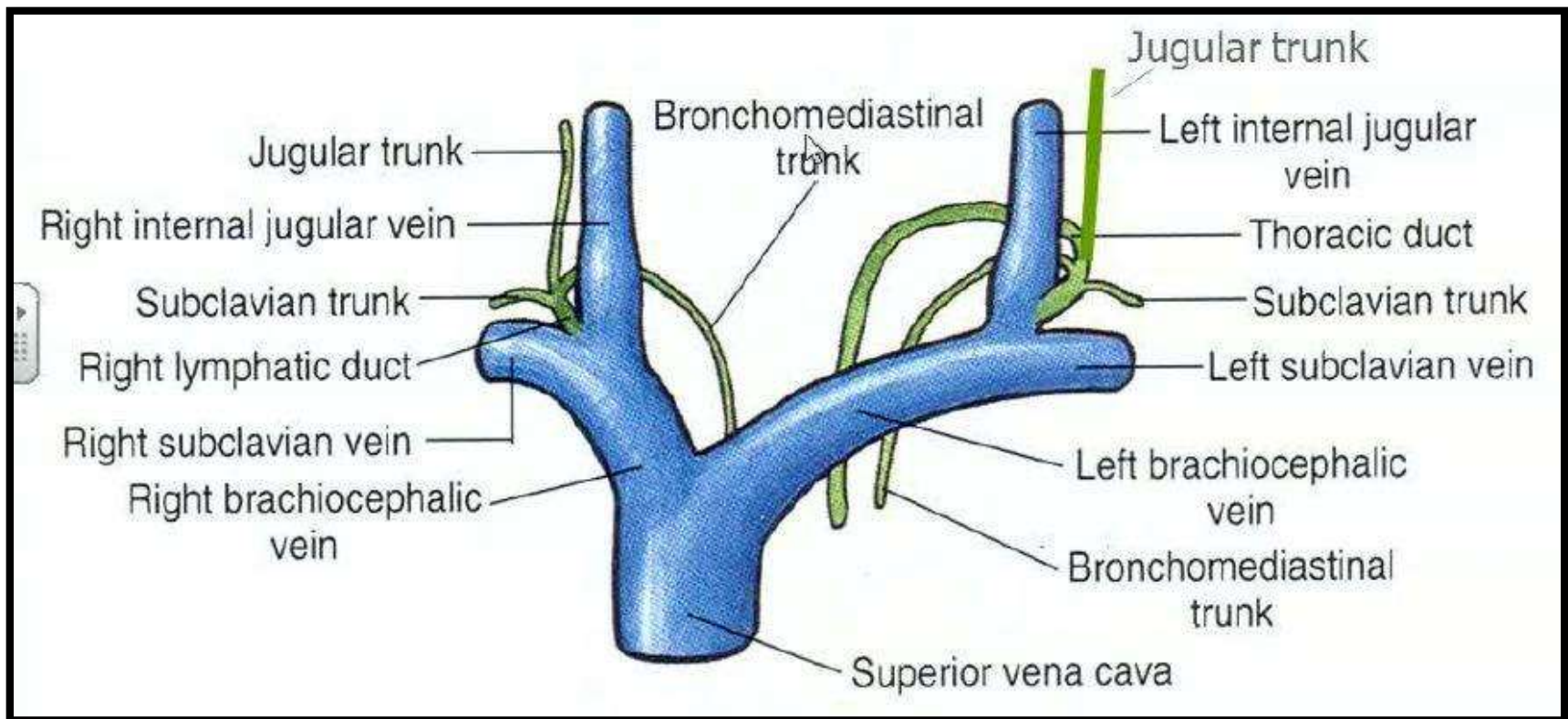


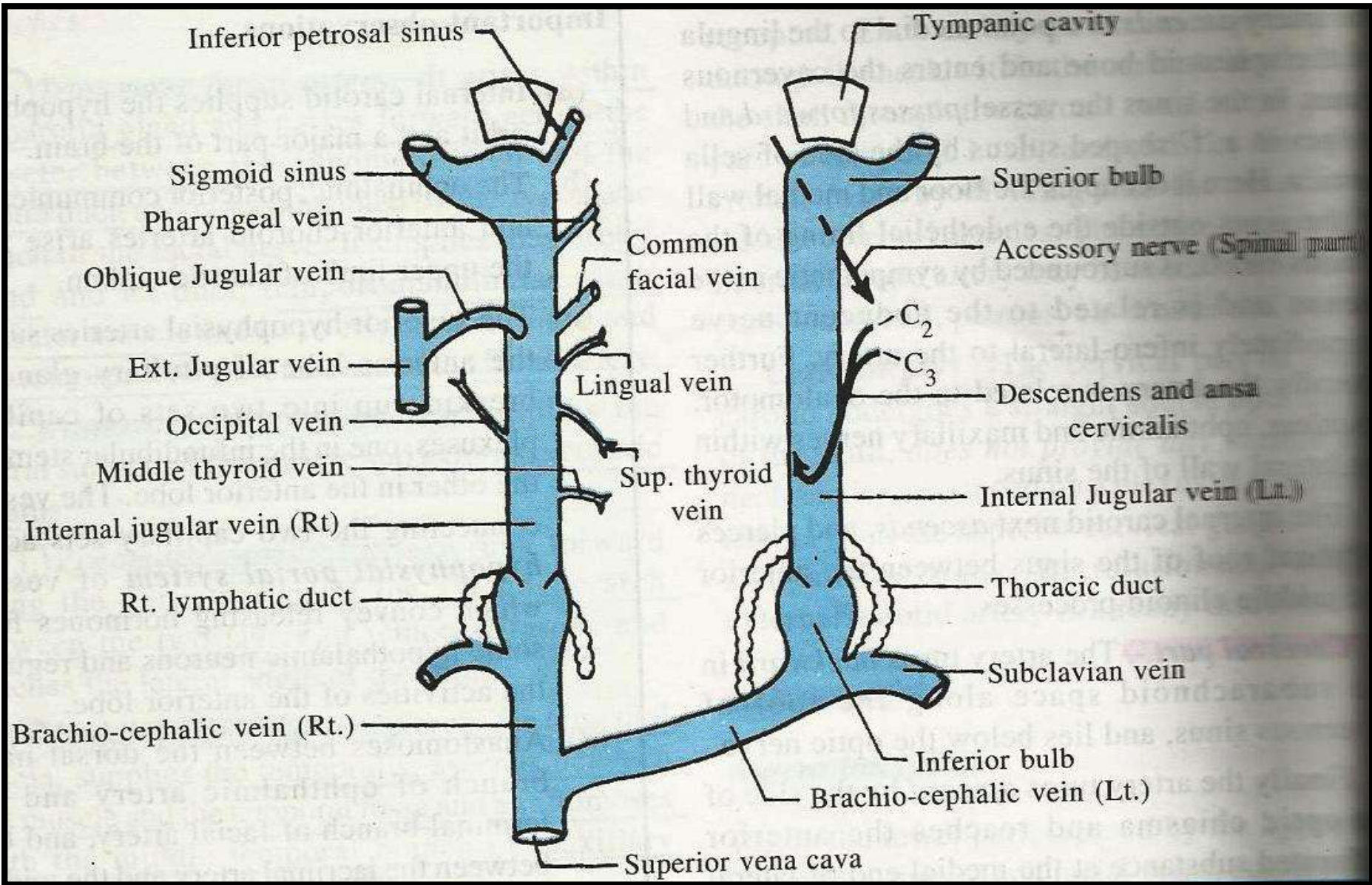
LYMPHATIC DRAINAGE OF HEAD & NECK

**Presented by:-
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Associate Professor
Department of Anatomy**

INTRODUCTION

- All the lymph from the region of head and neck drains into *deep cervical lymph nodes*.
- The efferents from these nodes form the *jugular trunk*.
- On the right side, jugular trunk drains into *right lymphatic duct*.
- On the left side, jugular trunk drains into *thoracic duct*.



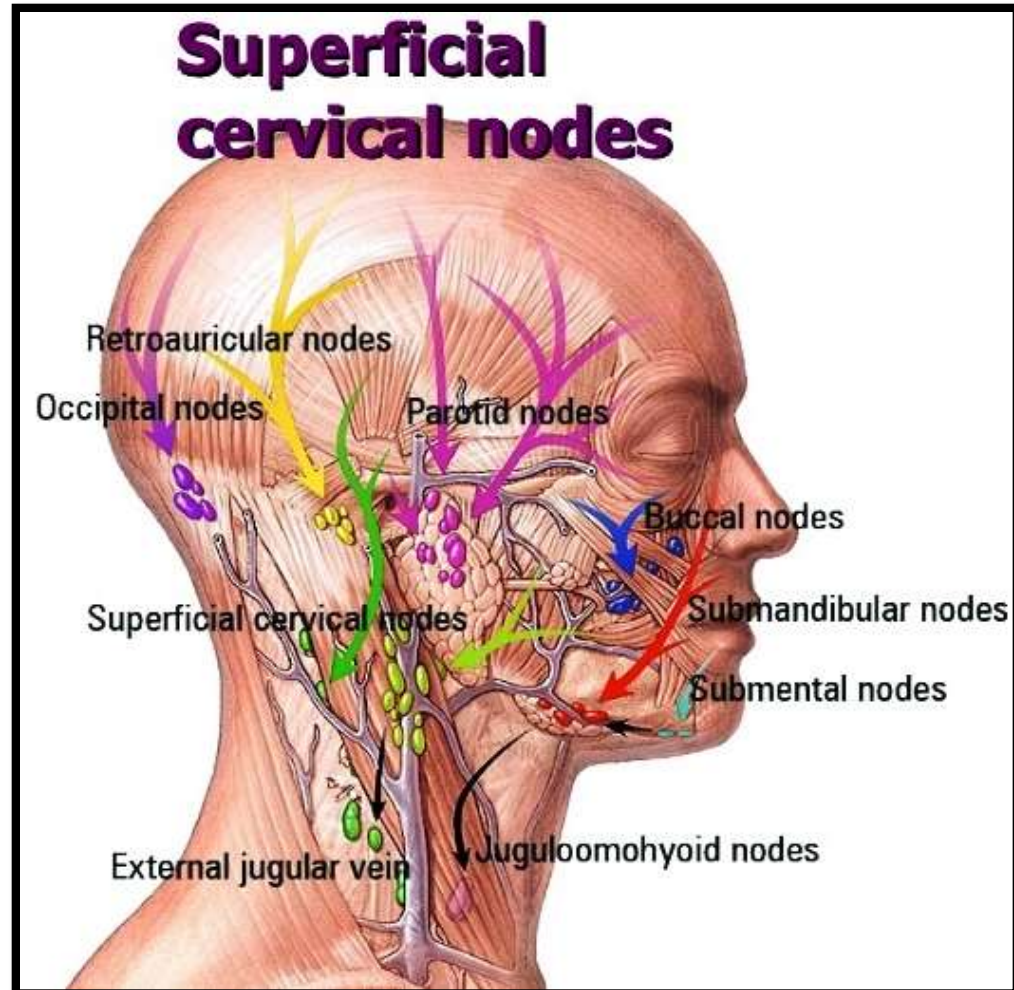


INTRODUCTION CONTD...

