



GROSS AND HISTOLOGIC ANATOMY OF A FEMALE COMMON OCTOPUS (*OCTOPUS VULGARIS*).

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Common octopus are frequently kept in aquaria and identifying anatomy can be challenging. Whole octopus are not regularly submitted for full diagnostic post-mortems examinations (PME). Instead, fixed whole specimens or mixed tissue samples for histopathological assessment are more common, usually from an unknown organ. This poster aims to be a visual aid for PME performed by clinicians or aquarists and provides normal histology for reference.

CNS



Central brain

CNS – Interesting facts:

- Octopuses have 1 brain containing 40% of the total neurons. The rest are found in 8 ganglia, divided between the 8 arms.
- The oesophagus runs through the central brain so food must be finely ground to prevent brain damage.

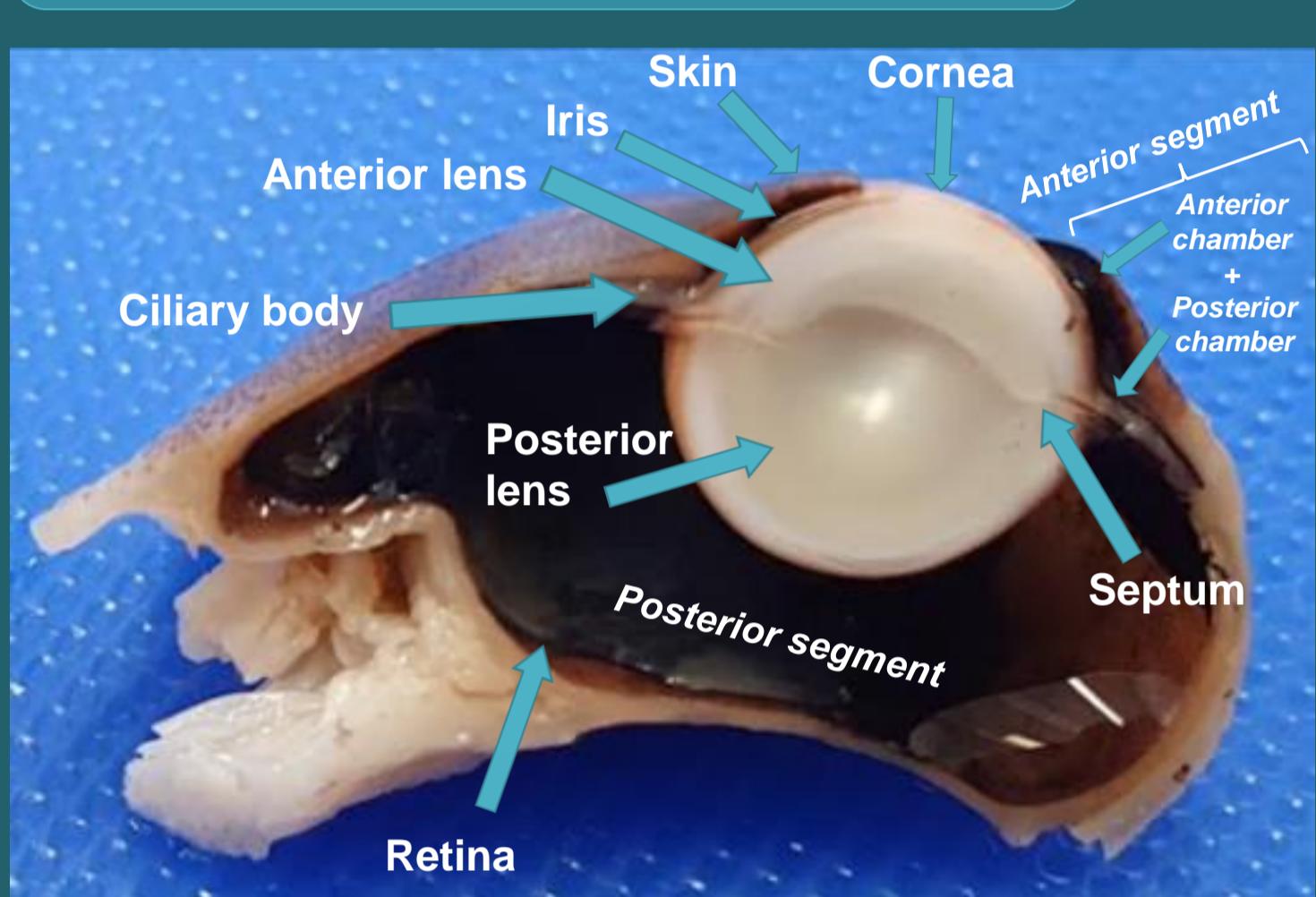


DV view of cephalon organs within a coelomic membrane



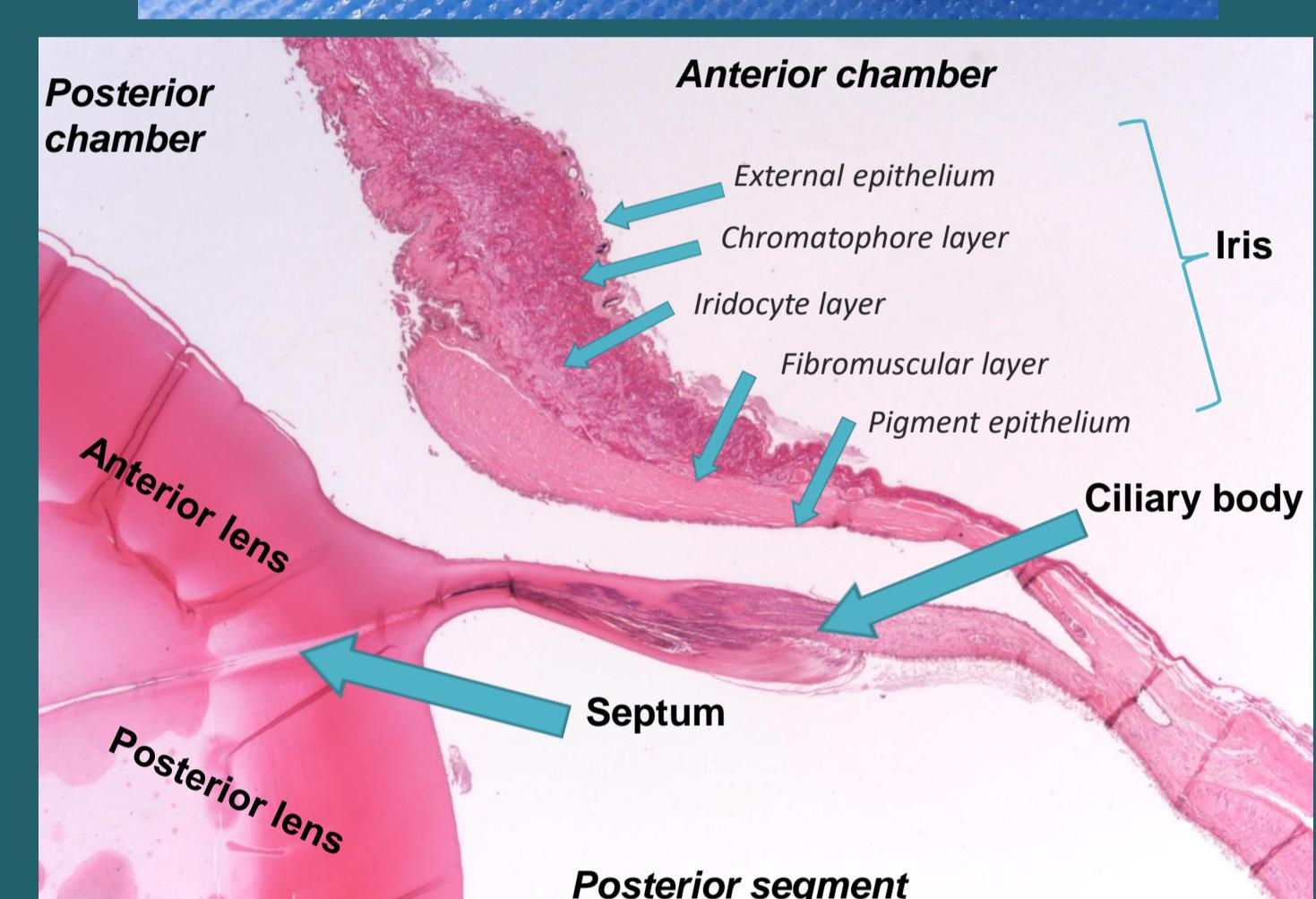
VD view of cephalon organs within a coelomic membrane

