



Superficial swellings

Objectives:

Not given

Resources:

- 435 Slides
- Davidson's

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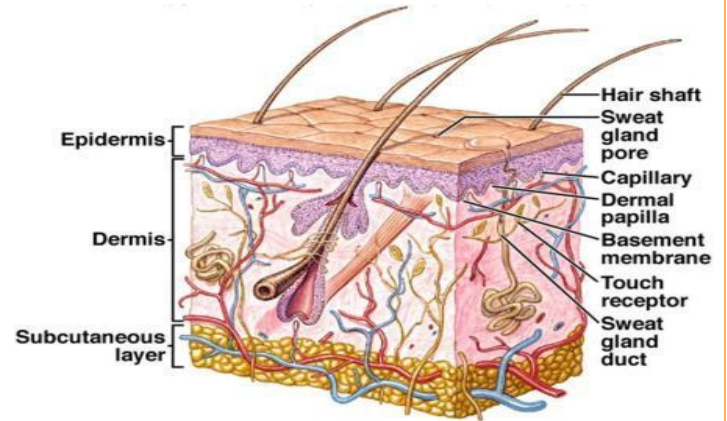
[[Color index](#) | [Important](#) | [Notes](#) | [Extra](#)]
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Once you stop learning
you start dying.

Basic review:

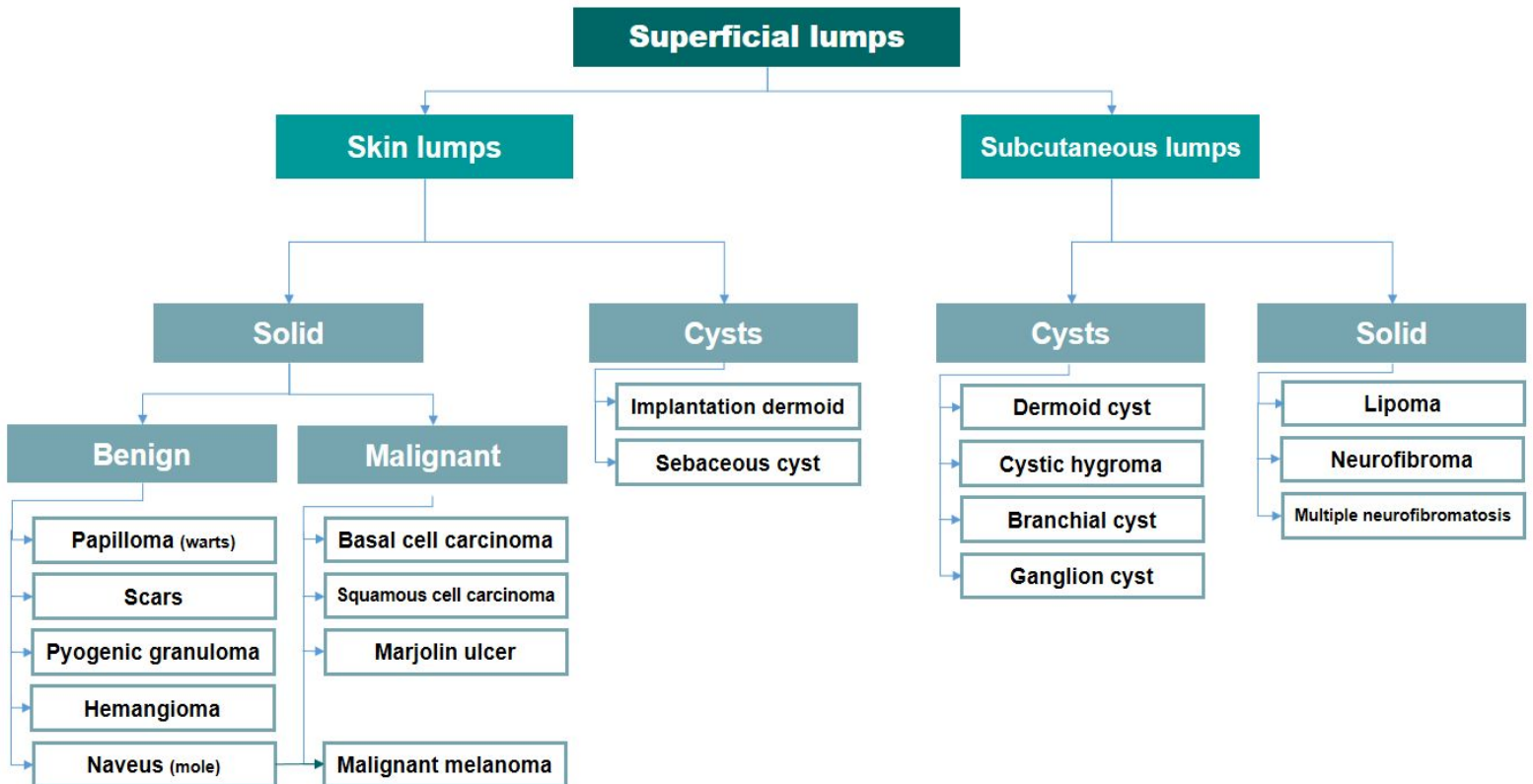
Skin anatomy :