- Out of total **400-450** lymph nodes of human body, **~60-70 nodes** are located in the region of head and neck.
- Lymph nodes in the head and neck region can be grouped into:
 - *Superficial nodes.*
 - *Deep nodes.*

SUPERFICIAL LYMPH NODES

- Lie above the investing layer of deep cervical fascia.
- Consists of a few small nodes lying superficial to the **external jugular** and **anterior jugular** veins.
- Includes:-
 - I. **Submental nodes.**
 - II. **Submandibular nodes.**
 - III. **Buccal nodes.**
 - IV. **Parotid (preauricular) nodes.**
 - V. **Mastoid (postauricular or retroauricular) nodes.**
 - VI. **Occipital nodes.**
 - VII. **Superficial cervical nodes.**
 - VIII. **Anterior cervical nodes.**



SUPERFICIAL CERVICAL NODES

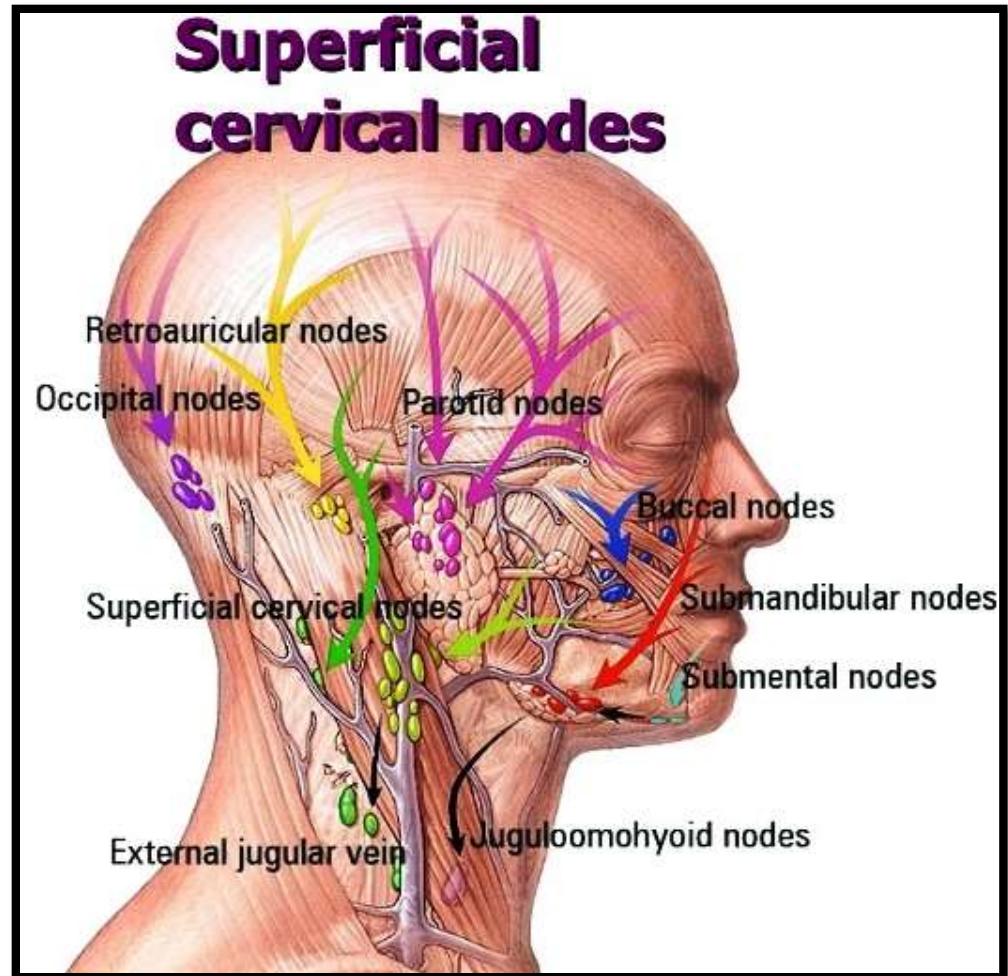
- These are offshoot of superficial parotid nodes.
- Located superficial to upper part of sternocleidomastoid by the side of external jugular vein.

AFFERENTS- from

1. *Floor of external acoustic meatus.*
2. *Lobule of the ear.*
3. *Angle of jaw.*
4. *Lower part of parotid region.*

EFFERENTS- drain into

- Lower deep cervical nodes.



ANTERIOR CERVICAL NODES

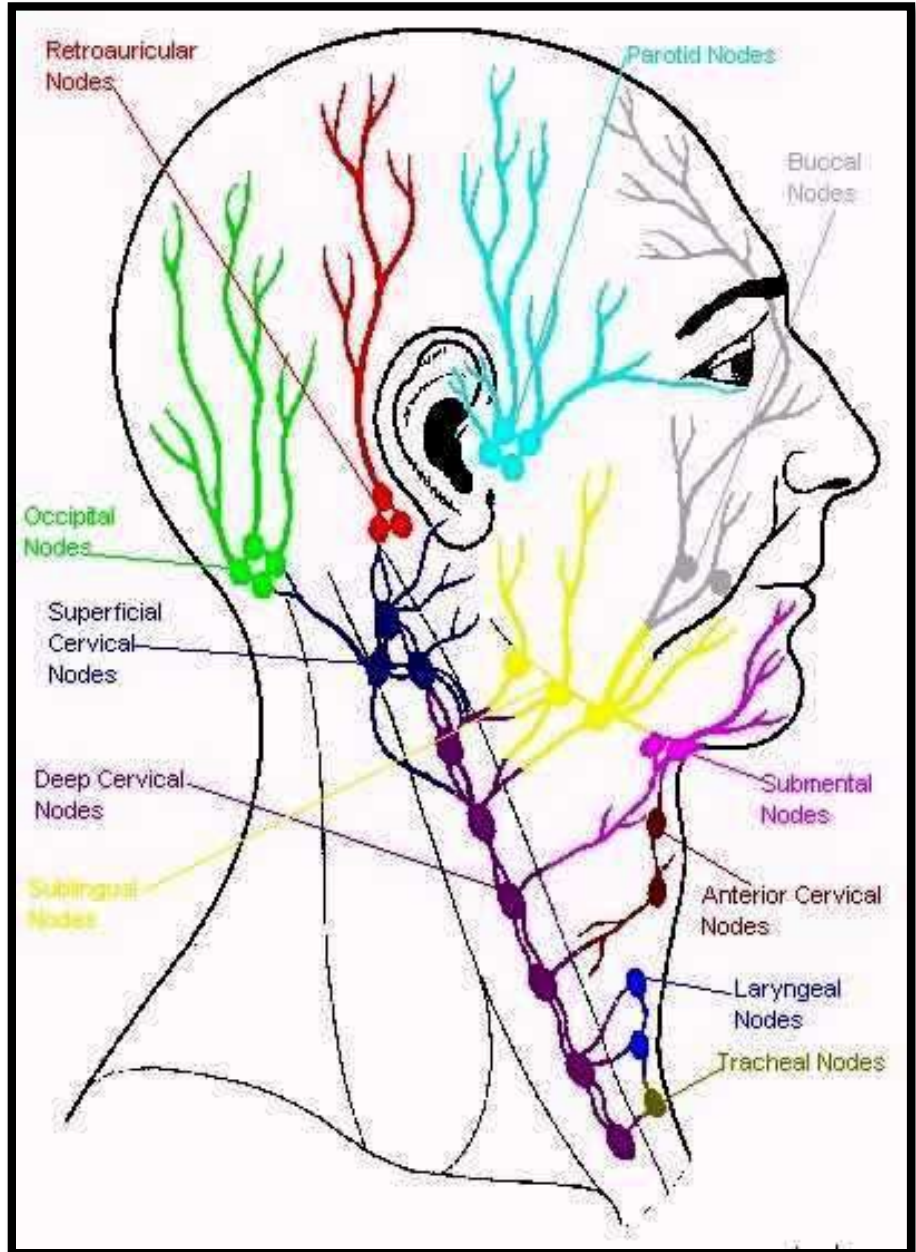
- Arranged along the anterior jugular vein.

AFFERENTS- from

- *Anterior triangle of neck below the hyoid bone.*

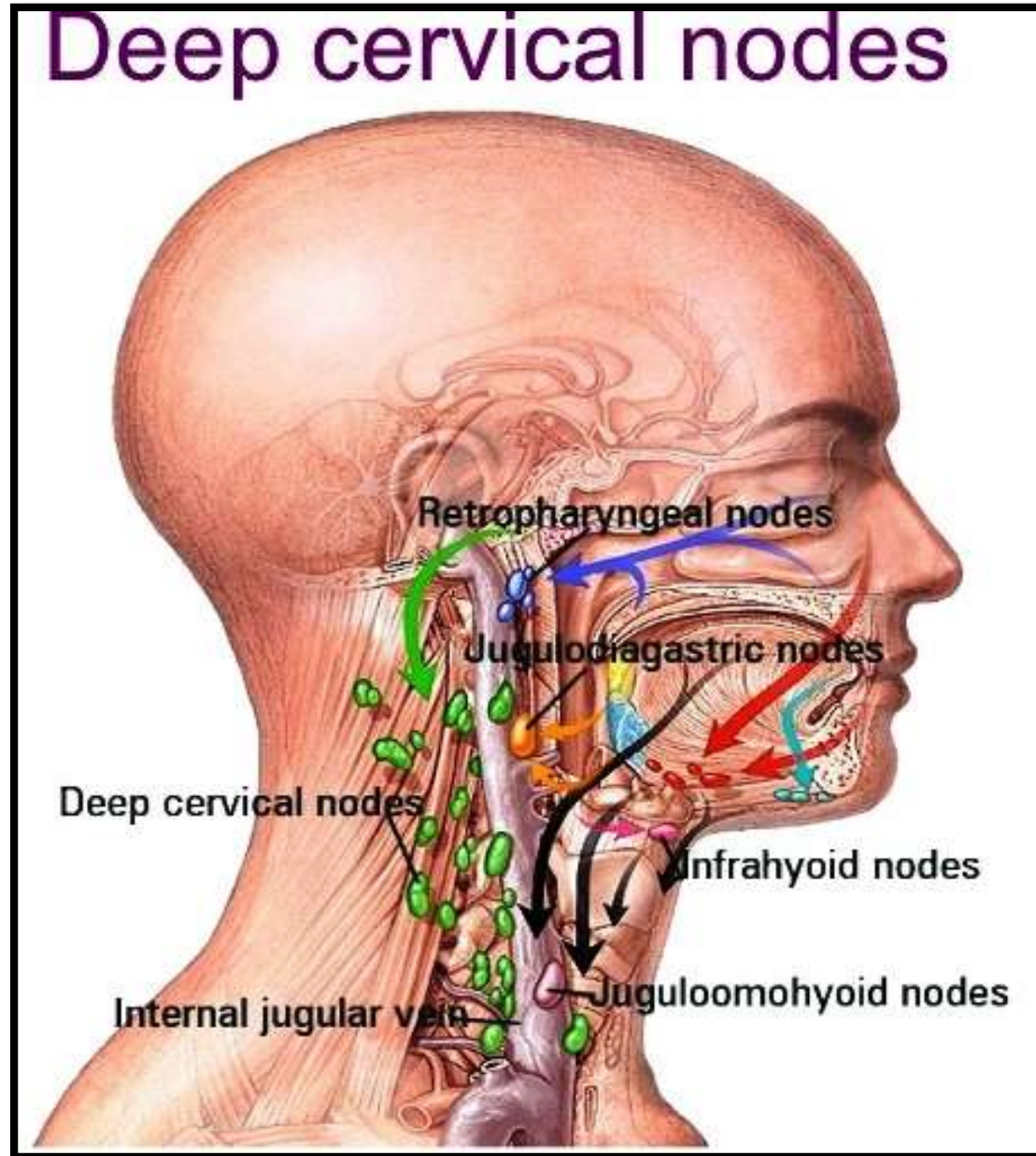
EFFERENTS- drain into

- Lower deep cervical nodes.



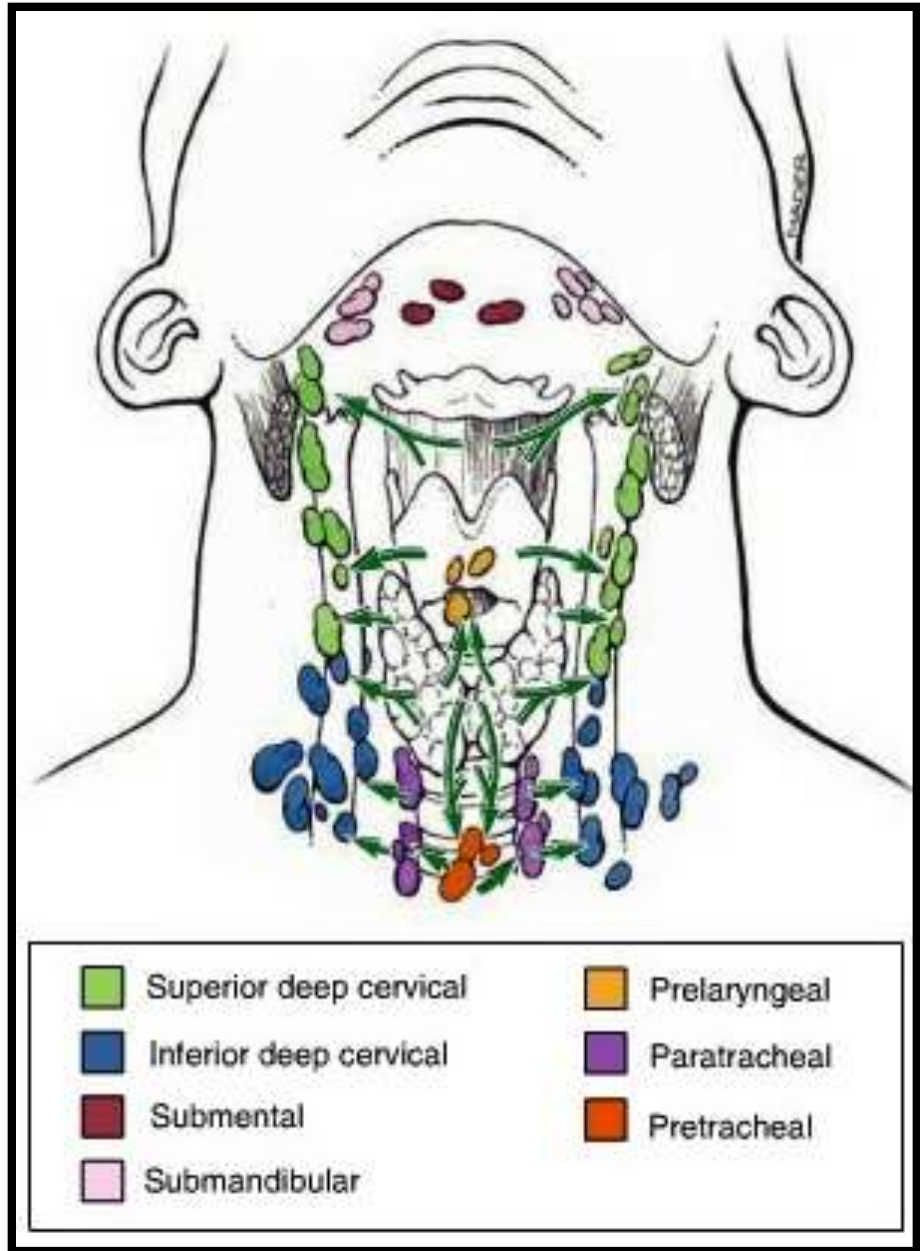
DEEP LYMPH NODES

- Deep cervical nodes.
- Waldeyer's ring.
- Nodes of midline.