Ocular System

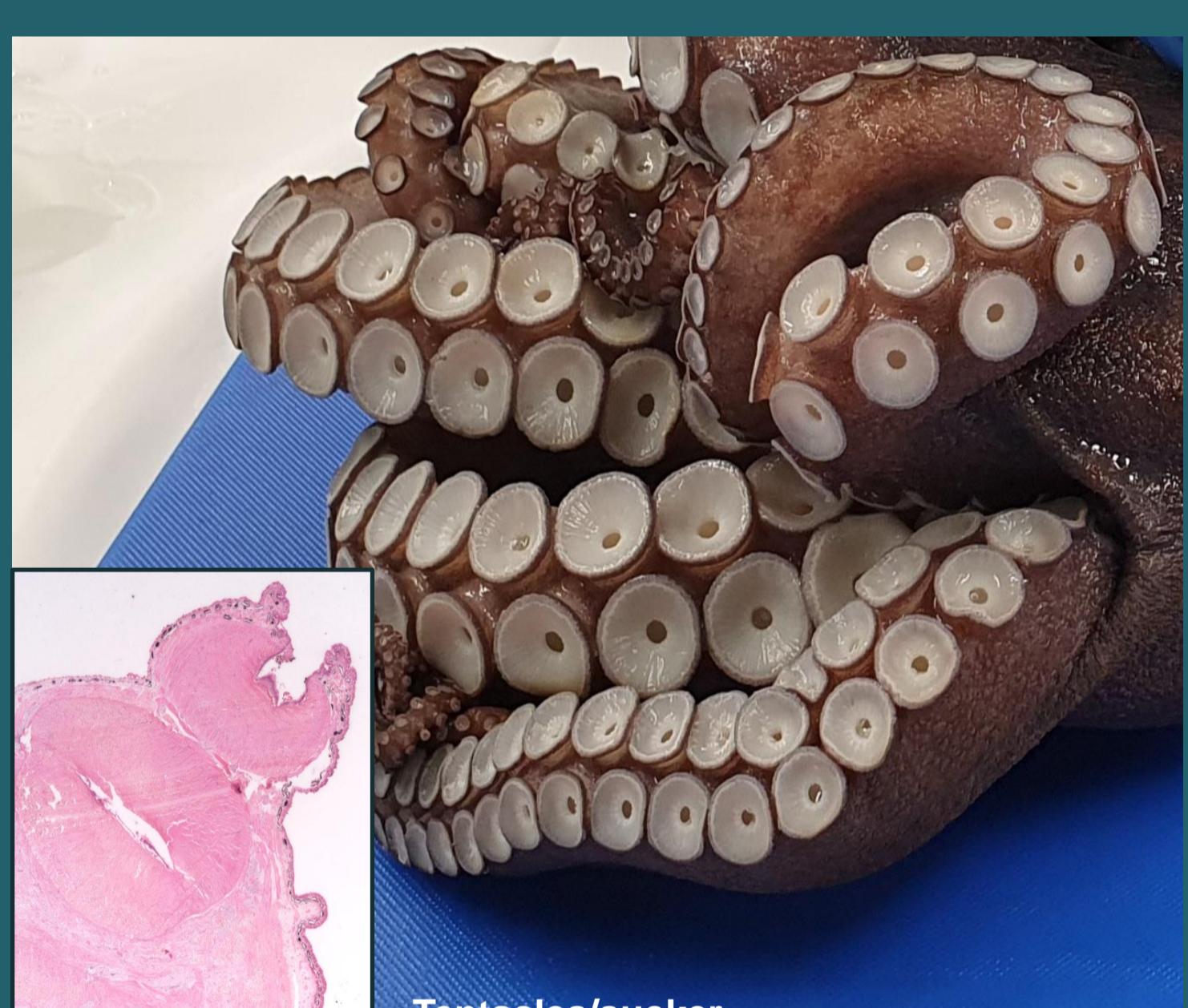


Bisected eye – interesting facts:

- The lens, divided into anterior and posterior parts separated by a septum, is suspended by the ciliary body.
- The layers of the retina are reversed. Unlike the vertebrate eye, photoreceptors are the innermost layer instead of the nerve fibre layer.
- Please note: the anterior surface of the iris and the corneal endothelium are artefactually touching in this specimen.



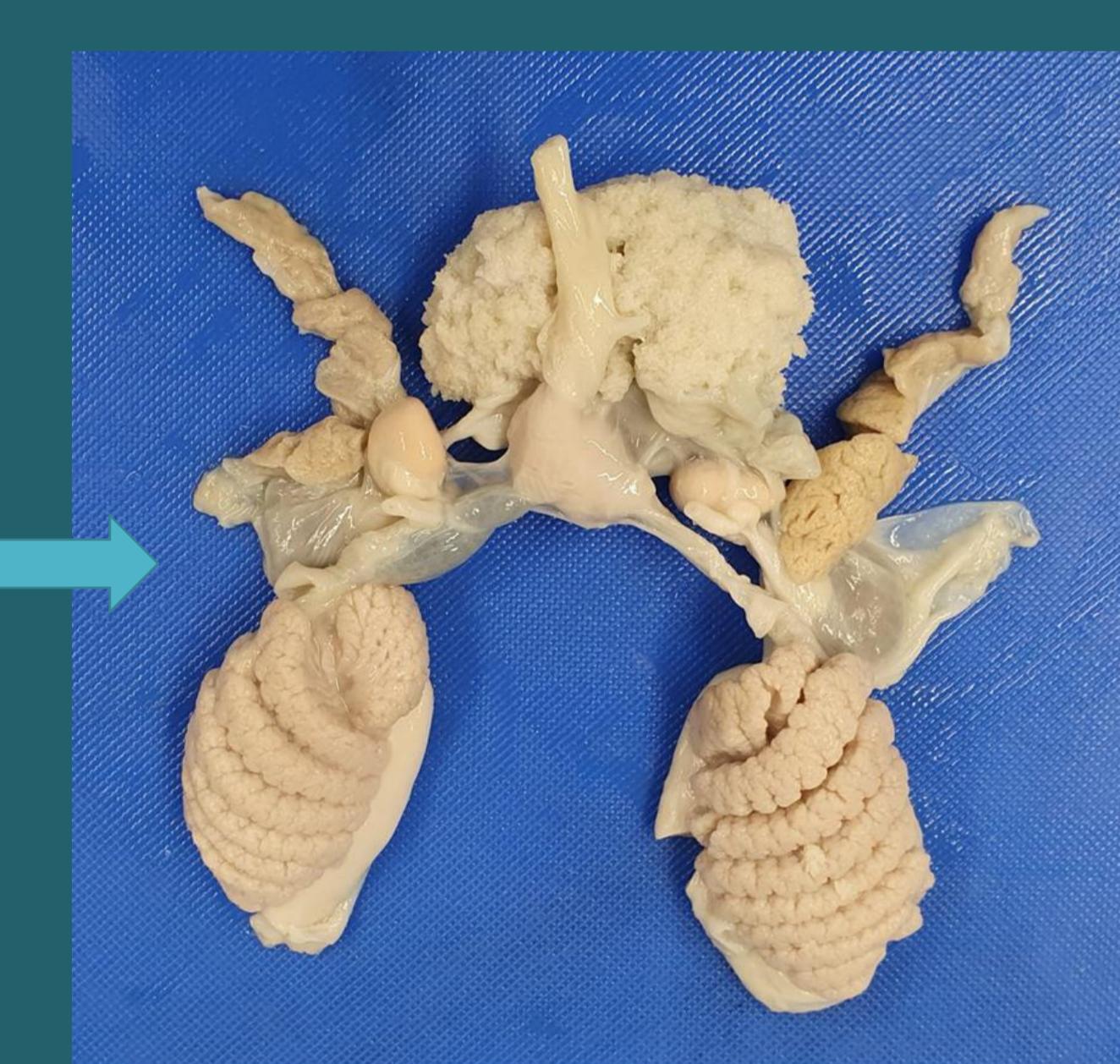
Histology of the iridociliary angle of an *Octopus vulgaris* eye.



