were assessed by univariate analysis (Log Rank test) and multivariate analysis (Cox model). Median follow-up was 150(147–152) months.

Results: By univariate analysis, age[(≤40 vs >40 yrs) p = 1.6 10−7], tumour size [(≤20 vs >20 mm) p = 1.1 10−15], modified SBR grade [p = 4.5 10−10], peritumoral vascular emboli [p = 8.9 10−13], N status [p = 4.6 10−13], ER [(<10%vs ≥10%) p = 0.01], PR [(<10% vs ≥10%) p = 0.003], Her2neu [(0+ vs 2+ and 3+) p = 0.0003] and Mib1 [(<20% vs ≥20%) p = 7.5 10−8] were significantly associated with probability of metastasis.

By Cox analysis, the final model showed as independent factors, tumour size [OR = 2.16(1.63–2.86) p < 10−3], vascular emboli [OR = 1.8(1.38–2.42) p < 10−3], N status [OR = 1.8(1.35–2.45) p < 10−3], age [OR = 1.8(1.24–2.67) p = 0.002], Her2neu [OR = 1.58(1.09–2.29) p = 0.015] and grade [OR = 1.7(1.04–2.75) p = 0.03]. Mib1 was selected in this model but was not statistically significant [OR = 1.31(0.96–1.79) p = 0.08].

Conclusion: Mib1 may represent an alternative to grade for prognostication in breast cancer however it did not surpass this factor in this series.

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B3 or B4 core breast biopsies: Are they indeterminate?

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Introduction: Histological diagnosis is essential in definitive management of breast lesions. However, a small proportion of core biopsies are reported in the uncertain categories (B3 & B4), which can lead to therapeutic dilemmas for the clinician. Our study aims to evaluate the predictive value of these indeterminate biopsies.

Methods: A prospectively maintained BASO database was used to identify patients with B3 or B4 breast core biopsies between Jun-02 and May-05. The retrieved data was analysed using MS Excel®.

Results: Thirty-three patients (21 B3 and 12 B4) were identified during this 3-year study period. The median age was 60 years and in 30 patients, a breast lump was the primary symptom at presentation.

Excision biopsy was performed in 22 patients. Seventeen patients (6 B3 & 11 B4) were identified to have invasive breast cancer or DCIS on subsequent assessment, yielding a positive predictive value of 29% (B3) and 92% (B4).

Patients with age > 70 years seemed to have an increased incidence of invasive cancer. Malignancy was more likely when associated with a high clinical and radiological (P4/5; R4/5) score. It was also evident that FNAC complemented the diagnostic accuracy of core biopsies.

Conclusion: The positive predictive value for diagnosing malignancy is high following a B4 core biopsy and in patients over 70 years. Also, diagnostic accuracy is superior in the presence of a high clinical, radiological and/or cytological score. Further biopsies or advanced imaging may be essential prior to definitive management in these indeterminate lesions.

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The histopathological profile of gestational breast cancer

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Few studies have reported on the pathology of gestational breast cancer (GBC) and most have been limited to a basic description. The only reported case-control study was very small (n = 27). It has been reported that GBC is more aggressive, with low expression of hormone receptors.

The aim of this study to establish whether there were any pathological characteristics identified that are unique to gestational breast cancer and which can be related to the disease outcome.

A comparison was made between the pathology from women diagnosed with GBC and women age and date of diagnosis matched diagnosed with non-GBC. GBC cases were identified from the Western Australian Gestational Breast Cancer Project and the non-GBC cases were identified from the PathWest archives. The pathology specimens were retrieved, re-reviewed and where necessary re-staining for hormone receptors was undertaken.

One hundred and twenty (120) GBC cases and 240 non-GBC cases were identified. Tumour size for the GBC cases ranged from 1 to 120 mm (median 20 mm) and lymph node positive status was similar for GBC cases (55%) and non-GBC cases (53%). Proportionally more GBC cases (69%) were histological grade III than non-GBC cases (57%). Analysis of the data continues and will be reported at the conference.

Our preliminary results conclude that women with GBC do have a more aggressive phenotype.

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Expression of estrogen receptors alpha and beta (ERa and ERb) and progesterone receptor (PgR) in male breast cancer

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Background: Male breast cancer (MBC) is a rare disease, accounting for only 1% of all breast cancers. Therefore, carcinoma of male breast has not been studied as extensively as carcinoma of the female breast (FBC). Steroid hormone receptors are more frequently positive in MBC than in FBC. The identification of the second human estrogen receptor, ERβ, raised a question of its role in male breast cancer.

The aim of this work was to determine the extent of ERβ expression in male breast cancer and to determine if ERβ expression is correlated with some clinical parameters and biological markers.

Material and Methods: Formalin-fixed, paraffin embedded breast cancer tissues from 28 male patients were used in this study. Immunostaining for ERa, ERβ and PgR (progesterone receptor) was performed using monoclonal antibodies against ERa, PgR (DakoCytomation), and against ERβ (CHEMICON). The EnVision detection system was applied. The study population comprised a control group of 120 women with breast cancer who had been operated in our clinic. The data were analyzed using a nonparametric Fisher-Freeman-Halton test; the statistical significance was considered when $p < 0.05$.

Results: MBC: 67% of tumors were ERa positive, 78.6% were PgR positive and 64.3% were ERβ positive; FBC: 57.5% of tumors were ERa positive, 64% were PgR positive and 55% were ERβ positive. As many as 14% of both MBC and FBC of ERβ positive tumors showed no expression of ERa. In male breast cancer correlations between tumor size, lymph nodes status, grade of malignance, p53, Ki-67 and expression of ERβ were not significant.

Conclusions: The expression of ERβ, like this of ERa, was more frequently positive in MBC than in FBC. In male breast cancer the expression of ERβ was also present in a noticeable proportion of ERa negative tumors. It may eventually result in new strategies in the hormonal treatment of male breast cancer.

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Metastatic models in different histologic types of breast lobular carcinoma

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There are several histological types of invasive lobular carcinoma (ILC): classical, alveolar, solid, pleomorphic, and tubulo-lobular. To determine whether the metastatic pattern was related to histologic subtype, we retrospectively analyzed a series of 72 cases of metastatic ILC. Tumors were classified in classical or variants forms. Estrogen receptor (ER), progesterone receptor (PR), E-cadherin, and ERB-B2 were assessed in 50 cases. The patterns of metastatic sites were analyzed in the different groups. 68% of cases corresponded to the classical type of ILC. The histologic variants included 23% pleomorphic carcinomas, 4% tubulo-lobular carcinomas, 3% alveolar carcinomas and 2% solid carcinomas. The metastatic sites were axillary lymph nodes (85% of cases), non axillary lymph nodes (8.06% of cases) and ovary (6.99% of cases). No significant corespondence was found between metastatic patterns and histology or E-cadherin expression. No relationship between histologic subtypes and specific patterns of dissemination was observed in this series of metastatic ILC. A high rate of pleomorphic type was found as compared with that observed among ILCs at diagnosis. A high rate of E-cadherin loss was found in metastatic ILCs, which corresponds to complete loss of E-cadherin expression in over 80% of ILCs documented in the literature. The lack of E-cadherin expression found also in metastases emphasized the adverse outcome of the disease.

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Intraoperative imprint cytology for evaluation of sentinel lymph node in breast cancer

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Introduction: Sentinel lymph node (SLN) biopsy in patients with breast cancer has emerged as a conservative and promissing procedure. One of the most important issue is the evaluation intraoperative of the SLN with a high degree of accuracy. Frozen section and/or imprint cytology can be