Specimens submitted (Core)

Reason/Evidentiary Support[1,2]

The pathologist needs to be informed about the nature of surgery (type of specimen) so that their description and dissection are focused on selecting appropriate tissues to guide accurate cancer staging.

The following commentary is intended to assist pathologists to understand the complex anatomy of the larynx and related structures. Anatomical sites and tissue compartments of the larynx are shown in Figures 1 and 2.

The **supraglottis** includes the epiglottis, aryepiglottic fold (laryngeal aspect), arytenoid, ventricular bands (false cords) and laryngeal ventricles.

The **glottis** extends from the ventricle to approximately 1.0 cm below the free level of the true vocal cord and includes the vocal cords, anterior commissure and posterior commissure.

The **subglottis** extends from approximately 1.0 cm below the level of the true vocal cord to the inferior rim of the cricoid cartilage.

Note that transglottic carcinomas cross the ventricles in a vertical direction arising in either the glottic and/or supraglottic larynx.

The **hypopharynx** is the part of the pharynx extending from the plane of the superior border of the hyoid bone (or floor of the vallecula) to the plane corresponding to the lower border of the cricoid cartilage. The contents of the hypopharynx include:

- left and right piriform sinuses which expand bilaterally and forward around the sides of the larynx and lie between the larynx and the thyroid cartilage
- lateral and posterior hypopharyngeal walls
- postcricoid region extending from the level of the arytenoid cartilages to the inferior border of the cricoid cartilage.

The **paraglottic space** is a potential space antero-lateral and deep to the ventricles and saccules, and filled with adipose tissue and connective tissue (Figure 1). It is bounded by the conus elasticus inferiorly, the thyroid cartilage laterally, the quadrangular membrane medially, and the piriform sinus posteriorly.

The **pre-epiglottic space** is anterior to the base of the epiglottis and filled with adipose tissue and connective tissue (Figure 2); it is triangular in shape and is bounded by the thyroid cartilage and thyrohyoid membrane anteriorly, the epiglottis and thyroepiglottic ligament posteriorly, and the hyoepiglottic ligament at its base (Figures 1 and 2).

