

# MALIGNANT MELANOMA

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## Introduction

A melanoma is a tumor produced by the malignant transformation of melanocytes. Melanocytes are derived from the neural crest; consequently, melanomas, although they usually occur on the skin, can arise in other locations where neural crest cells migrate, such as the gastrointestinal tract and brain.

[12] The five-year relative survival rate for patients with stage 0 melanoma is 97%, compared with about 10% for those with stage IV disease.

## Etiology

The causes may be related to:

Family history-Positive family history in 5% to 10% of patients; a 2.2-fold higher risk with at least one affected relative. Personal characteristics - Blue eyes, fair and/or red hair, pale complexion; skin reaction to sunlight (easily sunburned); freckling; benign and or dysplastic melanocytic nevi (the number shows a stronger correlation than size); immunosuppressive states (transplantation patients, hematologic malignancies)

Sun exposure over a lifetime - High UVB and UVA radiation exposure (Recent evidence has shown that the risk of melanoma is higher in people who use sunscreen. Because sunscreen mostly blocks UVB people using sunscreen may be exposed to UVA more than the general public, provided these people are exposed to the sun more than the public at large); low latitude, the number of blistering sunburns; use of tanning beds.

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Certifying in the university

Significance may be linked to the mode of detection. One survey of newly diagnosed and that SFS individuals have decrease the perception and wedge of the disease.

## Epidemiology

The incidence is increasing worldwide, and hypercarcinoma at a faster rate than that of any other cancer except breast cancer. Melanoma is more common in Whites than in Blacks and Asians that can be fifth most common malignancy in men and the seventh most common malignancy in women, accounting for 5% and new cases respectively. The average age at diagnosis is 57 years and patients are younger than 70 years of age. Melanoma affecting young and middle-aged people like other cancers mainly affecting older adults. It is more common in patients younger than 55 years, and it accounts for the third-highest number of lives lost across all cancers.

## Pathophysiology

Melanomas may develop in or near a pre-existing precursor lesion or healthy appearing skin. A malignant melanoma developing in healthy skin is said to arise de novo without evidence of a precursor lesion. Solar irradiation induces many of these melanomas. Melanoma also may occur in unexposed areas of the skin, including the palms, soles, and perineum.

Certain lesions are considered to be precursor lesions of melanoma. These include the following: nevi. Radiation induces melanomas in unexposed areas of the skin, including the palms, soles, and perineum. Certain lesions are considered to be precursor lesions of melanoma. These lesions have growth phases, radial and vertical. During the radial growth phase, the malignant cells grow in a radial fashion in the epidermis. With time, melanomas progress to the vertical growth phase, in which the malignant cells invade the dermis and develop the ability to

metastasize. Chally less are classified according to their depth, as follows:

Thin-7mm or less

Thin-7mm

and

Moderate-1m to 4 mm

Thick-greater than 4 mm

Stages

Stage of a cancer at cancer at diagnosis will indicate how far is the cancer reached and what kind of treatment will be suitable

One method of assigning a stage to melanoma describes the cancer in five stages Trusted Source, from 0 to 4:

Stage 0: The cancer is only present in the outermost layer of skin. Doctors refer to this stage as "melanoma in situ."

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Stage 1 The cancer is up to 2 millimeters (mm) thick. It has not yet ph nodes or other sites, and it mayor may not be Stage 2: The cancer is at least 1 mm thick but may be thicker than 4 nit may or may not be ulcerated, and it has not yet spread to lymph has nodes or other sites. Stage 3: The cancer has spread to one or more lymph nodes or nearby lymphatic channels but not distant sites. The original cancer may no visible, it may be thicker than 4 mm and also Lentigo maligna melanoma represents 4% to 10% of melanomas, the tumors are often larger than 3 cm, flat, and tan, with marked notching of the borders; they begin as small, freckle-like lesions. . Acral lentiginous melanoma constitutes 2% to 8% of melanomas in Whites and 35% to 60% of them in dark-skinned people; may appear on the palms and soles as flat, tan, or brown stains with irregular

My the history lines either changing characteristics in an for the adentification of a new mole the churicterrines of melanoma are commonly known by the acronym Up and include the following

C-Color variations, especially red, white, and blue tones in a brown

or black lesion

D-Diameter greater than 6 mm

E-Elevated surface

Also, melanomas may itch, bleed, ulcerate, or develop satellites. Patients who present with metastaticdisease or with primary sites other than the skin have signs and symptoms related to the affected organ system(s).

