

# Invasive Breast Cancer: Mastectomy vs. Lumpectomy- A Difficult Decision

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## Citation

C Hall, S Keene. *Invasive Breast Cancer: Mastectomy vs. Lumpectomy- A Difficult Decision*. The Internet Journal of Radiology. 2009 Volume 11 Number 1.

## Abstract

Each year over two hundred thousand women in the United States will be diagnosed with breast cancer. In most cases, the entire experience is both frightening and stressful. After a breast biopsy, for some, the news brings a big sigh of relief when they hear that wonderful word benign. For others, the words 'you have breast cancer' will forever change their lives. From that moment on, they will either be battling breast cancer or a breast cancer survivor. Along the road to survival the patient will have to make many important decisions some of which will ultimately affect their prognosis. Treatment options can be overwhelming when your life literally depends on the choices made. One hundred women were asked if diagnosed with invasive breast cancer would their treatment choice be mastectomy or lumpectomy and radiation. The vast majority of those polled chose mastectomy when scientific studies have shown the survival rate is the same when comparing mastectomy with lumpectomy and radiation. The purpose of this article is to remind healthcare professionals the decisions made by women regarding breast cancer treatment can be very emotional, confusing and difficult.

## INTRODUCTION

Breast Cancer is a disease in which cancer cells form in the breast ducts or lobules. Each breast has fifteen to twenty sections called lobes, which have many smaller sections called lobules (Medical Encyclopedia, 2008). Lobules terminate into multiple tiny bulbs that produce milk. The ducts of the breast are thin tubes that link the lobes and lobules together. The majority of breast cancers originate in the ducts.

Ductal carcinoma in-situ (DCIS) is the earliest, most treatable form of breast cancer. In-situ indicates the cancer has not spread outside the breast duct. In cases where the cancer has spread beyond the duct, it is known as Invasive or infiltrating breast cancer.

Breast cancer is the most common cancer among American women, except for skin cancer (www.cancer.org, 2008). Each year approximately two hundred thousand women will be diagnosed with breast cancer, which is the second leading cause of death in women exceeded only by lung cancer.

Women who are diagnosed with breast cancer will face many important decisions regarding their treatment. The decisions made will affect the rest of their lives and may ultimately affect their prognosis. Treatment options can

become overwhelming when the choices a woman's life literally depends on the choices she makes. As health care workers, often times it is assumed we know exactly how we would respond to the news of breast cancer. When in reality, there are so many pros and cons for treatment options even health care workers struggle with the life altering decisions.

## LITERATURE REVIEW

In a recent survey, one hundred women were asked by questionnaire, if diagnosed with invasive breast cancer (cancer has grown outside the duct, but not spread outside the breast) what treatment option would they prefer, lumpectomy with radiation or mastectomy? Fifty women who took part in the poll were randomly chosen from the general public while the other fifty were randomly chosen health care workers. Their ages range from twenty-six to sixty-three.

Surprisingly, their answers didn't differ much. Seventeen out of fifty non-health care workers chose lumpectomy and radiation as the treatment option of choice, which is thirty-four percent. Thirty percent of health care workers chose the same option, which is fifteen out of fifty. The significance of this is the fact that sixty-six percent of non-health care workers and seventy percent of health care workers polled would prefer a mastectomy, when multiple studies have

shown the survival rate to be the same as with lumpectomy and radiation.

Research has shown that women who live in the United States are more likely to have mastectomy than women in other countries. Other research has shown that choice of surgeon influence which treatment options are offered (Mastectomy vs. Lumpectomy, 2008). Often women tend to seek the treatment their physician recommends without conducting their own investigation of treatment options. Researchers believe that physician knowledge and attitudes are a likely explanation for the dramatic regional differences they have documented in breast-conserving surgery (Zuckerman, 2006)

Experts agree for most early stage breast cancer, lumpectomy with radiation is just as safe as mastectomy. Half of the women that experts deem eligible for lumpectomy, however, will undergo mastectomy instead (Breast Cancer Treatment: Patient Version 2007), in spite of the fact that at a 1990 conference sponsored by the National Institutes of Health, experts agreed that since the survival rates were the same, lumpectomy followed by radiation is the preferable treatment for most women with early stage breast cancer. But even today more than fifteen years later, many women eligible for breast conserving surgery are getting mastectomies. Breast conserving surgery (lumpectomy) is much more likely to be performed on younger women, and becomes increasingly unlikely as a women age (Zuckerman, 2006).

When women face the important decisions regarding treatment options, the entire experience can be confusing as well as overwhelming. There are several pros and cons to each choice a patient has regarding treatment. As already mentioned, both methods of treatment are found to be effective by experts.

As a general rule mastectomy doesn't require radiation, which is a time saver for women with busy lives. However with mastectomy, some women may experience psychological consequences such as negative sexual self-image. Clothing does not fit most women as well following a mastectomy and some women experience neck pain due the uneven distribution of weight on their chest. This is most often the case with large breasted women. Risks specifically related to the mastectomy itself are numbness of the breast skin and necrosis (tissue death) of the skin. Necrosis of the skin may require a return trip to the operating room for revision of the scar to remove the dead tissue. Risks related

when the lymph nodes in the armpit (axillary lymph nodes) are removed include lymph edema (swelling of the arm) and possible injury to the nerves of the armpit. One pro of mastectomy includes knowing that the problem area of the body has been removed. The thought process behind that seems to be, if one cancer cell is left, the chance of recurrence increases. Mastectomy removes the problem, so to speak. The chances of recurrence in the same breast are reduced when the breast is removed (Zuckerman, 2006). However, mastectomy may serve as a constant reminder to the woman that she had breast cancer. There are many options of reconstruction after mastectomy and oftentimes it is easier to achieve more desirable cosmetic results when the entire breast has been removed as opposed to partial breast removal.

