had pCR in the axillary lymph node and primary breast tumour and 2/7 had pCR in the axillary lymph node with a partial response in the primary breast tumour. Five patients had residual disease in the axillary lymph node and a pCR in the primary breast tumour. All axillary clips were successfully retrieved at surgery.

Conclusion: 35.7% of patients who had primary chemotherapy achieved pCR in the axilla (30% in the published data) [1,2]. 23.3% with a marker clip had SLNB at the time of surgery. Our results suggest that not all patients with lymph node-positive disease need ANC if they respond well to chemotherapy. More work is needed to establish if we can accurately recognise which patients can be managed with SLNB.

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A Closed-loop Audit of 5 versus 10 Days of Primary GCSF Prophylaxis to Reduce the Incidence of Febrile Neutropenia in Early Breast Cancer Treatment

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Purpose: Current guidelines recommend that patients with early breast cancer receiving chemotherapy that confers >20% risk of febrile neutropenia should have primary prophylactic granulocyte colony-stimulating factor (GCSF) on days 2–6 of chemotherapy [1,2]. An initial audit [3] demonstrated non-inferiority of 5 days versus 10 days of primary prophylactic GCSF in respect of febrile neutropenia rates seen in early breast cancer chemotherapy. Since 1 August 2016, our centre has switched from 10 days of prophylactic GCSF to 5 days. We re-audited febrile neutropenia rates following our change in practice.

Methods: The initially audited patient cohort received chemotherapy between August 2016 and February 2017. We closed the audit loop by analysing data for all patients at our centre receiving chemotherapy for early breast cancer between April 2017 and March 2018. Patient and treatment details were taken from ChemoCare© and blood results from Medway©.

Results: We identified 49 patients. The rates of febrile neutropenia were 24% in the 5-day GCSF cohort compared with 7.4% in the 10-day cohort. Eighty-five per cent of the admissions with febrile neutropenia occurred after the 5-day course of prophylactic GCSF was completed. The median length of stay was 2.5 days. Four patients (33%) had their prophylactic GCSF extended following febrile neutropenia. Eight patients (66%) had their chemotherapy dose reduced and one patient had their chemotherapy stopped following admission. The cost–benefit analysis, per patient, for 10 days GCSF is £540.29 and for 5 days GCSF is £383.95[1].

Conclusion: The previously demonstrated non-inferiority of 5 days versus 10 days of prophylactic GCSF in relation to febrile neutropenia rates was not corroborated in our re-audit. This may be partly attributable to a variation in patient characteristics between the two cohorts. Additionally, although a cost–benefit analysis favours the 5-day regimen, this does not account for morbidity related to GCSF or neutropenia. Patients of increased body weight should receive a higher dose of GCSF.

[1]Cost–benefit analysis: GCSF cost + (chance of febrile neutropenia × cost per bed day × median length of stay). For 10 days GCSF: (250.75 × 2) + (0.07 × 222 × 2.5) = £540.29. For 5 days GCSF: (250.75 × 1) + (0.24 × 222 × 2.5) = £383.95.

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Partial Breast Radiotherapy: a Single Centre Experience

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Purpose: This audit was undertaken to assess if the recurrence rates following partial breast radiotherapy at the Christie were in keeping with the IMPORT LOW trial [1], which showed non-inferiority when compared with whole breast radiotherapy for local recurrence. We also evaluated our selection criteria for partial breast radiotherapy with inclusion criteria used in the IMPORT LOW trial [1].

Methods: A retrospective analysis between April 2010 and April 2013 was undertaken using clinical records and local PACs systems. All patients reached 5 years post-treatment. Local protocol for follow-up is annual mammographic surveillance.

Results: In total, 63 patients were treated with partial breast radiotherapy, with one having bilateral treatment. The median age was 62 years. Twenty patients were aged 50–59, 43 aged >60 years and one <50 years (46 years). Fifty-six patients had invasive ductal carcinoma; the majority had grade 1 (42%) or grade 2 disease (44%). Sixty patients (95%) had hormone-positive disease. Fifty-four had standard hypofractionated radiotherapy (40 Gy in 15 fractions). Seven had a lower total dose (37.5 Gy and 38.5 Gy). One patient received 37.5 Gy in 14 fractions. All patients completed the intended treatment course.

