Lumpectomy vs. Mastectomy: Which to Choose?

Learn more about these two surgeries for breast cancer, plus how to know which is right for you.

Updated Nov 27, 2023

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In This Article: Lumpectomy vs. Mastectomy | Lumpectomy Pros | Mastectomy Pros | The Bottom Line

A <u>breast cancer</u> diagnosis comes with a lot of decisions. Among them: What type of surgery to have. Your two main options are a lumpectomy, which removes the tumor as well as a small a small amount of surrounding normal tissue, and a mastectomy, which removes all of the breast tissue, according to the <u>American Cancer Society</u> (ACS). Here's what breast experts know about these two surgeries and what you should consider before moving forward with either.

The Difference Between a Lumpectomy and a Mastectomy

Most women who are diagnosed with breast cancer will need to undergo some type of surgical procedure as part of their <u>treatment</u>. The goal of surgery, according to the ACS, is to remove as much of the cancer as possible. Some non-cancerous tissue will also be removed in the process, but just how much depends on whether you're having a lumpectomy or a mastectomy. Besides the differences in the amount of tissue removed, there are other distinctions to consider. These include:

Who Is Eligible for a Lumpectomy vs. Mastectomy?

You might assume that only women with very early breast cancer, like stage 0 or stage I, are eligible for lumpectomy, but that's <u>a myth</u>, says <u>Amanda Woodworth</u>, <u>M.D.</u>, the director of breast health at Keck Medicine of USC/Henry Mayo Newhall Hospital in Valencia, CA.

Whether your cancer is stage 0, I, II, or III, you may be a candidate for a lumpectomy, says Dr. Woodworth. (Most women with stage IV cancer don't get surgery because the cancer has metastasized throughout their body, and are instead given other treatments.) However, a number of other factors must be taken into account.

"One of the first things we look at is the ratio of tumor to breast size. If you have a large tumor in a small breast, then you might not be a good candidate for a lumpectomy, though someone with the same size tumor in a larger breast might be," she says.

Lumpectomy is designed to be breast-conserving, and oncoplastic (cosmetic) techniques are often used during the same surgery. But if you have a large tumor in a small breast, there just won't be enough tissue left over after the lumpectomy, Dr. Woodworth explains. "Some women are very surprised to find that even a stage breast 0 cancer could require a mastectomy if the cancer involves most of the breast tissue."



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The results of genetic tests are also extremely important when weighing lumpectomy versus mastectomy, says Kelly Hunt, M.D., the department chair of breast surgical oncology at the University of Texas MD Anderson Cancer Center in Houston. "For young women who have a BRCA1 or BRCA2 mutation, [which increase risk], we typically recommend mastectomy [instead of lumpectomy], because their lifetime risk of getting another cancer is so high," she says.

Survival Rates for Lumpectomy vs. Mastectomy

You might also be surprised to learn that lumpectomy, when combined with radiation, is typically as effective as mastectomy in terms of survival rates. "Numerous <u>randomized trials</u> have shown that in terms of survival, lumpectomy plus radiation is equivalent to mastectomy," says Dr. Hunt.

In fact, a study published in <u>JAMA Surgery</u> suggests that lumpectomy and radiation might even beat out mastectomy when it comes to survival: It found that the overall five-year survival rate was 95% with lumpectomy/radiation versus 84.5% with mastectomy alone or 86% with mastectomy/radiation. The authors suggested this might be because lumpectomy "provides better health-related quality of life and was associated with fewer postoperative complications."

A 2022 meta-analysis, published in <u>Annals of Surgery Open</u>, came to a similar conclusion. After analyzing results from 25 studies that were conducted no earlier than 2010, the authors determined that breast-conserving surgery (a.k.a. lumpectomy) "is associated with a survival benefit compared with mastectomy, suggesting that [breast conserving surgery] be the recommended treatment of early breast cancer if a radical lumpectomy can be performed." (A radical lumpectomy means more than 25% of the breast volume is removed. Early breast cancer is usually defined as stage 0, I, or II.)

Other Treatments Needed

Lumpectomy is almost always followed with radiation, which reduces the chance that the cancer will recur, according to the Mayo Clinic. If you have a mastectomy, you're less likely to require radiation, but there's no guarantee. Women who have a high risk of cancer recurrence—perhaps because the tumor removed was very large or cancer was found in a lymph node—may need radiation after a mastectomy, according to the Mayo Clinic. "It depends on the tumor biology and lymph node involvement," says Dr. Hunt.

Whether you opt for lumpectomy or mastectomy—and whether you have radiation or not—there's a good chance you may also require a systemic treatment such as chemotherapy, hormonal therapy, or a targeted therapy, according to the <u>ACS</u>. The need for systemic therapy or therapies depends on the stage of your cancer as well as other factors such as whether your cancer is being fueled by hormones (hormone receptor-positive) or a protein called HER2 (HER2-positive).

Lumpectomy Pros

Advantages of a Lumpectomy

When deciding between two surgeries, it's important to weight the benefits and risks of each. Some pros to lumpectomy include:

It's Less Invasive

A lumpectomy is also known as breast-conserving surgery. Or you might hear it referred to as a quadrantectomy, partial mastectomy, or segmental mastectomy, according to the <u>ACS</u>. These terms all mean the same thing: that only the part of the breast that contains cancer will be removed, plus a small area (margin) of surrounding healthy tissue.

In most instances, lumpectomy is paired with a lymph node biopsy, according to the <u>Mayo Clinic</u>. If you have an early stage breast cancer, your <u>surgeon</u> might recommend just removing a few lymph nodes (sentinel node biopsy). If cancer was already found in a lymph node before your lumpectomy—or if there's other good reason to believe the cancer has spread—then more lymph nodes near your armpit may need to be removed and biopsied.

