

**International Breast Cancer Screening Database Project Council Meeting  
October 16-18, 1997, Stowe, Vermont, USA**

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**TITLE:** MAMMOGRAPHIC SCREENING IN SWEDEN.  
SCIENTIFIC BASIS FOR RECOMMENDATIONS/GUIDELINES

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**KEY WORDS:** Breast Cancer, Screening, Population-based Screening,  
Mammography

**ABSTRACT:** Objective: The aim was to give a scientific base and proposals on revised national recommendations/guidelines on mammographic service screening in Sweden.

Background: Breast cancer afflicts nearly 5,000 women per year in Sweden. The risk for a woman to die before 50 years of age caused by breast cancer is 0.2% (total mortality rate = 1 %). Tumours 5 mm of size or more are often possible to detect by mammography.

Method: A committee of experts has analyzed available data concerning positive and negative effects of mammographic screening related to resource consumption. Large attention was given to quality for security aspects. A multidisciplinary reference group has followed the work. The parties concerned have examined and discussed the aim in all its aspects.

Results: Swedish studies show that among women invited to mammographic screening programs the risk to die caused by breast cancer decreased by one fourth. That will be equivalent to 40 saved lives per 10,000 women of age between 40 - 74, or 200 per year in the country. The share of cases of advanced breast cancer can be reduced in all age groups. This goal is easier to achieve in age 50 - 74 than among younger women. The medical care costs per additional year of life for women age 50 - 69 is estimated to be almost of the same size as for some other contributions to prolonge lives, i.e. cervix cancer or coronary case by-pass surgery.

Conclusion: It is possible to prolonge lives by mammographic screening for early detection of breast cancer. The costs vary between different age groups and is of the same size as costs for other frequent occurrence measures within the health and medical care.

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**TITLE:** THE CONTROVERSY ABOUT SCREENING IN YOUNGER WOMEN: PROPOSALS FOR MONITORING CHANGES IN NATIONAL GUIDELINES AND ESTABLISHING COLLABORATIVE STUDIES

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**KEY WORDS:** Screening, Younger Women, Guidelines

**ABSTRACT:** The recent Consensus Conference organised by the NIH and the conclusions of the panel arisen a wide controversy and debate about screening in younger women (40-49). As a consequence of this debate several associations (like ACS) reconsidered or are reconsidering their guidelines. In Europe, following the Falun Conference in Sweden and the international debate several Societies and Governments are also reconsidering their policy.

In the last survey carried out by the IBCSD the most part of countries in the world started screening programmes at age 50. How this debate will modify practice in the participating countries will be of interest of the IBCSDB and monitoring the changes in the offer of mammography at younger ages will be a very important aim for the next future.

The recent debate has shown that the issue of screening in younger ages is still open, independently from the evidence of mortality reduction. In particular the characteristics of the tumors (staging, prognostic indicators), the relationship with the woman physiologic life and the characteristics of the breast are needed of further research. Issues like recall-and biopsy rates, overdiagnosis (DCIS) and treatment modality are especially relevant, also from a psychosocial point of view, for younger women screening.

An initiative of the IBCSDB could facilitate the collection of data and collaborative research in this field.

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**TITLE:** US REGIONAL VARIATION IN SCREENING  
MAMMOGRAPHY INTERPRETATIONS AND  
RECOMMENDATIONS

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**KEY WORDS:** Screening Mammography, Variation

**ABSTRACT:** Background: With the diffusion of screening mammography, interest in the characteristics of its interpretation has grown. The American College of Radiology has recommended a lexicon of interpretations associated with specific follow-up recommendations. The impetus for the lexicon is to standardize language, clarify the clinical implications of an interpretation, and facilitate the comparison of radiologist's performance. The extent to which the interpretations are associated with consistent recommendations for follow-up is unclear, but differences are important since interpretive performance measures will be affected by how standardized the lexicon has become.

Objective: This study will examine the distribution of screening mammography interpretations and recommendations from seven sites around the United States. The results have implications for the comparison of interpretive performance across facilities, and the evaluation of the effectiveness of screening mammography.

