X-Rays Diagnose Breast Cancer Without Biopsy

➤ GREATER USE of X-days to diagnose breast cancer should both save many women from needless operations and prevent cancer deaths, the American Medical Association was told at its meeting in Atlantic City, N. J.

In most cases X-ray examination will tell whether a lump in a woman's breast is cancer or some other condition, Dr. Helen Ingleby of the Jewish Hospital, Philadelphia, reported. In many cases the X-ray picture will also distinguish between various conditions that are not cancer.

Heretofore physicians have relied for breast cancer diagnosis upon examination of the breast plus biopsy, which consists of removal and microscopic examination of a tiny piece of tissue suspected of being cancer.

Dr. Ingleby based her new approach in the cancer fight upon studies she and Dr. Jacob Gershon-Cohen have made in which they compared X-ray pictures of the breast with sections of breast after surgical removal.

The cancers they found in the breasts were the same in location, size and shape as the shadows seen on the X-ray pictures taken before operation.

Now they feel they can tell a woman when the lump in her breast is a cyst, when it is due to glandular changes, and when it is due to cancer without submitting her even to the minor operation of biopsy in cases that do not require any operation. If the X-ray picture shows cancer, the Philadelphia scientists of course urge immediate removal of it.

Science News Letter, June 23, 1951

Boss to Blame if Workers Make Errors Day After Day

➤ THE BOSS is at fault if a workman continues to make the same error day after day. That is what the American Society of Mechanical Engineers meeting in Toronto, Canada, was told by W. F. McMullen of Canadian General Electric Company, Ltd., of Toronto.

Many workers make the same mistake over and over again because no one ever takes the trouble to correct them, he stated. It is management's duty to do this, he said. The boss should discuss a man's work with him at regular intervals to let him know how he is doing. To do this job intelligently, the boss should keep a continuous record of the individual's performance.

This record should show how the person is doing on his present job, what he can do to improve and what additional training can be given him to help him improve. Also it should show what his ultimate potential is and what he needs to move towards it.

Science News Letter, June 23, 1951

CONTROL BOARD—Closeup of the master control board of the UNIVAC. Dr. John W. Mauchly, one of the inventors, is leaning over the panel.

Computer Figures Census

Electronic brain grinds out census data. UNIVAC is first computer designed to compile statistics as well as handle mathematics.

➤ THE FIRST electronic computing brain ever to be used in compiling census data is hard at work grinding out figures.

After almost five years of construction, the UNIVAC was unveiled to the public in Philadelphia. Although much smaller than the first of its family, the wartime ENIAC, the new electronic computer still fills a normal-size room.

The first electronic computer designed to compile statistics as well as handle complicated mathematical problems, the UNIVAC — Universal Automatic Computer—was constructed specifically for the U. S. Census Bureau.

Even during the dedication the electronic computer worked right along. Dealing with data compiled during the 1950 census, it figured out for Monroe County, Iowa, just how many men and women there are in the county, whether they live in the city or country, and the number of school years they completed.

The UNIVAC is 14½ x 7½ feet, and stands eight feet high. It was built by the Eckert-Mauchly Computer Corporation, a division of Remington Rand, Inc., under the supervision of the National Bureau of Standards. Prof. J. Presper Eckert and Dr. John W. Mauchly who designed it are the same men who several years ago at the request of the Army developed the ENIAC, a machine much too large for commercial use.

In only one-thirtieth of a second the new electronic brain can make a statistical description of a baby under one year of age who did not fall in the census sample. It takes about one-third of a second to classify the complete description of a person who was an employed foreign-born male, the head of a household, a veteran included in the census sample who had changed his place of residence during the pre-census year, was between 25 and 35 years old, attended school but did not graduate from college, and was not the sole support of the family.

In the wink of an eye—about one-sixth of a second—the machine can completely describe a typical American citizen.