

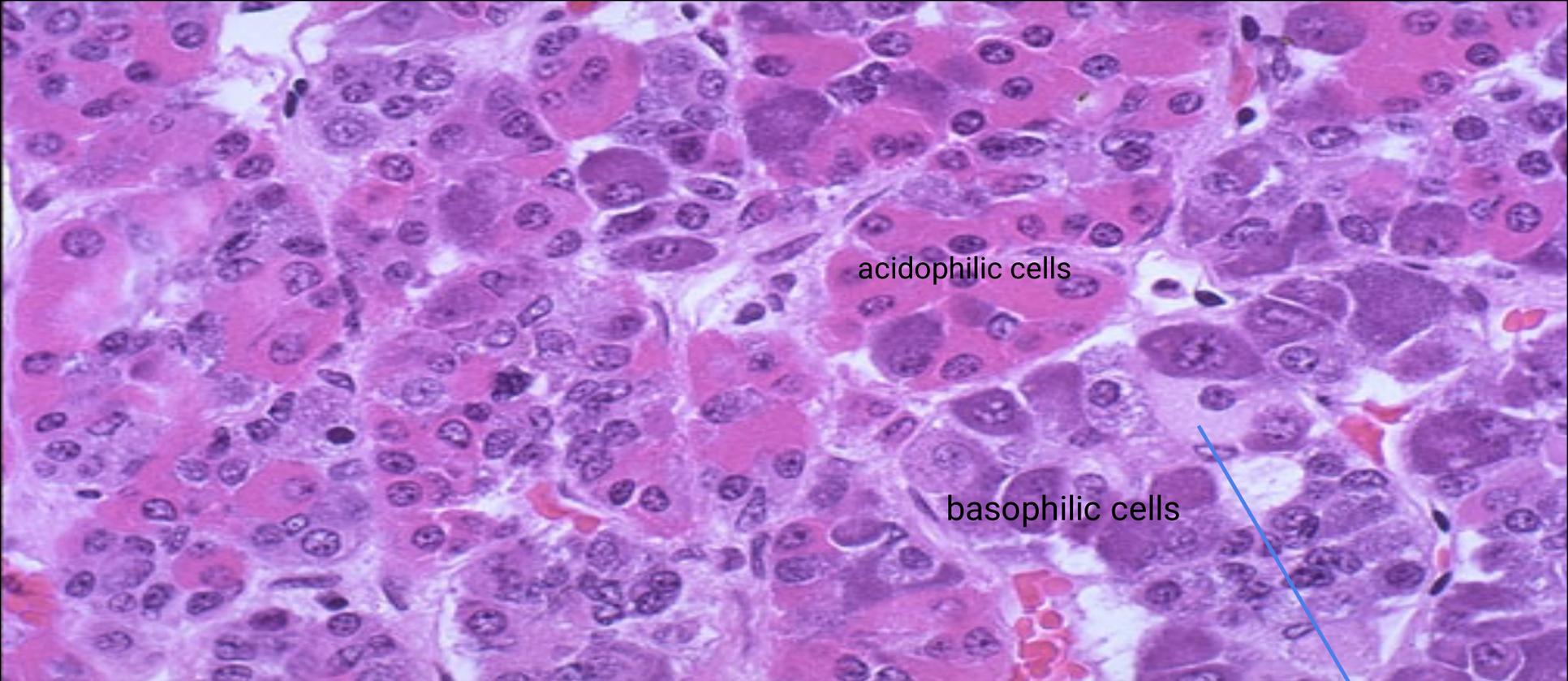
# **PATHOLOGY OF ENDOCRINE SYSTEM**

## **PITUITARY GLAND**

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15-5-2023

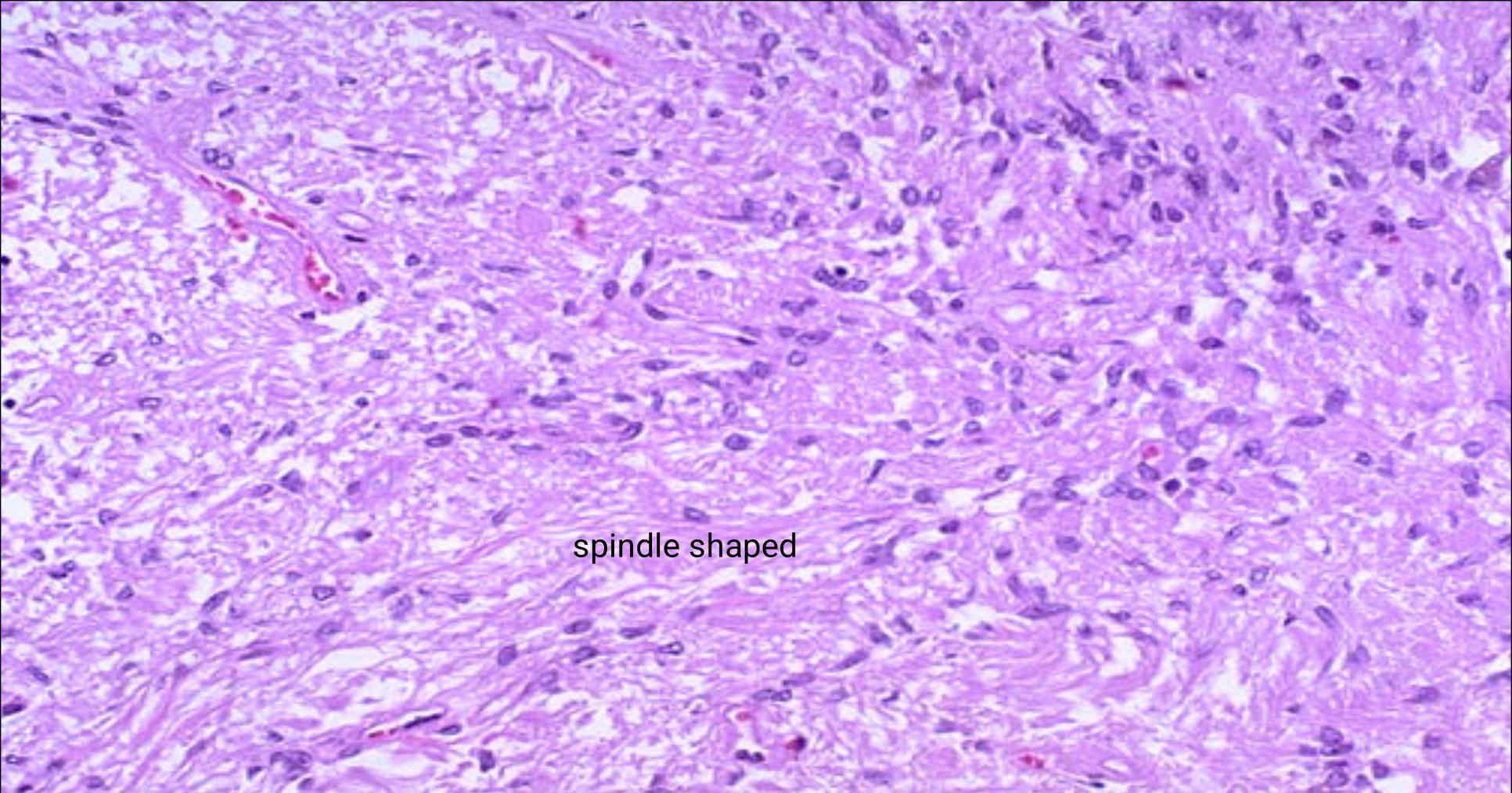




The **pink acidophils** secrete growth hormone (GH) and prolactin (PRL)

The **dark purple basophils** secrete corticotrophin (ACTH), thyroid stimulating hormone (TSH), and gonadotrophins follicle stimulating hormone-luteinizing hormone (FSH and LH) .