Methods: Using data collected from seven mammography registries we identify women screened in 1996 (n= ). The demographics, and prior mammography history, will be compared across the sites. We will then compare the proportion of women in each ACR category across sites for initial (0-5 scale) and final interpretations (1-5). Among women with final interpretations we will then compare recommendations made in association with each interpretation. Finally we will use multiple regression to model the proportion of women classified as "probably benign" in association with "short interval follow-up". The null hypothesis would be that there is no difference in the proportion of "probably benign" interpretations across regions, after accounting for the other factors including age, race, education, and prior mammography history.

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**TITLE:** BIOPSY RATE, CANCER DETECTION RATE AND RELATED MEASURES IN SELECTED US SITES

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**KEY WORDS:** Biopsy rate, screening mammography

**ABSTRACT:** Data from four mammography projects in the US will be presented on the biopsy yield from positive screening mammograms. The four sites represented are from different parts of the US, with different ethnic and racial distributions. Screening mammogram was defined as 2-view mammogram in an asymptomatic woman. A positive mammogram was defined in several ways, which will be discussed. Cancers are linked to mammography data through the state or regional cancer registries. For this analysis, DCIS was included and LCIS excluded as cancer.

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**TITLE:** QUALITY INDICATORS AND COMPARABILITY OF  
BREAST CANCER SCREENING PROGRAMS  
IN EUROPE

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**KEY WORDS:** Breast Cancer Screening, Quality Indicators, Epidemiology

**ABSTRACT:** Quality indicators of breast cancer screening programs as defined in the European guidelines include participation rate, cancer detection rate, size of the detected tumor and benign to malignant biopsy ratio. It is legitimate to assume that after publication of such results from several breast cancer screening programs comparisons would be feasible and appropriate. Yet at present, such comparisons are hindered by substantial differences in the organization of the various screening programs and their performance on some of the initial indicators.

Numerical examples of the effect of the rate of opportunistic (non-organized) screening in the community invitation schemes and the intensity of efforts to recruit non-attendees, initial participation rates, participation rates by age and screening time intervals on detection rates, size of detected tumors and malignant to benign ratio of operated tumors will be presented.

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**TITLE:** DETECTION OF INTERVAL CANCERS AND CANCERS IN  
NON-PARTICIPANTS IN THE ECCLES BREAST  
SCREENING PROGRAMME, DUBLIN, IRELAND

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**KEY WORDS:** Breast Screening, Interval Cancers, Cancer Registration

**ABSTRACT:** The Eccles Breast Screening Programme (EBSP) was a population-based screening programme for breast cancer in Dublin which began in 1989 as a member of the Network of Pilot Projects of the 'Europe Against Cancer' Programme. Women aged 50-64 years in a defined geographic area were invited for mammographic screening. The total target population was 35,000; the screening interval was 2 years; two rounds of screening were completed by end 1994. Follow up for ascertainment of interval cancers has continued to end 1996. Prior to 1994 Ireland did not have a National Cancer Registry. Thus, for the duration of the pilot project, there was no readily available method of identifying interval cancers and cancers in non-participant members of the target population. It was therefore necessary to set up an active review of pathology data of all hospitals in the screening and contiguous regions to which women of the target area might go for treatment. A total of 19 hospitals, including public and private, were identified. Permission was sought and granted from pathology staff and the Medical Boards of all hospitals. Review of all pathology records was undertaken by a nurse research assistant from EBSP under the direction of the epidemiologist / Project Co-ordinator. Difficulties encountered included differences in methods for recording and storing data between hospitals, different computer systems, changes in computer systems over time within hospitals, incomplete demographic data on pathology records and access to medical records. The entire process involved the review of some 500,000 pathology records. The results of the exercise will be presented in the context of other outcome parameters of the Eccles Programme. Data from this undertaking are currently being compared with similar data from 3 other European Screening projects. Included in the planned analysis of that comparison is an assessment of impact of method of ascertainment on differences in interval cancer rates between programmes.

