بسم الله الرحمن الرحیم

MELANOMA: CLINICAL FEATURES AND DIAGNOSIS

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melanoma

- Introduction
- Risk factor
- Classification and features
- Diagnosis
- Surgical management
- Reference

Introduction

- Melanoma is the most serious form of skin cancer
- In the United States, it is the fifth most common cancer
- increases with age

Risk factors

- cumulative sun damage (CSD)
- mole phenotype (high versus low nevus count)
- BRAF, NRAS, and other relevant mutations
- The patients phenotypic features include:

Light-complexioned phototype/red or blond hair/light eye color

- Presence of a large number (>50) of melanocytic nevi (common nevi)
- Presence of large or atypical melanocytic nevi

classification of melanoma

The traditional morphologic classification of melanoma:

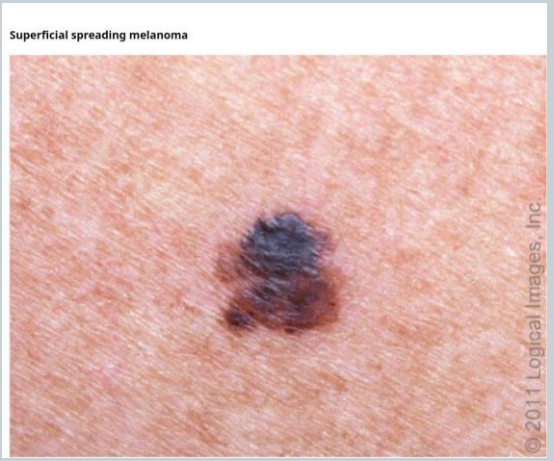
- superficial spreading
- nodular melanoma
- lentigo maligna
- acral lentiginous

Superficial spreading melanoma

-The most common histologic subtype.

-Over 60 percent diagnosed as thin, highly curable tumors that are ≤1 mm in thickness

- Approximately two-thirds of all melanomas arise de novo



Nodular melanoma

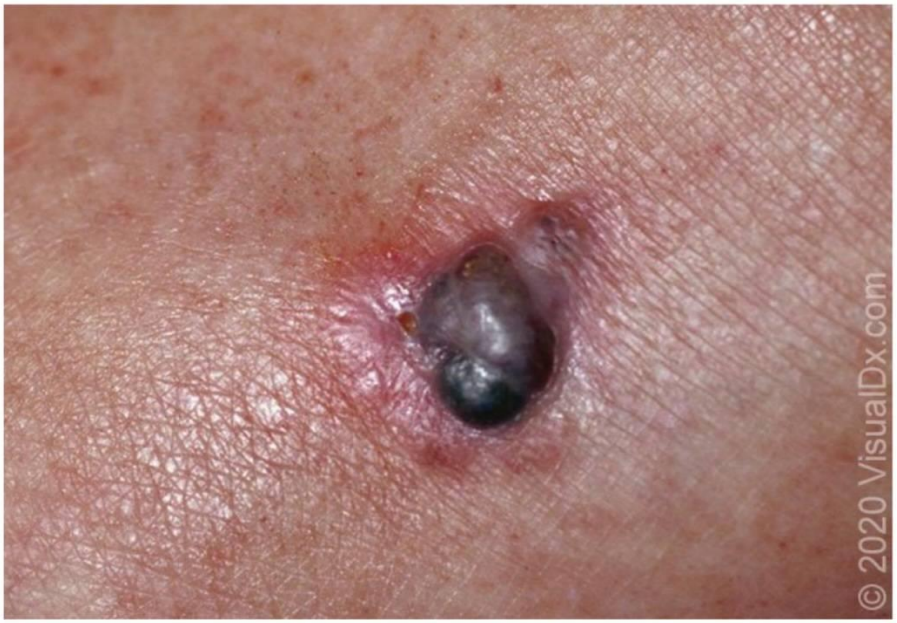
-Darkly pigmented, pedunculated, or polypoid papules or nodules