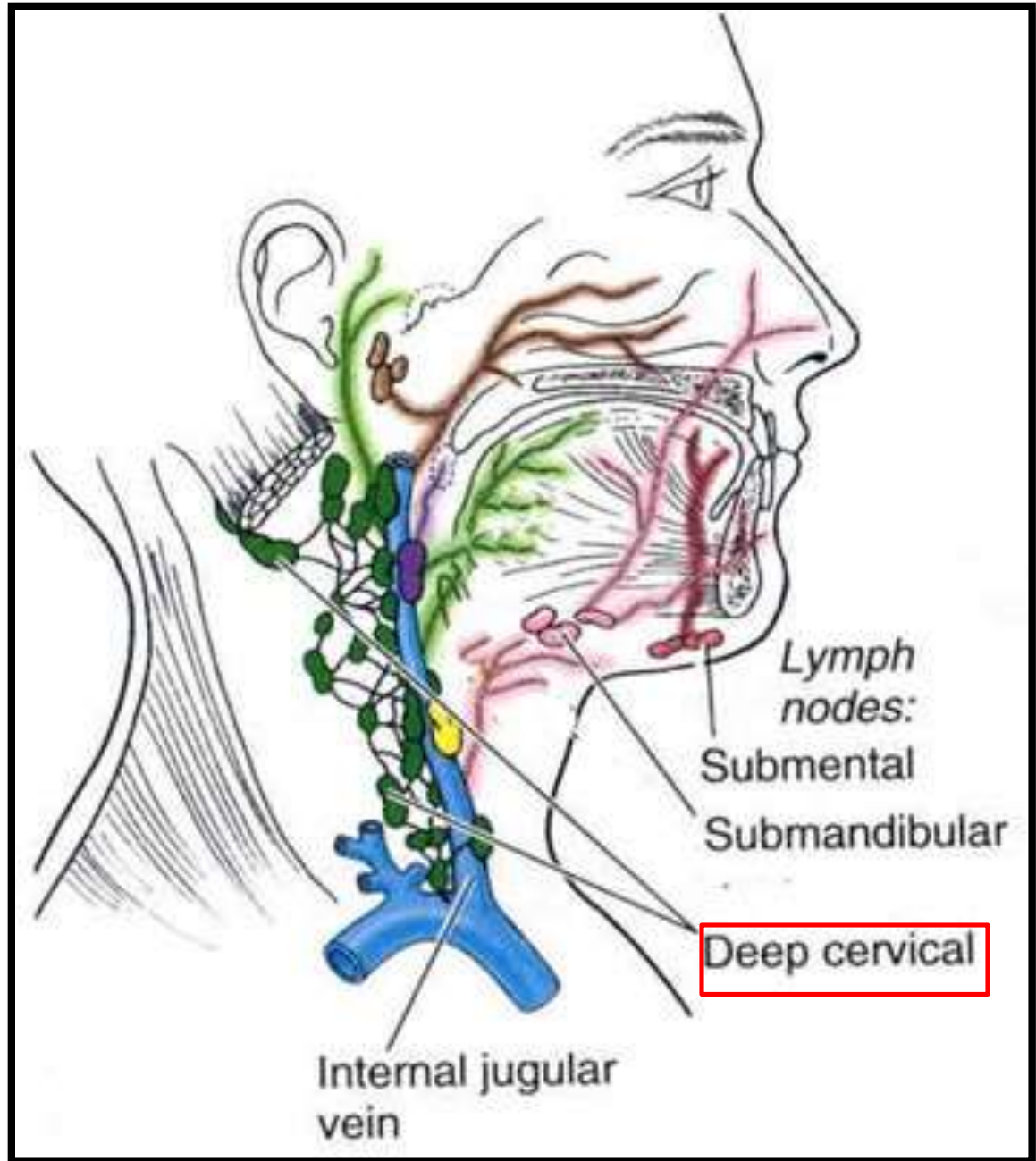
NODES OF MIDLINE

- Termed in correspondence to the anatomical area where they exist:
- *Infrahyoid.*
- *Prelaryngeal.*
- *Pretracheal.*
- *Paratracheal.*



DEEP CERVICAL LYMPH NODES

- All the lymph from the region of head and neck drains directly or indirectly into a vertical chain of *deep cervical lymph nodes*.
- **Deep cervical lymph nodes** surround the *internal jugular vein* and extend from *base of the skull* to the *root of neck*.



DEEP CERVICAL LYMPH NODES CONTD...

- Subdivided into 2 groups by the intermediate tendon of omohyoid.

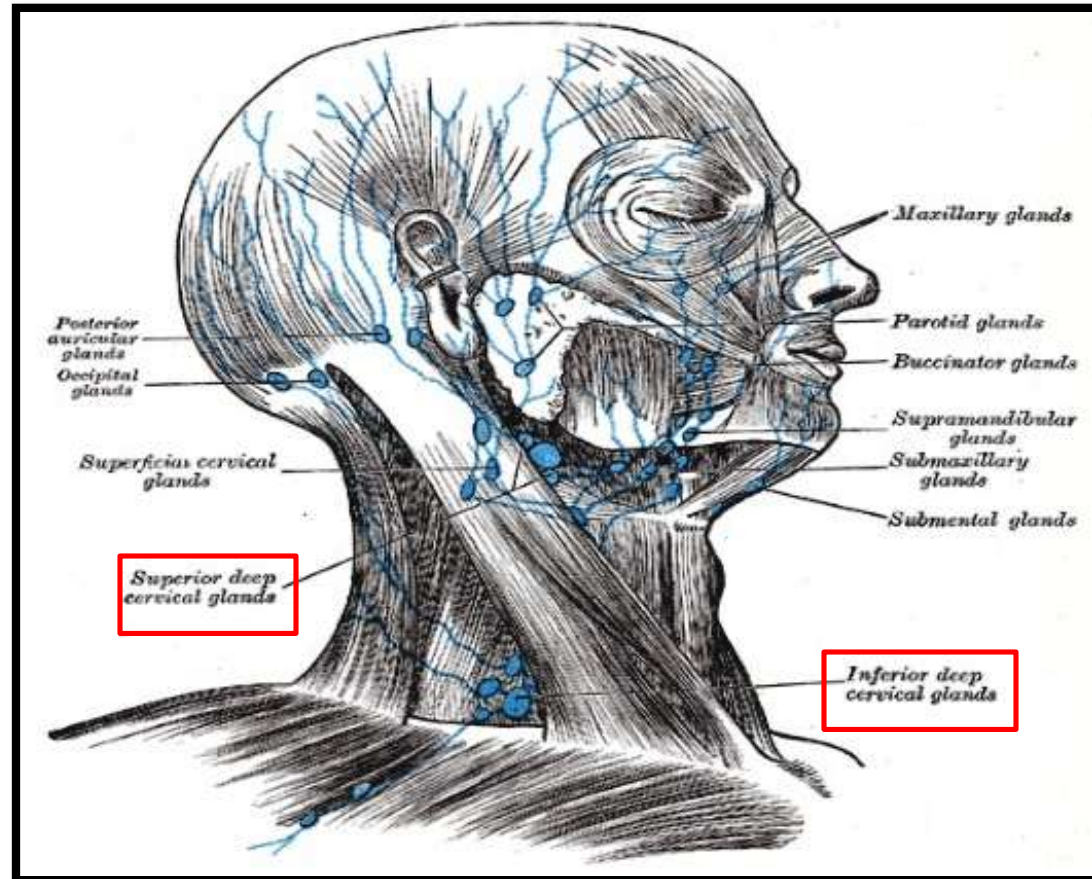
- *Upper deep cervical nodes.*
- *Lower deep cervical nodes.*

UPPER DEEP CERVICAL NODES-

- Lie along the upper part of internal jugular vein deep to sternocleidomastoid muscle.

LOWER DEEP CERVICAL NODES-

- Lie along the lower part of internal jugular vein deep to sternocleidomastoid muscle.



UPPER DEEP CERVICAL LYMPH NODES

JUGULO-DIGASTRIC NODES-

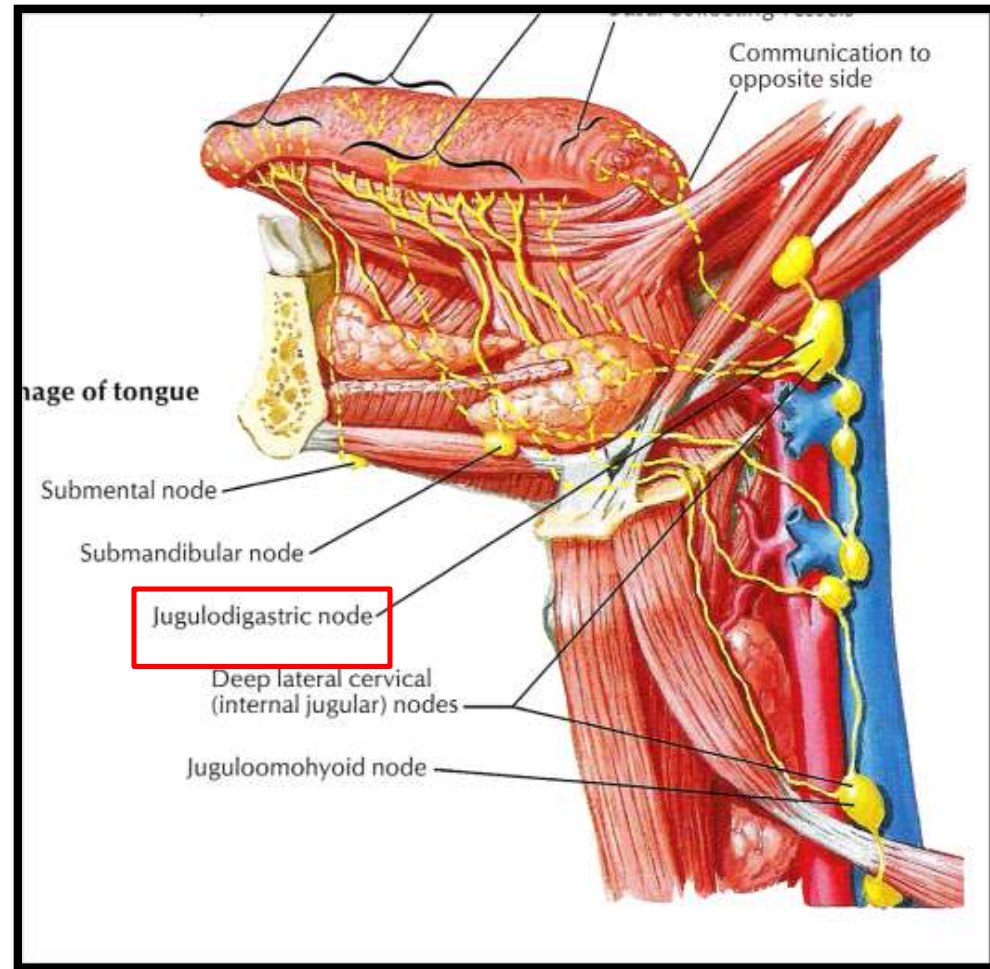
- Member of upper deep cervical group.
- Located below the posterior belly of digastric muscle.

