Melanoma Surgery

If you are reading this, you may have been diagnosed with a melanoma skin cancer that needs additional surgery. Melanoma is a skin cancer that is treated differently than the more common skin cancers, squamous cell and basal cell carcinoma. Melanoma originates from the pigment producing cells of the skin, and it can spread to other places in the body by going to local lymph nodes before going to other organs.

The word "melanoma" is frightening because most people have heard of bad cases of the disease. You must remember though, most melanoma cases stay in the skin, some spread to lymph glands, and even less spread to other organs. Moreover, treatment for metastatic melanoma as been revolutionized in recent years by immunotherapy, so be positive until you hear otherwise!

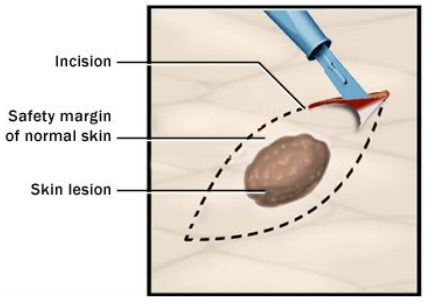
Surgery for melanoma accomplishes two things:

1. Taking enough skin around the melanoma to not leave any cancer cells behind, so it will not grow back (called wide excision).
2. Sampling a lymph node (or nodes) near the melanoma to see if cancer cells have spread to them. This is done if your melanoma is larger than 0.8 millilmeters (~.03 inches) in depth from the skin surface or if it has other high risk features that make the risk of spreading more likely (over 5%). The deeper (*not* wider) a melanoma is, the higher the chance it has of spreading to lymph nodes and beyond.

Let's look at each of these in more detail:

1. Wide excision. As the name implies, a wide brim of extra skin and fat, down to the muscle, is taken around your melanoma to decrease the chance the melanoma will grow back. These excisions can usually be stitched up, but sometimes we need to transfer skin from another part of your body to close the wound.

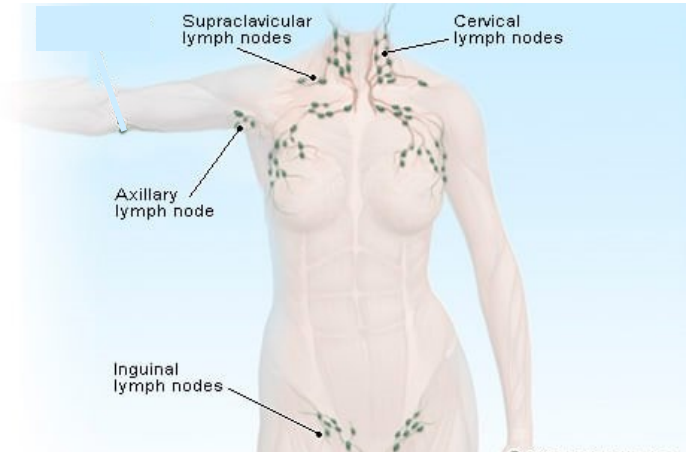
In general, if your melanoma is less than 1 millimeter deep from the surface, a 1 centimeter (~0.4 inch) margin around the melanoma will be needed. If your melanoma is deeper than 1 millimeter, then 2 centimeters (~0.8 inches) will be needed.



Courtesy of Mayo Foundation for Medical Education & Research

2. Lymph node sampling: All areas of the skin are drained by channels separate from blood vessels. These channels, called the lymphatic system, connect the skin to lymph nodes, which are where the immune system filters the lymph fluid and attacks enemy bacteria, viruses, etc.

This is a major part of your body's defense system. Melanoma cells tend to spread using this system of channels to move to the lymph nodes. Common lymph node areas affected by melanoma are the neck, arm pits, and groin areas as shown below:



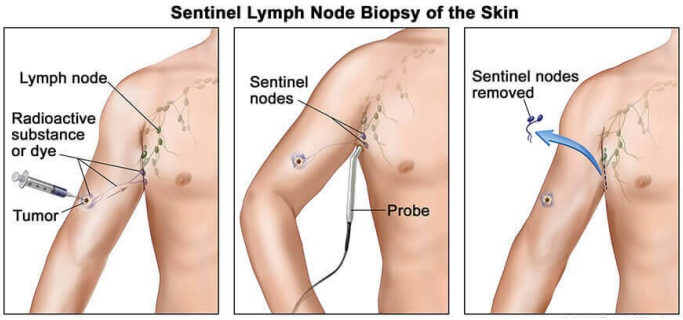
Courtesy of eMedicineHealth

Finding out if melanoma has moved to lymph nodes used to be hard. Common tests like CT scans, ultrasounds, and even PET scans usually cannot detect small numbers of melanoma cells that have moved to lymph nodes.