It is also important to examine all lymph node groups.

## Evaluation

Perform excisional biopsy on suggestive lesions so that a pathologist can confirm the diagnosis. Shave biopsies and electrodesiccation are inadequate; a full thickness of the skin is essential for proper histologic diagnosis and classification.[5][6][7] The most important prognostic indicator for stage I and I tumors is thickness; obtain a full-thickness biopsy specimen for adequate pathologic interpretation. Biopsy results ultimately determine the margins of resection and which patients are candidates for sentinel lymph biopsy and other adjuvant treatment.

The following laboratory studies are indicated:

(Including alkaline phosphatase, hepatic Stages

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Stage 4: The cancer has spread to distant lymph nodes or organs, such as the brain, lungs, or liver.

The more advanced a cancer is, the harder it is to treat and the worse the outlook becomes.

The 4 major types of melanoma, classified according to growth pattern, are as follows: Superficial spreading melanoma constitutes approximately 70% of melanomas, usually flat but may become irregular and elevated in later stages; the lesions average 2 cm in diameter, with variegated colors, as well as peripheral notches, indentations, or both.

Nodular melanoma accounts for approximately 15% to 30% of melanoma diagnoses; the tumors typically are blue-black but may lack pigment in some circumstances.

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Lactate dehydrogenase

wing laging modalities may be considered: Chest radiography

MRI of the brain

Ultrasonography (possibly the best imaging study for diagnosing lymph node involvement)

CT of the chest, abdomen, or pelvis Positron emission tomography (PET; PET-CT may be the best imaging study for identifying other sites of metastasis)

## Symptoms

In its early stages, melanoma can be difficult to detect. It is important to check the skin for any signs of change. Alterations in the appearance of the skin are vital indicators of melanoma.

Doctors use them in the diagnostic process.

The Melanoma Research Foundation offer pictures of melanomas and normal moles to help a person learn how to tell the difference.

They also list some symptoms that should prompt a person to visit the doctor, including:

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one that fails to heal, is inflamed, itchy, or tender

Also, such as a new spot or mole or a change in the color, size of an existing spot or mole

that fails to heal, is inflamed, itchy, or tender a spot or sore that starts to bleed

a spot or bump that looks shiny, waxy, smooth, or pale a firm, red lump that bleeds or looks ulcerated or crusty

a flat, red spot that is rough, dry, or scaly TREATMENT/MANAGEMENT

Surgery such as wide local excision with sentinel lymph node biopsy, elective node dissection, or both is the definitive treatment for early-stage melanoma. When performing the wide local excision, first consider the surgical margins. If the primary closure is not feasible, skin grafting or tissue transfers may be needed.[8][9][10][11] Medical management is reserved for adjuvant therapy of patients with advanced melanoma.

Agents that may be used in adjuvant therapy include the following:

Interferon alfa

. Pegylated interferon

. Granulocyte-macrophage colony-stimulating factor (GM-CSF) . Ipilimumab

Agents that merit consideration for the treatment of advanced-stage (stage IV) melanoma are the following:

Dacarbazine

. Temozolomide

. Interleukin-2

Cisplatin, vinorelbine, and dacarbazine (CVD) Cisplatin, dacarbazine, carmustine, and tamoxifen

Tumor thickness (worse prognosis in thicker lesions)

Evidence of tumor in regional lymph nodes (stage III disease)

Cant metastases (stage IV disease)

trunk and or face lesions have worse prognoses than

resence of ulceration

Presence of regression on histologic examination (controversial) Male sex

Prognous depends on the disease stage at diagnosis, as follows: Patients with stage I disease-5-years survival rate of greater that 90%

Patients with stage II disease- 5-year survival rate ranging from 45% to 77% Patients with stage III disease 5-year survival rate ranging from

27% to 70%

Patients with metastatic disease have a grim prognosis, with a 5-year survival rate of less than 20%

### **Complications**

Most severe complications occur in cases of delayed diagnosis and treatment. Complications can include

Secondary infection-resulting from disruption of the normal skin harrier Scarring these can result from the lesion itself or treatments.