AFFERENTS- from

1. *Palatine tonsils.*
2. *Posterior 1/3rd of tongue.*

EFFERENTS- into

- *Lower deep cervical nodes.*
- ❖ *These nodes act as principal nodes of palatine tonsils.*



LOWER DEEP CERVICAL LYMPH NODES

JUGULO-OMOHYOID NODES-

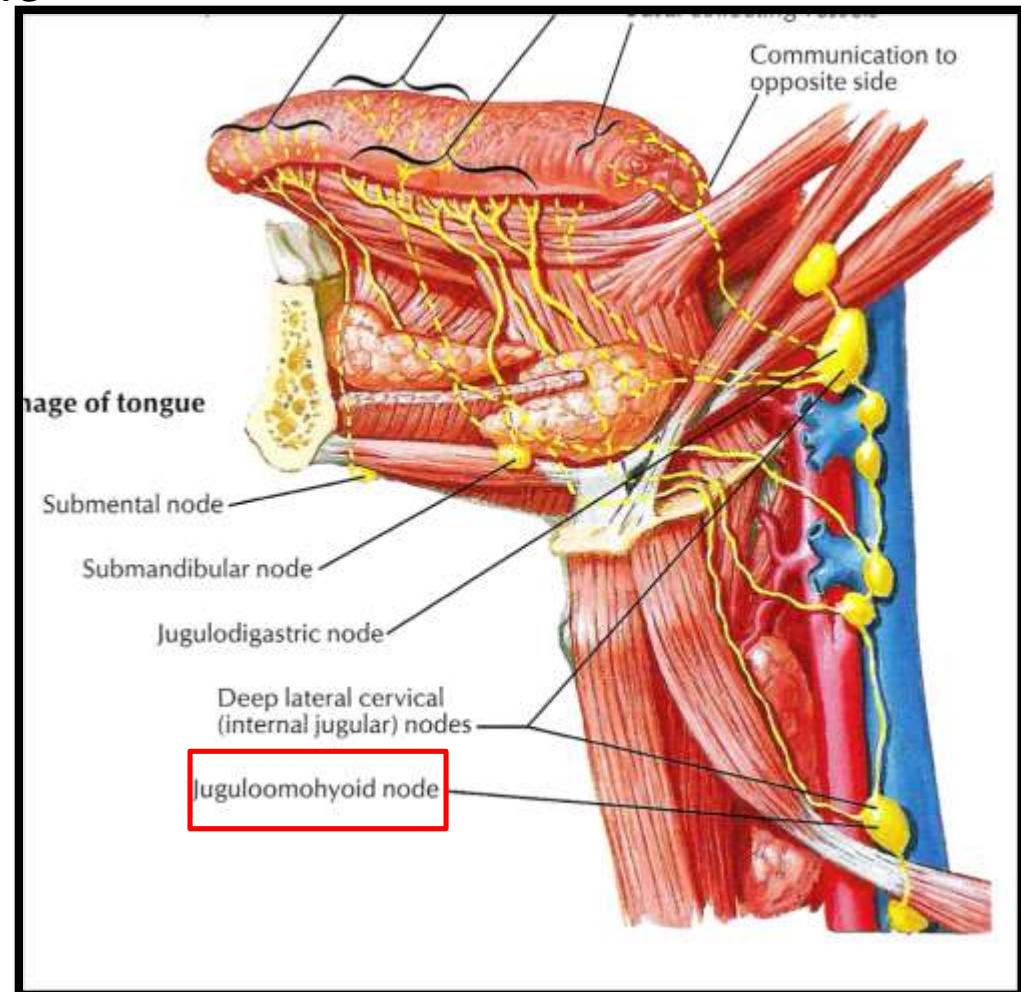
- Member of lower deep cervical group.
- Lie on the internal jugular vein just above the intermediate tendon of omohyoid.

AFFERENTS- from

1. *Tongue.*
2. *Submental nodes.*
3. *Submandibular nodes*
4. *Upper deep cervical nodes.*

EFFERENTS- into

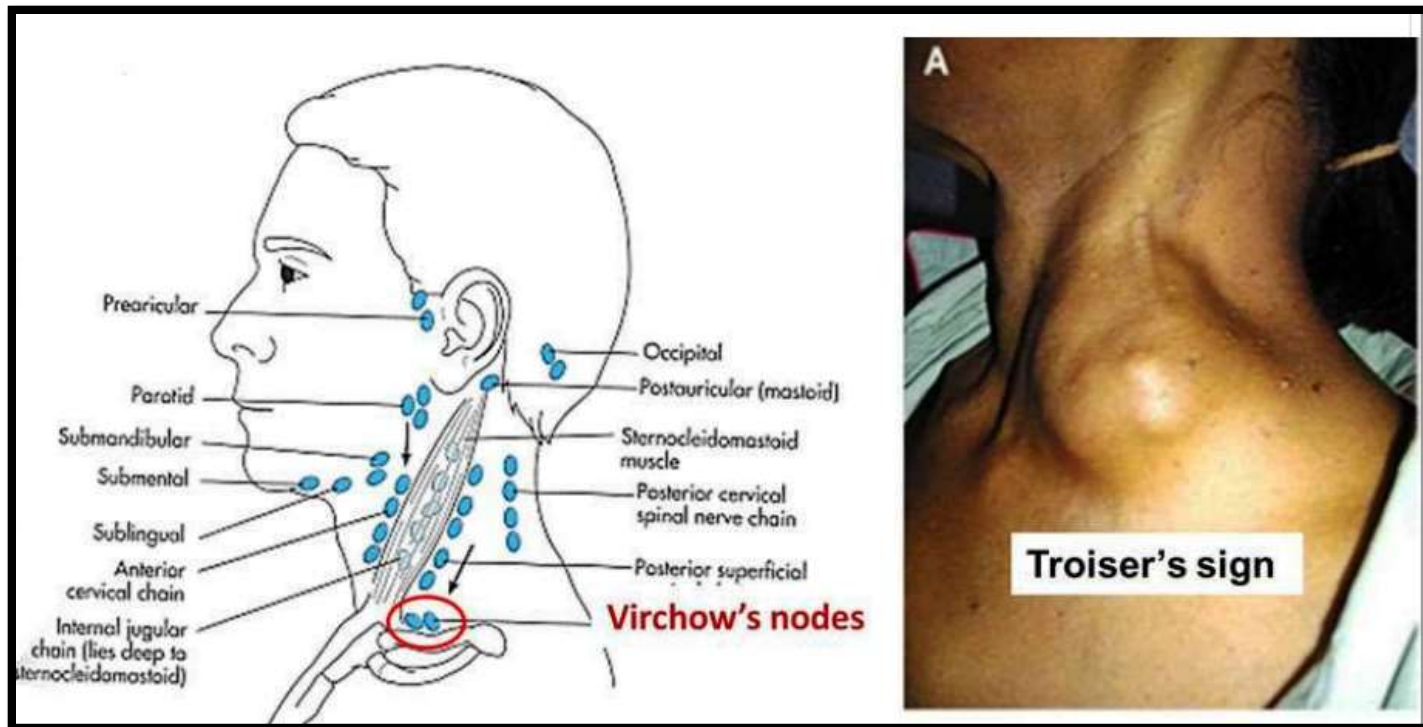
- *Lower deep cervical nodes.*
- ❖ *These nodes act as principal nodes of tongue.*



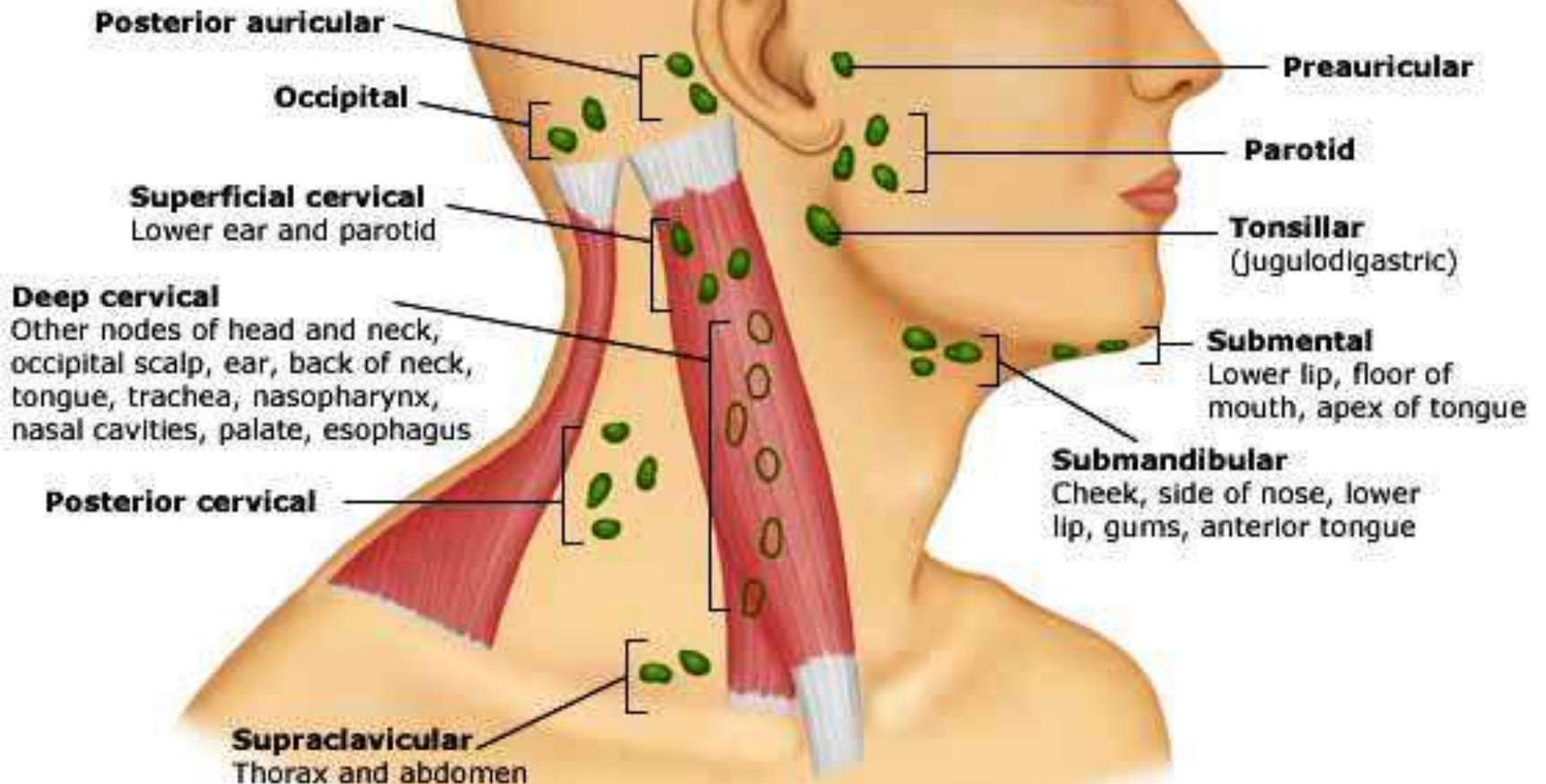
LOWER DEEP CERVICAL LYMPH NODES CONTD...

VIRCHOW'S NODES-

- Left supraclavicular nodes or left scalene nodes.
- Enlarged in malignancy of stomach.



