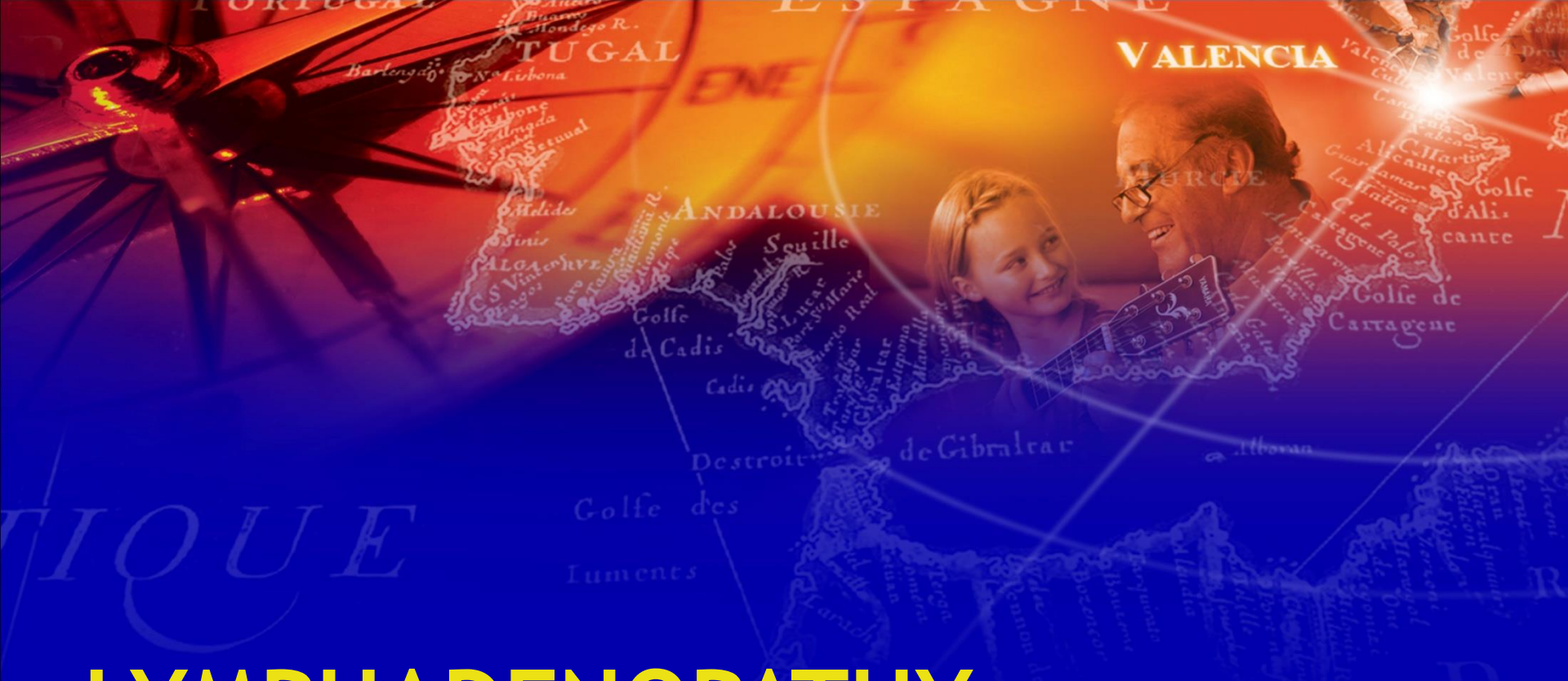
