followed by 2 yrs (4 mg q3m×24m) vs. 5 yrs (4 mg q3m×24m followed by q6m×36m) of zoledronate. CTC results after two years are shown. CTCs were assessed with the CellSearchSystem (Veridex, Warren, USA). After immunomagnetic enrichment with an anti-Epcam-antibody, cells were labelled with anti-cytokeratin (8,18,19) and anti-CD45 antibodies.

Results: The data of 579 pts at the mean of 29 months (range 20−43) after diagnosis are available. 4.3% of pts (n = 25) presented with >1CTC in peripheral blood. In pts with the detection of CTCs, the mean number of cells was 1 (range 1−29). While we found 1 CTC in 5.9% and 2 CTCs in 1.6% of pts, 1.5% had 3−5 CTCs, 1.2% >5 CTCs. We found no correlation between the presence of >1CTC with tumor size (p = 0.41), nodal status (p = 0.41), grading (p = 0.45), hormonal status (p = 0.92) or Her2-status of the tumor (p = 0.59).

In this patient group, 9.7% and 6.9% of pts had presented with >1CTC at primary diagnosis and after chemotherapy, respectively. We found no correlation of CTCs after chemotherapy with the results at primary diagnosis (p = 0.08) or at two years (p = 0.23). However, the presence of CTCs at diagnosis was associated with CTCs after two years (p = 0.03).

In 184 postmenopausal HR+ pts endocrine treatment data was analyzed. CTCs at two years were detected in 6.8% of pts on tamoxifen (n = 9), while 1.9% of pts were positive on anastrozole treatment (n = 1; p = 0.19).

Conclusions: The SUCCESS trial is the first randomized chemotherapy trial prospectively evaluating the role of CTCs in a large cohort of primary breast cancer patients. CTCs were detected in a relevant number of recurrence-free patients persisting after cytostatic, endocrine and zoledronate treatment. Longer follow-up will deliver insight in their prognostic relevance.

17 Poster

Inclusion criteria for the use of neoadjuvant chemotherapy in breast cancer

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Background: Only patients with pathological complete response (pCR) and patients in need of mastectomy before but receiving breast conservation (BCT) after successful neoadjuvant chemotherapy (nCT) really benefit from this treatment. The aim of this study was to find predicting factors for pCR and BCT to define better individualized criteria for neoadjuvant chemotherapy.

Method: All consecutive patients who had received standardized neoadjuvant chemotherapy in several prospective trials, and operated on between 1995 and 2007 after nCT were included in this retrospective analyses. For nCT either 3 cycles of CMF or 4−6 cycles of EC were used. Patients with her2neu overexpression received Herceptin adjuvant.

Results: 308 patients were included in the final analyses. Median follow up was 60 months. Patients with a documented pCR (11%) had a trend for improved overall survival (OS; 100% versus 86% p = 0.07) and distant recurrence free survival (DRFS; 92% versus 72% p = 0.08). Patients after BCT had a significant better OS (93% versus 78%) and DRFS (83% versus 62%) compared with patients after mastectomy (p = 0.0001) at a median follow up of 60 months. Multivariate analyses demonstrated that predictors for pCR were ductal histology (p = 0.01), endocrine non-responsive (p = 0.0001) and HER-2/neu positive (p = 0.007) breast cancer. Smaller size tumors tended to have a higher chance for pCR (11% versus 6% p = 0.07). A clinical complete response was predictive for the use of BCT (p = 0.0001). No other biological marker such as tumor type, grading or endocrine responsiveness was predictive for the use of BCT. Endocrine non-responsive ductal type breast cancers with HER-2/neu overexpression were most likely to achieve a pCR while lobular (1.5% of all lobular versus 9% of all ductal; p = 0.03), endocrine responsive breast cancers (3.6% of all endocrine responsive versus 14% of all endocrine non responsive; p = 0.0006) had reduced chances for a pCR. However, patients with lobular and/or endocrine responsive breast cancer still showed an increase in breast conservation of 30%.

Conclusion: Indications for neoadjuvant chemotherapy are surgical need for mastectomy including lobular and endocrine responsive breast cancer OR ductal type, endocrine non-responsive breast cancer of any size. Moreover, patients with her2neu positive breast cancer should also be treated preoperatively, because of the high likelyhood of these cancers to respond very well.

Wednesday, 24 March 2010 18:15–19:15

POSTER SESSION

Adjuvant and neo-adjuvant therapy

18 Poster

Biological activity of a combination of fulvestrant 500 mg (F500) plus anastrozole versus F500 alone or anastrozole alone as neoadjuvant treatment for breast cancer

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Background: Fulvestrant is an oestrogen receptor (ER) antagonist with no agonist effects that leads to dose-dependent reductions in tumour biomarkers (ER, progesterone receptor [PgR] and Ki67 levels). Combining fulvestrant with an oestrogen-lowering agent such as anastrozole may lead to a greater ER blockade and anti-tumour activity. This study compared the biological activity of fulvestrant 500 mg (F500) plus anastrozole (A) vs F500 alone or A alone as neoadjuvant treatment in postmenopausal women with ER-positive, primary breast cancer.

Methods: This was a Phase II, double-blind, randomised, multicentre trial (9238IL/0057; NCT00259090). Eligible patients were randomised 1:1:1 to receive: F500 (2×250 mg on Day 1) plus A 1 mg once daily (od) for 14−21 days (F500+A); F500 plus anastrozole placebo od for 14−21 days (F500); or A 1 mg od plus fulvestrant placebo for 14−21 days (A). Tumour biopsy samples were taken pre-treatment and at surgery to assess changes in ER, PgR and Ki67 index (evaluated by non-automated H-score assessment; treatment differences assessed by analysis of covariance). Tolerability (incidence of adverse events [AEs]) was a secondary endpoint.

Results: In total, 121 patients were randomised; 99 paired samples were analysed. Treatment with F500, F500+A and A significantly reduced the mean ER index from baseline (−41%, −35% and −15%, respectively; all p < 0.001). Compared with A, F500 and F500+A led to greater reductions in ER index (p = 0.0001 and p = 0.0004, respectively). There was no additional reduction in ER index with F500+A vs F500 alone (p = 0.21). For Ki67 and PgR, there were no between-treatment differences. PgR and Ki67 were significantly reduced from baseline in all groups (Ki67: −81%, −85% and −89%; PgR: −37%, −44% and −42% for F500, F500+A and A, respectively; all p = 0.0001). The incidence of AEs was similar for all treatment groups.

Conclusions: This study is the first to investigate the biological activity of fulvestrant 500 mg with and without anastrozole in a neoadjuvant setting. Treatment effects on the ER confirm the different modes of action reported experimentally for these agents. F500 alone or F500+A both significantly decreased ER index, but there was no further impact on ER by combining F500+A. No additional reductions in PgR and Ki67 levels were observed with F500+A vs F500 alone. These data suggest that it is unlikely there is a benefit of combining A with F500 in terms of biological activity in the neoadjuvant setting.

19 Poster

Cost-effectiveness of adding zoledronic acid to endocrine therapy in premenopausal women with hormone-responsive early breast cancer in Portugal, Spain, and Italy, based on the ABCSG-12 Study

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Background: To estimate the cost-effectiveness of adding zoledronic acid (ZOL) 4 mg intravenously q6m to adjuvant endocrine therapy (ET) in premenopausal women with hormone-responsive early breast cancer (HR+EBC) from the perspectives of the healthcare systems in Portugal, Spain, and Italy, respectively.

Material and Methods: A Markov model was used to project lifetime outcomes and costs of breast cancer care for premenopausal women with