- Epidermis : openings of glands (**sweat/sebaceous**)
- Papillary dermis: basal cell layer
- Dermis: contains sweat & sebaceous glands





Introduction:

- Skin is the largest organ in the body.
- Superficial swellings are swelling you can see/feel on the surface, most of them are on the skin or subcutaneous tissue.







Benign lumps

❖ Papilloma (wart) :

What is it?	<ul style="list-style-type: none"> - Fingers -and hands-like projection of <u>all</u> skin layers. - Most common benign tumor of the skin. - usually infective by papilloma virus. 	
Types	<p>1-Pedunculated (has a stalk and mobile).</p> 	<p>2-Sessile (broad base).</p> 
Treatment:	<ul style="list-style-type: none"> • If small or multiple → Cauterization¹ (electrical or chemical) . • If large → surgical Excision. 	



❖ Pyogenic granuloma: pyogenic = infection , granuloma = granulation tissue

What is it?	<p>Wound normally heal by granulation tissue from the floor then the the epithelium comes from the sides and covers the wound, if there is failure of epithelialization and the granulation tissue grows faster it well present as a small swelling or lump.</p> <ul style="list-style-type: none"> - Excessive granulation tissue growth in ulcers. More common in ulcers 			
Clinical features	<ul style="list-style-type: none"> - Firm, bright , red selling that bleeds on touch. composed of new vascular formations which bleeds easily - recurrent bleeding when exposed to Trauma. 			
Treatment	<ul style="list-style-type: none"> • If Small → cauterization Silver nitrate cauterization • If Large → excision 			
examples				

¹ By dermatologist.


❖ Scars :

- Fibrous tissue proliferation following trauma, surgery, infection.
- It is usually flat.

types	Hypertrophic scar	Keloids
What is it?	<ul style="list-style-type: none"> - excessive fibrous tissue in a scar. - This is an exaggeration of the normal maturation process. - Such wounds are very raised but never continue to worsen after 6 months 	<ul style="list-style-type: none"> - Excessive fibrous and collagen tissue. - These are similar to hypertrophic scars except that they continue to enlarge after 6 months and invade neighbouring uninvolved skin.
Gross Features	<ul style="list-style-type: none"> - confined to the scar. - NO neovascularization. - Post operative wound infection is an important factor 	<ul style="list-style-type: none"> - usually extends beyond the original incision. - There is neovascular proliferation in a scar. - They are most likely to occur across the upper chest shoulders and earlobes.
Clinical features	<ul style="list-style-type: none"> - it is a raised , non tender swelling with , No itching . - non progressive. - it may regress gradually in six months it will become flat , dark pigmented in color. - does not usually recur after excision. 	<ul style="list-style-type: none"> - Initially raised , pink , tender , itchy and may ulcerate. - Usually Progressive act like locally malignant tissue. - More common in dark skinned people. - Acquired v/s spontaneous
Treatment	Silicone gel and steroid injections.	<ul style="list-style-type: none"> - Injection (hyaluronidase , steroids (Cortisone) etc.) To reduce the inflammation and the itching - Excision² & grafting .
example		<p>If a pt is a keloid former he will develop keloid even with small punctures like ear piercing and vaccination .</p> 

² endo scar excision , you leave about 1 milliliter in each surrounding tissue then you excise from within , otherwise it will again go beyond the scar

