

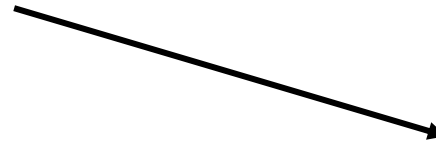
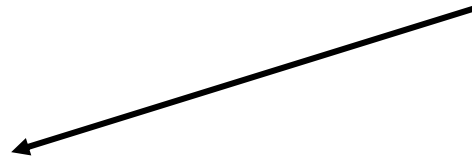
Some benign tumors

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Professor of Pathology
University of Kelaniya

Benign tumors

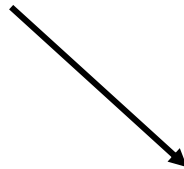
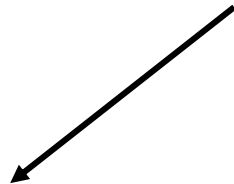
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graph TD; A[Benign tumors] --> B[Epithelial tumors]; A --> C[Connective tissue tumors]; B --> D[Papilloma]; B --> E[Adenoma]; C --> F[Fibrous tissue]; C --> G[Smooth muscle]; C --> H[Nerve tissue]; C --> I[Adipose tissue];
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A hierarchical flowchart showing the classification of benign tumors. The root node is 'Benign tumors', which branches into 'Epithelial tumors' and 'Connective tissue tumors'. 'Epithelial tumors' further branches into 'Papilloma' and 'Adenoma'. 'Connective tissue tumors' leads to a vertical list of four types: 'Fibrous tissue', 'Smooth muscle', 'Nerve tissue', and 'Adipose tissue'.



Epithelial tumors

Connective tissue tumors



Papilloma

Adenoma

Fibrous tissue

Smooth muscle

Nerve tissue

Adipose tissue

Epithelial tumours

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graph TD; A[Epithelial tumours] --> B[Papillomata]; A --> C[Adenomata]; B --> D[Squamous cell<br/>Transitional cell<br/>Columnar cell]; C --> E[Glandular tissue<br/>Eg: Breast, prostate<br/>colon.]; D --> F[Variants : Papillary cystadenoma, Eg: Breast, GB]; E --> F;
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Papillomata



Squamous cell
Transitional cell
Columnar cell

Adenomata



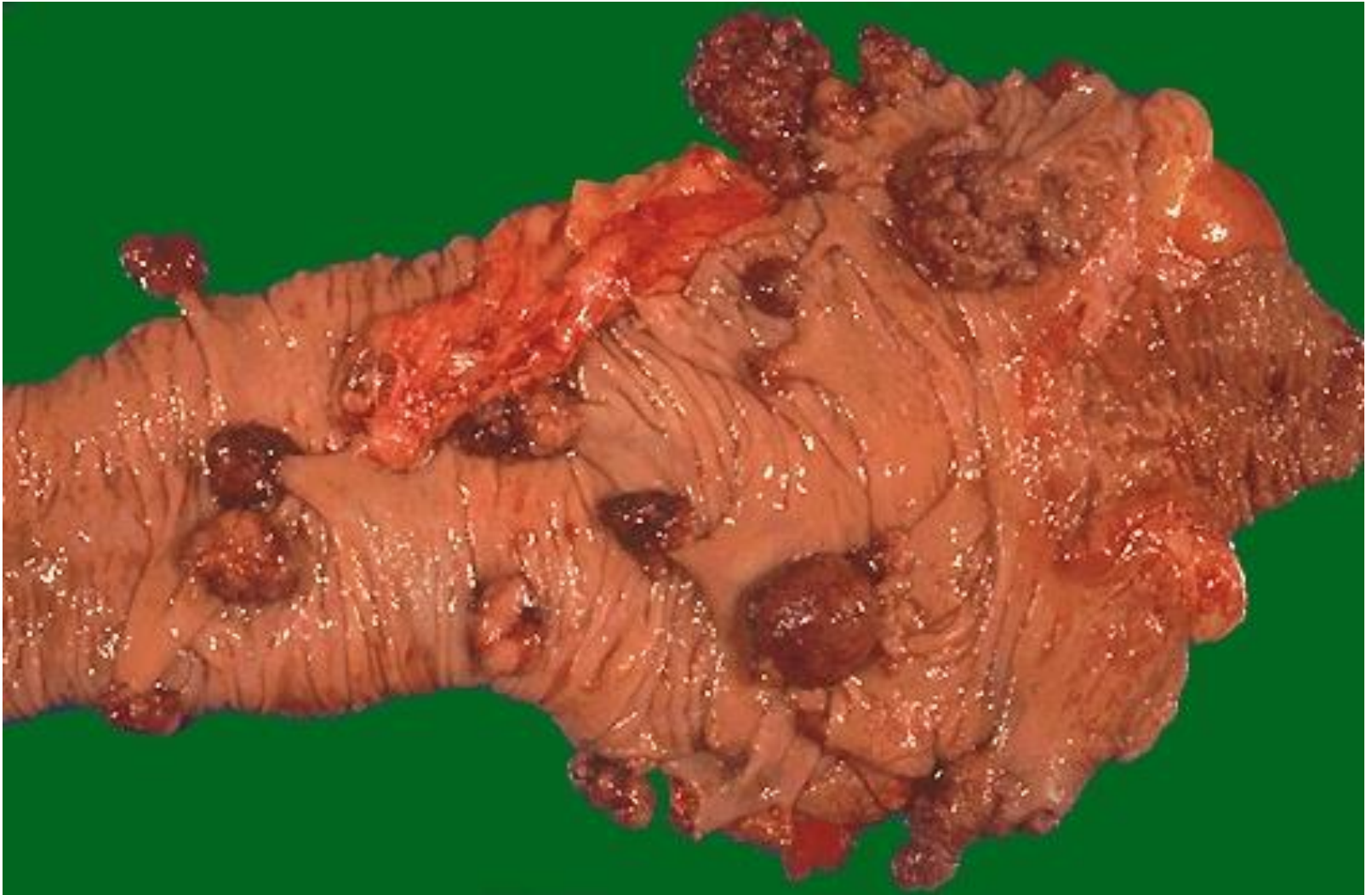
Glandular tissue
Eg: Breast, prostate
colon.

Variants : Papillary cystadenoma, Eg: Breast, GB

Papillomata (polyps)

- Benign tumours of an epithelial surface which appears elevated, warty a finger-like projection.
- Macroscopically
 - Sessile
 - Pedunculated

