



ENDOCRINE MODULE PATHOLOGY LAB

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Asymmetrical
unilateral thyroid
goiter



Exophthalmos



Apathic patient (loss of facial
expression & loss of eye
brows) due to hypothyroidism

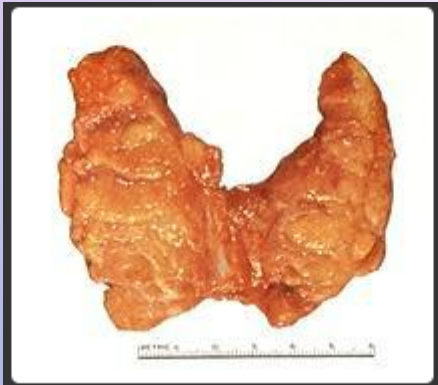


1- protruded tongue
2- umbilical hernia

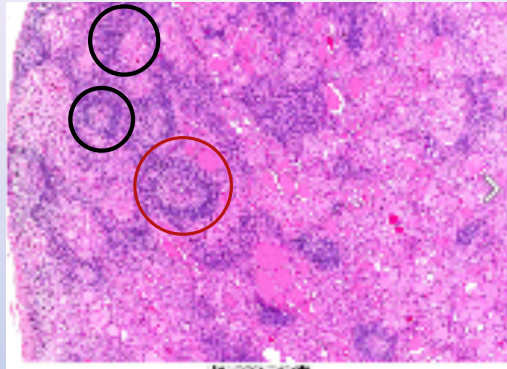
Hypothyroidism

HASHIMOTO's THYROIDITIS

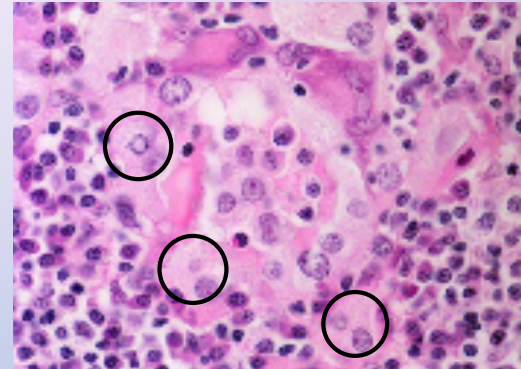
Microscopic features



Enlarged thyroid with minimum lobulation



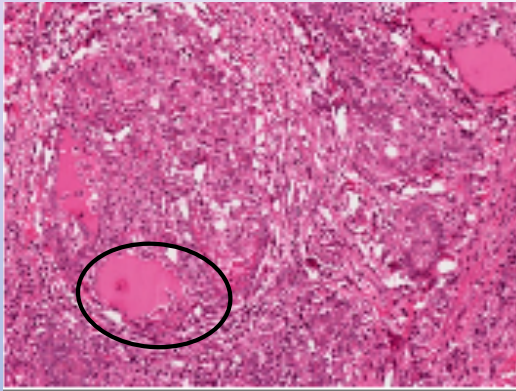
1-Dense lymphoid follicles



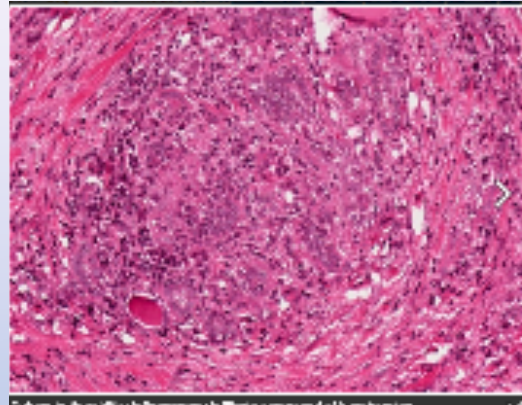
2- Hurthle cells
(enlarged follicular cell filled with abundant

De Quervain Thyroiditis

Known as sub acute granulomatous thyroiditis



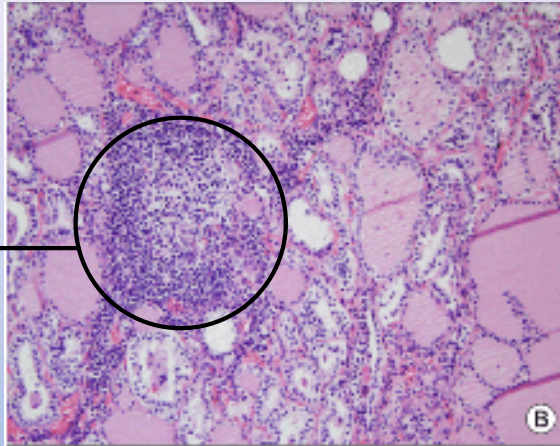
Fused macrophage (giant cell)



Granuloma (central macrophages surrounded by lymphocytes)

SUBACUTE LYMPHOCYTIC THYROIDITIS : (Silent)

Form lymphoid
follicles

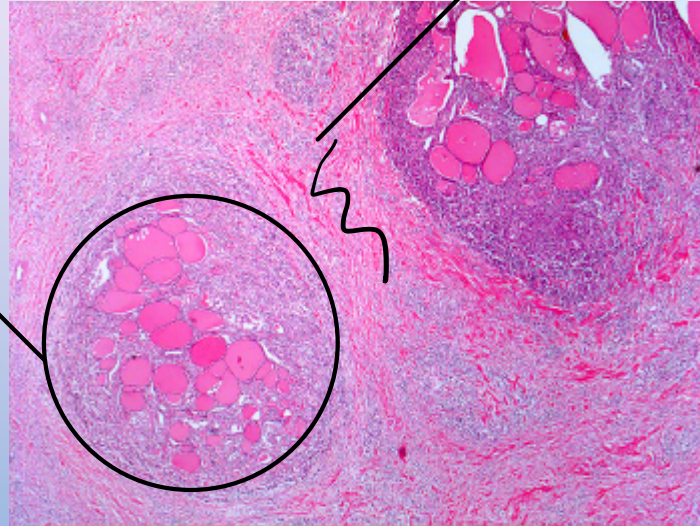


Characterized with dense lymphocytic infiltrate

- No hurthel cell changes

Extensive collagen deposition (fibrous band)
which extend beyond thyroid gland

Reidel's Thyroiditis



- Compressed thyroid follicles from fibrosis

Clinically :

