

Melanoma may
run in your family...



*but you can
manage
your risk!*

*Find out your risk for
hereditary melanoma and
what you can do to reduce it*

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Family Ties and Melanoma

Within every family, certain traits are shared and passed on from one generation to the next. Most obvious are physical traits such as eye or hair color, or resemblances that parents and children share. Less obvious are inherited genetic traits that control the tendency to develop specific health concerns, such as cancer.

Melanoma is a form of skin cancer that begins in melanocytes, cells that produce the pigment that gives your skin its natural color. Melanoma can be very serious—in fact, most skin cancer deaths are caused by melanoma. Fortunately, with lifestyle changes, early detection, and the proper medical guidance, you can reduce your cancer risk of developing melanoma.



What many people don't realize is that about 10% of melanomas may be hereditary—that is, they're due to a **damaged** (or **mutated**) gene that is passed down from parent to child. The good news is that there is a way to find out your risk for hereditary melanoma and there are effective medical options that can help reduce your risk. Being aware of your risk—and doing all you can to reduce it—is so important because **melanoma is highly curable, especially when it's diagnosed and treated early**. A longer, cancer-free life may be possible when the right information leads to the right healthcare decisions.

Does Melanoma Run in Your Family?

Melanoma may run in your family if:

- There are two or more melanomas in a single individual or family at any age
- Melanoma and pancreatic cancer occur in your family or in a single individual at any age (both cancer types may be caused by the same gene mutation)
- There is a previously identified *p16* mutation in the family

The *p16* gene plays an important role in the hereditary tendency to develop melanoma. Normally, this gene helps control cell division. Cells divide to produce more cells only as the body needs them. When a mutation occurs in the *p16* gene, it cannot perform its normal function, certain groups of cells then divide uncontrolled, and cancer may develop.

We each have two copies of every gene—one from our mother and one from our father. Because we inherit all of our different traits from our parents, if either parent carries a *p16* mutation, his or her children may carry it, too.

Inheriting a gene mutation puts you at higher risk...

Everyone has some risk of melanoma, especially if they spend a lot of time in the sun; are fair-skinned; or have had one or more severe, blistering sunburns as a child or teenager. However, you have a greater risk of melanoma if you have a gene mutation. A person in the United States who has inherited a *p16* gene mutation has up to a 76% chance of developing melanoma by the age of 80 compared with the approximately 2% chance of the general US population.

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Additionally, if you have already been diagnosed with melanoma, you also have a risk of developing a new, separate melanoma.

Some families with a *p16* mutation are also at increased risk of developing pancreatic cancer.

...but you can choose to explore effective options now

If melanoma runs in your family, it's important to realize that you have choices. Your doctor or other healthcare provider can help you find out about ways to reduce your risk now, including:

Recommended surveillance (screening)

- Periodic checkups by a dermatologist, plus monthly self-exams (also see section called "Keeping Your Skin Healthy")

Preventive surgery

- Biopsy and/or removal of abnormal (dysplastic) moles—a sample of the skin tissue is taken to check for cancer

MELARIS®: A Test for Hereditary Melanoma

To find out whether you carry the mutated *p16* gene, you can take a hereditary cancer test called MELARIS. A small blood sample is drawn, then sent to Myriad Genetic Laboratories, Inc. for analysis.

To make sure MELARIS is right for you, your doctor, genetic counselor, or other healthcare professional will do a comprehensive evaluation of your personal and family history, and discuss the test, possible test results, and how the results will affect your and your family's healthcare. That way, you can be fully informed about what the results could mean for future healthcare decisions.

What MELARIS tells you and your family

Your MELARIS test results will tell you whether or not you have a *p16* gene mutation. This can help you and your doctor estimate your risk for developing melanoma. The test does not tell you whether you have cancer.

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Why are the MELARIS® test results important?

For one thing, if you find out that you carry a *p16* gene mutation, you can take extra care of yourself by getting more frequent clinical exams and screenings. The test results can also help your doctor guide your and your family's overall healthcare.

Don't forget: The sooner you know your risk, the sooner you can do something about it.

