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O-1 Long-term mortality results from the UK Breast Screening Frequency Trial

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In the UK Breast Screening Frequency Trial, 49173 women aged 50–62 were randomised to three annual incidence screens after their prevalence screen date (study group) and 50162 to one incidence screen three years after the prevalence screen (control group).
Primary interest was in those who attended the prevalence screen. Results of predicted case survival based on the Nottingham Prognostic Index of the tumours diagnosed have already been published, indicating an insignificant 5–11% reduction in breast cancer mortality.
Here we present actual mortality results to the end of 2006 (median follow-up 162 months). There were 373 breast cancer deaths in the study group as a whole and 374 in the control group (RR = 1.02, 95% CI 0.88–1.17, p = 0.8). In the prevalence screen attenders, there were 209 breast cancer deaths in the study group and 231 in the control group (RR = 0.89, 95% CI 0.73–1.07, p = 0.2).
When we consider mortality only from cancers diagnosed during the three-year screening period of the trial, there was no significant difference between the study and control group (RR = 0.96, 95% CI 0.67–1.37, p = 0.8). This remained the case when restricted to those who had attended the prevalence screen (RR = 0.93, 95% CI 0.63–1.37, p = 0.7).
These results indicate that the predicted mortality figures were accurate. There is no evidence in favour of shortening the current three-year screening interval.

O-2 Screen-detected versus symptomatic breast cancer – is improved survival due to stage migration alone?

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This aim of this study was to quantify the survival difference in screen-detected versus symptomatic breast cancer and determine whether this was due to the expected shift in the Nottingham Prognostic Index (NPI) alone.
We studied overall survival by detection mode (screen-detected or symptomatic) in 4,500 women diagnosed with invasive breast cancer in East Anglia from 1998 to 2003 with complete histopathological data on tumour size, lymph node status and grade.
In 2,602 symptomatic cases there were 417 deaths (16%) and in 1,898 screen-detected cases there were 122 deaths (6%). Cox regression analyses, after adjustment for age, showed the expected significantly lower risk of death among the screen-detected cases (RR = 0.44, 95% CI 0.35–0.54, p < 0.001). After additional adjustment for NPI, the reduction in risk was still present but markedly attenuated (RR = 0.74, 95% CI 0.59–0.91, p = 0.005). The proportion of the benefit of screen-detection explained by a shift in NPI, calculated according to the method of Freedman et al (1992, Statistics in Medicine 11, 167–178) was 63%. NPI-specific analyses suggest that the difference in survival between detection modes is most pronounced at higher NPI values (in excess of 4.4). This was confirmed by plotting 5-year survival against individual NPI values as demonstrated by Blamey et al (2007, in press, Eur J Cancer) for screen-detected and symptomatic cancers separately.
Ongoing work is attempting to further elucidate NPI-specific differences and explain the remaining 37% of the difference in survival which may be due to differences in biological or treatment variables.

O-3 Long-term results from the ZEBRA trial comparing Goserelin with CMF as adjuvant therapy in premenopausal women

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Objective: The Zoladex Early Breast cancer Research Association (ZEBRA) trial was designed to compare the efficacy and tolerability of goserelin with cyclophosphamide, methotrexate, and 5-fluorouacil (CMF) chemotherapy in pre- and perimenopausal women with node-positive, early breast cancer.
Methods: Between 1990 and 1996 a total of 1640 patients (⩽50 years of age) received goserelin (3.6 mg every 28 days for 2 years; n = 817) or CMF (6 × 28-day cycles; n = 823) for the adjuvant treatment of breast cancer. We will present an updated analysis of disease-free survival (DFS), distant disease-free survival (DDFS) and overall survival (OS) with a median follow-up of about 12 years. The data given below are preliminary.
Results: An intial analysis showed a highly significant interaction between treatment and oestrogen receptor (ER) status (p = 0.0016) and results are therefore shown by ER status. In patients with ER-positive tumours (n = 1189) goserelin continued to be equivalent to CMF for DFS (hazard ratio [HR] 1.06; 95% confidence interval [CI] 0.91, 1.24) and OS (HR 0.99; 95% CI 0.82, 1.20) and was found to be nearly equivalent for DDFS (HR 1.08; 95% CI 0.92, 1.27).