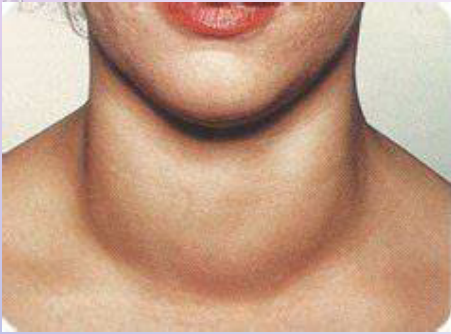
1- asymmetrical

2- fixed

3- enlargement

Misdiagnosed with malignancy

GRAVE'S DISEASE



Goiter



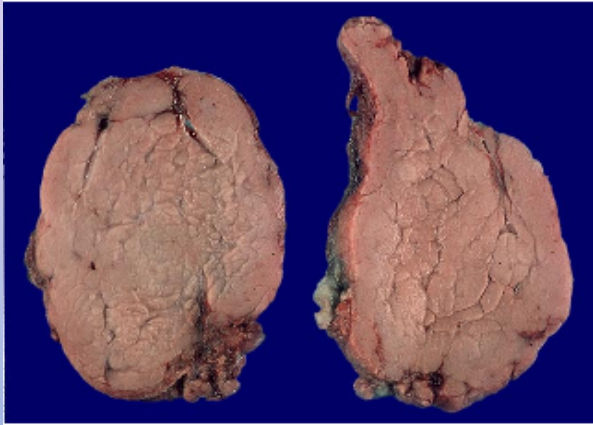
Exophthalmous



Pretibial myxedema

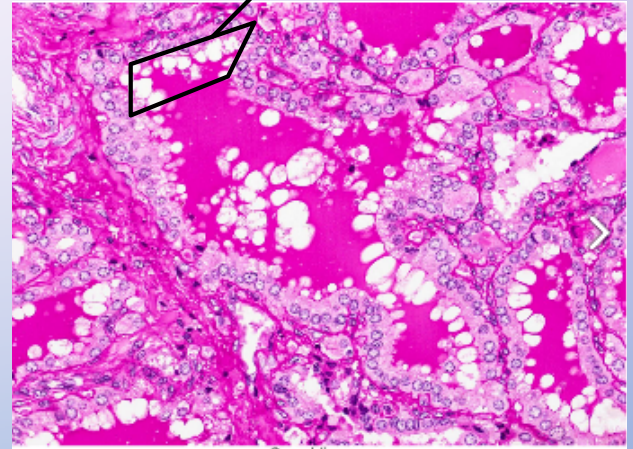


Finger clubbing



Very enlarged thyroid with beefy cut surface & multiple nodules

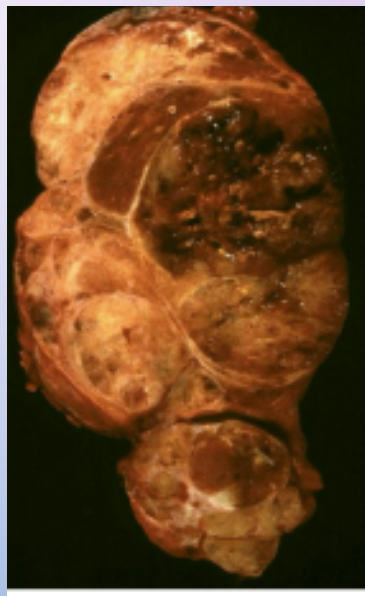
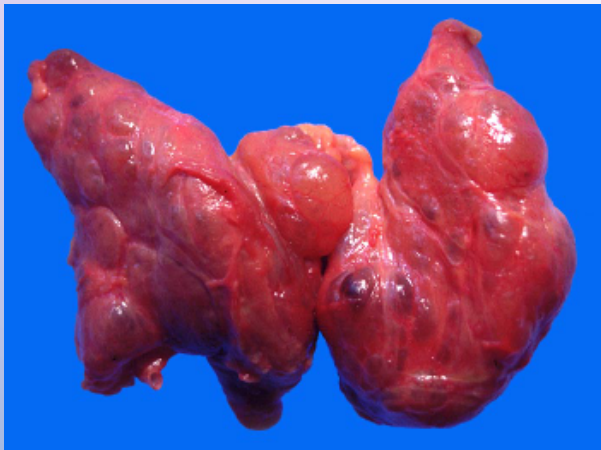
Peripheral scalloping of colloid



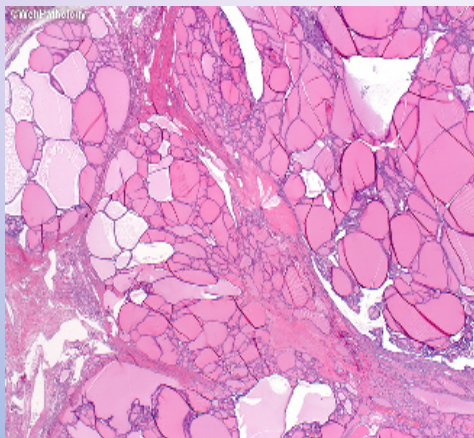
Hyperthyroidism —> hyperplastic follicular cell

DIFFUSE & MULTINODULAR GOITRE

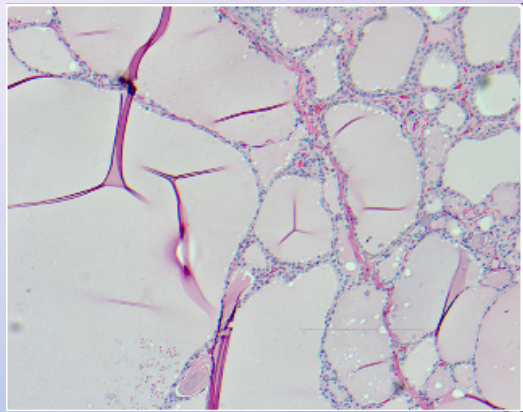
Diffuse thyroid enlargement
with multiple nodule