-Frequently present with uniform color or amelanotic/pink hue, symmetric borders, and a relatively small diameter, making early detection difficult

Nodular melanoma

-Most nodular melanomas are **thicker than 2 mm at the time of the diagnosis**

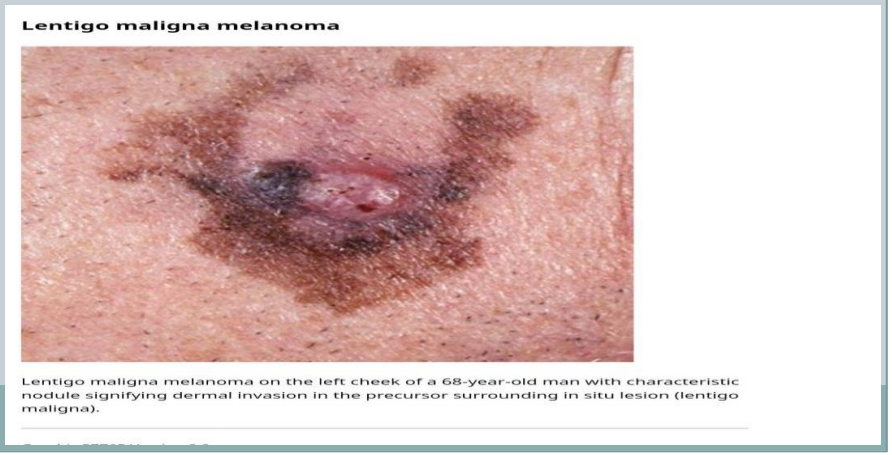
-No identifiable radial growth or in situ phase



Lentigo maligna melanoma

-Most commonly arises in **chronically sun-damaged areas** of the skin in older individuals and begins as **a tan or brown macule**

The lesion gradually **enlarges** over years and may **develop darker, asymmetric foci of pigmentation, color variegation, and raised areas** that signify **vertical growth** within the precursor in situ melanoma, which is termed "lentigo maligna"

