Breast-conserving therapy for early-stage cancers has increased, though access an issue

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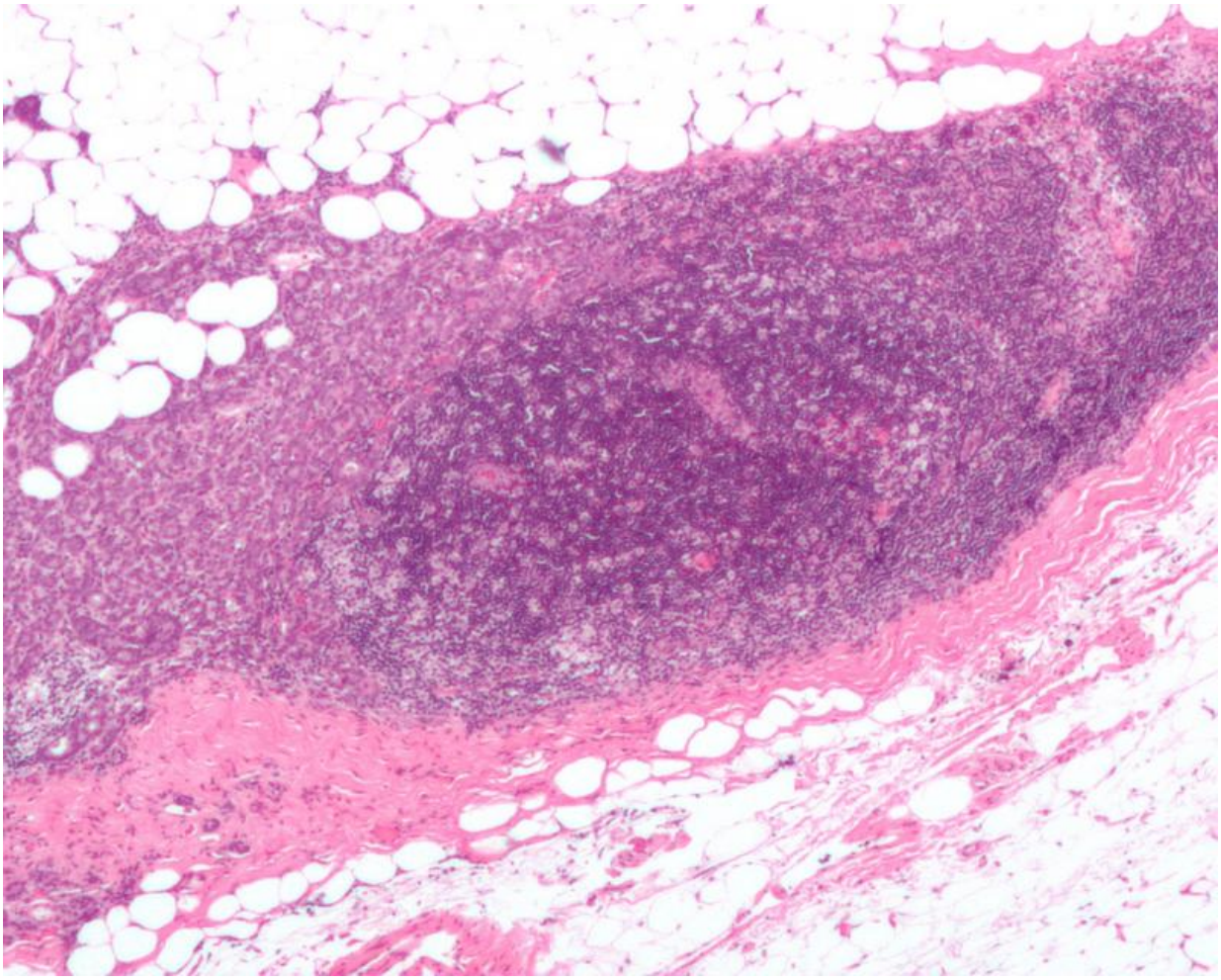

Micrograph showing a lymph node invaded by ductal breast carcinoma, with extension of the tumor beyond the lymph node. Credit: Nephron/Wikipedia

The first comprehensive national review of breast-conserving therapy (BCT) shows that over the last 13 years rates of this treatment modality for early-stage breast cancer have increased at a steady pace. However, the review also highlights important demographic factors that impact which patients have access to BCT. Researchers at The University of Texas MD Anderson Cancer Center found declines in disparities related to age, treatment facility type and geographic region, but also identified several socioeconomic factors—insurance, income and travel distance to treatment centers—as key barriers to BCT.