DIFFUSE & MULTINODULAR GOITRE



Vanobally sized dilated follicle
lined by hyperplastic
epithelium

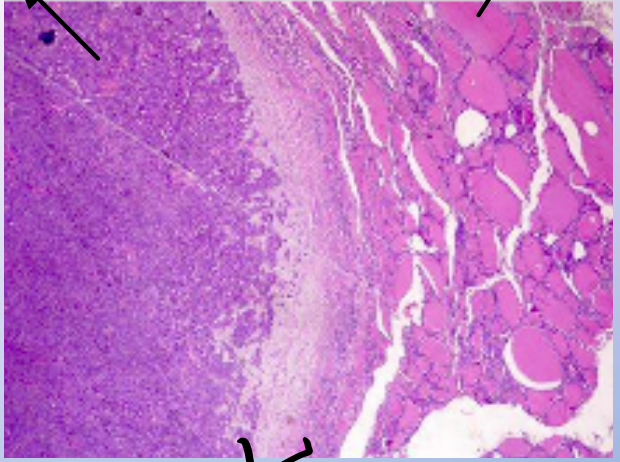
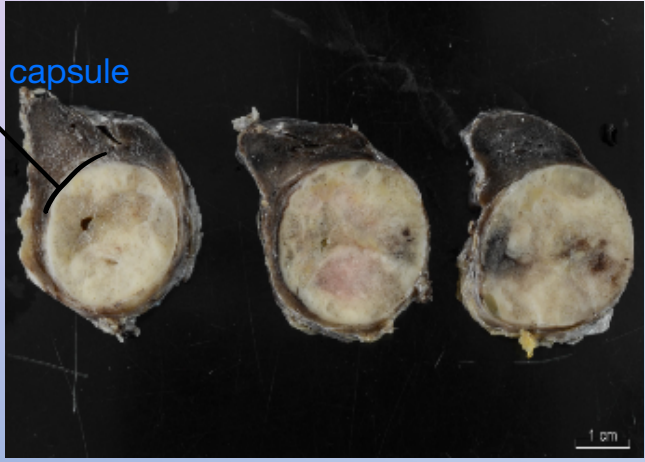


FOLLICULAR ADENOMA

Neoplastic (compressed follicle)

Compressed normal thyroid capsule

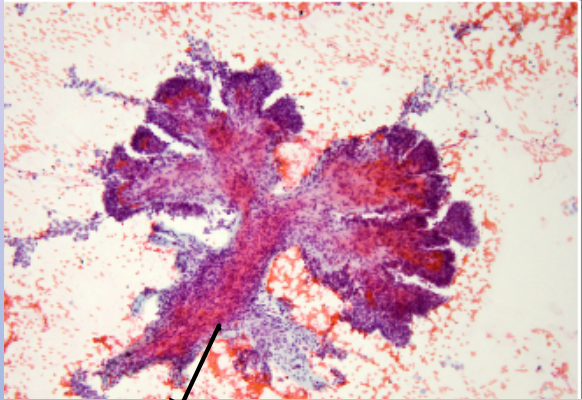
Intact capsule



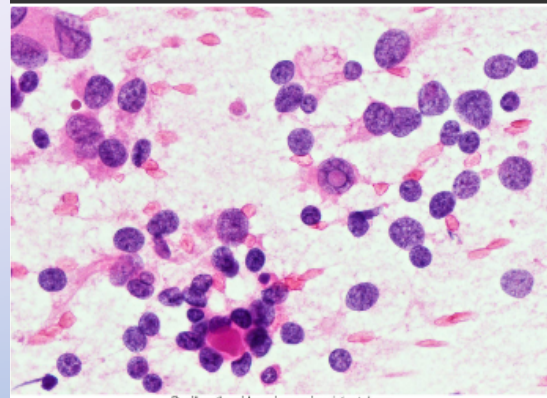
Single well circumscribed mass devoid from hemorrhage or necrosis

Surrounded by thin intact regular capsule

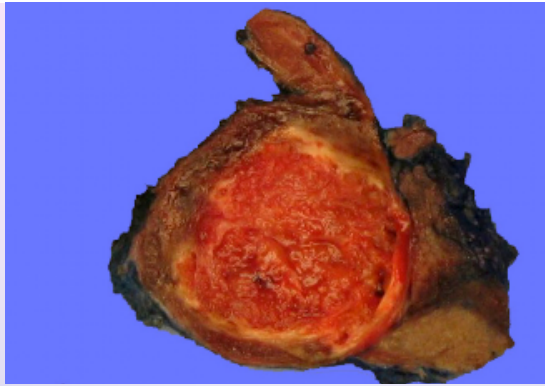
PAPILLARY CARCINOMA



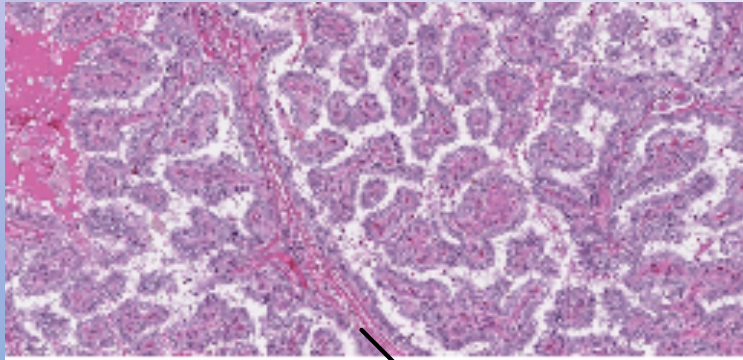
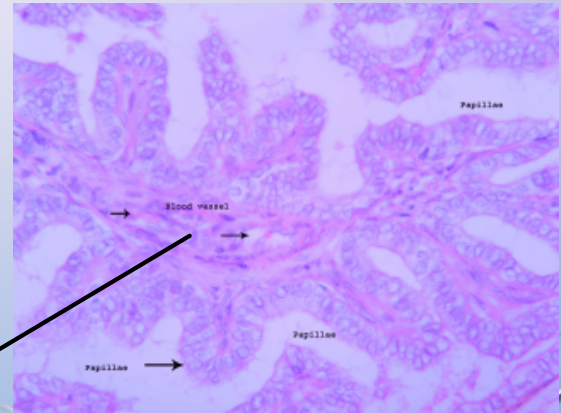
Central fibrovascular core surrounded by tumor cell



