

DAY 1 HIGHLIGHT:

A Promising Start to GBCC 2026

By GBCC Scientific Program Committee

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Plenary Lecture 1 · SURGICAL ONCOLOGY

Axillary Surgery Reimagined: Staging vs. Therapy in the Modern Era

The traditional role of axillary surgery in breast cancer is undergoing a fundamental reassessment. In her opening plenary, Jana de Boniface challenged the audience to distinguish two fundamentally different surgical intentions: the therapeutic and the diagnostic, and to question whether both remain necessary in every patient.

De Boniface framed the discussion around two clinical settings: patients undergoing upfront surgery and those who have completed preoperative systemic therapy (PST). In the upfront setting, sentinel lymph node biopsy has long been the standard for clinically node-negative disease. Yet the question of what to do in clinically node-positive patients and how much axillary intervention is truly needed remains actively contested.

In the post-neoadjuvant setting, the picture grows more complex. As targeted systemic regimens achieve higher rates of nodal clearance, the need for extensive axillary dissection diminishes, yet the need for accurate residual disease staging remains. Emerging sentinel node techniques and targeted axillary dissection (TAD) are increasingly validated as tools that meet this staging need with a reduced surgical footprint.

Plenary Lecture 2 · PRECISION ONCOLOGY

Evolution, Resistance, and the Road Ahead: Precision Oncology in Full Motion

Masakazu Toi opened with a striking clinical anecdote: a patient who achieved complete response to FEC chemotherapy, then experienced rapid, remarkable progression upon transition to docetaxel. This observation, difficult to explain by standard resistance models, propelled a decades-long inquiry into tumour microenvironment dynamics that would ultimately shape the CREATE-X trial.

Toi hypothesized that therapeutic stress can paradoxically accelerate chronic inflammatory feedback loops within the tumour microenvironment, amplifying resistance. Targeting thymidine phosphorylase (TP), a key mediator of angiogenesis and prodrug activation, led to the strategic use of capecitabine - and a clinical trial that became a cornerstone of post-neoadjuvant care in high-risk non-pCR patients.

Beyond CREATE-X, Toi presented a sweeping evolutionary perspective on breast cancer biology. Collaborative genomic research with Prof. Seishi Ogawa suggests that initial driver mutations may arise during puberty - reframing luminal A and invasive lobular carcinoma as diseases whose natural history spans a woman's entire lifetime. This lifespan lens has profound implications for prevention and early interception strategies.

Looking ahead, Toi outlined a bold vision for the next generation of precision oncology: liquid biopsy for real-time tumour evolution monitoring, AI-driven drug discovery to compress development timelines, and fully integrated digital health infrastructure capable of semi-automated clinical data extraction and multi-modal dataset analysis for precise trial stratification.

General Session 1

Investigators spotlight endocrine tailoring, genomic context, and personalized surgical strategies



[GS-01] Long-term Outcome Analysis of Extended Endocrine Therapy (EET) and Ovarian Function Suppression (OFS) in Multigene Assay (MGA)-Tested HRpos/HER2neg Early Breast Cancer(EBC): A Multicenter Real-world Retrospective Study

Ee Jin Kim (ASAN Medical Center, Korea)



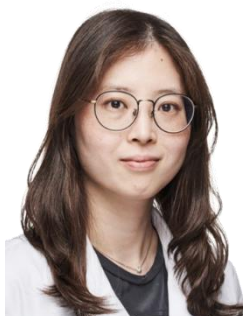
[GS-02] Germline Background Redefines the Clinical Meaning of Somatic BRCA Alterations in Breast Cancer

Masanori Oshi (Yokohama City Univ. Hospital, Japan)



[GS-03] Omission of Sentinel Lymph Node Biopsy in HER2+/TNBC Patients with Pathologic Complete Response after Neoadjuvant Systemic Therapy: 3-Year Interim Analysis of the Prospective ASLAN Trial (KBCSG-28)

Wonshik Han (Seoul National Univ. Hospital, Korea)



[GS-04] A Randomized Controlled Trial for Doing vs. Omitting Intraoperative Frozen Section Biopsy for Resection Margin Status in Selected Patients Undergoing Breast Conserving Surgery (OFF-MAP trail, KBCSG-17)

Tae-Kyung Robyn Yoo (ASAN Medical Center, Korea)

A strong set of presentations in General Session 1 will showcase how investigators are tackling some of the field's most pressing questions: who really benefits from extended endocrine treatment and the addition of ovarian function suppression to tamoxifen, how germline context reframes genomic findings, and how surgical strategies can be more precisely personalized.

One of the clinically most grounded presentations comes from a large multicenter Korean real-world study examining extended endocrine therapy (EET) and ovarian function suppression (OFS) in multigene assay–tested HR-positive/HER2-negative early breast cancer. In 7,349 patients treated across four institutions, the investigators found that use of EET in actual practice appeared to be driven primarily by clinical risk rather than genomic risk alone, and that the most pronounced long-term benefit from EET was seen in clinical high-risk groups, especially in the discordant clinical-high/genomic-low population. By contrast, the addition of OFS to tamoxifen did not show a clear survival advantage overall, although a signal emerged in clinical and genomic high-risk patients who had not received chemotherapy. The study adds a valuable real-world layer to ongoing debates about how to individualize endocrine duration and ovarian suppression after multigene testing.

