

Screening for breast cancer

Screen women over 65

EDITOR.—The breast screening programme is expected to prevent 1250 breast cancer deaths a year in women invited for screening.¹ We believe that an equivalent health gain would be achievable in women over 65 if they were also invited.

The diagnostic powers of modern mammography and subsequent assessment procedures are proved for women over 65, but the response of these women to invitation is said to be low. In fact, uptake seems to be good to age 69 but variable thereafter (table). Much of this variation will reflect the different organisation of the studies. Thus in Britain invitations to women are preceded by a "prior notification" cycle of checks by general practitioners on the accuracy of the population list. This added some 5% to Manchester's figures,² which suggests that 60% would be an attainable target for a first screening of 65 to 74 year olds in much of Britain. Rates for subsequent screenings would be lower.

The yield of cancers is high in older women. Reduction in mortality has been shown in women aged up to 74 on entry to screening but not beyond.^{3,4} Benefits on mortality are understated when reported as relative risks since older women have higher absolute risks. For instance, in the demonstration project in the United States the relative reduction in deaths from breast cancer was 24% in screened women aged 50 to 59 and 26% in those aged 60 to 74, but the absolute reductions were 103 and 140 deaths per 10000 screened respectively.^{3,4}

It was reasonable in the first instance to confine the British screening service to the cohort aged 50 to 64, in whom evidence of benefit was strongest, but screening policy and research policy with regard to older women should now be reappraised. Research on older women is minuscule compared with that on women aged 40 to 49, in spite of more serious doubts over the value of mammography in that group.

Older women may request screening, but few do so, and it would be administratively more costly than routine invitation if many did so. We believe that the national programme of invitations should extend to 69 year olds. This would need new money to be made available to health purchasers. There is a case for further expansion to age 74, but a large scale project is needed to establish whether a higher yield of cancer in this age group offsets the lower uptake and what the uptake in subsequent

Effect of age on uptake of screening for breast cancer in four studies.* Figures are percentages

Nijmegen, Netherlands			
Age (years)	60-69	≥70	
1st round	80	35	
3rd/4th round	54	21	
Two countries (Sweden)			
Age (years)	60-69	70-74	≥75
1st round	88	79	<50
2nd round	81	67	
Malmö, Sweden			
Age (years)	65-69	64	
1st round			
Manchester, England			
Age (years)	65-69	70-74	75-79
1st round	67	59	57

*For details see references 3 and 4.

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rounds would be. The situation for women over 75 also needs further research.

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Consider family history also

EDITOR.—We take issue with Joan Austoker's statement that "age is the only risk factor sufficiently important to influence policy" on screening for breast cancer.¹ This fails to take into account the effect of a family history of the disease on the risk of breast cancer, particularly premenopausal disease. In their review of hereditary breast cancer Evans *et al* pointed out that women with a first degree relative who developed breast cancer below the age of 40 have roughly a threefold risk of developing the condition themselves, and the chance of developing the disease is about the same for such women when they are 35 as it is for women of 50 with no family history of the disease.² If a woman has a more extensive family history of breast cancer her risk, particularly of premenopausal disease, is further increased.^{3,4} Women who have a germline mutation in the BRCA-1 gene predisposing to breast cancer may have a 70% risk of developing the condition by the age of 50.^{2,3}

Austoker notes that the proportion of breast cancers detected on population screening that are of lower malignant potential is higher in women below the age of 50 than in older women screened, but what this proportion would be if genetically predisposed women under 50 were targeted for screening is unknown.

We therefore submit that age is not the only risk factor sufficiently important to influence screening policy; family history is also relevant. The efficacy of screening for breast cancer among premenopausal women at high genetic risk of the disease is still uncertain, but screening would be expected

to be more efficient in these women because of the higher risk of disease in this group than in the general population. An assessment of such screening can be made only by audit of surveillance protocols in these women over a prolonged period, with an acceptance that such screening could be of great value to this group.

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Women do examine their breasts

EDITOR.—The Department of Health's policy highlights the importance of breast awareness, which includes an element of breast examination.¹ Joan Austoker asserts that most women do not perform breast self examination.² A recent study we performed in one general practice does not support this assertion.

Receptionists randomly distributed 177 questionnaires to women aged over 18 attending an urban and inner city general practice; 169 (95%) questionnaires were completed. One hundred and nineteen women reported that they examined their breasts. The highest rate of breast examination was in women aged 41 to 60 (52 of 59 women). This age group includes postmenopausal women, in whom the likelihood of a lump being malignant is much higher.³ Generally, breast examination was performed unsystematically: 90 women performed it on only a random, occasional basis.

Our study suggests that women, particularly those most at risk, do examine their breasts. Since most breast cancers are found by women themselves,² further clarification of breast awareness is required. Should we promote examination of the breast more actively and build on women's current practice to improve its quality and detection rate or does evidence suggest that as a screening tool it is ineffective? Women, however subconsciously, are taking the first step, and health professionals must ensure that it is in the right direction.

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Discrepancies in studies are confusing

EDITOR.—Chamberlain *et al* reported that they detected 6605 cancers (100%) among about 1.1

million women screened in the British breast cancer screening programme in 1991-2 and that 1465 of the cancers were invasive and < 10 mm in diameter.¹ Subsequently Yeoman *et al* reported that 39% of the cancers were palpable, leading to the conclusion that the balance, 39% (100-39-22), were non-invasive and impalpable.² Now Joan Austoker reports that ductal carcinoma in situ made up 17.6% of the cancers.³ In view of its rarity, lobular carcinoma in situ seems unlikely to have accounted for the other 21.4% of minimal lesions. We are left wondering where the discrepancy lies. In any event, such a large number of non-invasive cancers presents a practical and ethical problem since there is no consensus among surgeons about how to treat them.⁴ It is recognised that an appreciable proportion do not become life threatening.

