92 patients with VAB diagnosis of either AH or in IN, as well as in all 39 IC. Hystologic exam on operatory specimen as compared with VAC diagnosis demonstrated: IN in 8 of 38 cases diagnosed as AH; IC in 11 of 54 cases diagnosed as IN. Thus, false negative (FN) rate of VAB diagnosis in our series was 21% in AH and 20.3% in IN, respectively. Nevertheless, second surgery for radicalization was needed only in 3 of 19 (15.8%) understaged patients.

Conclusions: Our experience confirms the already reported data of a lower, as compared with other non-surgical diagnostic means, but not negligible FN rate in case of VAB diagnosis of either AH or IN. Given that surgical excision is mandatory after VAC finding of AH to confirm benign lesion, we found that preoperative understaging of both AH and IN has low clinical relevance.

54 Poster

Bilateral breast cancer – an Asian perspective

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Background: Bilateral breast cancer is rare with a worldwide incidence of 0.8−20% based on Western data. There is limited publication of this in an Asian population. Singapore has one of the highest incidences of breast cancer in Asia. A study was conducted to evaluate the histological features and treatment of bilateral breast cancer in Asian women.

Materials and Methods: A retrospective review of a prospectively collected breast cancer database was performed. Between 1992 to 2007, 1326 women were treated for breast cancer at Changi General Hospital, Singapore. Of these, 52 were found to have bilateral breast cancer. The clinical and histological features and treatment were analysed. Contralateral breast cancer diagnosed within three months of the primary was taken to be synchronous whereas those presenting after three months was considered metachronous carcinoma.

Results: The incidence of bilateral breast cancer was 4.0%. There was a predominance of Chinese women (78.8%) compared to the national demographics. The mean age of diagnosis of the primary carcinoma was 55.3 years while the second was 57.5 years. There were 26 patients with synchronous bilateral breast cancer (SBC) and 26 with metachronous bilateral breast cancer (MBC).

The most (71.2%) common presentation of the primary was a lump. While most (46.3%) of SBC presented with mammographic abnormality, the majority (65.4%) of MBC presented as a palpable lump. The most common histology was invasive ductal carcinoma (55.8% primary cancer and 57% second cancer). A larger proportion of MBC (84.0%) had early stage primary carcinoma compared to SBC (70.8%).

SBC had a lower level of positive hormone receptor status (68.4%) compared to MBC (84.2%). However, SBC had a higher HER-2 receptor positivity (34.6%) compared to MBC (19.2%). Majority underwent simple mastectomy for both breasts (primary cancer 59.6% and secondary cancer 69.2%). Systemic adjuvant therapy was based on the side with the higher stage.

Conclusions: Bilateral breast cancer is rare in the Asian population with the highest incidence amongst Chinese women. Synchronous breast cancer have lower hormone receptor positivity but higher HER-2 receptor positivity compared to MBC.

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Non-malignant papillary lesions of the breast at a US-guided directional vacuum-assisted removal – A preliminary report

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Background: To assess that accuracy of US-guided directional vacuum-assisted removal (US-DVAR) in evaluating non-malignant papillary breast lesions.

Materials and Methods: This retrospective study was approved by the institutional review board at our institution; patient consent was not required. We reviewed the clinical and pathologic findings from a total of 39 papillary lesions diagnosed at vacuum-assisted removal in 37 patients (age range, 26−60 years; mean age, 44.5 years). Over the follow-up period, we evaluated whether any histologic upgrade occurred and whether or not residual lesions were detected on follow-up imaging.

Results: US-DVAR of 39 lesions yielded tissue that was classified as benign in 35 and atypical in four. Of the 33 lesions that were diagnosed as histologically benign at US-DVAR, two were surgically excised. Both of them yield benign results. Of the 33 benign lesions that were not surgically excised, twenty-eight (85%) was not seen at radiographic follow-up. Of the four lesions diagnosed as atypical at US-DVAR that were surgically excised, all the four were benign. None proved to be malignant. The upgrade rate was 0.0% (95% confidence interval: 0−9%).

Conclusion: Among our patients, diagnosis by US-DVAR of benign papillary lesions proved to be accurate and benign papillary lesions at US-guided directional vacuum-assisted removal do not need to be surgically excised for accurate diagnosis.

56 Poster

MoCo – an image-based retrospective study assisted by electronic image management – an implemented solution at Munich Technical University

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Background: Clinical trials are essential to investigate new diagnostic or therapeutic procedures and their clinical relevance. Information systems are established in clinical routine but clinical trials are often still lacking direct support by electronic systems. Bridging the gap between clinical research and clinical routine, studies are required in a hospital setting. Most studies are paper based and require repeated input of data that already exist in the hospital information system (HIS). Usually, the image data base (if electronically available) is separate from the study data base.