Represents nuclear features
(pseudoinclusion)
Central eosinophilic structure inside nucleus



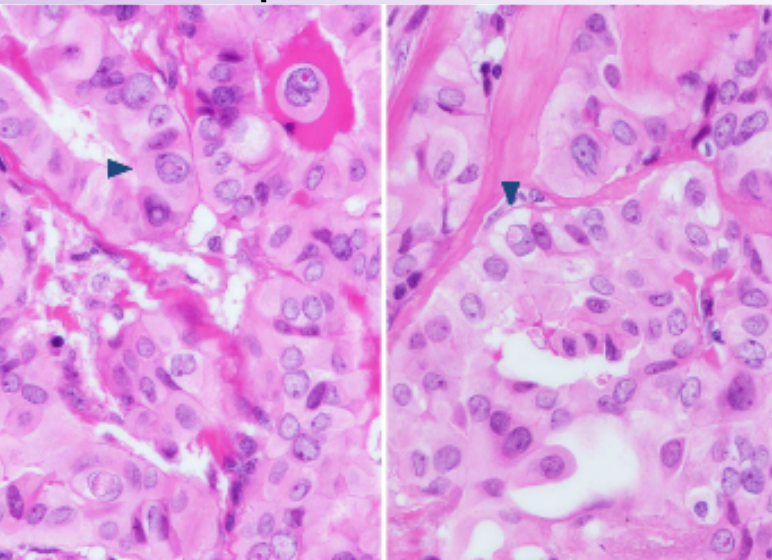
**Vareagated mass
Hemorrhage &
papillae mybe noticed**