Overall, a lumpectomy is a less invasive surgery than mastectomy, so recovery time is shorter, according to Breastcancer.org.

The Aesthetic Outcome May Be Better

With a lumpectomy, you get to keep most of your breast, so you will look and feel more like yourself, says Dr. Woodworth. Some cosmetic tweaking, with the help of oncoplastic surgery, can often be done simultaneously.

Disadvantages of a Lumpectomy

Despite being an "easier" surgery, there are cons to a lumpectomy, too. They include:

Additional Treatment

Lumpectomy is almost always followed by radiation. You will probably need radiation five days a week for five to seven weeks, according to Breastcancer.org. Getting a lumpectomy without radiation is generally not advisable, because research spanning 20 years has demonstrated that nearly 40% of women who get lumpectomy alone have a recurrence in the same breast (local recurrence); that number drops to about 14% if you add in radiation.

Risk of Recurrence

Even with radiation, the odds of having a local recurrence might be slightly higher with lumpectomy. On average, the rate of recurrence for women who have lumpectomy plus radiation shakes out to be about 1% per year, according to <u>Jane O'Brien, M.B.B.S.</u> (an international equivalent of M.D.), a breast specialist and oncoplastic surgeon in East Melbourne, Victoria.

Mental Stress

You may have more <u>anxiety</u> if you choose a lumpectomy. "If I have to peel you off the ceiling when it's time for a mammogram or you're so anxious that you're not sleeping at night, you might be someone who leans toward a mastectomy" despite being eligible for a lumpectomy, says Dr. Woodworth.

Mastectomy Pros

Advantages of a Mastectomy

With a mastectomy, your entire breast is removed. It's a more involved surgery, but it comes with some benefits, including:

A Lower Risk of Recurrence

Mastectomy involves removing all or most of the breast tissue, says Dr. Woodworth. (Some women may be candidates for a "nipple-sparing" or "skin-sparing" mastectomy, but the majority of breast tissue will still be removed.) Mastectomy patients also have some or all of the lymph nodes under the arm removed and biopsied, she adds.

The odds of having a recurrence in the same breast is lower than it is with a lumpectomy. However, it's not zero, because there's no way to remove 100% of the breast cells, according to Roswell Park Comprehensive Cancer Center.

You May Not Need Radiation

Unlike with lumpectomy, not all women who get a mastectomy need <u>radiation</u>. (Though some do, depending on the size of the tumor and lymph node involvement.) Radiation therapy is time consuming and comes with a risk of <u>side effects</u>, including swelling, fatigue, and nerve damage.

You'll Need Fewer Mammos

You will no longer need screening mammograms on the side that was removed. If only one breast was removed, you will still need mammograms on the other side, according to ACS.

Disadvantages of a Mastectomy

A mastectomy is a more involved surgery—and comes with risks to consider. These include:

A Tougher Recovery

Compared to a lumpectomy, a mastectomy is a more invasive procedure. That means that the recovery time is longer—typically four to six weeks, according to Memorial Sloan Kettering Cancer Center.

A Bigger Aesthetic Change

With a mastectomy, you lose all of the breast tissue. Even if you opt for reconstruction, your appearance will change more significantly, says Dr. Woodworth. Unless you want to go flat, you may require additional reconstructive procedures. (Most people who have a lumpectomy don't

need reconstruction, though oncoplastic surgery may be combined with lumpectomy to address deformities, according to ACS.)

Deciding Between a Lumpectomy and Mastectomy: Key Factors to Consider

Not everyone with breast cancer is eligible for lumpectomy. Even if you are, it may or may not be the right choice for you. Key factors to consider, per Dr. Hunt and Dr. Woodworth:

- Your lifetime risk of having a recurrence in the same breast (higher risk should tip you toward mastectomy)
- Your anxiety level, and whether or not getting a mastectomy would help ease your mind
- How important it is to keep your breast
- Whether you're physically able and willing to undergo radiation

Questions to Ask Your Doctor

Every patient is unique, so it's important to discuss the <u>specifics</u> of your cancer diagnosis as well as your personal risk factors and preferences with your healthcare team. The <u>ACS</u> recommends asking your doctor questions including:

- Am I candidate for lumpectomy?
- How might I benefit from lumpectomy versus mastectomy? What might the downsides be?
- · What will my breasts look and feel like after surgery?
- How would choosing lumpectomy versus mastectomy impact my options for reconstruction?
- · Would choosing lumpectomy versus mastectomy impact my personal odds of survival?
- What are your suggestions based on my cancer stage, type, grade, hormone receptor status, HER2 status, genetic tests, and family history?

When to Get a Second Opinion

Anytime you've been diagnosed with a serious condition, it's wise to consider getting a second opinion. It is especially important to get a second opinion if you're unhappy with your current oncologist, but even if you like and trust them, a second opinion may help you feel more confident in the treatment plan.

<u>Susan G. Komen</u> points out that second opinions are common, and your provider shouldn't discourage you from seeking one out.

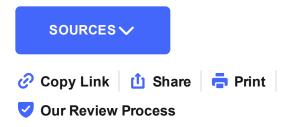
The Bottom Line

The Bottom Line on Lumpectomy vs. Mastectomy

Not every person with breast cancer is eligible for a lumpectomy, but many are and will find themselves having to decide between a lumpectomy and a mastectomy. Lumpectomy, when paired with radiation, has been proven to be a safe option that's comparable to mastectomy in terms of survival rates. Your personal risk of recurrence, your ability to withstand radiation, and your anxiety about your health should all factor into your decision. Your health care team should walk you through these options and share their recommendations, but the ultimate choice will be yours.

This article was originally published November 21, 2023 and most recently updated November 27, 2023.

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