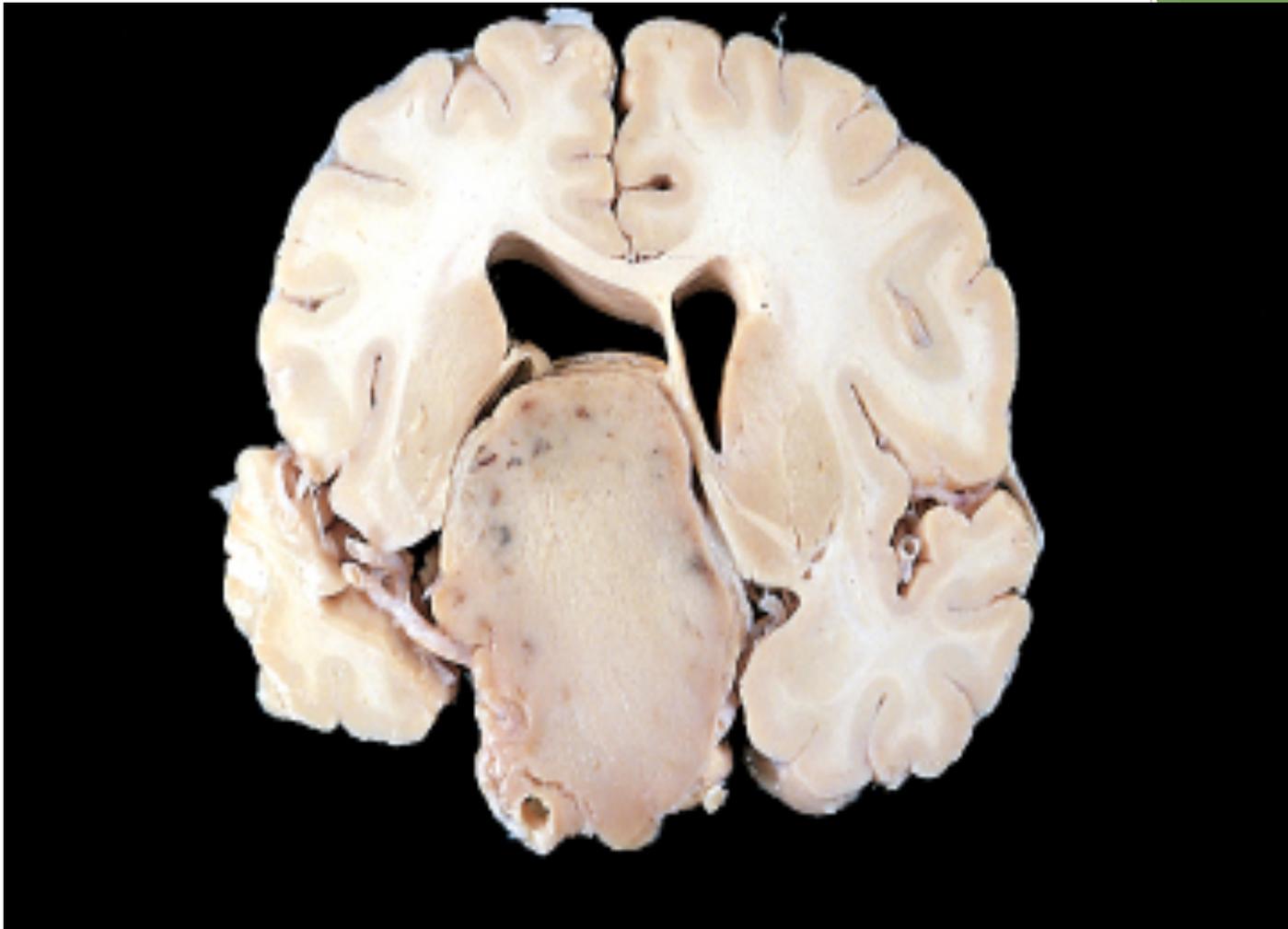
The **pale staining chromophobes** have few cytoplasmic granules, but may have secretory activity.