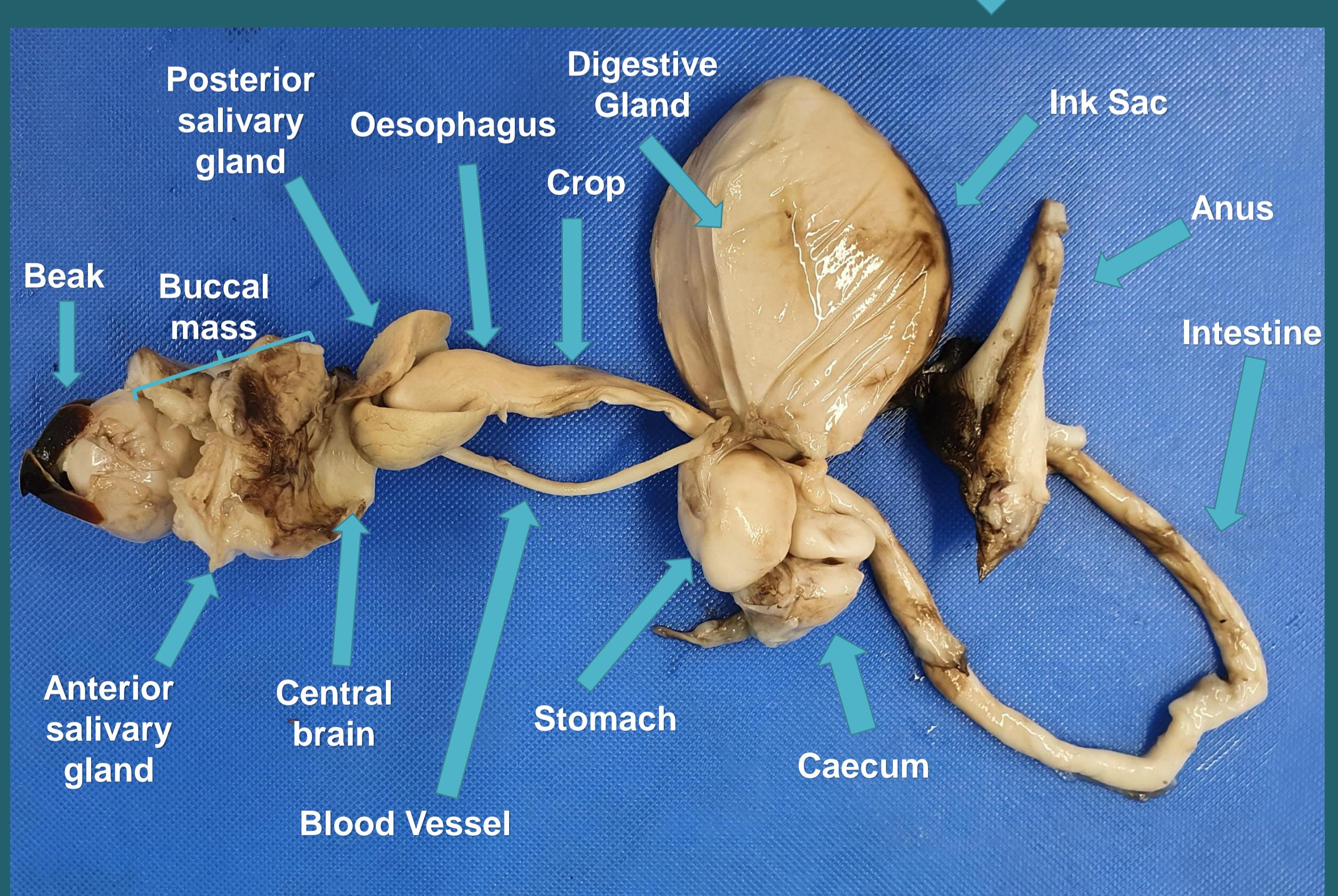
Tentacles/sucker



