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LETTER TO THE EDITOR

Breast Cancer and Screening in Hong Kong

Dear Editor,

The articles by Lam *et al*¹ and Dixon² reflect the current problem with screening in many areas of contemporary medical practice. This is the misappropriation of screening procedures, in the context of routine health care services without proper regard for the factors which determine whether or not the screening tool is effective and whether it is likely to lead to measureable health gains. The fact that the incidence of breast cancer in Hong Kong is *much* lower than in Western countries deserves greater emphasis. The three fold difference between a 1 in 27 chance of having the disease in Hong Kong women, compared with a ratio of 1 in 8 in the US immediately indicates that the positive predictive value of *any* test will be lower in this environment than elsewhere.

Although the overall burden of the problem will increase because of the ageing population, in Hong Kong there is no evidence of a convincing rising trend, at least not in the age group which might benefit from screening. There are approximately 300 deaths per annum to be prevented occurring in 1.7 million women aged 20 to 70+ years. However if screening confers any benefit this is only available to some of the 442,000 women aged 50-69. They contributed only 129 (39%) of the 330 deaths which occurred in 1991. Assuming the same prevalence at screening as in Western women, according to the analysis of Wright and Mueller screening of women in this age group in Hong Kong, over 7 years, would yield 66,300 positive tests of which 57,217 would be false positives. The deaths occurring in this group would total 486 compared with 663 if they were unscreened, yielding 177 avoided deaths at a cost of HK\$1.239 billion. As Dixon points out, 18,000 women would have to be screened *per death avoided*, but we must also note that 2,700 of these would have false positive results. Put another way, only 177 out of the 442,000 women (0.04%) would benefit. Finally we should acknowledge that the screening, if it conformed rigorously to the procedures and standards maintained in the best performing trials, would only prevent 20% of the deaths in the age group 50-69. This amounts to

only 8% of all breast cancer deaths in the Territory. Furthermore we can expect the *total mortality* in women screened for breast cancer to be the same as for unscreened women.

So there is, in our view, no point in allocating resources of this order to an intervention of unproven effectiveness and cost effectiveness in the Territory. A more rewarding health care activity would be to identify and implement effective interventions to prevent the recruitment of children and young women to smoking in Hong Kong. This, by contrast, would yield unquestionable benefits for population health far in excess of the predictable outcome (at present) of attempting to reduce breast cancer mortality through mass mammography.

It is unlikely that most of the questions raised by the present uncertainties about screening will be answered in this region without well designed randomised controlled trials in defined populations. Singapore is planning such a trial. Future trials should include the exploration of different approaches to the recruitment of women in defined at risk populations, in addition to questions relating to the effectiveness of the screening procedure itself. ■

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