Another General Session abstract addresses a question of growing relevance in precision oncology: whether somatic BRCA alterations mean the same thing as germline BRCA alterations. Using a nationwide Japanese cancer genomics dataset, investigators showed that the answer is no. Tumors with somatic BRCA alterations, but no germline mutation appeared biologically distinct from those harboring both germline and somatic BRCA changes, with different co-mutation patterns and different therapeutic implications. In ER-positive/HER2-negative disease, patients with germline BRCA-positive disease had significantly shorter time to treatment discontinuation on CDK4/6 inhibitors, whereas somatic BRCA-positive tumors without germline alteration behaved more like BRCA-negative disease. The findings argue for more nuanced interpretation of genomic reports and caution against assuming that all BRCA alterations are clinically interchangeable.

Surgical de-escalation also takes center stage with the ASLAN trial, a prospective

multicenter study testing whether sentinel lymph node biopsy can be omitted in selected patients with HER2-positive or triple-negative breast cancer who achieve breast pathologic complete response after neoadjuvant systemic therapy. In this 3-year interim analysis, 182 patients with breast pCR omitted SLNB, and early outcomes were striking: 3-year recurrence-free survival was 98.3%, with no axillary or regional nodal recurrences and no deaths observed at a median follow-up of 32.7 months. For a field increasingly focused on reducing surgical burden in exceptional responders, these interim data are likely to draw substantial attention.

A related but distinct surgical question is explored in the OFF-MAP trial, which randomized selected patients undergoing upfront breast-conserving surgery to intraoperative frozen section margin assessment or omission of frozen section. Although the study did not meet its prespecified noninferiority margin due to early termination for slow accrual, the absolute difference in positive margin rates was small: 5.8% with frozen section vs 6.8% without, for an estimated risk difference of 1.0%. This finding will likely fuel discussion about whether routine frozen section remains necessary in carefully selected patients, especially in systems where it is still widely used.

Symposium 1

Expanding the Role of Genomic Assays: Beyond Traditional Boundaries

Symposium 1, scheduled for Thursday, April 23, at GBCC 2026, will explore the evolving role of genomic assays in breast cancer, extending beyond their conventional use in the adjuvant setting. As genomic assays continue to influence treatment decision-making, their application in more complex clinical scenarios remains an area of active discussion. This session will address key challenges in interpreting genomic data, particularly in premenopausal and node-positive patients, as well as their emerging role in guiding extended endocrine therapy and their potential application in non-luminal breast cancer.

Recent evidence highlights important nuances in the interpretation of genomic assays, particularly in premenopausal patients. Premenopausal patients with low- to intermediate-risk recurrence scores appear to derive benefit from the addition of adjuvant chemotherapy regardless of nodal status, whereas similar benefit is not observed in postmenopausal patients with comparable clinical and genomic profiles. In the neoadjuvant setting, patients with ER-positive/HER2-negative disease and low to intermediate genomic risk demonstrate consistently low pathologic complete response rates, regardless of menopausal status, underscoring the limited chemotherapy responsiveness in this subgroup. These findings raise important questions regarding the mechanism of benefit, with growing interest in the hypothesis that chemotherapy may exert its effect through ovarian function suppression (OFS). Ongoing studies, including the phase III NRG-BR009 (OFSET) trial, are expected to further clarify whether the benefit attributed to chemotherapy in this population may be largely endocrine-mediated.

In addition to these insights, the session further explores several key areas, including the expanding role of genomic assays across the continuum of ER-positive breast cancer—particularly in predicting late recurrence and informing decisions on extended endocrine therapy, as well as their emerging applications in non-luminal subtypes such as HER2DX and TNBCDX, with the potential to refine risk stratification beyond traditional clinicopathologic factors.

Rather than providing definitive answers, this session aims to highlight areas where

evidence is evolving and where clinical judgment remains essential. By integrating perspectives across different disease settings, the symposium will offer a timely overview of how genomic assays are reshaping contemporary breast cancer management.

Symposium 2

Next-Generation Radiotherapy in Breast Cancer: Toward Precision and Personalization

Symposium 2, scheduled for Thursday, April 23, at GBCC 2026, will focus on the evolving landscape of radiotherapy in breast cancer, highlighting the key evidence needed to support more individualized treatment approaches. As systemic therapy and tumor biology continue to advance, the role of radiotherapy is also being redefined. This session explores how biomarkers, genomic signatures, and clinical risk stratification can inform more tailored radiotherapy strategies, while addressing ongoing efforts to minimize treatment-related toxicity.