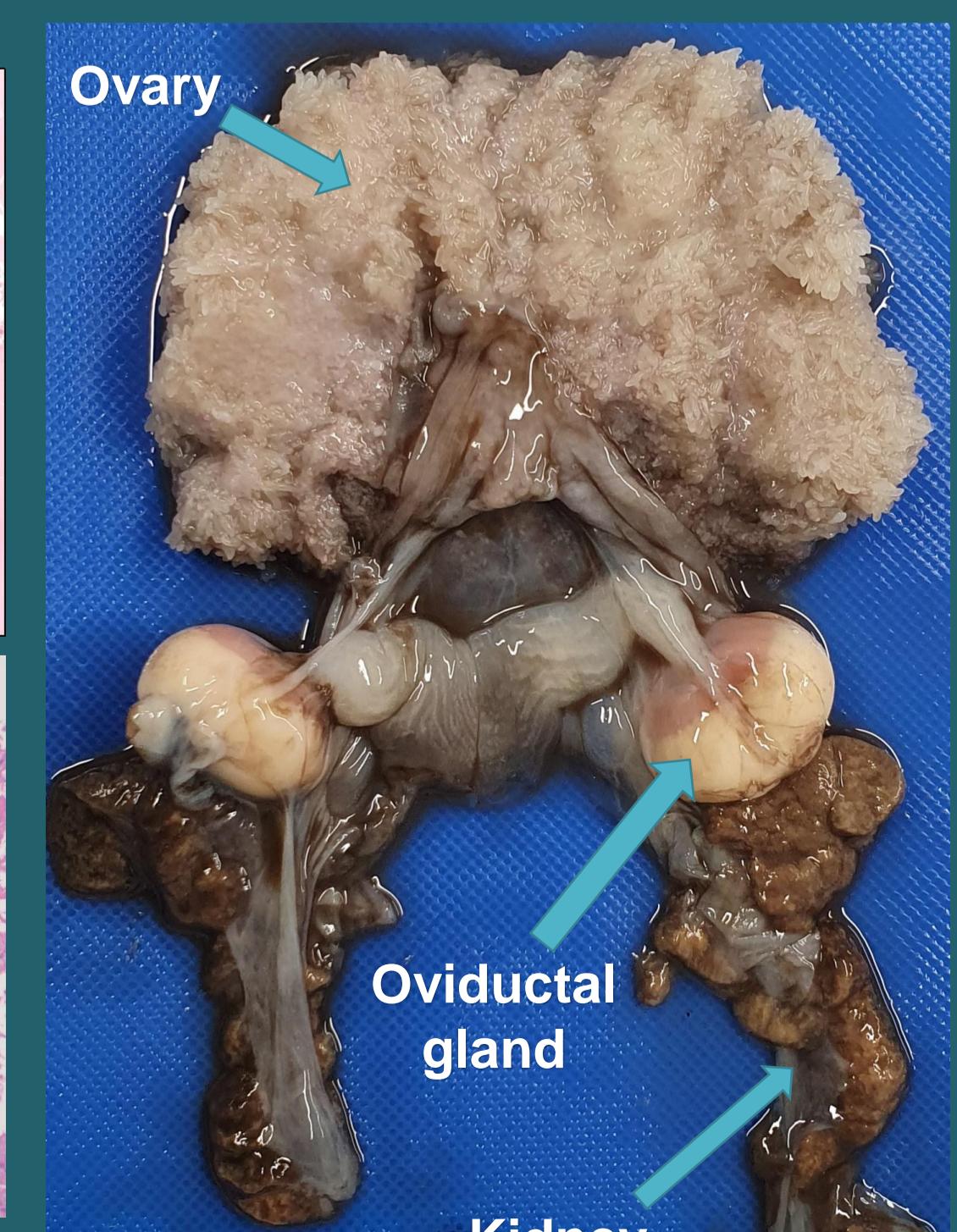
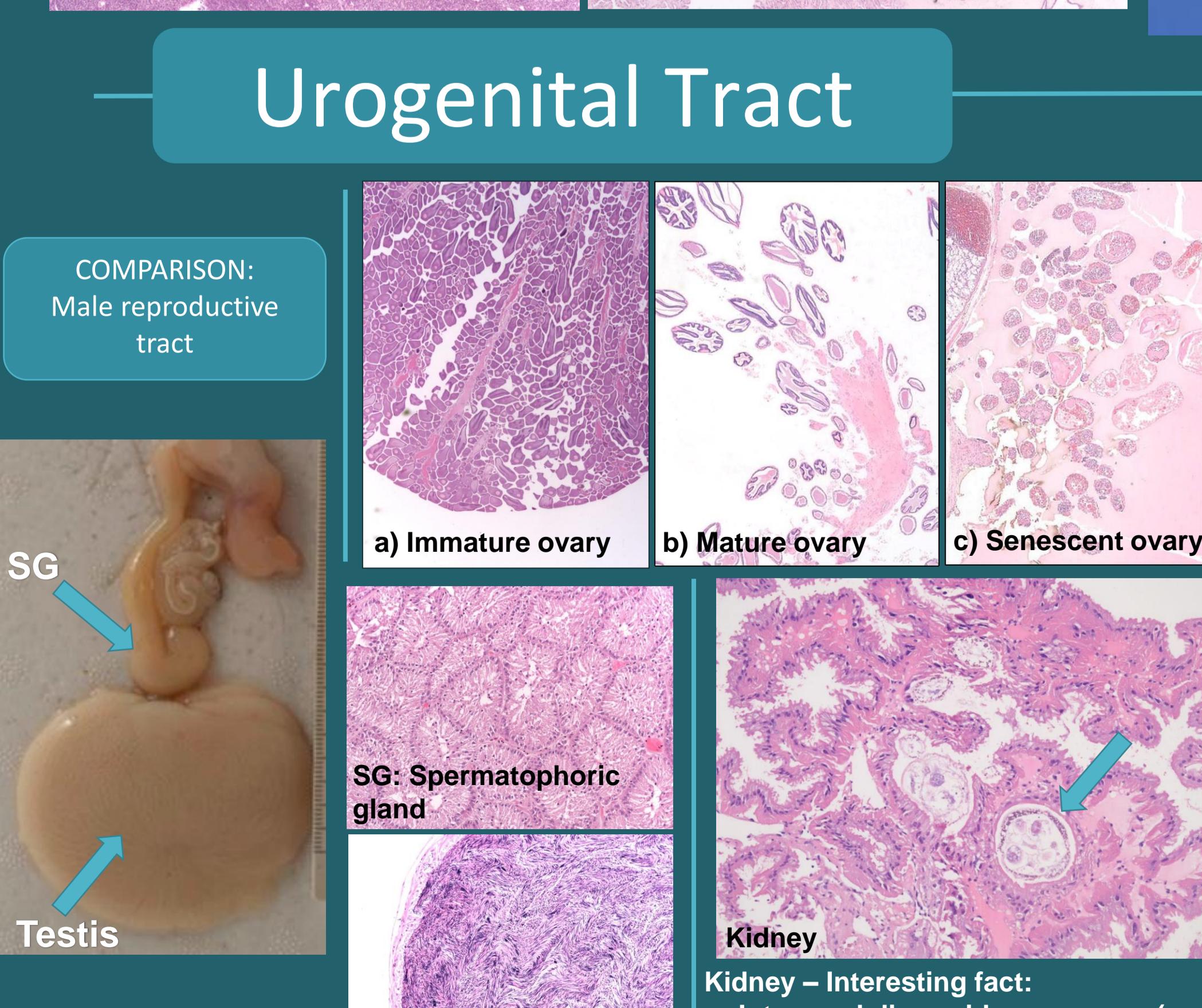
