Skin & soft tissue tumours

Objectives:

1. classify skin tumors according to their cell of origin
2. Be able to take history of skin lesions and describe the warning signs and symptoms that you should look for.
3. Differentiate between the different types of epidermal and dermal neoplasm
4. Differentiate between the different types of cysts
5. Recognize the risk factors leading to skin malignancies and how to prevent them
6. Be able to distinguish between SCC and BCC and be familiar with the clinical presentation, diagnosis, and ways of treatment
7. Differentiate between the benign and malignant pigmented skin lesion and be familiar with the most common types
8. Be oriented with melanoma epidemiology, risk factors, diagnosis and treatment

Resources:

- Dr.nawarh's Slides and notes

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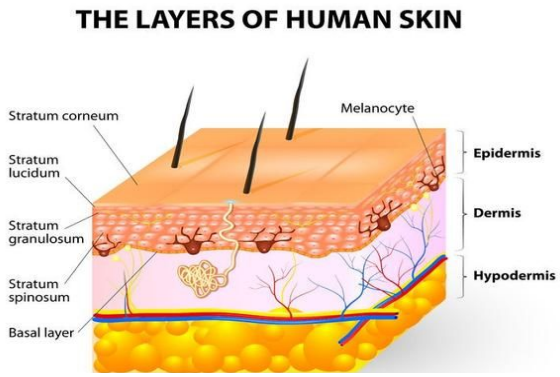
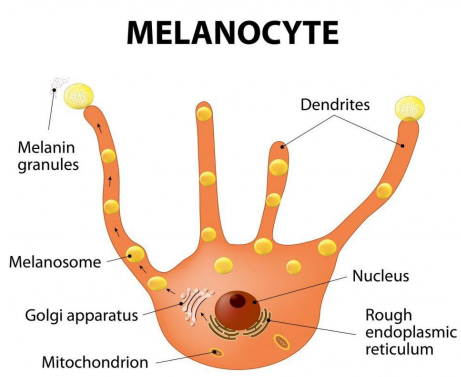
[Color index | Important | Notes | Extra | Editing file]

Once you stop learning
you start dying.

Basic review:





Skin Lesions

- Non pigmented
  - Benign
    - Epiderma origin
    - Dermal origin
    - Sebaceous gland origin
  - Malignant
    - Basal cell carcinoma
    - Squamous cell carcinoma
- pigmented
  - Benign
    - Epiderma origin
    - Dermal origin
  - Malignant
    - melanoma

There Are endless Types of lesions but I gave you what I thought r imp to you

الدكتوره قالت كان موجود warts بس انا شلتها لأنه تومتش عليكم

Benign Skin Lesions

Skin lesions with epidermal origin

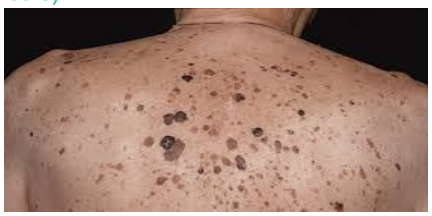
Seborrhoeic Keratosis
وَرَمٌ كولِيستيرُولِيّ

[One of the most common non-cancerous skin growths in older adults, usually appears as a brown, black or light tan growth on the face, chest, shoulders or back. They don't become cancerous and aren't related to sun exposure, but they can look like skin cancer. Painless and require no treatment. May be removed if irritated by clothing or for cosmetic reasons]

■Greasy دهني plaque like "brown to grey"

■Torso "trunk" of **elderly**, and sometimes in the face

■**Rx:**curettage[1] (shave it and remove the whole lesion,and the small wounds treated by antimicrobial till the area heals).



Actinic (solar) keratosis

[Characterized by small, single or multiple, firm warty spots on the face, back of the neck and hands, common in older, fair-skinned people who have been exposed to excessive sunlight. The scaly lesions drop off periodically to leave a shallow premalignant ulcer]

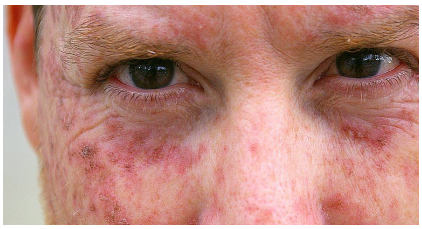
■Scaly crust متقشره erythematous area

■**Sun** exposed area of **elderly**

■1% progress to squamous cell carcinoma bc of severe skin damage.