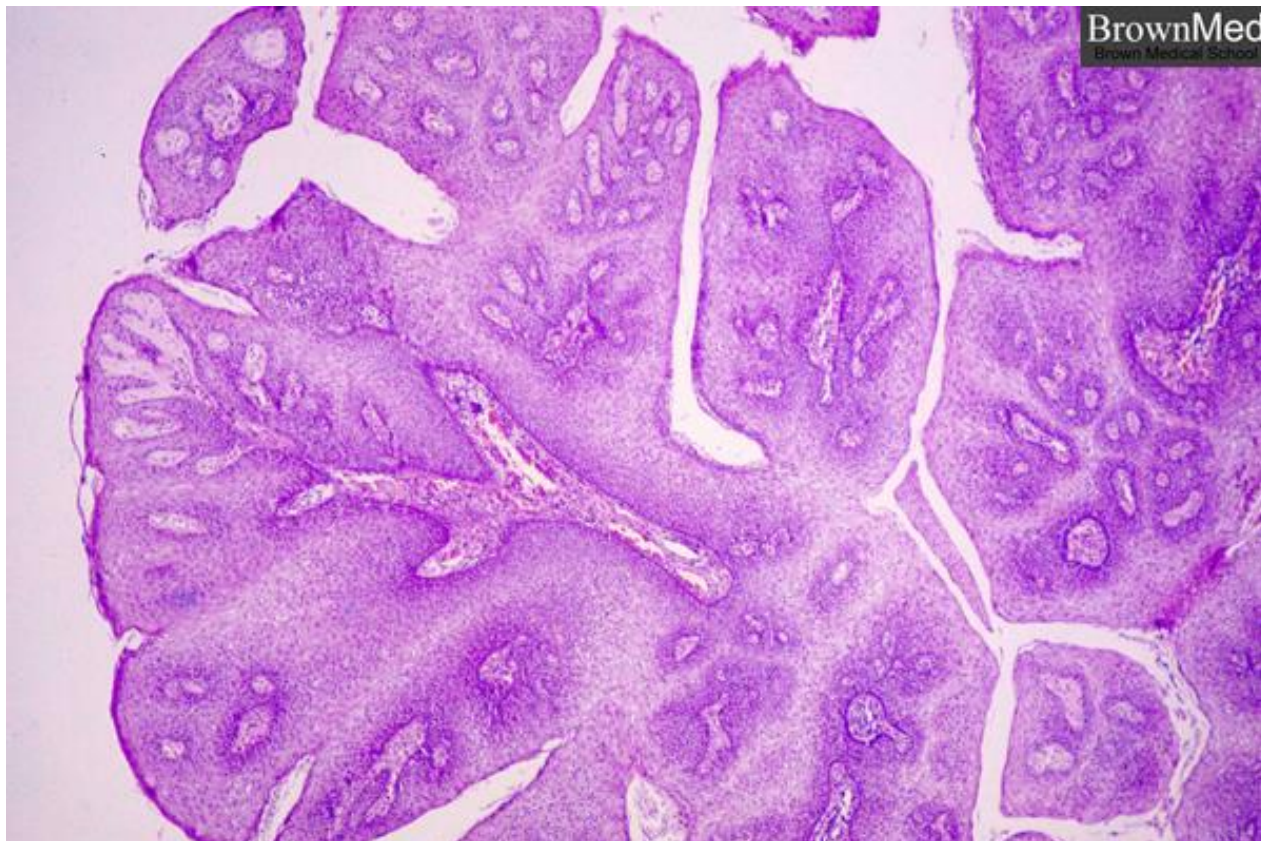
Polyps in the colon



Papillomata

- Columnar cell papilloma - Colon
- (But is referred to as Tubular, villous , tubulovillous polyps/adenomatous polyps)
- Transitional cell papilloma - Bladder
- Squamous papilloma - Skin
 - Verruca vulgaris)
 - Epithelial naevus) heterogenous group/.
 - Basal cell papilloma)

Squamous cell papilloma



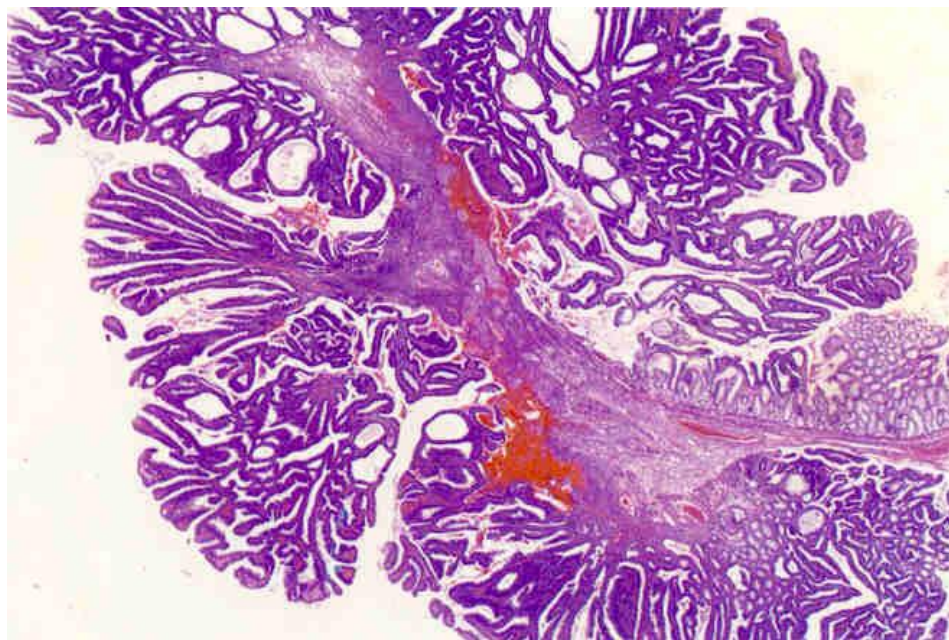
Transitional cell papilloma of the bladder

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Adenoma

- Arising in glands opening directly onto a surface epithelium leads to a polyp formation. Eg: Colon
- Arising at a distance from a surface assumes a spherical / nodular form with a fibrous capsule. Eg: Breast, prostate and endocrine organs.