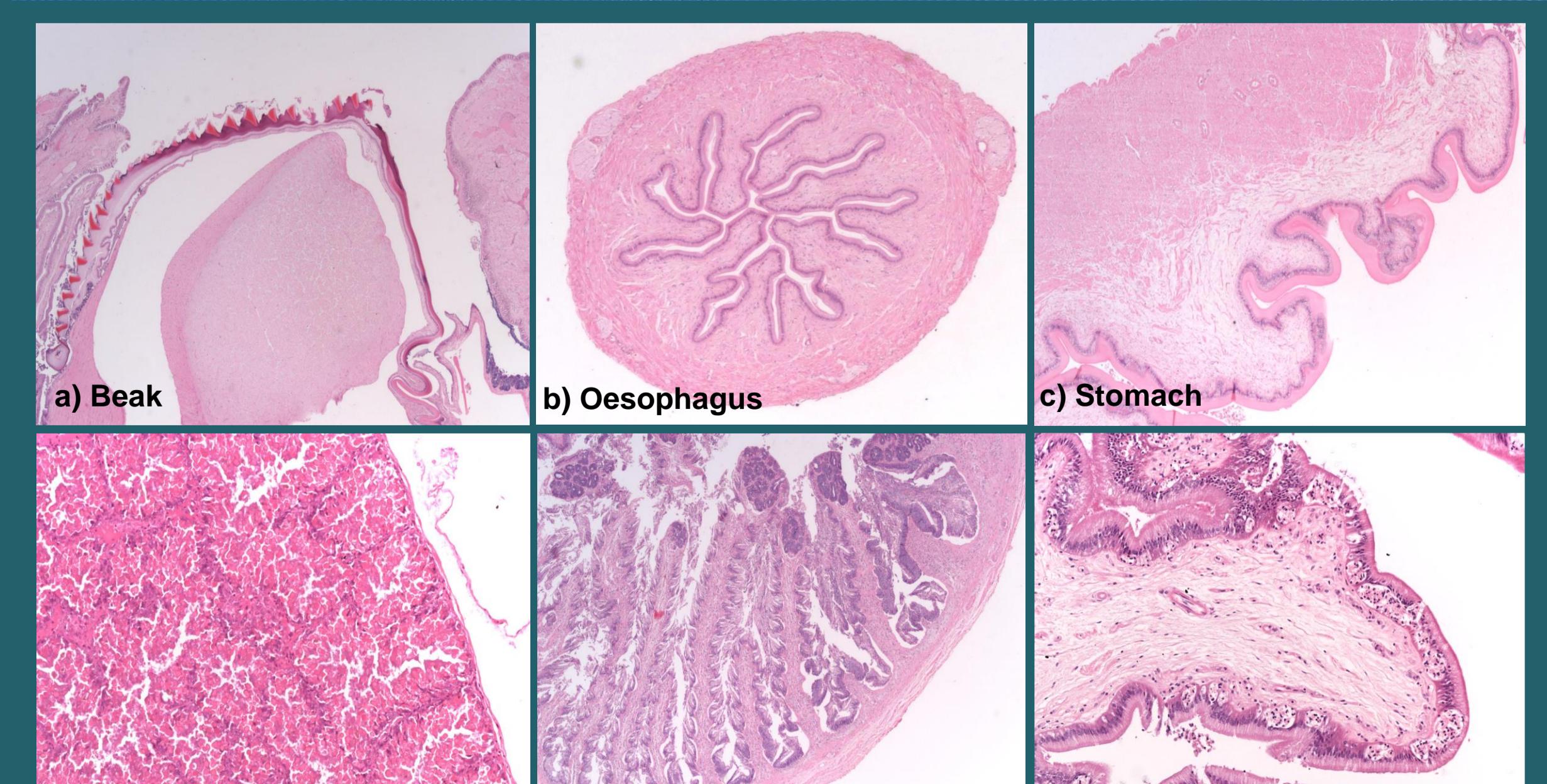
