between a delegation of the committee and the involved disciplines in the hospital

Conclusions: A quality system for systematic evaluation of the existing care process can be developed. The variations in results of the first round motivate recommendations for improvement of the existing care process. During the evaluation process improvement is already observed. A short term follow-up visit is added to the system aiming at confirmation for sustained improvement in the next rounds.

66 Poster

The validity of the preoperative assessment of tumor extent by MRI in breast cancer surgery

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Background: In breast conserving surgery (BCS) for primary breast cancer, remaining cancer cell may lead to local recurrence and intraductal spreading (IDS) is one of the chief factors for positive surgical margins at BCS. Therefore, it is very important to know the status of IDS preoperatively in breast cancer treatment. A few examinations such as computed tomography, ultrasonography and magnetic resonance imaging (MRI) are popularly used for evaluating tumor, and MRI has been reported as a useful test for detecting tumor and IDS. In the present study, our purpose was to clarify the validity of MRI for preoperative IDS assessment.

Patients and Methods: One hundred ten patients of primary breast cancer, who received both preoperative MRI examination and surgical treatment at Niigata university hospital between 1994 and 2004, were entered into the present study. Among all 110 patients, mastectomy was performed in 52 patients and BCS was performed in 58 patients. The status of IDS evaluated by preoperative MRI (MRI-IDS) was compared with postoperative histological diagnosis of IDS (Hx-IDS), and each sensitivity (ST), specificity (SP), accuracy (AC), positive predictive value (PPV) and negative predictive value (NPV) was calculated for each method. In the BCS cases, the correlation between MR-IDS and histological margin status was also examined. The statistical analysis was performed by chi-square test, and the statistical significance was defined as $p < 0.05$.

Results: The ST, SP, AC, PPV and NPV of DS-MRI for all patients was 77.6%, 73.8%, 75.5%, 70.4% and 80.4%, respectively. In the cases of BCS, the ST, SP, AC, PPV and NPV was 83.3%, 86.5%, 86.2%, 41.7% and 97.8%, respectively. The correlation between MRI-DS and Hx-DS was significant in both, the whole group and BCS cases ($p < 0.001$). In the BCS cases, 5 patients showed positive surgical margin; one patient (16.7%) in MRI-DS positive and four patients (7.7%) in MRI-DS negative patients. Among those 5 patients, 3 patients underwent mastectomy, and the other 2 patients received radiation.

Conclusions: Our results suggest that preoperative MRI is a valuable tool for preoperative IDS assessment, and that MRI is an effective method to decide surgical treatment whether BCS or mastectomy in breast cancer patients.

67 Poster

Delays in breast cancer diagnosis: Does a structured care pathway influence outcomes?

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Background: Delay in diagnosis of breast cancer remains a potential issue for media attention and litigation. It is therefore imperative to accurately confirm or exclude cancer in an efficient manner. A structured clinic pathway has been developed in our hospital to minimize inaccuracies and diagnostic delays. This study aims to assess the efficacy of the pathway for early diagnosis of breast cancer.

Methods: Patients referred to the breast clinic undergo a quintuple assessment of physical examination, mammography (patients > 35 years) and ultrasound guided core biopsy and FNAC by the surgeon during the first visit. Details are entered in the BASO database for future data acquisition. Positive and suspicious lesions are discussed in the multidisciplinary meeting.

Results: Over a 4-year period (Jan 2000 to Dec 2003), 4366 cases were seen in this clinic. A total of 637 patients (15%) were diagnosed to have breast cancer, of which 630 patients had cancer identified during their initial quintuple assessment, or immediate follow up. Diagnosis of breast cancer was delayed only in two patients giving a diagnostic accuracy of 99.8%.During this period of study 5 other patients with benign disease subsequently developed breast cancer. These cases have been reviewed and the subsequent cancers were at different sites or in the opposite breast.

Conclusions: This study highlights that a diagnostic accuracy of more than 99% in detection of breast cancers can be achieved by a structured clinic pathway as followed in our hospital. These results when compared are better than any other published series.

