



## Benign Soft Tissue Tumors

Benign soft tissue tumors can occur including skin, under skin, within and between muscles, ligaments, nerves, and blood vessels. Some tumors can be quite aggressive even if benign. Involvement of adjacent tissues increases the

chance of an incomplete excision and the possibility that the tumor will come back. A [complete excision](#) with the first surgery is the best chance to limit recurrence.

Benign soft tissue tumors include lipoma, angioliipoma, fibroma, benign fibrous histiocytoma, neurofibroma, schwannoma, neurilemmona, hemangioma, giant cell tumor of tendon sheath, and myxoma. Occasionally tumors may be related to an inherited gene and that information can be found on the American Cancer web site. Soft tissue tumors can occur anywhere in the body but are most frequent in the lower extremities, trunk and abdomen and upper extremities. The cause is unknown. Trauma may bring attention to a previous existing tumor.

Most benign soft tissue tumors can be removed in one operation without affecting other local muscles, bones, nerves or blood vessels. A patient should have normal function after a complete removal of a benign mass.

[Lipomas are the most common](#) benign soft tissue tumor. Lipomas are frequently palpable beneath the skin as a soft, painless, slightly moveable, bulge. They grow slowly over months to years and represent very little risk to the patient. They can be shelled out with a small risk of recurrence. Not all lipomas should be removed and can be observed instead. . Many patients seek medical attention for cosmetic reasons when a lipoma grows too large. An [angioliipoma](#) which involves blood vessels, is sometimes located deep in the muscle and is tender because it involves the vessels. If a lump is deep within a muscle or has grown rapidly or causes pain, or feels firm and fixed to adjacent tissues the [MRI scan](#) can delineate the extent of all soft tissue tumors as well as the likelihood of being malignant and not benign.

If a tumor is determined to be malignant during surgery, and only a biopsy is

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performed, a more extensive operation would then be necessary to remove the tumor. This is a rare event with an experienced surgeon.

If a soft tissue mass does not appear to be a lipoma and/or is suspicious for a malignancy, a **biopsy** is usually performed first. Then the exact type of tumor and the subsequent definitive treatment and resection can be determined.

The risks of surgery are more significant when malignant tumors are removed.

**Complete removal should include a wide tumor free margin around the mass.** Those risks include nerve injury, infection, bleeding, stiffness, or a scar which may be associated with an indentation.

Benign soft tissue tumors may also develop in connective tissue other than bone such as the **skeletal muscle, fat, tendon, fibrous tissue and nerve and blood vessel (neurovascular) tissue.**

**Benign soft tissue tumors rarely metastasize. They are categorized according to their behavior to be aggressive or not, ranging from inactive, to active, to aggressive.**

**Benign soft tissue tumors made of fibrous tissue include fibromas, extra-abdominal desmoid tumors, palmer fibromatosis and nodular fasciitis.** Fibromatosis (desmoid tumor) refers to a benign but aggressive tumor usually located in the lower extremity. Fibromatoses are very aggressive at the original site and invade the nearby muscle, soft tissue and bone but do not metastasize (spread to other sites).

Treatment includes removal (excision) of the soft tissue mass. In some cases the surgical margin (area around the tumor) is not large enough because the tumor extends microscopically beyond the main mass. Thus, there is a high rate of recurrence. These tumors should be treated aggressively with wide margin excisions. Radiation therapy is also used for local control.

Benign soft tissue tumors that are made of nerve tissue are also called nerve sheath tumors or **schwannomas because the tumor tissue has cells like the nerve sheath.**

**Neurofibromas** may occur as a single tumor or many tumors and may be found anywhere on the body. The mass is usually seen in connection with a major nerve and is composed of spindle cells. They range from simple, small masses to gross enlargement of an extremity.

The treatment involves excision of neurofibromas if they are large, painful or interfere with function. Single neurofibromas once excised rarely recur. The multiple

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neurofibromas of neurofibromatosis may become malignant. Most often they are observed and not excised unless they are growing or painful. If a sarcoma develops, the patient must undergo staging studies to rule out metastatic disease. Pre- and/or post-operative radiation therapy is usually included in the treatment plan, and sometimes chemotherapy.

A [ganglion or synovial cyst](#) is a benign soft tissue mass 'cyst like' in nature and comes from the capsule of the joint, synovial membrane (lining) or tendon sheath (covering). It usually develops on the top of the wrist in adults between 25 and 45 years of age, and are more common in women. The cause is unknown, but repeated trauma is a contributing factor. Some patients have no symptoms, while other have tenderness, pain and problems with wrist function. A needle aspiration should be done if a sarcoma is suspected. Staging studies are usually not necessary because of the ganglion cyst's classic appearance, although ultrasound is helpful in confirming the cystic nature of the lesion. The excised cyst or nodule has an outer fibrous layer with an inner lining made of clear colorless, gelatin-like fluid.

Some ganglia need no treatment because they go away on their own. Usually needle aspiration or rupture of the cyst give temporary relief. Recurrence is common. The best treatment for a patient who has symptoms is to completely excise the cyst down to the base of the cyst which should prevent recurrence.

## Skin Cancers

Skin cancer is a tumor or growth of abnormal cells in our skin, and is the most common form of cancer people get in the United States. There are several types of [skin cancer: basal cell carcinoma, squamous cell carcinoma and melanoma](#).

Melanoma, which means "black tumor", is one of the fastest growing cancers in the United States, and is the most dangerous type of skin cancer. Melanoma can affect any area of the body, and approximately 30% of melanomas begin in existing moles.

Most melanoma skin cancers are treated by complete removal of the tumor, while saving as much healthy skin as possible. The amount of skin and possible lymph node evaluation depends on the stage of cancer. I have managed complex melanoma cases, which sometimes require reconstructive options provided by a plastic and reconstructive surgeon simultaneously, to ensure optimization of cosmetic and functional outcomes.