are similar to those for women over age 50 in the UK National Breast Screening Program.

417 ORAL

Is annual mammography better to detect a contralateral breast cancer than mammography at a greater interval?

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Background: Follow up with annual mammography (MG) and regular clinical breast examination (CBE) is generally advised for women after curative treatment for primary breast cancer in order to detect a contralateral breast cancer (CBC) in an early stage.

Purpose: To investigate whether annual mammography results in the detection of contralateral breast cancers in an earlier stage compared to less frequent MG.

Patients and Methods: We compared stage and outcome of women with CBC diagnosed while on an annual MG and CBE schedule to women with the same CBE, but a less frequent MG screening interval. We studied 269 patients with a CBC treated for the first breast cancer in the period 1976–1987. They were followed until 1998.

Results: Group A consisted of 120 patients with CBC who had a MG interval of at the most 15 months. In group B 149 patients were analysed, their MG was made at a greater interval.

Group	N	Mean MG/pat	Mean MG interval months	Mean age at first BC	Found by %	Clinical occult %	Stage 0+I CBC %	node negative %	Dead by % 1998
A	120	6.25	12.2	49.5 yr	37	32	51	69	43
B	149	4.35	21.0	54.2 yr	40	25	59	68	42

MG was more often the source of first suspicion in recent years and tumor stages improved, but compared to the ipsilateral tumor stages hardly any difference was seen.

Survival curves will be presented.

Conclusion: Intensive follow up with annual MG does not lead to more non-palpable CBC's, nor better tumor stages than follow up with a less frequent radiological follow up.

418 POSTER

Continuing education and results in breast cancer screening

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At the end of 1997 the implementation of the nationwide mammographic screening has been completed in the Netherlands, resulting in 625.000 tests per year involving the age cohort 50–69 and with a screening interval of two years. All radiologists, radiographers and pathologists participating in the screening programme are trained in the National Expert and Training Centre in Nijmegen, the Netherlands, before the commencement of the screening. Technical quality control of all the 50 screening units is an additional task of the Centre.

The training programme for the radiologists includes the topics of screening vs clinical diagnosis, pattern recognition, the threshold for recall and radiologic/pathologic correlation, for the pathologists, handling of the specimen, differential diagnostic problems and similarly the radiologic/pathologic correlation. The radiographers are trained in positioning techniques, pattern recognition, psycho-social aspects and technical quality assurance.

The Centre has the task to evaluate the medical performance of the various disciplines by means of site visits. At these visits, first, the overall screening results of the first and subsequent rounds are evaluated, second, mammograms of a one-day production are reviewed for positioning- and technical quality and third, screening and diagnostic mammograms of interval and screen-detected St. II cancers are reviewed.

Results of 15 site visits will be presented and reasons for the regional variations will be discussed.

We conclude that training should be done before the commencement of the screening, that a continuous follow-up of the results is mandatory and that the various disciplines should be retrained continuously, both centrally and at the site by self-education.

419 POSTER

Screening – Yes, but whom and when?

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Screening is a way of detecting breast cancer in an asymptomatic, hence in many cases early stage. Early diagnosis – so women were taught – means a better chance for – if not curative – so at least improved treatment. So why is there lately so much argument about screening? Mostly because there is actually no scientific evidence proving (or disproving) the benefit of an early detection. The optimal age for starting screening, age-related anatomical difficulties, the interval, the techniques (mammography, BSE, CBE), the costs, no proof of a decrease in cause-specific mortality and the too often lacking experience of the mammographers, are only a few of the unsettled issues, that render the women insecure. In addition genetic markers have to be added by which women with a high risk to develop breast or ovarian cancer can be identified.

But since these open questions perhaps can never be answered univocally, women should be educated to inform themselves and take advice from their physician of confidence about the advantages and limits of screening and then take their health program in their own hands.

420 POSTER

Can population based screening reduce the mortality from breast cancer?

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Aim: We analyse the impact of the NHS breast screening program on disease stage, estimate the impact on mortality.

Methods: The pathology reports were obtained for all invasive breast cancers from 1988 to 1996 in women aged 50–64 in a defined geographical area. The distribution of tumour size was compared pre-screening and the second round. Mortality pre-screening was compared to that predicted for the second round.

Results: Tumour size changed significantly (Table 1). Mortality is predicted to drop by 22% from an observed 39% to 30.5% ($p < 0.0000$).

Table 1. The Distribution Of Tumour By Screening Round And Observed And Predicted Mortality

Tumour size mm	Observed 7 year mortality	Observed dist. Prescreening	Contribution to overall mortality	Observed dist. round 2	Predicted mortality round 2
<10	13%	0.03	0.4%	0.2	2.6%
10–19	18%	0.2	3.6%	0.31	5.6%
20–39	42%	0.36	15.1%	0.26	10.9%
40+	56%	0.15	8.4%	0.07	3.9%
unknown	47%	0.25	11.8%	0.16	7.5%
Total		1.00	39.3%	1.00	30.5%

Dist. = Distribution of tumour size

Conclusions: The change of tumour size seen due to the NHS Breast Screening Program implies that population based screening is effective.

421 POSTER

Symptomatic status, mammographic sensitivity and screening policy

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Population-based mammographic screening was introduced in Victoria, Australia in the 1990s and was fully operational by 1994. Screening is biennial with two-view mammography and double reading. The program is specifically targeted to women aged between 50 and 74 years, however women 40 to 49 years of age and women older than 75 can attend. Although the program is designed for asymptomatic women some women with symptoms do participate. According to BreastScreen Victoria policy women with a breast lump for less than 12 months who have not seen a doctor for the lump and women who report a blood-stained or watery nipple discharge should be referred for clinical assessment irrespective of the outcome of their screening mammogram. Women with 'other symptoms' are managed the same way as asymptomatic women.

We calculated the sensitivity of screening mammography according to the symptomatic status of women presenting for first round screening in 1994.