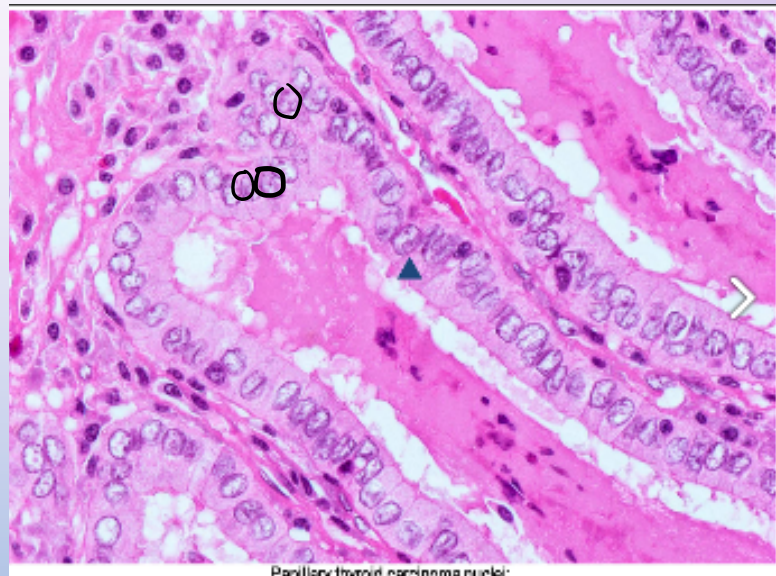
Central fibrovascular core

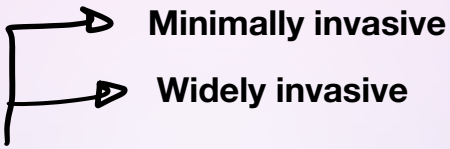
Nuclear features

Nuclear pseudoinclusion



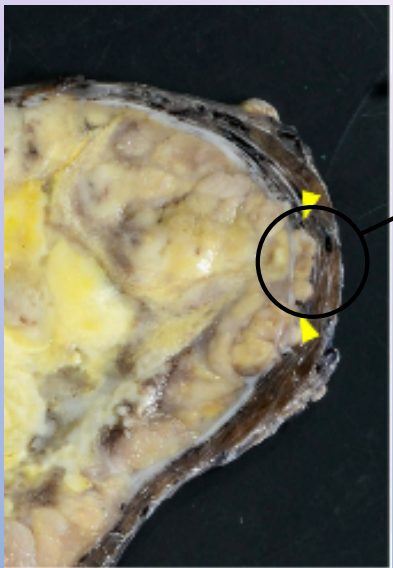
Nuclear groove



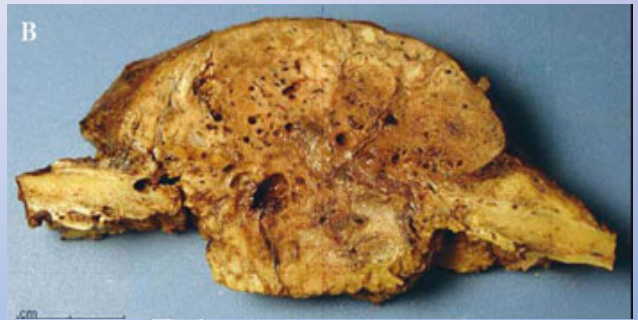


FOLLICULAR CARCINOMA

Surrounded by thick irregular capsule



Area of invasion



Widely invasive follicular carcinoma
in this diaphragm, there is no capsule

Tumor cells inside blood vessels

Area of invasion

Minimally invasive

Vascular invasion

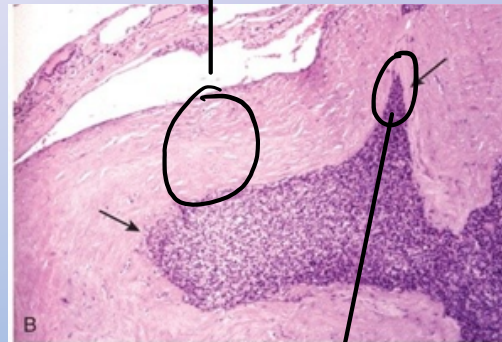
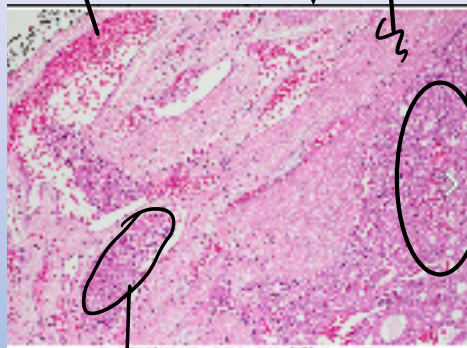
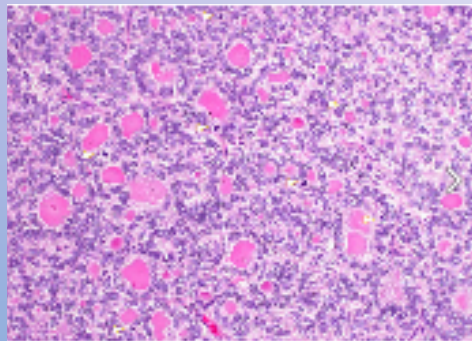
Cells of tumor

RBC

Capsule

Tumor cells

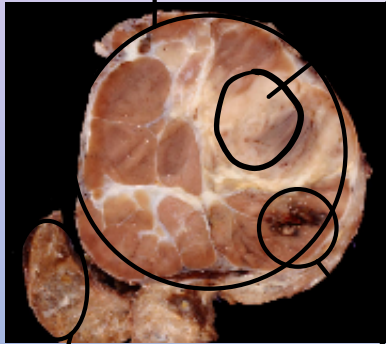
Thick irregular capsule



Ugly (undifferentiated cells)

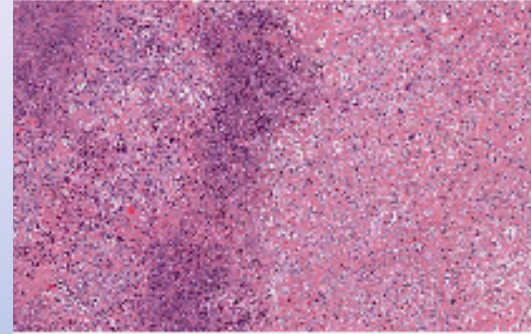
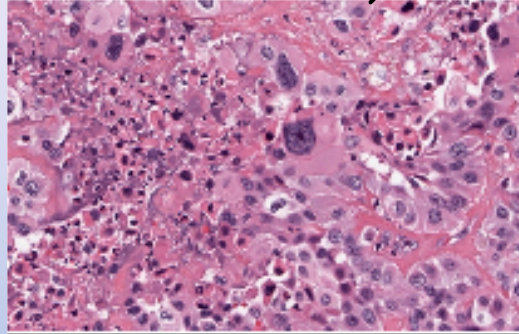
ANAPLASTIC CARCINOMA

Tumor
(variegated
mass)



Area of necrosis

All anaplastic features

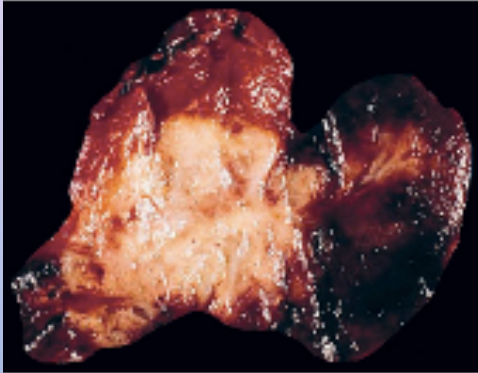


Normal thyroid

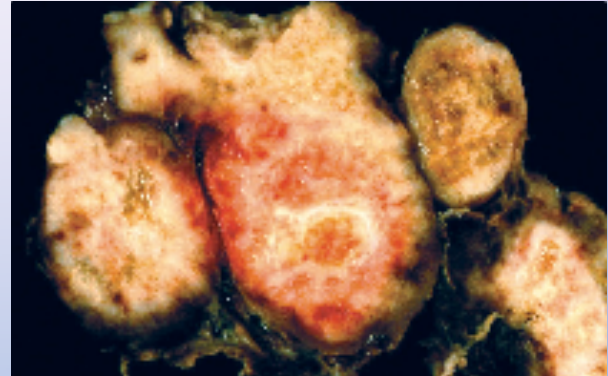
Area of hemorrhage

Extensive necrosis

MEDULLARY CARCINOMA.

