mean steady-state Cmax of the RIB 400 mg dose in the eBC population, the estimated mean ΔQTcF was 10.0 ms (90% CI: 8.02, 11.91). Patient population is a significant covariate and the eBC population had lower ΔQTcF (-5.37 ms; 90% CI: -3.26, -7.49) than the aBC population at the same level of RIB concentration.

Conclusions: Comprehensive PK assessment and exposure-QTcF analysis support manageable safety of RIB in eBC and justified the approved dose in pts with eBC.

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229P Risk of recurrence and overall survival in Stage II and III ER+/HER2- early breast cancer: A population-based registry study in Sweden

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Background: While randomized clinical trials (RCTs), such as the phase-III NATALEE and monarchE, have characterized the risk of recurrence and overall survival (OS) in patients with early breast cancer, data from real-world clinical settings remain limited. The aim of this population-based retrospective study was to assess recurrence risk and OS in stage II and III (AJCC 8th edition) estrogen receptor-positive and human epidermal growth factor receptor 2-negative (ER+/HER2-) patients in a Swedish clinical setting, reflecting the NATALEE inclusion criteria in terms of anatomical stage.

Methods: Patients diagnosed with breast cancer, 2013 - 2021, were identified in the Swedish Cancer Registry and linked to the National Swedish Quality Register for Breast Cancer for complementary data on TNM-status, molecular subtype and survival outcomes. Stage II and III ER+/HER2- patients were selected and, consistent with NATALEE, only high-risk T2N0 cases (grade 3 or grade 2 with Ki67≥20%) were included. Invasive disease-free survival (iDFS), distant disease-free survival (DDFS) and OS were assessed, overall and by nodal status, using Kaplan-Meier methods.

Results: A total of 20,605 patients were included. The median age was 65 years (Range: 22 - 105) and most patients were classified as stage II (15,773 [77%]). While 27% were lymph node negative, 57%, 11%, and 5% were classified as N1, N2 and N3, respectively. Overall, iDFS was estimated at 77.9% (95%CI: 77.3, 78.6) and 61.9% (60.8, 62.9), at 4 and 8 years, respectively. DDFS was 78.5% (77.9, 79.2) and 62.6% (61.5, 63.6), while OS was estimated at 87.8% (87.3, 88.3) and 74.0% (72.9, 75.0), respectively. At 4 years, iDFS was estimated at 77.0% (75.6, 78.3), 81.3% (80.5, 82.1), 71.0% (68.8, 73.2), and 56.5 (52.8, 60.0), for N0, N1, N2 and N3, respectively.

Conclusions: Although the results may not be directly comparable, they directionally support the notion that prognosis in terms of recurrence and OS may be worse in real-world settings compared to RCTs. Additionally, the results underscore the unmet need for innovative treatments and targeted strategies for this patient population, including N0 patients with high-risk features.

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230P Germline BRCA mutation status and response to neoadjuvant chemotherapy in triple-negative breast cancer patients

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Background: Triple negative breast cancer (TNBC) accounts for approximately 15-20% of all breast cancers and is associated with a poor prognosis. Germline mutations in BRCA 1 or 2 (gBRCA) can be found in approximately 15% of all TNBC patients. To date, the predictive role of gBRCA status on clinical outcomes for TNBC patients who receive neoadjuvant chemotherapy (NACT) remains uncertain. This study aims to assess the impact of germline BRCA mutation status on pathologic complete response (pCR) in TNBC patients receiving NACT.

Methods: We conducted a retrospective cohort study including all TNBC patients treated and genetically tested at the Department of Obstetrics and Gynecology of the Medical University of Vienna between 01.12.2014 and 31.12.2023. Chi-square test, t-test for independent samples and Mann-Whitney-U test were used to assess differences regarding the patients' characteristics. A multivariate logistic regression model was applied to determine the association between gBRCA status and pCR.

Results: We identified 294 TNBC patients treated with NACT at our department. After NACT, 41 (71,3%) of the 56 gBRCA carriers achieved pCR compared to 105 (44.1%) of gBRCA non-carriers ($p < 0.001$). In the multivariate logistic regression model, gBRCA status (OR 2.65; 95% CI, 1.35-5.19; p 0.005), age (OR 0.98; 95% CI 0.96-0.997; p 0.025) and tumor stage (OR 0.83; 95% CI 0.70-0.98; p 0.027) remained significant predictors for pCR.

