Annual Cancer Statistics Report Raises Key Questions

The government’s annual report on cancer statistics generated headlines this year—cancer mortality continues to decline, and incidence is holding steady overall (see box). But it also highlighted trends and disparities in specific cancers that are not well understood, especially in breast cancer, thyroid cancer, and racial and economic disparities for both children and adults.

“It’s part of our intent,” said the National Cancer Institute’s Brenda Edwards, Ph.D., chief author of the report. “We try to identify some of the leading questions and bring attention to what is known about risk factors, screening, and treatment that may provide clues to what’s causing the trends.”

This year for the first time, breast cancer incidence stopped rising, but researchers don’t know if it is leveling off. There was a 4% decline in breast cancers between 2001 and 2003, which was not statistically significant. If the data in the next few years continue to show a decline or stabilization in rates, said Edwards, the reasons may include the leveling off of mammography screening rates and the sharp drop in use of hormone replacement therapy in recent years. “But that is only speculation—we have to wait a few more years and acquire more data,” she said.

Thyroid cancer is also a mystery, as the rates have been rising steeply in recent years. The incidence has risen in men and even more dramatically in women in the last 10 years, globally and in all U.S. racial and ethnic populations and age groups. Increased screening and radiation exposure probably contributes to this trend but does not fully explain it, the authors say.

One focus of this year’s report was cancer rates among Hispanics, which don’t mirror those in the U.S. population. On the whole, Hispanics in the United States have a lower incidence of most cancers than non-Hispanic whites. However, Hispanics are more likely to be diagnosed at a later stage for lung, colorectal, prostate, female breast, and cervical cancers. Studies suggest that screening rates are low among Hispanics, especially in low-income areas. This finding may help explain the later-stage diagnoses, and it raises the question of whether improving early diagnosis would improve cancer prognosis in...

The report appeared in Cancer Oct. 15 and online Sept. 6 (http://www.interscience.wiley.com/cancer/report2006). It includes mortality rates for the entire U.S. population and incidence rates for a large and increasing proportion of the population, 82% for the most recent (1999–2003) period. This year’s report focused on Hispanic cancer rates and covered 90% of the Hispanics in the United States, making it the most comprehensive source of data for this population. Highlights of this year’s report include the following:

• Long-term mortality trends continue to decline for all races and both sexes combined.
• Overall incidence rates for all cancers, all races, and both men and women have been stable from 1992 to 2003.
• Breast cancer incidence did not increase for the first time, but the stabilization of the rate, if it exists, will have to be seen over the next few years before it can be confirmed.
• Lung cancer incidence continued to decline for men. The rates rose slightly for women, a change from last year’s report in which they were stable.
• Among men, the incidence of myeloma, leukemia, and cancers of the prostate, liver, kidney, and esophagus continue to increase; rates continue to decline for cancers of stomach and oral cavity, lung, and colon and rectum.
• Among women, incidence rates continue to decline for colorectal, uterine, ovarian, oral, stomach, and cervical cancers. Thyroid cancer incidence continues to increase. Also on the rise are rates for non-Hodgkin lymphoma, melanoma, leukemia, and lung, bladder, and kidney cancer.

low-income areas. Some programs aiming to reduce health disparities in the United States, such as Redes en Accion: The National Latino Cancer Research Network and the Cancer Prevention and Control Research Network. These groups are funding programs and research that could help address this question.

In addition to the stage differences, the report documents a higher incidence of liver, stomach, and cervical cancers among Hispanics. Because all three are associated with infectious agents, the finding suggests a need for broader immunization programs (hepatitis B virus for liver cancer, human papillomavirus for cervical cancer) as well as better screening programs, according to the report.

Hispanic children are also more likely to develop leukemia, retinoblastoma, osteosarcoma, and germ-cell tumors for reasons that are not well understood. These children are less likely to develop central nervous system, renal and epithelial tumors, and neuroblastoma than are non-Hispanic white children. Hispanic boys have higher rates of Hodgkin lymphoma, but Hispanic adolescents have lower rates than their non-Hispanic white counterparts.

Some retinoblastomas have a heritable gene mutation, but for most of these disparities there are few clues. The suggested causes for childhood leukemia include maternal diet, parental occupation, various environmental exposures, exposure to multiple infectious agents, and genetic differences. So far none has been linked conclusively to the disease.

The Northern California Childhood Leukemia Study is an ongoing epidemiologic study looking at the disease in both Hispanic and white, non-Hispanic children. Recently, this study revealed some ethnic differences in acute lymphoblastic leukemia, said principal investigator Patricia Balfour, Ph.D., at the University of California—Berkeley. One is a specific gene translocation that occurs more often in non-Hispanic patients than Hispanic patients. The other is the finding that daycare attendance, which is used as a proxy for exposure to infectious agents, lowered the risk of leukemia among non-Hispanic white children but not Hispanic children.

More clues may be coming soon from the California study. “Many analyses of the data are under way,” Balfour said.

—Caroline McNeil

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