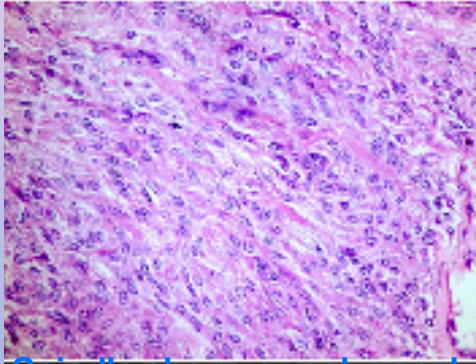


Sporadic carcinoma
Single mass

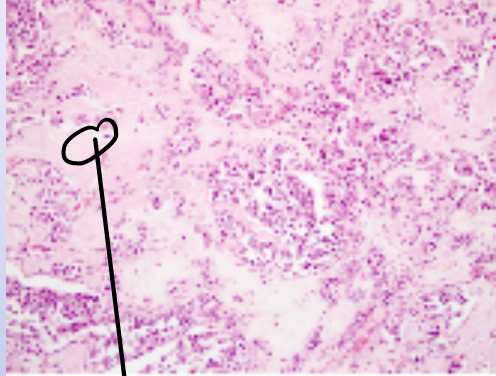


Familial carcinoma
Multiple masses

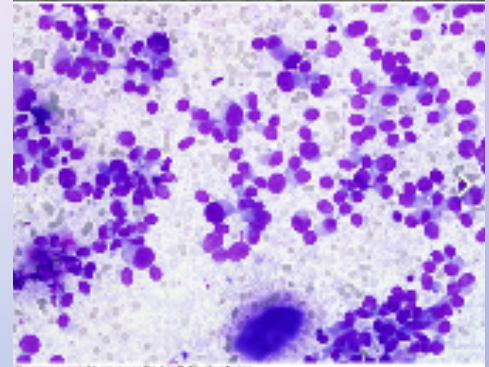
Wide range of morphology histologically



Spindle shape or polygonal



Plasmacytoid



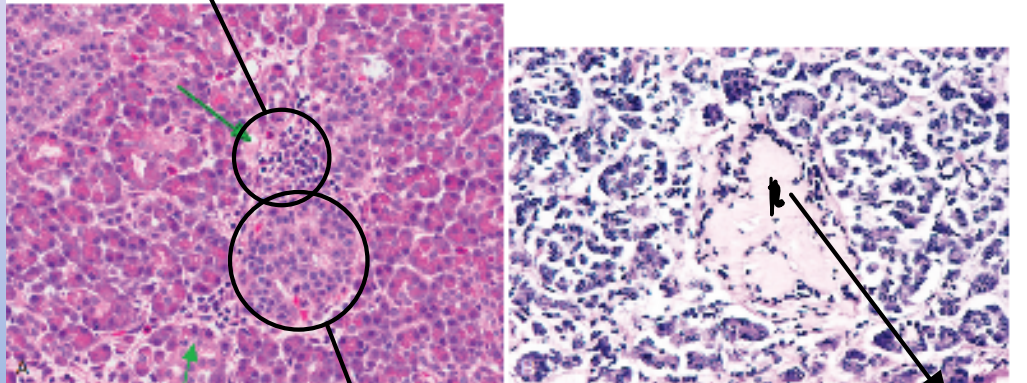
Pale eosinophilic deposition represents amyloid of calcitonin
(distinguishing features)

Islet of langerhan

DIABETES MELLITUS.

Lymphocytic infiltration

After long term (complete destruction
of islet of langerhans)

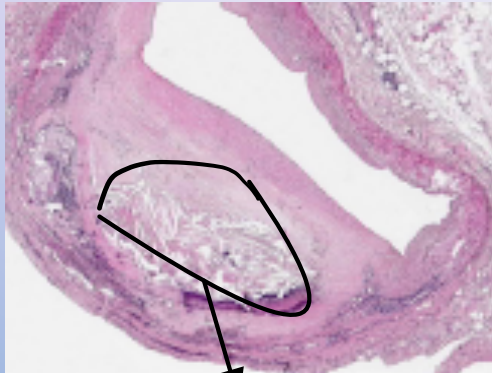


Islet are replaced with
amyloid

Accelerated atherosclerosis

Diabetic macrovascular disease

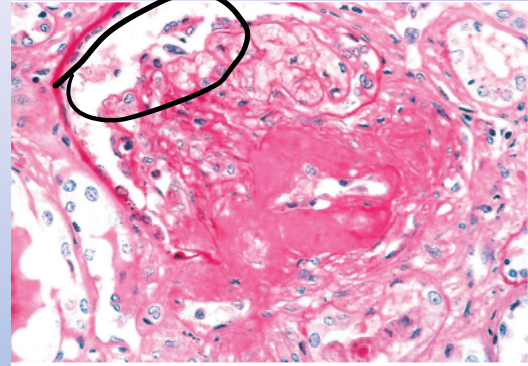
Narrow lumen of BV



Deposition of atherome
(cholesterol cleft with RBC & neutrophils)

Narrowing of lumen caused
by accumulation of hyaline

Hyaline atherosclerosis

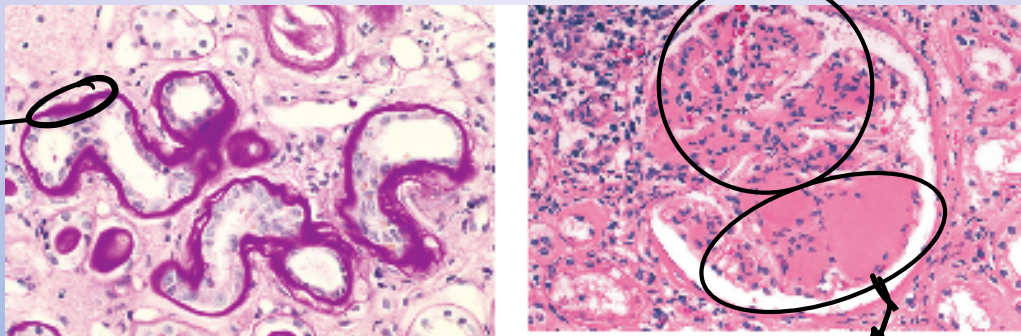


DIABETIC NEPHROPATHY

Nodular glomerulosclerosis

Normal portion of
glomerulus

Thickening of
basement
membrane



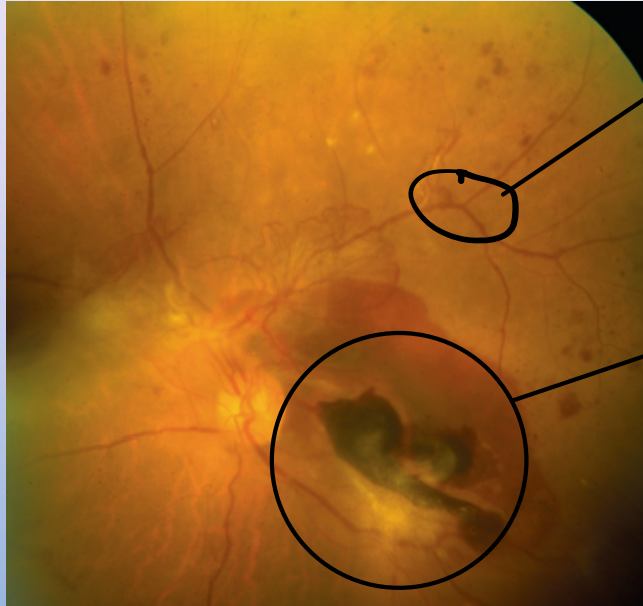
Abnormal portion of glomerulus (cell are replaced with
extensive sclerosis & fibrous)

