

amplified cases as compared to polysomic 17 or *HER-2/neu* negative cases.

Conclusion: Based on the current findings, we hypothesize that the biological significance of polysomy 17 is different from that of *HER-2/neu* gene amplification in breast cancer. The observation that polysomic 17 cases showed ER and PR expression rates similar to those encountered in *HER-2/neu* negative breast cancers is in line with this hypothesis.

References

- [1] Vanden Bempt I, Vanhentenrijk V, Drijkoningen M, Wlodarska I, Vandenberghe P, De Wolf-Peeters C. Real-time reverse transcription-PCR and fluorescence in-situ hybridization are complementary to understand the mechanisms involved in *HER-2/neu* overexpression in human breast carcinomas. *Histopathology* 2005; **46** (4):431-41.

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Poster

Expression of insulin-like growth factor-1, aromatase and oestrone sulphatase breast cancer tissue

Y.M. Chong, A. Sharma, W. Jiang, K. Colston, K. Mokbel. *St George's Hospital, Cellular & Molecular Medicine, London, United Kingdom*

Aim: Local oestrogen production by Aromatase and Oestrone Sulphatase enzyme (STS) and Insulin-like Growth Factor-1, IGF-1 play pivotal roles in growth stimulation of breast cancer cells. We investigate the influence of the local production of IGF-1 of breast tumours on the expression of these oestrogen producing enzymes.

The Aromatase(Cyp-19 gene), STS and IGF-1 gene expressions in 71 oestrogen receptor positive breast cancer tissue and their corresponding adjacent normal tissue (ANT) were analysed using real-time quantitative-PCR. Their expression levels were compared to that of beta-actin (housekeeping gene). Data was interpreted using Spearman's Correlation test and paired sample T-test.

Results: The mean IGF-1 mRNA levels were higher in ANT than in tumour tissue but this was not statistically significant ($p=0.212$). There was no correlation was found between the tumour tissue and ANT in terms of IGF-1 expression in each case ($p=0.844$). There was an inverse relationship between tumour IGF-1 and tumour STS expression ($p=0.000$). This relationship was also present between IGF-1 expression in ANT and tumour STS expression ($p=0.014$). ANT IGF-1 expression also had an inverse relationship with tumour Cyp-19 expression but this was only marginally significant ($p=0.079$). Tumour expressed IGF-1 did not correlate with tumour Cyp-19 ($p=0.129$).

Conclusion: IGF-1 expression is higher in ANT than in tumour tissue. These results suggests that IGF-1 expression in tumour and ANT may act as downregulators to STS expression and to a lesser degree to Cyp-19 expression.

Thursday, 23 March 2006

16:00-16:45

POSTER SESSION

Pre-operative management

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Poster

Additional work-up of new lesions found in breast MRI for staging purposes in 345 patients with breast cancer

J. Camps-Herrero¹, M. Sentis-Grivellé², V. Ricart-Selma¹, C. Martínez-Rubio¹, I. Martínez-Gómez³, M. Lloret-Martí¹, A. Giménez-Sierra⁴, P. Gonzalez-Noguera⁴, J. Cuevas⁵. ¹Hospital de la Ribera, Radiology, Alzira, Spain; ²UDIAT, Radiology, Sabadell, Spain; ³UDPCM area 10, Radiology, Alzira, Spain; ⁴Hospital de la Ribera, Surgery, Alzira, Spain; ⁵Hospital de la Ribera, Oncology, Alzira, Spain

Purpose: Breast MRI is increasingly being used as a staging tool in breast cancer. Our purpose is to evaluate the additional work-up procedures generated by the integration of this technique in everyday practice.

Material and Methods: We staged 345 consecutive patients with fine needle aspiration biopsy (FNAB) or core-biopsy (CB) proven breast cancer or cancer of unknown origin (CUP) syndrome. T1-weighted FLASH 3D pre- and post-contrast images were obtained. Morphologic and semi-quantitative analysis was done in all patients. Additional lesions with potential change in therapeutic approach were evaluated with second-look ultrasound and FNAB or CB when needed. If necessary, new lesions were localized with a radiotracer (Tc-99m). BIRADS 3 lesions were followed-up

with breast MR. Our gold standard was the pathologic report in all cases. All the procedures were carried out by dedicated breast radiologists.

