Sarcoma and Soft Tissue Tumor Surgery
What are Abdominal Soft Tissue Tumors?

Soft tissue tumors can occur anywhere in the body. They can grow in muscles, nerves, ligaments and blood vessels. There are many tumor that fall under this category, they vary in size, location and behavior. Some can be very aggressive and require major surgery. Common tumors which can be classified as benign soft tissue tumors are lipoma, angiolipoma, fibroma, benign fibrous histiocyteoma, neurofibroma, schwannoma, hemangioma, giant cell tumor of tendon sheath, and myxoma. A small number of these tumors may be related to an underlying inherited condition. We specialize in the surgical removal of **intra-abdominal soft tissue tumors**.

What is a Sarcoma?

A sarcoma is a very rare kind of soft tissue cancers. It originates from different connective tissue cell types and can potentially grow anywhere in the body. There are more than 50 types of sarcoma, however they can be grouped into two main groups: soft tissue sarcomas and bone sarcomas. We specialize in surgery of soft tissue sarcomas growing in the abdomen. The most common types of sarcoma in adults are undifferentiated pleomorphic sarcoma (previously called malignant fibrous histiocyteoma), liposarcoma, and leiomyosarcoma. We specialize in the surgical removal of **intra-abdominal sarcoma**.
Sarcoma Risk Factors

- Family history of sarcoma
- A bone disorder called Paget's disease
- A genetic disorder such as neurofibromatosis, Gardner syndrome, retinoblastoma, or Li-Fraumeni syndrome
- Exposure to radiation, most commonly during treatment for an earlier cancer

Common Symptoms of Sarcomas

Sarcoma symptoms vary widely. Most sarcomas are asymptomatic early on and most commonly become symptomatic as they impinge on surrounding organs and obstruct nearby visceral structures. Sarcomas develop in flexible, elastic tissues, the tumor can often push normal tissue out of its way as it grows. Therefore, a sarcoma may grow quite large before it causes symptoms. Eventually, it may cause pain as the growing tumor begins to press against nerves and muscles, symptoms include:
• **Pain**: caused by the tumor affecting local tissues, nerves, or muscles, it is usually felt as pain in the general area.
• **Mass or lump**: asymptomatic when small but becomes symptomatic as it grows
• **Local tumor mass effects**: these can vary widely and can include, but not limited to bleeding into an organ, decreased appetite, early satiety, vomiting, abdominal distention,…
• **Systemic effects**: weight loss, fevers, fatigue

**Treating Sarcomas**

Treatment of sarcomas should be done by a team of specialists in various medical disciplines, including surgeons/surgical oncologists, medical oncologists, radiation oncologists, gastroenterologists, radiologists, nutritionists and support groups. Sarcoma cancer treatment is a multimodality treatment and includes surgery, chemotherapy and sometimes radiation therapy. Recent advances include immunotherapy if other treatments fail, in addition to palliative surgery/therapy.

**Surgery**

Surgery is the mainstay treatment for sarcomas. The only cure for the disease is to find it and remove it as early as possible, with good margins to prevent recurrence.

Surgery for sarcoma include a wide variety of procedures, basically depending on the location of the tumor itself. It is not uncommon to remove parts of surrounding organs when performing a sarcoma surgery. The aim is to remove the entirety of the tumor with clean margins all around it, even if that means resecting part of a surrounding structure.

**Radiation Therapy**

Radiation therapy is an important part of the multimodality approach to sarcoma cancer, it might be given before or after surgery depending on the stage of the disease and the treatment team preference, and the involvement of surrounding structures.

**Chemotherapy**

Chemotherapy is also used as adjunct to surgery and radiation therapy in the treatment of sarcomas, however success rate depends on the specific type of sarcoma, as most do not respond well to systemic chemotherapy. Specific types of sarcomas, like gastrointestinal stromal tumors (GISTs), respond very well to targeted chemotherapeutic agents.

**Sarcoma Surgery**

The extent of sarcoma surgery is dictated by the location of the disease. If cancer isn’t growing into the edges of the tissue removed, it is said to have *negative or clear margins*. The sarcoma has much less chance of coming back after surgery if it is removed with clear margins. When the tumor is in the abdomen, removing the tumor with enough normal tissue to get clear margins could be difficult because the tumor could be next to vital organs that can’t be taken out. When cancer cells are left after surgery, the patient may need more treatment — such as radiation or another surgery.
Most of the time, surgery cannot cure a sarcoma once it has spread. But if it has only spread to a few spots in the lung, the metastatic tumor can sometimes be removed. This can cure many patients, or at least lead to long-term survival.

**Abdominal Sarcoma Sites of Origin**

![Abdominal Sarcoma Sites of Origin](Image)

**Palliative Sarcoma Surgery**

When tumors cannot be technically removed by surgery and they are causing a mechanical obstruction for the outflow of food from the stomach, palliative surgery is used to allow these patients to eat again and bypass the area of obstruction. This type of surgery is only done for palliative reasons and is not curative by any means.