The results may also be important for your children, siblings, parents and other close relatives. If you have found out through the MELARIS test that you have a *p16* mutation, other family members can be tested to determine if they also have inherited the mutation. Then, they can take steps to reduce the risk of cancer or to treat cancer as early as possible. On the other hand, the test may show that they don't have the *p16* mutation— and are not at an increased risk.



Be ready against cancer now

Remember that frequent screening and early detection is critical to detecting melanoma and treating it. MELARIS can help you find out your risk so that you can fight hereditary melanoma before it even develops. Now's the time to ask your doctor about hereditary cancer testing and how it can benefit you and your family.

Keeping Your Skin Healthy

Of course, you and your family need to protect your skin. Keep sun time to a minimum and wear sunscreen and protective clothing. (A child's tan may look "cute" but early childhood sunburn should be avoided because it isn't healthy.) If you're at higher risk for melanoma, due to family and personal history, you need to take even greater care. One way to stay safe is to regularly examine your skin carefully for moles that could lead to melanoma.



The ABCDEs of moles

Each time you examine yourself, look for changes in the size, color, or shape of any mole or freckle. Tell your doctor if you see any new moles or changes in moles you didn't see on your last exam. Remember the ABCDE rule for moles that might be melanoma:

A **symmetry:** One half of the mole does not match the other half.

B **order:** The edges of the mole are ragged or notched.

C **olor:** The color over the mole is not the same. There may be differing shades of tan, brown, or black, and sometimes patches of red, blue, or white.

D **iameter:** The mole is more than 1/4 of an inch wide.

E **volution:** A mole that has changed in appearance or the development of a new mole.

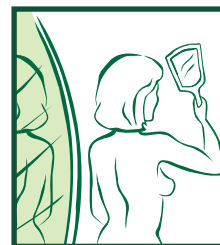
Some melanomas don't fall into these categories, so always ask your doctor if you aren't sure.

Get skin exams

Visit your healthcare provider every 6 to 12 months for a full-body skin exam—or more often, depending on the level of your risk. In between, you can examine your skin yourself.

Here's how:

1. Examine your face, especially the nose, lips, mouth, and ears—front and back. Use a hand mirror and/or a large mirror to get a clear view.
2. Thoroughly inspect your scalp. Use a blow-dryer and mirror to expose each section to view. Get a friend or family member to help, if you can.
3. Check your hands carefully: palms and backs, between the fingers and under the fingernails. Continue up your wrists to examine both front and back of your forearms.
4. Standing in front of a full-length mirror, scan all sides of your upper arms. Begin at your elbows. Don't forget your underarms.
5. Next, focus on your neck, chest, and torso. Women should lift breasts to view the underside.
6. With your back to the full-length mirror, use the hand mirror to inspect the back of your neck, shoulders, upper back, and any part of the back of your upper arms you could not view in step 4.
7. Still using both mirrors, scan your lower back, buttocks, and backs of both legs.
8. Sit down; prop up each leg, in turn, on another stool or chair. Use the hand mirror to examine the genitals. Check front and sides of both legs, thigh to shin; ankles; tops of feet; between toes; and under toenails. Examine soles of feet and heels.



Step by step self-exam guidelines provided by
The Skin Cancer Foundation at www.skincancer.org.

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Some Frequently Asked Questions

Who is the most appropriate person to first have testing in my family?

The person with the highest risk should be tested first. That is, someone who has (or has had) melanoma, pancreatic cancer, or both.

Will my health insurance pay for the MELARIS® test?

Insurance coverage for genetic testing of at-risk patients is excellent, with the majority of patients covered for testing. Although each case is unique, the average patient pays coinsurance of less than 10% of the test price.*

Can my health insurance company discriminate against me based on my MELARIS results?

