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Screening

127 EARLY DISCHARGE OF LOW-RISK WOMEN FROM CERVICAL SCREENING

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Background: The Scottish Cervical Screening Programme currently offers three-yearly screening to all women between the ages of 20 and 60, irrespective of their underlying risk of disease or their previous screening history. However, previous studies have indicated that well-screened women over the age of 50 are likely to be at low risk of cervical neoplasia. This study aimed to explore the implications of discharging these women from screening in a typical area of Scotland.

Methods: 1. Case-control study of the screening histories of women with and without screen-detected cervical neoplasia between ages 50 and 59 in Lanarkshire. 2. Cross-sectional study of the prevalence of adequate screening histories among women currently aged 50 in Lanarkshire. 3. Use of routine screening programme statistics to estimate the effects of introducing an early discharge policy.

Results: 1. Women reaching the age of 50 with two recent, consecutive, negative smears had reduced odds of screen-detected neoplasia in the subsequent decade. 2. The estimated odds ratio for all screen-detected neoplasia was 4.4 (95% confidence interval 1.6–13.2, $p=0.002$). 3. The estimated odds ratio for screen-detected high-grade squamous neoplasia was 17.0 (95% confidence interval 2.4–243.0, $p=0.0004$). 4. 54.0% (95% confidence interval 47.9%–59.9%) of screening participants currently aged 50 fulfilled the definition of adequate screening. 5. Discharging these women might be expected to reduce screening workload by approximately 10%, but those discharged would acquire an increased risk of cervical neoplasia—predominantly low-grade or glandular neoplasia—as a result.

Conclusion: It is possible to identify a low-risk group within the screened population using routinely-available records. This type of information could be used to inform participative decision-making about individual women's need for screening, or to target the screening programme more closely on those with the greatest capacity to benefit from it.

128 TWENTY YEAR ANALYSIS OF BENEFITS AND HARMS FROM CERVICAL SCREENING

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The National Screening Committee and General Medical Council advise giving information about benefits and harms to enable informed choice about whether to participate in screening. Information about cervical screening has emphasised that screening saves lives, but has not explained that screen-detected abnormality is common and in most cases represents self-limiting cell change. Nor has the fact that missed cases and incurable cases are inevitable despite screening been successfully conveyed. Data on which to base information about the different screening outcomes is lacking.

We analysed records for women screened in Bristol from 1976 to 1996 to determine cumulative incidence for cytological and histological abnormality of the cervix. Using Office for National Statistics mortality data we modelled expected numbers of deaths from cancer of the cervix for this cohort of women a) assuming that pre-screening death rates and trends had continued, and b) assuming that cohort reductions in cervix cancer deaths had taken place equivalent to those observed for England and Wales as a whole.

Amongst 214,582 women with a recent test result there were 33,522 (15.6% of the total tested) who had ever had abnormal cytology, and 11,656 (5.4%) who had ever had abnormal histology during the twenty years from April 1976 to March 1996. Trends for each birth cohort and for each grade of abnormality yield information about diagnostic trends, reversibility of lesions, and rising incidence. The mortality modelling is near completion, and will enable numbers with screen-detected abnormality to be put in context against numbers who would have developed cancer were it not for screening. The indication is that at least 90% of women with abnormal results

would—without any intervention—have remained free of cervical cancer by the age of 70. These results should help to achieve better public and professional understanding of the consequences of screening.

129 RELATIONSHIP BETWEEN MENOPAUSE, USE OF HORMONE REPLACEMENT THERAPY AND THE SENSITIVITY AND SPECIFICITY OF SCREENING FOR BREAST CANCER

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Introduction: Previous studies suggest a detrimental effect of use of HRT on breast cancer screening but have been unable to account for important confounding factors.

Methods: A total of 124,886 women participating in the Million Women Study at 10 NHS screening centres from June 1996 to March 1998 completed a study questionnaire immediately prior to screening. They were followed through the breast screening programme for recall to assessment following screening and screen-detected cancer, and through regional cancer registries for the occurrence of breast cancer in the interval following screening.

Results: Overall, 5,367 (4.3%) women were recalled to assessment. Among women who had never used HRT, the adjusted proportion recalled to assessment with no subsequent diagnosis of breast cancer ("false positive recall") was 4.7% (95% CI 4.1–5.3%) in premenopausal women, 4.2% (3.7–4.7%) in perimenopausal women and 2.5% (2.3–2.7%) in postmenopausal women. Postmenopausal women who were currently using HRT had a significantly elevated rate of false positive recall of 4.0% (3.7–4.3%), compared to 2.5% among never users. Among current users the rate of false positive recall increased with increasing duration of use, however the effect of HRT did not differ significantly according to the type of preparation used or the dose of oestrogen. Former users of HRT had a significantly elevated risk of false positive recall (3.0%, 2.7–3.4%) compared to never users. The risk appeared to diminish following cessation of use and 5 years after ceasing use the rate of false positive recall did not differ significantly from that in never users. Overall, use of HRT could account for around 20% of the total cases of false positive recall in the NHSBSP annually. Preliminary data indicate that women who are currently using HRT have around double the rate of interval cancer compared to women who have never used HRT.

130 WILL SCREENING MAMMOGRAPHY IN THE EAST DO MORE HARM THAN GOOD?

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Background: Breast cancer screening by mammography has become routine practice in many Western countries, but there are no data about its efficacy in Asian women. We systematically reviewed the evidence for population-based screening for breast cancer and examined the applicability of these results to a Chinese population.

Methods: Primary reports for the meta-analysis were identified by a search of MEDLINE and the Cochrane Library. Information on breast cancer incidence and mortality was collected from the International Agency for Research on Cancer and the Hong Kong Cancer Registry. Outcome measures included breast cancer-related mortality, the number needed to screen (NNS) to prevent one death, and the positive predictive value (PPV) of mammography.

Results: We identified eight clinical trials conducted in Western women. The pooled relative risk for breast cancer-related death in the screened group was 0.82 (95% confidence interval = 0.72, 0.93). When applied to Hong Kong this translates into an NNS of 1,447 healthy women screened annually for 10 years to prevent one death, assuming the relative risk reduction is independent of the baseline risk. The PPV of mammography was between 1.8% and 13.4%. Therefore, for 100,000 Hong Kong Chinese women aged 50 or over screened annually for 10 years we would expect 8,980 false positive cases, 134 of them would sustain a biopsy-related complication. Only 69 breast cancer-related deaths would be avoided, assuming trial conditions and 100% uptake and follow-up.

Conclusions: There is insufficient evidence to justify population-based breast cancer screening by mammography for women in Hong Kong and other Asian populations with low breast cancer prevalence.