ABOUT YOUR HEAD AND NECK RECONSTRUCTIVE SURGERY

ABOUT THE DIAGNOSIS OF HEAD AND NECK CANCER

A diagnosis of cancer is difficult for the patient and the family. In addition to the information that you get from the UAB Head and Neck Oncology doctors, there are several important sources of information available through the National Cancer Institute (www.cancer.gov) and the American Cancer Society (www.cancer.org).

SKIN CANCER

A large skin cancer of the face can be cosmetically deforming and result in a local invasion of nerves and bone. Skin cancers generally have a tendency to recur locally, but they do not commonly spread to distant sites (such as the lungs).

HEAD AND NECK CANCER

Head and neck cancer affecting the mouth, throat, sinuses, or skin can be one of many tumor types, but is most commonly squamous cell carcinoma cancer. Tumors are graded according to the size and location of the primary tumor and the presence of local disease spread (most commonly in the neck). Tumors that spread to the neck are still curable but often require more aggressive treatment.

HEAD AND NECK TUMOR TREATMENTS

Primary treatment options for head and neck cancer include surgery, radiation, or both. Chemotherapy is sometimes used as an additional treatment option. The appropriate treatment for you depends on the tumor size, location, past treatments, and patient preference. The treatment plan is developed in discussion with your head and neck oncology doctor.

RECONSTRUCTION OF HEAD AND NECK CANCER

Treatment of head and neck cancer may require a reconstruction to improve post-treatment cosmetics, swallowing, or speaking. While the reconstructive procedure is often a necessary part of the tumor removal, it is important to understand the risks and benefits associated with the reconstructive procedure.

GOALS OF RECONSTRUCTION

1. Prevent leakage of saliva outside of the mouth and throat
2. Improve speech and swallowing
3. Maximize cosmetic results

WHAT HEAD AND NECK RECONSTRUCTION INVOLVES

Head and neck reconstruction can require the use of skin and/or bone to replace diseased tissue. Transplantation of tissue involves removal of tissue from elsewhere in the body and hooking up the blood supply in the neck. Tissue is usually either soft-tissue alone or bone and soft-tissue. The free tissue used to reconstruct the tumor defect is called a "free flap", because the tissue is completely removed from one part of the body and transferred to another as a free piece of tissue.

GENERAL RISKS OF FREE FLAP RECONSTRUCTION

All of these problems develop within the first 4-6 days of your operation, so by the time you are ready to go home, the risks of these things happening are much less.

1. **Risk of Flap Failure**
   The free flap can lose its blood supply and fail. If the free flap develops a clot in its blood supply, it will not "take". It usually happens in the first 5-7 days after the operation. Every attempt is made to save the graft if loss of its blood supply can be detected early. There is a 1 in 10 chance that the free flap will fail.

2. **Risk of Infection**
   About 1 in 10 of free flaps will develop an infection of the neck from saliva leakage into the neck. This may mean several additional days in the hospital and possibly a brief operation to wash the infection out of the neck.

3. **Risk of Blood Collection in the Neck**
   If a blood clot forms in the neck, it may require a brief operation to rinse out the clot.

DIFFERENT SITES OF FREE FLAP OPERATIONS

There are several different sites on the body from which the tissue can be taken for reconstruction.

1. **Radial Forearm Free Flap**
   Removal of tissue from the arm will mean that for the first week after the operation you will have limited use of your arm. A cast will be placed on your arm that will be changed at 5-7 days. After that it will require daily gauze changes (with medicated gauze) for three weeks and you may be given a splint to protect the graft. Two weeks after the operation you should begin active and passive range of motion, which means that you should regularly exercise your hand after two weeks. There may be a small area on the arm that takes longer to heal; this will require wet gauze dressings until the area heals over (usually a couple of weeks). The arm will heal over the course three months. It heals as a superficial scar that shrinks from its original size over time. The major risk of removing this tissue is that you may lose some strength in your hand. There is often sensation loss on the back of your thumb that can occasionally be permanent. Most patients do not complain about the arm graft donor site three months after the operation. If bone is taken from the arm, there is a low risk of fracture of the hand that could limit the use of the hand. If a wound vac is used during the operation, patients generally receive wet to dry dressing changes daily.

2. **Fibula Free Flap**
   The fibular free graft is taken from the leg, and the bone is used to reconstruct the jawbone. The leg that the graft is taken from will take several months to heal. Usually the healing process begins with physical therapy on the third day in the hospital. You will need a walker for several weeks and then a cane for a month or two. The risks include numbness in the foot, infection in the lower leg, toe drop, and a limp. There is a rare chance of loss of blood supply to the foot.

