What is the recommended approach to a breast mass in a woman younger than 25 years?

Even though cancer is rare in this age group, all masses should be evaluated by palpation and ultrasonographic imaging performed by an expert, according to this population-based study.

Scant research has focused on breast cancer in very young women. This retrospective case series by investigators at the Mayo Clinic assessed girls and women younger than 25 years who were given a diagnosis of primary breast cancer between 1935 and 2005 and who received care at that institution.

The investigators highlighted many of the challenges clinicians face when a young patient presents with a lump or other signs associated with breast cancer. For example, they note that, in its early stages, breast carcinoma in young women can be similar in appearance to fibroadenoma. When a patient postpones care or a clinician dismisses the lump because of a low index of suspicion, diagnosis can be delayed. That is problematic because invasive breast carcinoma in girls and young women is more aggressive and associated with a poorer prognosis overall.

Details of the trial

Eleven women 20 to 24 years old and one 18-year-old teen were found to have breast cancer. Of these, eight of the women detected the mass themselves, one observed bloody nipple discharge associated with constitutional symptoms, and another experienced severe constitutional symptoms associated with disseminated malignancy. In one case, the physician detected a breast mass in an asymptomatic woman. Details on the remaining woman were unavailable.

Palpable masses were noted in most of the women at the time of clinical evaluation, among the 12 young women who had breast cancer, the median greatest diameter of their breast mass was 4 cm.
When should a breast mass in a young woman be biopsied?*

- When the patient has a medical history that arouses concern, such as a history of malignancy, a family history of breast or ovarian cancer at a young age, a history of BRCA mutation, a rapidly growing mass, or constitutional symptoms of malignancy.
- When the physical examination reveals fever, weight loss, anemia, systemic lymphadenopathy, other masses, or hepatosplenomegaly. Other findings that should arouse concern (and warrant biopsy) are hard masses with an irregular edge, skin tethering, axillary lymphadenopathy, or any combination of these; distorted architecture or asymmetry of the breasts; bloody uniductal nipple discharge; or a mass size of 5 cm or larger.
- When it persists with no sign of regression for 3 to 4 months.
- When there are multiple and bilateral breast masses.
- When imaging detects reason for concern.

* Surgical excisional biopsy or core needle biopsy is recommended.

Source: Simmons PS, et al.

and the median greatest diameter was 4 cm. After the original history and exam, breast cancer was suspected in only 2 of the 11 women.

Among the 11 young women who had breast cancer, one had received mantle and abdominal radiotherapy for previously diagnosed Hodgkin’s disease. Two women had a family history suggesting hereditary breast cancer. None of the women were tested for a BRCA mutation. Regional or local recurrence was identified in three women, and contralateral breast cancer was found in two women (one of whom was subsequently also found to have ovarian cancer). At the time of the last follow-up (a median of 25.5 months), four women had died as a result of breast cancer, one had died from advanced ovarian cancer, two were alive with disease, and five were alive with no evidence of disease.