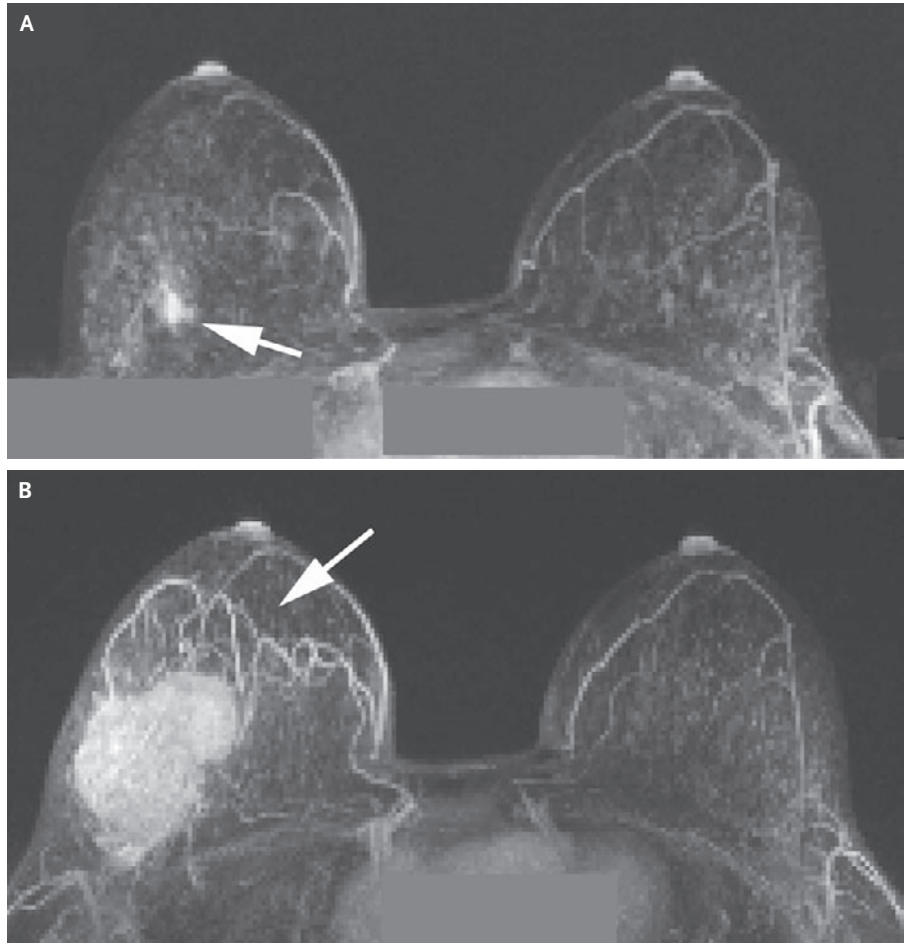


IMAGES IN CLINICAL MEDICINE

Rapid Progression of Basal-Type Breast Cancer



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A 33-YEAR-OLD WOMAN WITH A KNOWN *BRCA1* MUTATION (2080DELA) WAS REFERRED FOR 3.0-TESLA MAGNETIC resonance imaging (3T MRI). The patient's mother had had breast cancer at the ages of 31 and 38 years; her sister had had breast cancer at the age of 30. Routine physical examination revealed no breast masses, and screening mammography showed extreme breast density but was otherwise normal. At follow-up approximately 4 months later, 3T MRI showed a progressively enhancing lesion, 1.6 by 1.0 cm (Panel A, arrow). Mammographic imaging showed new calcifications at the 10 o'clock position. A stereotactic biopsy was performed; 4 of 10 cores showed calcifications, and all cores showed ductal hyperplasia with no evidence of cancer. Approximately 1 year later, repeated 3T MRI showed a peripherally enhancing mass, 4.7 by 6.1 by 5.3 cm, extending to the pectoralis muscle, with extensive neovascularization (Panel B, arrow). A biopsy specimen showed the presence of an invasive adenocarcinoma of the breast, which was classified as grade II to III, with a negative test for estrogen receptor, at 0 fmol per milligram, and a borderline-positive test for progesterone receptor, at 13 fmol per milligram. The biopsy specimen was *HER2/neu*-negative and cytokeratin 5/6-positive, findings that were consistent with the presence of a basal-type breast cancer. The patient chose to receive further care from a local oncologist.

The *BRCA1* mutation is associated with ovarian cancer as well as breast cancer. The sensitivity of mammography is decreased in women with high breast density. Therefore, close follow-up with more sensitive screening approaches, such as MRI, in women at high risk for breast cancer, such as those with the *BRCA1* mutation, is warranted.

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