3. **Rectus Free Flap**
   If a graft is used from your belly, there will be an incision down the length of your abdomen on one side. You will have some pain, and there is a possibility of a hernia immediately or months after the operation. During the harvest of the rectus free flap, there is a possible risk of bowel injury.

4. **Thigh Flap**
   If a graft is taken from the outside of your thigh, there will be a one-foot scar down the length of your outer thigh. Most people after this operation are able to walk one day after the surgery. There is some numbness of your thigh after the operation, which is to be expected. Of note, there is a 5% chance of a permanent limp.

ANCILLARY PROCEDURES

Additional procedures are often required in addition to the cancer resection and surgical reconstruction defect.

1. **Split Thickness Skin Graft**
   If you are to receive a split skin graft from your thigh, the site is dressed after the operation with gauze that will remain on there for several weeks. The nurses on the floor will explain the care of the dressing. The graft will be very painful and can sometimes get infected. It leaves a scar on the leg.

2. **Tracheostomy**
   Patients with an oral or throat reconstruction will receive a hole in the windpipe as a temporary measure to allow breathing while the throat and/or oral cavity heal. The tracheostomy is usually removed within 6 days of the operation. Some patients need to have the tracheostomy in for longer. The tracheostomy will leave a scar on the neck and will take several weeks to close once the tube is removed.

3. **Feeding Tube**
   While the throat and/or oral cavity are healing, a feeding tube will be placed so that adequate nutrition can be obtained. The feeding tube will come out as soon as all of your treatments have been completed (after radiation) and you can maintain your weight without using the tube. This usually takes several months after your treatments are completed. The risks of placing the tube include abdominal injury and infection.

AFTER YOUR OPERATION

Most patients stay in the hospital for 5-7 days unless there is a problem (such as infection or general medical problem). The operation will take between 6-10-hours. You will first go to the recovery room (2 hours) and then to the 7th floor of West Pavilion (P734 or P736 are the rooms that most free flap patients are assigned). You will have drain(s) from your neck which will be removed over the course of 5-7 days. Some patients will have a tracheotomy which will prevent you from speaking for several days. The nurses and resident doctors will monitor the flap every hour to assess for possible graft failure during the first few days. The dressing from the free flap donor site will be changed after five days.

If a throat or mouth operation was performed, usually you can take liquids by mouth at one week to three weeks. However, learning to swallow again can take several months and serious setbacks occur during radiation therapy. Our head and neck team provides specialized speech therapy and usually requires several visits. Occasionally, additional operations are required to improve swallowing. Swallow and speech results are highly variable depending on the location and size of the cancer.

WHEN TO NOTIFY OUR OFFICE

1. Fever greater than 101.5
2. Bleeding from incision sites or flap sites
3. Foul odor or any pus from sites. This could indicate infection and needs immediate attention.
4. Difficulty breathing call 911 or go to the emergency room
5. Contact us with any questions or concerns

GENERAL INFORMATION

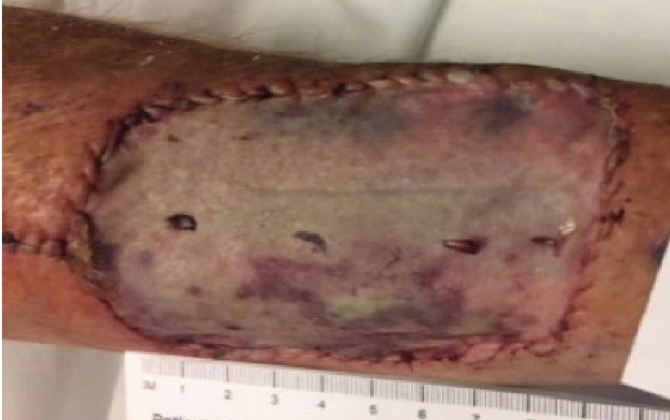
Patients may shower when they leave the hospital. It is usually necessary to take pain medication for 3 to 4 weeks. The use of Ibuprofen should be used around the clock and narcotics only for break through pain. Shoulder pain from nerve weakness can last for months and should not be treated with narcotics. A warm, moist towel can be used before shoulder exercises and a cold compress afterwards for the most comforting results.

Returning back to work is individualized for patients. The ability to turn one's head for the blind spot and pain medication is the main concern with driving. Those who have desk jobs can usually go back to work in three weeks. No caffeine should be used for three weeks following surgery and nicotine is highly discouraged.