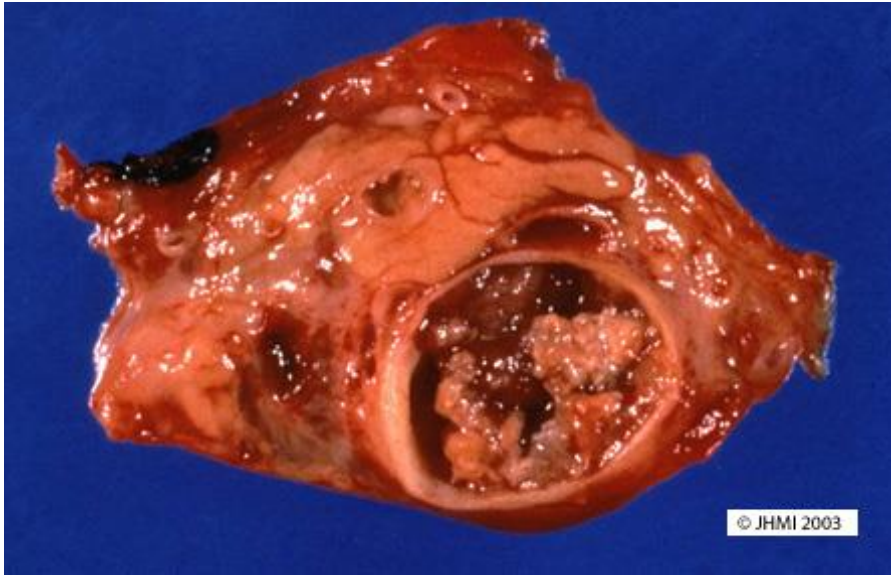
Variants of adenomata

- Cystadenoma
- Papillary cystadenoma
- Mixed tumours
 - Fibroadenoma

Cystadenoma

- Formation of cystic spaces.
- Essentially an adenoma

Papillary cystadenoma



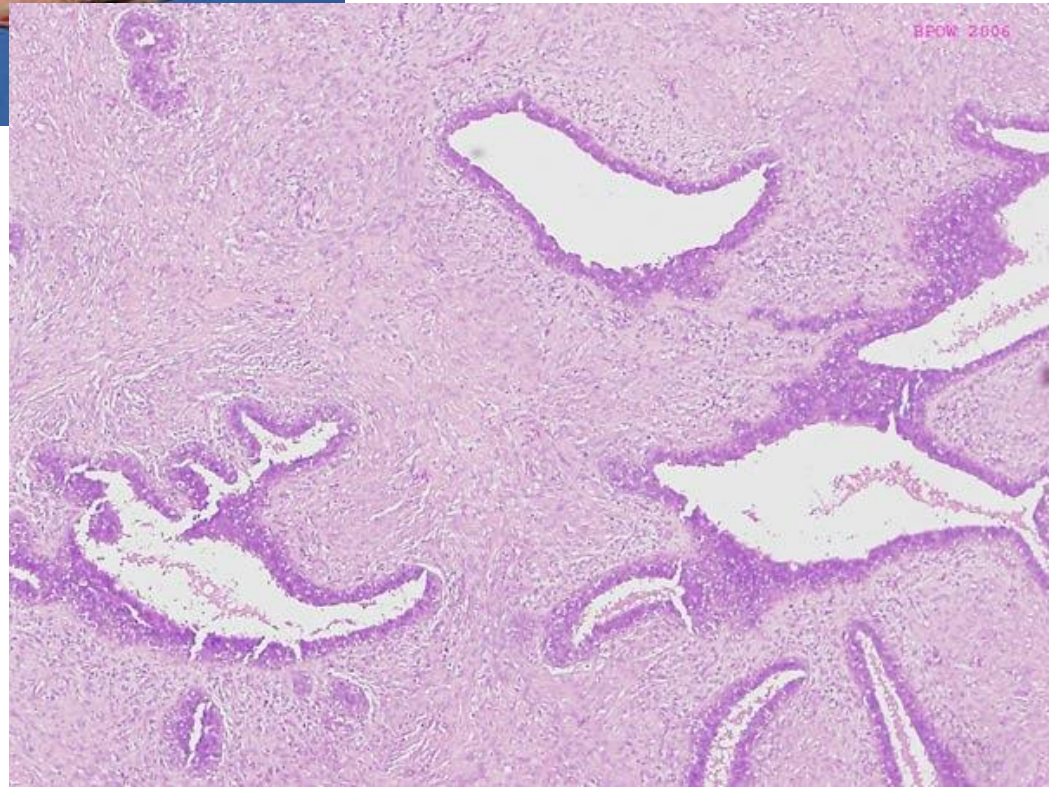
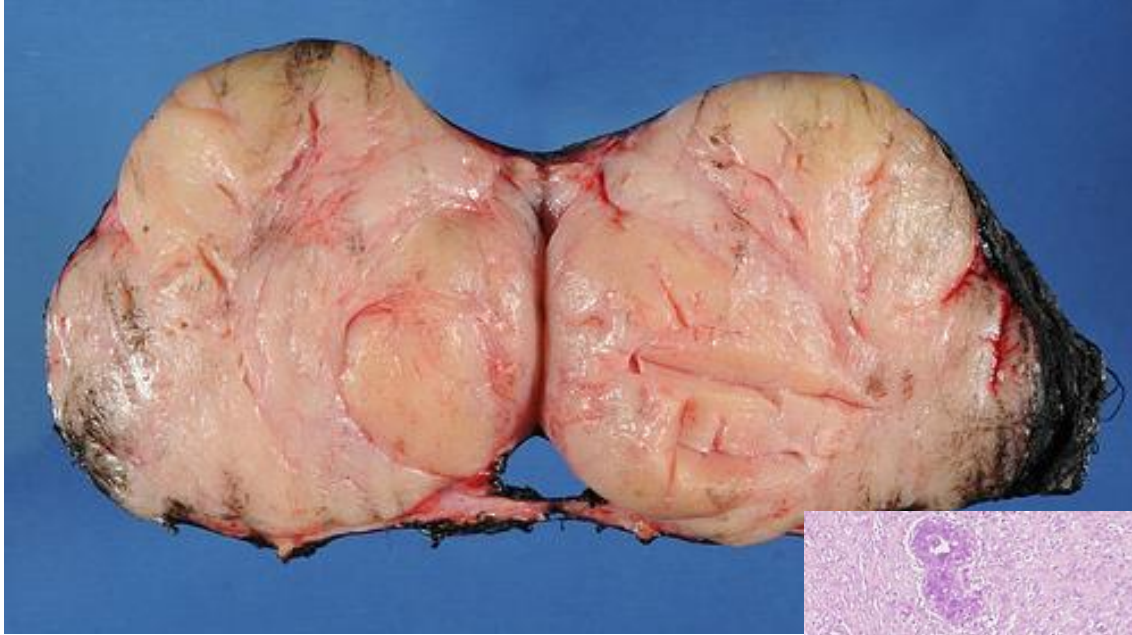
- Formation of papillary ingrowths into a cystic space.
- Eg: Ovary - serous, mucinous.

Pancreas

Appendix

Salivary gland

FIBROADENOMA OF THE BREAST



Fibroadenoma of the breast

- Glands set in a fibrous stroma - mixed tumour
Fibroadenoma
- Pericanalicular - soft
- Intracanalicular - hard.
(more fibrous
tissue compressing the
glands)



Connective tissue tumors - Fibrous tissue

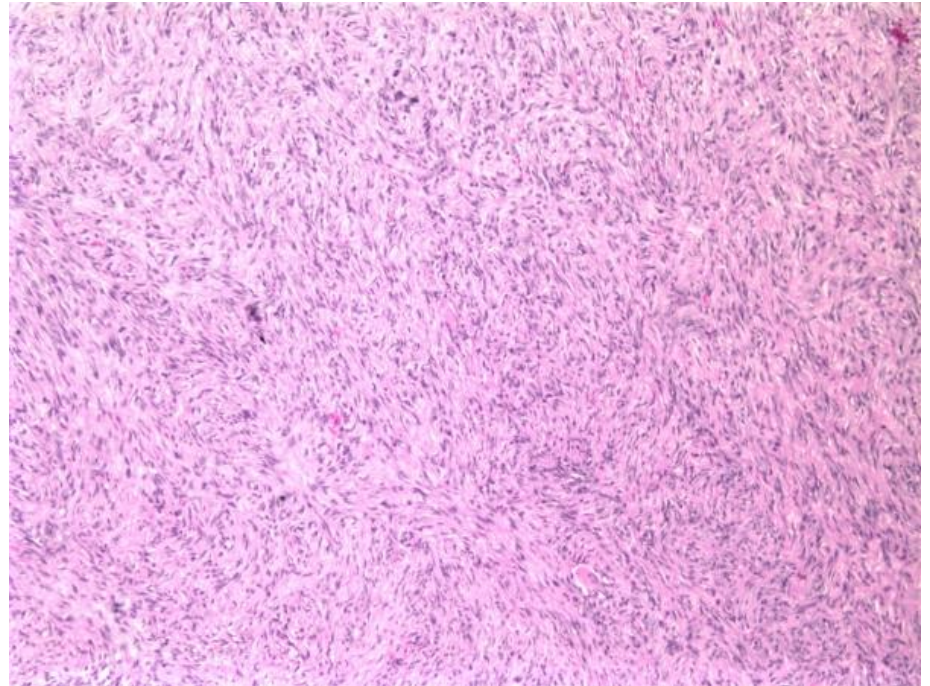
- **Fibroma**
collection of fibroblasts and collagen.
- Hard fibroma - Fibroma durum
- Soft fibroma - Fibroma molle (intermixed with adipose tissue)

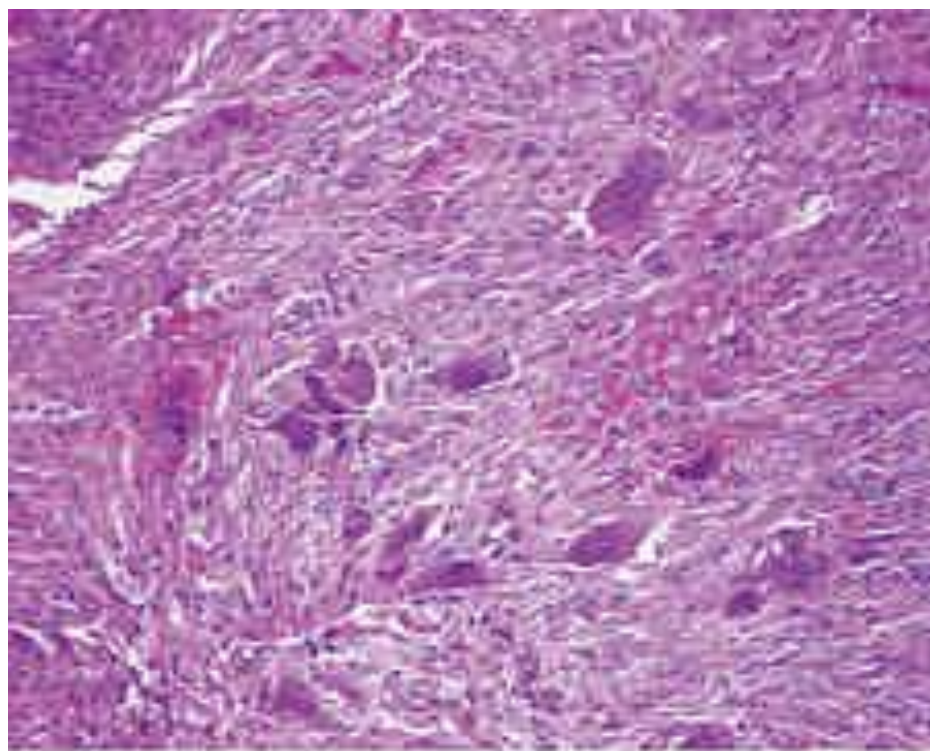
Benign fibrous tissue tumours / Tumour - like conditions- Fibromatosis

