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 - 19% of similar margins.
57% of patients had the tumour size up-scaled from the ultrasonic measurement on final histology.
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 $\geq$2cm discrepancy between MMG/US and MRI and 56.2% had $\geq$1cm, 29.2% were multifocal. Discrepancy of $\geq$2cm between MRI and histology was seen in 19.2% and $\geq$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(NHSBCSP) 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 NHSBCSP detected 17,045 cancers from2008-2009. 199 follow-up mammograms(costing £6965)

were required to detect one cancer, while 124 screening mammograms(costing £4340) were required to detect one cancer.
Conclusions: Routine annual mammograms for breast cancer recurrence are less cost effective than those for the NHSBCSP. Stratified follow up or less frequent mammograms should be considered for detecting recurrence.

1057: DO YOUNG WOMEN WITH CLINICALLY AND RADIOLOGICALLY BENIGN BREAST LUMPS REQUIRE BIOPSIES?

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Aim: Women <25 years with clinically and radiologically benign breast lumps do not require a biopsy in accordance with RCR guideline 2010.
Methods: A retrospective audit of all women under 30 years having a breast biopsy at SWBH NHS Trust between Jan 2000 and Dec 2010. Clinical, radiological and histological data were compared.
Results: 864 patients were identified from the pathology database, 612 had FNAC and 252 had core biopsy. 544 patients had full data sets available for analysis. 91.2% (496) were p2 u2, all were confirmed b2 histology. 7.2% (39) were p2+ u3 with histology downgrading all of them to b2. 1.7% (9) were p3+ u3+ and histology graded them as b4+. 61.4% (334) of the dataset < 25years old. 10 cancers were detected, 1 <25 yrs (P2 U2), 9 >25yrs all suspicious clinically and radiologically.
Conclusions: 91.2% of biopsies could have been avoided. Clinical and Radiological findings show a high correlation < 30 years. Only 0.18% (1) showed a discrepancy from the guidelines. 8.8% of the patients would have required biopsies in keeping with the guidelines; a substantial saving in psychological stress to patients, financial cost and manpower time.

1071: IMPROVING THE SERVICE FOR PATIENTS WITH BENIGN BREAST BIOPSY RESULTS: LESSONS LEARNT FROM A BUSY DISTRICT GENERAL HOSPITAL

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Aims: In 2005 the NHS Breast Screening Programme published guidelines recommending that 90% of breast biopsy results should be given to patients within a week.
We set up a Consultant-led telephone biopsy results service in response to a recent questionnaire study that demonstrated 77% of our patients did not want a follow up appointment if their biopsy result was benign. Our experience and audit results are presented below.
Methods: Retrospective analysis of 25 under 35 year clinic patients with benign histology between August 2009 and February 2010, and prospective analysis of 35 patients identified as suitable for telephone results in July 2010.
Results: Between August 2009 and February 2010 the average wait from appointment to the patient receiving benign biopsy results were 25 days (16-61). 0% of patients were informed within a week. The average wait for results via telephone call was 6 days (2-12), with 88% (31/35) receiving results in 7 days or less.
Conclusions: There was a significant reduction in patient wait for benign histology results after the introduction of a Consultant-led telephone service, which approached the NHSBSP target of 90%. This has reduced patient anxiety, clinic attendances and net departmental workload with resultant financial savings.

1077: AN ANALYSIS OF EMERGENCY ADMISSIONS RELATED TO PRIMARY BREAST SEPSIS: A THREE-YEAR STUDY

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Aim: Factors related to emergency admission of primary breast sepsis are not well known. We aimed to evaluate any such underlying factors.
Method: Analysis of all emergency breast-related emergency admissions from 1st January 2009 to 31st December 2011 was performed retrospectively. Statistical analysis was performed using SPSS 16.0.
Results: Some 140 breast-related emergency admissions took place over a three year period. A total of 89 admissions (59.7%) were due to primary breast sepsis (either cellulites or abscess, unrelated to any recent breast intervention). Patients with primary breast sepsis were significantly younger (40.9±16.1 years), compared to those who were admitted with other breast emergencies (such as haematoma, postoperative wound infection, pain, seroma, etc.) (53.4±15.0 years) [p<0.001]. Monthly occurrence of primary breast sepsis was highest in July (n=14) and lowest in September (n=3) [p=0.06]. Seasonal occurrences of primary breast sepsis were as follows- winter (18), spring (20); summer (29) and autumn (22) [p=0.29].
Conclusions: Incidence of primary breast abscess requiring emergency admission remained moderate and peaked in July and summer. Patients with primary breast sepsis were significantly younger than those without. These may improve our current understanding and have implications on service provision.

1079: AN AUDIT OF PRE-OPERATIVE AXILLARY ULTRASOUND ASSESSMENT IN BREAST CANCER

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Aim: To assess the sensitivity and specificity of pre-operative axillary ultrasound in predicting lymph node metastases in breast cancer.
Method: A retrospective review of patients undergoing surgery for breast cancer over a 12-month study period was undertaken. Data was collected on pre-operative lymph node radiology, cytology and histopathology and correlated with post-operative histological nodal status.
Out of 93 patients, 31 had radiologically abnormal axillary ultrasound scans (group 1) whilst 62 were normal (group 2).
In group 1- 2 patients underwent ultrasound-guided biopsy of node, 3 underwent sentinel lymph node biopsy (SLNB), 28 underwent primary axillary node clearance (ANC) and 1 underwent secondary ANC (following SLNB).
In group 2- 47 underwent SLNB, 15 underwent primary ANC and 11 underwent secondary ANC
Results: In group 1, 87% of patients had involved nodes compared with 39% of patients in group 2. This data gives the sensitivity of ultrasound scan of the axilla as 52.9%, a specificity of 90.5%, positive predictive value of 87.1% and a negative predictive value of 61.3%.
Conclusions: Isolated ultrasound assessment of axillary lymph nodes has an unacceptably low sensitivity, although specificity is high. Sensitivity may be improved by combining pre-operative imaging with guided lymph node biopsies.

1093: INVESTIGATING THE IMPACT OF NEOADJUVANT CHEMOTHERAPY AND HERCEPTIN ON THE SURGICAL MANAGEMENT OF PATIENTS WITH INVASIVE BREAST CANCER

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Aims: Neoadjuvant Chemotherapy(NCT) is indicated in locally aggressive invasive breast cancers. The aims of this study are to audit the surgical management of patients managed with NCT, including Herceptin, in a tertiary referral centre in the west of Ireland, and to assess the impact of receptor status on response to chemotherapy.
Methods: The cohort studied included all patients assigned to NCT between 1999-2010. Data regarding patient demographics, tumour characteristics, nodal management, final pathological score and outcome was obtained from a prospectively maintained database. Analysis was completed using PASWv18.
Results: 152 patients were assigned to NCT including 5 with bilateral disease. Following chemotherapy, 140 patients underwent Axillary Clearance(AXCn), of which 53 were negative. NCT was found to be effective in 77.9% of patients, 29.3% having a complete pathological response, and a further 48.6% having partial response. Breast Conservation was facilitated in 42 patients(28.57%). Luminal-A subtype was the molecular subtype most often associated with a poor response (30.14%), while all those positive for Her-2 receptor had at least a partial response, 50% a complete response.
Conclusion: AXCn in this cohort remains controversial, with 38% of patients assigned to AXCn with no additional positive lymph node yield. Those patients treated with chemotherapy targeting Her2-receptor had a better response than Her2-negative patients.