oncology, clinical oncology and obstetric management) over the last 5-year period.

Results: Three units have completed data collection ($n = 10$ PABCs diagnosed during pregnancy). The mean gestational age at diagnosis was 20.9 weeks. Most (60%) underwent surgical resection (40% mastectomies, 10% BCS) during pregnancy. Eighty per cent of the patients received anthracycline-based chemotherapy during pregnancy; of those 30% received chemotherapy in the neoadjuvant setting. Seventy per cent of patients also received taxanes. Toxicities seen were similar to those in non-pregnant patients. All chemotherapy was administered after the second trimester. All ER-positive cancer patients were given adjuvant tamoxifen. None of the patients breastfed postpartum. For early stage PABCs, 25% of patients received adjuvant radiotherapy during pregnancy, with the remainder receiving radiotherapy after delivery.

Conclusion: Our preliminary data confirm the multidisciplinary nature of our Breast Cancer Trainees Research Collaborative Group. We continue to work with our collaborative group to complete data collection. The authors would like to encourage other institutions across the UK to join the workforce.

Managing Osteonecrosis of the Jaw Related to Denosumab in Patients with Breast Cancer

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Purpose: Bone metastases in breast cancer are associated with a median reduction in survival of 2 years and significant morbidity and impairment of quality of life. Denosumab is used for the prevention of skeletal-related events such as pathological fractures and spinal cord compression. Adverse events include osteonecrosis of the jaw (ONJ). We reviewed adverse events associated with denosumab use at a single centre.

Methods: Breast cancer patients treated with denosumab between January 2016 and December 2017 were identified retrospectively using an electronic chemotherapy prescribing system (Chemocare). Patient records were reviewed for adverse events and patient morbidity associated with denosumab.

Results: In total, 112 patients were treated with denosumab. Of these, 12 patients (10.7%) experienced adverse events that resulted in stopping treatment. Toxicities included deteriorating dental health or poor wound healing following dental surgery, diarrhoea, poor renal function and hyper/hypocalcaemia. Specifically, four patients (3.6%) stopped treatment due to symptoms associated with ONJ. They were all referred to maxillofacial services and restorative dentistry as required.

Conclusion: Medication-related osteonecrosis of the jaw (MRONJ) is associated with significant morbidity. The real-life incidence of MRONJ is probably underestimated. Currently, no national guidelines are available specifically for managing MRONJ in cancer patients. We have developed local guidelines that aim to develop a multidisciplinary approach with key areas to optimise management of patients, e.g. primary care, oral and maxillofacial services, speech and language therapy, pain specialists, dieticians and psychoncology support. We aim to audit our practice before and after the implementation of guidelines.

A Retrospective Audit on Outcomes Following Implementation of Neoadjuvant Treatment of HER2-positive Breast Cancer with Combined Pertuzumab and Trastuzumab with Docetaxel

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Purpose: A phase II trial, NeoSphere (2012), reviewed the effect of pertuzuamb in combination with trastuzumab for the treatment of early HER2-positive breast cancer with docetaxel in the neoadjuvant setting. Data identified, although not statistically significant, a greater 5 year progression-free interval with this combination. Patients had significantly better complete pathological response rates (cPR), probably associated with longer progression-free survival (45.8%) [1,2]. To audit local data on patients receiving neoadjuvant pertuzumab, trastuzumab and docetaxel and review cPR and tolerability of the regimen.

Methods: Data of patients with HER2-positive breast cancer treated with neoadjuvant anti-HER2-based chemotherapy between 2016 and 2017 were retrieved. Data reviewed included demographics, histological subtype, treatment given, tolerability and outcome from treatment including a pathological response.

Results: In total, 42 patients received treatment during this period. 22/42 (52%) patients had cPR to treatment, with 6/42 of these patients having cancer *in situ* (CIS) remaining. Nineteen patients obtained a partial response and one patient had no response to treatment. 29/42 completed the total of eight cycles of chemotherapy, with 19/42 requiring dose reductions and 7/42 developing a grade 3 toxicity, although poorly documented. 2/42 had chemotherapy stopped following disease progression.

Conclusion: Our results correlate with NeoSphere data with similar response rates, with both including CIS remaining as part of cPR outcome. Some patients with multifocal breast cancers with varying HER2 positivity had a partial response to treatment. These results could alter the data, as it was difficult to identify HER2 status on remaining disease. Therefore, a complete response to treatment with only HER2-negative disease remaining would be categorised as a partial response. We can confidently say this regimen is generally well tolerated, but documentation of toxicity needs improving. We await the outcome of ongoing trials focusing on disease-free survival as the primary outcome in this subset of patients.

References

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Outcomes of Neoadjuvant Chemotherapy in Breast Cancer Subtypes Guide Rationalising its Use in High-risk Patients by Tumour Genomic Profile

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Purpose: Neoadjuvant chemotherapy downstages breast cancer, permitting less extensive surgery and facilitates early initiation of systemic therapy in high-risk patients. Approximate overall response rates are 69% [1] and pathological complete response (pCR) rates are 24% [2]. We compared outcomes of patients from two North London hospitals with the published data and assessed the risk of progression during therapy.

Methods: We retrospectively reviewed all the patients from two hospitals who received neoadjuvant chemotherapy for breast cancer from October 2016 to 2017.

Results: We identified 58 female patients aged 25–87 years (mean 52 years). Thirty-eight per cent were T3–4 by magnetic resonance imaging (MRI), 75% were node-positive by ultrasound or sentinel node biopsy (SNB) and 39% were grade 3. Multiple regimens including EC-T, FEC-T/T-FEC, FEC-TH, FEC-TPH and wTaxol-H were used, with EC-T being the most common. Fifty-four per cent underwent mastectomy; 54% underwent axillary node clearance (ANC). The overall pCR rate was 33.3%, but was 36% in 'triple-negative' patients, 12% in oestrogen receptor-positive (ER+)/human epidermal growth factor receptor 2 negative (HER2−) patients and 66% in ER−/HER2+ patients. Sixty-four per cent had a >20% reduction in tumour size; 61% had an axillary pCR. Eight patients had possible disease progression, seven of whom were ER+ or grade 1–2. In two there was radiological progression during treatment and both recurred with metastatic disease within 6 months.

Conclusion: In our cohort of patients, pCR rates were comparable with the published data and progression was rare. ER+/HER2− patients had the lowest pCR rate and were at highest risk of disease progression during chemotherapy, whereas 'triple-negative' and HER2+ patients had the