation of the popular adjuvant! Online tool compounded this challenge, creating a need for a new, publicly available tool to provide survival estimates for the U.S. early-stage breast cancer population.

Materials and Methods: Komen collaborated with teams from MD Anderson and Yale Cancer Centers to develop a web-based decision support tool that provides personalized five-year survival estimates for women with early-stage breast cancer. The tool, ASSESS, uses an algorithm developed with U.S.-based SEER data to estimate outcomes for various systemic adjuvant therapies based on an individual's clinical and pathological characteristics. The ASSESS online tool was designed and built by a multidisciplinary team of experts, including scientists, clinicians, website developers and marketing professionals, using an iterative approach to incorporate feedback from breast cancer patient advocates and clinicians. Initial design requirements for ASSESS included a simple, engaging user interface and a public-facing design suitable for clinical use as a shared decision-making tool. It was designed to be responsive and support use on multiple devices, incorporating best practices for communicating risks and offering a summary feature to save and print results. Cognitive interviews with patient advocates and breast cancer clinicians informed the tool's design, resulting in changes that made the interface and output clearer and more accessible to a lay audience. Once finalized, additional usability testing was conducted with patient advocates and breast cancer medical oncologists to ensure the tool was deployed as intended.

Results: The ASSESS tool (www.komen.org/assess-tool), which was launched in December 2025, helps providers visually demonstrate outcomes for different treatment options and provides links to accessible information that can be shared with patients for each treatment, including details on how it works, its side effects, and references to the associated expert clinical guidelines.

Conclusion: Built using a patient-centered approach, the ASSESS tool supports shared decision-making for people with early-stage breast cancer, helping them make the best individual decisions for their treatment and care.

Keywords: Newly diagnosed; advocates; treatment

Category III

Comparison of Clinical and Pathological Tumour Staging Following CDK4/6 Inhibitor-based Neoadjuvant Therapy in HR+/HER2− Breast Cancer

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Objective: CDK4/6 inhibitors are an established component of systemic therapy for hormone receptor-positive (HR+)/HER2− breast cancer, with proven efficacy in combination with endocrine therapy in both advanced and early-stage disease. Their role in the neoadjuvant setting is increasingly explored, particularly for patients in whom chemotherapy may be less appropriate. This study evaluated the impact of CDK4/6 inhibitor-based neoadjuvant therapy on clinical-to-pathological tumour stage conversion and assessed biological subtype modulation before and after treatment.

Materials and Methods: This retrospective analysis included 92 patients (96 tumours, including four multifocal or bilateral cases) treated at a high-volume multidisciplinary breast unit. All patients received a CDK4/6 inhibitor combined with endocrine therapy, most commonly aromatase inhibitors ± GnRH agonists, as neoadjuvant systemic treatment. Tumour biology was assessed using standard immunohistochemistry for estrogen receptor, progesterone receptor, and HER2, with molecular subtypes classified according to St Gallen 2019 criteria. Clinical tumour stage (initial T) was compared with final pathological stage (final T) to assess downstaging. Ki-67 proliferation indices were recorded on core biopsy and final pathology.

Results: Pathological complete response (pCR) was observed in five tumours (5.2%), including one breast in a bilateral case. At baseline, Luminal B was the predominant subtype (53.1%), followed by Luminal A (41.7%), with HER2-equivocal tumours accounting for 5.2%. Following neoadjuvant therapy, Luminal A increased to 76.0% while Luminal B decreased to 11.5%, indicating marked biological differentiation and enhanced endocrine responsiveness. One Luminal B tumour converted to a triple-negative phenotype. HER2-equivocal tumours ($n = 6$) persisted without further SISH confirmation. On core biopsy, only 10 patients demonstrated a Ki-67 ≤6%. Post-treatment pathology revealed a substantial reduction in proliferative activity, with 53 patients showing Ki-67 <3%, including four with <1%. A parallel reduction in tumour size and stage was observed, with most tumours demonstrating downward T-stage migration (e.g., T3-T4 to T1-T2).

Conclusion: CDK4/6 inhibitor-based neoadjuvant therapy results in meaningful tumour downstaging and biological subtype modulation in HR+/HER2− breast cancer. The frequent conversion from Luminal B to Luminal A and the marked suppression of Ki-67 support the cytostatic, differentiation-driven mechanism of CDK4/6 inhibition. Although pCR rates remain modest compared with chemotherapy, the consistent biological and morphological responses highlight this approach as a lower-toxicity alternative or complement to chemotherapy in selected patients. Prospective studies incorporating proliferative dynamics and nodal outcomes are warranted.

Keywords: Staging; South Africa; HR+/HER2

Category III

Hypofractionated Radiation Therapy for Breast Cancer: A Unit Review in Alignment with International Guidelines

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Objective: Randomized trials and international guidelines endorse hypofractionated whole-breast irradiation (HF-WBI) as standard of care for early breast cancer, offering equivalent tumour control with shorter treatment times and reduced system burden. In South Africa, where access and throughput are critical, real-world uptake is particularly relevant. This review evaluates our centre's adoption of HF-WBI and adherence to guideline-based practice.

Materials and Methods: We retrospectively reviewed all breast cancer patients referred for radiotherapy from 2018–2024, stratifying fractionation as conventional WBI (CF-WBI; ~50 Gy/25 fractions), hypofractionation (40.05 Gy/15 or 42.5 Gy/16), and ultra-hypofractionation (≈26 Gy/5). Among those receiving breast-conserving therapy (BCT), we assessed annual HF-WBI adoption, age distribution (<50 *vs.* ≥50 years), and boost use.

