

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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your doctor will take a complete medical history and ask for details about:

- your past exposure to the sun
- whether you have any personal or family history of melanoma
- when you first noticed the spot
- if the spot has changed at all in size or appearance



Your doctor will also do a skin examination and check for enlarged lymph nodes.

MSK dermatologists (skin doctors) such as Erica Lee are highly trained in caring for many types of skin cancers.

If your doctor thinks that a particular spot on your skin may be melanoma, you'll most likely need to have a biopsy. In this test, a doctor removes a small piece of tissue. A pathologist (a doctor who specializes in diagnosing disease) will examine the tissue under a microscope to determine whether melanoma cells are present.

Your care team will also need to diagnose which type of melanoma you have and determine how extensive it is. This is a key first step in developing the best treatment plan for you.

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Available Monday through Friday, 8 a.m. to 6 p.m. (Eastern time)

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Skin Biopsy

A biopsy is often the first step in diagnosing skin melanoma. During a biopsy, a doctor removes a small amount of tissue from the area where the cancer is suspected. The sample is sent to a pathologist, who examines it under a microscope and works with the other members of the care team to make a diagnosis.

At MSK, we have a team of pathologists whose sole focus is diagnosing skin cancer, such as melanoma. This specialization allows them to make the most precise diagnosis possible. A more precise diagnosis can improve the effectiveness of your treatment or spare you from treatment that won't work against the disease.

Noninvasive Techniques for Melanoma Diagnosis

There are also several noninvasive techniques that doctors can use to evaluate possible melanomas. Dermoscopy is one common approach. It involves the use of a handheld device called a dermatoscope. This tool gives doctors a close-up view of the skin using a powerful microscope and special light.

MSK also offers a sophisticated new approach developed by our experts called [reflectance confocal microscopy](#). It uses a low-power laser to provide real-time images of a tumor.

With confocal microscopy, doctors can map melanoma and other skin cancers in precise detail. It can be an especially powerful tool when the borders of a melanoma are difficult to distinguish. MSK doctors may use it when the borders of a tumor are vague or when conventional imaging can't pick up the differences between cancerous tissue and sun-damaged tissue.

FISH Tests and CGH Tests

Molecular tests, such as fluorescence in situ hybridization (FISH) and comparative genomic hybridization (CGH), can be used to analyze the DNA of suspicious spots on the skin to help make difficult diagnoses. They are especially useful for diagnosing [nevoid melanoma](#) and [spitzoid melanoma](#), which may look like benign skin moles under a microscope. These tests are readily available at MSK.

Genomic Testing for Advanced Melanoma

Genomic testing is also called tumor sequencing or molecular profiling. It involves looking at the cells obtained from the melanoma to see if there are any genetic mutations (changes in the genes) that could be linked to the type of cancer.

For people with advanced disease, our experts use a testing approach called [MSK-IMPACT™](#). This test, developed by MSK experts, screens for mutations in more than 450 genes at once.

Based on which mutations we find, we may be able to recommend a [targeted therapy](#) that has been approved for the specific changes in the tumor. Some MSK patients may be able to join a [melanoma clinical trial](#) testing a new drug therapy.

Genetic information about the tumor can also help us predict the chances that the cancer will return after treatment and avoid treatments that won't work.

Almost all of these genetic changes are found only in cancer cells, not in normal cells, which means they cannot be passed on to your children.

Why Choose MSK for a Skin Cancer Diagnosis

It is not always easy for doctors to tell the difference between an unusual but noncancerous mole and a melanoma. A diagnosis can sometimes be challenging to make. Memorial Sloan Kettering is one of the few hospitals in the United States with access to advanced diagnostic techniques that can help accurately evaluate a tumor.

At Memorial Sloan Kettering, sophisticated pathology and imaging tests provide our care teams with a great deal of information. The pathologists and other experts who perform these tests focus on skin cancer care and melanoma in particular. This training gives our team the expertise to ensure that you get the right diagnosis and to personalize your care as much as possible.

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