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**TITLE:** EFFECT OF VARIATION OF DEFINITIONS ON  
ACCURACY MEASUREMENTS IN US DATA

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**KEY WORDS:** Outcomes, accuracy, sensitivity and specificity,  
mammography, screening

**ABSTRACT:** Mammography done in the USA is not a well organized process of screening populations of women at defined screening intervals with universally defined reporting. The women being imaged are a mix of screening patients, and symptomatic patients. In order to measure the results of screening it is essential that clear criteria be created to define a screening exam, and its results. This definition must work across different patterns of screening, and different available data sets in order to both create larger pools of data and compare patterns of care from different geographic regions. In order to confirm that the definitions are appropriate we are testing the changes on accuracy measures caused by changes in the definitions. The presentation will outline the standard definition, the accuracy measurements of this standard definition, and the variations tested. Variations of the standard definition to test are: the results to include as positive, the length of time after the screening study for cancers to occur, exclusion of in-situ as positive for cancer, and the effect of including symptomatic patients.

## ABSTRACT FORM

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**TITLE:** Reliability of Diagnosis of DCIS

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**KEY WORKS:** DCIS, diagnosis

### **ABSTRACT:**

The SEER study of in situ breast cancer in 1973-1985 involved reabstracting all first cancer in situ breast cancer cases in four states. In reviewing the pathology report for each case, another goal emerged; i.e., to demonstrate the need for a standardized method of reporting pathology for DCIS diagnosis. The pathology section of the data collection form included histology of predominant component of biopsy specimen, histology of secondary component, nuclear grade, presence of necrosis in tumor, margins of surgical specimen, multi-focal, multi-centric, tumor size. These items need to be included in a standardized way in pathology reports on DCIS. At a minimum, information on whether the breast cancer was in situ or invasive was needed since one of the endpoints of the study was recurrence with invasive disease. A total of 253 (13%) of the 1,965 cases were excluded because they were coded as in situ and were invasive. A review of 129 of the pathology reports from New Mexico, Iowa, and Utah originally miscoded as in situ showed that 43% had correct diagnosis within final diagnosis statement along with the term "in situ"; 25% had correct diagnosis within final diagnosis statement with no mention of "in situ"; 19% had correct diagnosis within micro portion of the path report only and did not mention invasive disease in the final diagnosis statement; 5% had ambiguous terminology making correct diagnosis impossible; and the other 8% had various problems such as "possible" infiltrating ductal carcinoma (SEER rule is to code only as invasive if it is definite or "probable"). Much like mammography reports have been standardized, a standardized method for pathology reports is needed for cancer registries, researchers, clinicians and patients. Otherwise the reliability of pathology reports is questionable.

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**DEADLINE:** September 1, 1997

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**TITLE:** EVALUATION OF BREAST CANCER SCREENING PROGRAMMES USING TRENDS IN MORTALITY

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**KEY WORDS:** Breast Cancer, Mortality, Screening

**ABSTRACT:** The effectiveness of screening for breast cancer by mammography, at least in women over 50, has been clearly demonstrated by a number of randomised trials. On the basis of these results, many countries have established national screening programmes. However, the effectiveness of such programmes on breast cancer mortality is much more difficult to measure due to the lack of an unscreened control population.

In the RCT's it was usually several years before a difference between the breast cancer mortality in study and control groups began to emerge. Large-scale national programmes almost inevitably take longer to become fully established and cover the whole population than a randomised controlled trial, and the effect on mortality will thus become apparent even more gradually. In addition, in the trials it was possible to exclude from the analysis deaths in breast cancer cases diagnosed before date of entry to the trial, for which screening could have had no benefit. The inclusion of such cases in national mortality rates will further dilute the evidence of a screening effect for a number of years.

Most of the effects described above can be modeled in some way. However, the fact that in a number of countries, including the UK, breast cancer mortality rates appear to be falling already,-- probably largely due to other factors, makes the separate effect of screening difficult to estimate. Some possible approaches to this problem such as geographical and temporal comparisons will be discussed.