LYMPH NODES OF THE HEAD AND NECK



LYMPH NODES OF HEAD & NECK

CLASSIFICATION OF LYMPH NODES-

- *Peripheral.*
- *Terminal.*

Peripheral Lymph Nodes-

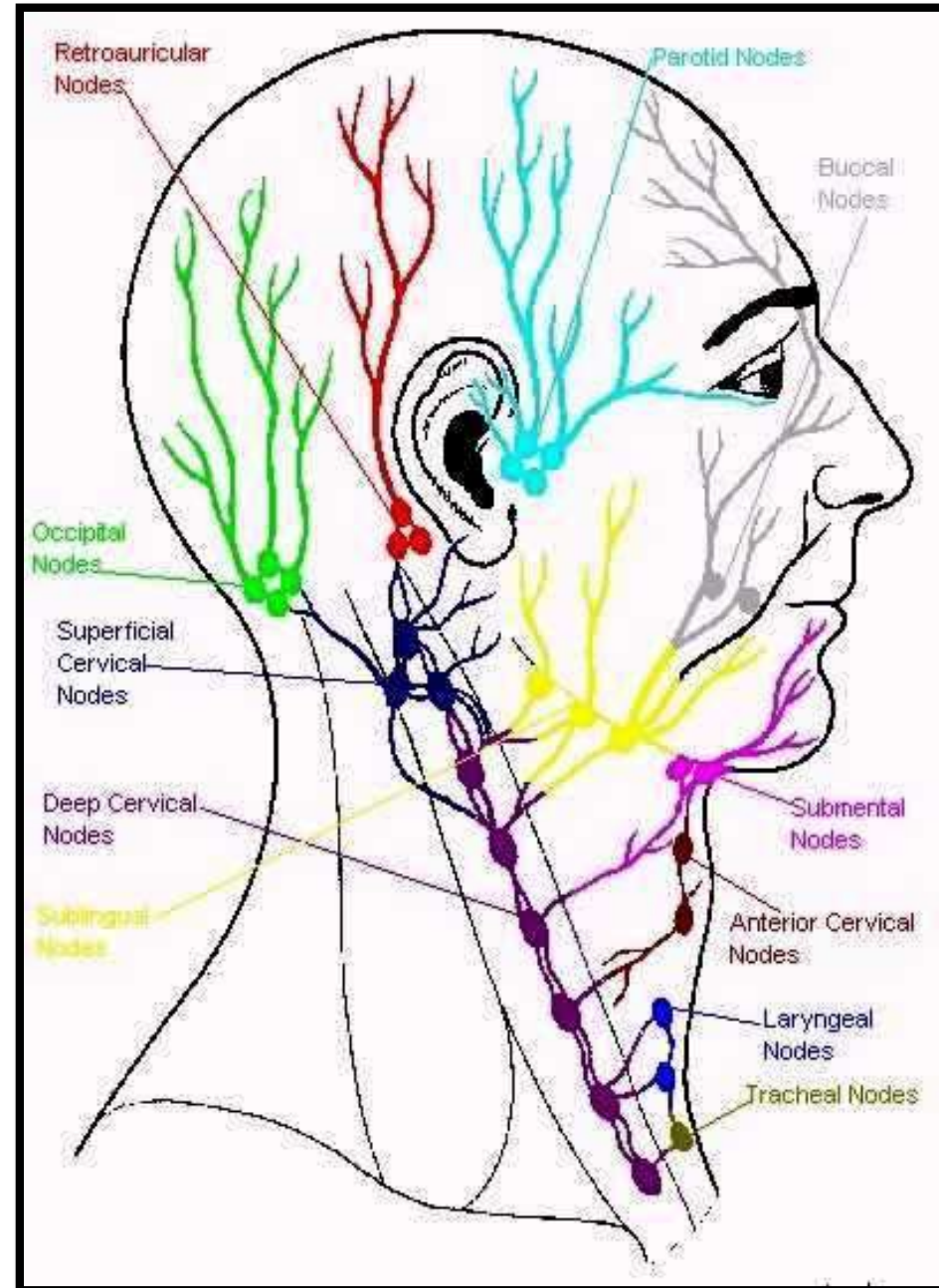
- Arranged in *outer* and *inner* circles.

OUTER CIRCLE-

- Forms a **pericervical** or cervical collar at the junction of head and neck.
- Extends from chin to the occiput.

It includes:-

- I. *Submental nodes.*
- II. *Submandibular nodes.*
- III. *Buccal nodes.*
- IV. *Parotid (preauricular) nodes.*
- V. *Mastoid (postauricular or retroauricular) nodes.*
- VI. *Occipital nodes.*



LYMPH NODES OF HEAD & NECK CONTD...

INNER CIRCLE-

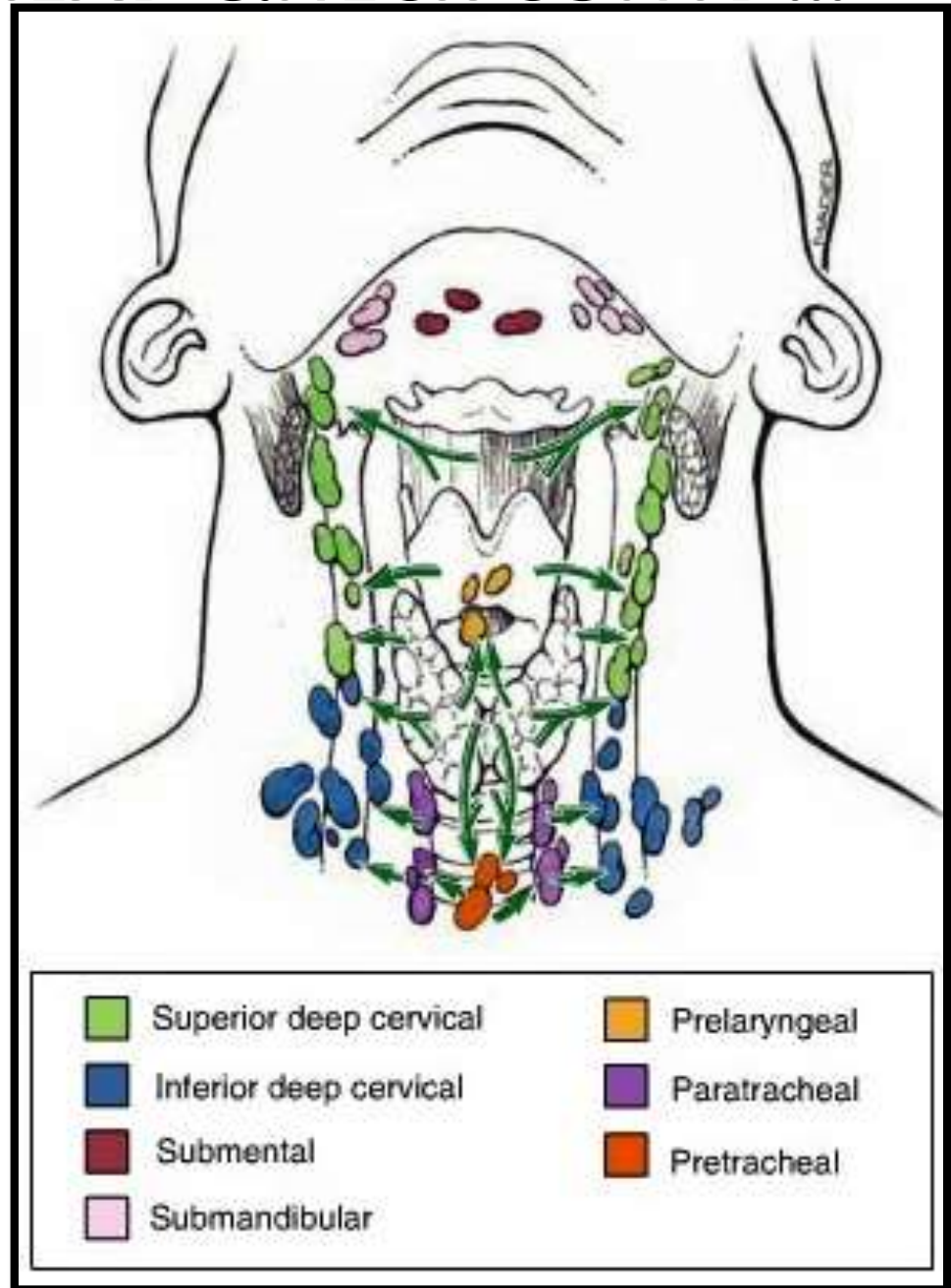
- Surrounds the upper part of respiratory and alimentary passages.
- It includes:-

I. *Prelaryngeal nodes.*

II. *Pretracheal nodes.*

III. *Paratracheal nodes.*

IV. *Retropharyngeal nodes.*

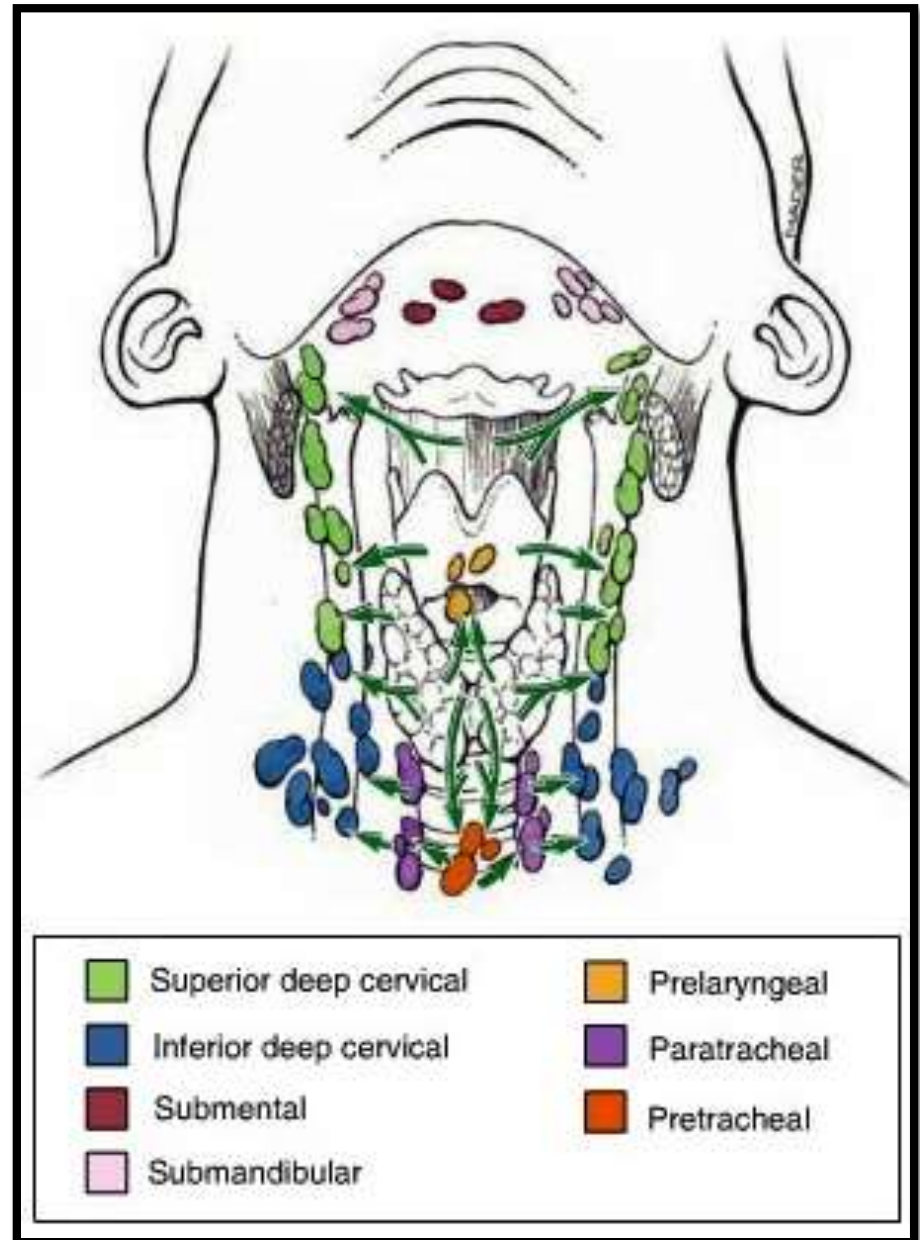


PRELARYNGEAL NODES

- Located in front of **conus elasticus**.

PRETRACHEAL NODES-

- In front of trachea and above the isthmus of thyroid gland.



SUBMENTAL NODES

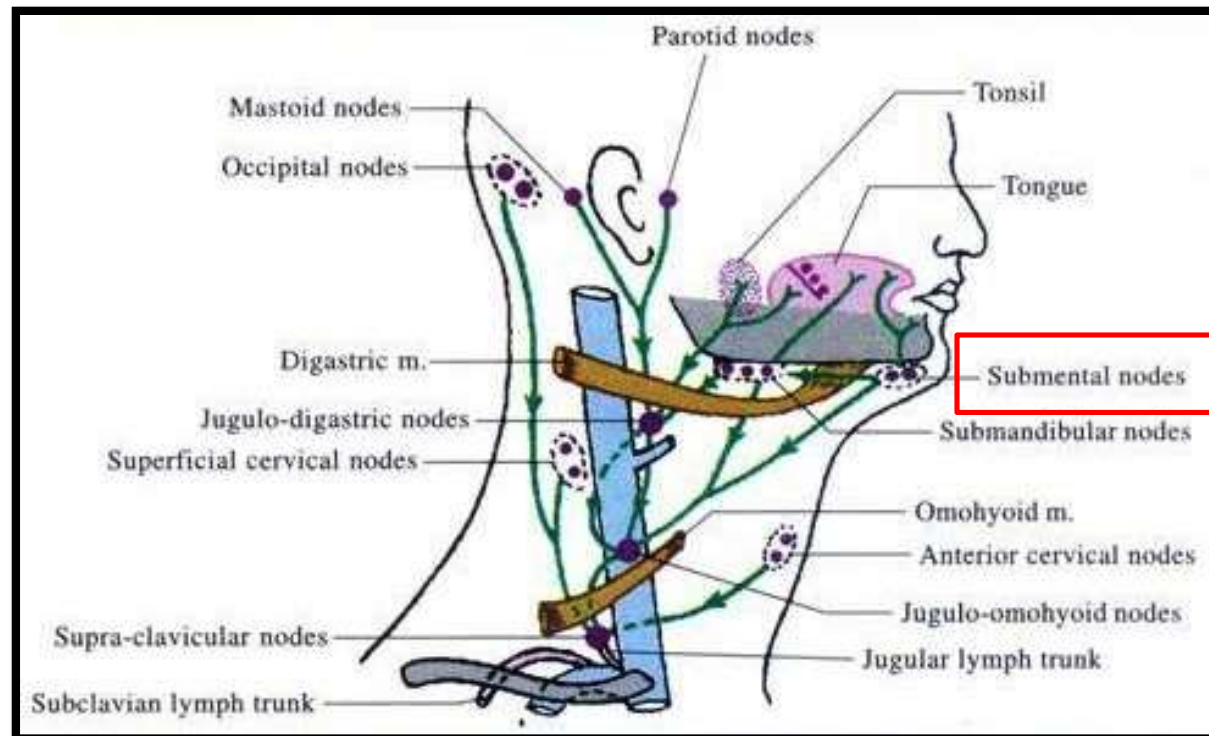
- Located in the submental triangle.
- 3 or 4 in number.
- Situated on mylohyoid muscles between the anterior bellies of both digastric muscles.