spindle shaped

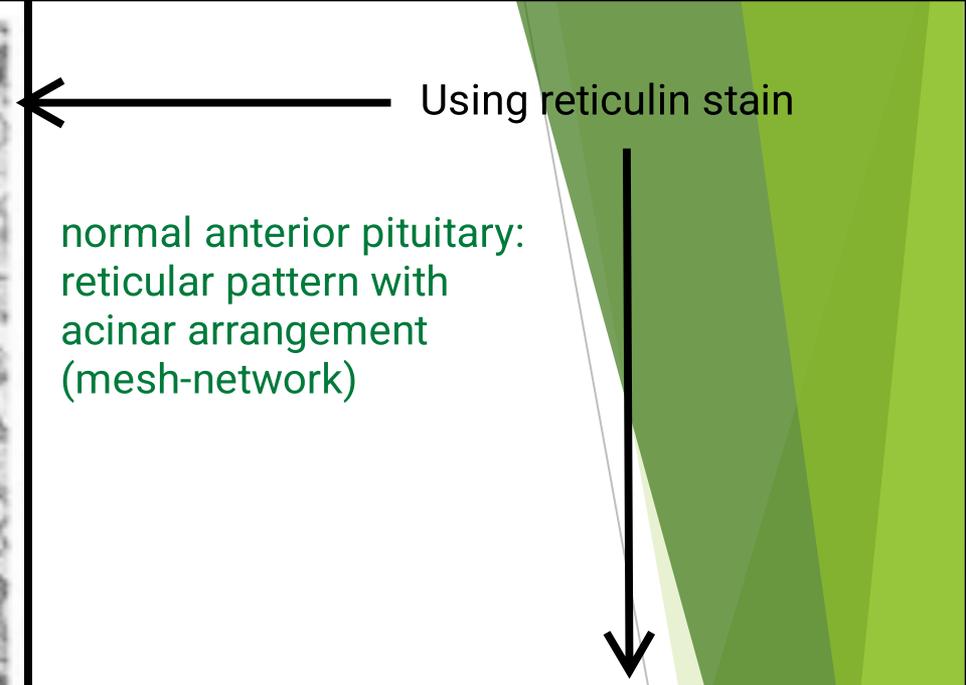
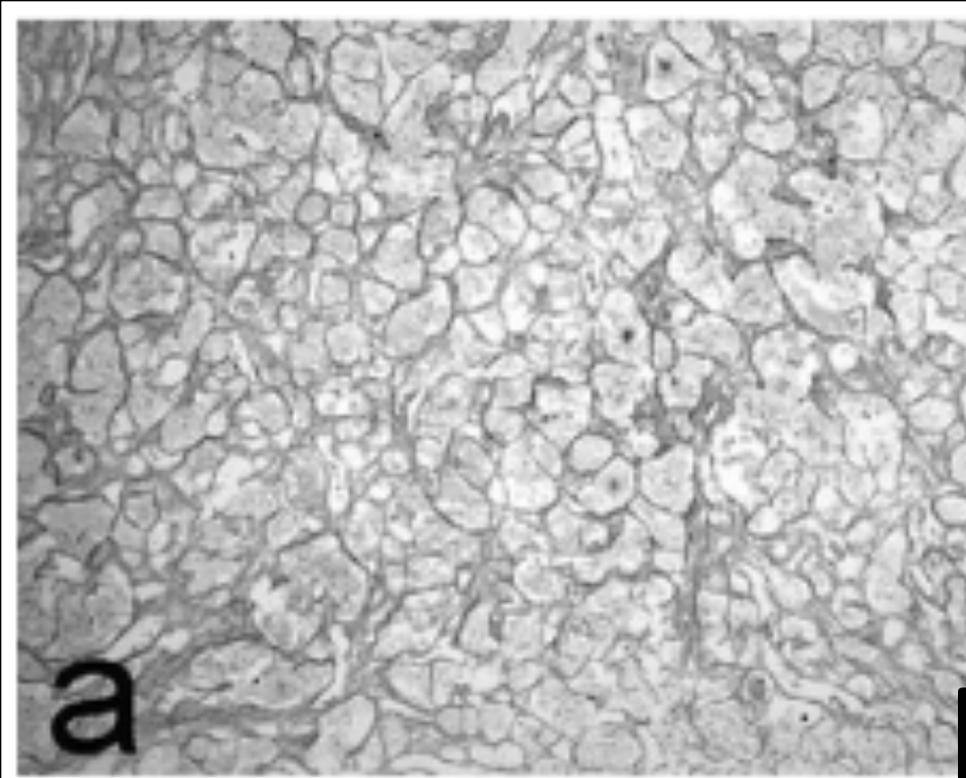
The **neurohypophysis** shown here resembles neural tissue, with glial cells, nerve fibers, nerve endings, and intra-axonal neurosecretory granules.

The hormones **vasopressin** (antidiuretic hormone, or ADH) and **oxytocin** made in the hypothalamus (supraoptic and paraventricular nuclei) are transported into the intra-axonal neurosecretory granules where they are released.