^ so if the pt observes any changes in this area 'like ulceration, non healing wounds, or inflammation' →here u need to biopsy this area.

Rx: Freezing.



Keratoacanthoma
(molluscum sebaceum)

■Mainly in those >50 years of age.

■**Course of the lesion: [**initially pt will develop a **nodules** over weeks or months (4–6 week) then → the nodule will become bulge with area of **necrosis in the middle** (hemispherical nodule with a friable red centre crusted with keratin) → later on it will involute **'regress']** all of these will take along time "months".

■Seen usually in the **face**

■**Why it's worrying:**This lesion can be confused with squamous cancer because of its clinical Histology appearance that resemble squamous cell carcinoma حتى بالبيوبسي, but if u ask the pt about the course of this lesion ,u will know it's keratoacanthoma not SCC.**فأهم شيء نعتمد عليه هو الهيستوري**

■**Rx:** conservatively it will disappear by itself, مشكلتها تاخذ وقت فالمرضى يتأذون مومعقول يقعدون شهور بهالمنظر, so if the pt don't want to wait we excise it completely.

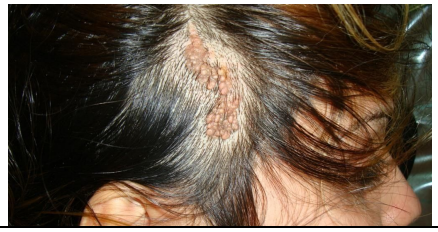
Sebaceous nevus of Jadassohn

■**What is it?** It's a congenital malformation 'child is born with it' ,the family who will bring the child يلاحظونها لما يمشطون شعره شكلها مو ظريف منظرها مزعج كلها صعدات ونزلات

■It will become even bigger in the puberty due to hormonal effect.

■**look at this pic below what do u see?** (irregular red pulgy surface شعر مافي حوالينها) if u put this pic in ur mind it gonna be easy to recall the features.

■**Rx:**even though it's completely a benign lesion, we prefer to remove it, لسببين نحب نشيلها :**cosmetic & the risk of transformation** [50% will transform into another sort of tumour either 'benign or malignant' ,most of them will become benign tumours, and the minority will be malignant نخاف منه حتى لو الاحتماليه ضئيلة]

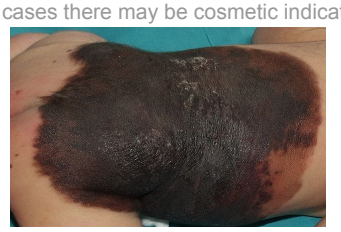


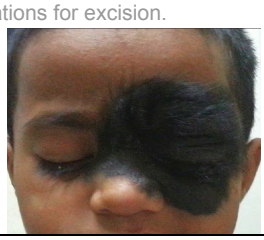
Congenital melanocytic Nevus

■**What is it?** It's pigmented lesion, if it's big in size 'more than 20 cm' and hairy ,we call it **[giant hairy nevus]**
Unlike the common mole, this lesion is present at birth. It can cover a large area, typically the bathing-trunk area and face.

■Risk for malignant melanoma 0.07%-2% either in that area or other area in the body. شينه لو شلناها او ماشلناها فيها فيها احتمالية تحولها لميلانوما خبيثه

■**Rx:** excise the whole skin tissue 'if it was a big lesion here we need several sessions to excise it(serial excision) +skin grafting'.Risk of malignant changes is small but such moles should be kept under observation, and in some cases there may be cosmetic indications for excision.





[1]in medical procedures, is the use of a curette (French, meaning scoop) to remove tissue by scraping or scooping.

Cyst

[mentioned with more details in "Superficial swelling" lecture]

Dermoid cyst

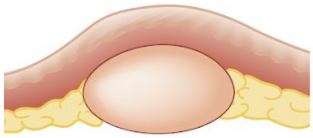
■**what is it?** it's a congenital condition, if u go back to the embryology in the process of face development once the face starts to fuse [in area of fusion when the maxillary, mandible & frontonasal يلتقون مع بعض, the **embryological epithelial tissues** get trapped and this will form cyst].

*the embryological epithelial tissue could be either ectoderm, mesoderm,or endoderm.