Loss of function \Rightarrow on long term (renal impairment)
manifested by high certain & urea

Micro vascular complications

DIABETIC RETINOPATHY

**Neovascularization
(weak vessels which bleed with
exudate)**



**Hemorrhage & exudate in
retina
-> causing pressure on retina
leads to retinal detachment**

Excess cortisol

CUSHING SYNDROME

Buffalo hump



Abdominal striae



Moon face with acne



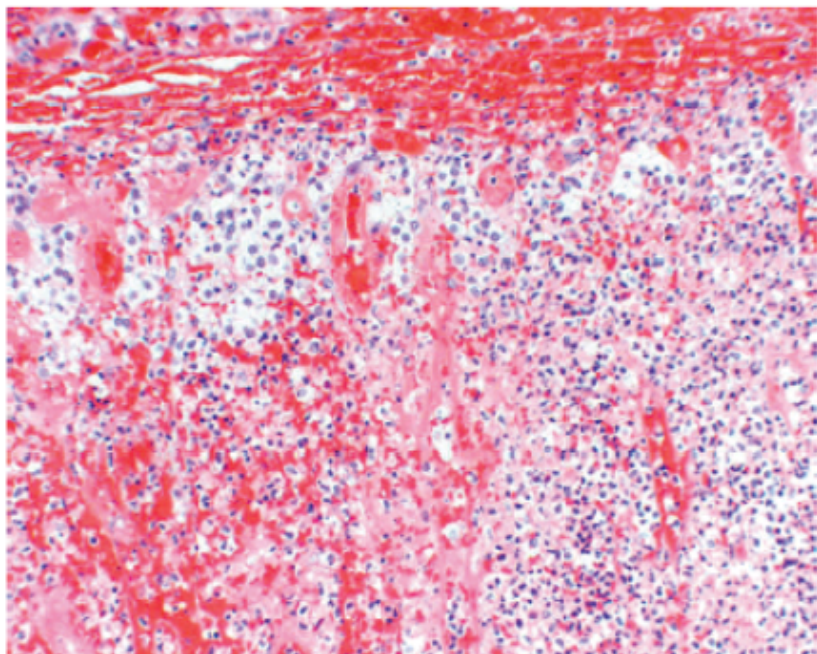
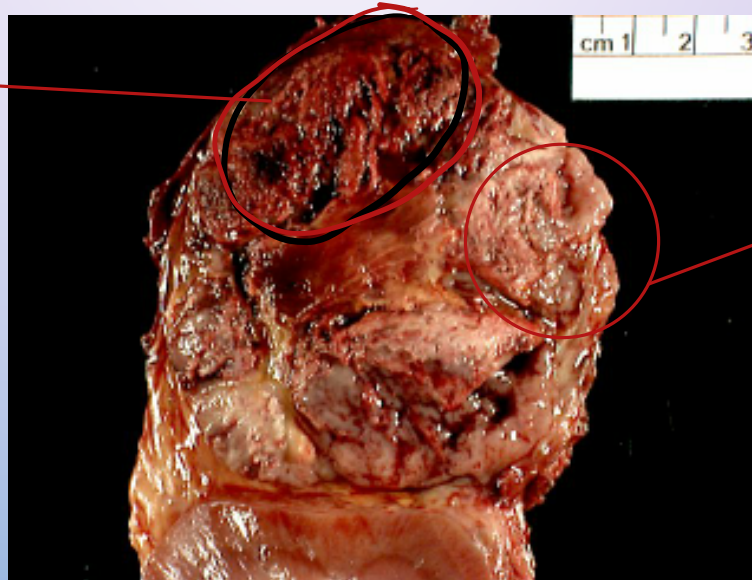


Figure 19-39 Waterhouse-Friderichsen syndrome. Bilateral adrenal hemorrhage in an infant with overwhelming sepsis, resulting in acute adrenal insufficiency. At autopsy, the adrenals were grossly hemorrhagic and shrunken; in this photomicrograph, little residual cortical architecture is discernible.