Method: In a collaboration between the Department of Obstetrics and Gynecology, Klinikum rechts der Isar, Technical University of Munich and Siemens Medical Solutions a web-based front-end and back-end integration of different electronical information systems used in clinical routine (SAP/IS-H*Med, SWISSlab, KIS, PACS) as well as a research database was developed. The integrated solution was then implemented to support diagnostic, image-based clinical trials in order to facilitate clinical trials and allow complete data representation within one system.

Two pilot projects using this integrated solution were then started, one phase-II therapy trial (HEDON – Herceptin-Docetaxel-Neoadjuvant) and the MoCo Trial (Motion Compensation).

The MoCo trial focuses on the diagnostic value of motion compensation for MR images using two different motion correction algorithms. Therefore, pseudomized pre-surgically performed contrast enhanced breast MR images of 100 MRI cases performed before breast conserving therapy for staging purposes are stored in a research PACS. The images are analyzed and correlated with the definite histopathological diagnosis by a superreader who describes the findings and writes the results directly into the corresponding eCRF (electronic Case Report Form).

To evaluate the diagnostic value of the motion compensation algorithms, four external readers then perform blinded reading on the set of MR images (with and without applied motion correction algorithms) for each case and store their results in the eCRFs as well.

A special integrated application allows correlating the lesions detected by an external reader with the ones described by the superreader.

Results: The developed system facilitates to easily compare the results of the external readers with the superreader's results. Errors that are traditionally caused by incorrect correlation of images and data entered on paper can be dramatically reduced by electronically linking all images and data (case report forms). Another expected benefit is the comfortable selection of images that are already stored in an existing IT system (clinical routine PACS) for the image based trial.

The result of the first 50 readings will be presented.

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Imaging evaluation of pathological response in breast cancer after neoadjuvant chemotherapy by real-time sonoelastography and MRI

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Background: The evaluation of tumor response and pathological CR (pCR) after neoadjuvant chemotherapy in breast cancer is essential. The goal of the present study was to compare the sensitivity and specificity of real-time sonoelastography (EG) with that of B-mode ultrasound (US) and MRI for prediction of pathological complete response to neoadjuvant chemotherapy in breast cancer.

Patients and Methods: Fifty primary breast cancer patients (T1: 2; T2: 35; T3: 5; T4: 8 cases, median size 32 mm) who underwent standard neoadjuvant chemotherapy following surgery were evaluated with US, EG and MRI before and after chemotherapy. The diagnosis was made by board certified radiologists/doctors. EG (Hitachi EUB-8500, Hitachi Medical Systems, Japan) images were assigned an elasticity score (1 to 5) according to the Tsukuba Elastography Score [1]. Clinical response was categorized as a clinically complete response (cCR, no enhanced lesion by MRI, no mass by US or score 1 or 2 by EG), or residual tumor (score 3 to 5 by EG). The pathological complete response (pCR) was defined as no invasive cancer with or without remaining DCIS.

Results: Breast conserving operation was performed in 37 patients (74%) and mastectomy was performed in 13 patients (26%). Pathological CR was confirmed in 15 patients (30%). The sensitivity and positive predictive value to predict pathological CR was 53.3% and 57.1% by MRI and 73.3% and 68.7% by EG ($p < 0.05$), respectively. The specificity, negative predictive value was 82.8% and 80.5% by MRI and 85.7% and 88.2%, respectively.

Conclusion: The Elastography is a reliable modality and predicted pCR slightly better than MRI. Together with conventional ultrasonography, mammography and MRI, Elastography will improve the surgical management of breast cancer after Neoadjuvant chemotherapy.

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Wednesday, 16 April 2008 12:30–14:30

POSTER SESSION

Epidemiology, prevention, follow-up, management and care

58 Poster

Nab-paclitaxel or docetaxel; as alternatives to conventional paclitaxel for the treatment of metastatic breast cancer (MBC): cost utility analysis from the perspective of the United Kingdom (UK)

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Background: Paclitaxel and docetaxel are commonly used for the treatment of MBC. However, one important drawback in their use, particularly with docetaxel, is their potential for dose-limiting toxicity. To improve the side effect profile and efficacy of paclitaxel, an albumin-bound formulation (nab) was developed (Abraxane®). Clinical trials have demonstrated that n*ab*-paclitaxel is safer and more clinically active than both docetaxel and paclitaxel. To provide health economic data from the perspective of the UK, a cost utility analysis comparing n*ab*-paclitaxel to docetaxel, both as alternatives to paclitaxel was conducted.

Methods: The clinical data were obtained from a meta analysis of randomized trials comparing either n*ab*-paclitaxel (260 mg/m^2 q3wk) or docetaxel (100 mg/m^2 q3wk), to conventional solvent-based paclitaxel (175 mg/m^2 q3wk). Health care resource use for the delivery of chemotherapy and the management of grade III/IV toxicity was collected from a survey of medical oncologists and from the cancer literature. Using the Time Trade-off technique, treatment preferences and utility estimates were obtained from interviewing 35 female oncology nurses from 25 centres across the .