❖ **Haemangioma:** Previously known as a tumor but there aren't tumor

what?	- It is a developmental malformation of blood vessels rather than a tumour
where?	- It <u>commonly</u> occurs in skin & subcutaneous tissue - but it <u>could be in deep</u> organs (e.g lips , tongue ,liver ,brain, <u>spleen, intestines, uterus</u>)
types:	<ul style="list-style-type: none"> • Capillary • Cavernous • Arterial
examples	

Malignant lumps

Basically there are 3 malignancy of the skin



1. Basal Cell Carcinoma
2. Squamous cell carcinoma
3. Malignant melanoma



FACIAL DANGER ZONES

1. Gabella
2. Temple
3. Nose
4. Perioral Area (Lips)
5. Infraorbital Region
6. Nasolabial Fold

Types	Basal cell carcinoma (BCC)	Squamous cell carcinoma (Epithelioma)
what?	- Ulcerated tumour of basal cell layer of skin.	- Arise from squamous cell layer of skin or mucous membrane, It may arise from metaplasia of columnar epithelium due to chronic irritation <u>that leads to metaplasia.</u>
Common in:	- Middle aged white tropical males (Australia) <u>Common in areas that exposed to the sunlight.</u> - Common in face. <u>in the dangerous zone (Between the ears and the nose).</u>	- It can occur anywhere in the body. (gallbladder, bronchus, stomach .etc.) - More common in males than females .

	Basal cell carcinoma (BCC)	Squamous cell carcinoma (Epithelioma)
Clinical features	<ul style="list-style-type: none"> - low grade and slowly growing tumour (years) some call it locally malignant. - It usually not metastasize³. - Inverted edges (Rolled-in) with attempts of healing. Because it's slowly growing, epithelium starts to grow at the sides to heal. - floor shows an unhealthy granulation with a scab. - The base is indurated and may be fixed to bone. - spreads locally (usually NO L.N metastases). 	<ul style="list-style-type: none"> - More malignant/aggressive and rapidly growing than BCC. - Everted edges (rolled out) due to its fast growing - Locally spread may also spread to L.N, and blood. - It commonly develops in an area of epithelial hyperplasia or keratosis.
treatment	Local excision +/- radiotherapy	If there is no metastases → Surgery with Radiotherapy.
examples	 <p>Inverted edges</p>	 <p>Everted edge with necrosis in the center</p>

❖ Marjolin ulcer:

what?	<ul style="list-style-type: none"> - This is a malignancy that develops in a chronic inflamed non-healing scar (burn scar) - It is a low grade (less malignant) squamous cell carcinoma arising in chronically inflamed ulcers or scars. (normally scars are painless because the nerves are destroyed, but in case of Marjolin ulcer the scar will be painful). If the pt has an old scar then it started to have pain, irritation, itching and ulceration suspect marjolin ulcer.
Treatment	Surgery with Radiotherapy same treatment as SCC ⁴
examples	

³ possibly because the size of the cell is larger than the size of the lymphatics through which metastases take place.

⁴ Squamous cell carcinoma

❖ Naevus (mole):

- A localised **cutaneous** malformations.
- Includes moles & birthmarks.
- They may present at birth or even later.

Types:

- Junctional
- Intradermal
- Compound
- Blue naevus
- Juvenile
- Freckle



Evidences of malignant change To malignant melanoma: **very important**


- Increase in size
- change to irregular edge
- change in thickness
- change in colour
- change in surrounding tissue
- symptoms e.g: itching, bleeding discharge
- Lymphadenopathy
- microscopic evidence

❖ Malignant Melanoma: most aggressive of all skin malignancies

Commonly in:	<ul style="list-style-type: none"> - More common in females with a higher incidence on the legs. - Affected fair skinned people and are the most lethal of all skin cancer.
Features	<ul style="list-style-type: none"> - Invasion of the dermis by proliferating melanocytes with large nuclei, prominent nuclei and frequent mitosis - It is rare but most rapidly/aggressive infiltrating skin tumour. - De-novo (10%) , Pre-existing naevus (90 %). - LN metastasis
metastasis	<ul style="list-style-type: none"> - Local & satellite nodules. - Lymphatic. - Blood to liver, lung, bone etc ... systemic
examples	<div style="display: flex; justify-content: space-around;">  </div> <p style="text-align: right; margin-right: 100px;">Satellite nodule</p> <p style="text-align: center; color: teal;">malignant melanoma of the foot → metastasized to the groin lymph nodes → excision of the lymph node (You will find melanin in the LN)</p> <div style="display: flex; justify-content: flex-end; margin-top: 20px;">  </div>