- Superficial fibromatosis
 - Palmar fibromatosis - Dupuytren's
 - Plantar fibromatosis - Ledderhous disease
 - Penile fibromatosis - Peyronie's disease.
 - Juvenile fibromatosis
- Desmoid tumor - anterior abdominal wall
- Deep fibromatosis
 - Mesenteric fibromatosis) Gardeners
 - Retroperitoneal fibromatosis) Syndrome

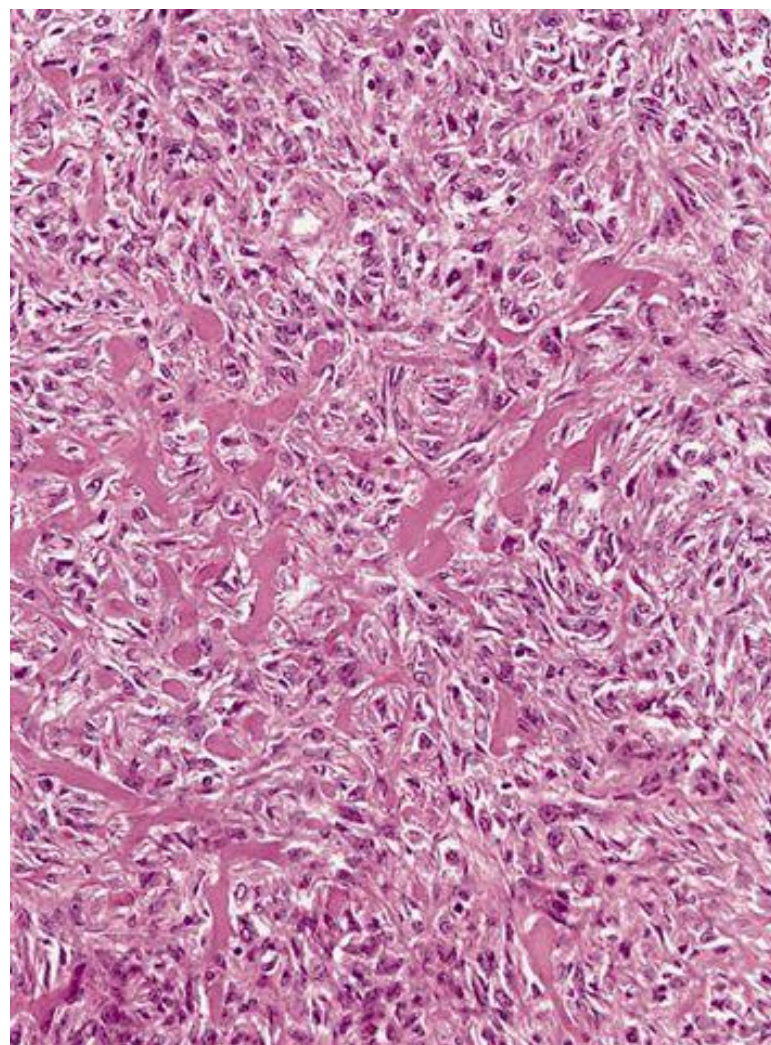
Tumours of Fibrohistiocytic origin

- Histiocytoma
- Fibrous histiocytoma
- Dermatofibroma
- Reticulohistiocytoma
- Juvenile xanthogranuloma

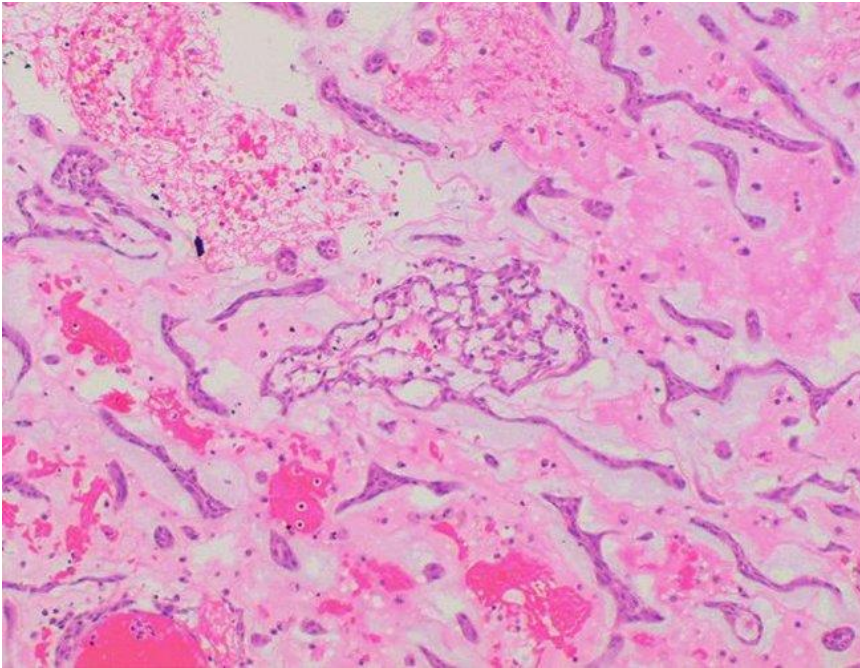




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Myxoma

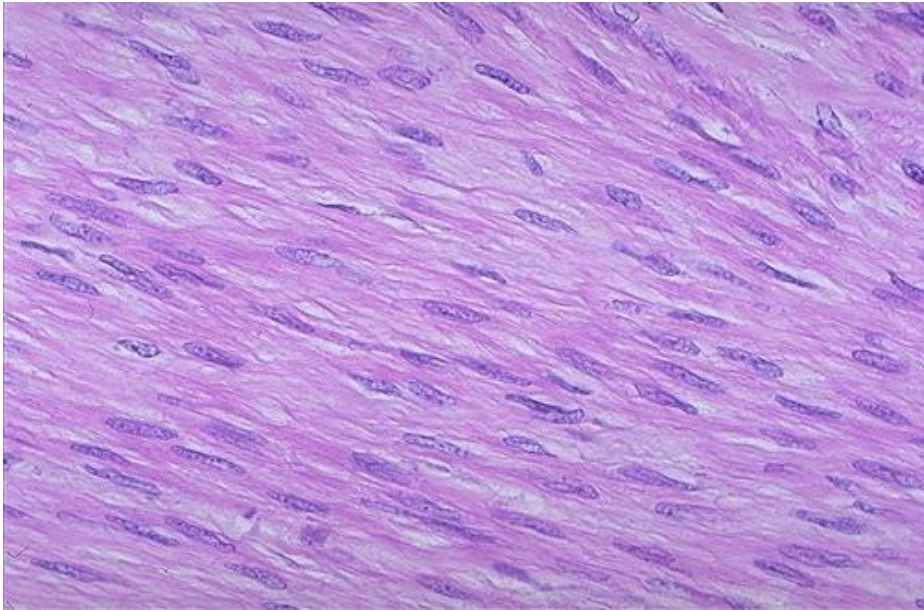


- Circumscribed, oval spherical
- C/S - translucent grey shiny and glistening
- Uncommon tumour
- Jaw, Heart, soft tissue
- Origin - Fibroblasts not differentiated to form collagen.
- Myxoid degeneration in other tumors

Benign tumors of muscle (Myoma)

- **Rhabdomyoma** -
(skeletal muscle)
Uncommon, occurs in
young children in
Tuberous sclerosis.

