Twenty-Year Follow- Up Breast Screening Project

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THIS REPORT is a 20-year follow up of the routine yearly screening of 9,043 women for 5 years beginning in 1973 that detected 143 breast cancers in 128 women, of whom 86% are still living. Of the women with lesions less than 1.1 cm in diameter 88.3% are living of those with larger lesions, only 78.8% have survived. When excluding those with lobular carcinoma insitu (LCIS), those who had normal physical examinations but whose cancer was found only by mammography, **95.1% have survived.** In contrast for women who had palpable lesions, only 78% are alive (p = 0.006). The 128 women have been matched with 1,609 others who had negative examinations during the routine screening program, but have not had mammograms regularly, on their own volition. This latter group were found to have larger lesions than those found in the original 128. Mammography failed to detect 8.3% of the lesions. Three women diagnosed as having insitu cancers died.

In 1973, the American Cancer Society/National Cancer Institute funded 28 Breast Cancer Detection Demonstration Projects.[1] One of the first three operational projects was at the Georgia Baptist Medical Center. The goal was to demonstrate that if breast cancer is detected early enough, survival rates would increase.

On admission, the women were informed that if they had any breast problems they would not be eligible for the project. Some of the women did have clinical lesions of the breast and were either ignorant of the fact or chose not to disclose it.

A review of the Breast Cancer Detection Demonstration Project (BCDDP) at the Georgia Baptist Medical Center (GBMC) after 20 years reports the follow up of 9043 women screened yearly over 5-years for breast cancer. Mammography, thermography, and physical examinations were performed on all the women. Due to the scare, at that time, of radiation carcinogenesis, the National Cancer Institute stopped mammography on women less than 50 years of age after the second year.[2] Thermography was discontinued after finding only 46% of the women with breast cancer had positive thermograms.[3]

A total of 916 (10.1%) of the 9043 women had biopsies. There were 143 (15.6%) cancers detected in 128 women, 86% of whom are still alive. The 128 women were matched with 1609 women who had had negative examination during the 5-year screening period. Those women with breast cancer have been followed along with the matched group of the original cohort by the authors, the Cancer Registry of Georgia Baptist Medical Center and Westat.[4] The aver age survival time of the original 128 women is 16.6 years, with the median survival is 19.7 years. (All lesions were not found the same year).

When the lesions found measured less that 1.1 cm., 113 (88.3%) of the women have survived. Of the 67 women who had nonpalpable lesions, 95.5% have survived.

The method of detection of their first cancer was recorded for 120 of the 128 women. Since there is controversy as to whether LCIS is a cancer or just a high risk of developing cancer, those women with LCIS have been eliminated from the survival statistics. A total of 67 women's lesions were found only by mammography; because 6 of the 67 women had LCIS, the number is reduced to 61, with 58 living (95.1%).

Ten women's lesions (8.33%) were found only by physical exam; their mammograms were negative. This indicate the extreme importance of physical examination in the screening procedures. Another 43 women had lesions found by both physical and mammographic examinations; 53 women had palpable lesions. Since 3 women had LCIS, the number is reduced to 50 with palpable lesions; 39 (78%) are living.

Nonpalpable vs. Palpable p = < 0.006. When LCIS is included, Nonpalpable vs. Palpable p = < 0.001, which shows the importance of routine mammography to find the LCIS which needs excision and, at a minimum, careful observation.

The pathologists at the various hospitals treating the women "called" 31 of the 55 insitu lesions "duct carcinoma insitu" (DCIS). Three of them have died of cancer (3/31 = 9.67%). This suggests that, at the least, axillary sampling is a necessary part of breast cancer surgery.

On the first visit 59 lesions detected, the other 64 lesions were found on subsequent visits. All the 64 had previous negative mammograms on retrospective review. There were 14 other women who had "interval lesions," i.e. they were found between visits either by Breast Self Examination or by their physician. All of these women also had negative mammograms on retrospective review.

On a subsequent visit, 4 women were found to have suspicious lesions seen on retrospective review of the previous films; these were termed "missed." One person's films had been mistakenly filed before they were read. Only one of the other three, a 38-year-old with a 0.2 cm lesion, has died. Missing only 4 indicates the accuracy of screening 9043 women with mammography and physcial examination during 38,719 visits over the 5-year period (4/38,719 = 0.001 or 0.01 of 1%).

Two women, less than 50 years of age, did not have mammography after the second year and returned during the fourth year with palpable lesions. Ten women older than 50 years of age had declined mammograms because of the fear of radiation. Later, they returned