Conclusion: Wound infection following breast cancer surgery can have severe consequences by delaying the start of adjuvant chemo-radiotherapy and affect the outcome of patient. This audit indicates that prophylactic antibiotics substantially reduce the risk of post-operative wound infections in breast surgery and thus avoid delay in start of adjuvant treatment or any additional operation required for definitive treatment.

0747: ULTRASOUND MARKING OF THE WIRE-TIP PRIOR TO WIRE GUIDED WIDE LOCAL EXCISION SHOWS PROMISE IN IMPROVING OUTCOME FOR IMPALPABLE BREAST CANCER

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Aim: We examined whether pre-operative ultrasound marking (PUM) of the wire-tip improved outcome for women undergoing wire-guided wide local excision (WLE) of impalpable breast cancer.

Methods: Between 01/2010 and 06/2011, 33 women underwent wire-guided WLE in our institution. Via a retrospective analysis of case-notes we identified patients who had undergone PUM of the wire-tip. Patient age, tumour characteristics, operating time, mass of specimen excised and further procedures (cavity-shave) were recorded.

Results: 12 women underwent PUM of the wire-tip (group a), 21 women did not (group b). Both groups were well matched for age, histological grade of tumour and tumour size. The median mass of specimen excised was 48.5g(range 24-92g) for group a and 57g(range 22-140g) for group b (p=0.14). Median operating time was 36.5mins(range 19-52mins) for group a compared to 41mins(range 24-103mins) for group b (p=0.001). None of the patients in group a (0%) required a further cavity-shave compared with 5 of the patients in group b (24%).

Conclusions: PUM of the wire-tip shows promise as an adjunct in wire-guided WLE of impalpable breast cancer, reducing the mass of specimen removed (with obvious aesthetic implications), the operating time, and the number of repeat procedures to which the patient is subjected.

0782: ANALYSIS OF SOCIAL STATUS AND BREAST CANCER PROGNOSIS USING WELSH INDEX OF MULTIPLE DEPRIVATION AND ACORN CLASSIFICATION: DOES A GAP EXIST?

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Introduction: There has always been an implied association between poor health and social deprivation. Our study assessed whether a gap in patient outcome for breast cancer exists between different strata of society within a geographical region in Wales.

Methods: A retrospective cohort of 745 breast cancer patients was recruited using cancer registry data from January 2008 to February 2011. Welsh Index of Multiple Deprivation (WIMD) along with 4 deprivation categories from the ACORN classification based on patient postcodes were used as a measure of deprivation. Nottingham Prognostic Index (NPI) was used as a marker of patient outcome.

Results: Analysis of WIMD demonstrated no correlation with NPI (coefficient: 0.042, p: 0.25). The incidence of breast cancer was highest (30%) in the least deprived category of patients (20%-26% for the remaining categories). The mean NPI score was 3.1 for the least deprived group (3.2 for other categories). 38% of the least deprived patients had an excellent prognostic outcome (32%-34% for other categories),11% of the least deprived patients had a poor prognosis (9%-11% for other categories).

Conclusions: Our results show no statistically significant difference in either the incidence of breast cancer or outcome from treatment of the disease between different strata of society.

0857: PREDICTING RESPONSE – THE USE OF NEOADJUVANT CHEMOTHERAPY IN BREAST CANCER A 5 YEAR REVIEW

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This study aimed to determine the rate of pCR following neoadjuvant chemotherapy, identify clinicopathologic factors associated with pCR and validate the efficacy of a published nomogram (Neoadjuvant) (1) in predicting pCR .

Data was collected on patients with breast cancer treated with neo-adjuvant chemotherapy at SVUH from July 2006 to July 2011. Patient demographics, tumour clinicopathologic parameters and chemotherapeutic regimens were recorded. Response to neoadjuvant chemotherapy was assessed radiologically and pathologically. Where sufficient data was available the Neoadjuvant nomogram was used to calculate the probability of pCR. Predictive accuracy was assessed by calculating the area under the receiver operating characteristic (ROC).

