

## Session A. Breast cancer

### A70 Factors affecting recurrence risk in her2 positive dcis

P. Di Cesare, L. Pavesi, L. Villani, M. Frascaroli  
IRCCS Fondazione Salvatore Maugeri, Pavia

**Background:** The aim of this study is to evaluate the prognostic role of human epidermal growth factor receptor 2 (HER2) overexpression in patients affected by ductal carcinoma in situ (DCIS).

**Patients and methods:** We evaluated 48 cases of DCIS, divided in two groups according to HER2 amplification status. Nuclear grade and “Retrograde-Lobular-Cancerization” were determined within primary DCIS and Ki67, ER, PR and HER2 expression was established using immunohistochemistry (IHC). The histopathological variables in HER2-positive and in HER2-negative patients were compared to determine the recurrence risk. We also considered the median age at the time of surgery according to HER2 status.

**Results:** There were 11 recurrences (23%), 6 DCIS (55%) and 5 invasive cancer (45%). In a 8 years long median follow-up, we hypothesized high risk of recurrence in HER2-positive DCIS. Patients with HER2-positive DCIS were younger than HER2-negative ones ( $P = 0.002$ ). HER2-positive DCIS was also related to histopathological predictors of recurrence such as high nuclear grade ( $P < 0.001$ ), high Ki67 expression ( $P = 0.003$ ), low ER and PgR levels ( $P < 0.001$ ) and the presence of “Retrograde Lobular Cancerization” ( $P < 0.049$ ). We also considered other variables of recurrence risk and we found that HER2-positive DCIS were larger in size than HER2-negative ones, without statistical significance ( $P = 0.48$ ). Our data showed no benefit from radiotherapy ( $P = 0.56$ ) or hormone therapy ( $P = 0.77$ ) in patients with HER2-positive DCIS. We analyzed the presence of comedonecrosis ( $P = 0.097$ ) and calcifications ( $P = 0.416$ ) which were related to poor prognosis, regardless of HER2 status.

**Conclusions:** Our trial confirms that HER2 amplification in primary DCIS is identified more frequently in younger patients and it is related to histopathological predictors of overall relapse as high nuclear grade, high Ki67 expression, low ER and PgR levels and the presence of “Retrograde-Lobular-Cancerization”. In HER2-positive DCIS other variables of recurrence risk are compared to HER2-negative lesions, without statistical significance. These results are probably related to the evidence that some variables of recurrence risk are independent from HER2 status. Our results show that HER2 testing might suggest clinicians the optimal treatment of patients affected by DCIS.