- **Leiomyoma** -
(smooth muscle)
uterus
(Fibroid) Intestine
skin



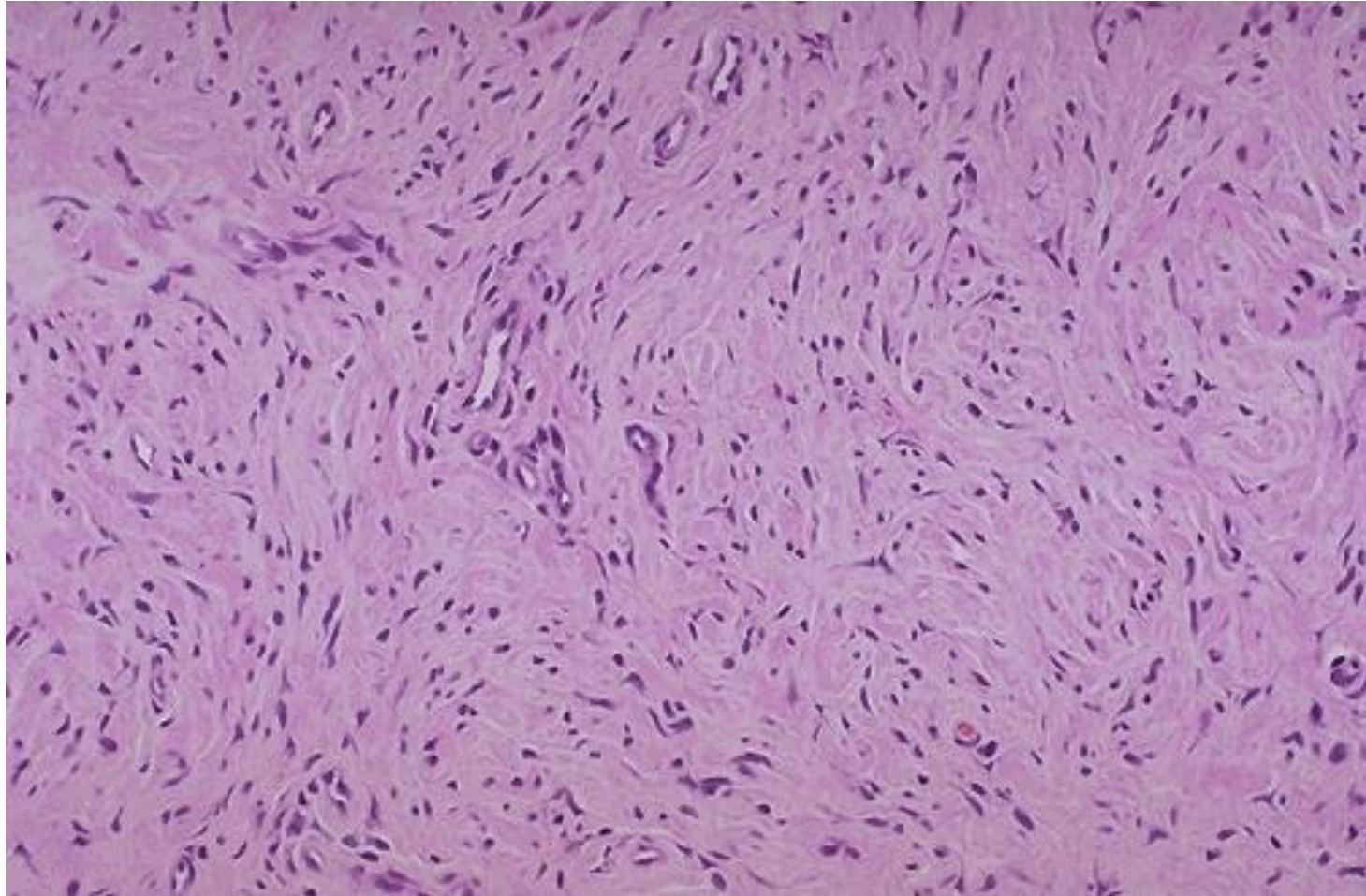
Benign tumors of nerve

- Neurofibroma - Arise from schwann cells and intervening nerve tissue.

Nerve fibers pass through the nerve - diffuse enlargement.

- Multiple - Von Recklinghausens disease
- Microscopy - spindle cells with wavy / serpiginous nuclei

NEUROFIBROMA

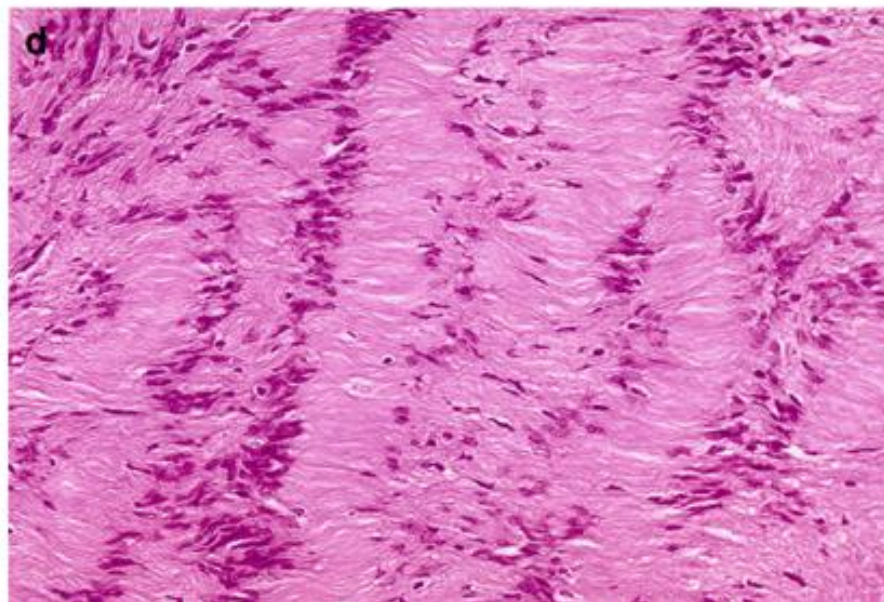
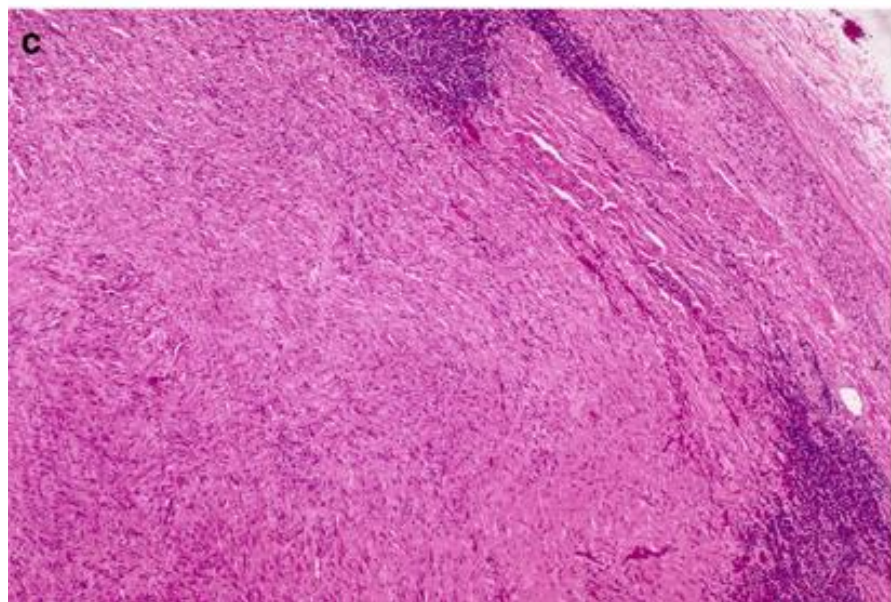
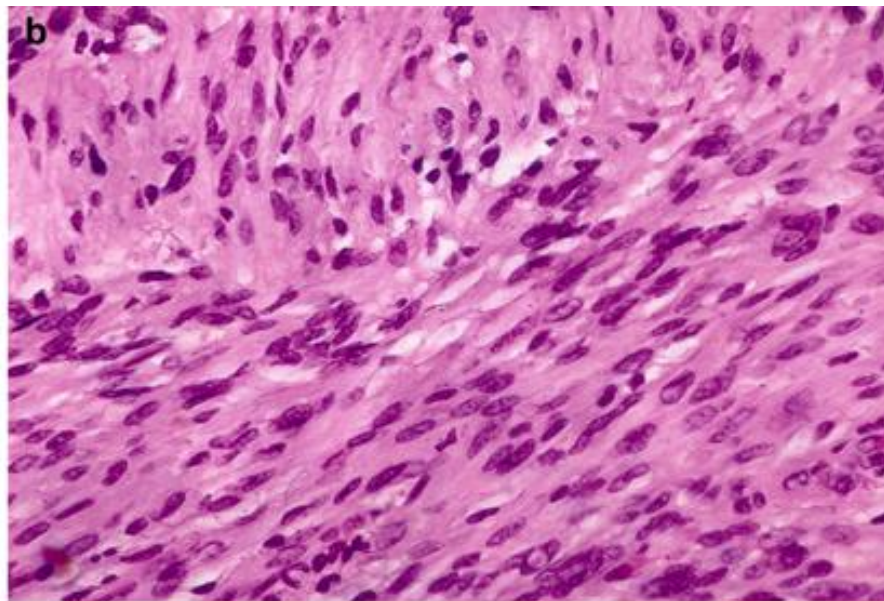
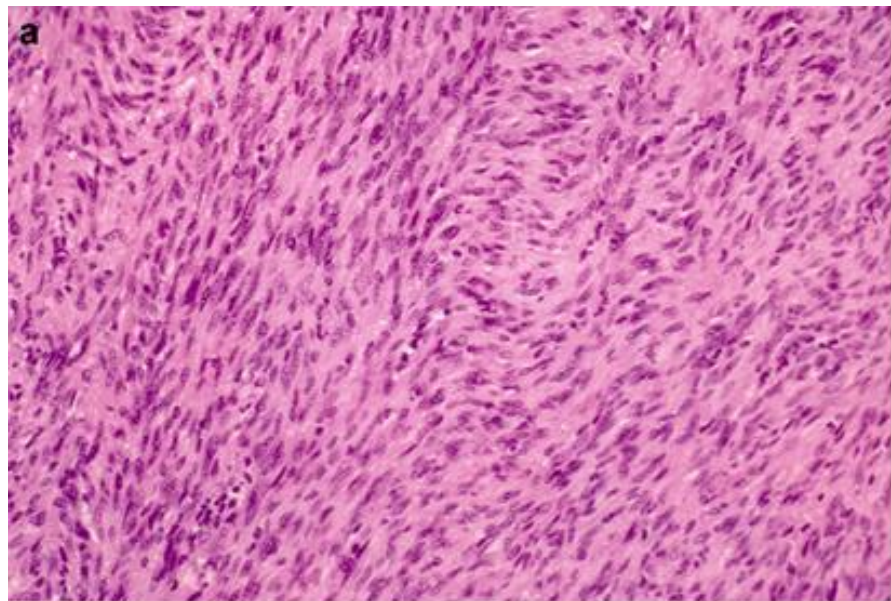