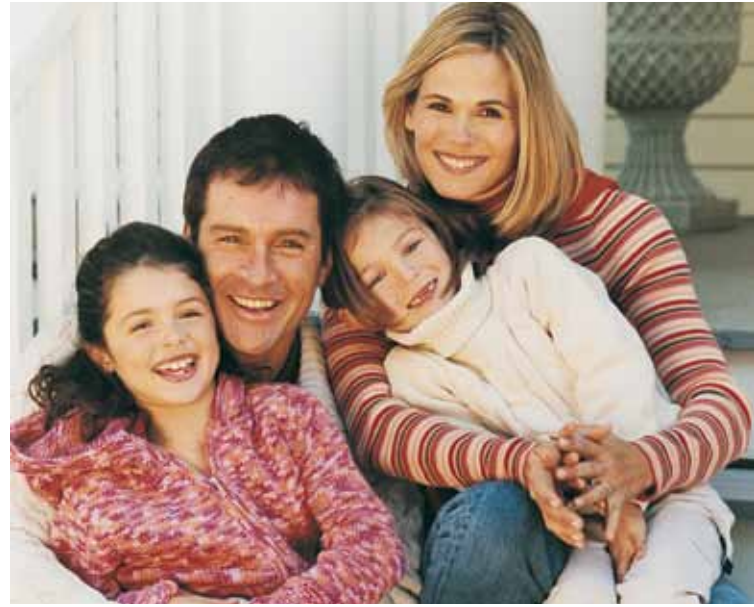
Federal laws (HIPAA and GINA) and most state laws prohibit discrimination regarding eligibility, benefits or premiums based solely on genetic information.

Will anyone else know the results of my test?

It is Myriad's policy that test results are disclosed only to the ordering healthcare provider or designee, unless the patient consents otherwise.

*Test prices may be confirmed by calling Myriad Customer Service at 800-469-7423. Unmet deductibles are always the responsibility of the patient.

Any discussion of medical management options is for general informational purposes only and does not constitute a recommendation. While genetic testing and medical society guidelines provide important and useful information, medical management decisions should be made based on consultation between each patient and his or her healthcare provider.



Where can I get more information about MELARIS?

Please talk with your physician, a genetic counselor, or other healthcare provider. You can also visit our web site at www.myriadtests.com or call Myriad at 800-4-MYRIAD (800-469-7423).

THIS INFORMATION IS PROVIDED TO HELP ANSWER SOME OF YOUR QUESTIONS WITH RESPECT TO CANCER RISKS, HEREDITARY CANCER RISKS AND PRE-DISPOSITIONAL CANCER TESTING. IT IS GENERAL IN NATURE AND IS NOT INTENDED TO PROVIDE A DEFINITIVE ANALYSIS OF YOUR SPECIFIC RISK FACTORS FOR CANCER OR YOUR HEREDITARY CANCER RISKS. YOU SHOULD NOT RELY ON THE INFORMATION PROVIDED HEREIN; BUT RATHER, YOU SHOULD CONSULT WITH YOUR DOCTOR OR A QUALIFIED HEALTHCARE PROFESSIONAL TO REVIEW THIS INFORMATION ALONG WITH YOUR INDIVIDUAL HEALTH CONDITIONS AND RISK FACTORS.

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Family History Questionnaire

To help start the dialogue with your physician or other healthcare provider, complete this and take it with you to your next office visit.

	Diagnosed with melanoma and/or pancreatic cancer	Diagnosed with multiple primary melanomas
Yourself		
Your mother/father		
Your sister/brother		
Your daughter/son		
Mother's side		
Your grandmother/grandfather		
Your aunt/uncle		
Your cousin/niece/nephew		
Father's side		
Your grandmother/grandfather		
Your aunt/uncle		
Your cousin/niece/nephew		

Where to Look for Information and Support

There are many organizations
and groups that can assist you.
Here's a list of resources for you:

Myriad Genetic Laboratories, Inc.
www.myriadtests.com
800-4-MYRIAD (800-469-7423)
e-mail: melaris@myriad.com

American Academy of Dermatology
www.skincarephysicians.com

American Cancer Society
www.cancer.org
800-ACS-2345

Melanoma Center
www.melanomacenter.org/index.html

National Cancer Institute
Cancer Information Service
www.cancer.gov
800-4-CANCER

National Society of Genetic Counselors
www.nsgc.org
610-872-7608

Pancreatic Cancer Action Network
www.pancan.org
877-272-6226



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