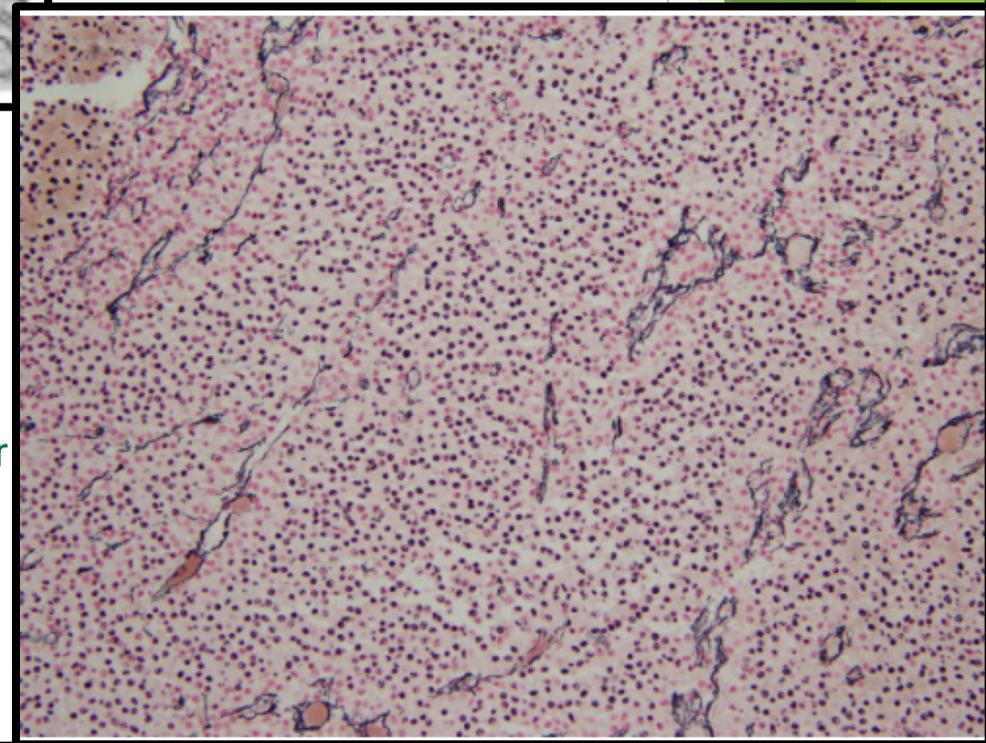
macroadenoma with gross appearance © Elsevier 2005

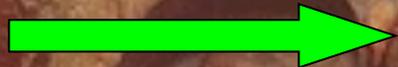
## Mass effect of pituitary adenoma



normal anterior pituitary:  
reticular pattern with  
acinar arrangement  
(mesh-network)

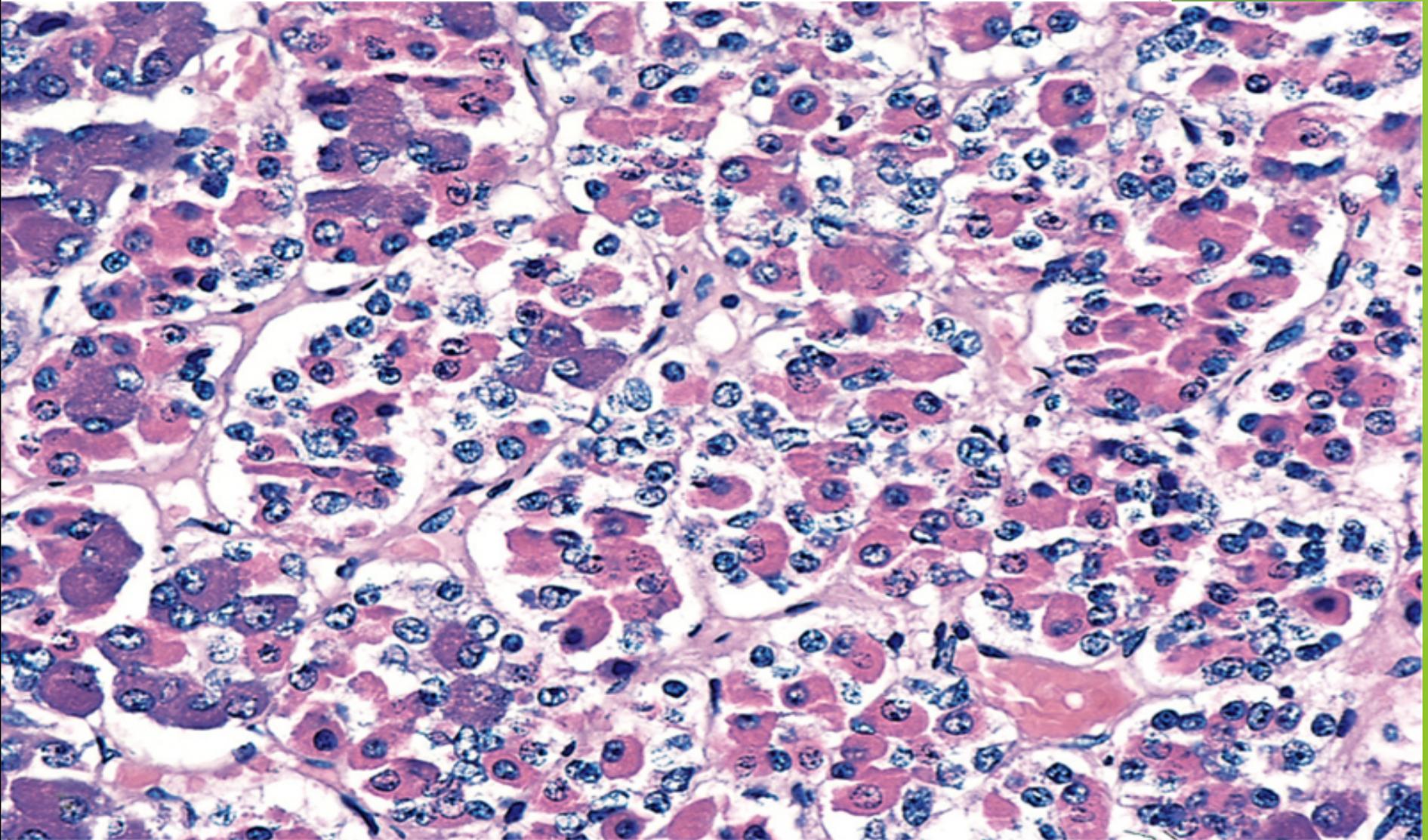
adenoma of anterior pituitary:  
neither acinar arrangement, nor  
reticular pattern  
all cells resemble each other  
(monoclonal cells)  
highly cellular