Lymphedema - most commonly occurs secondary to the removal of lymph nodes but can result from cancer alone.

Local recurrence- especially in cases that were more advanced before diagnosis.

and anxiety-because

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with advanced cases, and melanomas

cell carcinomas

and anxiety-because of cosmesis issues

Go to

Deterrence and Patient Education

Patients need to receive counsel to engage in preventative activities.

especially once they have been treated for melanoma. These actions include:

Avoid midday sun

Use sunscreen at all times of the year

Don protective clothing t cover skin

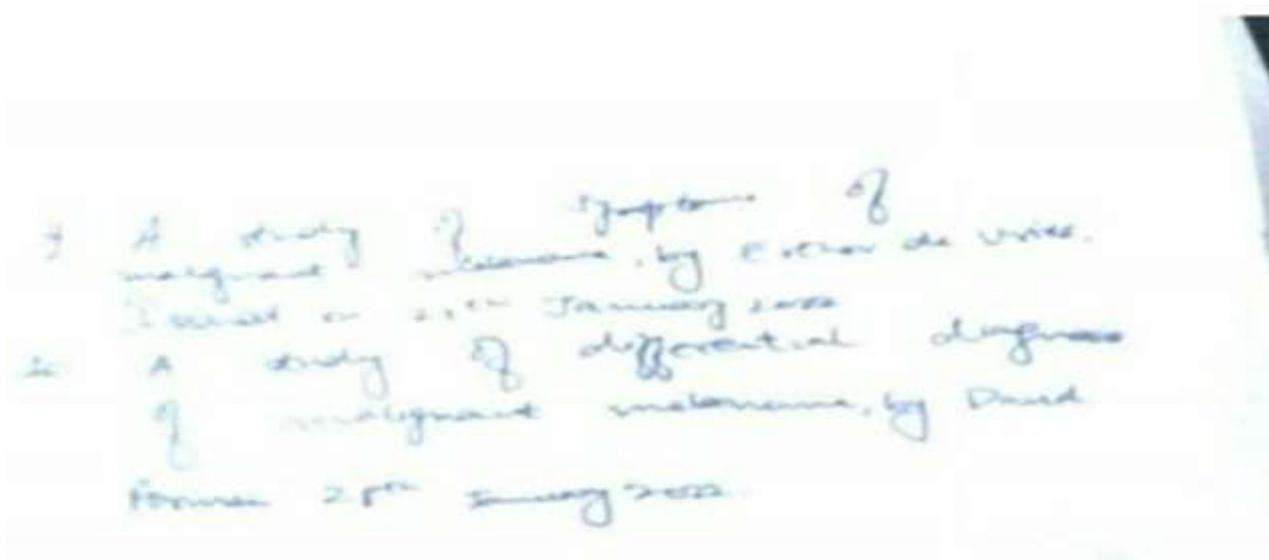
Avoid tanning beds

Be familiar with their skin so they can promptly spot changes-this includes areas that may not receive much sun exposure

### Enhancing Healthcare Team Outcomes

Skin cancers are frequently seen! primary care providers, nurse: practitioners, internists, and pharmacists, this is why an interprofessional team approach is needed. While many skin lesions are benign, it is important always to consider melanoma- as it is potentially deadly if the diagnosis gets missed. If there is suspicion of melanoma, the patient should obtain a referral to the dermatologist oncologist and pathologist for further workup. Irrespective of which of the other healthcare providers first became suspicious Surgery includes wide local excision with sentinel lymph node biopsy, elective node dissection, or both. These surgical procedures are the definitive treatment for early-stage melanoma.

[13/06, 7:32 pm] Amit: When performing the wide local excision, first consider the surgical margins. If the primary closure is not feasible, skin grafting or tissue transfers may be needed. Medical management is reserved for adjuvant therapy of patients with advanced melanoma: here again, the pharmacist can monitor medications and consult with the dermatologist. Dermatology nursing staff will assist at all stages of case management, and provide patient counsel and monitor the condition, reporting to the treating clinician as necessary. For localized lesions, the prognosis is with surgery, but advanced melanoma has a grim prognosis, but the interprofessional team approach to care will optimize the patient's prospects for a better outcome.



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