Skin Cysts

❖ **Implantation Dermoid** : due to the implantation of the ectoderm **inside/underneath** the skin

What?	- it is a post traumatic dermoid.
Commonly in	Commonly in fingers and hands of farmers, taylor's. And barbers . (Common in people who are prone to minor trumas)
features	<ul style="list-style-type: none"> - Tense , may be hard tender swelling. - Attached to skin which may be scarred. - Contains desquamated epithelial cells. - pain and ulceration may occur following repeated trauma.
Treatment	Excision is curative. (will not recur after excision)
examples	 <p style="text-align: right;">Dermoid.</p>

❖ **Sebaceous Cyst**: irritation cyst

What?	<p>Sebaceous gland has a duct that opens to the skin (punctum) , when blocked it will retain the secretion called sebum (paste like)</p> <p>Common dermal swelling covered by epidermis.</p>
Commonly in	<ul style="list-style-type: none"> - Commonly in scalp, face, back, scrotum and vulva - never in palm & sole (does not have sebaceous gland) <p>So any swelling in the dorsum or ulnar aspect of the hand, you never mention sebaceous cyst as a ddx</p>
Clinical features	<ul style="list-style-type: none"> - Spherical, cystic or tense swelling, attached to skin with punctum that may discharge sebum upon squeezing. punctum= Opening of the duct, small depression at the center of the cyst, blackish to deep blue, it is diagnostic for Sebaceous Cyst - They have thin wall of flattened epidermal cells and contain keratin . - They result from inflammation in pilosebaceous unit. - If infection supervenes the cyst become hot,red and painful. - It is a retention cyst due to blockage of its duct. - Lined by squamous epithelium and contains sebum and desquamated epithelium
N.B.	<ul style="list-style-type: none"> ● Indentation and fluctuation tests may be positive. ● But transillumination test is negative. ● Usually asymptomatic but there might be some complication

❖ Sebaceous Cyst: (cont...)

complications	<ul style="list-style-type: none"> • Cosmetic • Infection • Ulceration • Cock peculiar tumour (granuloma due to ulceration) • Sebaceous Horn (inspissated secretion sebum) very rare
Treatment	<p>- uninfected cyst → Excision.</p> <p>- infected cyst → Drainage followed by excision. Like any other abscess</p> <p>In pts with infected cysts after excision and drainage, we wait for few weeks (so the inflammation will subside) and excise the whole cyst and its capsule</p>
examples	