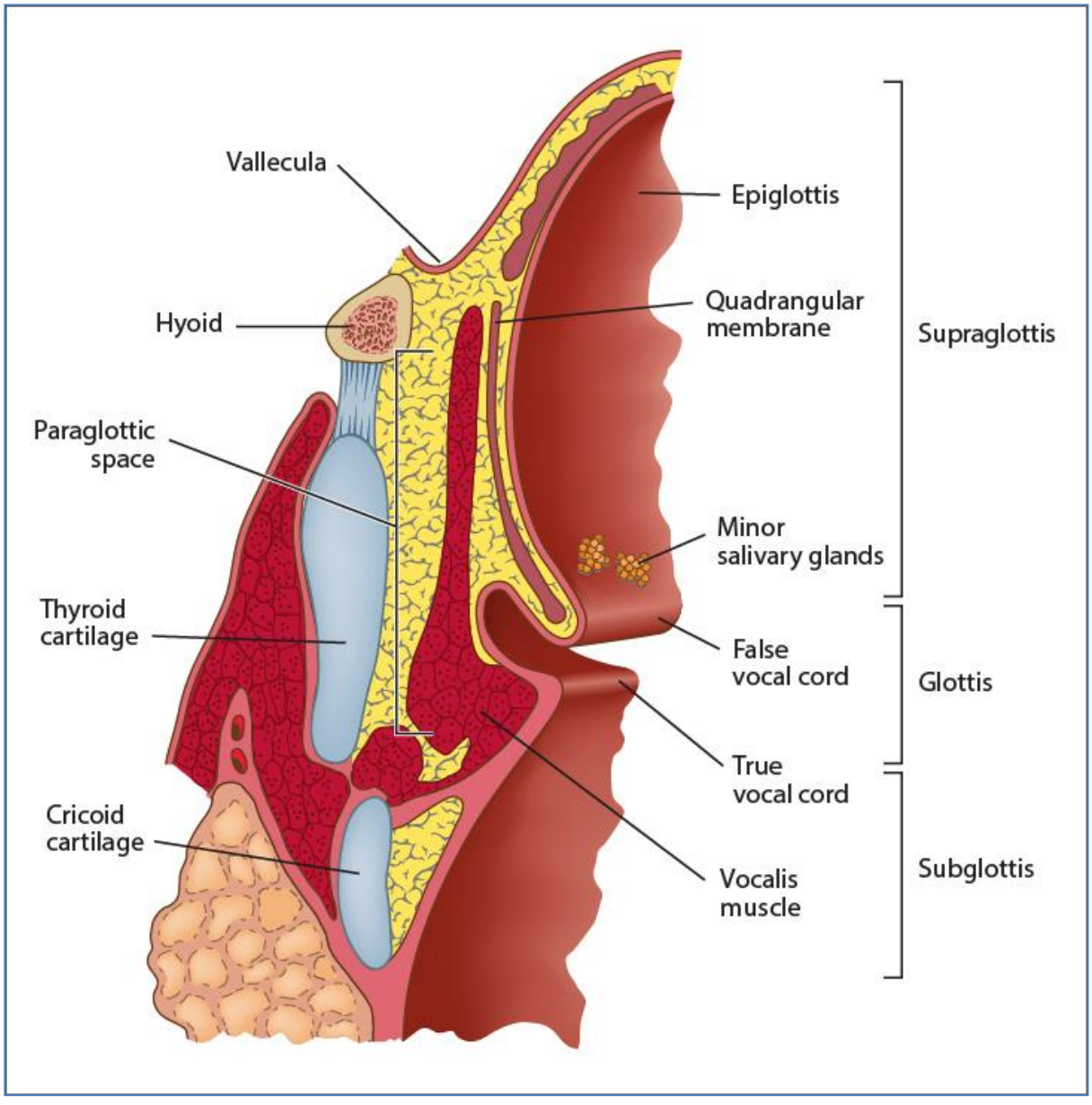

Figure 1. Coronal section through the larynx to show the main structures and paraglottic space

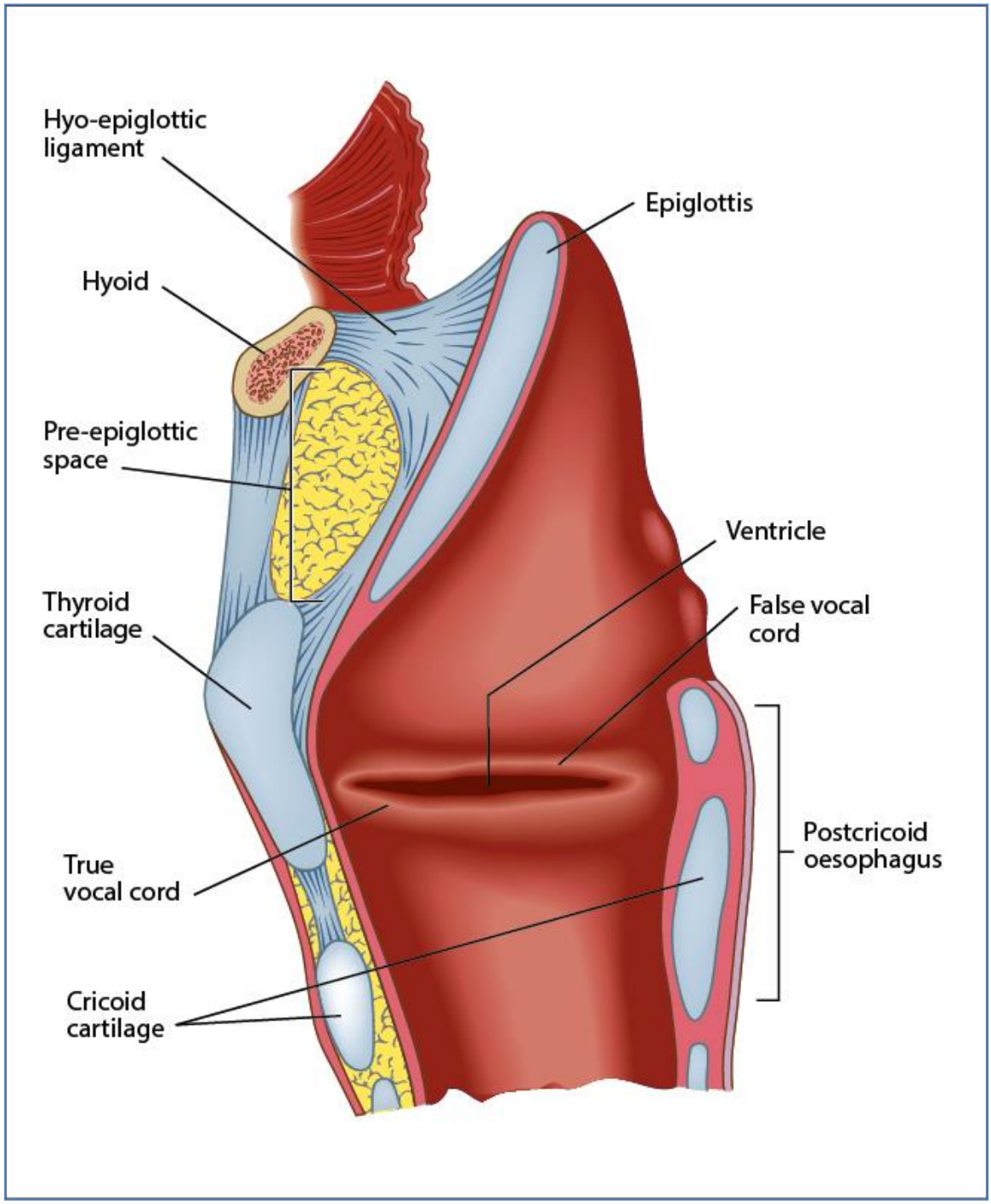

Figure 2. Sagittal section through the larynx to show main structures and the pre-epiglottic space

References

1 Helliwell TR (2000). ACP Best Practice No 157. Guidelines for the laboratory handling of laryngectomy specimens. *J Clin Pathol* 53(3):171-176.

2 RCPA (The Royal College of Pathologists of Australasia). Macroscopic Cut-up Manual. Available from: http://www.rcpa.edu.au/Library/Practising-Pathology/Macroscopic-Cut-Up/Specimen/Head-and-neck/Larynx (Accessed 7th August 2017).