Conclusions: Germline BRCA mutation status, age and tumor stage at the time of diagnosis were significantly associated with pCR. Based on real-world data, our results show that TNBC patients who carry pathogenic gBRCA mutations have a higher chance of achieving pCR than non-carrier patients after treatment with NACT. Survival outcomes have to be evaluated to comprehensively assess the long-term effect of gBRCA mutations in TNBC patients.

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231P Investigation of bone mineral density, muscle strength and body composition in postmenopausal women with ER+ early breast cancer

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Background: Aromatase inhibitors (AIs) lead to accelerated bone loss, increasing the risk of osteoporosis. Women with obesity are at higher risk of breast cancer, but there is a lack of evidence on associations between body composition, muscle strength and bone mineral density (BMD) in these patients. This study aims to determine BMD at diagnosis in patients with AI-treated ER+ early breast cancer and to investigate associations between baseline BMD, body composition and hand grip strength (HGS).

Methods: Postmenopausal women with ER+ early breast cancer were identified from the BeGIN cohort (REC:14/EE/1297). Clinical data and DEXA measurements of BMD were collected from patient electronic records. Baseline bioimpedance (BIA) derived body composition measurements were collected from the study database and HGS was extracted from case report forms. Descriptive statistical analysis techniques were performed using SPSS (version 29.0.2.0).

Results: Out of 103 patients who met the study criteria only 59 (57%) had DEXA scans. 29 (49.2%) had osteopenia and 11 (18.6%) had osteoporosis. A positive correlation was found between mean total hip category and fat free mass index (FFMI) (n=59, U=122.5, p=<0.001) and lumbar spine BMD and fat mass index (FMI) (n=57, r=0.481, CI 95%=0.009-0.028, p=<0.001). No significant correlation was found between HGS and FFMI (r=0.073, CI 95%=-0.890-0.422, p=0.480) or between HGS and DEXA clinical diagnosis (n=57, r=0.006, p=0.965).

Conclusions: The majority of postmenopausal breast cancer patients have osteopenia or osteoporosis when starting AI; however, many patients do not appear to be aware of this at time of the study. No significant associations were found between muscle grip strength and measures of body composition, however there was a positive association between muscle mass by BIA and bone density by DEXA. These results will be used to inform future interventional studies for rehabilitation or exercise programmes for women with early breast cancer, specifically aiming to optimise bone health, particularly in patients with risk factors for osteoporosis.

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Legal entity responsible for the study: University Hospital Southampton NHS Foundation Trust.

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Disclosure: All authors have declared no conflicts of interest.

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232P Impact of the addition of carboplatin and pembrolizumab to neoadjuvant chemotherapy (NACT) in triple-negative breast cancer (TNBC): A large, retrospective, two-centre, real-world study

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Background: Complete pathological response (pCR) with NACT improves outcomes of TNBC patients (pts). pCR rates increased with the addition of carboplatin and pembrolizumab (IO). Here, we examined the change in NACT rates and regimens over time and the impact on pCR.

Methods: From January 2000 to October 2024, we conducted a large retrospective observational cohort study of TNBC pts, diagnosed in St Vincent's University Hospital and St Vincent's Private Hospital in Dublin, Ireland. Collected data included clinicopathological features, treatment details and pCR status. Changes in NACT were analysed over 3 time periods: before 2014 (CALGB 40603 presented SABCS2013), 2014-2021 (EMA approval of pembrolizumab) and after 2022.

Results: 371 TNBC pts were identified. Clinicopathological features are summarized in the table. 67 pts (18.1%) were diagnosed before 2014, 229 pts (61.7%) between 2014-2021 and 75 pts (20.2%) after 2022. 215 pts (58%) received NACT. The most common NACT was carboplatin based regimen without IO (51.6%), dd-ACT (28.4%) and Keynote-522 (17.7%). pCR rate was 17.9% with dd AC-T, 43.6% with carboplatin and 65.8% with IO. NACT and a carboplatin regimen was increasingly used through the 3 time periods: before 2014 (13.4% and 22.2%), between 2014-2022 (66.4% and 66.4%) and after 2022 (72% and 83.3%). pCR improvement was seen over these 3 periods: 22.2%, 40.1% and 59.2%, retrospectively. 53.9% had Her-2 low disease (IHC 1+ and 2+) and 45.8% Her-2 0. pCR was 50% in Her2-0, and 38.53% in Her-2 low disease.

