Lymph เป็น liquid ใสสีเหลืองอ่อนมีปฏิกิริยาเป็นด่าง พบได้ใน lymph vessels
Lymphatic System

Lymph vessels
- Lymph capillaries
- Afferent vessels
- Efferent vessels
- Collecting vessels
- Thoracic duct

Lymph vessels ไม่พบที่
- CNS
- Bone marrow
- Internal ear
- Coats of eye ball
- Hyalin cartilage
- Epidermis
- Cornea
THE LYMPHATIC DRAINAGE OF THE HEAD AND NECK

Lymph nodes of head and neck ประกอบด้วย

- Regional groups

- Terminal groups (deep cervical groups)
Efferent of Deep Cervical Lymph Nodes form Jugular Trunk

Right jugular trunk ด้านซ้ายที่
- Junction of internal jugular vein กับ subclavian vein
- Join กับ right lymphatic duct

Left jugular trunk ด้านขวาที่
- Thoracic duct
- Internal jugular vein
- Subclavian vein
Deep Cervical Lymph Nodes

1. The superior deep cervical lymph nodes

- Jugulodigastric lymph nodes

  Afferent – Tongue, tonsil

  Efferent - Lower deep cervical lymph nodes

- Jugular trunk
2. Inferior deep cervical lymph nodes

- Jugular Omohyoid lymph nodes

Afferent - Tongue

Efferent - Jugular trunk
The Lymphatic Drainage of the Tissue of the Head and Neck

1. The superficial tissues

2. The deeper structures and viscera
1. Lymphatic Drainage of the Superficial Tissues of the Head and Neck

Superficial tissues → Regional lymph nodes → Deep cervical nodes
Regional Lymph nodes of Head and Neck ที่เกี่ยวข้องกับ drainage of superficial tissues

- Occipital
- Retroauricular
- Parotid
- Buccal (facial)
- Submandibular
- Submental
- Anterior cervical
Occipital lymph nodes

Afferent – Back of scalp

Efferent – Deep cervical lymph nodes
Retroauricular (mastoid) Lymph Nodes

Afferent - Strip of scalp above auricle
- Posterior external auditory meatus

Efferent - Deep cervical nodes
Parotid Lymph Nodes

- Superficial parotid nodes
- Deep parotid nodes

Afferent of superficial parotid nodes

- Strip of scalp above the parotid salivary gland
- Lateral surface of auricle
- Anterior wall of external auditory meatus
- Lateral part of the eyelid

Afferent of deep parotid nodes

- Middle ear

Efferent

- Deep cervical nodes
Buccal Lymph Nodes

There are lymph nodes in the buccinator muscle that are connected to the facial vein.

Efferent - Submandibular lymph node
Submandibular Lymph Nodes

Afferent - Front of scalp
- Nose and adjacent cheek
- Upper lip
- Lower lip (ยกเว้น center part)
- Frontal, maxillary, ethmoidal air sinus
- Upper and lower teeth (ยกเว้น lower incisor)
- Anterior 2/3 of tongue (ยกเว้น tip)
- Floor of mouth, vestibule, gum

Efferent - Deep cervical lymph nodes
Submental Lymph Nodes

Afferent - Tip of tongue
- Floor of mouth beneath the tip of tongue
- Incisor teeth and associated gum
- Center part of lower lip
- Skin over chin

Efferent – Submandibular nodes
- Deep cervical lymph nodes
  (Jugulo-omohyoid nodes)
Anterior cervical lymph nodes

Afferent - Skin, superficial tissue of the front of the neck

Efferent - Deep cervical lymph nodes
Superficial Cervical Lymph Nodes

Afferent - Skin over the angle of jaw
- Skin over apex of parotid salivary gland and lobul of ear

Efferent - Deep cervical lymph nodes
Lymphatic Drainage of the Scalp and Ear
Lymphatic Drainage of Face
Lymphatic Drainage of Neck
2. Lymphatic Drainage of the Deeper Tissues of Head and Neck

Deeper tissues of head and neck

Regional lymph nodes → Deep cervical lymph nodes
Regional Lymph Node ที่เกี่ยวข้อง

- Retropharyngeal
- Paratracheal
- Infrahyoid
- Prelaryngeal
- Pretracheal
- Lingual
Retropharyngeal Lymph Nodes

Afferent - Nasal part of pharynx
- Auditory tube
- Upper part of cervical vertebral column

Efferent - Deep cervical lymph nodes
Paratracheal Lymph Nodes

Afferent - Neighboring structures
- Thyroid gland

Efferent - Deep cervical lymph nodes
Infrahyoid, Prelaryngeal, Pretracheal Lymph Nodes

Afferent – *Anterior cervical nodes*

Efferent – *Deep cervical lymph nodes*
Lymphatic Drainage of the Nasal Cavity, Nasopharynx and Middle Ear
Lymphatic Drainage of Larynx, Trachea and Thyroid Gland
Lymphatic Drainage of the Mouth, Teeth, Tonsil and Tongue

Mouth

Gum - Submandibular

Hard palate - Upper deep cervical
- Retropharyngeal

Soft palate - Retropharyngeal
- Upper deep cervical

Anterior part of floor of mouth
- Submental
- Upper deep cervical

Posterior part of floor of mouth
- Submandibular
- Upper deep cervical
Teeth

Upper and lower teeth - Submandibular
- Deep cervical

Lower incisor - Submental
Tonsil

- Jugulodigastric
Tongue

หน้า vallate papillae → Marginal, Central vessels
หลัง vallate papillae → Dorsal vessels
Tip and frenulum of tongue → Marginal vessels

Submental
Jugulo – omohyoid
Submandibular
Jugulodigastric
Tongue

Lateral margin of tongue

Marginal vessels

Submandibular

Jugulodigastric

Jugulo-omohyoid

Posterior part of margin of tongue

Marginal vessels

Jugulodigastric
Dorsal surface of tongue ➔ Central vessels ➔ Deep cervical nodes ➔ Submandibular nodes
Vallate papillae และส่วนของ tongue หลัง vallate papillae

Dorsal vessels

Join กับ marginal vessels

Jugulodigastric

Jugulo-omohyoid
Lymphatic Drainage of the Pharynx and Cervical Part of Esophagus

Pharynx and cervical part of esophagus

Retropharyngeal or paratracheal

Deep cervical

Epiglottis

Infrahoid node