

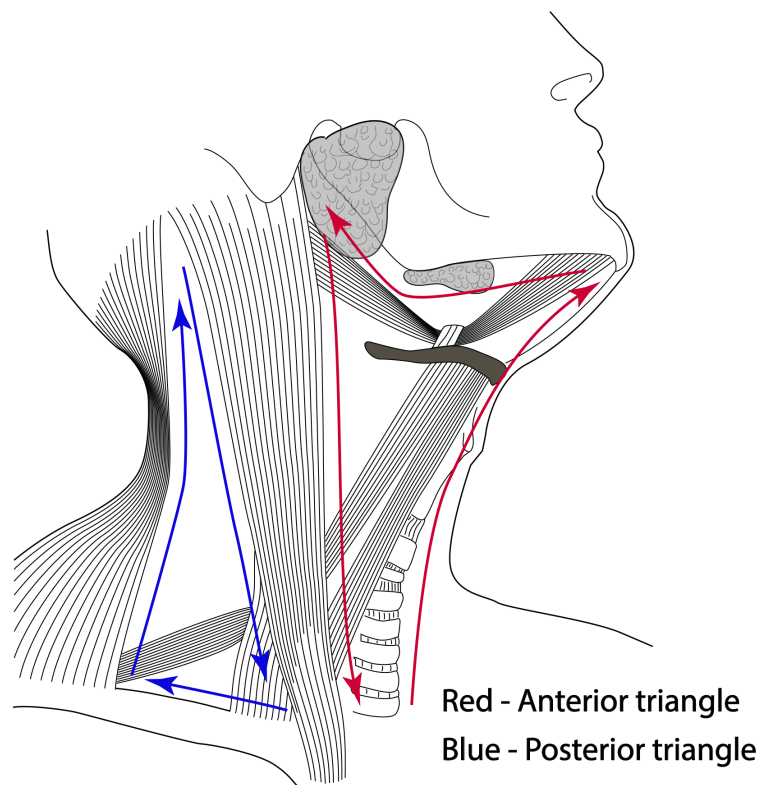


# Surface Anatomy of the Neck

## The Great Triangles of the Neck

The anterior aspect of the neck is bordered by the body and angles of the mandible superiorly and sternal notch and clavicles inferiorly. The neck has no lateral border and is continuous however inferior laterally the trapezius muscles borders with the shoulders.

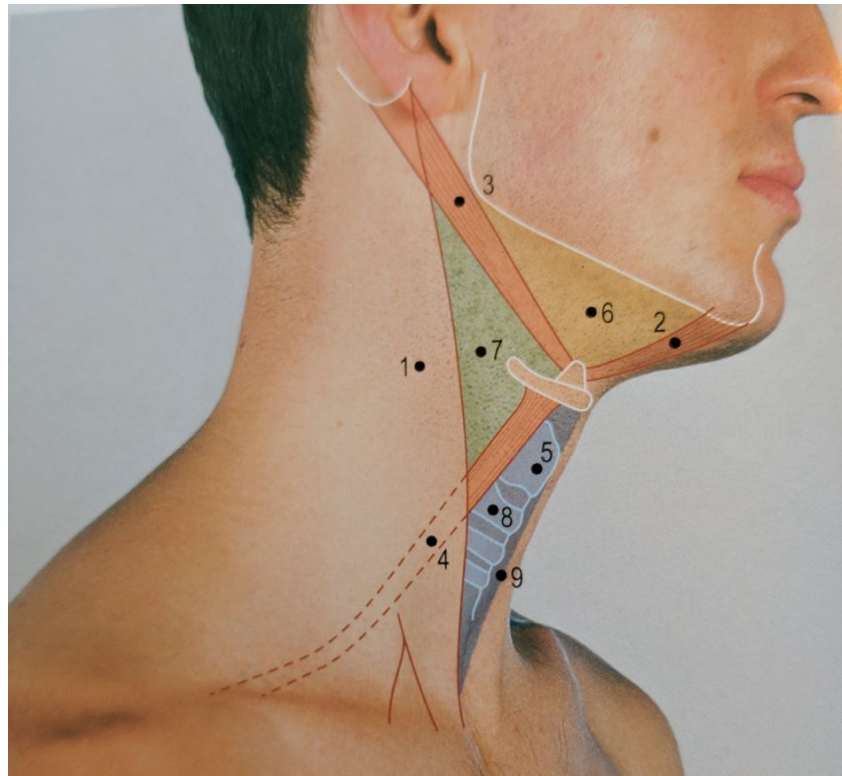
The sternocleidomastoid muscle (SCM) attaches to the mastoid bone and superior nuchal line of the skull. The muscle divides the neck into the anterior and posterior triangles as it passes through the neck on its course to its inferior attachment, the sternal and clavicular heads.



## Anterior triangle and its contents

The anterior triangle is bordered by the midline of the neck anteriorly and by the anterior border of the SCM posteriorly. Superiorly lies the mandible. The anterior triangle can be further divided into zones I – IV & VI. These zones can be used as a method to describe exactly where in the neck a pathology is located.

