New Computer Program Assesses a Woman’s Risk for Developing Breast Cancer

Since last April, when researchers announced evidence that tamoxifen reduces the incidence of breast cancer in high-risk women, doctors have been looking for a systematic way to identify women who qualify as “high risk.” To address this need, the National Cancer Institute developed the Breast Cancer Risk Assessment Tool, an interactive computer program released this month as a pilot project.

The program is adapted from the risk assessment model used to screen participants for the Breast Cancer Prevention Trial conducted by the National Surgical Adjuvant Breast and Bowel Project and funded by NCI. The 6-year trial showed an approximately 45% reduction in the incidence of breast cancer for high-risk U.S. women who took tamoxifen (Nolvadex®). The full study is published in this issue of the Journal (see page 1371).

“Before you can know if a woman might benefit from tamoxifen you first have to identify her risk,” said Barnett Kramer, M.D., deputy director of the NCI’s Division of Cancer Prevention, who helped develop the program. “There are thousands of potential combinations of factors involved in estimating the risk of developing breast cancer. This program is the most accurate tool available to assess risk.”

While calculating risk may be complex, the Breast Cancer Risk Assessment Tool fits on a floppy disk and takes only a couple of minutes to use. Users must answer seven questions regarding risk factors such as age at first childbirth and family history of breast cancer. The program then calculates an individual risk of developing breast cancer over the next 5 years and of developing it before age 90 — essentially a lifetime risk.

For example, a 45-year-old Caucasian woman who has two first-degree relatives with breast cancer, experienced menarche at age 13, and experienced childbirth at age 24 has a 5-year risk of developing breast cancer of 3.4% and lifetime risk of 33.6%. A woman with a 5-year risk of 1.7% or more was considered to be at elevated risk and eligible for participation in the BCPT.

The disk also contains information regarding the benefits and risks of tamoxifen. “The disk is really an entree into a discussion of a very complicated issue,” said Kramer. “It requires a conversation with a health care professional, a self-assessment of personal values, and a weighing of potential outcomes.”

Postmenopausal women at increased risk for breast cancer are encouraged to consider participating in the Study of Tamoxifen and Raloxifene. The study, which will include 22,000 women, is being run by NSABP, and will compare tamoxifen to raloxifene, an osteoporosis drug that may also have breast cancer prevention effects. Women can sign up for information online at http://www.nsabp.pitt.edu. (By mail: NSABP, Box 21, Pittsburgh, PA 15261; by fax: 412-330-4664).

Feedback from the pilot project will be used to refine the risk assessment approach. Copies of the current Breast Cancer Risk Assessment Tool may be ordered online at http://cancertrials.nci.nih.gov or by calling NCI’s Cancer Information Service at 1-800-4-CANCER.

— Jennifer Smith

Institute of Medicine Completes Review of I-131 Issues

The National Academy of Sciences and the Institute of Medicine completed their review earlier this month of the National Cancer Institute study of exposure of the American people to I-131 from Nevada atomic bomb tests in the 1950s.

At press time, neither staff from the NCI or the U.S. Centers for Disease Control and Prevention had seen a copy of the IOM report.

The IOM review was conducted under a contract with the U.S. Department of Health and Human Services, which charged the IOM with four main tasks:

First, IOM was to assess the soundness of the NCI study’s radiation dose reconstruction and its estimates of thyroid doses. Then IOM was to estimate the number of cancers expected.

Second, IOM was to assess the public health and medical implications of the projected doses and expected cancers; third, provide information to DHHS on how to best inform and educate the public concerning the risk from I-131 released from the atomic testing; and fourth, develop recommendations for clinical practice guidelines related to evaluating, treating, and counseling exposed persons.

The NCI radiation fallout study report is available on the NCI web site (www.nic.nih.gov) by clicking on “What’s New,” and then on “Radiation Fallout.” NCI statements on the IOM study are there, as well as links to the NCI fallout report, which was published in October 1997. The IOM report was expected to be available on the NAS web site (www.nas.edu).