LYMPH NODE LEVELS

- AAOHNS = American Academy of Otolaryngology Head and Neck Surgery Classification:
- The N classifications for thyroid and nasopharynx are unique to those sites and are based on tumor behavior and prognosis.
- Level I:
  - Ia - Sub mental (outside ant diagastric, hyoid down and myoglossus superiorly)
  - Ib - Submandibular (inside ant post diagastric and mandible above). Marginal mandibular nerve (1cm ant and inf to angle of mandible) mostly damaged in dissection.
- Level II: Upper jugular (IIa - ant to SCM, IIb - Superior and posterior)
  - Clinical Landmark = Hyoid, Surgical Landmark = Bifurcation of carotid
    - Ila anterior to Spinal Accessory nerve IIb posterior to spinal accessory
- Level III: Mid-jugular
  - Clinical Landmark = Lower border Cricoid cartilage and Surgical Landmark = Omohyoid muscle
- Level IV: Lower jugular (Omyohoid superiorly to Clavicle inferiorly)
- Level V: Va – above cricoid in Post triangle and Vb – below
  - Va - Posterior triangle (spinal accessory)
  - Vb - (Transverse cervical artery nodes…. upper, middle, and lower, corresponding to the levels that define upper, middle, and lower jugular nodes)
- Level VI: Prelaryngeal (Delphian)
  - Pretracheal
  - Para tracheal
- Level VII: Upper mediastinal
- Other grps:
  - Sub-occipital
  - Retropharyngeal
  - Parapharyngeal
  - Buccinators (facial)
  - Preauricular
  - Periparotid and intraparotid

- Level I: Contains lymph nodes in the submental and submandibular triangles bounded by the anterior and posterior bellies of the digastric muscle, and the hyoid bone inferiorly, and the body of the mandible superiorly.
- Level II: Contains lymph nodes in the upper jugular lymph nodes and extends from the level of the skull base superiorly to the hyoid bone inferiorly.
- Level III: Contains the middle jugular lymph nodes from the hyoid bone superiorly to the level of the lower border of the cricoid cartilage inferiorly.
- Level IV: Contains the lower jugular lymph nodes from the level of the cricoid cartilage superiorly to the clavicle inferiorly.
- Level V: Contains the lymph nodes in the Posterior triangle bounded by the anterior border of the trapezius muscle posteriorly, the posterior border of the sternocleidomastoid muscle anteriorly, and the clavicle inferiorly. For descriptive purposes, Level V may be further subdivided into upper, middle, and lower levels corresponding to the superior and inferior planes that define Levels II, III, and IV.

- Level VI: Contains the lymph nodes of the anterior central compartment from the hyoid bone superiorly to the suprasternal notch inferiorly. On each side, the lateral boundary is formed by the medial border of the carotid sheath.

- Level VII: Contains the lymph nodes inferior to the suprasternal notch in the superior mediastinum.

*The level IIA nodes are located at the mandibular angle above the hyoid bone and anterior to the sternocleidomastoid muscle, whereas the level IIB nodes are located above the hyoid bone and adjacent to the sternocleidomastoid muscle.*

- *The level V nodes, the posterior triangle nodes, are divided into 2 groups. The level VA nodes are located above the cricoid cartilage, and the level VB nodes are located between the cricoid cartilage and the clavicle.*

- A key point is that the level IIB, III, and IV nodes are all located adjacent to the sternocleidomastoid muscle, whereas the level V nodes are located posterior to the sternocleidomastoid muscle.

- Regional lymph node (N) classification for all head and neck cancer sites except nasopharynx and thyroid cancers:
  - N1  - <3 cm ipsi
  - N2a  - 3-6 cm ipsi single
  - N2b  - 3-6 cm ipsi multiple
  - N2c  - 3-6 cm contralateral/bilateral
  - N3  - > 6cm

- A designation of “U” or “L” may be used to indicate metastasis in the lateral neck above the lower border of the cricoid (U) or below the lower border of the cricoid (L).

- Oral cavity extends from the skin-vermillion junction of the lips to the junction of the hard and soft palate above and to the line of circumvallate papillae below.
- **ORAL CAVITY**
  - T1  - <2cm
  - T2  - 2-4cm
  - T3  - >4cm
  - T4a  - (Lip) Tumor invades through cortical bone, inferior alveolar nerve, floor of mouth, or skin of face, i.e., chin or nose
    - **Oral Cavity** Tumor invades through cortical bone, into deep [extrinsic] muscle of tongue (genioglossus, hyoglossus, palatoglossus, and styloglossus), maxillary sinus, or skin of face.
    - **Oropharynx** Medial Pterygoid, extrinsic muscles of tongue, larynx, hard palate, mandible
  - T4b  - Tumor involves masticator space, pterygoid plates, or skull base and/or encases internal carotid artery, (in oropharynx involvement of Lateral Pterygoid muscle, lateral nasopharynx)
- **STAGE GROUPING**
  - 0  Tis N0 M0
  - I   T1 N0 M0
  - II  T2 N0 M0
  - III T3 N0 M0
  -   T1 N1 M0
  -   T2 N1 M0
  -   T3 N1 M0
  - IVA T4a N0 M0
  -   T4a N1 M0
  -   T1 N2 M0
  -   T2 N2 M0
  -   T3 N2 M0
  -   T4a N2 M0
  - IVB Any T N3 M0
  -   T4b Any N M0
  - IVC Any T Any N M1
  - Superficial erosion alone of bone/tooth socket by gingival primary is not sufficient to classify as T4.
- **NASOPHARYNX**
  - T1  - Only nasopharynx
  - T2a  - Oro or nasal cavity extension without parapharyngeal involvement
  - T2b  - Parapharyngeal involvement
  - T3  - Bony and PNS involvement
  - T4  - Tumor with intracranial extension and/or involvement of cranial nerves, infratemporal fossa, hypopharynx, orbit, or masticator space.
- **HYPOPHARYNX**
  - T1  - One subsite < 2 cm
  - T2  - More than one subsite or adjacent site 2-4cm without fixation of hemilarynx
- **T3** - >4cm with or without fixation of hemilarynx
- **T4** - Tumour extending to adjacent structures eg thyroid, cricoid cartilage, carotid artery, soft tissue neck, prevertebral fascia, thyroid or oesophagus.