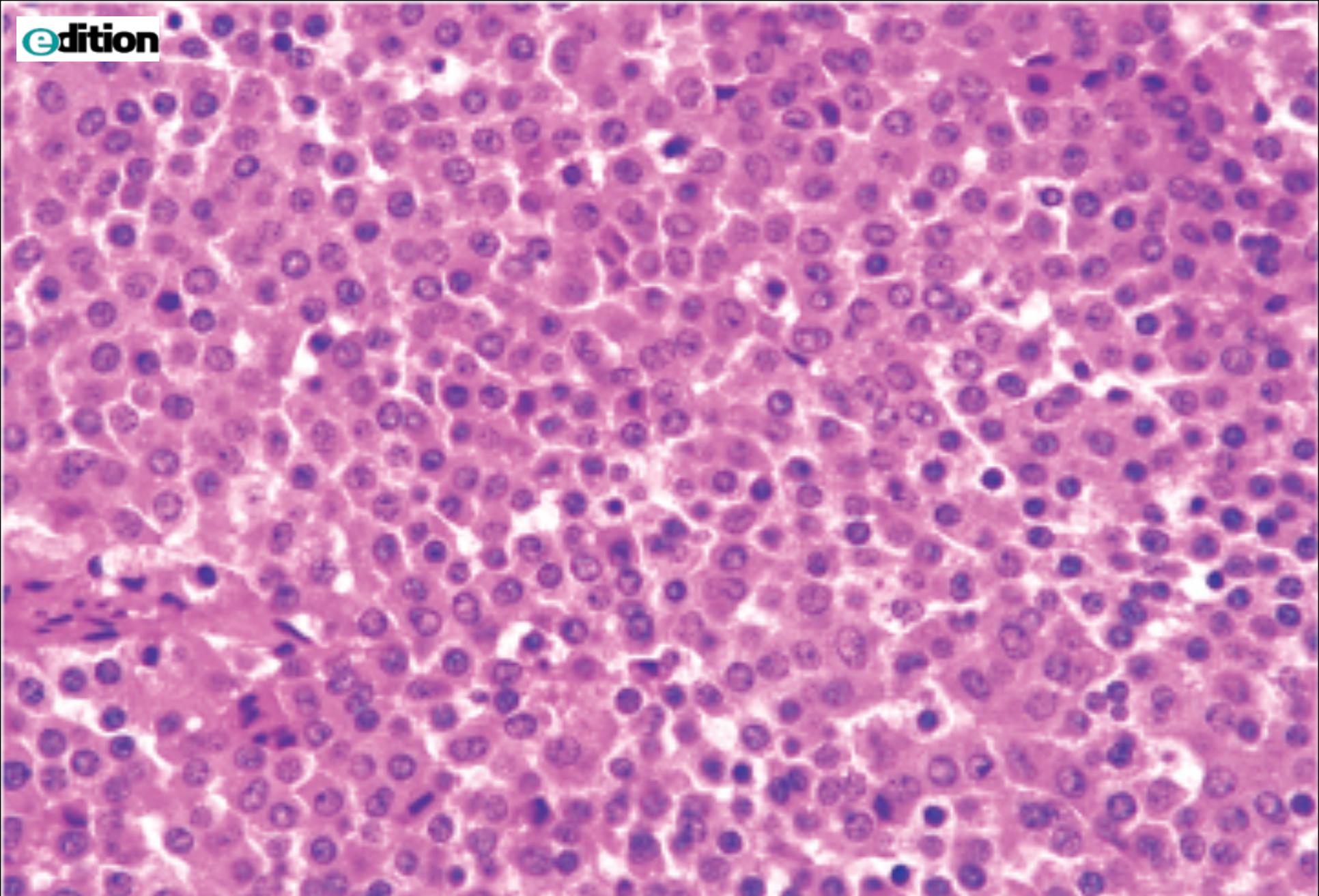




