MIB-1 [21.6%], ER [58.8%], and PGR [54.4%]), expressed as median values, are reported in Figure 1. There was a significant relationship between (1) size and both age (R = 0.16, p = 0.005) and ER (R = −0.15, p = 0.011), (2) CEA and CA 15−3 (R = 0.19, p < 0.001), (3) PGR and ER (R = 0.52, p < 0.001), and (4) an inverse relationship between PGR and age (R = −0.15, p = 0.008), size (R = −0.23, p < 0.001), and MIB-1 (R = −0.15, p = 0.009). A weak correlation (R = 0.11, P = 0.046) between age and CEA was also found.

Conclusions: There was no relationship between preoperative serum tumor markers CEA and CA 15−3, and routine prognostic markers ER, PGR and MIB-1, which mainly inversely correlate with age of the patients, and size of the tumor.

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Prognostic factors in Mexican young women with breast cancer

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Background: Many epidemiologic studies have demonstrated that younger women with breast cancer have a worse survival than older women, which may potentially be related to more aggressive tumor biology. We studied the prognostic factors in Mexican young women with breast cancer.

Materials and Methods: Retrospective study of 136 Mexican women under 40 years with breast cancer (BC). We assessed inmunohistochemistry (IHC) studies for estrogen receptor (ER), progesterone receptor (PR), the results were scored by HScore previously described. HER-2/neu were scored positive with score 3 and score 2 was amplified by FISH with HER-2/neu CEP 17 probes (ratio $\geqslant$2.2). Clinical and pathologic features and survival were compared. Data were analyzed with the statistical package SPSS 17.

Results: Mean age was 36 years. Ductal carcinoma was observed in 87% of cases, lobular carcinoma 10.3% and others 2.2%. The percentage of stage I was 10.3%, stage II 35.3%, stage III 44.1%, stage IV 10.3%. RE was positive in 47.1% of tumors, RP 39%, HER2neu 22.8%. Tumors with HSCORE $\geqslant$200 for ER were 5.9% and PR 6.6%. High histological grade was related with tumors RE negative (p = 0.01) and RP negative (p = 0.046). Triple negative cancers (TPN) were 31% (IC95% 27.3–34.5). Median follow-up was 37.6 months. Overall 5-year and 10-year survival (OS) rates were 83.8% and 69.9% respectively. Factors associated with OS decreased in univariate analysis were advanced stage (p = 0.05), RE negative (p = 0.05), RP negative (p = 0.004), age <30 (p = 0.001), TPN (p = 0.007). After multivariate anlysis only age <30 (p = 0.001) was revealed to be independent factor for OS. The OS in patients with tumors HScore >200 was 100%.

Conclusions: TPN tumors are frequent in these patients (31%). Age <30 years is considered the only independent factor of bad prognosis in mexican women under 40 years with breast cancer.

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QuantiGene 2.0® assay for measurement of ER and PR in breast cancer

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Intoroduction: Estrogen receptor (ER) and progesterone receptor (PR) status has been used as an indicator of endocrine responsiveness and as a prognostic factor for breast cancer. At present, IHC assessment of ER and PR is recommended as standard method. However, unfortunately interlaboratory variability with IHC assessment of ER, PR is relatively high in clinical practice. The QuantiGene 2.0® assay has lower interlaboratory variability and could measure amount of RNA directly without a reverse transcription step and polymerase chain reaction process. To evaluate the utility of QuantiGene 2.0® assay for assessment of ER and PR as an alternative to immunohistochemistry (IHC), we compared disease free survival according to the quantitative expression level of ER and PR between IHC method and QuantiGene 2.0® assay method.

Materials and Methods: 171 patients who underwent breast cancer surgery between January 2003 and December 2006 were collected at Seoul St. Mary's Hospital, the Catholic University of Korea. IHC and QuantiGene 2.0® assay was done for assessment of ER and PR. Cox-proportional hazard analysis was done and concordance between IHC and QuantiGene 2.0® assay for assessment of ER and PR was evaluated.

Results: Between IHC and QuantiGene 2.0® assay result of assessment for ER and PR both were well correlated (kappa value was 0.110 and 0.115 respectively). Disease free survival difference according to the expression level of ER was not significant in both IHC and QuantiGene 2.0® assay (p-value = 0.263, 0.514 respectively). In contrast, Disease free survival difference according to the expression level of PR was statistically significant in both group (p-value = 0.001, 0.045 respectively).

Conclusion: Although, we did not show the superiority, QuantiGene 2.0® assay for quantitative assessment of ER, PR showed similar results for response to treatment compared with IHC. So, our data for validation to the treatment response could support that QuantiGene 2.0® assay might be worthwhile alternative of IHC which is considered standard for evaluation of ER and PR.

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HER2/neu receptor positivity and its correlation with other prognostic and predictive factors of breast cancer

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Background: There is consistent evidence in the literature, that overexpression of HER2/neu is associated with a worse clinical course in both node-positive and node-negative breast cancer patients. The objective of this study was to explore the relationship between HER2/neu receptor positivity and estrogen receptor status (ER), progesterone receptor status (PR), grade, tumor size, axillary nodal involvement and age in female breast cancer.

Materials and Methods: During 2005–2008, 346 consecutive female patients with invasive breast carcinoma, 307 ductal and 39 non-ductal, in which HER2/neu overexpression has been evaluated, were reviewed retrospectively. Each patient was further assessed for ER, PR, histological grade, tumor size, nodal status and age at diagnosis. Immunohistochemistry (IHC) was used to define ER, PR and HER2/neu expression status. HER2/neu was scored positive, if a 3+ immunostaining intensity result was found or amplified gene expression was present on fluorescence in situ hybridization (FISH). Statistical analysis (Chi-square and Levene's T-test) was performed using the SPSS software (Statistical Package for the Social Sciences − version 15.1). P-value of less than 0.05 was considered significant.

Results: The observed frequencies were significantly higher between HER2/neu overexpression and high tumor grade (p = 0.002), positive nodal status (p = 0.017), large tumor size (p = 0.007), ER negative (p < 0.001) and PR negative (p < 0.001) receptors in our series.

Conclusions: In summary, in this study of 346 cases of infiltrating breast carcinomas a statistically significant association was established between HER2/neu overexpression and histological grade, tumor size, ER, PR and nodal status. No statistically significant association was found between HER2/neu receptor positivity in relation to histological type and patients' age at presentation.

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Typical medullary carcinoma of the breast: experience of a single institution

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Background: Typical medullary carcinomas (TMC) of the breast account for less than 10% of all invasive breast cancers. Despite their aggressive histological features (hormonal receptors (HR) negative and grade 3), the prognosis of these tumours is generally favourable.

The aim of this retrospective study was to evaluate clinical and pathologic features, overall (OS) and disease free survival (DFS) in a population with TMC.

Methods: We reviewed all cases of TMC admitted at Instituto Português de Oncologia-Porto, between January/1985 and August/2009. We characterised TMC in terms of clinical and histopathological factors. Outcome was evaluated for OS and DFS, which were illustrated with Kaplan-Meier plots.

Results: We identified 29 cases of TMC. The average age was 54 (range from 23 to 82) years old; 62.1% were treated with modified radical mastectomy and 37.9% with conservative surgery; 65%, 55.2% and 24.1% undergo adjuvant chemotherapy, radiotherapy and hormonotherapy, correspondingly; 24.1% were stage I and 62% were stage II; 86.2% were