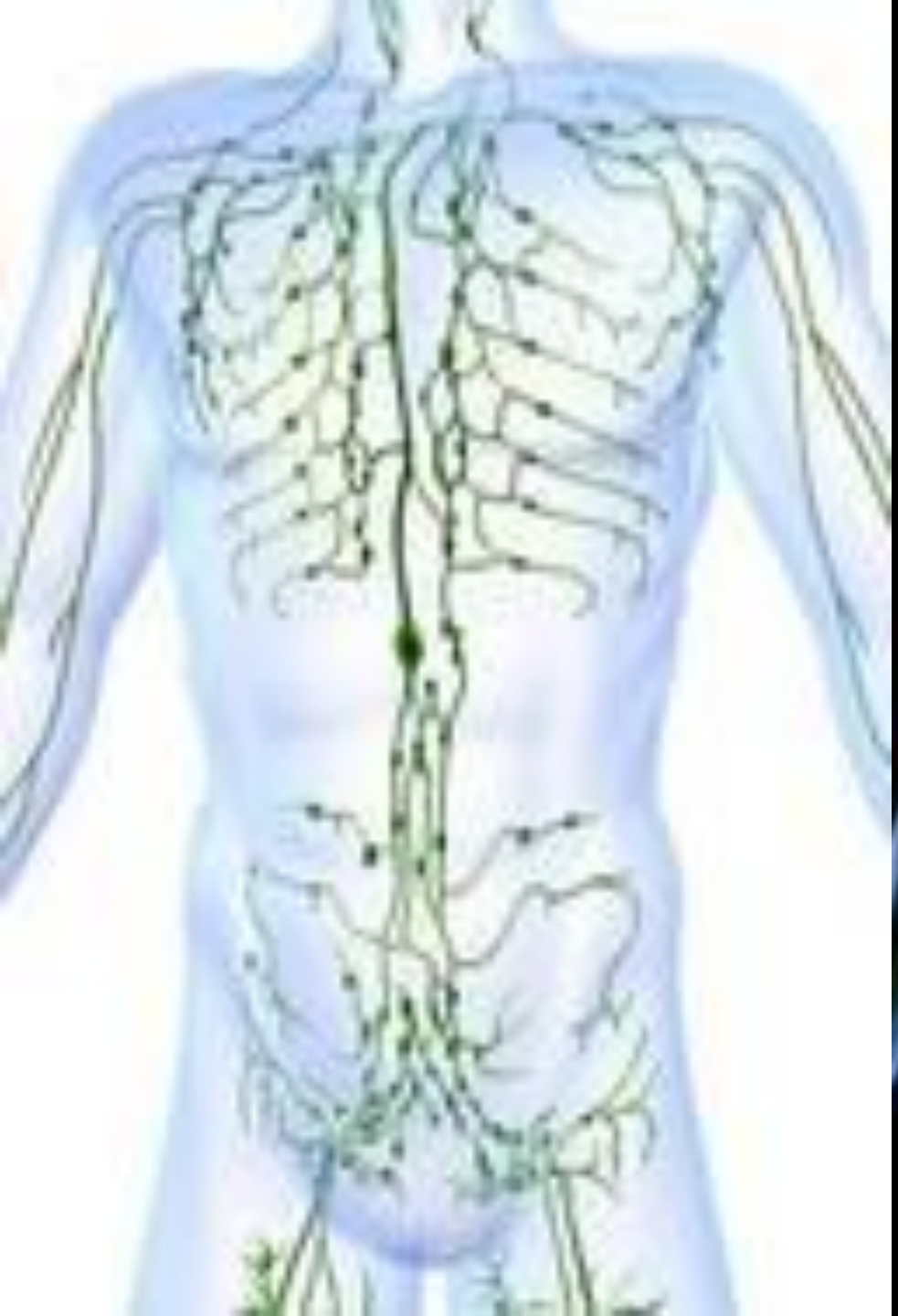