89 patients were treated with neoadjuvant chemotherapy during the study period. pCR was observed in 14%. Estrogen receptor (ER) negativity and Her2/neu receptor positivity were significantly associated with pCR (p<0.05). All tumours exhibiting a pCR were invasive ductal carcinomas. No invasive lobular carcinoma exhibited a pCR to neoadjuvant chemotherapy. The ROC of the validated nomogram in our breast cancer population revealed a value of 0.87.
Clinicopathologic factors including ER and Her2/neu receptor status are associated with response to neoadjuvant chemotherapy. The Neoadjuvant nomogram may be a useful tool in our population of breast cancer patients.

**0920: BREAST RADIO-GUIDED OCCULT LESION LOCALISATION (ROLL): A GOOD ALTERNATIVE TO WIRE-GUIDED LOCALISATION**

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**Aim:** To assess the emerging role of radio-guided occult lesion localisation (ROLL) as a superior alternative to conventional wire-guided localisation methods in the removal of impalpable breast lesions. This project assessed the excision margins and re-excision rates of ROLL and compared them to NICE-based wide local excision (WLE) standards.

**Method:** Data was collected on a retrospective basis for all patients who underwent the ROLL-guided removal of screen-detected and incidental non-palpable breast cancers from July 2009 to July 2011. Benign tumours and lymphoma(s) excised using ROLL were excluded.

**Results:** A total of 76 cases were examined. The re-excision rates using the ROLL technique with a <2 mm excision margin stood at 7 cases (9.2%) overall, but this included 4 patients (5.2%) with multi-focal disease undergoing mastectomy. Only 3 patients (3.9%) required further WLE as the only procedure. This is well below the NICE guidelines of re-excision rates for WLE of 13 - 15% of similar margins.

**Conclusion:** The ROLL technique for the management of non-palpable breast lesions does effectively show better results as compared to wire-guided procedures. Further research is necessary to establish the exact role of ROLL.

**0981: WHEN SHOULD WE CONSIDER CONTRALATERAL PROPHYLACTIC MASTECTOMY IN BRCA1/BRCA2 NEGATIVE FAMILIAL BREAST CANCER PATIENTS? A STUDY OF HISTOPATHOLOGICAL PATTERNS**

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**Aims:** Little is known on the management of BRCA1/BRCA2-negative familial breast cancer. This study aims to characterize histopathological data on these patients in order to help in predicting the likelihood of contralateral breast cancer.

**Methods:** A 5-year retrospective study was performed on patients referred to the National Centre for Medical Genetics in Ireland from 2007-2011 for genetic testing. Clinical and histopathological reports were collected from high-risk patients (Manchester score ≥16) negative to BRCA1/BRCA2 (N=179).

**Results:** 42/179 (23%) high-risk BRCA1/BRCA2-negative patients had bilateral breast cancer. 22/42 (52%) were moderate to high grade, 20/42 (47%) were ER+, 6/42 (14%) were HER2+ and 4/42 (10%) were triple negative. Interestingly, only 7/42 (16%) of these tumours were lobular carcinoma.

**Conclusion:** BRCA1/BRCA2-positive breast cancer patients are considered high-risk and offered bilateral prophylactic mastectomies. However, these patients only account for a small proportion of familial breast cancer. Despite intensive efforts, the discovery of additional breast cancer predisposing genes to account for the large proportion of familial breast cancer has so far been unsuccessful. Therefore, efforts should be made to create a scoring system to predict the likelihood of bilateral breast cancer in this patient group through histopathological data in a larger scale multinational study.

**0992: COULD A PROPORTION OF FAMILIAL BREAST CANCER PATIENTS TESTING NEGATIVE TO BRCA1 AND BRCA2 IN FACT BE FALSE NEGATIVES IN THE REPUBLIC OF IRELAND?**

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**Aim:** The National Centre for Medical Genetics (NCMG) provides genetic testing for familial breast cancer patients throughout Ireland. We performed an audit of BRCA1/BRCA2-negative familial breast cancer patients and assessed their characteristics.