Results: N*ab*-paclitaxel had the most favourable safety profile characterized with the lowest incidence of grade III/IV neutropenia, febrile neutropenia, anemia, emesis and stomatitis. This translated to lower overall costs for managing the grade III/IV side effects of n*ab*-paclitaxel relative to both docetaxel and paclitaxel (£137 vs. £819 vs. £344). Using the median number of cycles administered as reported in the randomized trials and the cost impact of grade III/IV toxicity, the overall cost for n*ab*-paclitaxel would be £7,770 compared to £8,151 for docetaxel and £3,494 for paclitaxel respectively. In the preference assessment, 26 of 35 (74.3%) respondents selected n*ab*-paclitaxel as their preferred agent. As an alternative to paclitaxel, the incremental cost per QALY gained was determined to be more favourable with n*ab*-paclitaxel than docetaxel (£15,700 vs. £22,400).

Conclusions: N*ab*-paclitaxel is safer and less costly than docetaxel in MBC patients. As an alternative to paclitaxel, the National Health Service of the UK must decide if the £15,700 cost per QALY gained represents good economic value. Compared to other new cancer agents (e.g. cetuximab for metastatic colorectal cancer), this seems to be a reasonable proposition.

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Breast care nurse led follow-up is associated with high levels of patient satisfaction

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Background: Following a diagnosis of breast cancer, women commonly enter a physician led follow-up care programme. Published patient perceptions of such follow-up models have included patients feeling hurried, clinic appointments lacking reassurance or continuity and patients feeling uncomfortable about expressing emotional concerns to a doctor. The role of the breast care nurse (BCN) in patient follow-up is starting to be evaluated, and where examined the majority of patients reported a preference to receive their follow-up from a BCN. There is, however, a paucity of published data on patient satisfaction with this method of follow-up.

Materials and methods: Local ethical committee approval was granted for this study. A peer-reviewed, validated questionnaire was given to women receiving BCN led follow-up after diagnosis and treatment for breast cancer. This comprised 47 statements relating to the BCN led follow-up programme, with response alternatives arranged as a five-point scale ranging from “strongly disagree” to “strongly agree”. Questionnaires were distributed to patients attending follow-up clinics in plain, sealed envelopes which also contained a pre-paid and addressed envelope for return. Patients were asked to complete their questionnaires at home following the appointment. Responses from the first 10 questionnaires returned were examined as a pilot study to ensure that the questionnaires had been presented in an intelligible format.

Results: A questionnaire return rate of 92% was achieved (55/60), with most questionnaires fully completed. Respondents had a mean age range of 55−64 (35%). 100% (53/53) of respondents agreed or strongly agreed that they knew who to contact if they had a problem between appointments, and 98% (52/53) felt able to contact the BCN in this situation. 96% (53/53) strongly agreed or agreed that they were given a chance to say what was on their mind and that their views were being fully considered, and 100% (53/53) of respondents agreed or strongly agreed that they felt able to express themselves and ask the BCN questions. Overall, 100% (52/52) agreed or strongly agreed that they were satisfied with their care and 92% (47/51) agreed or strongly agreed that they had had thorough follow-up care (data collection ongoing).

Conclusions: High levels of patient satisfaction with BCN led follow-up are expressed in this study, and these results may identify an important future role for BCN’s within the multidisciplinary breast care team.

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Prognosis and survival of patients with T1a breast carcinoma: a single center retrospective study

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Background: Management of patients with breast cancer $\leqslant$5 mm remains controversial. No clear-cut treatment guidelines are currently available for this increasing population. The aim of this study was to better characterize these tumors and to find prognostic factors.

Methods: We retrospectively studied 247 patients treated at the Bergonié Institute (France) between 1980 and 2006. All patients with breast tumors measuring >0.1 cm and $\leqslant$5 mm (pathological size, pt1a) were included in this study. Patients having bilateral or anterior controlateral invasive breast cancer were excluded. Axillary lymph node dissection was done in 139 patients. Survival curves were evaluated by Kaplan–Meier method and univariate analysis by the logrank test.

Results: Median follow-up was 90.9 months. Overall survival was 96% at 5 years and 94% at 10 years. Distant disease free survival was 98% at 5 years and 94% at 10 years. Distant disease free survival was 98% at 5 years and 97% at 10 years for pT1aN0 versus 68% at 5 years and 57% at 10 years for pT1aN+. In univariate analysis, axillary nodal status, mitotic index, lymphovascular invasion and estrogen receptor status (positive or negative) were significant pronostic factors. ($p = 7.3 \times 10^{-9}$; $p = 0.01$; $p = 0.05$ and $p = 0.05$).

Conclusions: pT1a breast tumors have an excellent prognosis. Axillary nodal status seems to be the strongest prognostic factor. Randomized