**Anatomy of the Larynx**

The larynx is a musculocartilagenous organ that is defined by its division into the trachea and the oesophagus. It is suspended from the hyoid apparatus and found partially in the rami of the mandible and extends into the neck caudally.

The function of the larynx is to act as a passage for air during respiration and increasing intra-abdominal pressure. Another crucial function of the larynx is the protection of the trachea from the entry of food material that can lead to fatal aspiration pneumonia. This occurs via the rostral movement of the larynx causing the epiglottis to close and the solid material to be guided into the oesophagus by the pharyngeal muscles. Fluids orally consumed are also deflected by the epiglottis. The laryngeal folds are also responsible for vocalization.

**Cartilages of the Larynx**

Thyroid cartilage – hyaline cartilage that articulates with the hyoid bone and the cricoid cartilage

Cricoid cartilage – hyaline cartilage articulating with the thyroid cartilage; it has facets for the arytenoid cartilages by the formation of a crest on the midline of their dorsal surface

Arytenoid cartilage – paired hyaline cartilage that articulates with the rostral part of the cricoid cartilage; possesses a vocal process for the attachment of the vocal folds, a corniculate process that extends dorsomedially and a muscular process that extends laterally.

Interarytenoid cartilage – a very small button of hyaline cartilage located between the arytenoid cartilages dorsally

Epiglottic cartilage – a body of elastic cartilage comprised of two main parts: a stalk-like part attached to the basihyoid bone, the body of the thyroid cartilage and the root of the tongue and a blade-like part that points dorso-rostrally and lies behind the soft palate

Cuneiform process – Elastic cartilage that supports the mucosal folds from the epiglottis to the arytenoid cartilages; found to be free or fused with the epiglottic cartilages and even absent in some species

**Innervation of the Larynx**

The larynx is innervated by branches of cranial nerve 10 (CN X), the vagus nerve. The caudal (or recurrent) laryngeal nerve innervates the intrinsic muscles located in the larynx except the cricothyroid muscle. The cranial laryngeal nerves is associated with the mucosa internally and the cricothyroid muscle externally.

**Musculature of the Larynx**

\* Cricothyroid muscle - causes tension of the vocal folds by the caudal movement of the cricoid and arytenoid cartilages

\*\*Dorsal cricoarytenoid muscle – this muscle abducts the vocal process, leading to the widening of the glottis; it runs from the dorsal surface of the cricoid cartilage to the arytenoid cartilage

\*\*Lateral cricoarytenoid muscle – adducts the vocal processes and narrows the glottis

\*\*Thyroarytenoid muscle – Responsible for the change in tension of the vocal and vestibular folds, running from the floor of the larynx to the thyroid and arytenoid cartilages; also forms part of the muscular sphincter arrangement

\*\*Transverse arytenoid muscle – located along the entire body of arytenoid cartilages and completes the muscular sphincter arrangement

\* - innervated by the cranial laryngeal nerve branch of the vagus nerve

\*\*- innervated by the caudal (recurrent) laryngeal nerve branch of the vagus nerve