## **Melanoma: Introduction**



### What is cancer?

Cancer starts when cells in the body change (mutate) and grow out of control. To help you understand what happens when you have cancer, let's look at how your body works normally. Your body is made up of tiny building blocks called cells. Normal cells grow when your body needs them. They die when your body doesn't need them any longer.

Cancer is made up of abnormal cells that grow even though your body doesn't need them. In most cancers, the abnormal cells grow to form a lump or mass called a tumor. If cancer cells are in the body long enough, they can grow into (invade) nearby areas. They can even spread to other parts of the body (metastasize).

# **Understanding the skin**

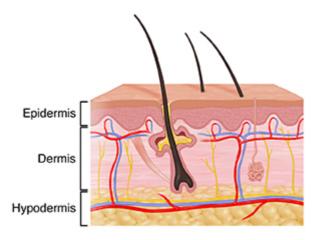
The skin is the largest organ of the body. Skin protects us from heat, sunlight, injury, and infection. It also stores water and fat, and makes vitamin D. The skin has 3 layers:

- The outer layer is called the epidermis.
- The middle layer is called the dermis.
- The inner layer is called the subcutis (subcutaneous tissue).

The **epidermis** is the skin that you see. The top of it is made of flat cells called squamous cells. These cells constantly shed as new ones are made. Round basal cells are under the squamous cells. They divide and flatten as they move toward the surface to become squamous cells. The lower part of the epidermis also has pigment-making cells called melanocytes. These cells darken the skin when exposed to the sun.

The **dermis** has blood vessels, lymphatic vessels, nerve endings, hair follicles, and glands. Some of these glands make sweat. This helps keep the body cool. Other glands make sebum. Sebum helps keep the skin from getting dry. Sweat and sebum reach the skin's surface through tiny openings called pores.

The **subcutis** and the lowest part of the dermis form a network of collagen and fat cells. This layer stores heat and helps protect the body's organs from injury.



#### What is melanoma?

There are 3 main types of skin cancer:

- Basal cell carcinoma. This is, by far, the most common type of skin cancer. It starts in the lower part of the epidermis. It grows slowly and rarely spreads.
- Squamous cell carcinoma. This starts in the flat cells that make the surface of the skin. They are more likely than basal cell carcinomas to grow into deeper layers of the skin and spread.
- Melanoma. This starts in the skin's pigment cells (melanocytes) in the epidermis. Melanoma is much
  less common than the other types of skin cancer. But it's more likely to grow and spread to other parts
  of the body.

#### When melanoma forms

Melanoma can start anywhere on the skin. Common places include the chest, back, head, neck, face, arms, and legs.

Sometimes melanoma starts on areas of the skin that are never exposed to sunlight. For instance, it may start in the eye, under a fingernail or toenail, the soles of the feet, the genitals, or even in the nose and sinuses. But these are less common.

## What are the different types of melanoma?

Melanoma starts when normal melanocytes change and become cancer. When the cancer cells are on the skin, the cancer might be called cutaneous melanoma. Most of what we know about melanoma (its behavior, staging, and treatment) refers to cutaneous melanoma.

Cutaneous melanomas come in these types:

- Superficial spreading melanoma. This is the most common form. It makes up about 70% of all
  melanomas. These often grow along the skin for a long time before spreading deeper into the skin.
  They're often flat and have irregular shapes. They may be shades of tan and brown or other colors, like
  black, white, blue, or red.
- Nodular melanoma. These are often blue-black, dome-shaped sores (lesions). But they can also be
  pink or red. They tend to grow quickly and deeper into the skin layers.
- Acral lentiginous melanoma. This type is the most common in people with naturally darker skin. These lesions are found on the palms of the hands, soles of the feet, or under a nail (subungual). They often look black or brown.
- Lentigo maligna. These are most common in older people. They're usually flat and large, spreading
  widely along the surface of the skin. They often begin as non-cancer (benign) lesions on the face or
  other sun-exposed area. The look a lot like superficial spreading melanoma. When lentigo maligna
  spreads beyond where it first started or invades deeper into the skin, it's called lentigo maligna
  melanoma.
- Desmoplastic or neurotropic. These very rare melanomas show up as small nodules on the skin.
   They are light in color (non-pigmented) and may look like scars. They tend to travel and grow along nerves in the skin. They can also cause fibrous tissue to develop around them.
- Amelanotic melanoma. These rare melanomas are often pink- or flesh-colored. They're different from
  the more common melanomas because they don't make pigment. They can be mistaken for a pimple or
  other noncancer growth. They can be hard to diagnose.

# Keeping an eye on moles

Sometimes groups of melanocytes make moles (nevi). Most people have some moles on their bodies. These moles are often pink, tan, or brown. They can be flat or raised. They tend to be round or oval. Most moles are on the chest or the upper part of the body.

Moles don't often grow or change very much. Sometimes moles fade in older adults. Most moles aren't cancer. (They're benign.) And they don't lead to cancer.

Some abnormal moles, called dysplastic nevi, are linked to an increased risk of melanoma. These tend to be a looking moles. They should be checked regularly by a healthcare provider.

## Melanoma growth and spread

Melanoma tends to grow in 1of 2 ways:

- Radial growth. This means the melanoma spreads horizontally along the top layers of your skin. Most
  melanomas start growing this way. If caught and treated, the risk of spread is low. But over time, it may
  grow into deeper layers of your skin.
- Vertical growth. This means melanoma grows into deeper layers of skin. This kind of growth is more serious. The melanoma can reach lymph and blood vessels and then spread to other parts of the body. Nodular melanoma grows this way fairly quickly. Still, most melanomas first grow along the top layers of skin for some time.

If left untreated, melanoma tends to spread to other parts of the body more quickly than other types of skin cancer. This can make it more dangerous. This spread can be a bit unpredictable, too. Melanoma tends to spread first to lymph nodes in the area near the original tumor. For instance, if the tumor was on your leg, it may spread to lymph nodes in your groin area. But sometimes melanoma can spread to distant parts of your body, even if the nearby lymph nodes don't contain cancer cells. These distant areas can include the liver, lungs, or brain.

# Talk with your healthcare provider

If you have questions about melanoma, talk with your healthcare provider. They can help you understand more about this cancer.

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