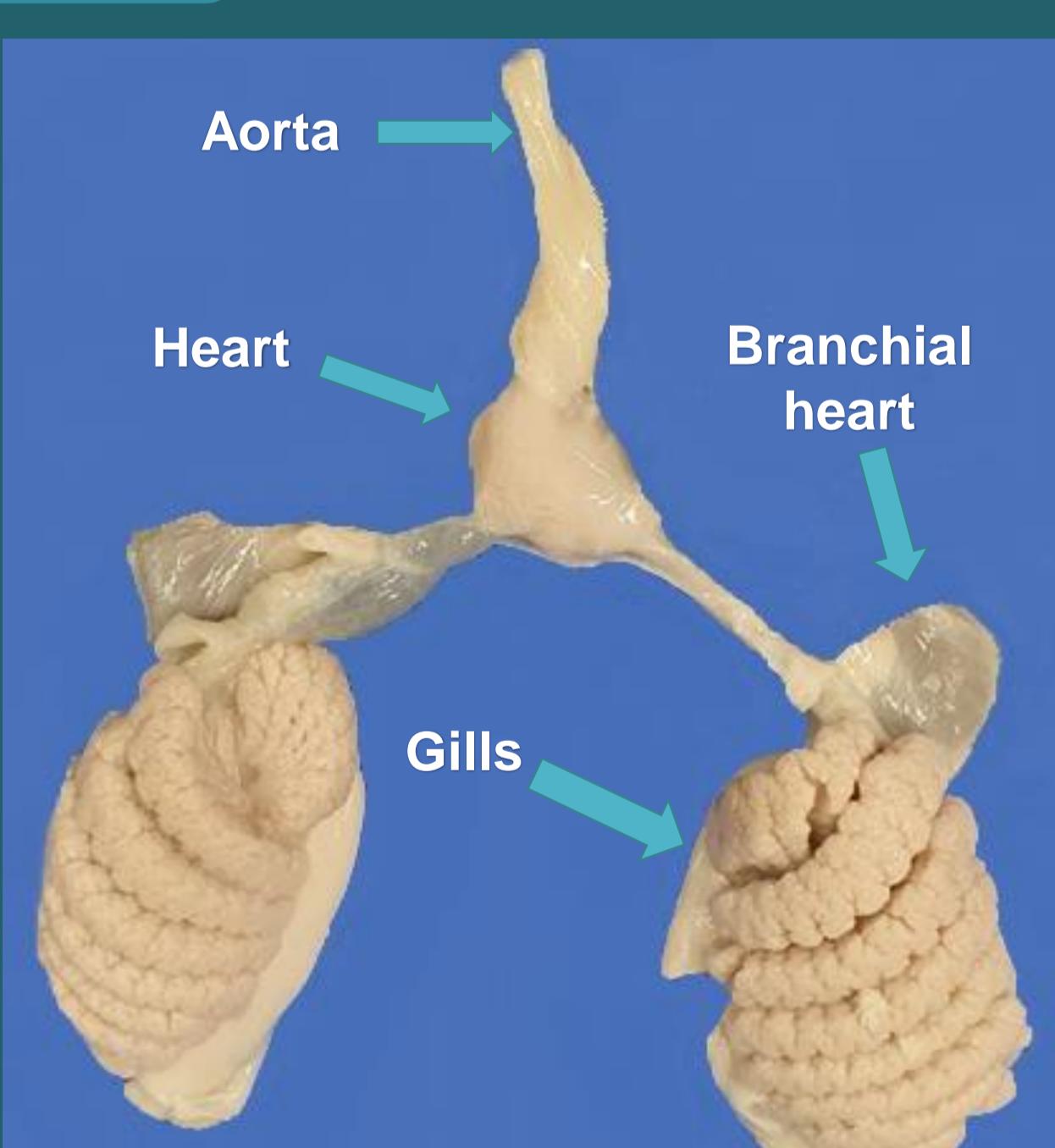
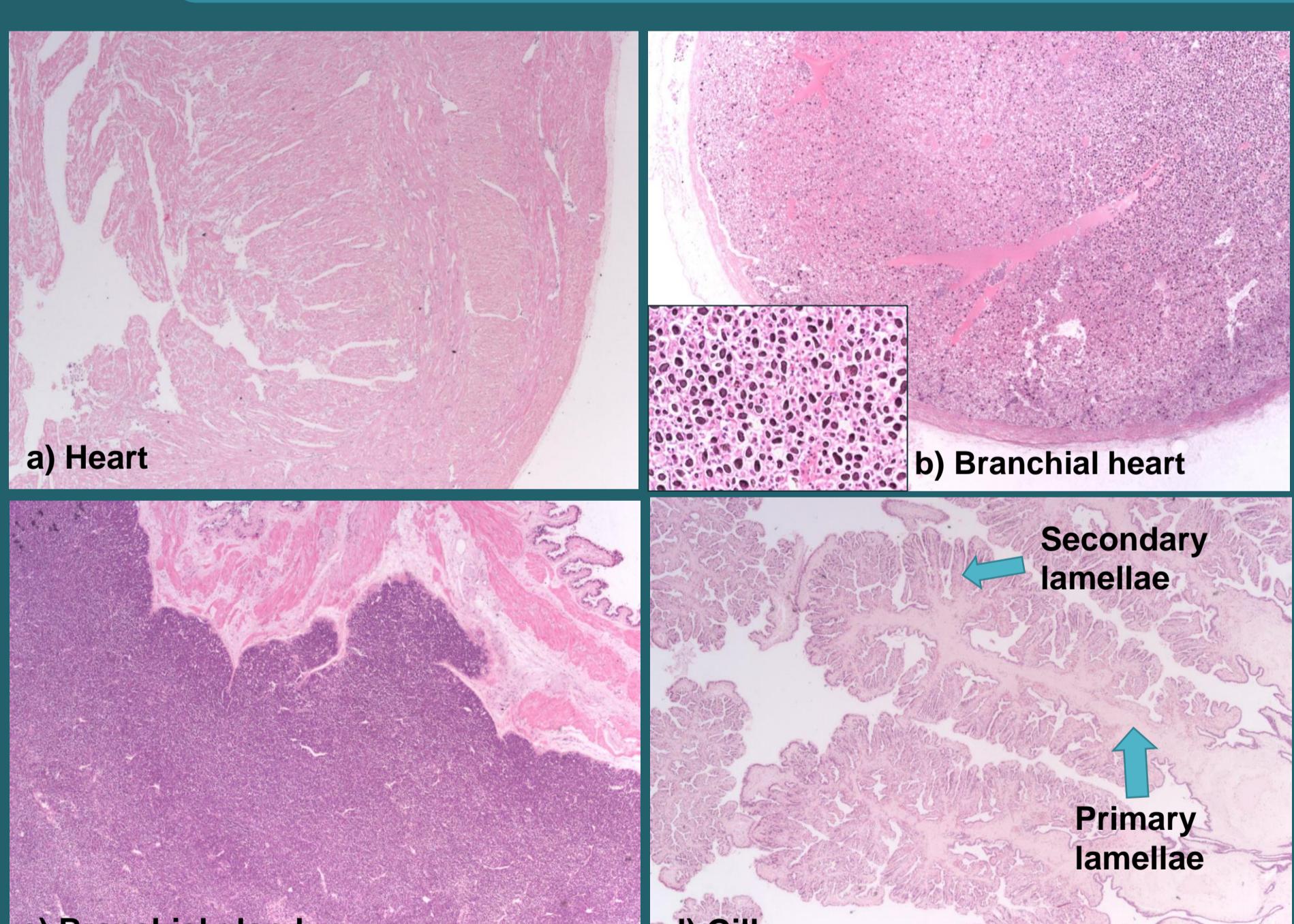
Siphon



Alimentary Tract



Cardiorespiratory System



Urogenital Tract