We also note that figure 3 of Austoker's paper shows reduced mortality, with a relative risk of 0.5 among women aged 40-49 screened in the Malmö trial. This scarcely equates to a 29% increase in mortality among women under 55 screened in that trial⁵; this error would also affect the size of the cumulative reduction in mortality among the seven trials cited.

Austoker reports that "primary care teams have an important part to play in encouraging women to attend for screening and in providing information and advice, and reassurance at all stages of the screening process." She subsequently lists the benefits (three) and disadvantages (seven). It is not clear whether the women are shown this list and, in relation to overdiagnosis, told what Fentiman advises: that "for many borderline lesions there cannot be any clear guidelines at present, and the only appropriate treatment will be to enter the patient into well-designed national clinical trials."⁶

Skrabanek's argument for the need to obtain signed informed consent from the invited women at the outset of screening⁷ is underlined by the reported outcome measures.^{1,3}

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Screening for testicular cancer

Familial predisposition ignored

EDITOR,—Joan Austoker clearly evaluates the advantages and disadvantages of population screening for testicular cancer.¹ We agree that screening of the general population cannot be justified on present evidence and that greater awareness of this tumour in the general population and among the medical profession should be encouraged. Austoker does not, however, discuss the now substantial evidence concerning familial predisposition to testicular cancer.

Forman *et al* showed that sons of men with the disease had a relative risk of developing it them-

selves of 4.0 and that brothers of men with the disease had a relative risk of 9.8.² Thus siblings of patients with testicular cancer have a lifetime risk of developing the disease of over 2% and form a high risk population with a greater risk of developing the disease than patients with cryptorchidism. We believe that this risk is sufficient in brothers and sons of patients for them to be actively encouraged to undertake self examination and that self examination should be considered mandatory for males in families with two or more cases of testicular cancer.

In July this year the five groups involved in family studies of testicular cancer met to form a consortium to localise the predisposing gene(s) by linkage analysis in families of patients with the disease. If the gene is found it may help to select very high risk patients for more intensive screening as well as give insight into the mechanism of development of testicular cancer. To succeed we will need to examine a large number of families. Sixty families have been identified in Britain, but more are needed, and we would encourage oncologists and surgeons aware of such families to enter them into our research programme by contacting us or Dr David Forman at the Yorkshire Cancer Registry, Yorkshire Cancer Organisation, University of Leeds, Cookridge Hospital, Leeds LS16 6QB (from 1 October).

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Self examination of testes is of value

EDITOR,—As Joan Austoker states, 120 deaths from testicular cancer a year do not justify population screening for this disease.¹ The question of education of young men about testicular cancer in general, and about self examination of the testes in particular, raises some different questions; it will indeed be difficult to evaluate education about self examination of the testes in terms of its effect on mortality from the disease and the proportion of patients requiring chemotherapy.

I take issue, however, with Austoker's statement, based on anecdotal reports, that widespread application "might lead to a substantial increase in investigation of non-malignant conditions with its associated anxiety." Colleagues and I have reported the effect of distributing a leaflet about self examination of the testes. A study of a population of male students indicated that around 500 saw a copy of the leaflet.² Shortly after they did so there were seven consultations at the student health service for scrotal complaints. After the interviews that were conducted to evaluate the effect of the leaflet a further six consultations took place. Such consultations were monitored throughout the investigation, which lasted seven months. From this it seems that publicity about self examination of the testes will, over a short period, provoke inquiries from around 1% of the people who are affected by the publicity. There is no evidence of any longer term anxiety that would appreciably affect the demand on health services.

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Screening for toxoplasmosis

EDITOR,—The Toxoplasmosis Trust's finding that only just over half of British antenatal clinics give advice and information on toxoplasmosis¹ broadly agrees with the finding of a similar study by the Public Health Laboratory Service.² The trust's survey, however, raises more questions than it provides answers.

Both the table and the text misuse the term "screening" and therefore misleadingly imply that almost all the respondents (89% of British antenatal clinics) are, contrary to current recommendations,³ engaged in a category of this activity. Investigating subjects for acute toxoplasmosis on request and when flu-like symptoms are reported is diagnosis, not screening. Failure to distinguish between these two activities can only add confusion to the "ad hoc nature of current screening policy" deplored by Christine Asbury.¹ The activities carry completely different ethical and resource implications, although they both require backing by well informed professionals if patients are to benefit. The survey's finding that ignorance was common among midwives is therefore worrying, although unsurprising.

This ignorance was also reflected in the finding that 51 (>20%) clinics investigated women if they owned a cat. Although this is not commented on by Asbury, no scientific basis exists for doing this. The study's confirmation of professional ignorance also lends weight to earlier concerns about the ethics of media campaigns for screening for toxoplasmosis when expectations cannot be met in practice by the health service.⁴

The chief medical officer recently stated that purchasers should not start new screening programmes unless the programmes have been recommended after research and appraisal.⁵ Such appraisal led to the current recommendations about screening for toxoplasmosis,³ and it would be interesting to know why the purchasers responsible for the five clinics that reported routine screening disagreed with this conclusion.

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Mammography after treatment for breast cancer

EDITOR,—The National Breast Screening Programme's guidelines on follow up of women after treatment for breast cancer recommend regular mammographic surveillance of both the treated and contralateral breast.¹ This surveillance is the responsibility of the clinician providing follow up. Local screening units will continue to recall women with treated breast cancer aged 50 to 64 at the normal screening interval as part of the national programme. Women over the age of 64 will not be recalled but will be screened on request at the normal interval. But for women under 50, or women whose clinicians recommend surveillance