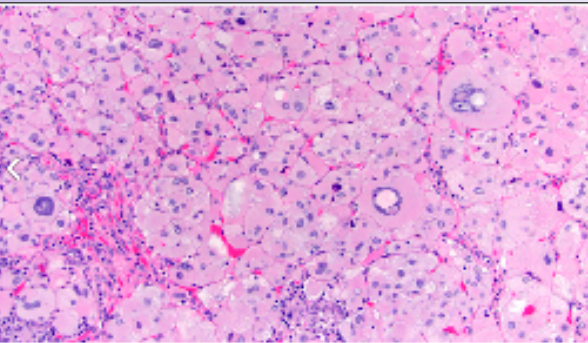
Grossly appears as large ugly mass

ADRENALCORTICAL TUMORS

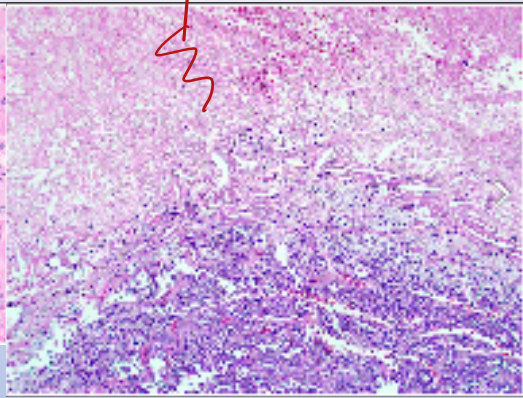
Area of hemorrhage



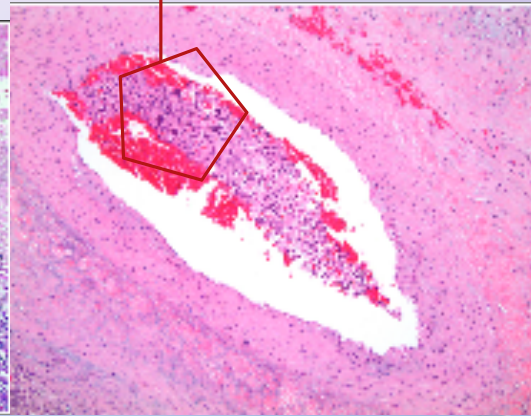
Area of necrosis



**Atypia nuclear enlargement
Increased N/C ratio
Hyperchromasia / nuclear pleomorphism**



Area of necrosis



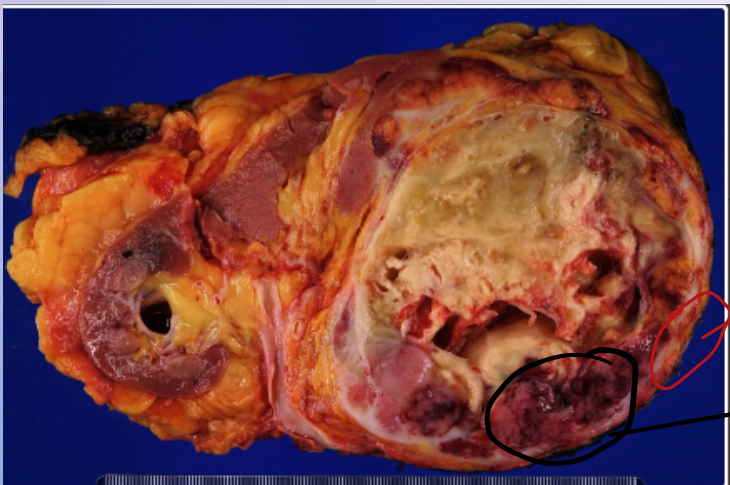
Lymphovascular invasion

Nuroendocrine tumor of adrenal medulla

PHEOCHROMOCYTOMA

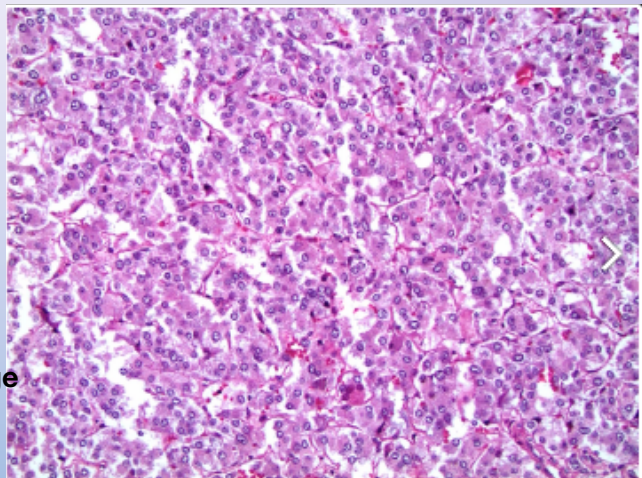
Metastatic is the only feature of malignancy

Zelballen pattern under microscope
(arranged as trabeculae)



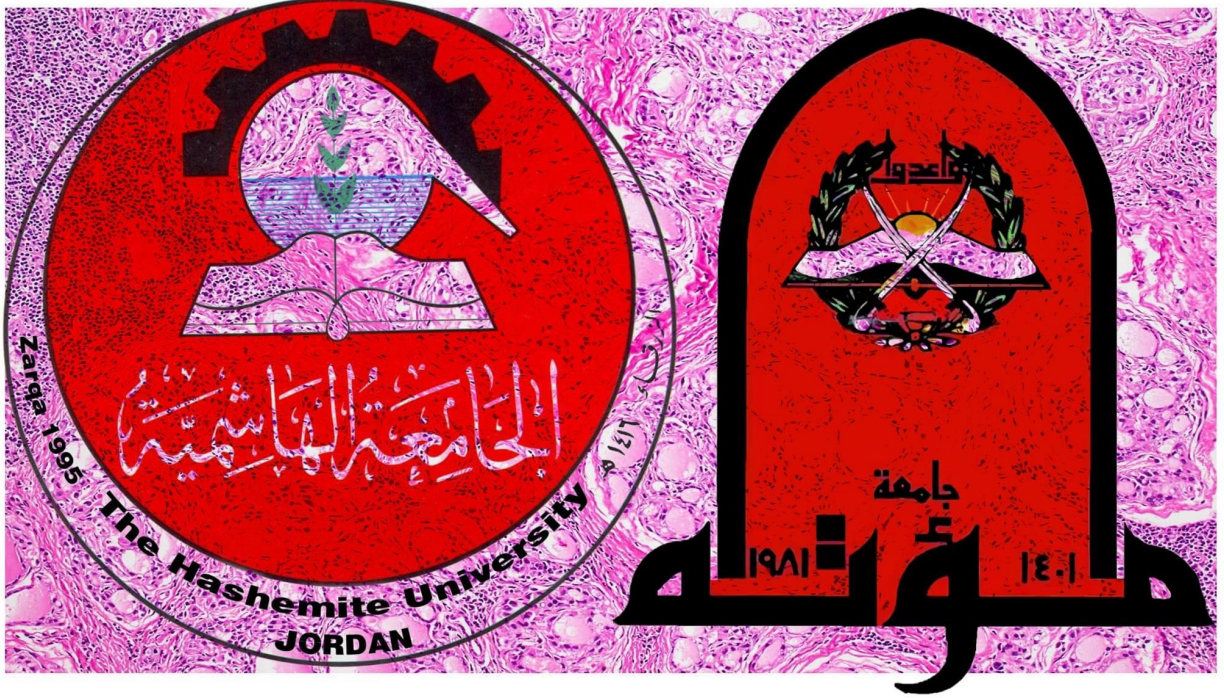
Capsule

Area of
hemorrhage



Basophilic cells due to catecholamin granules

Hashimoto's thyroiditis



♥ تحية اجلال للمحاربين الذين وصلو الى هنا
سدد الله خطاكم ونفع بعلمكم
♥ لا تنسوننا من صالح دعائكم
#لجنة_الطب_والجراحة