Results: Across yearly datasets, HF-WBI increased steadily and substantially. In 2018, HF-WBI accounted for 17/138 CF/HF cases (12.3%). Uptake rose through 2019 (21.0%), 2020 (27.1%), 2021 (43.4%), 2022 (38.6%), 2023 (54.6%), and reached 82.4% in 2024 (103 HF *vs.* 22 CF). Ultra-hypofractionation (≈26 Gy/5) appeared from 2022 onward at low but increasing levels (e.g., 6 cases in 2024). Boost delivery was used across schedules; HF-WBI frequently included a boost (e.g., 59 cases in 2023; 70 in 2024), indicating protocol flexibility without abandoning shorter courses. Importantly, HF-WBI was used in both younger and older patients (e.g., 2024: <50 $y = 32$; ≥50 $y = 70$ within HF cases), reflecting rising clinician confidence across age groups as guideline-concordant practice matured.

Conclusion: Our multi-year review demonstrates a decisive transition from conventional to HF breast RT, with HF-WBI becoming the predominant regimen by 2024. Real-world implementation was feasible with sustained boost utilisation and broad age inclusivity, aligning with international guidelines while improving patient convenience and departmental efficiency. Wider adoption of HF-WBI—and selective use of ultra-hypofractionation—can expand equitable access and support service sustainability in resource-constrained health systems.

Recommendations

1. Adopt "HF-by-default" for eligible BCT patients, requiring a documented exception for CF-WBI.
2. Scale a FAST-Forward pathway (≈26 Gy/5) where clinically appropriate with clear selection criteria.
3. Standardise boost indications in HF schedules (e.g., 10–16 Gy in 4–8 fractions).
4. Embed age-agnostic eligibility in MDM checklists to avoid age-based bias against HF.
5. Bundle HF-WBI with DIBH planning QA for left-sided cases to maintain cardiac/lung constraints.
6. Implement a KPI dashboard tracking HF share, median treatment days, boost rate, and re-planning rate.
7. Update patient-facing education to explain HF schedules and boost delivery, improving adherence.

Keywords: Hypofractionated; South Africa; guidelines

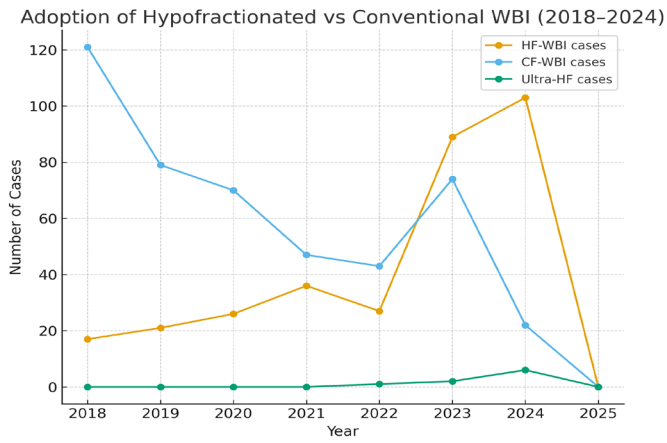

Figure 1. Uptake of hypofractionated *vs.* conventional whole-breast irradiation (2018–2024).

WBI: Whole-breast irradiation, HF: Hypofractionated, CF: Conventional

Category III-4

Survivor Perspectives on Artificial Intelligence Integration in Breast Cancer Treatment: A Qualitative Study of Trust, Equity, and Application

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Objective: Artificial intelligence (AI) may enhance the efficiency and personalization of breast cancer (BC) treatment care. It is imperative to include patient viewpoint into AI design for clinical care but there is limited research exploring how survivors perceive AI to inform BC care. To explore BC survivors' understanding of, trust in, and acceptance of AI applications to inform BC treatment, and to examine variations in perspective by age, race/ethnicity, income, and neighborhood deprivation index.

Materials and Methods: This IRB-approved qualitative descriptive study used purposive sampling of adult BC survivors recruited from a large academic cancer center and affiliated community outreach programs. Inclusion included the ability to speak and understand English and BC diagnosis within the past 10 years, participants completed a brief demographic survey followed by a 15–30-minute semi-structured interview focusing on awareness of AI, perceived benefits, risks, equity implications, and any suggested strategies for AI to be reincorporated into BC care. Interviews were audio-recorded, transcribed verbatim, and analyzed using thematic and content analysis. A second reviewer verified coding. Demographic data were analyzed descriptively and dichotomized.

Results: Participant (n = 20) ages range from 38 to 74 years old (mean 57); 80% identified as White, 20% as Black. Most participants had some college education, and neighborhood area deprivation index scores, mean 68.2, (standard deviation 19.2) spanned 8–95 (indicating broad socioeconomic representation). Time since diagnosis ranged from 1 to 10 years. Three themes are identified:

1) Awareness of AI ranging from no knowledge to very familiar.

2) Concerns included loss of human interaction, clinician over-reliance on algorithms, and security assurance (data privacy breaches and model safety). Acceptance of AI was highest when framed as augmenting rather than replacing clinician judgment.

3) Equity-some survivors viewed AI as a force that might reduce disparities, while others feared exclusion of under-represented groups due to non-diverse datasets or institutional access barriers. Notably, all Black participants emphasized the necessity of dataset representation to avoid perpetuating inequities. Variations in perspective by dichotomized age, income, years since diagnosis, and neighborhood deprivation index were otherwise not identified.

Conclusion: AI is welcomed when it enhances, but does not substitute for human-led care, and when transparency, safety, equitable inclusion, and governance are assured. These findings underscore the imperative and proactive attention needed to ensure patients with BC participate in AI system design, development, evaluation, and deployment, particularly when related to critical BC treatment decision-making.

Keywords: Survivor; treatment study