Sixty of 63 were alive at the time of the retrospective review. Three died from metastatic disease from an unrelated second primary. Of those 59 patients who completed 5 years of mammographic follow-up there was no evidence of local recurrence (100%). Of the four patients who did not have 5 years of mammography, two were lost to follow-up, one died of a second primary and one had 4 years of mammography follow-up but no final mammogram. Adherence to the patient inclusion criterion set in the IMPORT LOW trial was good (98–100%).

Conclusion: The rate of local recurrence following partial breast radiotherapy is low when appropriately used in the low-risk patient and should be considered in this cohort routinely.

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Clinical Outcomes in HER2-positive Lobular Breast Cancer: a Single-institution Experience

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Purpose: Invasive lobular carcinomas (ILC), characterised by loss of the cell adhesion molecule E-cadherin, are typically oestrogen receptor (ER)-positive/HER2-negative luminal tumours with a similar prognosis to that expected for luminal invasive ductal carcinomas (IDC). Less than 5% of classical ILC but up to 35% of pleomorphic ILC are HER2-positive. Previous studies have suggested similar benefit from trastuzumab for HER2-positive ILC and IDC, but data are limited [1].

Methods: Retrospective collection of clinical data from all patients with HER2-positive ILC diagnosed between 2004 and 2014 at the Royal Marsden Hospital. The primary end point was median overall survival in patients with metastatic HER2-positive ILC, secondary end points included timing and pattern of relapse after treatment for early HER2-positive ILC and rate of pathological complete response (pCR) to neoadjuvant chemotherapy (NAC).

Results: Fifteen patients with advanced HER2-positive ILC were identified, median age 59 years, 67% ER-positive, 80% grade 2, 27% pleomorphic. Nine patients had been previously treated for early HER2-positive ILC, of whom 6/9 received adjuvant trastuzumab. Patients received a median of two lines of treatment for advanced disease (range 1–7), including trastuzumab (86.70%), TDM1 (40%), pertuzumab (20%) and lapatinib anti-HER2 TKIs (tyrosine kinase inhibitors) (33.3%). Median overall survival was 51.3 months (95%CI 8.8–not reached); similar to that reported with dual HER2 targeting in the CLEOPATRA trial. Thirty-four patients with early HER2-positive ILC were identified, median tumour size 24 mm, median two involved nodes (range 0–16), 76% ER-positive, 68% grade 2, 21% pleomorphic. Seven of 34 patients (20.6%) received NAC, with trastuzumab in 5/7 (71.4%). Among 5/7 NAC patients who underwent surgery, pCR was noted in 3/5 (60%). Five patients received primary endocrine therapy, with trastuzumab in 1/5 (20%). Twenty-one patients received adjuvant chemotherapy, with trastuzumab in 18 (85.7%). Nine of 34 patients relapsed (26.5%) after a median disease-free interval of 111.3 months (95%CI 111.2–not reached), with locoregional (4/9; 44.4%), bone-only (2/9; 22.2%), bone and visceral disease (2/9; 22.2%) or brain-only disease (1/9; 11.1%). The 5-year overall survival rate for the early disease cohort was 78% (95%CI 59–89%).

Conclusion: In this single-institution study, we report outcomes for patients with HER2-positive ILC comparable with those expected for HER2-positive IDC, despite incomplete exposure to all anti-HER2 therapies.

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Clinical Outcomes in Triple-negative Lobular Breast Cancer: a Single-institution Experience

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Purpose: Invasive lobular carcinomas (ILC) are characterised by loss of the cell adhesion molecule, E-cadherin, most commonly due to somatic CDH1 mutations. These are typically oestrogen receptor (ER)-positive/HER2-negative luminal tumours, which have a similar prognosis to that expected for luminal invasive ductal carcinomas (IDC). However, approximately 15% of ILC will be ER-negative; either at the time of breast cancer diagnosis or at metastatic relapse due to loss of ER expression. Previous studies have suggested that patients with triple-negative ILC have a superior prognosis to matched controls with triple-negative IDC, despite different clinical features, including higher rates of leptomeningeal disease, ovarian and peritoneal metastases [1].