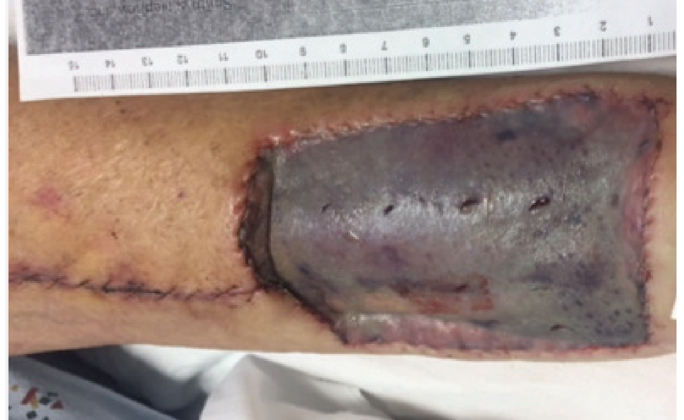
The Head and Neck Oncology Program and the Department of Otolaryngology at UAB provide this information with the understanding that there are additional risks and benefits not discussed above. It is intended only to provide a general guide to the process of undergoing a major head and neck surgery with reconstruction.

CONTACT INFORMATION

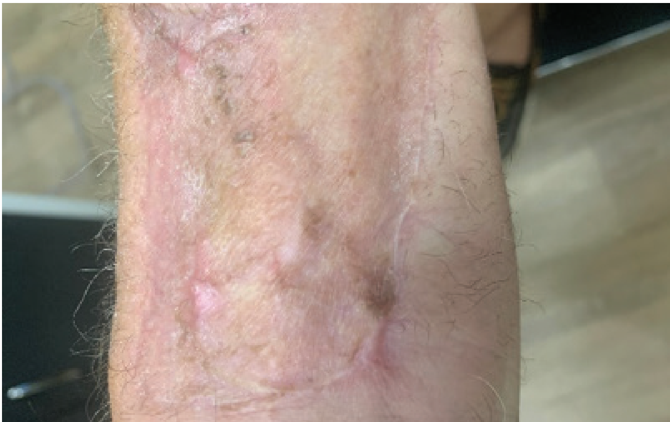
If you have any questions or problems and it is during office hours (Monday – Thursday, 7:30 am – 4:30 pm and Friday 7:30 – 4:00 pm), please call 205-801-7801, option 2. After hours and weekends, page the ENT resident on call at 205-934-3411.



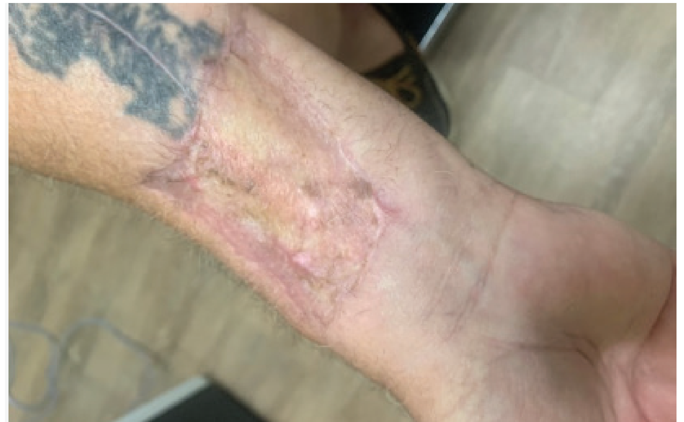
Radial Forearm Free Flap
Post-Operative Day 5



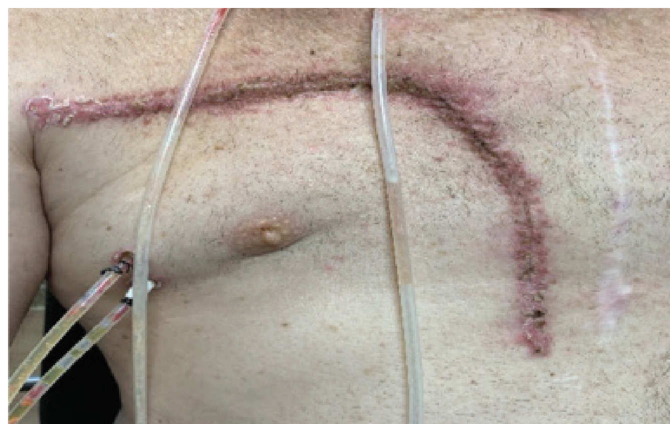
Radial Forearm Free Flap
Post-Operative Day 6



