



### Warning message

View or [debug](#) the AMP version of this page.

[News & Information](#) / [In the News](#)

# In Good Hands: Meet Hand Sarcoma Surgeon Edward Athanasian

By Julie Grisham, Tuesday, July 24, 2018



Hands are complex, which makes operating on tumors incredibly difficult.

---

## Summary

Edward Athanasian is the only surgeon in the United States who is trained in both surgical oncology and hand surgery. He is also Chief of the Hand and Upper Extremity Service at the Hospital for Special Surgery in New York City.

**Sarcoma** is not one distinct cancer but more than 50 different types. These tumors can arise in a variety of body tissues, including muscle, nerve, cartilage, and bone. Most commonly, they begin in the torso or leg, but they can occur anywhere, including in a hand or finger.

Memorial Sloan Kettering's **Edward Athanasian** is the only surgeon in the United States who is trained in both surgical oncology and hand surgery. We recently spoke with Dr. Athanasian, who is also **Chief of the Hand and Upper Extremity Service** at the Hospital for Special Surgery in New York City. Here, he describes the unique challenges of operating on sarcomas and other tumors in the hand. He explains how people who have been diagnosed with one of these rare cancers can benefit from MSK's approach and expertise.

## How common are sarcomas in the hands and fingers?

They are relatively uncommon. I would estimate that at MSK we've done about 100 hand surgeries for sarcoma in the past 20 years. That's not a big number, but it's more than anywhere else. If you include tumors in the wrist, elbow, and arm, that number would be significantly higher.

**Bone tumors** in the hand are very rare, so the majority of hand tumors are in the soft tissues, such as the muscles and fatty tissues. Some of the **types of sarcoma** that I've treated recently include **synovial sarcoma**, **liposarcoma**, and epithelioid sarcoma. Most of the people I see are adults, but I do operations on **children** as well.

## Why is it so unusual for someone to be trained in both surgical oncology and hand surgery?

In many ways, these two surgical specialties are very different from one another. In surgical oncology, the emphasis is on doing a wide excision, which means removing the tumor as completely and thoroughly as possible. Whereas in hand surgery, the training is focused on repairing damage and restoring and maximizing function. It can be very hard for a hand surgeon to shift gears and say, "OK, I'm going to cut out all of this tissue regardless of how it affects function."

This is how my training is different. I have a complete understanding of the need to achieve appropriate margins around the cancer at the time of the surgery. That is always my primary goal because it's the only way to maximize the likelihood that the tumor is removed entirely. But at the same time, I'm still thinking about how to accomplish the most successful reconstruction, which optimizes appearance and function after the cancer is gone.



## Surgery for Soft Tissue Sarcoma

Surgery is often the primary treatment for soft tissue sarcoma. Learn about minimally invasive operations, limb-sparing procedures, and other approaches.

[Learn more](#)

## What are some of the biggest challenges of hand surgery?

Microsurgical reconstruction, including complex nerve reconstruction, is an important part of what we do. These surgeries involve working with delicate instruments under a microscope. The procedures can be very long and complex. They are really a team effort.

Often I am in charge of the excision portion of the operation. I work with our plastic surgeons during the reconstruction. Sometimes I don't know how much tissue I'll have to remove until my part of the procedure has been completed. The plastic surgeons need to be prepared with plans for three or four different reconstructive procedures for the soft tissue depending on the results after the tumor is removed.

We're very careful and as precise as possible when explaining surgical options to patients. Sometimes, amputation of the whole hand offers the best chance for fully removing the cancer and maximizing the chances of a cure. At other times, we are able to remove the cancer completely from the hand and restore near normal function. It's imperative that they understand how their hand's function might be different after the tumor is removed. They also need to have an understanding of the limitations of reconstructive procedures. We want people to have realistic expectations for both short-term and long-term function and outcomes.

## What difficulties do people with these cancers face?

From the standpoint of work and daily life, it can be devastating to lose a hand, or even part of a hand. Losing your thumb is an especially significant problem. It's so important for picking up and holding things and interacting with the surrounding environment. We've developed surgical techniques for saving people's thumbs. Sometimes we take the big toe and make it into a thumb, but if we don't have to, we're better off trying to save enough of someone's thumb that they're still able to use it, even if it's shorter.

There can be serious emotional aspects for many people. These issues often go beyond the cancer diagnosis itself. Your hands are a major part of how you interact socially and how you present yourself to other people. Some people adapt easily, but for others it can be traumatic to lose even the tip of one of their fingers.

**“Hand tumors can be incredibly complex and difficult problems, and people who have them need our help.”**



**Edward A. Athanasian**  
surgeon

## What advantages does MSK offer to people with these cancers?

We have a strong collaborative team. In addition to working closely with our plastic surgeons, I also frequently collaborate with medical oncologists and radiation oncologists. **Kaled Alektiar** has conducted research on the best way to use radiation to shrink tumors before surgery. This can often make it easier for me to remove the cancer and improve our options for sparing fingers.

We have a great relationship with the hand therapists at MSK and the Hospital for Special Surgery as well as surrounding regional hand therapy centers. **Physical and occupational therapy** after these surgeries is absolutely essential. Therapists help people recover from surgery and get back to normal as much as possible. For people who are not able to have their therapy in New York City, we can coordinate with other facilities.

Hand tumors can be incredibly complex and difficult problems, and people who have them need our help. People come to us from all over the country and other countries as well. I have dedicated my career to this, and I consider it a privilege to be doing this work at Memorial Sloan Kettering.



Sillerman Center for Rehabilitation