Sebaceous Horn



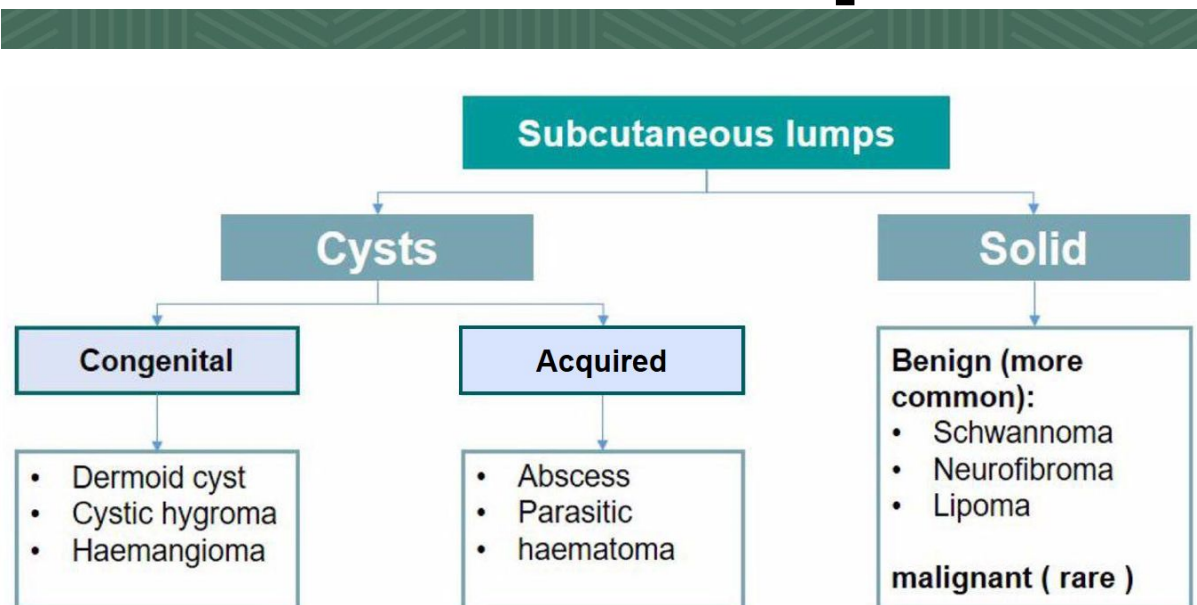
Infected sebaceous cyst



Sebaceous cyst excision



Subcutaneous lumps



❖ **Dermoid cysts:** The ectoderm is buried inside the mesoderm during the embryonic life

Clinically 4 varieties:

Sequestration dermoid (congenital)	Implantation dermoid (acquired)	Tubulo-dermoid (congenital)	Terato-dermoid (congenital)
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Sequestration dermoid:

What?	-It is a true congenital cyst. -Ectodermal tissue buried in mesoderm forming a cyst lined by squamous epith. and contains paste-like desquamated epith.
Commonly in:	Common at lines of Embryonic fusion sites: <ul style="list-style-type: none"> • Midline: neck & root of nose. • Scalp. • Inner or outer angles of eyes.
Clinical features	<ul style="list-style-type: none"> • Painless, spherical, cystic mass. • Appears in childhood or adults. • Grows slowly • Smooth surface. • Not attached to skin unlike seb. cyst • No punctum unlike seb. cyst. • Not compressible unlike meningocele. If the swelling in this area is compressible (empties when we pressing) that means its connected to the meninges like in meningocele • Bone indentation (scalp) due to chronic pressure • Transillumination test is negative. because it contains a paste like material not clear fluid
complications	Infection.
Treatment	- If not infected → excision. - Infected → excision and drainage.



Occipital dermoids



nasal root dermoid



forehead dermoid



External angular dermoid



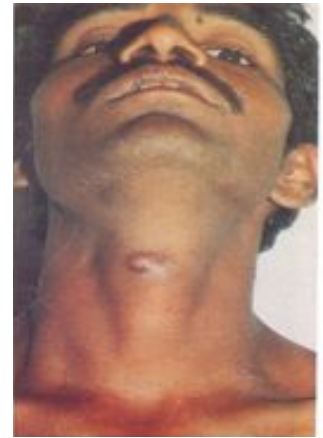
Submental dermoid



Infected dermoid

Tubulo-dermoid:

- Cystic swelling arising from the **non-obliterated** part of congenital duct or tube which fills up by secretions of lining epithelium.
- Examples :
 - **Thyroglossal cyst** (remnant of thyroglossal duct).
 - Post-anal dermoid (remnant of neuro-enteric canal).
 - Epindymal cyst in brain (rem. of neuro-ectoderm canal).



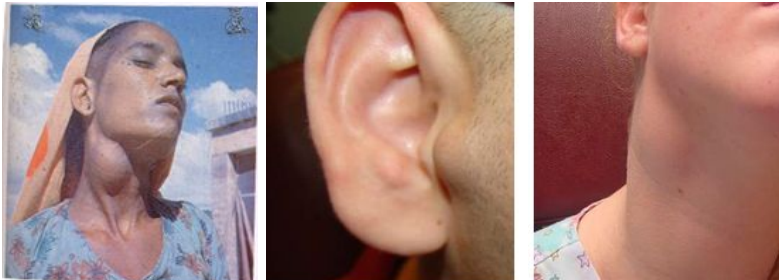
Teratomatous dermoid: Usually in deep organs.

- Cystic swelling arising from the totipotent cells with ectodermal preponderance.
 - Ovary: Ovarian cyst.
 - Testes: Teratoma
 - Mediastinum.
 - Reteroperitoneum.
 - Pre-sacral area
- They usually contain derivatives of mesoderm (cartilage, bone, hair, cheesy material).