**Methods:** BRCA1/BRCA2 genetic testing data was collected prospectively since the NCMG service was first introduced in 1998 to present. In addition, we collected histopathological data on patients from 2007 to 2011 and performed a literature review on BRCA1/BRCA2-positive breast cancer histological data from previous international reports to compare it with our Irish cohort.

**Results:** Since 1998, 618 high-risk affected breast cancer patients were referred to the NCMG. Only 16% tested positive for BRCA1/BRCA2 germline mutations. According to the literature, BRCA1-positive tumours tend to be triple negative and of high grade. In 179 affected patients negative to BRCA1/BRCA2, 26/179 (15%) were triple negative, 41/179 (23%) were high grade and 10/179 (6%) were both.

**Conclusion:** International statistics show that the susceptibility genes BRCA1 and BRCA2 comprise 25% of familial breast cancer. However, in Ireland, we show that only 16% are tested positive for BRCA1/BRCA2 mutations at the NCMG. Our next step will be to perform next generation DNA sequencing on invited participants in order to address this clinically important question.

**1018: ROLE OF MRI IN INVASIVE BREAST CANCER**

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**Aim:** To study the effect of preoperative breast MRI on change of surgical management in invasive breast cancers.

**Methods:** Retrospective study of patients(pts) with invasive breast cancer who underwent a preoperative breast MRI between Jan ’09 and Dec’11. Data collected included demographics, radiological investigations, surgical treatment & histology.

**Results:** 79pts. with a mean age of 58.6years were included. 24 pts. underwent breast conservative surgery, 55 pts. had mastectomy. Mean histological tumour size was 32.5mm. There was a significant difference between MRI size of tumour (mean 36.5mm) and the histological size (mean 31.3mm) (p=0.19). A significant difference was found between the mammogram(MMG)/Ultrasound(US) size (mean 19.7mm) and the MRI size (mean 34.5mm). 31.2% had ≥2cm discrepancy between MMG/US and MRI and 56.2% had >1cm, 29.2% were multifocal. Discrepancy of ≥2cm between MRI and histology was seen in 19.2% and >1cm in 24.4%, 55.9% were multifocal. 31pts (39.2%) had a change in the operative plan because of a new ipsilateral multifocality (16pts.), contralateral cancer (1pt) or larger cancer (12pts). Two pts had both a new multifocality and a contralateral breast cancer. 84% of those had lobular breast cancer.

**Conclusion:** MRI plays a major role in detecting additional cancers bigger size and in planning course of treatment especially in lobular cancers.

**1052: WHAT IS THE COST-EFFECTIVENESS FOR MAMMOGRAMS FOR DETECTING BREAST CANCER RECURRENCE COMPARED WITH THOSE FOR BREAST CANCER SCREENING?**

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**Background:** There are limited NICE guidelines regarding follow-up after breast cancer surgery. At Charing Cross, London patients are followed up with yearly clinical and mammographic assessment for 5years. The aim of this audit is to determine if annual mammographic follow-up for breast cancer is cost effective compared to screening mammography.

**Methods:** A retrospective audit, for breast patients cancer undergoing surgery during 2005 at Charing Cross Hospital, London. Data collected included operative procedures performed, length of follow-up, and recurrence (method of detection for recurrence) and survival rates. Data was compared to the pick-up rate NHS Breast Screening Programme(NHSBSCP) Audit2008-2009.

**Results:** 269patients underwent surgery from January-December 2005, full data collection was possible on 213patients. Average follow up was 4.68years, which equates to 996mammograms(£34860). During this time there have been 25deaths and 28recurrences. Of the recurrences, 5were detected by follow up mammogram only. The NHSBSCP detected 17,045 cancers from2008-2009. 199 follow-up mammograms(costing £6965)