Tumours were classified regarding invasiveness, tumour size, axillary lymph node status, Nottingham grade, tumour proliferation (Ki67), HER2, cyclin D1 and p27, WHO type and hormone receptor status. Duration of breastfeeding was measured using mean time of breastfeeding per child. Duration was categorised in quartiles using the lowest as the reference group (<2.2, $\geqslant$2.2−<4.0, $\geqslant$4.0−<6.2 and $\geqslant$6.2 months). Relative risks, with 95% confidence intervals, were obtained using a Cox's proportional hazards analysis adjusted for potential confounders.

Overall risk for breast cancer was similar in all quartiles of breastfeeding. In women with long ($\geqslant$6.2 months) duration of breastfeeding, there was a statistically significant risk of grade III tumours, 1.87 (1.05–3.34), and tumours with high Ki67, 2.15 (1.14–4.05). Longer breastfeeding was also associated with high cyclin D1 expression (1.29: 0.61–2.71), low p27 expression (1.55: 0.95–2.54), and ERα negative tumours (1.62: 0.70–3.74), but these associations did not reach statistical significance. In addition to mean time of breastfeeding per child, all results were similar when total time of breastfeeding and time related to the first child were used as exposures.

We conclude that long duration of breastfeeding was associated with more unfavourable breast tumour characteristics.

504   Poster discussion
Safety of pregnancy in breast cancer survivors: a meta-analysis

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Background: Breast cancer (BC) is the most common malignant tumour affecting women during their childbearing period. With the decline of BC mortality and rising trend of delaying pregnancy to later in life, it is often that BC survivors consider getting pregnant. However, some concerns have been raised regarding the safety of this approach though. Hence we conducted a meta-analysis to evaluate the effect of pregnancy on survival of patients with history of BC.

Material and Methods: A MEDLINE and EMBASE search was performed by two authors with no time or language restriction using the search terms "breast cancer, pregnancy" and "breast cancer, gestation". Eligible studies had to provide overall survival (OS) analysis, hazard ratio (HR) and 95% confidence internal (CI) as summary statistics. When not directly available, HR and 95% CI were indirectly calculated from the reported number of deaths, or from the reported comparison between median survival with the corresponding P-value, or from the survival curves. Heterogeneity of the effect across studies was assessed by the x^2 and I^2 tests. The method of Macaskill was used for assessing publication bias. In this analysis no distinction was made between the various measures of association (relative risk, rate ratio, risk ratio, HR). Pooling of data was performed using the mixed effect model.

Results: 14 trials published between 1970 and 2009 met the inclusion criteria (1417 pregnancy and 18059 controls; Table 1). Patients who got pregnant following BC diagnosis had significantly better survival compared to women who did not get pregnant (HR 0.58; CI: 0.49–0.68). There was no evidence of heterogeneity as estimated by x^2 test (20.2; p = 0.09) and I^2 test (35.6). There was no evidence of publication bias (p = 0.22).

Table 1: Studies comparing overall survival in pregnant and non-pregnant patients

Study	Year of publication	No. pregnant	No. non-pregnant controls	Study design	Matching criteria for choosing controls
Cooper	1970	28	56	Matched CC	stage (I/III); N(+/−); age
Mignot	1986	68	136	Matched CC	age, year of tumor treatment, TNM status, histology
Ariel	1989	46	900	Population based	NA
Sankila	1994	91	471	Matched CC	stage (I/III); age; year of BC diagnosis
Malamos	1996	21	222	Hospital based	NA
Lethaby	1996	14	334	Population based	NA
Velentages	2000	53	265	Matched CC	stage of disease
Birgisson	2000	14	33	Matched CC	tumor size, nodal status, year of BC diagnosis
Gelber	2001	94	188	Matched CC	nodal status, tumor size, age, year of BC diagnosis
Blakely	2003	47	323	Hospital based	NA
Mueller	2003	329	2088	Matched CC	age, race/etnicity, year of BC diagnosis, stage
Ives	2007	123	2416	Population based	NA
Kroman	2008	371	9865	Population based	NA
Largillier	2009	118	762	Hospital based	NA
Total		1417	18059		

NR: not reported; CC: Case-Control; BC: breast cancer; NA: Not applicable.

Conclusion: On the contrary of what is perceived; pregnancy in BC survivors is not detrimental on survival but seems to be associated with a protective value. Several immunological and endocrinal theories could explain this finding.

505   Poster
Improving the quality and efficiency of breast cancer follow-up: results from an RCT

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Background: A multicentre randomised clinical trial (RCT) was performed among early breast cancer patients to investigate the impact of nurse-led telephone follow-up (f-up) and a short educational group programme (EGP) on quality of life (QoL) and resource use.

Material and Methods: Between 2005 and 2008, 320 breast cancer patients were randomised into one of four f-up strategies for their first year after treatment: 1. three-monthly hospital f-up and mammography at one year after treatment; 2. three-monthly nurse-led telephone f-up and mammography at one year; 3. arm 1 with EGP; 4. arm 2 with EGP. The EGP consisted of two group-sessions, led by a breast care nurse and health psychologist, in which physical and psychosocial sequelae of diagnosis and treatment were discussed. The primary endpoint of the trial was health-related QoL as measured by the EORTC QLQ-C30. Additionally, anxiety, feelings of control, patient satisfaction and resource use were measured at randomisation, three, six, and 12 months after inclusion. Linear mixed models for repeated data were used for the analyses. Data were analysed according to the intention-to-treat principle.

Results: Nurse-led telephone follow-up did not result in a loss of quality of life (p = 0.42), nor did it increase feelings of anxiety (p = 0.42). Additionally, it did not negatively (or positively) affect feelings of control (p = 0.32), and general patient satisfaction (p = 0.38). Patients in the telephone group showed a significant higher satisfaction with access of care (p = 0.02). Resource use was considerably lower in the telephone group. The EGP was well-received by patients, it provided new information, but did not significantly improve QoL (p = 0.86), or affect other outcome measures.

Conclusions: Nurse-led telephone f-up seems an appropriate model of f-up care for early breast cancer patients. An EGP does not increase QoL, but may be appropriate to meet information needs early in the f-up. However, instead of trying to find a one-size-fits-all approach, we propose an individualised tailored approach in which the patient and health care professional make a shared and informed decision on the basis of evidence of actual benefits and risks, and an assessment of the patient's needs and preferences.

Friday, 26 March 2010   18:15–19:15

POSTER SESSION
Epidemiology, prevention, follow-up, management and care

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506   Poster
Locoregional recurrence in breast cancer patients: a population-based five year follow-up study

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Background: Conservative surgery for early breast cancer patients, if adequately performed and followed by radiotherapy, should lead to a