❖ Cystic hygroma

What?	A <u>congenital</u> malformation affecting lymphatic channels. The lymphatic vessels are not communicated with the main lymphatic channel
Commonly in	<ul style="list-style-type: none"> ● Neck ● Axilla ● Groin ● Mediastinum ● Tongue
Clinical features	<ul style="list-style-type: none"> - appears early, multilocular, filled with clear fluid (trans-illumination +ve). - lined by columnar epith. - Sometimes it's discovered in the antenatal follow up by ultrasound (its an indication for C-section)
Examples	

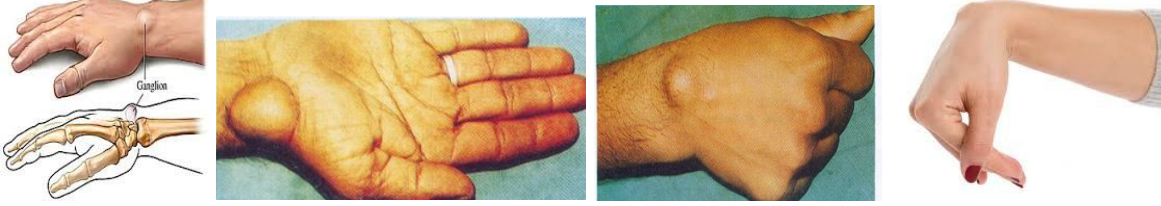

❖ Branchial cyst:

What?	- A <u>congenital</u> cyst in persistent cervical sinus Below angle of mandible or behind mid s.mastoid muscle.
Clinical features	- Tense ,distinct edges, +ve fluctuation and -ve transillumination . - Contains cholesterol crystals (diagnostic).
DDx	<ul style="list-style-type: none"> ● cold abscess. ● dermoid cyst . ● plunging rannula. ● cystic hygroma. ● carotid body tumour. ● lymph node. ● sub.mand.salivary gland.
Examples	

❖ Ganglion cyst: Due to degeneration of synovial membrane of tendons

What?	<ul style="list-style-type: none"> - It's a cystic swelling of synovial membrane of tendon or capsule in small joints. - myxomatous degeneration. - Two types: ganglion arising from the synovial membrane of tendon , ganglion arising from the capsule of small joints *If arising from synovial membrane the treatment is easy , just excision , but if arising from the capsule then you have to excise the capsule of that joint
Commonly in	<ul style="list-style-type: none"> - dorsum of wrist. - dorsum of foot and ankle. - palmar aspect of wrist & fingers.
Clinical features	<ul style="list-style-type: none"> ● may be communicating. ● Slowly growing lump. ● Common in females. ● Spherical, firm, cystic swelling. ● Mobile across tendon axis but limited along longitudinal axis. ● Transillumination test +ve (it contains gellatanuis fluid) ● More obvious when you put that tendon on action ,clenching the hand or dorsiflex the hand the swelling will be more prominent and more fixed (diagnostic)
Treatment	<ul style="list-style-type: none"> ● Asymptomatic → reassurance. ● Symptomatic → aspiration or excision.

❖ Ganglion cyst (cont.):


<p>Examples</p>			
			
	<p>transillumination test</p>	<p>aspiration of ganglion</p>	<p>ganglion excision</p>

❖ Lipoma:

<p>What?</p>	<ul style="list-style-type: none"> - It is a benign tumour of adipose tissue. - The most common benign tumour in subcutaneous tissue.
<p>Commonly in</p>	<p>Common in trunk, neck and limbs</p>
<p>Notes</p>	<ul style="list-style-type: none"> • Types: plays an important part in the management (see below) <ul style="list-style-type: none"> ◦ Encapsulated (localized) ◦ Diffuse. • May be mixed e.g: angioliipoma (mixed with blood vessels), fibrolipoma, neurolipoma (mixed with nerves), haemangio-lipoma. • Could be multiple (Dercums disease) • Typical features are there soft fluctuant feel (pseudo fluctuation), there lobulation and the free mobility of overlying skin.
<p>Clinical features</p>	<ul style="list-style-type: none"> • Painless, non tender, soft and lobulated lump. Due to of the internal septum • Well defined edges and skin is free. • Slipping sign positive. When you press it from one end it will slips away. • Freely mobile. • Fluctuation test is negative. Sometimes there is pseudo fluctuation • Transillumination test is negative.
<p>complications</p>	<ul style="list-style-type: none"> • Necrosis • Calcification • Haemorrhage • Infection • Rarely transform into liposarcoma