LYMPHADENOPATHY

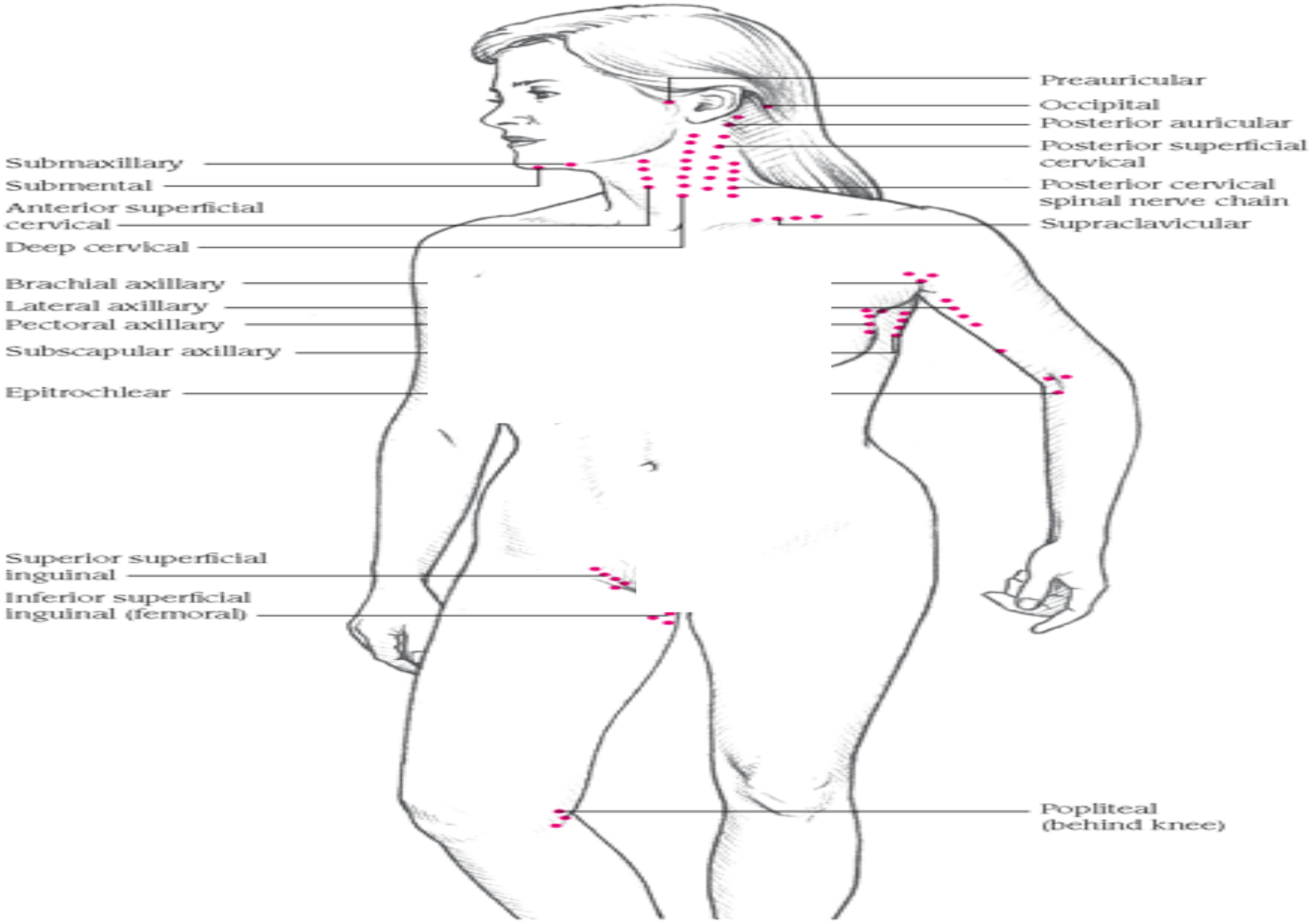
Defination

- Abnormal increase in size or altered consistency of LN
- It is a clinical manifestation of regional or systemic disease
- Serves as an excellent clue to the underlying pathology and etiology



Areas of localized lymphadenopathy

When you detect an enlarged lymph node, palpate the entire lymph node system to determine the extent of lymphadenopathy. Include the lymph nodes indicated below in your assessment.



Lymph Node Groups

- submental, submandibular, preauricular, postauricular, occipital,
- cervical: anterior, posterior
- clavicular: supraclavicular, infraclavicular
- axillary: anterior (pectoral), lateral, posterior (subscapular), central
- epitrochlear, inguinal

CAUSES OF LYMPHADENOPATHY

LOCALIZED

- LN draining a septic focus

  Cervical; axillary; inguinal; periauricular

- Metastasis from carcinoma or other solid tumour
  - Hilar → bronchus
  - Vichow → stomach
  - Cervical → thyroid, togue, parotid

CAUSES OF LYMPHADENOPATHY (localized)

- Systemic infection
  - Viral: viral hepatitis (Rt. Supracalv. LN)
  - Bacterial: TB
  - Protozoal: Filarial infection
- Generelized LN may start as localized LN. As in Hodgkin's disease

CAUSES OF LYMPHADENOPATHY

- **GENERALISED**

➢ infections

- viral; infectious mononucleosis,CMV,HIV
- bacterial; tuberculosis,syphilis
- protozoal; toxoplasmosis

➢ Leukemias

Especially chronic lymphocytic leukemia

CAUSES OF LYMPHADENOPATHY (Con.)