Lumpectomy with radiation has many advantages and disadvantages as well. The surgery for lumpectomy has a much shorter recuperation time than mastectomy. Conversely, after lumpectomy, radiation therapy usually requires five to six weeks of treatment five days a week. This can be both time consuming and tiring. Many women become extremely fatigued during the course of their treatments and consequently require more rest. This alone may pose a challenge for day-to-day routines and activities. Skin problems may also occur with radiation therapy. Erythema or redness of the skin and thickening of the skin are reactions the skin can have to therapy. There is also the possibility of the skin breaking open and weeping. Swelling under the arm, tender ribs or inflammation of the lung can also be side affects. The longer the treatment regimen lasts, the higher the possibility of side effects. Lumpectomy with radiation also carries a small long-term risk of secondary cancers (Mayo Clinic Staff, 2007). The main advantage of lumpectomy is that it can preserve much of the appearance and sensation of the breast. The breast cannot safely tolerate additional radiation if cancer occurs in the same breast after lumpectomy, therefore mastectomy is often the recommendation for recurrence in the same breast.

The three key factors in the diagnosis of breast cancer are monthly self- breast exam, yearly mammograms after age forty, and annual breast exam by a physician. Mammography (an x-ray of the breast tissue) should begin with a baseline between the age of thirty-five and forty with yearly mammograms beginning at age forty. In most cases a mammogram can detect breast cancer years before it can be felt as a lump. There is evidence that mammographic screening reduces breast-cancer mortality. The summary

findings from a meta analysis of randomized studies of mammographic screening demonstrated that in screening populations, the relative risk of death from breast cancer was significantly reduced, as compared with that in unscreened populations (Punglia, Morrow, Winer, & Harris, 2007).

Once a woman has an abnormal mammogram or a palpable area that is suspicious for malignancy, a biopsy is indicated. When the diagnosis is made there are a few factors that determine treatment options. For instance: patients age and over all health status as well as type and stage of breast cancer.

In general, ductal carcinoma in-situ is treated with lumpectomy at minimum and may sometimes require external beam radiation therapy. If the pathologist finds the lumpectomy specimen to have cancer close to or involving the margin of the specimen, then radiation therapy may be indicated.

When women face the important decision regarding treatment options, the whole experience can be both confusing and overwhelming. There are several pros and cons to both choices. As mentioned before, both treatment options are effective according to scientific evidence. If mastectomy is chosen, radiation therapy typically is not required which is a positive for someone who may have other health problems that could make it difficult to attend daily appointments for several weeks. With mastectomy, some women may suffer psychological consequences such as negative self-esteem. Following a mastectomy, clothing will not fit as well and some women begin to suffer from neck pain due to more weight on one side of the chest. This is the case most often with large breasted women. Risks specifically related to the mastectomy itself are numbness of the breast and skin necrosis (tissue death) of the skin (www.emedicinehealth.com, 2008). Necrosis of the skin may require a return trip to the operating room for revision of the scar to remove the dead tissue. When the lymph nodes in the armpit are removed during mastectomy, the risks include lymph edema (swelling of the arm) and possible injury to the nerves in the armpit.

Lumpectomy and radiation has many advantages and disadvantages as well. The surgery for lumpectomy has a much shorter re-cooperation time than mastectomy; however, radiation therapy typically requires five to six weeks of treatment. Radiation therapy can cause fatigue, anemia and skin problems. Serious side effects such as swelling under the arm, tender ribs or inflammation of the

lung, sometimes occur. Lumpectomy with radiation also carries a small long-term risk of secondary cancers (www.mayoclinic.com).

Women who conduct their own research regarding treatment options will have a more active roll in their treatment regimen. However, no matter how educated the women become regarding the options, the decision is still difficult and life changing.

As Thomas G. Frazier, MD put it, "When I explain to a patient that they have more than one option, many ask 'What would you do if it were your wife?' and I say that I'd explain the options to my wife in the same way and let her make the decision. But for myself, in this group of patients, who have the choice, I'd feel comfortable going either way (lumpectomy with radiation or mastectomy) based on the scientific information. It's basically a matter of where your comfort level is."

### **CONCLUSION**

A woman's chance of developing breast cancer over the course of her lifetime (presuming she lives to age 90) is one in seven, or 14.3% (Puliti, 2007). With those numbers, breast cancer most likely will affect each of us at some point in our life, whether it is personally or indirectly through a relative. Each one of the many diagnosed will be faced with some of the most difficult decisions of their lives. As this independent study has shown, the choices made concerning breast cancer treatment options are not affected by health care background.

Every woman diagnosed with breast cancer likely will be allowed to have an active roll in deciding her course of treatment. Although none of the choices are easy, decisions must be made keeping in mind the consequences will be for the rest of their lives. It is a personal choice that no one but the patient can make. When life-changing decisions are being made it is difficult under the best of circumstances and many things must be considered. Each patient must make final choices with piece of mind. Because if a women can lay her head down on her pillow at night without wondering if the cancer is still there, she clearly does not have a good peace of mind. And, peace of mind is worth a whole lot in our overall health and well-being.

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