Benign tumors of nerve - Schwannoma

- Macroscopy -
 - Encapsulated
 - Arising focally on nerve - nerve stretched over it.
 - Soft and grey.

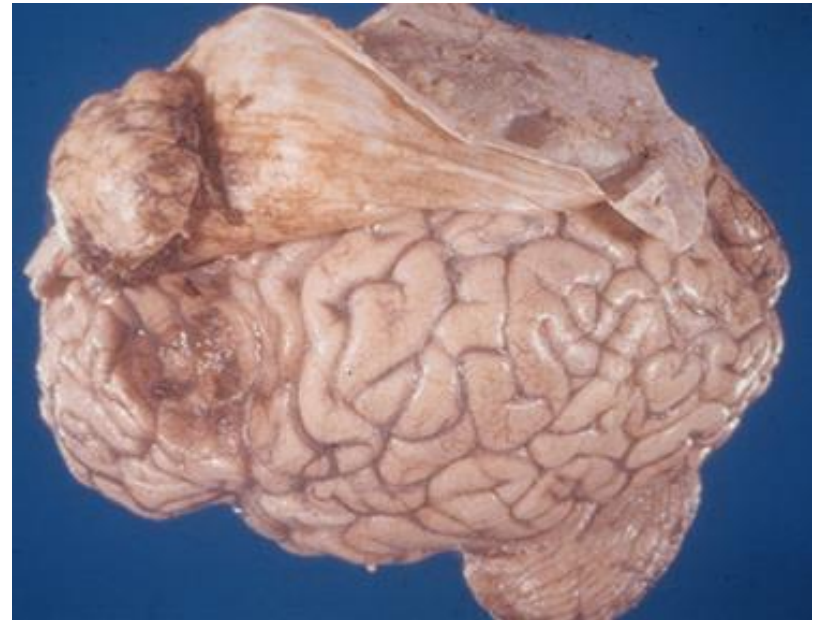
Benign tumors of nerve - Schwannoma

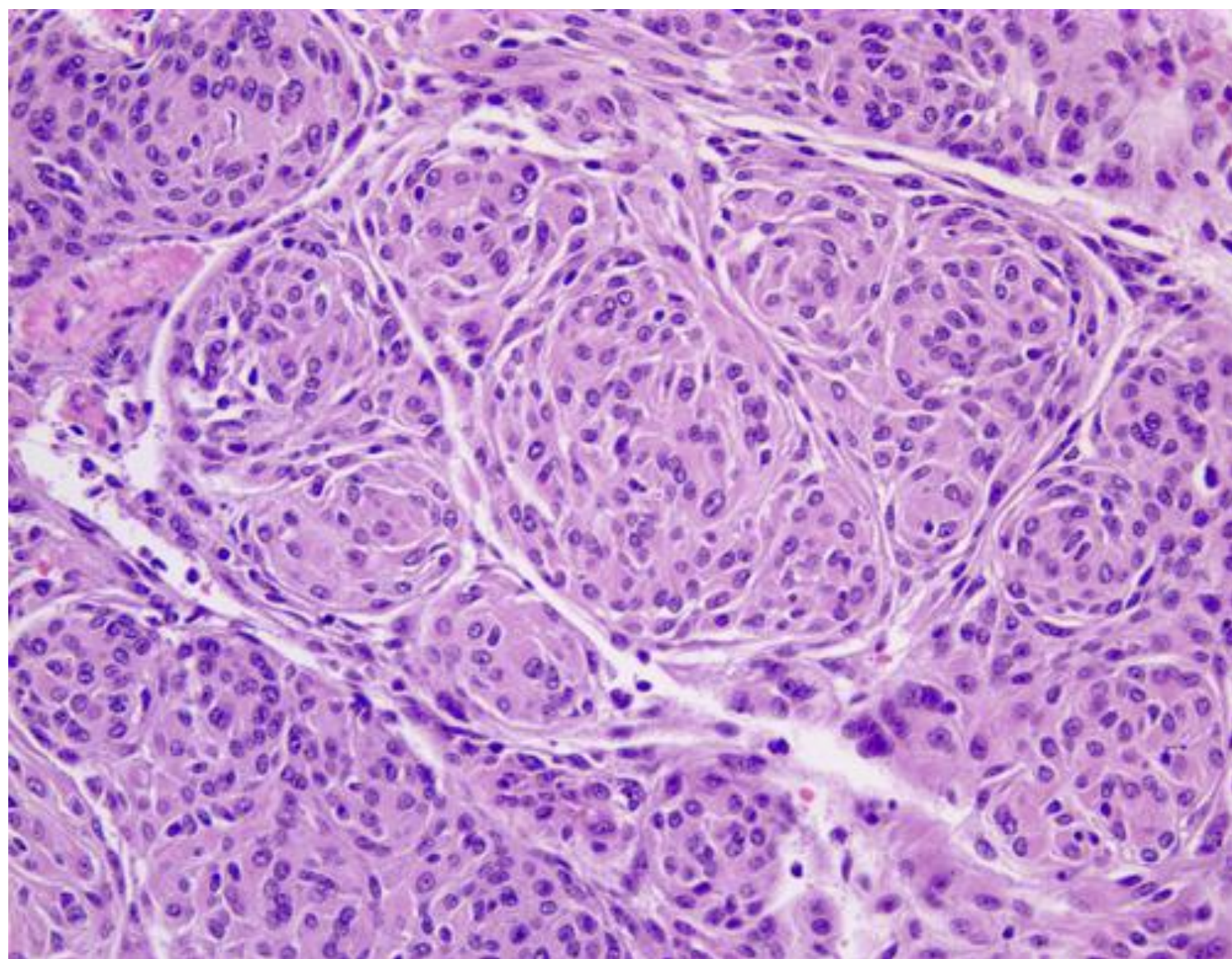
- Microscopy -
 - Cells arranged in compact fascicles or whorls with nuclear palisading.
 - Verocay bodies
 - Antoni B type areas - cystic and loosely arranged
 - Hyalinized blood vessels.