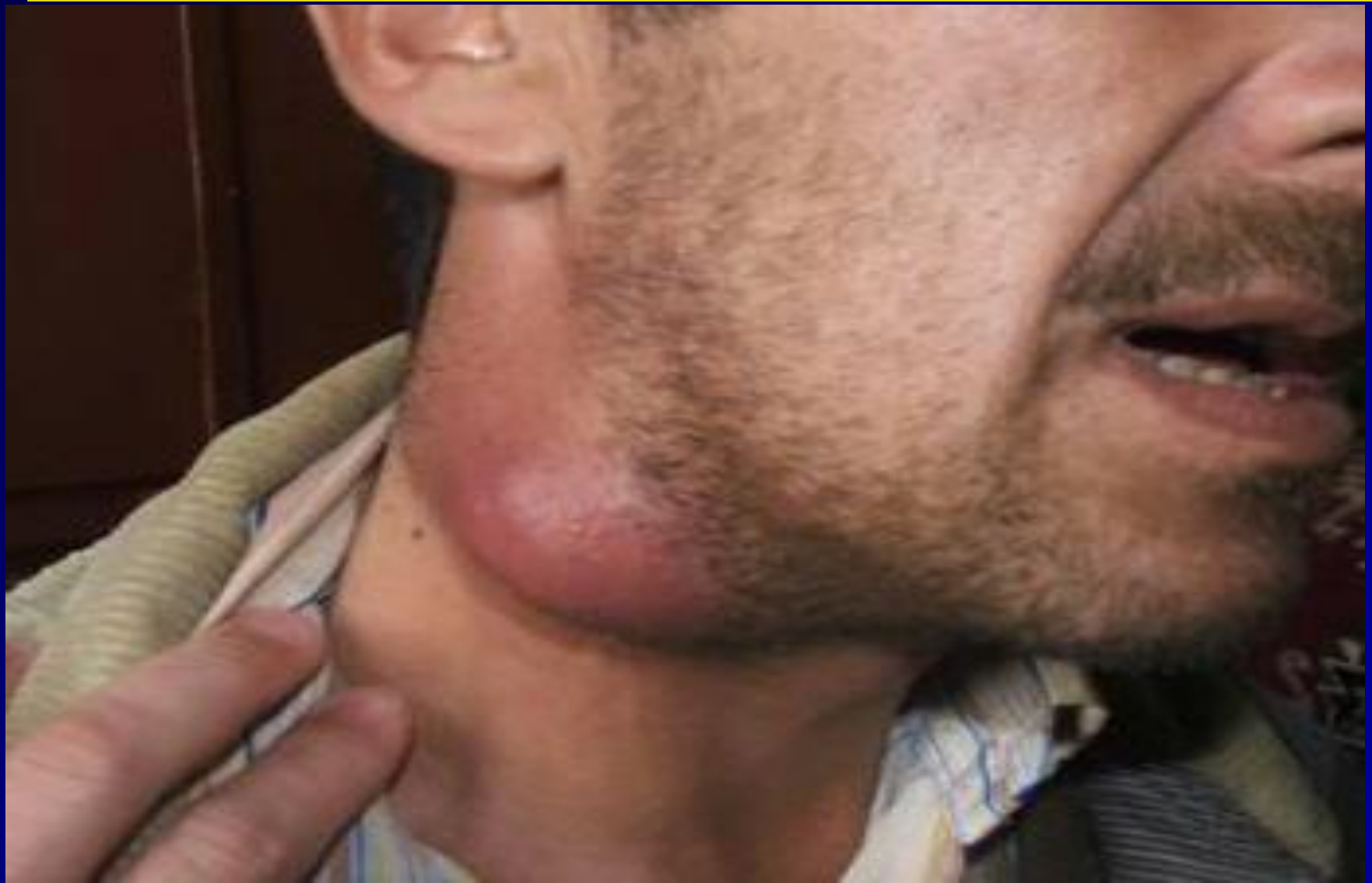
- Lymohomas
  - Hodgkin's disease (HD)
  - Non-Hodgkin's lymphoma (NHL)

