

# Advanced breast cancer on the rise in younger women

The incidence of breast cancer with distant involvement increased a small but statistically significant amount over the last three decades among U.S. women aged 25 to 39 years, but not among older women.

With evidence from the National Cancer Institute Surveillance, Epidemiology, and End Results (SEER) database suggesting that the incidence of advanced breast cancer in young women is on the rise, Rebecca H. Johnson, MD, of Seattle (Washington) Children's Hospital and the University of Washington in Seattle, and colleagues sought to quantify this trend (*JAMA*. 2013;309[8]:800-805). They used the following SEER definitions for breast cancer in their analysis:

- Localized disease is confined to the breast.
- Regional disease refers to contiguous and adjacent organ spread, such as to the lymph nodes and chest wall.
- Distant disease refers to remote metastasis of breast cancer, such as to bone, brain, or lung.

The researchers found that in women aged 25 to 39 years, the incidence of breast cancer with distant involvement at diagnosis increased from 1.53 per 100,000 in 1976 to 2.90 per 100,000 in 2009, representing an average compounded increase of 2.07% per year over the 34-year period. No such increase was seen in any other age group or in any other extent-of-disease subgroup of the same age range.

The rate of increasing incidence of distant disease was inversely proportional to age at diagnosis, with the greatest increase occurring in women aged 25 to 34 years. As summarized by a statement from *JAMA*, progressively smaller increases occurred in older women by 5-year age intervals, and no statistically significant incidence increase occurred in any group of women aged 55 years and older.

The increase in distant disease for these younger women occurred among women of all races and ethnicities evaluated (race and ethnicity information became available in the SEER database in 1992), particularly non-Hispanic whites and African-Americans, and among women in both metropolitan and nonmetropolitan areas.

Distant disease incidence increased more for women with estrogen-receptor (ER)-positive breast cancer than for those with ER-negative disease.

Johnson and her team noted in their report that breast cancer is the most common malignant tumor in adolescent and young-adult women aged 15 to 39 years, accounting for 14% of all cancer in women and men in that age group. Although the steady increase revealed by their study is relatively small, the investigators pointed out that the trend showed no evidence of abating and may indicate increasing epidemiologic and clinical significance.