

Melanoma: Prevention and Early Detection

Skin cancer is the most common form of cancer in the United States. One type of skin cancer, melanoma, is particularly dangerous. Although it accounts for only 1% of skin cancer cases, melanoma spreads quickly to lymph nodes, is less curable than other skin cancer types, and is responsible for most skin cancer deaths.¹

This newsletter will discuss prevention and early detection of melanoma. It will also explain a simple method that patients can use to screen themselves, and how the lab can help patients with melanoma.

Scope of the Problem

The American Cancer Society (ACS) estimates that in 2019 about 100,000 new cases of melanoma will be diagnosed, and about 7,000 people will die from melanoma.¹ The incidence of melanoma has been steadily increasing for the past 30 years, and is expected to continue to increase.² The median age of diagnosis is 63 years, but melanoma is not uncommon in people as young as 30 years.¹

Prevention

Melanoma is one of the most preventable forms of cancer. Sun exposure, especially if sunburn occurs, is the leading risk factor, as is exposure to sources of artificial ultraviolet (UV) light such as tanning beds.³ Other risk factors include a light skin complexion (low pigmentation and increased sensitivity to UV exposure), the presence of congenital and acquired melanocytic nevi, and a family history of melanoma.³

In 2014 the Surgeon General issued a *Call to Action* report to address the increasing burden of melanoma. The report identifies groups of people who would most benefit from increased disease education and awareness that reducing exposure to UV radiation can prevent most skin cancers.⁴ Since the *Call to Action* was released, melanoma awareness and prevention have increased, but a comprehensive national program for skin cancer prevention is yet to be implemented in the United States.

A number of measures can help prevent melanoma. Counseling in primary care settings has been proven to modify behavior and decrease intentional tanning.⁴ The United States Preventive Services Task Force (USPSTF) recommends that clinicians counsel patients with fair skin who are 10 to 24 years old to minimize their exposure to sunlight and artificial UV light to decrease their risk of developing melanoma.² The ACS recommends that persons at increased risk of getting melanoma (eg, individuals with light skin tone, family history of melanoma, a large number of moles, weakened immune system from medications or disease)^{5,6}

- Avoid prolonged exposure to midday sun
- Wear a wide-brimmed hat
- Wear tightly woven clothing that covers arms and legs
- Wear sunglasses that block both UVA and UVB rays
- Use a broad spectrum sunscreen with an SPF of 30 or higher
- Avoid indoor tanning



Risk Factors for Melanoma^{2,5}

- Aged 35 to 75 years
- Personal history of skin cancer
- Family history of skin cancer
- Light skin
- Blond or red hair
- More than 40 moles
- 2 or more atypical moles
- Many freckles
- Sun-damaged skin
- History of blistering sunburn
- History of indoor tanning

Early Detection

Fortunately, melanoma is highly curable when detected in its early stages. The 5-year relative survival rate is 98% if caught early, at the localized stage, but only 23% for individuals with distant metastasis.⁷

Visual screening during a total body skin examination (TBSE) is an easy and effective way to detect new or changing moles. Due to a lack of available evidence, the USPSTF does not currently support annual TBSE by a clinician.⁵ Although, for at-risk patients (see Sidebar on previous page), many organizations and clinicians disagree.² Regardless of this controversy, patients are encouraged to examine themselves each month using the ABCDE rule to identify suspicious moles (Figure).^{8,9}

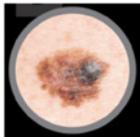
A: Asymmetry

One side is different from the other



B: Border

The edges are irregular and ragged



C: Color

Varied shades of tan, black, and brown



D: Diameter

Bigger than 6mm (1/4 inch)



E: Evolving

Changes in size, shape, and color



Figure. What to Look for in a Mole: The ABCDEs^{8,9} (Source: Dermath Diagnostics)

How Dermath Diagnostics Can Help

Dermath Diagnostics, a Quest Diagnostics company, offers a comprehensive test menu for dermatological needs, including testing of skin biopsies with analysis performed by board-certified dermatopathologists. In addition to tests for heredity and tumor burden, Dermath offers *BRAF/c-KIT* testing for patients with metastatic melanoma. Dermath and Quest also offer companion diagnostic tests including PDL1 IHC 288 pharmDx test, used to detect PDL1 expression in melanoma tissue; Melanoma, *BRAF* V600 Mutation, Cobas®; and Melanoma, *BRAF* V600E and V600K Mutation Analysis, THxID™. Together with microsatellite instability testing, these tests help identify candidates for targeted immune therapy.³

Note: Dermath and Quest contract independently with insurance companies.

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