AFFERENTS- from

1. *Tip of tongue.*
2. *Floor of mouth.*
3. *Lower gums opposite the incisor teeth.*
4. *Central part of lower lip.*

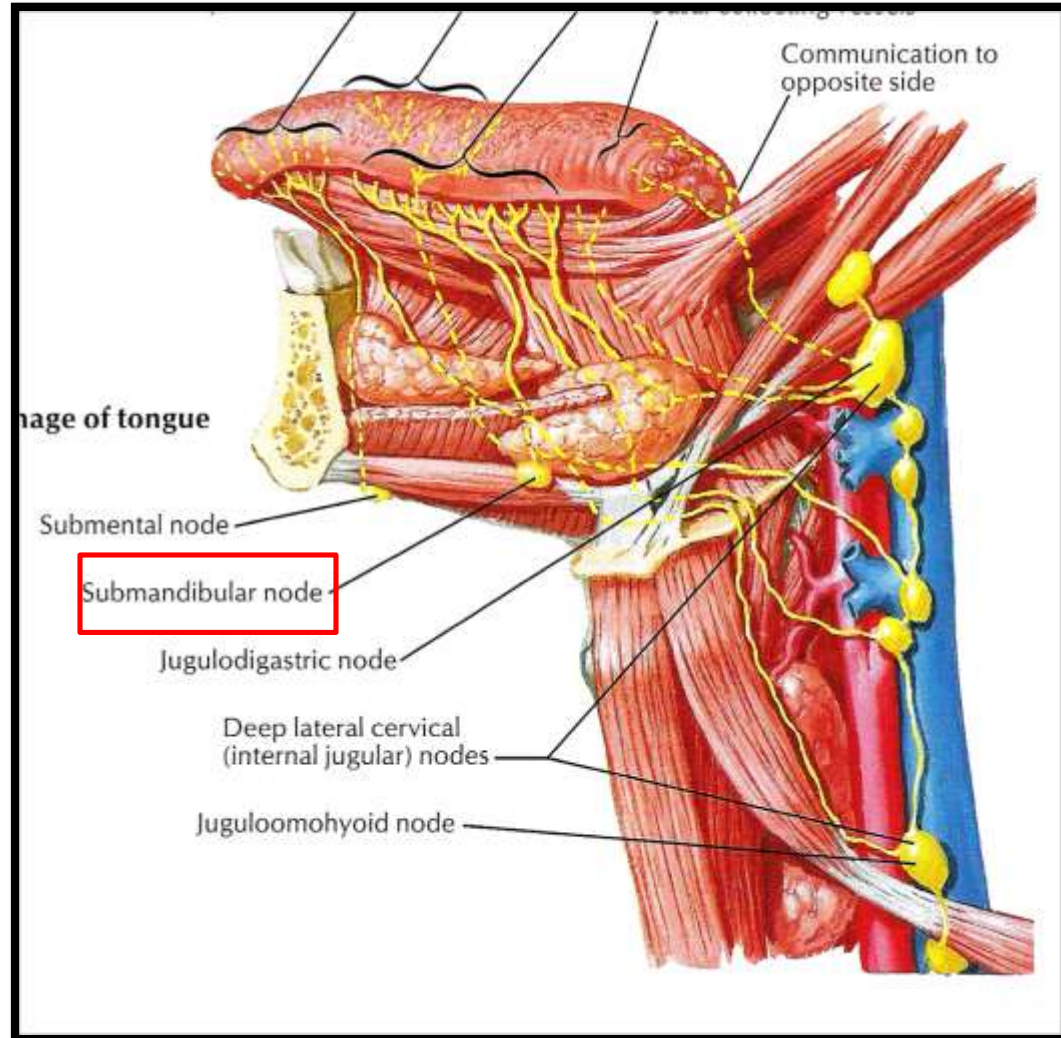
EFFERENTS- into

- *Sub-mandibular nodes.*
- *Jugulo-omohyoid nodes.*



SUBMANDIBULAR NODES

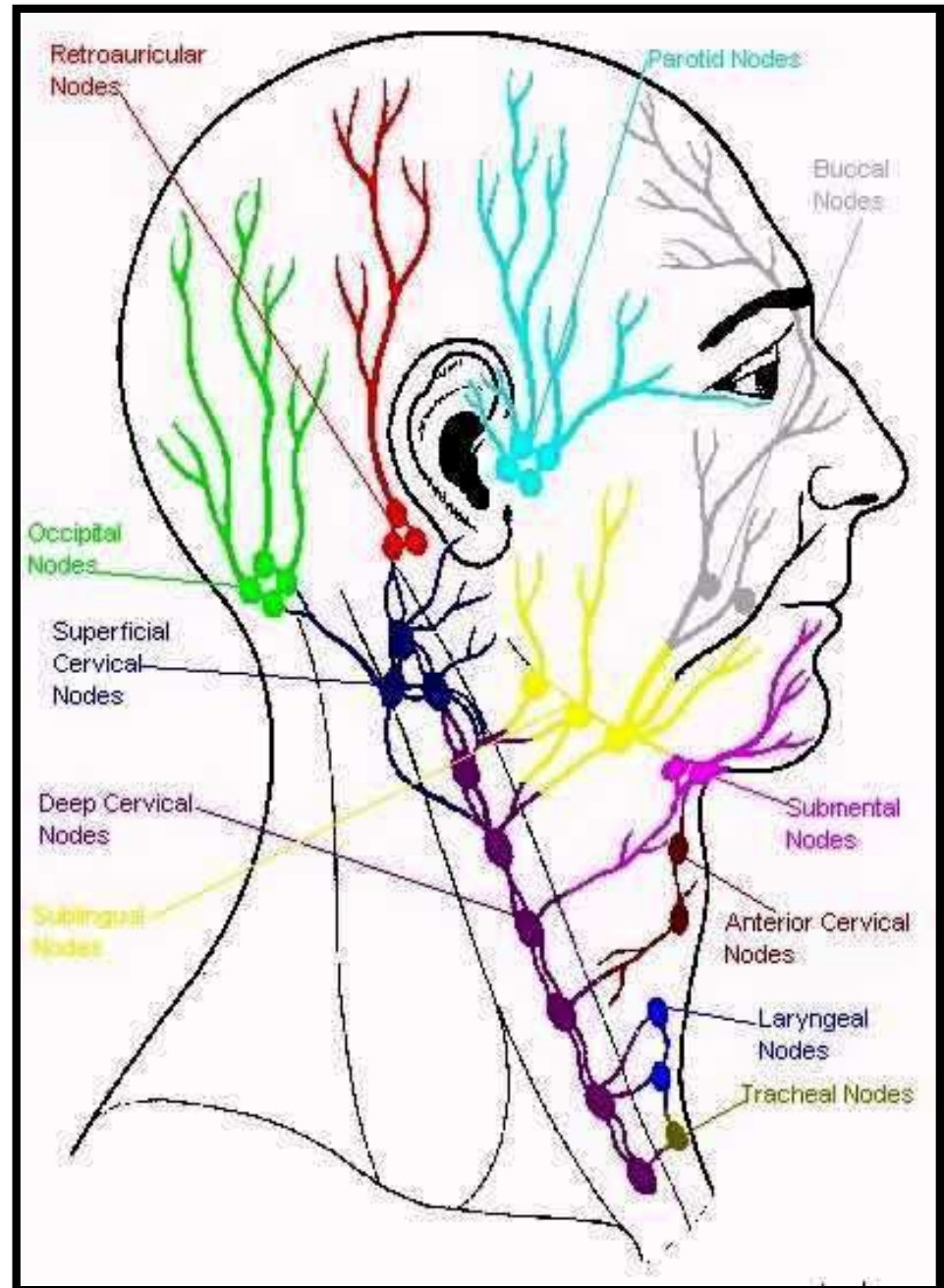
- Located in the digastric triangle beneath the deep cervical fascia in contact with the submandibular salivary gland.
- 3 in number.



SUBMANDIBULAR NODES CONTD...

AFFERENTS- from

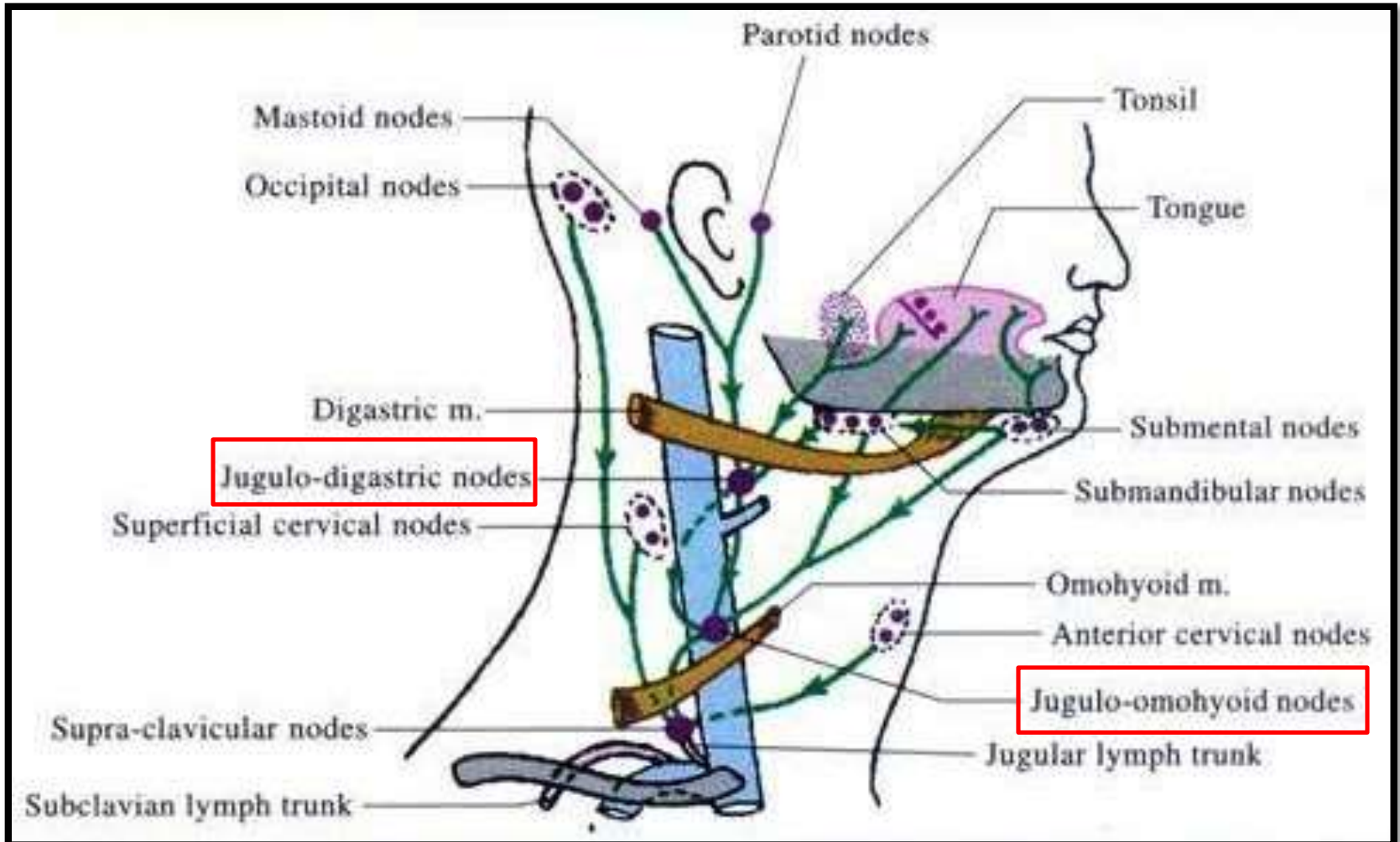
1. *Centre of forehead.*
2. *Medial angle of eye.*
3. *Side of the nose.*
4. *Cheek and angle of mouth.*
5. *Whole of the upper lip.*
4. *Lateral part of lower lip.*
5. *Anterior 2/3rd of the tongue.*
6. *Upper gums.*
7. *Lower gums.*
8. *Frontal, maxillary and most of the ethmoidal sinuses.*
9. *Submental lymph nodes.*



SUBMANDIBULAR NODES CONTD...