Table: 232P Demographic and disease characteristics of the patients

Average age (years)			53
	Age <50 (%)	154	41.5
	Age >50 (%)	217	58.5
Tumour size			
	T1 (%)	148	39.9
	T2 (%)	190	51.2
	T3 (%)	33	8.9
Grade			
	1 (%)	2	0.5
	2 (%)	58	15.6
	3 (%)	306	82.5
	Not available	1	1.3
Lymph nodes			
	negative (%)	234	63.1
	positive (%)	136	36.7
ER IHC			
	negative (%)	328	88.4
	1-10% (%)	42	11.3
Her2 IHC			
	0 (%)	170	45.8
	1 (%)	122	32.9
	2 (%)	78	21
	Not available (%)	1	0.3

Conclusions: In this large study, we demonstrated increased use of NACT, carboplatin and IO for TNBC pts with subsequent improvement in pCR rates. Her-2 0 cancers had slightly higher pCR. The survival analysis is on-going.

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233P Ethnic disparities in pathological complete response and immune-related adverse events with neoadjuvant pembrolizumab in early triple-negative breast cancer

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Background: Pembrolizumab, combined with chemotherapy, is the standard-of-care neoadjuvant treatment for early triple-negative breast cancer (eTNBC). While there is growing real-world data on pembrolizumab-induced immune-related adverse events (irAEs) and rates of pathological complete response (pCR), little is known about how these outcomes vary across different ethnic groups. At St. Bartholomew's Hospital, which serves a highly diverse patient population, we investigated the impact of ethnicity on treatment outcomes and toxicity profiles.

Methods: We conducted a retrospective review of electronic medical records for 96 patients with eTNBC who received pembrolizumab and chemotherapy between December 2022 and August 2024. Treatment outcomes and irAEs were analyzed and compared with data from the KEYNOTE-522 trial.

Results: The patient cohort included individuals who self-identified as White (39.4%), Asian (33.0%), Black (12.8%), Other (9.6%), Mixed (2.1%), and Not Stated (3.2%). Among the 96 patients, 50 presented with T2N0 staging. Immune-related adverse events were reported in 50% of patients, with significant variability across ethnic groups. Asian patients had the highest prevalence at 64.5%, followed by White patients at 49.9%, and Black patients at 33.3%. Notably, grade 3 ALT elevation was observed in 10% of our cohort, compared to 5% in the KEYNOTE-522 study, with 18.4% of Asian patients experiencing this irAE. Pathological complete response (pCR) data was available for 85 patients, with an overall pCR rate of 50.6%, lower than the 64.8% reported in the KEYNOTE-522 trial. pCR rates in the White and Black patients were higher at 53% and 55% respectively, whereas the rate in the Asian subgroup was lower at 47%. Our patient cohort was more diverse than that of the KEYNOTE-522 trial, which may have contributed to our lower overall pCR rate.

Conclusions: This study reveals significant ethnic disparities in pCR and irAEs following treatment with neoadjuvant pembrolizumab, highlighting the need for further research into ethnicity-specific responses, greater clinician awareness, and improved patient education on irAEs.

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234P Symptomatic pneumonitis in a UK NHS adjuvant abemaciclib clinic

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Background: Patients receiving adjuvant abemaciclib are at risk of pneumonitis, both from the drug and from prior radiotherapy (RT). In the treatment arm of MonarchE, 1.6% developed symptomatic pneumonitis. 0.5% were attributed to RT, double that of the control arm. We report the real-world incidence of symptomatic pneumonitis in a regional adjuvant abemaciclib clinic.

Methods: Electronic case records, including monthly electronic patient reported outcome measures (ePROMs), were reviewed for patients who commenced adjuvant abemaciclib prior to 30/08/24. New or worsening dyspnoea and/or cough were used to identify cases and imaging and treatment plans were reviewed. Symptomatic pneumonitis was defined as UKONS grade ≥2 new cough or new/worsening dyspnoea, with CT evidence of interstitial lung disease. Cases were reviewed by 2 oncologists (CW, CA) to determine pneumonitis causation categorised as; abemaciclib, RT or combined. RT was considered a contributing factor in the first 6 months post treatment.

Results: 322 patients were included (median age 56 years (range 24-85)). 127 (39.4%) patients developed new/worsening respiratory symptoms during the first 6 cycles of