

Ready to start planning your care? Call us at [800-525-2225](tel:800-525-2225) to make an appointment.

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Memorial Sloan Kettering  
Cancer Center

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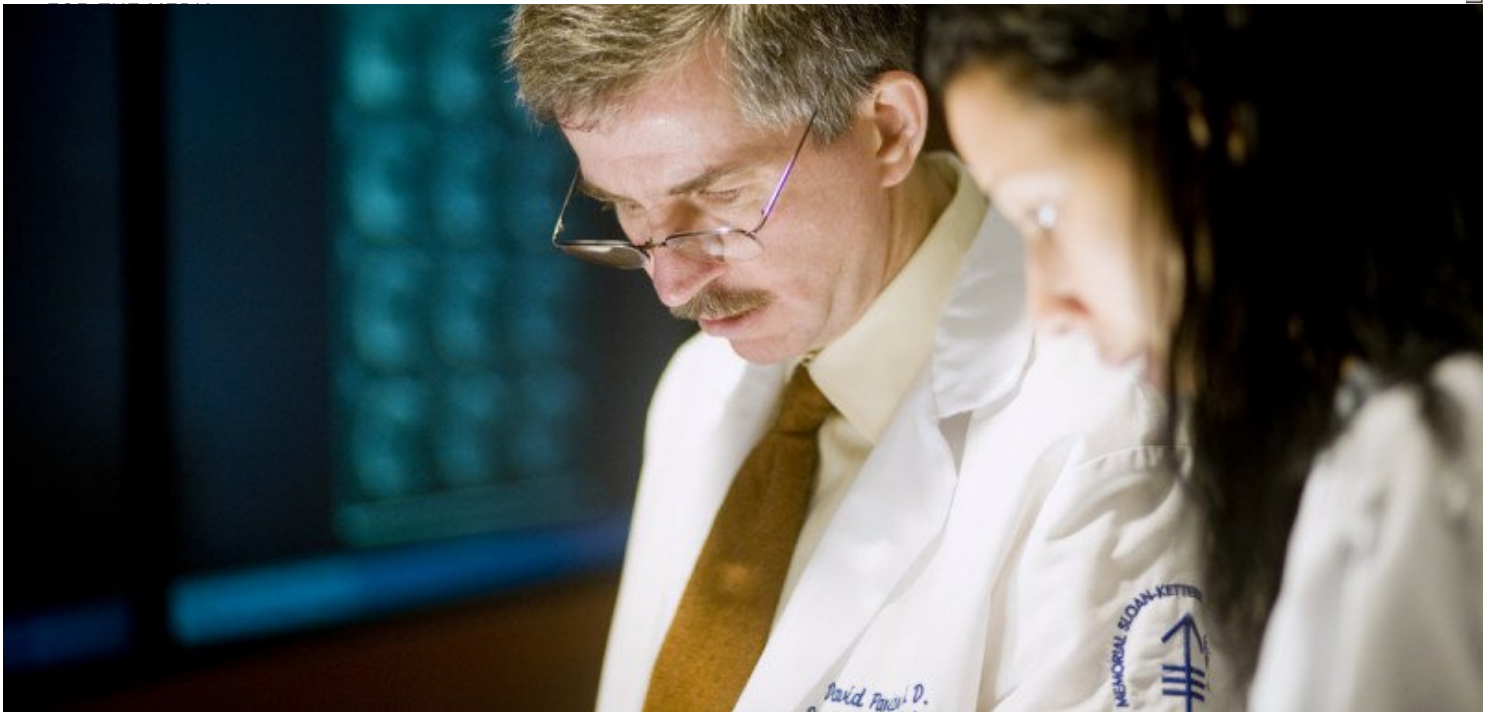
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Diagnostic radiologist David Panicek performs imaging studies that help orthopaedic surgeons and medical oncologists plan the best treatment for individuals with primary bone tumors.

If it's suspected that you have bone cancer, one of our doctors will first discuss your personal and family medical history with you. We will then perform a complete medical examination and do some tests.

[Bone infections, noncancerous bone tumors, and other conditions](#) may cause symptoms that could be confused with bone cancer. To accurately diagnose bone cancer, your doctor needs to know where it's located in the body, how it appears on imaging studies, and the way the cells look under a microscope.

Metastatic bone cancer (cancer that formed in another part of the body and later spread to the bones) often has the same appearance and symptoms as primary bone cancer. A biopsy can determine where in the body the cancer began.

## Bone Cancer Diagnosis and Treatment in Kids

Looking for information about osteosarcoma (a type of bone cancer) in children, adolescents, and young adults?

[Learn more](#)

### Laboratory Tests

One key test involves examining your blood to look for a specific enzyme that is often present at high levels when bone-forming cells are very active, called alkaline phosphatase. This kind of high activity occurs normally when a young child's bones are growing or when a broken bone is mending. Otherwise, it could mean that a tumor is creating abnormal bone tissue. Since the enzyme may rise in response to other causes, high levels do not necessarily indicate that you definitely have bone cancer. But they do signal the need for further evaluation.

### Biopsy

To make a definite diagnosis, we need to take a biopsy (a sample) of the suspicious bone tissue. If your tumor is small enough, we may remove the entire tumor, which is called an excisional biopsy.

In other cases, your doctor may make a small opening in your skin and remove just a small part of the tumor for analysis. This procedure is known as an open biopsy.

Or we may do a needle biopsy, in which we remove a sample of the tumor through your skin using a needle.

It is very important that an experienced and skilled surgeon perform the biopsy. An improperly performed biopsy may limit treatment options later on.

One of our pathologists will then examine the biopsy sample under a microscope. He or she will determine whether the tissue is cancerous and, if it is, identify the exact type of cancer. Determining which type of bone cancer you have is critical because not all types respond to the same kinds of treatment.

### Diagnostic Imaging

We use imaging technology such as x-rays, CT scans, and MRI scans both after you are first diagnosed and throughout your treatment. Our goal is to monitor the tumor's size and look for possible metastases (areas where the cancer has spread) or signs that the cancer has recurred (returned).

We usually begin with x-rays, which allow your doctor to see any unusual bone growths. This may be followed by a bone scan, to see if there are other abnormal areas in your bones. Before a bone scan, we inject a small amount of a slightly radioactive substance, known as a tracer, into a vein. After a few hours, the tracer collects where there is new bone growth. Often, we recommend a CT scan or MRI to show the exact size, shape, and extent of the suspected bone tumor and to determine if it has invaded surrounding tissue.

We also may perform a PET scan as part of your diagnosis. Unlike other imaging techniques that focus on a precise area, PET scans can show cancer growth throughout your whole body. PET and CT scans can be used in combination with each other to pinpoint the location of the cancer. Often, CT scans of the chest are used to see if the cancer has spread to your lungs.

### Request an Appointment

Call [212-639-6219](tel:212-639-6219)

Monday through Friday, 8:30 a.m. to 5:30 p.m., (Eastern time)

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