The diagram below demarcates the important surface anatomy of the anterior triangle and its associated structures.



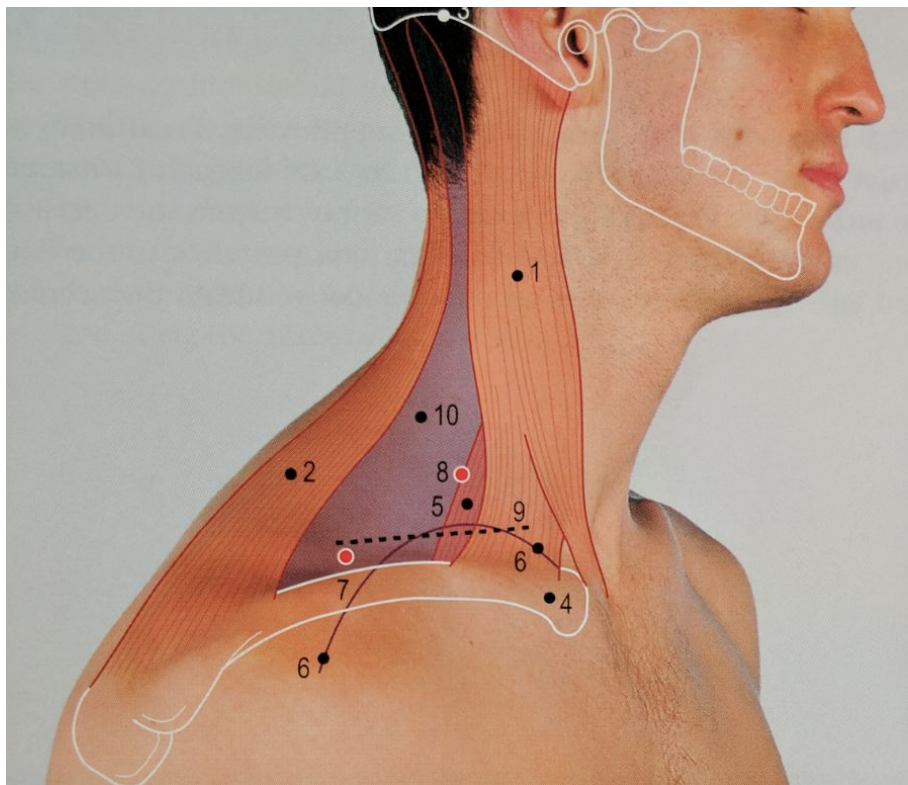
1. Sternocleidomastoid muscle
2. Anterior belly of digastric muscle
3. Posterior belly of digastric muscle
4. Omohyoid muscle
5. Thyroid cartilage
6. Digastric triangle
7. Carotid triangle
8. Cricoid cartilage
9. Muscular triangle

## Posterior triangle and its contents

Level 5 is located in the posterior triangle of the neck. Within this triangle can be found the apex of the lung and some significant vasculature in the subclavian artery and vein. The brachial plexus is also situated deep to this area.

It is bounded anteriorly by the posterior border of the sternomastoid muscle, inferiorly by the clavicle and posteriorly by the anterior border of the trapezius.

Below is a diagram of the posterior triangle and its associated structures.



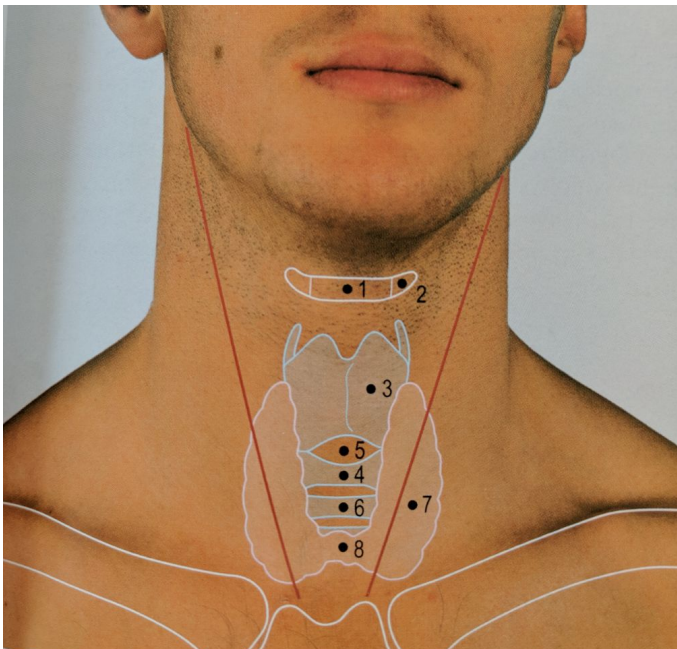
1. Sternocleidomastoid muscle
2. Trapezius muscle
3. Superior nuchal line
4. Clavicle
5. Scalenus anterior muscle
6. Apex of the lung
7. Needle insertion point for brachial plexus anaesthesia
8. Needle insertion point for scalene regional anaesthesia
9. Supraclavicular incision to approach subclavian artery, neck of first rib and adjacent structures
10. Posterior triangle of neck

## The larynx

The larynx is a midline structure covered by skin, platysma muscle, fat, and fascia. Superiorly to the larynx sits the hyoid bone at the level of the 3<sup>rd</sup> cervical vertebra. Inferior to the hyoid sits the thyroid cartilage. The laryngeal prominence can be palpated easily and is colloquially known as the “Adam’s apple”. This prominence is more pronounced in men. It is at this level that the vocal cords are located.