In the old days, whole areas of lymph nodes were removed to determine if there was spread, but these surgeries came with significant side effects. In the early 1990's, a new technique emerged that allowed physicians to learn even if few melanoma cells had moved to lymph nodes before becoming obvious. This is called sentinel lymph node (SLN) mapping and biopsy.

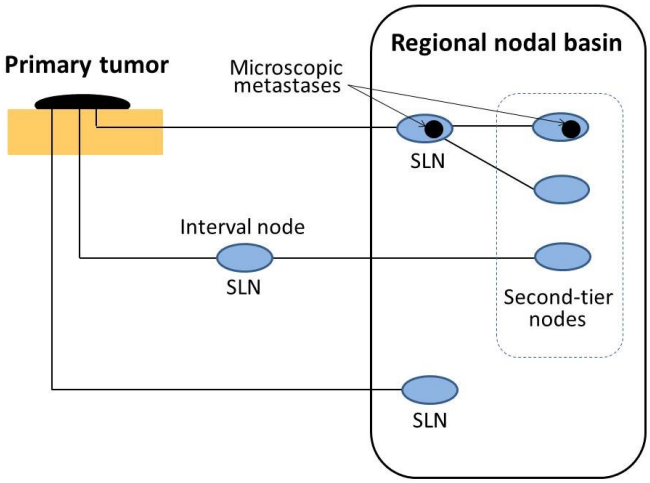
The sentinel ("look out") lymph node is the first node or group of nodes that monitors the region of skin where melanoma is located. This procedure is performed as an outpatient surgery at same time the wide

Melanoma Surgery



Courtesy of Terese Winslow

On the day of surgery a small amount nuclear material (less than radiation for a chest x-ray) is injected at the melanoma site. Over 1-2 hours we will use an x-ray detector to follow the nuclear material down the channels to the sentinel lymph node so we can remove it at surgery. (Note: This x-ray result does not mean you have metastasis! If just shows us where to look for nodes.)



Courtesy of Intech Open

Next, we go to surgery and inject blue dye in the skin around the melanoma before removing it. This gives us a second method for identifying sentinel lymph nodes, as the blue dye will travel down the same channels and fill up the lymph nodes, turning them blue. We make a small incision over the lymph node area of interest and remove nodes that are either radioactive, colored blue, or (usually) both. (Note: The blue dye may color your urine green for a short time, do not be alarmed!)

The removed lymph nodes are sent to the lab for complete microscopic evaluation. Results usually take several days.

7/2021

Let's summarize:

1. You have been found to have a melanoma larger than 0.8 millimeters in depth, it has more than a 5 % risk of having spread to local lymph nodes. Therefore, you need more skin removed around the melanoma site, and a sampling of 1-2 lymph nodes removed in the area of your melanoma.
2. The results of your lymph node removal will allow us to determine the stage of your disease and will guide us to the proper way to cure you.
3. The surgery for melanoma is outpatient, day surgery (you go home the same day).
4. You will usually have two incisions: one at the melanoma site and one at the lymph node site.
5. The results of your surgery take several days and will not be known on the day of your surgery.

FAQS:

1. Your initial skin biopsy pathology report does NOT have the stage of your melanoma. The "Clark level, I, II, III, or IV" refers to the depth that your melanoma has grown, NOT the stage of your disease. This can only be determined after your lymph node mapping procedure.
2. Will I need additional treatment? If your lymph node is positive, you will likely be considered for additional treatment, which usually involves immunotherapy. Your physician will discuss this with you after surgery.
3. Risk of lymphedema (swollen arm or leg) from sentinel lymph node biopsy is low (less than 3%).
4. Down time is very minimal (more details from your surgeon).

References:

National Comprehensive Cancer Network (for patients)
American College of Surgeons

PREMIER Surgical

Surgical Oncology

Premier Surgical at Fort Sanders
1819 Clinch Avenue, Suite 200
Knoxville, TN, 37916
(865) 524-3696