



# Cutaneous Cancers

## Patient Education on Skin Cancers

### Melanoma

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#### Epidemiology

Melanoma is much less common than basal cell carcinoma or squamous cell carcinoma of the skin, but it is considered much more aggressive. While melanoma represents only 7% of skin cancers in the US, it has an increased likelihood of invading nearby structures, or spreading to other parts of the body. Over the past 30 years the number of new cases of melanoma has been steadily increasing. Although melanoma can develop in people with all skin types, it primarily affects those with lighter skin; white males over 50 years old are at highest risk.

#### Risk Factors

People with light/fair skin that freckles or burns easily are at higher risk for melanoma. Exposure to natural or artificial ultraviolet radiation increases the chances of developing melanoma, especially a history of blistering sunburns or tanning bed use. Certain medical conditions such as a weakened immune system, or skin disorders (atypical nevus syndrome, xeroderma pigmentosa) can increase the risk of melanoma as well.

Risk factors for developing melanoma can be divided into two categories: genetic predisposition and environmental exposure.

#### 1. Genetic Predisposition

- a) Some people are born with genetic medical conditions that increase the likelihood of developing melanoma. These include Xeroderma Pigmentosum and atypical nevus syndrome.
- b) Fair skin is another risk factor. Skin tone can be classified by the Fitzpatrick scale; those with types I and II are at higher risk for developing melanoma.





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Fitzpatrick Skin type	Typical features	Tanning ability
I	Pale white skin, blue/green eyes, blond/red hair	Always burns, does not tan
II	Fair skin, blue eyes	Burns easily, tans poorly
III	Darker white skin	Tans after initial burn
IV	Light brown skin	Burns minimally, tans easily
V	Brown skin	Rarely burns, tans darkly easily
VI	Dark brown or black skin	Never burns, always tans darkly

### 2. Environmental Exposure

Intense exposure to natural or artificial ultraviolet (UV) radiation increases the chances of developing melanoma. Specifically, a history of blistering sunburns has been associated with the development of melanoma later in life. Tanning bed use is associated with melanoma, and these should be avoided.

### Prevention

Protection from ultraviolet (UV) radiation is the best method of prevention of melanoma. Artificial sources of UV radiation (eg tanning beds) should be avoided all together. Routine self-exams can help identify suspicious lesions early.

Some guidelines for keeping safe include:

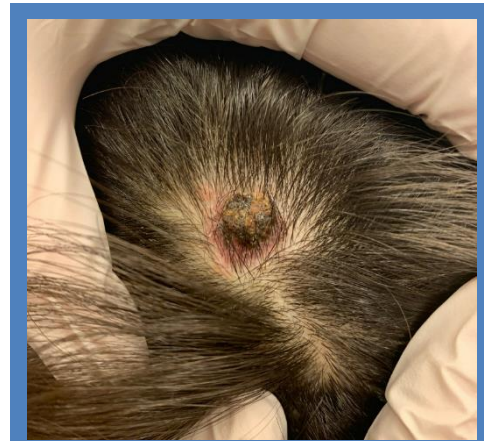
- Use of broad-spectrum sunscreen with an SPF of 30 or higher
- Long-sleeved shirts and wide-brimmed hats
- -Wearing sunglasses with UV protection
- Avoiding sun exposure between 10am – 4pm (highest UV concentration)

### Presentation

Melanoma on the skin typically appears as an irregular pigmented (dark) lesion. Typical lesions are described by the ABCDEs of melanoma:

- Asymmetric lesions
- Borders of the lesion are irregular (not smooth)
- Color variations throughout the lesion
- Diameter that is larger than 6 mm (about the size of a pencil eraser)
- Evolution, or changing, of the lesion over time

Melanomas may develop in a previously existing mole or may develop in an area of normal skin where no previous lesion was present.



The scalp is a common place to find melanomas, even in hair-bearing areas. This lesion also shows the classic “ABCDs” of melanoma.

*Photos courtesy of Kevin Emerick, MD*



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#### Treatment

Lesions that are concerning can be biopsied by a dermatologist or a head and neck surgeon. A biopsy (a minor procedure in which a small portion of the lesion is removed) is the only way to accurately diagnose melanoma.

If confirmed, the most common treatment for melanoma is surgical removal. Information from the biopsy will help determine how much tissue needs to be removed at surgery, and if any additional procedures need to be performed to evaluate for spread to other parts of the body. The surgeon may recommend a procedure called a sentinel lymph node biopsy, in which the closest lymph nodes to the melanoma are identified and removed; microscopic testing can determine if melanoma has spread to these lymph nodes.

In many cases, radiation treatments are recommended after surgery as additional treatment. Radiation may be used as the primary treatment in patients who are medically unable to undergo surgery.

There are several new types of chemotherapy available for aggressive melanoma that has spread to other areas of the body, or for melanoma that cannot be completely removed with surgery. For patients with disease that is this aggressive, management through a multidisciplinary tumor board is recommended.



Occasionally, melanoma can present without being overly pigmented/dark. This is an example of a melanoma in the temple (in front of the left ear) that does not show the typical pigmentation most often seen in melanoma. A biopsy has been performed through the center of the lesion.

*Photos courtesy of Kevin Emerick, MD*