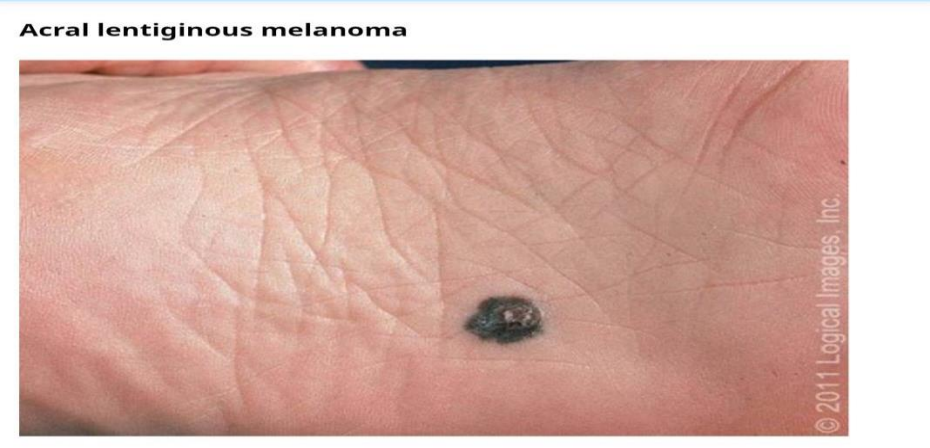


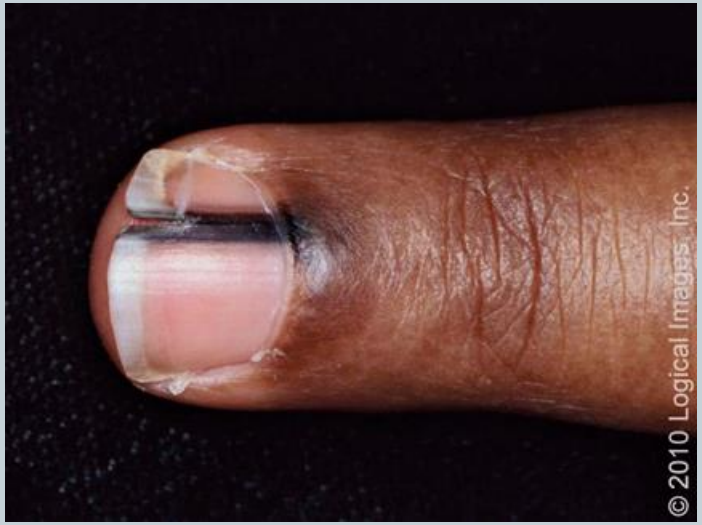
Lentigo maligna melanoma on the left cheek of a 68-year-old man with characteristic nodule signifying dermal invasion in the precursor surrounding in situ lesion (lentigo maligna).

Acral lentiginous melanomas

-First appear as dark brown to black, irregularly pigmented macules or patches, with raised areas, ulceration, bleeding, and/or larger diameter generally signifying **deeper invasion in the dermis**.

-most commonly on **palmar, plantar, and subungual** surfaces





Subungual melanoma

Melanoma originating from the nail matrix.

An area of hyperpigmentation of the proximal nail fold (**Hutchinson sign**) is present.

When to suspect melanoma

1.The **ABCDE rule** of melanoma:

- **A**symmetry
- **B**order irregularities
- **C**olor variegation
- **D**iameter ≥6 mm
- **E**volution (a lesion that is changing in size, shape, or color, or a new lesion)

2.The Glasgow seven-point checklist

- **Major** (2 score):

-Change in size/new lesion

-Change in shape/irregular border

-Change in color/irregular pigmentation

- **Minor** (1 score):

- Diameter ≥7 mm
- Inflammation
- Crusting or bleeding
- Sensory change/itch

3.The "ugly duckling" sign

Diagnosis

- **Dermoscopy**

Dermoscopic examination should be performed on **all suspicious**, pigmented lesions **as a first-line diagnostic support modality.**

The **definitive** diagnosis of melanoma is **histopathologic**.

Biopsy – A **complete full-thickness** excisional biopsy of suspicious lesions with **1 to 3 mm margin** of normal skin and extending to a depth to encompass the thickest portion of the lesion should be performed whenever possible

surgical management

ROLE OF SURGERY

- -Histologic confirmation of the diagnosis
- -Obtaining complete and accurate pathologic staging of the primary tumor (and when appropriate, regional nodal basin staging by sentinel lymph node biopsy [SLNB]
- -Wide excision of the primary melanoma site with an appropriate margin of normal tissue around the primary site to minimize the risk of local recurrence

Margins for cutaneous melanoma

-**For melanoma in situ (Tis)** – 0.5 to 1 cm surgical resection margin; a 0.5 cm margin is commonly used

-**For cutaneous melanomas ≤1 mm thick (T1)** – 1 cm resection margin.

-**For cutaneous melanomas >1 to 2 mm thick (T2)** – 1 to 2 cm resection margin

-**For cutaneous melanomas >2 mm thick (T3, T4)** – 2 cm resection margin.

case

- بیمار آقای ۸۳ ساله با شکایت ضایعه توده اسکالپ از دو سال قبل مراجعه کرده است.

بیمار ذکر میکند ضایعه ابتدا کوچک و یک عدد بوده است ولی بعد از ۱ سال و نیم و عدم پیگیری درمان به اندازه یک کف دست رسیده است.