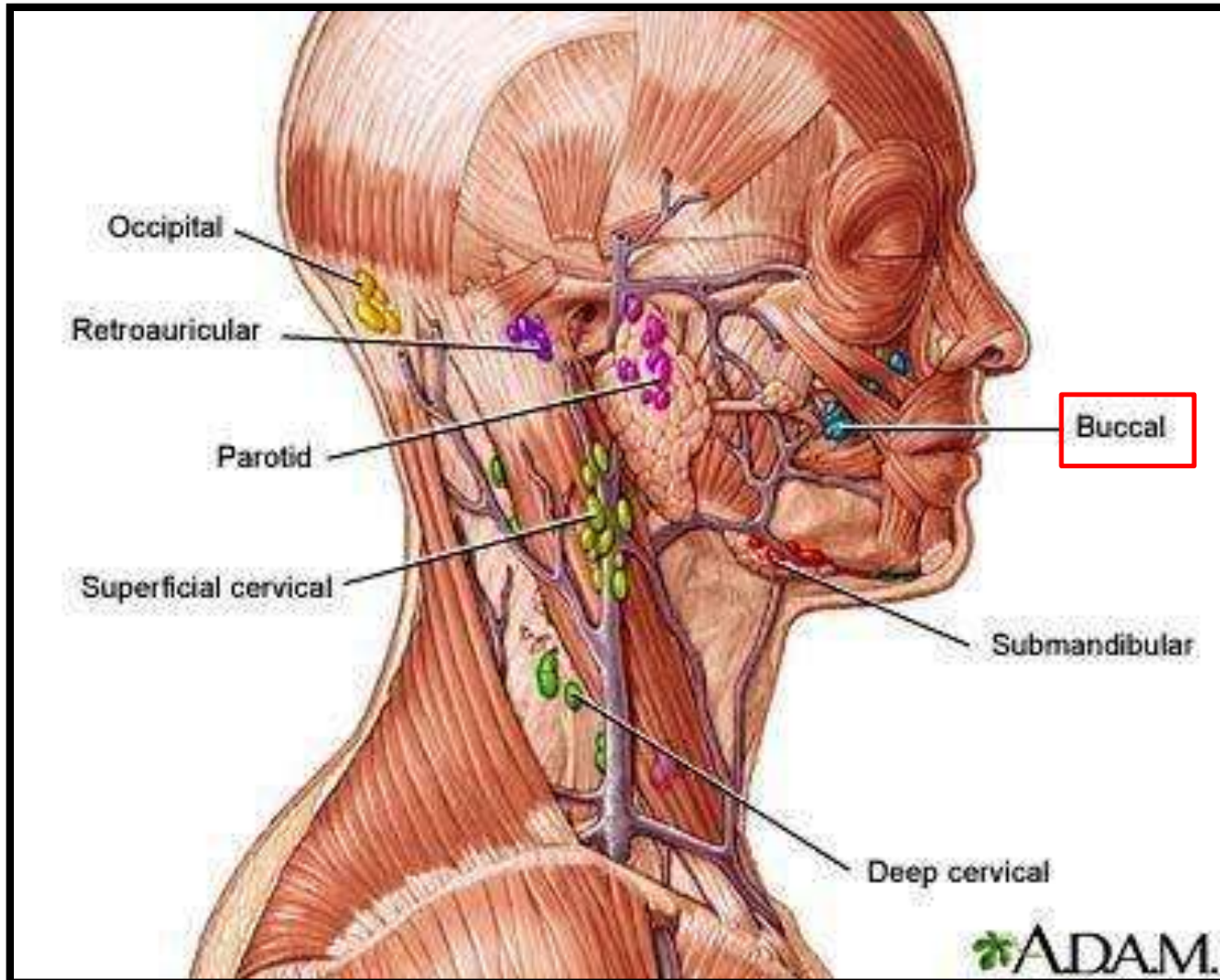
EFFERENTS- into

- Mainly **jugulo-omohyoid** and partly into **jugulo-digastric** nodes.



BUCCAL NODES

- One member of submandibular nodes.
- Lies on the **buccinator**.



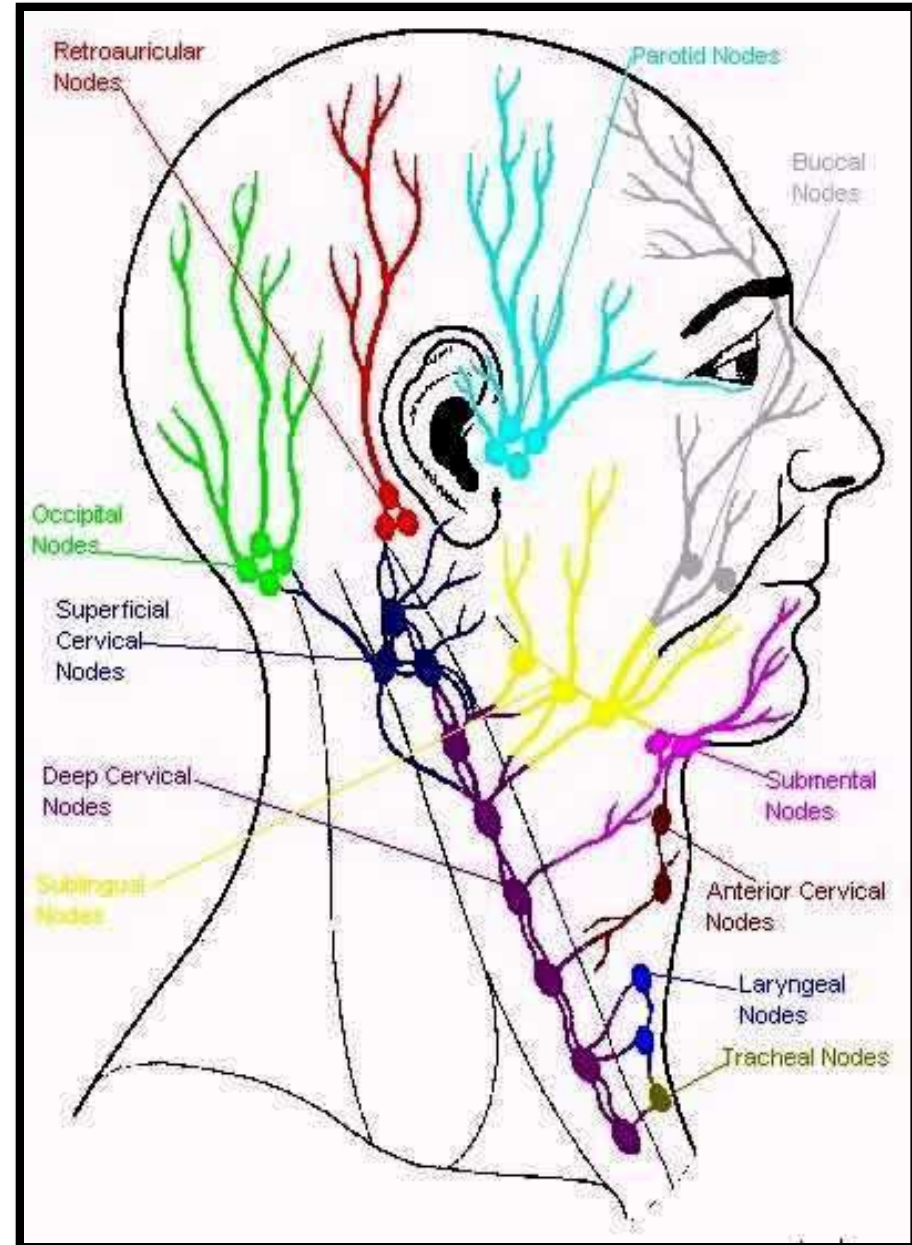
BUCCAL NODES

AFFERENTS- from

1. Part of the cheek.
2. Lower eyelid.

EFFERENTS- into

- Upper deep cervical nodes.



PAROTID (PREAURICULAR) NODES

- Lie *superficial* and *deep* to the fascial capsule of parotid gland and within its substance.
- Divided into 2 groups:-
 - *Superficial group.*
 - *Deep group.*

SUPERFICIAL GROUP-

- Receives **afferents** from-
 1. *Upper part of forehead.*
 2. *Temporal region.*
 3. *Upper part of lateral surface of auricle.*
 4. *Anterior wall of external acoustic meatus.*
 5. *Eyelids.*

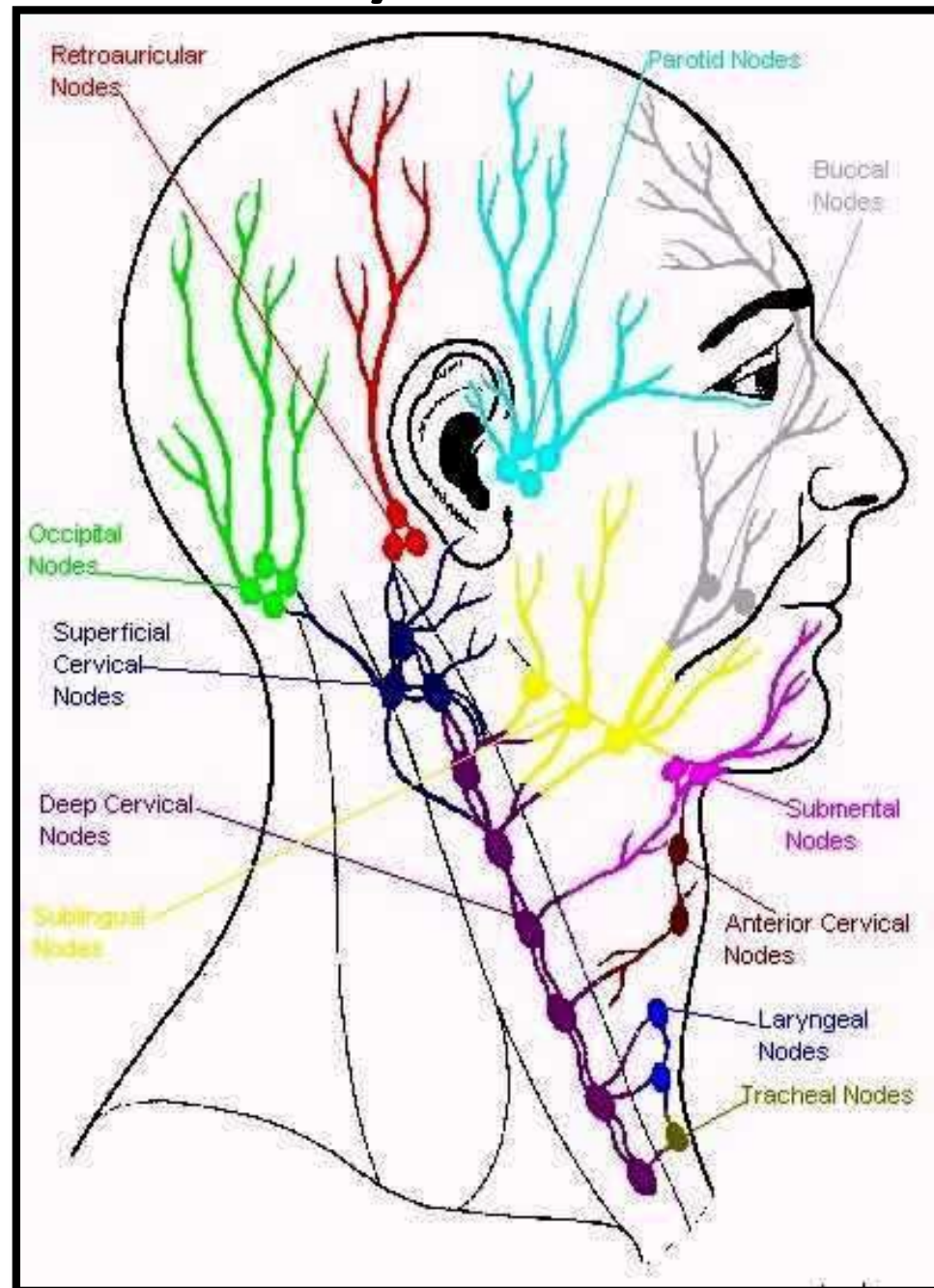
DEEP GROUP-

- Receives **afferents** from-
 1. *Nasopharynx.*
 2. *Posterior part of the nose.*
 3. *Tympanic cavity.*

EFFERENTS-

 drain into

- Upper deep cervical nodes.