Diagnosis	FNA ⁵ .
Treatment	<ul style="list-style-type: none"> • Small asymptomatic lipoma → reassurance • Symptomatic lipoma : <ul style="list-style-type: none"> ○ Encapsulated and localized → surgical excision ○ Diffuse → liposuction.
Examples	 <p style="text-align: center;">multiple lipomatosis (Dercum's disease) ulcerated lipoma One of the indications for surgery</p>

Liposarcoma:





What?	Is the most common sarcoma of middle age.
Commonly in	Common in retroperitoneum , thigh and back .
Clinical features	<ul style="list-style-type: none"> • Rapid growth (sudden growth) • Warm and vascular • Dilated veins • Restriction of mobility • Skin fixation and fungation • Hematogenous spread to lungs
Treatment	Wide surgical excision is recommended but can be difficult for retroperitoneal tumors postoperative radiotherapy and chemotherapy are advice.
examples	 <p style="text-align: center;">Gluteal liposarcoma</p>

⁵ Fine needle aspiration

Neurofibroma:

What?	Tumour of nerve connective tissue (not neurons If it arises from the nerve axons then it is called schwannoma)	
Types	<ul style="list-style-type: none"> ● Localised or solitary NF. most common ● Generalized diffused (Von-Recklinghausen's disease) ● Plexiform NF ● Elephantiasis NF ● Cutaneous NF 	
Clinical features	<ul style="list-style-type: none"> ● Encapsulated, rounded or elliptical swelling. ● Smooth, firm with well defined edges. ● Associated with dark pigmentation which is called café au lait (diagnostic) ● Tenderness and paresthesia may be present. ● Mobility may be diminished along nerve-axis. 	
Treatment	excision.	
Notes	<ul style="list-style-type: none"> ● Present at birth or becomes apparent in early childhood. ● It can cause bony deformities particularly of the spine. ● An increase in size or the appearance of new swelling suggests malignant change. 	
example	If cafe-au-lait spot there its diagnostic, if not doesn't rule out	

❖ Multiple neurofibromatosis (V-R disease):

What?	Multiple tumors- with Cafe-au-lait spots .			
Commonly in	More common in males than females.			
Features	<ul style="list-style-type: none"> ● Inherited as an autosomal dominant disease. ● Peripheral and cranial nerves may be affected. ● May be associated with other tumors (eg, endocrine). Pheochromocytoma, parathyroid tumor, pancreatic tumor 			
Treatment	no treatment			
Examples				

MCQS

1- A 25 years old patient presented to the surgical clinic complaining of a painless swelling at the front of the left thigh for 3 years and no other swellings . Examination revealed a spherical, soft ,lobulated , non tender lump which is freely mobile in subcutaneous tissue.

The most likely diagnosis is:

- A. lipoma
- B. sebaceous cyst
- C. fibroma
- D. branchial cyst

2- A 16 years old girl presented to the clinic with a 2cm painless, cystic swelling lateral to the left eyebrow.

it was first noticed 5 years ago and was gradually increasing in size.

The most likely diagnosis is ?

- A. Haemangioma.
- B. Abscess.
- C. External angular dermoid
- D. Ganglion

3- A 22-year-old healthy African-American woman presents with a recurrent growth on her right thigh. She has a childhood history of a third-degree scald burn to the same area that did not require skin grafting. The growth was completely removed 2 years ago. On physical examination there is a 5 cm × 2 cm, raised, irregularly shaped purple lesion with a smooth top.

Which of the following is the most likely diagnosis ?

- A- Malignant melanoma
- B- Squamous cell carcinoma
- C- Kaposi sarcoma
- D- Keloid

4- The most common midline single neck swelling is:

- A- Pharyngeal pouch
- B- Dermoid cyst
- C- Laryngocele
- D- Thyroglossal cyst

Answers:

- 1- A
- 2- C
- 3- D
- 4- D