Inferior to the thyroid cartilage sits an important structure, the cricothyroid membrane, which can be felt as a soft depression. This membrane connects the thyroid and cricoid cartilage and is the area that is punctured during a cricothyroidotomy. The cricoid cartilage is located at the level of C6. It exists as the only complete ring of cartilage in the respiratory tract. Pressure is applied here during a rapid sequence intubation to prevent regurgitation of stomach contents in an emergency.

The diagram below shows the surface anatomy of the larynx.

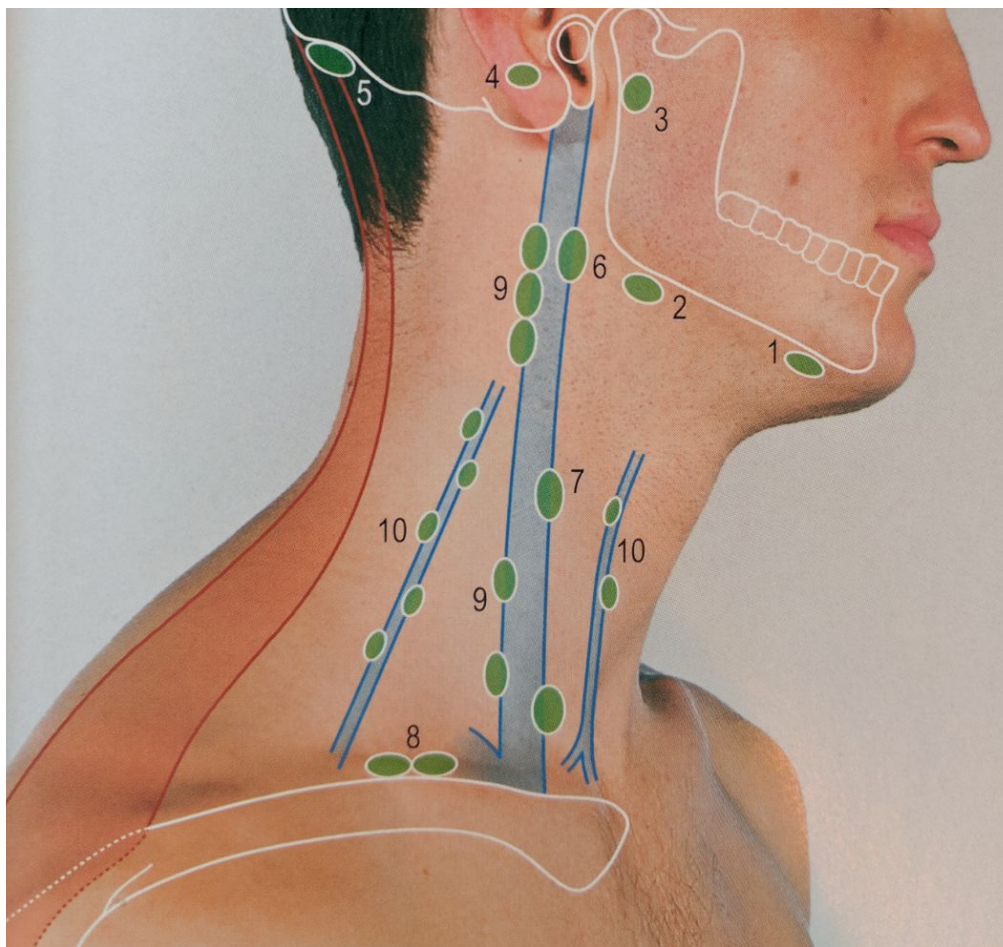


1. Body of the hyoid bone
2. Greater horn of hyoid bone
3. Thyroid cartilage
4. Cricoid cartilage
5. Cricothyroid membrane
6. First tracheal ring
7. Lateral lobe of the thyroid gland
8. Isthmus of thyroid gland

## Head & Neck lymph nodes

The lymphatic drainage system of the head and neck is comprised of deep and superficial chains. A good knowledge of both their names and location is vital in conducting a thorough examination of the neck.

The diagram below demonstrates the names and location of the lymph nodes. The order of palpation in a head and neck examination is not important however it is important that you are systematic in your approach to ensure no groups of nodes are not missed.



1. Submental
2. Submandibular
3. Parotid
4. Posterior auricular
5. Occipital
6. Jugulo-digastric
7. Jugulo-omohyoid
8. Supraclavicular
9. Deep cervical chain
10. Superficial cervical chains