68 Poster

Rapid access breast clinics for the future

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Introduction: While Rapid Assessment Breast Clinics (RABC) can capably diagnose patients symptomatic with breast cancer, they may be criticised on the basis of their resource requirements and cost-effectiveness, therefore, their effectiveness and ways to expand their utility should be investigated and made evident by analysis of performance statistics.

Methods: 1429 women attended our weekly symptomatic RABC over an eighteen month period and thereby underwent full clinical and radiological (breast mammogram +/− ultrasound) ± cytological (Fine Needle Aspiration, FNAC) assessment with risk factor profiling. Our customised, prospectively maintained database has been scrutinised to identify trends and determine future initiatives.

Results: Despite careful triage of referrals, considerable contamination of appointment allotment occurs with many individuals correctly triaged as non-urgent being seen within an "urgent" timeframe. Furthermore, 12.3% of all attenders had at consultation neither the symptom that triggered referral, nor breast lump or nipple discharge nor positive family history of breast cancer. However, of those attending without cancer, 143 had a significantly increased familial risk, which required tailored follow-up, identified that was separate to their reason for referral. Nonetheless 135 of 154 women (87.7%) diagnosed with breast cancer were seen urgently. Same-day triple assessment allowed most patients (92.9%) with cancer to be diagnosed at one attendance despite the fact that on examination 32 (20.8%) of these individuals had either no clinically palpable lump (n = 8, 5.2%) or a clinically benign lump (n = 24, 15.6%) while eight (5.2%) had a normal mammogram. Consultant pathologist input allows high definitive diagnostic accuracy with low FNA discordant and inadequacy rates (5.4% and 4.7% respectively).

Conclusion: With a standardised referral and consultant triage system, RABC reliably categorise malignant versus non-malignant diagnoses and is an efficient method of dealing with symptoms suspicious for cancer. However, the burden of assessing low risk patients without suspicious features and screening high-risk patients should be dealt with in a different forum as they can clutter RABC (expending resources that could be more efficiently utilized elsewhere) without adequately addressing the patients' needs.

69 Poster

Accuracy of breast MRI parametric images in the staging evaluation of pure ductal carcinoma in situ (DCIS)

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Purpose: Parametric breast MR images map quantitatively morphologic and physiologic properties of breast tumors. MES parametric images show areas that most rapidly enhance and are purportedly more specific for neoangiogenetic tumoral tissue. ME parametric images show the areas that enhance the most and are thus less specific. Our purpose was to assess the accuracy of breast MR in the study of ductal carcinoma in situ (DCIS) and to quantify the usefulness of maximum enhancement speed (MES) and maximum enhancement (ME) parametric images in the evaluation of 35 patients with biopsy-proven pure ductal carcinoma in situ (DCIS).

Methods and Materials: 35 patients aged 70 to 30 years (mean 54 years) with core biopsy proven pure DCIS (grades DIN 1c to DIN 3) underwent breast MRI prior to surgery. T1-weighted FLASH 3D pre- and post-contrast images were obtained. Morphologic and semi-quantitative analysis was done in all patients. Analysis of MES and ME parametric images was done with a dedicated software for breast MRI (K-View®, Dimensión Informática, Valencia, Spain). Maximum diameters (MD) were compared in breast MRI MES and ME parametric images exams and in the final histopathological exams and a Pearson correlation coefficient was obtained. When stratified by DCIS grade, 48.5% of the patients were DIN3, 11.4% were grade DIN2 and 40% of the patients were grade DIN1c. We also analysed the breast MRI patterns.

Results: Breast MRI did not show the disease in 3 patients (sensitivity for pure DCIS was 91.4%). MES parametric images were more accurate than ME images, with a Pearson correlation coefficient $r = 0.872$. Correlation coefficients stratified by grade were only significative in grade DIN3 cases for MES images ($r = 0.934$). Correlation stratified by MR pattern for MES images was only significative for the segmental multinodular pattern ($r = 0.902$).