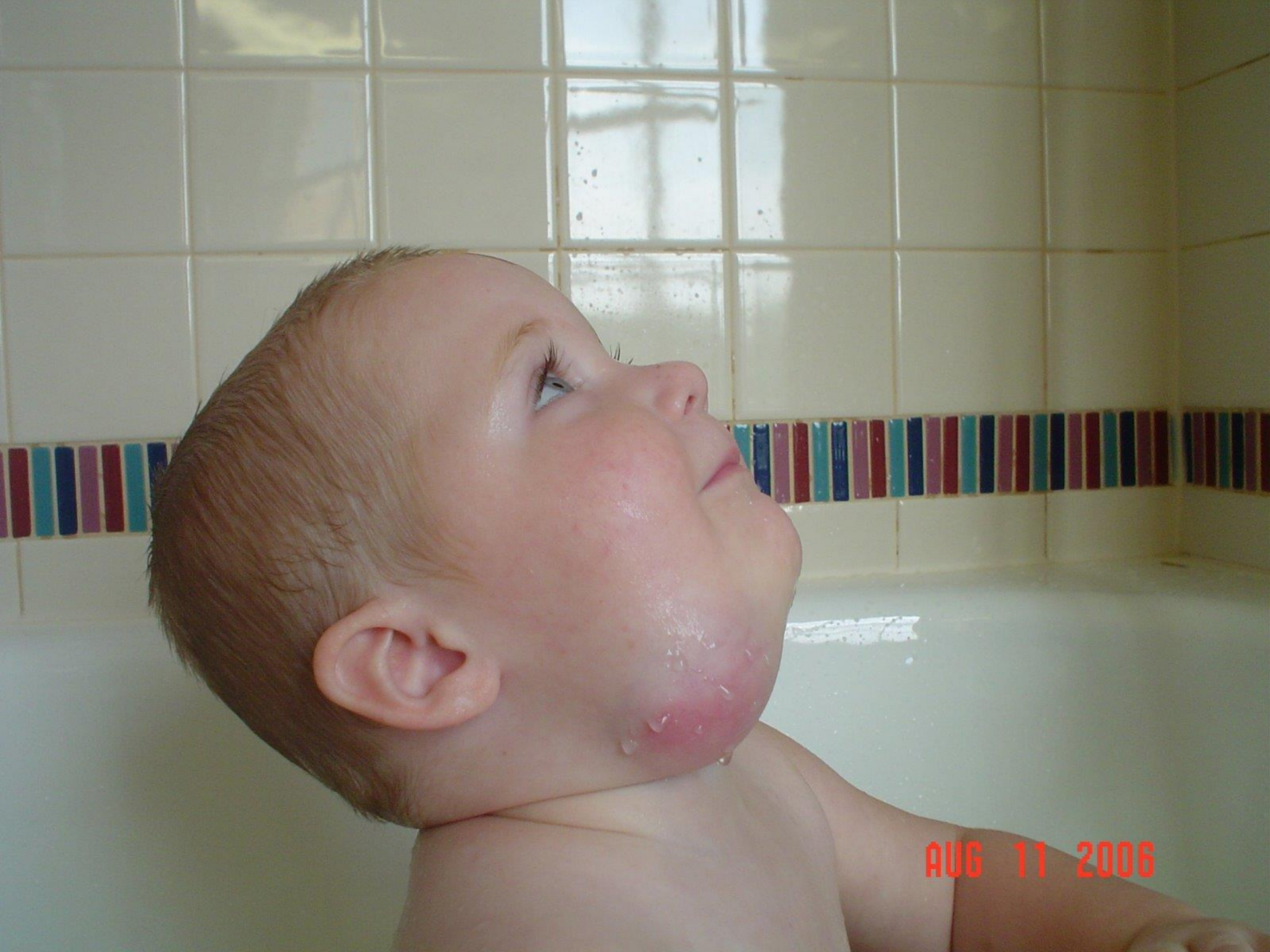
- Collagen
  - Rheumatoid artheritis
- infitration; sarcoidosis
- drugs; phenytoin

Characters of L.N enlargment

- **Infection:** **Acute, tender, warm**
  - Primary region drained also **involved** (e.g neck nodes w/strep throat)
  - Sometimes get **diffuse** enlargement in response to **generalized infection** or systemic inflammatory process (.e.g TB, HIV, systemic mononucleosis)

Cervical lymphadenopathy

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Characters of L.N enlargment

- **Malignancy:**

  - Slowly progressive, firm, multiple nodes involved, stuck together & to underlying structures, not tender

