

Breast Cancer

Receiving the diagnosis of breast cancer is an overwhelming event in a woman's life. It can be mind numbing and you may not hear or remember anything else after the word "cancer" is said. As one of my patients once said, "I feel as if this is happening to my evil twin." I have learned through the years that it is difficult to concentrate on the information and choices for treatment that we will discuss. It helps to bring a friend or a relative with you when we talk and to write your questions down ahead of time. You will have many questions and the options for treatment can become confusing and daunting. The purpose of this information is to provide you with a summary of our discussion to which you may refer. Remember, however, that each patient with breast cancer is individual and different and the information provided here may not apply specifically to you. Information is a powerful tool in your fight against breast cancer and there are good sources available that I will refer you to. One of your best tools is asking questions. Don't hesitate to ask. There will be many of us along with your family and friends to help you through this most difficult time.

You have already been diagnosed with breast cancer by one of a number of diagnostic techniques available to us. Though family history plays a significant role in the risk for breast cancer, remember that most women who develop breast cancer do not have a family history. There appears to be some increased risk for developing breast cancer in women who have used high doses of hormone replacement therapy. Again, most women who use HRT do not develop breast cancer. There is almost certainly nothing that you did that caused your breast cancer.

Most breast cancers arise from the cells that line the milk ducts (small tubes that carry milk from the milk glands to the nipple) and are called ductal carcinoma. This type of cancer comprises 75-80% of patients who have breast cancer. Another 10-15% of breast cancers arise from the milk glands themselves and are termed lobular carcinoma. Their prognosis and treatment are very similar even though they have a different appearance under the microscope. The term invasive cancer means that cancer cells have broken out of the milk ducts or glands that contained them and have an increased potential to spread via the lymph system or blood vessels to other areas of the body. An earlier form of cancer known as *in situ*, or in place, carcinoma is often diagnosed. This means that the cancer has not broken out of the ducts or glands and has virtually no chance of spreading as long as it is appropriately treated. Because of routine mammography a large percentage of cancers are either *in situ* or early (i.e., small) and have an excellent cure rate, again, when treated appropriately. Through this entire, difficult ordeal never lose sight of the fact your life will go on even though this disease may dominate your life for the next four to six months of therapy.

Treatment of breast cancer is divided into two phases, local and systemic treatment. Local treatment is intended to eradicate the disease in the breast where it started and in the lymph glands of the axilla (armpit), the first area to which it is most likely to spread. The second phase, systemic therapy, is designed to kill any cancer cells that might have spread beyond these areas. Breast cancer recurs and becomes deadly because of systemic

disease. Therefore, systemic treatment, usually chemotherapy, is an important component of therapy.

Depending on the stage of disease, there may be several options for local treatment. If a cancer is small enough relative to the size of the breast, it can be removed by lumpectomy which is also known as partial mastectomy. This procedure entails removal of the cancer via a 1 ½ to 2-inch incision with a rim (margin) of normal tissue around it. We try to obtain a margin of about ½ inch of normal tissue around the cancer. If the margins are not adequate or the cancer is much more extensive than appreciated by our preoperative studies, a re-excision or possibly a mastectomy may be necessary at a later operation. Because numerous studies have demonstrated that the recurrence of cancer in the breast is higher after partial mastectomy than complete mastectomy, we always recommend radiation therapy (RT) to the breast after lumpectomy. This treatment reduces the risk of recurrence in the breast to that of mastectomy as long as the margins are adequate. RT is given over a series of 30 treatments in 6 weeks. Aside from the inconvenience, you can pursue normal activities during the treatment. You will be referred to a radiation oncologist for a complete discussion of this treatment.

The other aspect of surgical treatment is designed to identify and remove any cancer cells that might have spread to the lymph glands of the axilla. Lymph glands are small filters, usually about the size of a kidney bean or smaller. Cancer cells will sometimes be trapped in these filters as they spread from their site of origin in the breast. We used to remove all of the lymph glands in the armpit at the time of lumpectomy. This surgery bears the risk of arm edema (swelling) which can be severe in 5% of patients as well as altered sensation in the armpit and inner aspect of the upper arm. Complications such as fluid accumulation (seroma) where the glands were removed and infection are also higher. For this reason, we try to identify one or several lymph glands that would be the most likely sites of spread if the cancer were to do so. This procedure is called sentinel lymph node (SLN) biopsy. Prior to surgery the breast is injected with a small amount of radioactive material (less radiation than with a chest x-ray) that is picked up in the lymph channels and carried to the lymph glands in the axilla. This radiation can be identified by a scan and with a sterile, hand held Geiger counter probe that we use in surgery. A small incision is made in the armpit and the sentinel lymph gland or glands are identified and removed. A pathologist examines them very carefully. If the nodes do not contain cancer cells (negative) then the likelihood is extremely high that there is not lymph gland involvement and there is no need to remove the remaining 15-20 lymph glands by an axillary dissection. The lumpectomy and sentinel lymph node biopsy are performed under general anesthesia as an outpatient and usually take less than an hour. Normal activities can be resumed within several days. The downside of sentinel lymph node biopsy is that a second operation to remove remaining lymph glands may be necessary if the SLN is positive.

There are occasions when it is clear prior to surgery that a lumpectomy will not be adequate to completely remove the cancer from the breast and leave an acceptable cosmetic result. Some women do not want to undergo RT or for personal reasons want the affected breast removed. In these cases a modified radical mastectomy is the better treatment option. This operation removes the entire breast and usually is accompanied by

a complete axillary dissection. No muscles are cut during this operation. The result is a diagonal or horizontal scar across the chest wall which is left with a flat contour. Women usually wear a breast prosthesis after this procedure and can have a normal appearance in a scoop-necked dress or even a bathing suit. Another alternative is immediate or delayed breast reconstruction. This can be a fairly long, substantial operation and we will discuss it in greater detail if you are a candidate for this procedure or are interested in the option. I will refer you a reconstructive surgeon if you desire greater details.

Systemic therapy refers to chemotherapy or hormonal therapy. Regardless of the stage of your disease, you will be referred to a medical oncologist for a discussion of this option. Generally chemotherapy is indicated for positive lymph glands or for women who are pre-menopausal. There are also certain characteristics of the cancer, such as size, estrogen and progesterone receptor status, and tumor makers which may be indicators of the need for chemotherapy. On occasion we will recommend chemotherapy before surgery if the cancer is advanced or we would like to try to shrink the cancer prior to surgery in order to perform a lumpectomy instead of a mastectomy. These issues sometimes become rather complex and are best discussed with the medical oncologist.

I hope that this information is useful to you. Please do not hesitate to call if you have questions. It is a privilege to be your surgeon and I will do my best to help you through this difficult time.

Dr. Mac

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