Emerging evidence suggests that radiotherapy decision-making may increasingly be guided by both clinical and genomic risk assessment. Recent studies have demonstrated the predictive value of genomic signatures such as ARTIC and POLAR, supporting their potential role in identifying patients who may benefit from tailored radiotherapy approaches. In parallel, prospective trials including LUMINA and IDEA have explored the safety of omitting radiotherapy in carefully selected patients with low-risk Luminal A tumors, suggesting that omission may be a reasonable option in specific clinical contexts. A number of ongoing trials such as PRECISION, EXPERT, PRIMETIME, DEBRA, and TAILOR RT are expected to further refine patient selection and clarify the role of radiotherapy in different risk groups. Together, these data point toward a shift away from a “one-size-fits-all” approach, emphasizing the integration of clinical and genomic information to support more personalized care. At the same time, until higher-level evidence becomes available, shared decision-making that incorporates patient preferences remains essential.

In addition to these advances, the session also addresses several key areas, including

the potential of biology-guided radiotherapy in the management of oligometastatic breast cancer, as well as strategies for cardiac risk mitigation to improve the safety of breast radiotherapy.

As radiotherapy continues to evolve, this session will provide a timely overview of how emerging evidence and novel approaches may help refine treatment selection and reduce toxicity, ultimately moving toward more precise and patient-centered care.

Symposium 3

Advances in Asian Breast Cancer Screening: From Evidence to Personalization

Scheduled for Thursday, April 23, at GBCC 2026, Symposium 3 will examine the evolving landscape of breast cancer screening in Asia. Early detection remains a cornerstone of improving treatment outcomes and survival rates. While the benefits of routine screening are well-established, it is a recognized challenge that screening Asian women is significantly more complex due to the high prevalence of dense breasts (approximately 70%), unlike their Western counterparts.

To enhance the diagnostic accuracy of mammography in this population, two primary strategies have emerged: the integration of Artificial Intelligence (AI) and the supplemental use of breast ultrasound. While retrospective studies have validated these approaches, further investigation through prospective cohorts is essential to evaluate long-term outcomes such as patient survival, interval cancer rates, and overall diagnostic precision. This session will highlight the AI-STREAM trial, which prospectively analyzed the impact of AI using South Korea's national cancer screening data, and the J-START study, which investigated the long-term survival outcomes of combined mammography and ultrasound screening. Additionally, the session will introduce emerging biomarkers, such as glandular tissue components, that hold potential for future integration into personalized screening protocols.

Symposium 4

Breast Cancer-Related Lymphedema

Symposium 4 will explore the latest advancements in managing breast cancer-related lymphedema (BCRL). Lymphedema remains one of the most debilitating sequelae following surgery and radiotherapy, yet current therapeutic options often fall short of clinical satisfaction. Given the significant symptom burden on patients, innovation in this field is critical. This session will focus particularly on the latest surgical breakthroughs.

A key highlight will be Vascularized Lymph Node Transfer (VLNT), a procedure where healthy lymph nodes are harvested and transplanted into the affected forearm or axilla. This technique aims to alleviate lymphedema by promoting lymphangiogenesis and lymphovenous communication. With refined surgical techniques, an increasing number of patients—especially those with advanced-stage lymphedema—are experiencing clinical improvement. Furthermore, the session will facilitate a comparative discussion on Lymphovenous Anastomosis (LVA), contrasting its therapeutic application post-onset with its burgeoning role in preventive care, including the respective pros, cons, and clinical considerations for each approach.

Poster Discussion 1, 2

Emerging biology behind HER2-low disease and radiation-induced systemic immunity

The Poster Discussion Session highlights two projects that move beyond immediate practice questions and into the biology shaping future treatment strategies.

One presentation examines the prognostic and biologic significance of HER2-low expression in ER-positive early breast cancer. In a nationwide Korean registry analysis including 32,990 HER2-negative early breast cancers, HER2-low status was associated with worse overall survival in ER-positive disease, but not in ER-negative tumors. Complementing the clinical findings, transcriptomic work in patient-derived tumor xenograft models suggested that HER2-low/ER-positive tumors may be characterized by endocrine resistance-related signaling, including upregulation of MAPK1 and JAK2.

Functional studies further showed that combined inhibition of ER, HER2, and JAK2 could suppress ER/HER2 crosstalk and downstream STAT3 signaling.

The second Poster Discussion presentation turns to radiobiology and immunotherapy, focusing on the elusive abscopal effect in breast cancer. In a bilateral murine TUBO breast cancer model, investigators found that ablative radiation but not conventionally fractionated non-ablative radiation alone could induce systemic tumor control in nonirradiated lesions. Mechanistically, the effect appeared to depend on IFN- β signaling, with IFNAR-1 blockade abolishing the response. Importantly, exogenous IFN- β supplementation restored abscopal activity under non-ablative radiation, and the combination of IFN- β plus anti-PD-L1 therapy further strengthened systemic tumor control. Although preclinical, the study offers a compelling framework for converting local radiotherapy into a more systemic immunologic strategy in relatively “cold” breast cancer models.