Methods: Retrospective collection of clinical data from all patients with triple-negative ILC diagnosed between 2004 and 2014 at the Royal Marsden Hospital. Primary end point; median overall survival in patients with metastatic triple-negative ILC, secondary end points include median disease-free interval (DFI) after treatment of early disease, rate of response to neoadjuvant chemotherapy (NAC) and patterns of disease relapse.

Results: Twenty-three patients with advanced triple-negative ILC were identified, median age 48 years, all female. Eleven patients had been previously treated for early triple-negative ILC; 76 for early (54/76) or advanced (2/76) ER-positive ILC. Nineteen of 23 patients received a median of two lines of palliative chemotherapy (range 0–6) and the median OS was 18.32 months (95% CI 13.0–32.8). Sixteen patients with early triple-negative ILC were identified, median tumour size 3 cm, 43.8% grade 3, 62.5% axillary node-positive (median two nodes, range 0–35). Three received NAC (no pathological complete response but imaging responses in 2/3) and nine received adjuvant chemotherapy. Eleven of 16 patients relapsed (68.8%), most commonly with locoregional (3/11; 27.3%), bone-only (2/11; 18.2%) or brain-only disease (2/11; 18.2%). Median DFI was 28.5 months (95%CI 15–78.8) and the 5-year overall survival rate for the cohort was 52% (95%CI 23–74%).

Conclusion: In our institution we report a high rate of relapse after treatment for early triple-negative ILC, but the median overall survival from metastatic disease is similar to that expected from triple-negative IDC.

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The GOLD (Geriatric Oncology Liaison Development) Service and its Impact on Oncology Outcomes in Breast Cancer Patients: a Retrospective Analysis

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Purpose: Outcomes for older patients with cancer are poorer than their younger counterparts. The GOLD service is a recent development in oncology. Patients older than 65 years, with comorbidities, polypharmacy or poor performance status regardless of tumour type are referred to the GOLD clinic for optimisation before starting or during systemic treatment and/or radiotherapy. The aim of this retrospective analysis is to review the impact of the GOLD assessment on breast cancer patients.

Methods: We reviewed all patients who were referred to the GOLD clinic between March 2016 and May 2018. We analysed tumour type, age, type of treatment, reason for referral and outcome. The primary end point was whether patients were able to start or continue planned treatment.

Results: In total, 456 patients were seen in the GOLD clinic. The most common tumour types were gastrointestinal (137; 30%) and lung (53; 12%). Only 19 (4%) had breast cancer: median age 77 years. At the time of referral, 11 (58%) had or were due chemotherapy [five (26%) adjuvant, three (10%) neoadjuvant, three (10%) palliative], five endocrine therapy [two (10%) adjuvant, three palliative (15%)] and one adjuvant radiotherapy (5%). Reasons for referral: comorbidities 47%, functional decline 31%, optimisation (15%) and recent admission (10%). Seventeen (89.4%) patients were able to start or continue their treatment following a GOLD review. The four most common actions were (1) change in medication: 11 (57%); (2) general practitioner instructions: nine (47%); (3) AHP referral: four (21%) and (4) oncology instructions: three (15%). All but one patient completed their planned treatment.

Conclusion: A small number of breast cancer patients were referred to the GOLD service compared with other tumour types. Most patients were able to start/continue the proposed treatment with optimisation. A retrospective review of patients who were not referred will help further define which patients will benefit from this service.

Current UK Practice of Management of Pregnancy-associated Breast Cancer

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Purpose: With the trend towards delayed child-bearing, the incidence of pregnancy-associated breast cancer (PABCs) is rising and remains an important clinical problem. The aim of this national retrospective study was to describe the current practice of PABCs and any variation in the provision of care and adherence to treatment.

Methods: All oncological units in the UK are eligible for inclusion and encouraged to participate. Trainees from eight units entered through the Breast Cancer Research Collaborative initiative. A trainee lead with a supervising consultant with a special interest in breast cancer was identified to coordinate the study. Trainees registered the study locally at each institution. A questionnaire was developed by members of the collaborative steering group including trainees across surgical, clinical oncology, medical oncology and gynaecological specialties. Each centre collected information on current PABCs practice (including baseline characteristics, surgical, medical