the importance of classical prognostic factors in early breast cancer: node status, cancer histology, tumor size, tumor grade, menopausal status, age, ER and PR content. Cox regression models were used to identify variables associated with progression and death and estimate hazard ratios.

The median follow–up period for the CMF group was 81 months, and 61.5 months for untreated group. Five-year disease-free survival (DFS) and overall survival (OS) for the CMF group were 64.9% (95% CI [57.5%–73.1%]), and 79.4% (95% CI [73.1%–86.3%]), respectively, and for the untreated group: 61.9% (95% CI [50.9%–75.4%]) and 70.7% (95% CI [59.7%–83.6%]). Node-positive patients in CMF group had significantly worse DFS than node-negative (Log rank test, p=0.003). Treated patients with PR-negative tumors had better DFS compared to women with PR-positive tumors (Log rank test, p=0.033). It appeared that steroid receptor status is quite important in node-negative group of patients: ER and PR negative patients had better DFS then ER and PR positive patients (for ER: Log rank test, p=0.009, and for PR: p=0.004). Overall survival remained unaffected by SR status in both, node-negative and node-positive patients who had received adjuvant CMF. Adjuvant chemotherapy significantly influenced OS (Log rank test, p=0.015), but not DFS. Furthermore, node-negative patients who took chemotherapy had better DFS and OS then those without adjuvant therapy (Log rank test, p=0.026 and p=0.022, respectively).

Our results showed that positive node status is the only significant predictor of disease progression (Likelihood Ratio test, p=0.007) in CMF and untreated group of patients. Furthermore, adjuvant CMF chemotherapy seems to decrease hazard of death more in a group of patients with negative lymph nodes (by 67%) then in a group of patients with positive nodal status (by 21%).

71 POSTER

The evolving role of bisphosphonates for the prevention of cancer treatment-induced bone loss in patients with breast cancer

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Background: Cancer treatment-induced bone loss (CTIBL) is a common problem in patients with breast cancer receiving long-term adjuvant therapy with antiestrogens, aromatase inhibitors, or ovarian-ablative chemotherapy. As a result of CTIBL, patients are at increased risk of skeletal complications that may substantially increase skeletal morbidity and reduce quality of life. Studies have shown that bisphosphonates can preserve bone mineral density (BMD) in these patients, indicating a role for bisphosphonates in maintaining bone health when used during therapy for breast cancer. Oral bisphosphonates have been shown to prevent bone loss associated with chemotherapy-induced ovarian failure. Zoledronic acid, which is the most potent bisphosphonate available, has also been shown to preserve BMD in the adjuvant treatment setting with a convenient treatment schedule.

Materials and methods: Evidence supporting a role for zoledronic acid in the prevention of CTIBL in patients with primary breast cancer was reviewed and ongoing/planned trials are described.

Results: Recently Gnant et al. reported the results of ABCSG-012 trial (San Antonio Breast Cancer Symposium, 2002) demonstrating that 4 mg intravenous (IV) zoledronic acid every 6 months maintained BMD in premenopausal women receiving standard hormonal therapy with either tamoxifen or anastrozole (both in combination with goserelin). In patients treated with anastrozole + placebo, BMD in the lumbar spine and hip declined significantly within 12 months compared with zoledronic acid-treated patients. Zoledronic acid (4 mg every 3 months for 1 year) has also been shown to significantly increase BMD compared with placebo in patients with prostate cancer receiving long-term androgen-deprivation therapy (Smith et al., *J Urol*, 2003). Based on these promising results, we have initiated the Z-FAST and ZO-FAST trials. Postmenopausal women with hormone receptor-positive breast cancer receiving initial adjuvant therapy with the aromatase inhibitor, letrozole (2.5 mg/day) for 5 years are being randomized to receive 4 mg zoledronic acid every 6 months, either starting with the initiation of letrozole or at the time a patient exhibits a decline in BMD. Accrual to the Z-FAST trial in the United States is complete.

Conclusions: These studies will confirm the benefit of IV zoledronic acid for the prevention of CTIBL and a clinical strategy for maintaining bone health in patients receiving hormonal therapy for breast cancer.

72 POSTER

A computer programme to calculate for the individual the expected improvement in survival chance from adjuvant therapies

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The EBCTCG overviews of adjuvant therapies provide figures of relative risk reduction (RRR). Applied to the survival chance of the individual, shown by the Nottingham Prognostic Index (NPI) the absolute improvement expected from therapies for that individual, may be calculated. The baseline figure ('observed 1980–86') is the survival in NPI groups before the introduction of adjuvant systemic therapies. The 'Expected' figures are the effects on these from the relative risk reductions (RRR) demonstrated in the EBCTCG overviews for each therapy.

Example: Women 50+, % 10 year survival

NPI Group	Observed 1980–86 No adjuvant	Expected Tam 5yr (ER+) RRR 27%	CMF RRR 11%
EPG	84	89	86
GPG	63	73	67
MPGI	59	70	64
MPGII	43	59	49
PPG	15	39	24

Patient age and pathological tumour characteristic (grade, LN stage, size, ER, VLI, herceptin) must be entered. The expected improvements will be given for individual NPI values rather than for groups. The computer programme will be demonstrated and will eventually be accessible on the EUSOMA website.

73 POSTER

Sequential dose dense usage of adriamycin, taxol, high dose cyclophosphamide with G-CSF support improved the survival of breast cancer with ten or more positive lymphnodes than A-CMF regimen

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Purpose: To evaluate the toxicity and efficacy of the dose dense sequential adjuvant usage of adriamycin followed by Taxol followed by cyclophosphomide for breast cancer with ten or more positive lymphnodes.

Materials and Methods: In the study performed by SYSCC, the patients with more than 3 positive lymph nodes were treated with sequential dose dense Doxorubicin followed by CMF, the overall survival for patients with more than 10 lymph nodes were 50.7% the disease free survival was 36.5% only. It is necessary to improve the adjuvant treatment of breast cancer. We therefore conducted a study of treating the patients of breast cancer with more than 10 positive nodes with dose dense taxol containing regimen.

Results: Totally 60 patient with 10 or more positive lymphnodes have been enrolled for this regimen. Twenty eight patients has completed the treatment for more than 2 years with a median follow up of 46 months. The general constitutional symptoms were tolerable. Although neutropenia and granulocytopenia occurred, only 7 cycles among 270 cycles developed fever, the infection rats were 2.6% (7/270). The disease free survival and overall survival as compared with previous patients treated with will A-CMF showed significantly improved.

Conclusion: Dose dense regimen of adriamycin followed by Taxol followed by cyclophosphamide is feasible. It showed improved DFS and OS as compared the A → CMF regimen.