  -**Primary** site malignancy could be **nodes**(e.g.lymphoma) **or adjacent** region (e.g. intra-oral squamous cell ca)

  - Associated with constitutional symptoms

  - Pel Ebstein fever: in HD (period of fever lasting for few days or weeks alternating with aprexial period

Lymph Node Examination

Inspection:

- lymphedema
- surgical scars from cancer excision
- obvious masses

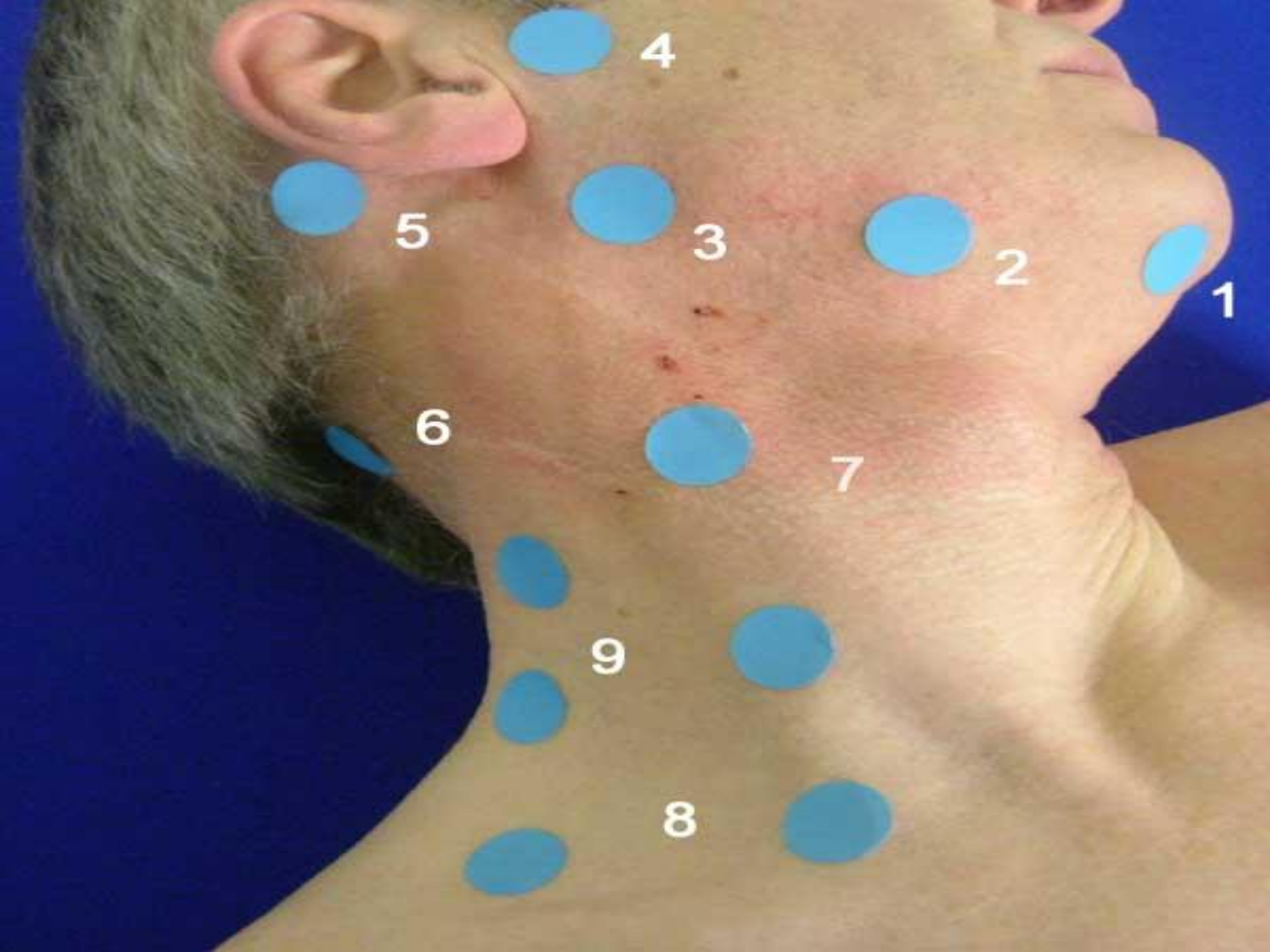
Palpation:

technique:

use the pads of the middle three fingers & move the skin in circular motions over the underlying tissues in each area