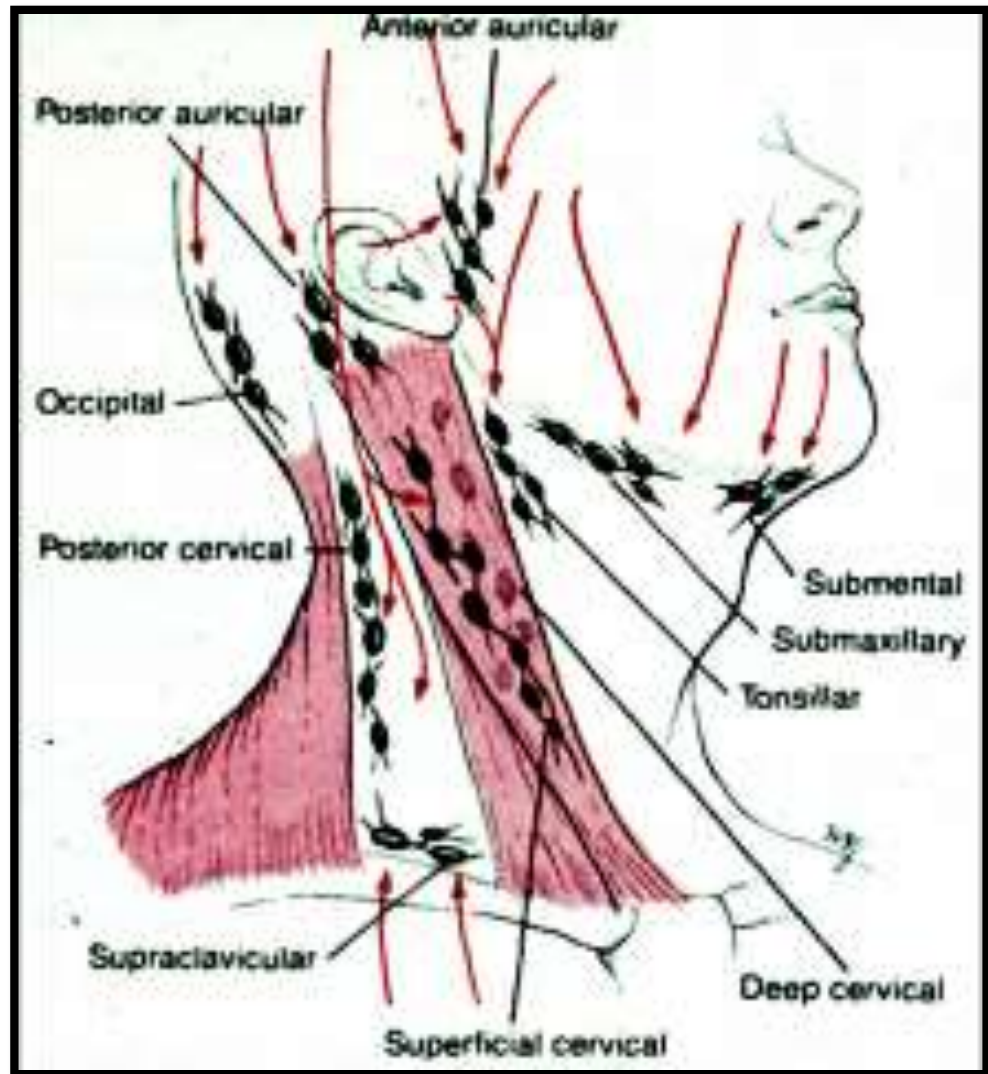


MASTOID (POSTAURICULAR) NODES

- Lie superficial to the sternocleidomastoid near its attachment to the mastoid process.

AFFERENTS- from

1. *Upper part of cranial surface of auricle.*
2. *Adjoining portion of the scalp.*
3. *Posterior wall of external acoustic meatus.*

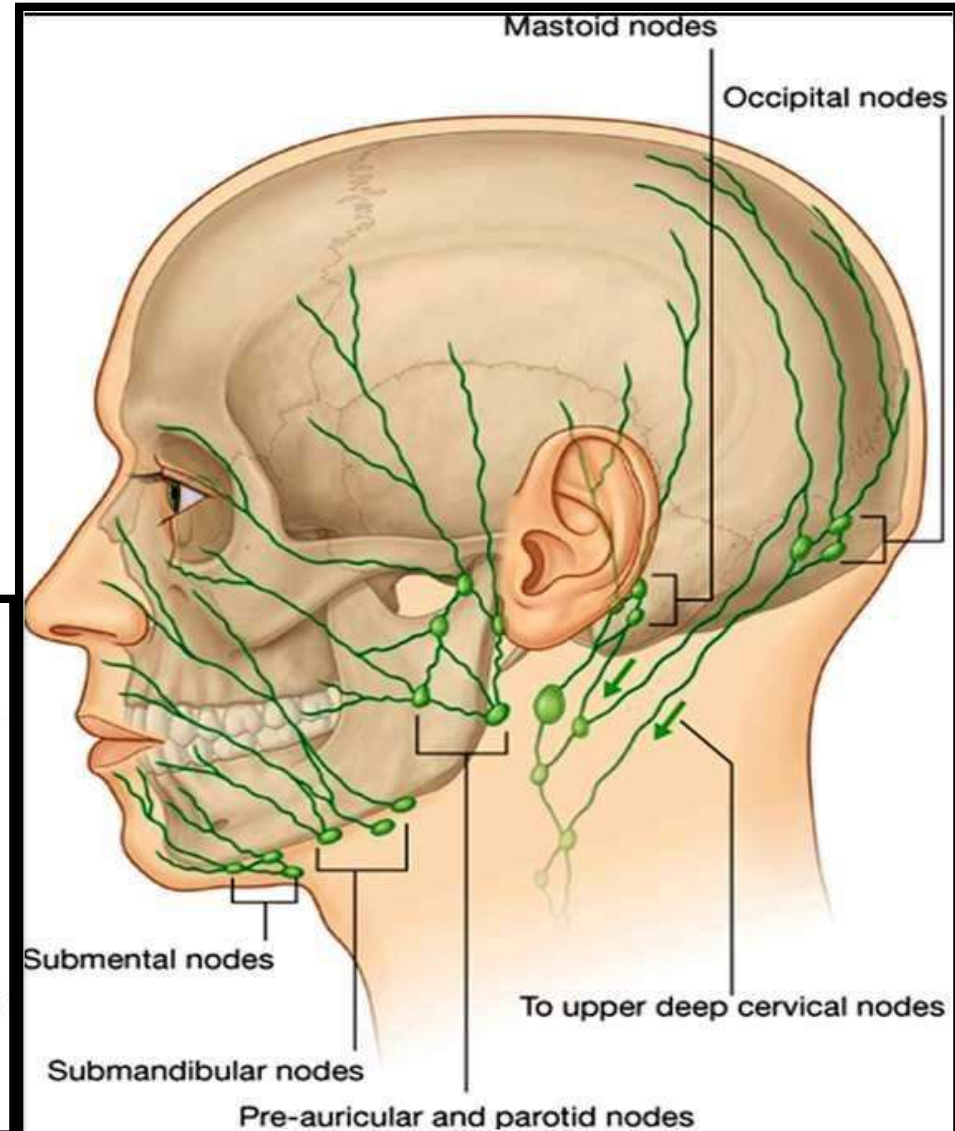
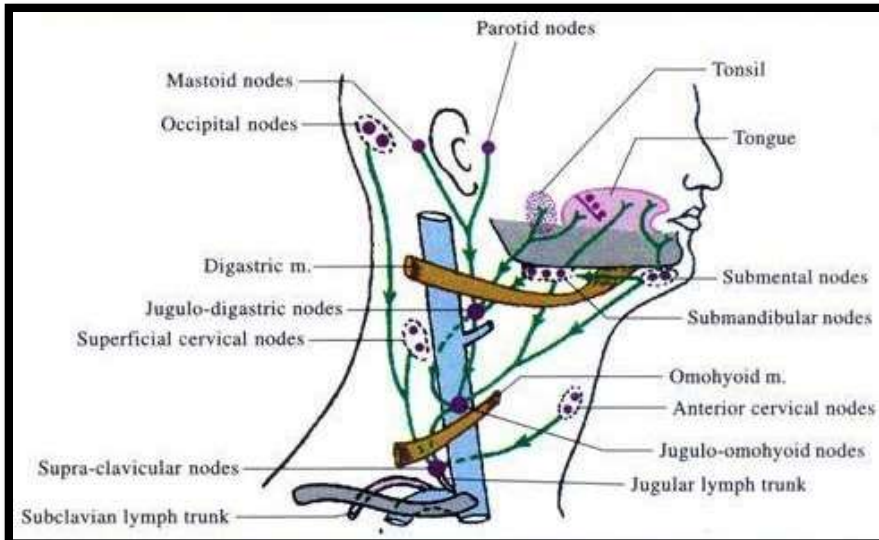


MASTOID (POSTAURICULAR) NODES

CONTD...

EFFERENTS- drain into

- Upper deep cervical nodes.



OCCIPITAL NODES

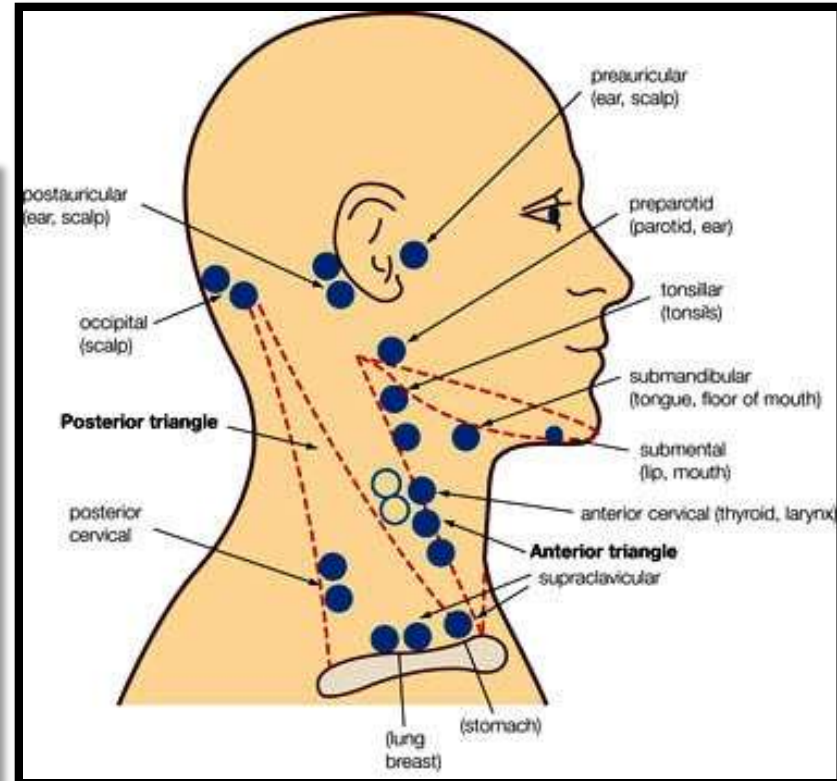
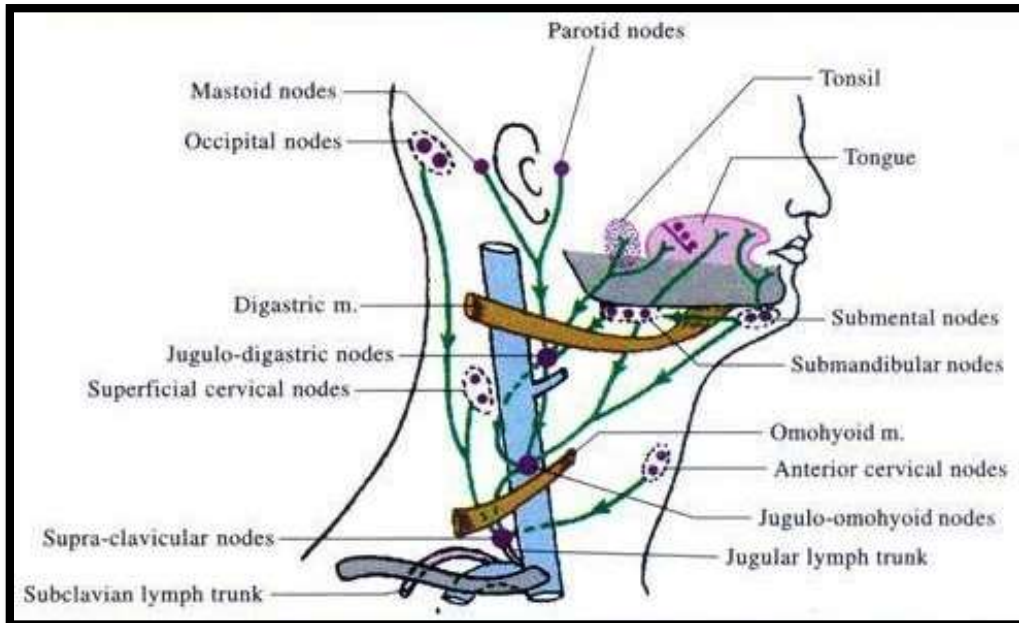
- Located at the **apex of posterior triangle** superficial to the trapezius.

AFFERENTS- from

- *Posterior part of the scalp.*

EFFERENTS- drain into

- Supra-clavicular nodes.





Thanks!