



## **Breast Cancer Basics**

### **Surgical Management in Breast Cancer**

#### **Surgical removal of Lymph Nodes: Sentinel Lymph Nodes vs. Axillary Lymph Node Dissection (ALND)**

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**Dr. Medhani Gupta:** Welcome to GRACE breast cancer video series. My name is Medhani Gupta. Today, we'll be chatting about surgical management of breast cancer. I'm joined by Dr. Jessica Young. Dr. Young is an assistant professor with the division of surgical oncology and also a part of Comprehensive Cancer Center in Buffalo, New York. She's also a member of National Comprehensive Cancer Network or NCCN guidelines panel for breast cancer. Welcome Dr. Young, it's a pleasure to have you with us. Let's talk a little bit more about [inaudible] or the armpit you mentioned earlier that there are two major types of surgeries Sentinel lymph node biopsy or the lymph node resection. Yes, we know that [inaudible] is a more aggressive surgery and it has more side effects and as a team, we would wish to avoid it if possible. Can you tell us what are some of the circumstances in which patients need to have the exploratory dissection?

**Dr. Jessica Young:** This is also a super-hot area of discussion in breast cancer care. So let's talk about the two surgeries first and why we may or may not want to do them. And then we can talk about which areas, why we pick one over the other. So, for most women if they do not have any suspicious lymph nodes to begin with, they usually are a candidate for what we call a Sentinel lymph node biopsy. So a central lymph node biopsy is usually when we remove a few nodes from under the arm, but not all of them. The way that we usually figure out which lymph nodes we want to remove is that at the time of surgery, something is injected into the breast. And it sort of moves from the breast over to the lymph nodes in the arm. And they're supposed to represent the first few lymph nodes that cancer would go to if cancer had gone to the underarm.



So, we have many studies from the nineties and early two thousand, which tell us that these are usually the accurate lymph nodes, meaning that if we take these first few lymph nodes out and they don't have cancer in them, then there's probably not cancer in the rest of the lymph nodes. And since we know this information, we have really been able to save a lot of women from having all of their lymph nodes removed the way that we used to do it in the nineties. So that's called a Sentinel lymph node biopsy. Picking out all the lymph nodes is called an exploratory dissection, or sometimes they call it a completion, axillary lymph node dissection. And that is really removing all the lymph nodes in the area under your arm. It doesn't mean we remove all the lymph nodes everywhere.

You obviously still have lymph nodes throughout the rest of your body, and you still actually have lymph nodes up higher in the area, but we remove the main bulk of the nodes from under the arm. So that's a little bit more of a complicated surgery and it can also have more complications. So really, I think the biggest thing that most won't most patients worry about is this risk of what we call lymphedema. So lymphedema is a chronic swelling of the arm. It happens because the lymph nodes have these little channels and they tend to leak in the area and when they leak, they can cause a swelling of the arm that can be very mild or it can be very, very disfiguring depending on what level it sort of gets to. When we remove a few of the lymph nodes, you still have a chance of that lymphedema, but the chance is pretty low at about probably somewhere around 5%.

If we remove all the lymph nodes, then the chance of that happening is more around 20%. So of course, if we can avoid having issues with that, then we would like to in addition to the swelling of the arm, the lymphedema can sometimes cause motion issues as well. And there can be chronic scarring that can be an issue there. So if we can avoid taking all the lymph nodes out, we want to do that. That being said, most women who have all the lymph nodes out still don't have any issues with the arms. So that's a good thing to note as well. If you have to have to lift, just take a note, it's okay. Most people do very well. So when we think about who should get, which surgery most women who come to us and do not have any suspicious lymph nodes, either on physical exam or on any of the imaging are usually a candidate to get a Sentinel lymph node biopsy.

This is of course, provided that they have what we call invasive cancers. There is invasive breast cancer and noninvasive breast cancer. The invasive breast cancer is the type that can go elsewhere in the body then noninvasive breast cancer or what we call DCIS we usually don't have to check lymph nodes for necessarily. So for invasive breast cancer of



any size, as long as you don't have suspicious lymph nodes on imaging or on physical exam, we're usually able to pour on the central lymph node biopsy first. And as long as you have one or two lymph nodes positive with a lumpectomy, even we know that we don't have to take the rest of the lymph nodes out. If you're having a mastectomy where we're not as certain that you're going to get radiation, then only we do end up taking all of your lymph nodes out if any of them are positive.

Alternatively, if we know that you have lymph nodes that are positive to begin with, then if you do surgery first, we usually end up taking all of your lymph nodes out. There are exceptions to this rule, but for the most part, that would be the case. And then sometimes women get chemotherapy first in order to help shrink down either the mass in the breast or to make the lymph nodes normalized. And if they do normalize, sometimes when we come to surgery, we may only have to take out a few lymph nodes and not all of them. But ultimately if they're still positive after chemotherapy, we usually take them all out.