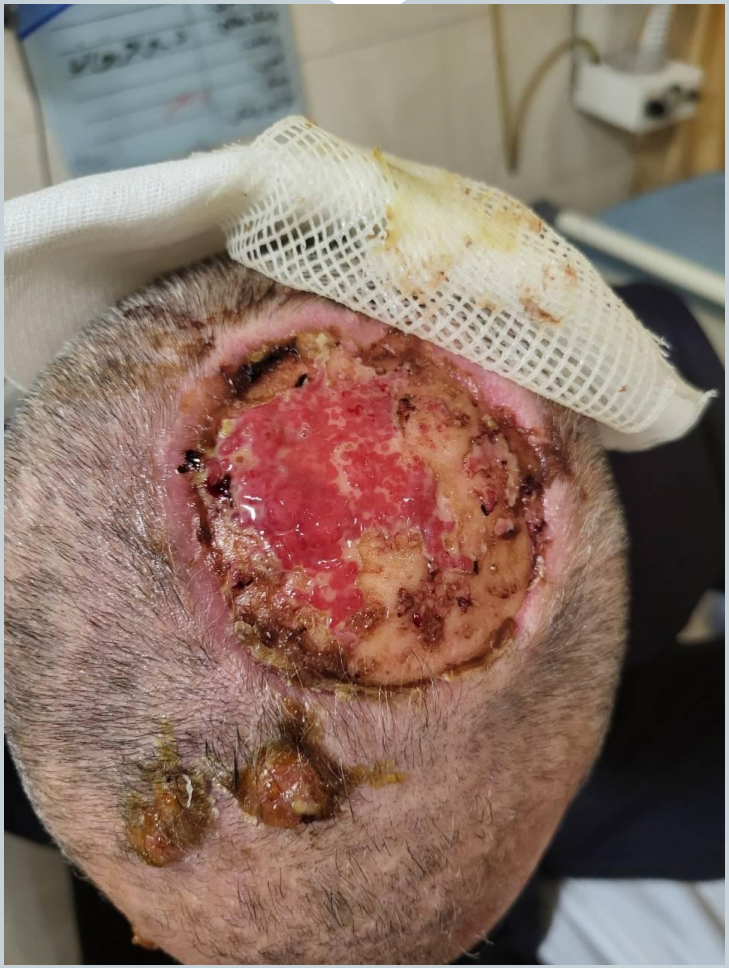
تب-/بی اشتهایی-/ کاهش وزن-/ درد-

PMH: HTN

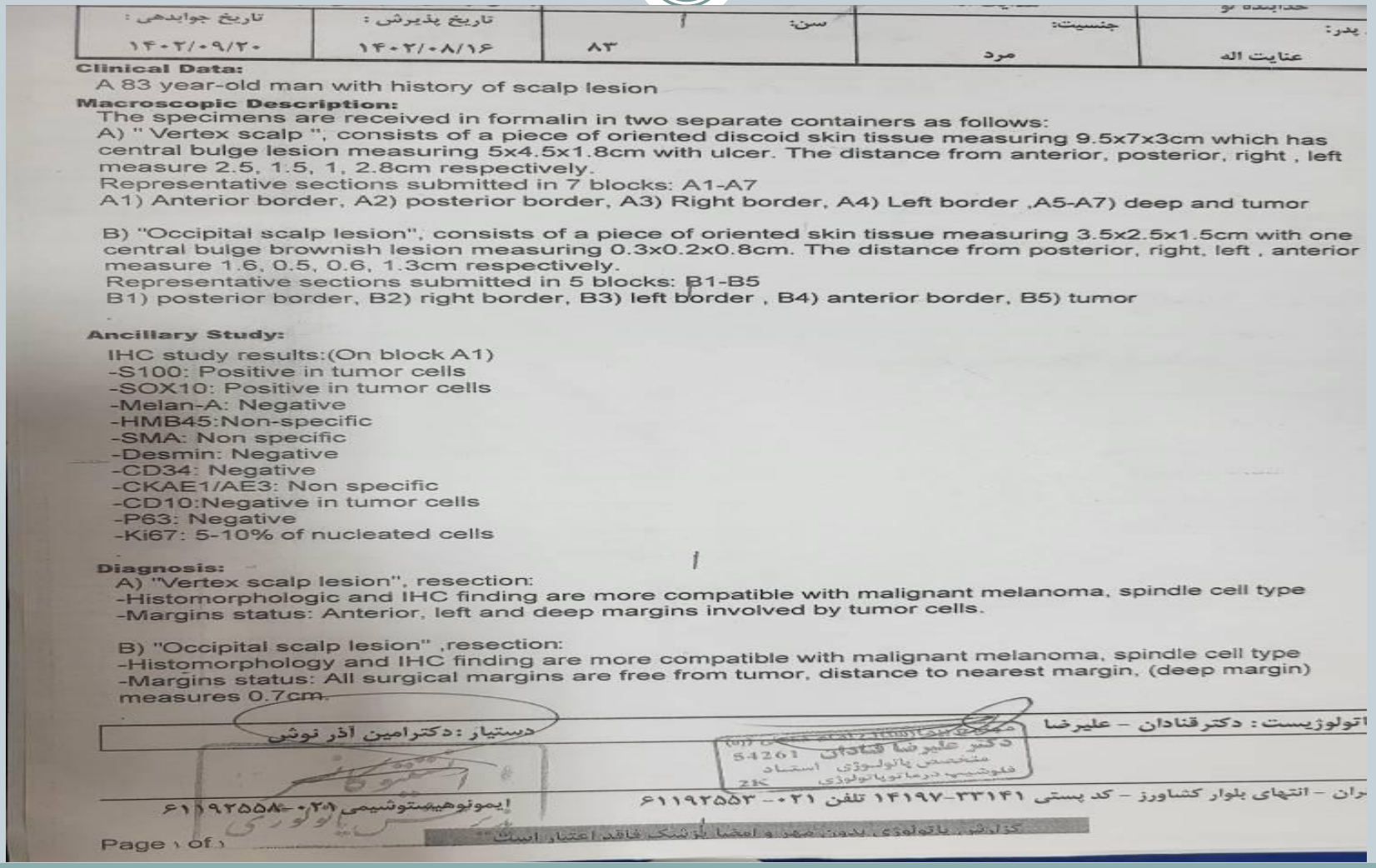
HH: -

DH:VALSARTAN

FH: -



pathology



تاریخ جوابدهی :	تاریخ پذیرش :	سن:	جنسیت:	پدر:
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Clinical Data:
A 83 year-old man with history of scalp lesion

Macroscopic Description:
The specimens are received in formalin in two separate containers as follows:
A) " Vertex scalp ", consists of a piece of oriented discoid skin tissue measuring 9.5x7x3cm which has central bulge lesion measuring 5x4.5x1.8cm with ulcer. The distance from anterior, posterior, right , left measure 2.5, 1.5, 1, 2.8cm respectively.
Representative sections submitted in 7 blocks: A1-A7
A1) Anterior border, A2) posterior border, A3) Right border, A4) Left border ,A5-A7) deep and tumor

B) "Occipital scalp lesion", consists of a piece of oriented skin tissue measuring 3.5x2.5x1.5cm with one central bulge brownish lesion measuring 0.3x0.2x0.8cm. The distance from posterior, right, left , anterior measure 1.6, 0.5, 0.6, 1.3cm respectively.
Representative sections submitted in 5 blocks: B1-B5
B1) posterior border, B2) right border, B3) left border , B4) anterior border, B5) tumor

Ancillary Study:
IHC study results:(On block A1)
-S100: Positive in tumor cells
-SOX10: Positive in tumor cells
-Melan-A: Negative
-HMB45:Non-specific
-SMA: Non specific
-Desmin: Negative
-CD34: Negative
-CKAE1/AE3: Non specific
-CD10:Negative in tumor cells
-P63: Negative
-Ki67: 5-10% of nucleated cells

Diagnosis:
A) "Vertex scalp lesion", resection:
-Histomorphologic and IHC finding are more compatible with malignant melanoma, spindle cell type
-Margins status: Anterior, left and deep margins involved by tumor cells.

B) "Occipital scalp lesion" ,resection:
-Histomorphology and IHC finding are more compatible with malignant melanoma, spindle cell type
-Margins status: All surgical margins are free from tumor, distance to nearest margin, (deep margin) measures 0.7cm.

دستیار : دکترامین آذر نوشی

اتولوژیست : دکترقنادان – علیرضا

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reference

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