Benign tumors of the meninges - Meningioma

- Arise from meningeal cells lying deep to the dura and arachnoid granulations
- Superior sagittal sinus, Falx cerebri.

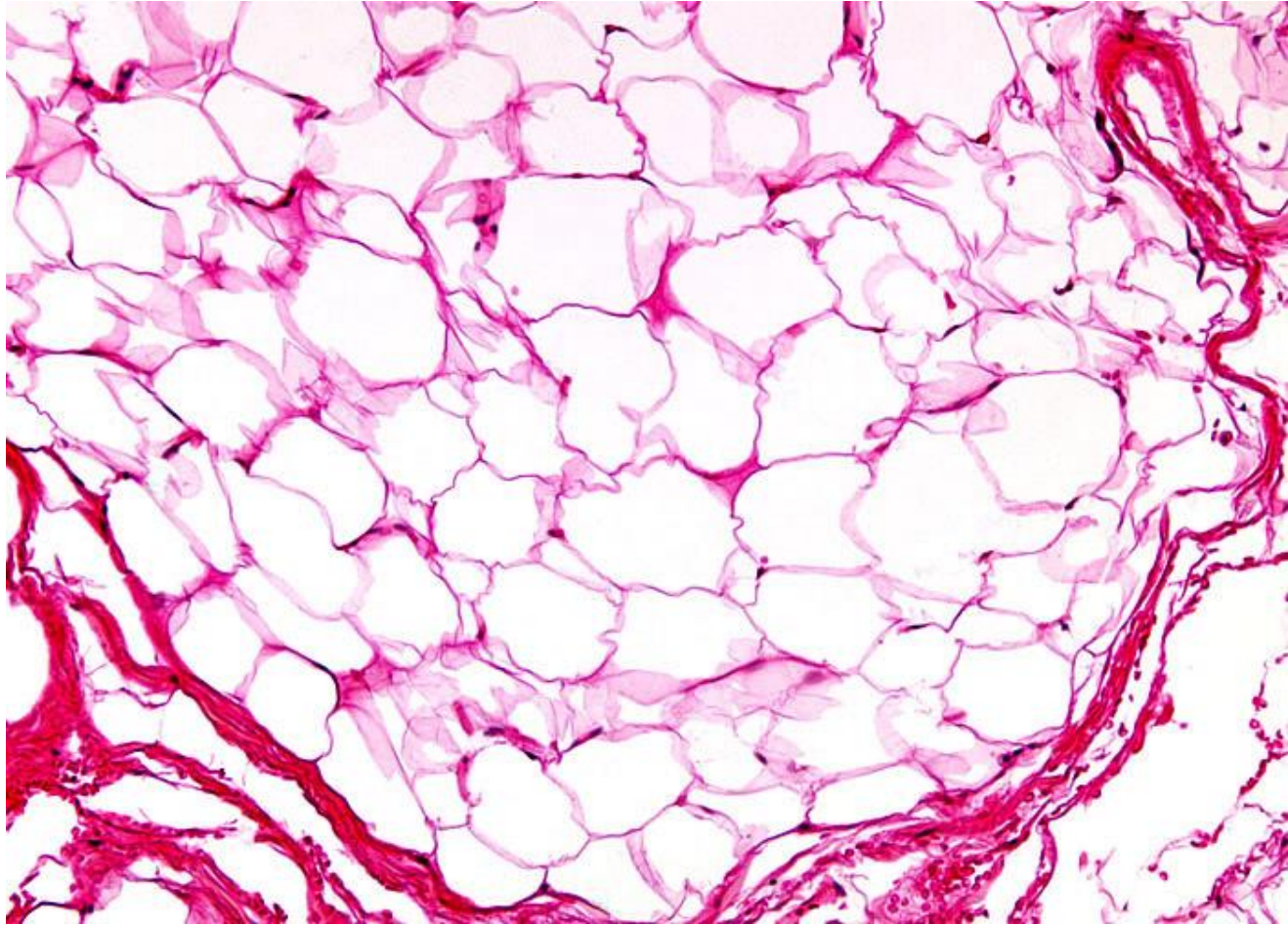




Benign tumors of adipose tissue - Lipoma

- Lobulated. Yellow (fatty) Encapsulated (thin)
- Microscopy - lobulated adipose tissue
- Subcutaneous, Intramuscular, Retroperitoneal, intestinal , Subserosal

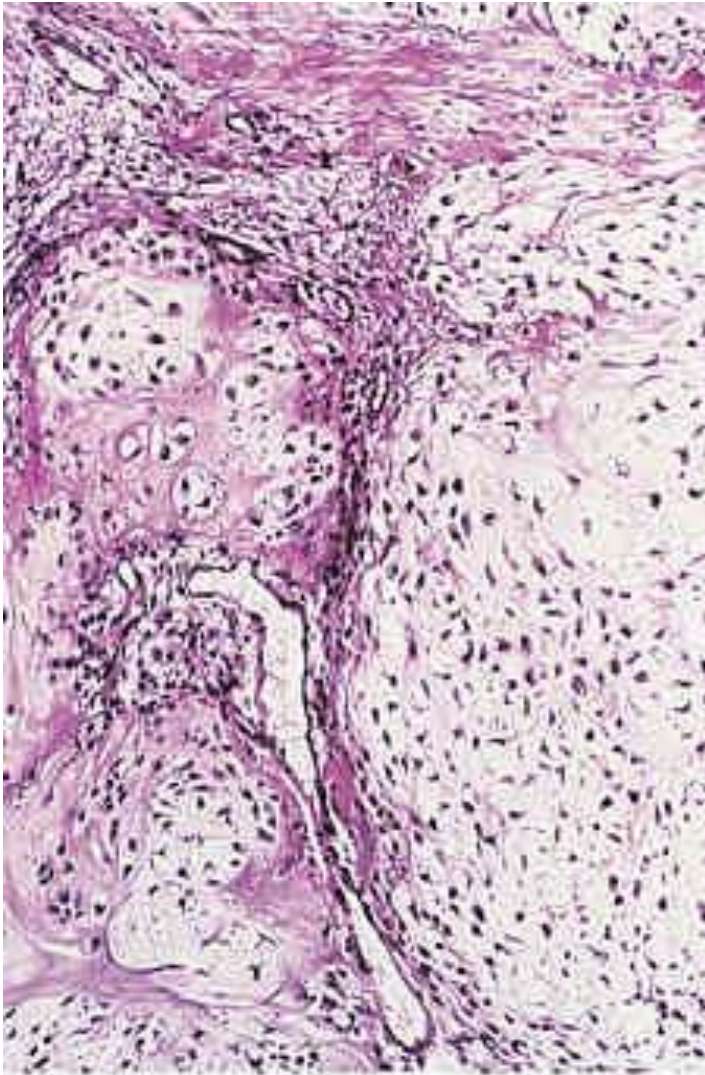




Benign tumors of Bone

- Cartilage
 - Enchondroma
 - Ecchondroma
- Mature bone
 - Compact bone - Osteoid osteoma
 - Cancellous bone osteoma osteoblastoma.