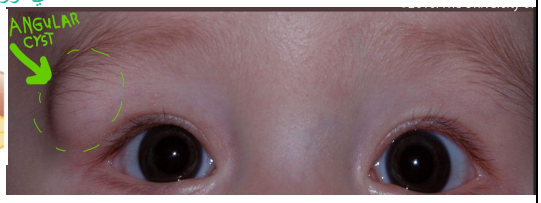
■Seen in any areas of fusion (face, base of the nose, forehead and the occiput), the pic below called **[angular cyst]**

■brain مكانها خطير وراها ال طيب ليش هالموضوع مهم؟!

■So if we decide to excise it, we should do CT before, to know if there's neural connection or not داخله بالبرين اخاف افتحها على عماي والقى نفسي, if there's neural connection ننادي نوروسيرجن معنا



Submuscular



Epidermoid(sebaceous) Cyst

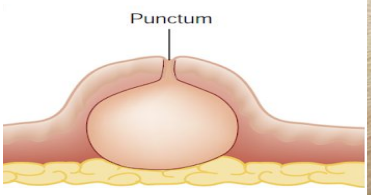
■Not congenital

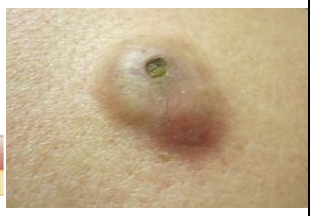
■Usually seen in the trunk, face.

■عادةً البيشنت يشوفها ويطنشها,متى يقرر يروح المستشفى؟ لمايصيرلها انفكش ويتغير لونها ولون الجلد الي حواليها.

■The cyst is covered by stratified squamous epithelium and filled with keratin secrations & sebum from sebaceous gland, which appear cheesy white with bad smell. May get **infected**.

■**Rx:** Excise the WHOLE capsule لانه لو بقاء جزء من الكابسول ممكن ترجع السيست مره ثانيه





Subcutaneous

"epidermis and dermis inside the subcutaneous layer"

Malignant Skin Lesions

Malignant nonpigmented skin lesions[BCC & SCC]:

- **Etiology of malignant nonpigmented skin lesion:** Radiation | Toxins | Immunosuppression | Genetic | Chronic wounds 'marjolin ulcer' leads to SCC,as a result of long standing irritation\inflammation | Premalignant condition.

Basal Cell Carcinoma

■**SLOW** growing, **LOCALLY** invading, **RARELY** metastasizes.

■Most common neoplasm in caucasians in the western world

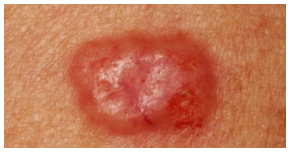
■85% after 40 of age

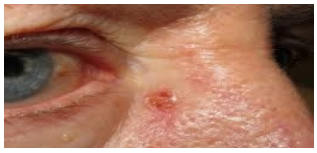
■80% in **SUN** exposed area 'like upper face and neck'

■It has different forms: nodule\ulcerative\pigmented

■**Treatment:**

- Surgical excision with SAFETY margin
- Moh's micrographic surgery: تخليني ما اشيل اكثر من الي احتاج if the lesion in critical cosmetic area "face" or the lesion margins are not well defined, we do moh's technique (it was discovered by a med student) it allows me to excise exactly what I need 'with minimum safety margin', we examine the skin layer under the microscope immediately after removing it.
- Radiation: preferred for elderly patients who aren't fit for surgery (have chronic illness :Afib, heart dis..etc), مانستخدم الراديشن للصغار عشان نخاف عليهم من خطر الأشعة والطفرات الي ممكن تسويها



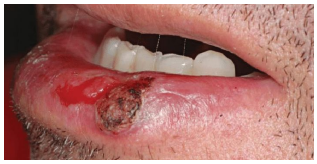


Cutaneous Squamous Cell Carcinoma

■**Additional risk factors :**

- Smoking
- human papillomavirus
- herpes simplex in genital area

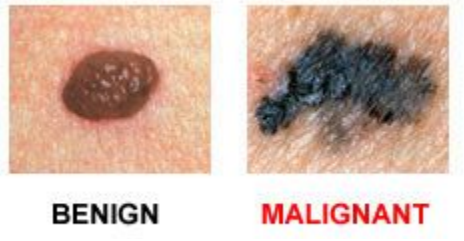
■**Rx:** wider excision bc it is more aggressive than BCC, if it's large lesion with deep involvement, we refer the pt to multidisciplinary team to **rule out any metastasis**, they do [CT scan, chest x ray, LFT, lymph nodes dissection]. Radiation can be done بس انا اركزلكم على الأشياء الي تهمنا بالسيرجري