**Before Surgery**

*Virginia Surgery Associates, P.C.*  
*www.vasurgery.com*  
*(703) 359-8640*
• There is no need to stop taking baby aspirin, ibuprofen, or naproxen. Ask your doctor what to do if you take prescription blood thinners such as Coumadin (Warfarin), Lovenox, Eliquis, or others. Plavix or full dose Aspirin need to be stopped 7 days before surgery.

• Have any tests, such as blood tests, that your doctor recommends, have your clearance done by your primary care doctor or heart doctor as required by your surgeon.

• Don’t eat anything after midnight, the night before your surgery. You may have clear liquids up until 4 hours before the procedure.

• It is recommended that you shower the morning of surgery.

• Smoking cessations for 2 weeks before surgery is strongly recommended.

**The Day of Surgery**

• Arrive at the hospital or surgery center on time. You will be given an IV to provide fluids and medications.

• An anesthesiologist will talk with you about the medications used to prevent pain during surgery. Laparoscopic cholecystectomy is done using general anesthesia. This lets you sleep during the procedure.
**Discharge Instructions after Soft Tissue Tumor Surgery**

You just had surgical removal of your soft tissue tumor surgery and completed your hospital stay after the procedure. It is now safe to be discharged home. Your surgeon will be keeping a close eye on your progress even if are at home. Healing from a sarcoma surgery usually takes weeks.

**Activity:**
We encourage resuming walking and light activity immediately; as soon as you are sure you are not going to have issues with dizziness or lightheadedness. You may resume driving when it is comfortable to walk up and down stairs, when you feel safe driving and when you are not taking narcotic pain medications. You should be able to slam on the brakes to avoid an accident without causing any pain. Don’t plan on any strenuous activities, like sports or going to the gym, until your postoperative office appointment. Your surgeon may have specific instructions to add to this; usually these are outlined to you before surgery. The bottom line: if it hurts, don’t do it!

**Eating:**
The basic rule is take in what your body is telling you. Depending on the organs removed by surgery, it might take about two-three weeks at least in order to resume a normal diet. Your stomach will be slow at digesting food especially if a part of the stomach or intestines is removed. Some find it easier to digest bland foods, light foods, or predominantly liquids. It is not uncommon that you will be discharged home on a liquid diet for the first two weeks after surgery. Make sure you stay hydrated, and avoid excessive caffeine. Raw fruits, raw vegetables, dairy products and carbonated beverages should be avoided as they cause gas pain. Alcohol is not allowed for a few weeks/months after surgery. We strongly recommend being on supplements like Ensure or Boost after surgery for a few weeks.

**Elimination:**
Constipation is very common after surgery. We recommend staying well hydrated, and using over the counter stool softeners if it happens, try to avoid laxatives. Do not let more than 48 hours go by without a bowel movement without starting the above medications. If they fail to help within another 24 hours, call our office. Diarrhea is common if you are taking antibiotics. If you have this problem, we would suggest either probiotics while you are on the antibiotics, or eating yogurt with active cultures. If diarrhea occurs more than 4-6 times daily for more than 48 hours, call us. Make sure your doctor is aware of any chronic difficulties with urination (like prostate trouble) before surgery.

**Wound care:**
Surgical wounds will have either glue or steri-strips (butterfly tapes) on them, often covered with gauze. Glue, steri-strips, or waterproof plastic dressings can all get wet the day after surgery (unless your surgeon advises differently). Wounds with visible staples or sutures can get wet in the shower after 48 hours. Do not submerge your wound (tub bathing or swimming) for one week. If you have a feeding tube, do not submerge in water until this tube is removed. If you have a surgical drain, do not submerge in water until that drain is removed. While soap will not harm the wound, do not scrub it. Do not apply peroxide or other chemicals. After 48 hours, change or remove gauze dressings or Band-aids. Do not leave soiled or wet dressings on the wound beyond 48 hours. Most wounds can then remain uncovered, unless you have been told otherwise. Light gauze covering to prevent chafing is acceptable if you wish. You may notice a slight drainage (usually pink or reddish in color) from the incision site. This is normal and not a cause for concern. Light pinkness immediately surrounding the incision, and not spreading over time, is normal. Bruising is common and may extend for up to an inch. Spreading redness, progressive
swelling with bruising, and malodorous drainage are not normal and should prompt a call to our office.

Drains:
If you are sent home with surgical drains, you will likely be given instructions at the time of discharge for care of them, and a log sheet to record the output. It is important to note the daily output of the drain(s) so we will know when to remove them. Drains that empty into a suction bulb or attached bag can get wet in the shower. If there is gapping of the skin around the drain, Neosporin or similar ointment may be used to protect the area while you shower. Do not submerge the drain site underwater, such as tub bathing or swimming. Slight pinkish or yellowish drainage from around the tube is normal while it is in place, as is a small amount of redness at the site. Gauze over the site may help protect your clothing from staining. Foul smelling or copious drainage around the drain, or spreading redness around the drain, is not normal and should prompt a call to our office. If the drain reservoir fails to hold suction when you squeeze it, or if the drainage suddenly drops to near zero, call our office.