Radial Forearm Free Flap
Post-Operative 6 Months

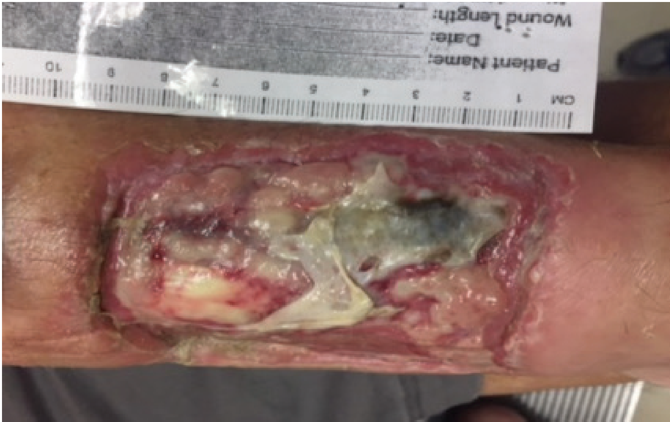


Post-Operative Day 5

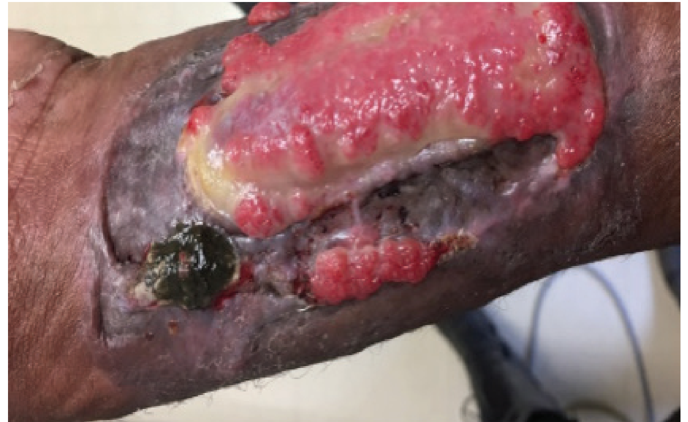


Post-Operative Day 14

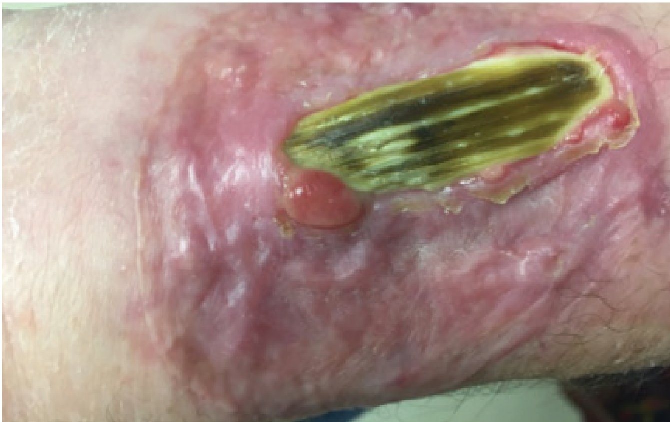
RADIAL FOREARM FREE FLAP – WOUND COMPLICATIONS



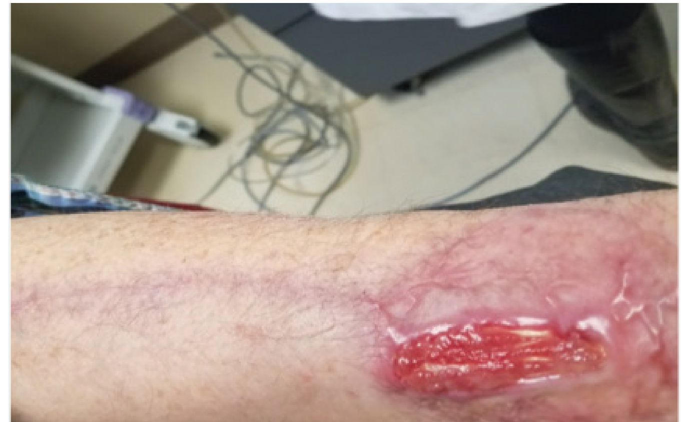
Sloughing



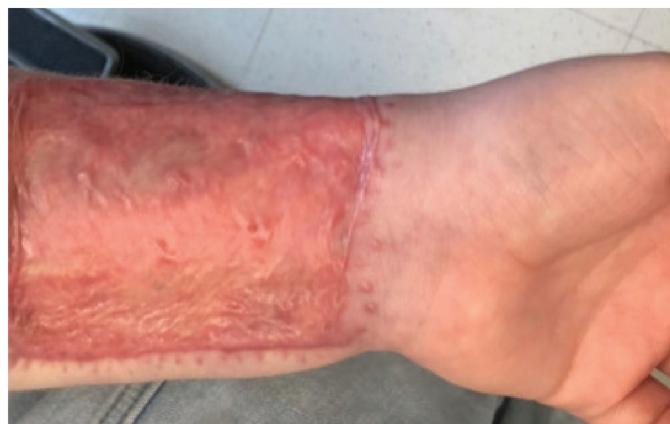
Hyper-granulation



Exposed tendon



Exposed tendon after wound vac therapy



Hypertrophic scar