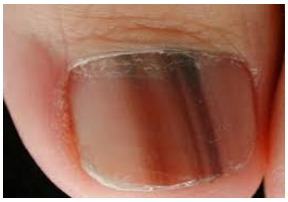


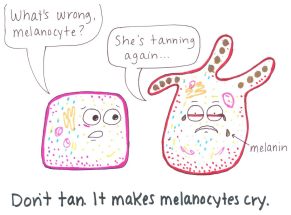
Malignant pigmented skin lesion [Malignant melanoma]:

- **Malignant melanoma Risk factors:** Premalignant lesions | Previous melanoma | Age | Race | Fitzpatrick type1 and type 2 [fair skin=low melanin] so having dark skin is protective | Sunburn and sunbed use [even one hx of sunburn] | Naevi e.g:giant hairy nevus & atypical melanocytic nevus syndrome (AKA Familial atypical dysplastic syndrome*), [overall any type of naevi r suspicious if they were more than 50].

  *a patient who has more than 50 nevi with FHx of melanoma, if you take a biopsy of the nevi ,you will find dysplasia.

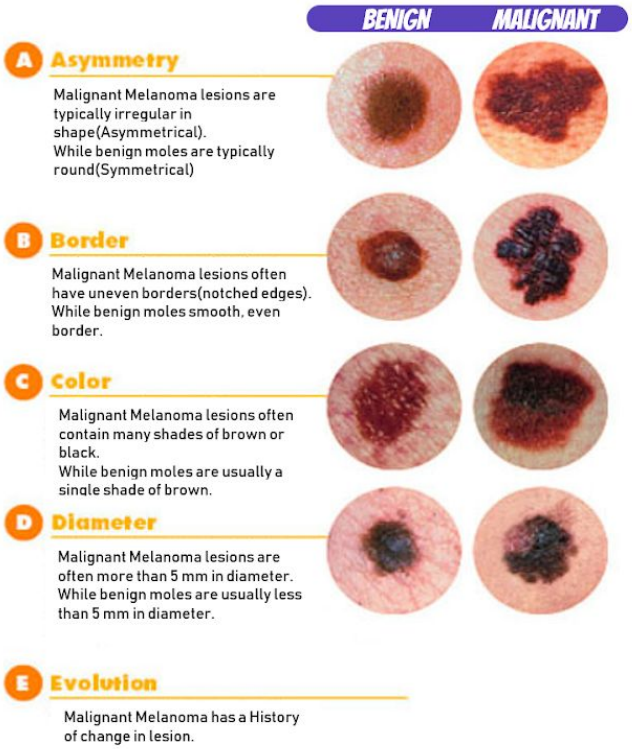






- **How to differentiate benign lesion from melanoma:** who knows might come in osce :o)

  اذا فتح لونها او زغر حجمُها مع الوقت فهذا شي مو زين changes in color



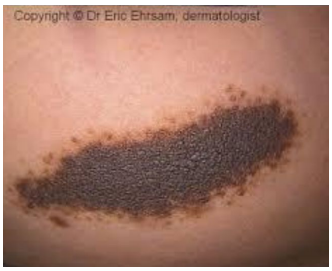
7 points checklist for assessing risk of melanoma

Suspect melanoma if there are 1 or more **major signs:**

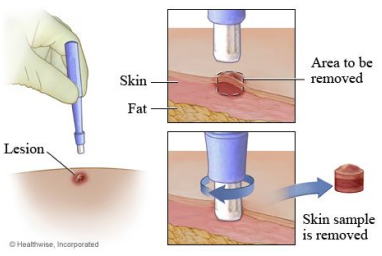
1. Change in size
2. Change in shape
3. Change in color

3 or 4 **minor signs** without a major sign can also indicate a need to biopsy suspicious moles:

4. Inflammation
5. Crusting or bleeding
6. Sensory change
7. Diameter (equal or more than 7)



A family brings to you their child with a suspicious lesion عمره سِنْتَين,how to approach this pt?
1)First of all, history :change in, color, size, other lesion in the body, family hx of melanoma..etc
2)investigations:if it's a small remove it as whole by excisional biopsy. كتريتمنت وديافنوزس مره وحده
But, if it's a large ومايصير اشيلها مره وحده فآخذ جزء منها either by incisional biopsy, or punch biopsy قطعة معدن زي السكين تقطع دوائر (see figure) Then send it to pathology.