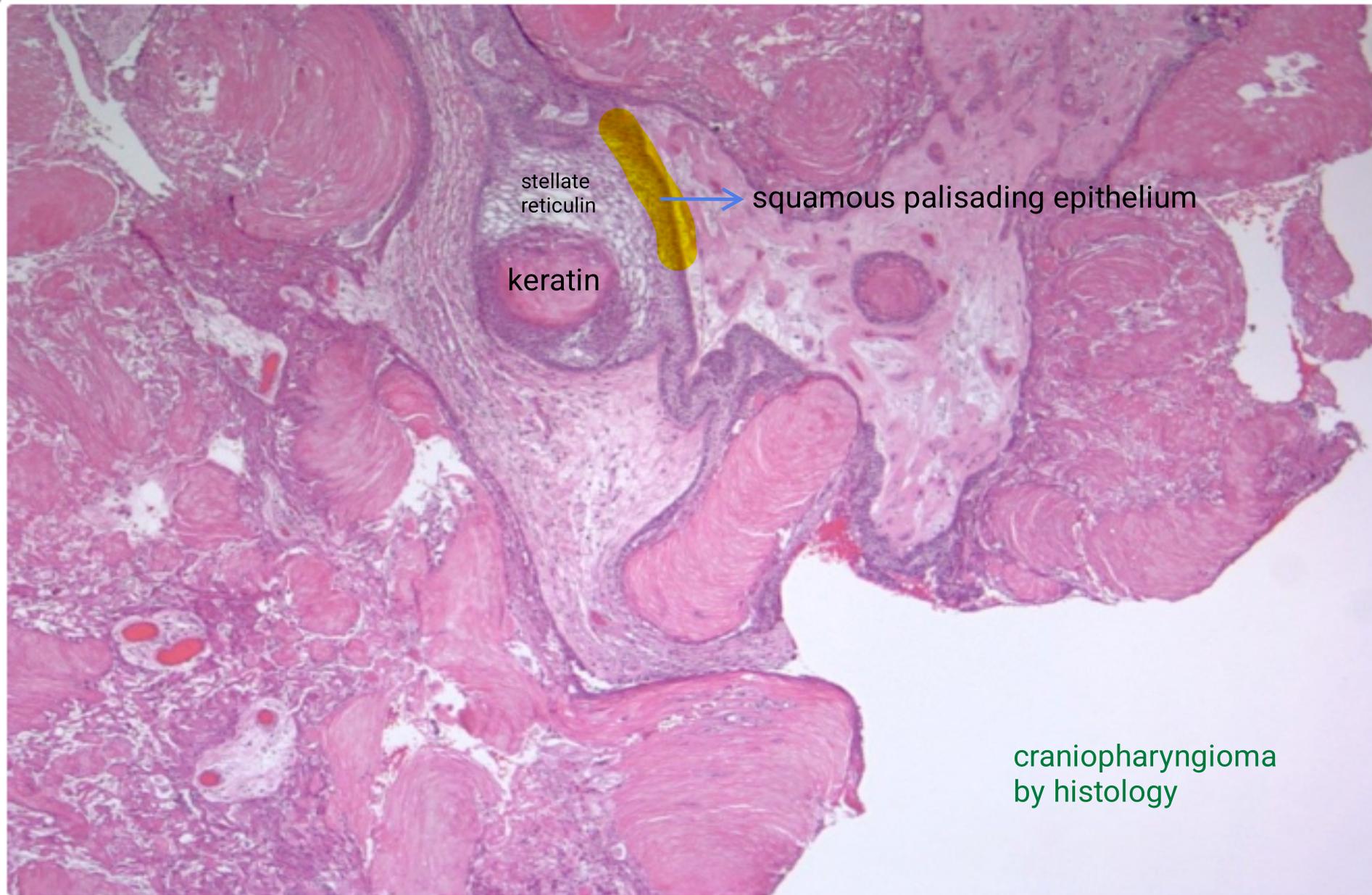
**Sella turcica with pituitary adenoma**

