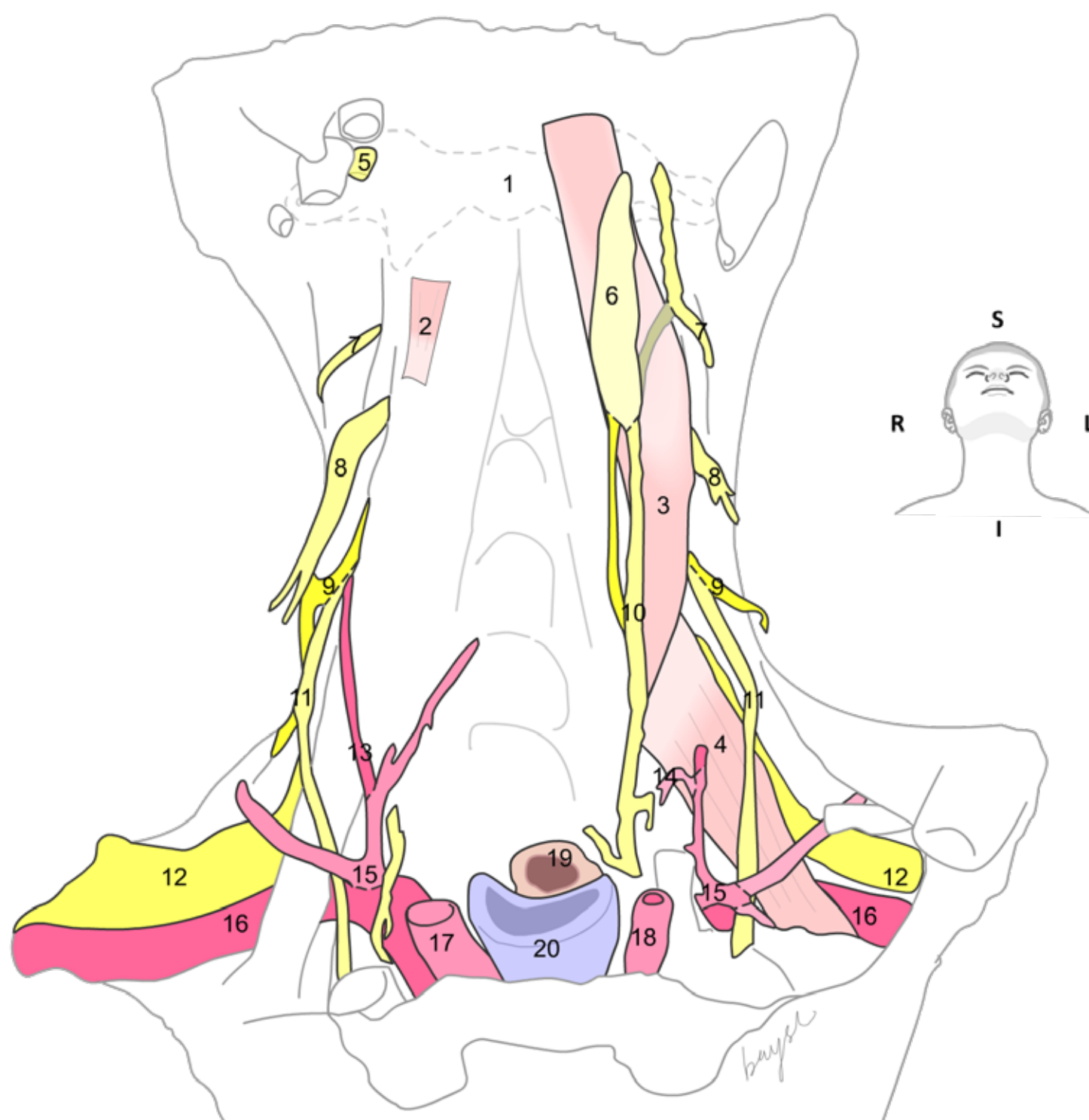


# ROOT & PREVERTIBRAL REGION OF NECK



**Anterior view of the root of neck** showing the deep structures of the neck which include the **trachea, esophagus, subclavian artery (right), common carotid (proximal part only), prevertebral muscles (longus coli and longus capitis, scalenus anterior)** and the **cervical sympathetic trunk and ganglia (superior cervical sympathetic ganglion)**.

- |          |   |  |
|----------|---|--|
| Muscles  | } | 1. Atlas   |
|          |   | 2. Longus capitis (cut)  |
|          |   | 3. Longus colli  |
|          |   | 4. Scalenus anterior   |
| Nerves   | } | 5. Cranial nerves (IX, X, XI, XII)<br>[At the jugular foramen] |
|          |   | 6. Superior cervical ganglion                                  |
|          |   | 7. Cervical spinal nerve C2                                    |
|          |   | 8. Cervical spinal nerve C3                                    |
|          |   | 9. Cervical spinal nerve C4                                    |
|          |   | 10. Sympathetic trunk  |
|          |   | 11. Phrenic nerve  |
|          |   | 12. Brachial plexus  |
| Arteries | } | 13. Ascending cervical artery                                  |
|          |   | 14. Inferior thyroid artery                                    |
|          |   | 15. Thyrocervical trunk  |
|          |   | 16. Subclavian artery  |
|          |   | 17. Brachiocephalic trunk                                      |
|          |   | 18. Common carotid artery                                      |
|          |   | 19. Esophagus  |
|          |   | 20. Trachea  |

One of the most important aspects of the anatomy of the root of the neck is the fact that the dome of the pleura (cervical pleura) and the lung extends superiorly for some distance into the neck region. Injury to the cervical pleura may lead to pneumothorax.

The scalenus anterior muscle is a “key structure” at the root of the neck as many important structures are closely related to it: phrenic nerve, subclavian artery and vein, brachial plexus etc.

**Clinical Correlation** – A lesion of the cervical sympathetic trunk such as the superior cervical sympathetic ganglion may result in Horner’s syndrome.

Q: Name the epithelial lining of the trachea and esophagus.

Q: Name two structures in the head supplied by the superior cervical sympathetic ganglion.

Q: Where are the cell bodies of the preganglionic sympathetic neurons located?

Q: Which nerve is closely associated with the inferior thyroid artery? What would be the functional loss if this nerve is damaged?

Q: What is “subclavian steal syndrome”?