

Breast Implant Evaluation

Breast implants are made of saline, silicone, or both. Some complications that may occur with implants include the implant bursting (rupture), unexplained swollen lymph nodes in the armpits, or a rare blood cancer called anaplastic large-cell lymphoma (<https://www.radiologyinfo.org/en/info/lymphoma>) that may occur a year after surgery. Patients with implants and without symptoms should continue routine breast screening (<https://www.radiologyinfo.org/en/info/screening-breast>) .

A saline-implant rupture is often diagnosed with a physical examination. If imaging is needed, ultrasound (<https://www.radiologyinfo.org/en/info/breastus>) (US) should be used for people under 30. For people 30 to 39 years old, a mammogram (<https://www.radiologyinfo.org/en/info/mammo>) , digital breast tomosynthesis (<https://www.radiologyinfo.org/en/info/tomosynthesis>) (DBT), or US may be used. A mammogram or DBT is the best test for people 40 and older.

MRI (<https://www.radiologyinfo.org/en/info/breastmr>) without contrast is the best test for diagnosing a silicone-implant rupture, especially when the silicone is still contained by the outer shell (majority of ruptures). Mammography and DBT are not recommended for contained ruptures.

For ruptures outside the shell, in addition to MRI without contrast, US may be used in people under the age of 30. Mammography, DBT, and US may be used for people over 30. For people with prior silicone implants, results may show leftover silicone, not a rupture of new implants, making it important to compare with prior tests.

For unexplained swollen lymph nodes in the armpits, US should be used for patients under the age of 30. For people over 30, mammography, DBT, or US should be used. If the person is suspected to have anaplastic large-cell lymphoma, US is recommended.

— By Celena Romero, RD, MBA, CPHQ, and Ryan K. Lee, MD, MBA, MRMD. This information originally appeared in the *Journal of the American College of Radiology*.

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