[Here **Jwaher Alharbi** summarized skin lesions chapter from davidson, if u r interested check out the link]

[⊠for skin lesion examination check out the link]

Surgical Recall:

What are the most common skin cancers?1. Basal cell carcinoma (75%) - 2. Squamous cell carcinoma (20%) - 3. Melanoma (4%)
What is the most common fatal skin cancer? Melanoma

MELANOMA

What is it? Neoplastic disorder produced by malignant transformation of the melanocyte; melanocytes are derived from neural crest cells
Which patients are at greatest risk? White patients with blonde/red hair, fair skin, freckling, a history of blistering sunburns, blue/green eyes, actinic keratosis,
What are the three most common sites?1. Skin 2. Eyes 3. Anus (T ink: SEA Skin, Eyes, Anus)
What is the most common site in African Americans? Palms of the hands, soles of the feet (acral lentiginous melanoma)
What characteristics are suggestive of melanoma? Usually a pigmented lesion with an irregular border, irregular surface, or irregular coloration,Other clues: darkening of a pigmented lesion, development of pigmented satellite lesions, irregular margins or surface elevations, notching, recent or rapid enlargement, erosion or ulceration of surface, pruritus
What are the "ABCDs" of melanoma?Asymmetry_Border irregularity_Color variation_Diameter 6 mm and Dark lesion
What are the associated risk factors? Severe sunburn before age 18, giant congenital nevi, family history, race (White), ultraviolet radiation (sun), multiple dysplastic nevi
How does location di er in men and women? Men get more lesions on the trunk; women on the extremities
Which locations are unusual? Noncutaneous regions, such as mucous membranes of the vulva/vagina, anorectum, esophagus,& choroidal layer of the eye
What is the most common site of melanoma in men? Back (33%)
What is the most common site of melanoma in women?Legs (33%)
What are the four major histologic types?1. Super cial spreading_ 2. Lentigo maligna_ 3. Acral lentiginous_ 4. Nodular
Define the following terms:

- Super cial spreading melanoma: Occurs in both sun-exposed and non-exposed areas; most common of all melanomas (75%)
- Lentigo maligna melanoma:Malignant cells that are super cial, found usually in elderly patients on the head or neck Called "Hutchinson's freckle" if noninvasive Least aggressive type; very good prognosis Accounts for 10% of all melanomas
- Acral lentiginous melanoma:Occurs on the palms, soles, subungual areas, and mucous membranes Accounts for 5% of all melanomas(most common melanoma in African American patients; 50%)
- Nodular melanoma:Vertical growth predominates Lesions are usually dark Most aggressive type/worst prognosis Accounts for 15% of all melanomas
- Amelanotic melanoma: Melanoma from melanocytes but with obvious lack of pigment

What is the most common type of melanoma? Superficial spreading (75%) (Think:SUPERficial SUPERior)
What type of melanoma arises in Hutchinson's freckle? Lentigo maligna melanoma
What is Hutchinson's freckle? Lentigo maligna melanoma in the radial growth phase without vertical extension (noninvasive); usually occurs on the faces of elderly women

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SQUAMOUS CELL CARCINOMA

What is it? Carcinoma arising from epidermal cells
What are the most common sites?Head, neck, and hands
What are the risk factors? Sun exposure, pale skin, chronic inflammatory process, immunosuppression, xeroderma pigmentosum, arsenic
What is a precursor skin lesion? Actinic keratosis
What are the signs/symptoms? Raised, slightly pigmented skin lesion;ulceration/exudate; chronic scab; itching
How is the diagnosis made? (Small lesion—excisional biopsy)-(Large lesions—incisional biopsy)
What is the treatment? Small lesion (, <1 cm): Excise with 0.5-cm margin
Large lesion (>1 cm): Resect with 1- to 2-cm margins of normal tissue (large lesions may require skin graft / flap)
What is the dreaded sign of metastasis?Palpable lymph nodes (remove involved lymph node basin)
What is Marjolin's ulcer? Squamous cell carcinoma that arises in an area of chronic inflammation (e.g., chronic fistula, burn wound, osteomyelitis)
What is the prognosis? Excellent if totally excised (95% cure rate); most patients with positive lymph node metastasis eventually die from metastatic disease
What is the treatment for solitary metastasis? surgical resection

