of contralateral breast cancer was 1.53-fold higher (95% CI 1.05−2.24, p = 0.03) in radiotherapy arms.
Conclusion: Radiation therapy should follow lumpectomy in women with localized, mammographically detected DCIS. Our findings in 3665 patients strongly confirm that radiotherapy substantially reduces invasive and DCIS ipsilateral breast cancer recurrence risk after breast-conserving surgery. No data are currently available to identify a subgroup of women with the kind of DCIS who did not need to be treated with radiation therapy.

2030 ORAL

Efficacy of neoadjuvant trastuzumab in patients with inflammatory breast cancer: data from the NOAH (NeOAdjuvant Herceptin) Phase III trial

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Background: There is currently no standard therapy for women diagnosed with HER2-positive inflammatory breast cancer (IBC), a rare and highly aggressive disease typically treated with neoadjuvant chemotherapy. Here we present data from patients (pts) with HER2-positive IBC included in the randomised Phase III NOAH (NeOAdjuvant Herceptin) trial of neoadjuvant trastuzumab (Herceptin®; H) in combination with chemotherapy.
Methods: Pts with locally advanced breast cancer at first diagnosis were recruited and assigned to 1 of 2 cohorts depending on HER2 status. All pts received neoadjuvant chemotherapy: 3 cycles of doxorubicin–paclitaxel (AT: A 60 mg/m^2, T 150 mg/m^2 q3w), 4 cycles of T (175 mg/m^2 q3w) and 3 cycles of cyclophosphamide/methotrexate/5-fluorouracil (CMF: C 600 mg/m^2, M 40 mg/m^2, F 600 mg/m^2 q4w on days 1 and 8). Pts with HER2-positive disease were randomised to receive concomitant H (8 mg/kg iv loading dose then 6 mg/kg q3w for 1 year) or chemotherapy only. The first pre-planned interim efficacy analysis evaluated the primary end point of event-free survival and secondary end points of in-breast pathological eradication (pCR), in-breast and nodal pathological eradication (tpCR), objective clinical response rate (cRR) and safety.
Results: 61/228 pts with HER2-positive disease and 14/99 with HER2-negative tumours had IBC; 31 of the pts with HER2-positive IBC received chemotherapy with H.

	HER2-negative IBC	HER2-positive IBC	
	(n = 14)	−H (n = 31)	+H (n = 31)
cRR, %	57.1	77.4	77.4
pCR, %	28.6	19.3	54.8*
tpCR, %	28.6	12.9	48.4**

*p = 0.004; **p = 0.002.

The cRR was similar with or without H in pts with HER2-positive IBC, but addition of H significantly improved the pCR and tpCR rates compared with chemotherapy alone (54.8% vs 19.3%, p = 0.004; 48.4% vs 12.9%, p = 0.002). There were no reports of left ventricular ejection fraction decreases to <45% and only 5/47 pts receiving H had absolute decreases of ⩾10%.
Conclusions: Addition of H to neoadjuvant chemotherapy more than doubled the rates of pCR and tpCR in pts with HER2-positive IBC compared with chemotherapy alone. At the low cumulative dose of administered anthracycline (total doxorubicin dose of 180 mg/m^2), the chemotherapy regimen was well tolerated with no reported symptomatic cardiac events by the time of this interim analysis.

2031 ORAL

A comparison between HER2, p53, PAI-1, angiogenesis and proliferation activity as prognostic variables in tumours from 408 patients diagnosed with early breast cancer

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Background: The prognostic potential of HER2, p53, PAI-1 tumour tissue protein level, angiogenesis and proliferation activity (expressed by MIB-1 estimates) were investigated in tumours from 408 patients diagnosed with early breast cancer and followed >10 years. 167 patients (41%) had died from cancer.
Materials and Methods: Using immunohistochemistry tumours were stained for anti-HER2, anti-p53, anti-CD34, and anti-MIB-1, whereas PAI-1 was measured by ELISA. A HER2 score of 3+ was considered positive, and in cases of HER2 score of 2+ a FISH analysis for amplification was performed. p53 was scored in quartiles according to the density of tumour cells staining positive. Angiogenesis was evaluated by the Chalkley technique, using the hot spot approach, whereas MIB-1 estimates were based on systematic random sampling.
Results: Eighty-six tumours (21%) were HER2 positive. The distribution of p53 in classes 1 through 4 was 31, 104, 75 and 198 cases, respectively. Median PAI-1, Chalkley and MIB-1 was 0.72 ng/mg protein (range, 0−90 ng/mg protein), 5.00 (range, 2.67−12.00) and 15% (range, 1−83%), respectively. A high MIB-1 tertile was correlated with HER2 positivity (P < 0.0001), high scores of PAI-1 (P = 0.002), Chalkley count (P < 0.0001) and p53 score (P < 0.0001). None of the factors were otherwise inter-correlated. In univariate analyses with disease-specific survival (DSS) as endpoint, HER2 positivity (P < 0.0001), and increasing values of Chalkley count (P = 0.006), MIB-1 (P = 0.004) and PAI-1 level (P = 0.06) were prognostic markers. Among the 191 node-negative patients, HER2 positivity (P < 0.0001), high PAI-1 levels (P = 0.006) and postmenopausal status (P = 0.03) were associated with poor DSS. In the 217 node-positive patients, HER2 positivity (P = 0.0003), high value of MIB-1 (P = 0.02), Chalkley (P = 0.003), negative estrogen receptor (P = 0.0004) and high malignancy grade (P < 0.0001) were indicators of poor DSS. In multivariate analysis increasing number of metastatic lymph nodes (RR 2.02, 95% CI 1.67−2.44), HER2 positivity (RR 1.96, 95% CI 1.38−2.77), increasing PAI-1 (RR 1.05, 95% CI 1.02−1.07) and high malignancy grade (RR 1.28, 95% CI 1.02−1.61) showed independent prognostic value. In node-negative patients the HER2 status was an even stronger independent prognosticator with a RR 3.42, 95% CI 1.81−6.47.
Conclusion: Compared to p53, PAI-1, Chalkley counts and MIB-1, HER2 positivity was the strongest independent marker of poor prognosis, irrespective of lymph node status.

2032 ORAL

Detection of minimal residual disease (MRD) in peripheral blood of primary breast cancer patients – Translational research in the SUCCESS-Study

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Background: Patients with the detection of MRD in bone marrow are known to have an increased risk for recurrence and a poorer clinical outcome. However, peripheral blood would be the preferable compartment to monitor treatment efficacy due to increased feasibility. The translational research program of the German SUCCESS-trial was established to evaluate MRD in peripheral blood at 4 different time points during adjuvant systemic treatment of breast cancer patients.
Here first results of the detection of MRD at primary diagnosis and after adjuvant chemotherapy will be presented.
Materials and Methods: Cells were separated by Oncoquick® (greiner bio-one, Frickenhausen, Germany) followed by labelling of epithelial cells with