Results: Additional lesions in the same or contralateral breast were found in 97 patients (28.1%). These lesions were due in part to multicentricity or multifocality in 67 patients (19.4%), also due to contralateral lesions in 25 patients (7.2%), extensive intraductal component in 7 patients (2%) and CUP syndrome in 5 patients (1.4%). Work-up of all these additional lesions originated 89 ultrasound procedures (in 25.7% of patients), 28 pre-surgical localizations with radiotracer (8.1%), 26 FNAB (7.5%) and 16 core-biopsies with 14G (4.6%). Additional breast MR exams were needed in 47 patients with BIRADS 3 lesions. Mean follow-up time was 13.8 months and no malignant new lesions were seen. For multicentric-multifocal disease, sensitivity was 75% (CI 62-83%) and specificity 99% (CI 96-99%). After all the work-up was done, patients were reevaluated and breast MR changed therapeutic approach correctly in 66 patients (19.1%) and incorrectly in 12 patients (3.4%).

Conclusions: Additional lesions are found in almost a third of patients staged with breast MR and work-up of these lesions is cumbersome but it changes therapeutic approach in 1 out of every 5 patients in our series and is therefore recommended in the staging of women with breast cancer.

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Poster

Screen detected breast cancer: is preoperative staging necessary?

T. Eastwood, H. Hamed, N. Beechey-Newman, I.S. Fentiman. *Guy's Hospital, Academic Oncology, Breast Unit, London, United Kingdom*

Introduction: Staging investigation to exclude metastatic disease in patients with early stage Breast cancer is routinely carried out. However such a practice has not often been scrutinised for its clinical value and cost effectiveness. Expectedly the earlier the stage of the disease the lesser the chance of finding evidence of metastatic disease with commonly used methods. Consequently the use of routine preoperative investigations may be of little value but adding more financial strain on already stretched resources. This instigated the current study to evaluate the benefit of commonly used tests, full blood count (FBC), liver functions (LFS) and chest x-ray (CXR) as preoperative staging in women with mammographically detected breast cancer diagnosed by pre-operative core biopsy.

Methods: The results of routine preoperative investigations, FBC, LFS and CXR in patients with mammographically detected breast cancer were reviewed. Breast cancer diagnosis was established preoperatively by core biopsy. Patients with palpable tumours and those who had investigations for symptomatic reasons were excluded from the study.

Results: Total of 146 patients with mammographically detected breast cancer were included in the study. Patients aged between 37-90 years. One hundred and sixteen cases had invasive carcinoma and 30 had DCIS only. In those with invasive disease histological tumour size ranged from 1.8mm to 30mm. Twenty cases had axillary node involvement. Tumour grade was I, II and III in 36, 49 and 27 cases respectively. Four cases could not be graded because of small tumour size. There was no evidence of metastatic disease detectable on preoperative staging in any of these patients.

Conclusion: This study does not support the routine practice of pre-operative staging in patients with mammographically detected breast cancer. Therefore routine bloods and chest x-ray should not be carried out in this cohort of patients. Omitting these tests not only preclude wasting valuable resources but should also have positive financial implications.

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Poster

Prevention of wound infection in breast cancer surgery with a strategy based on administration of antibiotic prophylaxis in patients at high risk of wound infection occurrence

N. Penel^{1,2}, Y. Yazdanpanah^{2,3}, M. Chauvet⁴, S. Clisant⁵, S. Giard⁴, J. Neu⁶, D. Lefebvre⁷, C. Fournier⁶, J. Bonnetiere⁴. ¹Oscar Lambret Cancer Centre, General Oncology Department, Epidemiology and Biostatistics Department, Lille, France; ²Hospital, Infectious Diseases Department, Tourcoing, France; ³Oscar Lambret Cancer Centre, Breast Cancer Department, Lille, France; ⁴Oscar Lambret Cancer Centre, Clinical Research Unit, Lille, France; ⁵Oscar Lambret Cancer Centre, Hygiene Unit, Lille, France; ⁶Oscar Lambret Cancer Centre, Anaesthesia and Algology Department, Lille, France; ⁷Oscar Lambret Cancer Centre, Biostatistics Unit, Lille, France

Background: In a previous study, we showed that neoadjuvant chemotherapy and immediate breast reconstruction were associated with an increased risk of wound infection (WI) in patients undergoing breast cancer surgery. The objective of this study was to evaluate the impact on WI occurrence of a preventive strategy based on administration of