

TRENDS IN BREAST CANCER INCIDENCE IN YOUNG WOMEN: EXPERIENCE AT AN OUTPATIENT COMMUNITY BREAST FACILITY

PURPOSE

To assess longitudinal trends in breast cancer incidence, method of detection, and tumor characteristics among women aged 18-49 over an 11-year period at an outpatient breast imaging practice.

METHODS AND MATERIALS

A retrospective review was conducted of breast cancer cases diagnosed in women aged 18-49 between 2014 and 2024 at a community outpatient breast imaging facility. This age group comprised 21-25% of the annual patient volume during the study period. Clinical and imaging data were reviewed, including detection modality, tumor grade, receptor status, size, and stage at presentation. Non-breast malignancies and cases lacking follow-up were excluded.

RESULTS

A total of 1,799 breast cancers were diagnosed in 1,290 women aged 18-49. Annual diagnoses in this group ranged from 145 to 196, with a mean age of 42.6 years (range 23-49). Of these, 731 (41%) were detected on screening and 1,068 (59%) on diagnostic evaluation. Invasive cancers comprised 1,451 cases (80.7%), while 347 (19.3%) were non-invasive. Twenty-three patients (1.8%) presented with metastatic disease. The average tumor size was 27 mm for DCIS and 22 mm for invasive cancers. A family history of breast cancer was documented in 381 cases (21%). Tumor grade distribution included 347 (19.3%) low-grade, 790 (43.9%) intermediate-grade, and 593 (33.0%) high-grade tumors; 154 (8.6%) were triple-negative. Age-stratified analysis showed that 423 cancers (24%) occurred in women under 40, and 1,376 (76%) in women aged 40-49. Annual cancer diagnoses in women under 40 ranged from 17 to 56, peaking in 2019, while cancers in women aged 40-49 consistently exceeded 98 per year. Total patients under 50 declined slightly from 24% in 2014 to 21% in 2024, but the absolute number of breast cancers in this cohort remained stable, representing approximately 20-24% of total breast cancer volume each year.

CONCLUSIONS

Women under 50 consistently represent a substantial portion of the breast cancer burden at our center. A significant percentage of these tumors are invasive, high-grade and triple negative, particularly among those under 40. These findings support the need for ongoing vigilance in imaging protocols and consideration of earlier or more intensive screening for higher-risk younger populations.

CLINICAL RELEVANCE/APPLICATIONS

Emerging national trends highlight a rising incidence of breast cancer in younger women, prompting re-evaluation of age-based screening thresholds and risk stratification strategies. Understanding age-specific tumor behavior and detection patterns can inform optimized imaging guidelines and early intervention approaches.