Published online in *JAMA Surgery*, the researchers used the National Cancer Data Base (NCDB) to examine the surgical choices of women with stage T1 or T2 breast cancer treated between 1998 and 2011. The NCDB is a nationwide oncology outcomes database that includes approximately 70 percent of all newly diagnosed cases of cancer in the U.S. Of the nearly 728,000 women included in the analysis, the percentage undergoing BCT increased from 54.3 percent in 1998 to 59.7 percent in 2006 and then remained relatively constant, landing at 60.1 percent in 2011.

However, the rates of BCT—also called lumpectomy—varied based on patient demographics, including insurance status and income, and treating facility variables, such as facility type, location and travel distance for the patient. Findings include:

- The use of BCT was greater in patients age 52-61 (62.8 percent) compared with younger patients (57.8 percent), and among women with higher education levels (61.7 percent).
- Rates of BCT were lower in patients without insurance (49.3 percent) compared to those with private insurance (62.3 percent), and among women with the lowest median income (51.1 percent).
- Academic cancer programs (59.8 percent), the Northeast (64.5

percent), and living less than about 17 miles from a treatment facility (roughly 60 percent) were factors associated with higher BCT rates, compared with community cancer programs (55.4 percent), the South (52 percent), and living farther away from a treatment facility (54 percent).
- Importantly, increases in BCT use were seen from 1998 to 2011 across all age groups (from 48.2 percent to 59.7 percent), in community cancer programs (48.4 percent in 1998 vs. 58.8 percent in 2011) and at facilities located in the South (45.1 percent in 1998 vs. 55.3 percent in 2011).

"Looking at the big picture, strides have been made to reduce disparities in the use of this very effective treatment for women with early-stage breast cancer. But despite significant progress by the medical community, there are significant pockets of women where this therapy is underutilized," said principal investigator Isabelle Bedrosian, M.D., F.A.C.S., associate professor, department of surgical oncology, and medical director, Nellie B. Connelly Breast Center at MD Anderson. "The socioeconomic barriers are unlikely to be erased without health policy changes."

Elaborating on the findings, she added that lower rates of BCT among women who live farthest from treatment facilities may be attributed to patients' ability or willingness to travel for daily radiation therapy, a standard follow-up to lumpectomy. This may also account for lower rates of BCT in the South, where women often have disproportionately greater travel distances to treatment facilities. Income and insurance status also play a significant role in surgical choice, as a woman from a low-income family may be unable to take the length of time needed for the weeks of radiotherapy.

Most women with breast cancer have some type of surgery to remove the tumor, usually opting for BCT or mastectomy. With BCT only the part

of the breast containing the cancer and some surrounding tissue is removed. The National Institutes of Health issued a consensus statement in 1990 in support of BCT that led to a substantial decline in mastectomy rates and widespread acceptance of BCT as an appropriate and effective treatment for early-stage breast cancer. However, in the past decade, technical advances and other societal changes—including genetic testing for BRCA1 and BRCA2 mutation, advances in reconstruction techniques, breast magnetic resonance imaging and contralateral prophylactic mastectomy—have garnered increased patient interest.

According to Bedrosian, this study confirms that the majority of women are choosing BCT, a 'reassuring finding that patients and physicians recognize that this less invasive therapy is a good course of treatment for early-stage breast cancer." However, she added, "These data also demonstrate the breadth of the socioeconomic factors that need to be considered to adequately address the disparate use of BCT across demographic groups."

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