Normal care of drains includes emptying the fluid in the reservoir every 8 hours and recording the amount per 24 hour period. Bring this record to your postoperative appointment. The fluid may need to be emptied more frequently if the drainage is heavy. Fluid will often be red at first, then pink, then yellow as the wound heals. Stringy material in the tubing or reservoir is normal.

Medications:
Prescription pain medications are there to help you recover comfortably, but stop them as soon as you are able. Side effects of nausea, vomiting, dizziness, fatigue, poor appetite, and above all constipation, are common. If you have these issues, try to use Ibuprofen and Tylenol instead (see below). Do not use alcohol or drive if you are taking prescription pain medications. Unless you are told differently by your surgeon or primary doctor, you can take 400 mg ibuprofen every 4-6 hours, or 800 mg every 8 hours, for the first 3-5 days after surgery, for a maximum dose of about 2400 mg/day (refer to the label for specific dosing based on age and weight). It is best if you can take some food with this medication. Tylenol should also be used around the clock to help with the baseline pain after surgery. It can be taken in conjunction with ibuprofen, and with your prescription (unless your prescription already contains acetaminophen—which is Tylenol). Be very careful not to exceed the dosage on the bottle. Taking more than 4 grams/day is not advisable. Blood thinners should only be restarted after surgery according to the plan discussed with you by your surgeon or prescribing doctor before surgery. If this was not made clear to you, call our office. All other medications should be resumed once you get home. Vitamins and supplements are not necessary to help you heal, unless you have a known deficiency. You may resume them after you get home if you wish. We would suggest sleep aids not be used while you are on narcotic pain medications.

If Difficulties Arise:
Please call us if any problems or questions arise. We can be reached any time, including evenings and weekends, by calling our office number (703) 359-8640 and selecting to speak to the on call physician.

Call your doctor if you have any of the following:
- Fever over 101°F or chills
- Increasing pain, redness, or drainage at an incision site
- Yellowing of the skin or eyes, or brown colored urine
- Vomiting or nausea that lasts more than 12 hours
- Prolonged diarrhea
• Chest pain or shortness of breath
• Inability to urinate within 8 hours of discharge
SOFT TISSUE TUMOR SURGERY DISCHARGE INSTRUCTIONS

WHAT TO EXPECT AT YOUR SURGICAL SITES:
- Pink/reddish drainage, bruising, swelling/lump at incisions may occur and is normal.
- Drainage and/or irritation around your drain or feeding tube (if you have one), is expected, a warm shower over the area will help.

CARE FOR THE INCISION:
- If you have white tapes on the skin (steri-strips), these will fall off over 7-10 days
- Skin glue over your incisions will dissolve over the next two weeks.
- Staples will be removed at your first post-operative office visit by your surgeon.
- Shower 48 hours after your surgery. No tub bathing, or pool/ocean for 1 week.

DIET:
- Most patients are discharged on some form of an easy diet or liquid diet, keep yourself hydrated. We prefer liquid food to solid food for the first couple weeks after your surgery, as it may take your stomach 3-4 weeks to regain its normal function.
- Please add supplements (Ensure, Boost, etc…) at least 3 bottles a day.
- If you have a feeding tube, you will go home on a feeding formula through, please follow directions given before discharge. It is expected to have mild drainage and irritation around the tube site.

ACTIVITY:
- If it hurts, don't do it!
- Walking & stairs are encouraged.
- Avoid strenuous physical activity & lifting until cleared by your surgeon.
- You may drive again once you have stopped taking prescription medication for pain.

MEDICATIONS:
- Resume all home medications, except the one stopped by your surgeon before discharge from the hospital.
- Use Tylenol and Motrin (Advil, Ibuprofen) for your pain, in addition to narcotics pain medications prescribed by your surgeon. Be aware that narcotics sometimes cause nausea and constipation and should be avoided if possible.
- For constipation, an over-the-counter stool softener or laxative may be taken. Please refer to attached detailed instructions or our website for this issue.
- Most patients will be taking some sort of blood thinners on discharge, please refer to discharge instructions about those specific medications. You will be taught by nurses before discharge on how to administer some blood thinner injections to yourself.
• Most patients will need acid reducing medications (Protonix, Omeprazole, etc…) on discharge, these prevent bleeding from your stomach after surgery.
• Most patients will be discharged on stomach motility medications to help in contractions of the stomach for a better digestion.

**WHAT TO LOOK FOR:**
*Please call our office immediately at (703) 359-8640 or go to the ER if you develop any of the following:*
  - Excessive drainage, bleeding, redness or swelling at or around the incisions
  - Fever over 101°F
  - Increased abdominal pain
  - Persistent nausea or vomiting
  - Difficulty with urination
  - Difficulty breathing, chest pain or calf pain
  - Brown/dark yellow urine, or yellow discoloration of the skin or eyes

**FOLLOW-UP:**
  - We will see you in our office 1-2 weeks after your surgery, your surgeon will tell you exactly about the timing of follow up visits.
  - If not already scheduled, please call (703) 359-8640 to arrange your post op visit.