# Normal pituitary gland





**Uniform cells of pituitary adenoma** single cell type (monoclonal)



stellate  
reticulum

squamous palisading epithelium

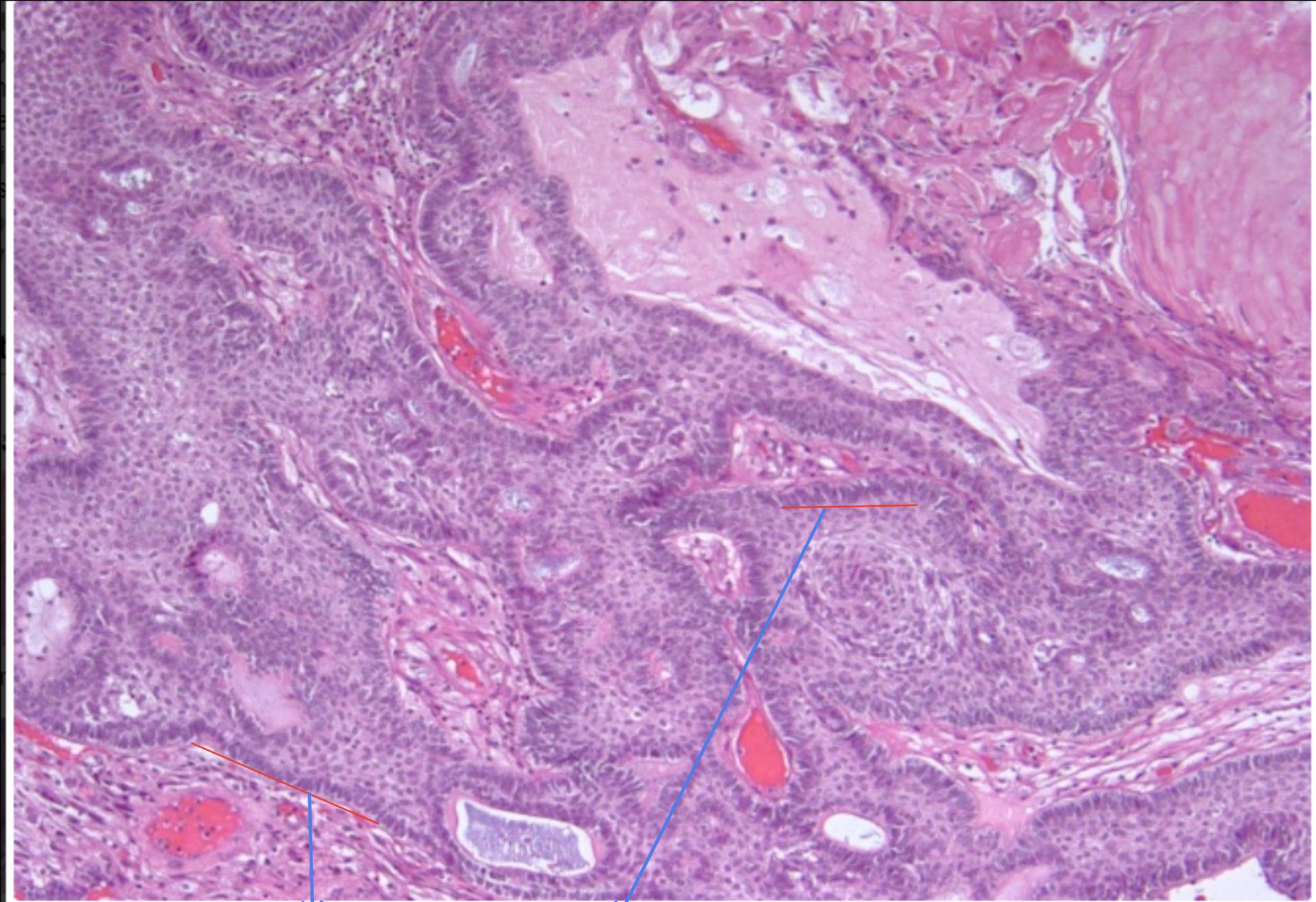
keratin

craniopharyngioma  
by histology

Low power view of all 3 components of the tumor: palisading epithelium, stellate reticulum and wet keratin.

Contributed by Nelli S. Lakis M.D., M.Sc.





**Squamous epithelium with peripheral nuclear palisading.** **Wet keratin** **Cystic degeneration** **Fibrosis** **craniopharyngioma**  
Contributed by Nelli S. Lakis M.D., M.Sc.