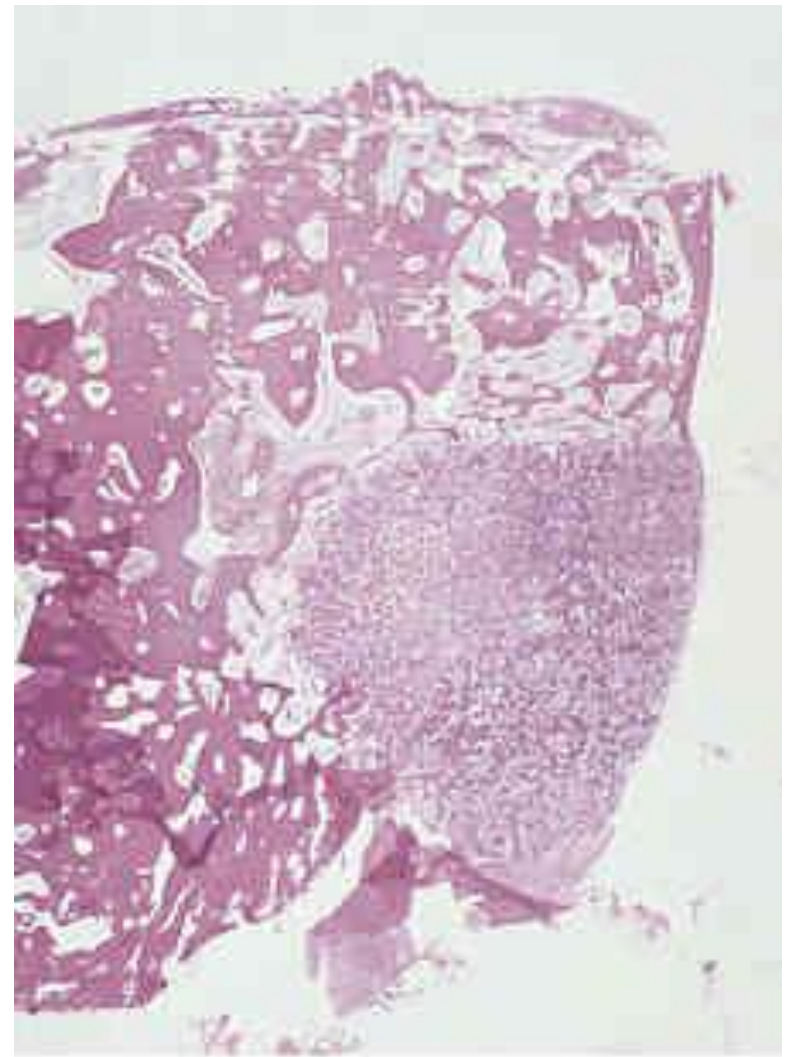
Chondroma and Osteochondroma



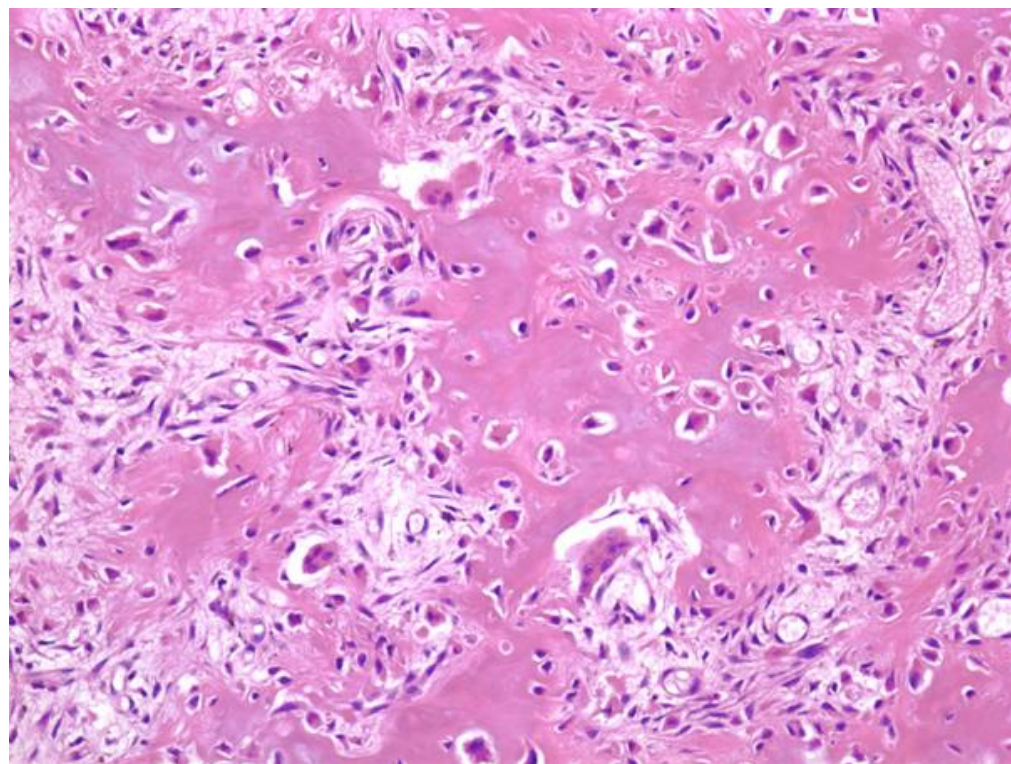
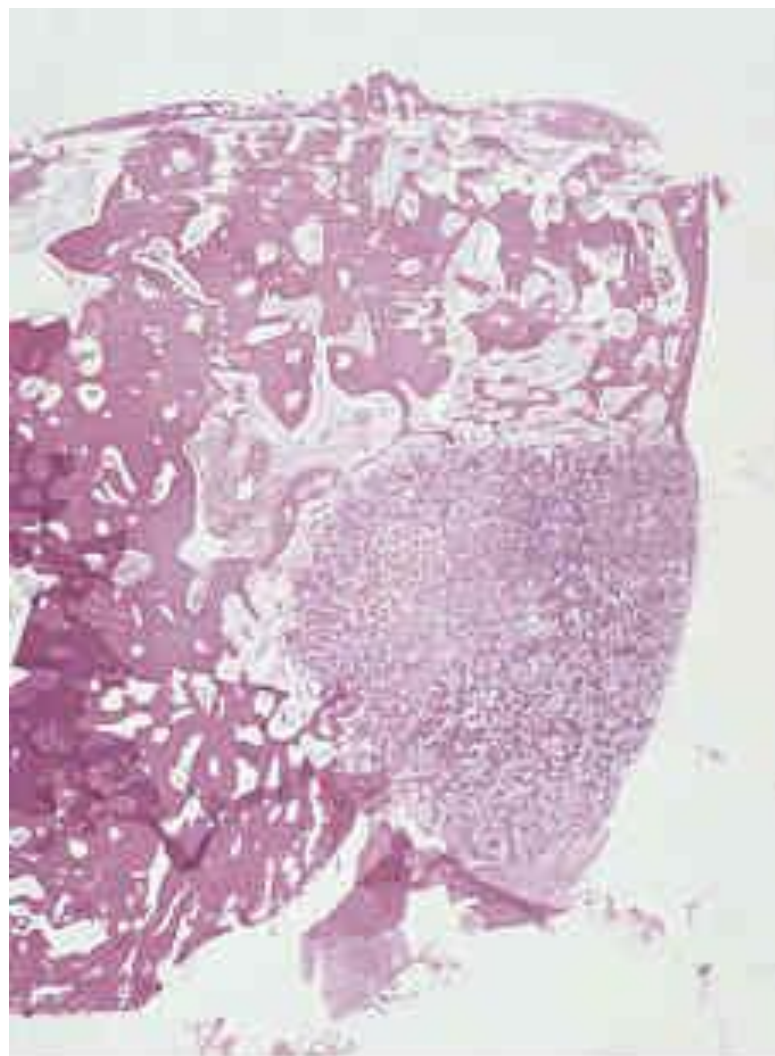
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Benign tumours of blood vessels

- Varying types of haemangiomas – the commonest being the pyogenic granuloma also known as the lobular capillary haemangioma
- Regarded as a hamartoma by some