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BASAL CELL CARCINOMA

What is it? Carcinoma arising in the germinating basal cell layer of epithelial cells
What are the risk factors? Sun exposure, fair skin, radiation, chronic dermatitis, xeroderma pigmentosum
What are the most common sites?Head, neck, and hands
What are the signs/symptoms? Slow-growing skin mass (chronic,scaly); scab; ulceration, with or without pigmentation, often described as "pearllike"
How is the diagnosis made? Excisional or incisional biopsy
What is the treatment? Resection with 5-mm margins (2-mm margin in cosmetically sensitive areas)
What is the risk of metastasis? Very low (recur locally)

MISCELLANEOUS SKIN LESIONS

What is an Epidermal Inclusion Cyst? EIC Benign subcutaneous cyst filled with epidermal cells (should be removed surgically) filled with waxy material; no clinical difference from a sebaceous cyst
What is a sebaceous cyst? Benign subcutaneous cyst filled with sebum (waxy, paste-like substance)from a blocked sweat gland (should be removed with a small area of skin that includes the blocked gland); may become infected; much less common than EIC
What is actinic keratosis? Premalignant skin lesion from sun exposure; seen as a scaly skin lesion (surgical removal eliminates the 20% risk of cancer transformation)
What is seborrheic keratosis? Benign pigmented lesion in the elderly; observe or treat by excision (especially if there is any question of melanoma), curettage, or topical agents
What is Bowen's disease of the skin? Squamous carcinoma in situ (should be removed or destroyed, thereby removing the problem)
What is "Mohs" surgery? Mohs technique or surgery: repeats thin excision until margins are clear by microscopic review (named after Dr. Mohs)—used to minimize collateral skin excision (e.g., on the face)

MCQS

1)A 25 years old patient presented to the surgical clinic complaining of a painless swelling in the back for 3 years and no other swelling. Examination revealed a spherical soft lump which is attached to the skin and a black spot at its center. Which of the following is the most likely diagnosis?

A. Lipoma
B. Sebaceous cyst
C. Fibroma
D. Branchial cyst

2)A patient with scar following a burn presented later with a malignant tumor in the same area. What is the most likely type of cancer she developed?

A. Squamous cell carcinoma
B. Basal cell carcinoma
C. Melanoma
D. Fibroma

3)A 40 years old male patient complaining of a painless swelling over his left forearm, it was there for many years,. It was very slowly increasing in size; the examination revealed a 3 cm swelling, not attached to the skin or underlying muscle and was freely mobile with positive slipping sign. Which of the following is the most likely diagnosis ?

A. Haemangioma
B. Haematoma
C. Neurofibroma
D. lipoma

4)A 50-year-old male complaining of an ulcer in medial canthus for 4 years, what is most likely diagnosis?

A. Squamous cell carcinoma
B. Basal cell carcinoma
C. Melanoma
D. Sarcoma

5)A 17 years old girl complaining of a small lump at the dorsum of the right hand, she has mild discomfort when she is writing and the examination revealed a 1cm spherical, firm swelling that moves more in the transverse direction and becomes more prominent when the wrist is flexed.
Which of the following is the most likely diagnosis?

A. Dermoid cyst
B. Branchial cyst
C. Ganglion
D. Lipoma

6)A 14 years old boy complaining of a 2 cm painless, cystic swelling lateral to the left eyebrow. It was first noticed 5 years ago and was gradually increasing in size. Which of the following is the most likely diagnosis?

A. Sebaceous cyst.
B. Angular dermoid .
C. Lipoma.
D. Hemangioma .

7)A newborn has a reddish raised mass on the cheek which is growing rapidly for the past 5 months. Which of the following is the most likely diagnosis ?

A. Capillary telangiectasia
B. Haemangioma
C. Port wine stain
D. AV fistula

Answers:

1- B | 2- A | 3- D | 4-B | 5-C | 6- B |7-B

Don't panic the dr.stated that she has changed the lecture contents completely ,from last years خففتها

Q7)this typical scenario for involuting hemangioma: present at birth or appears 2-3 weeks after birth→Grows rapidly 4-6 months→Spontaneous involution complete 5-7 yr