Lymph Node Examination

- in abnormal nodes, describe in terms of
  - location
  - size
  - discrete or matted together
  - mobile or fixed
  - consistency (soft, hard, firm)
  - tenderness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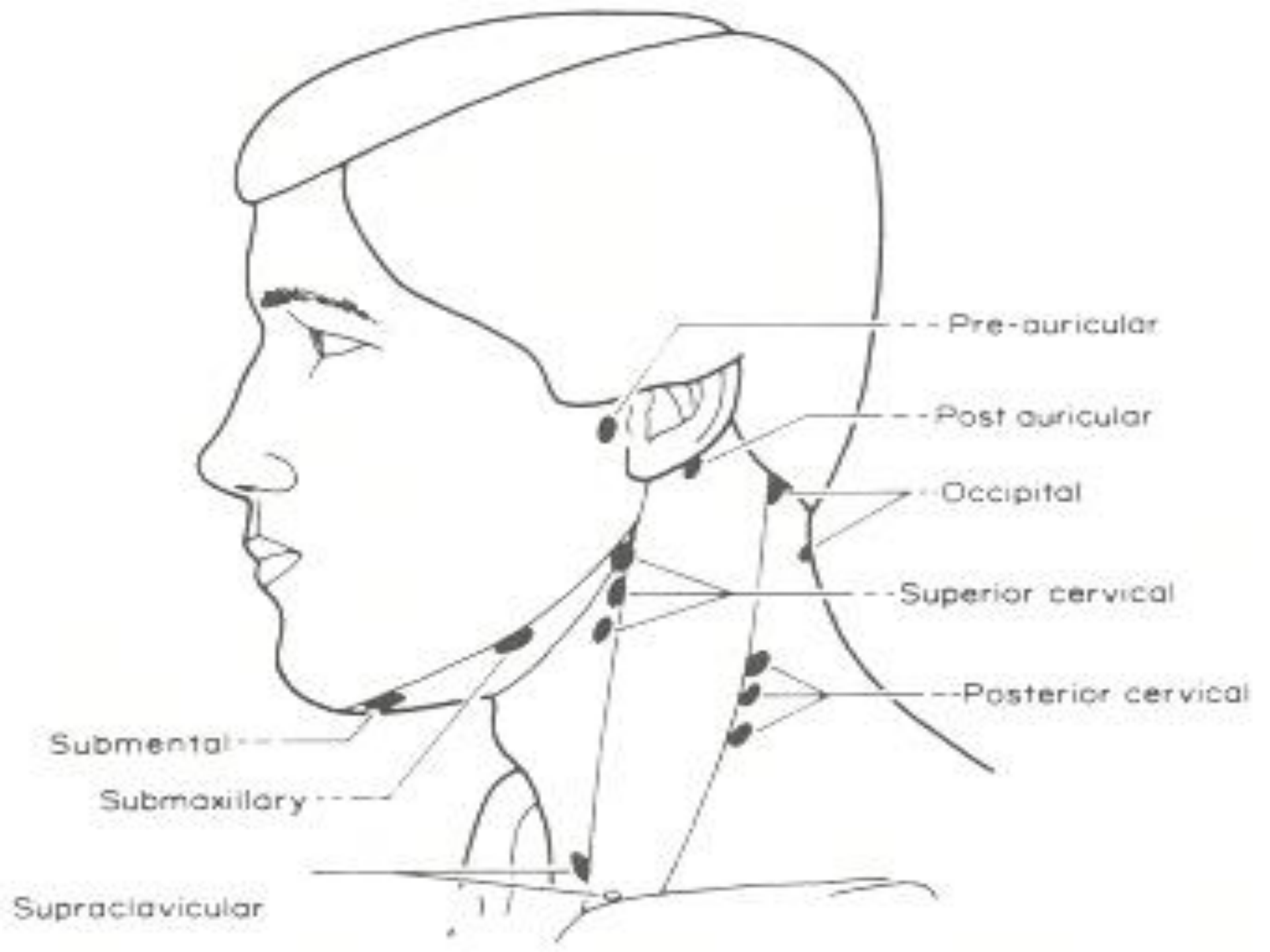
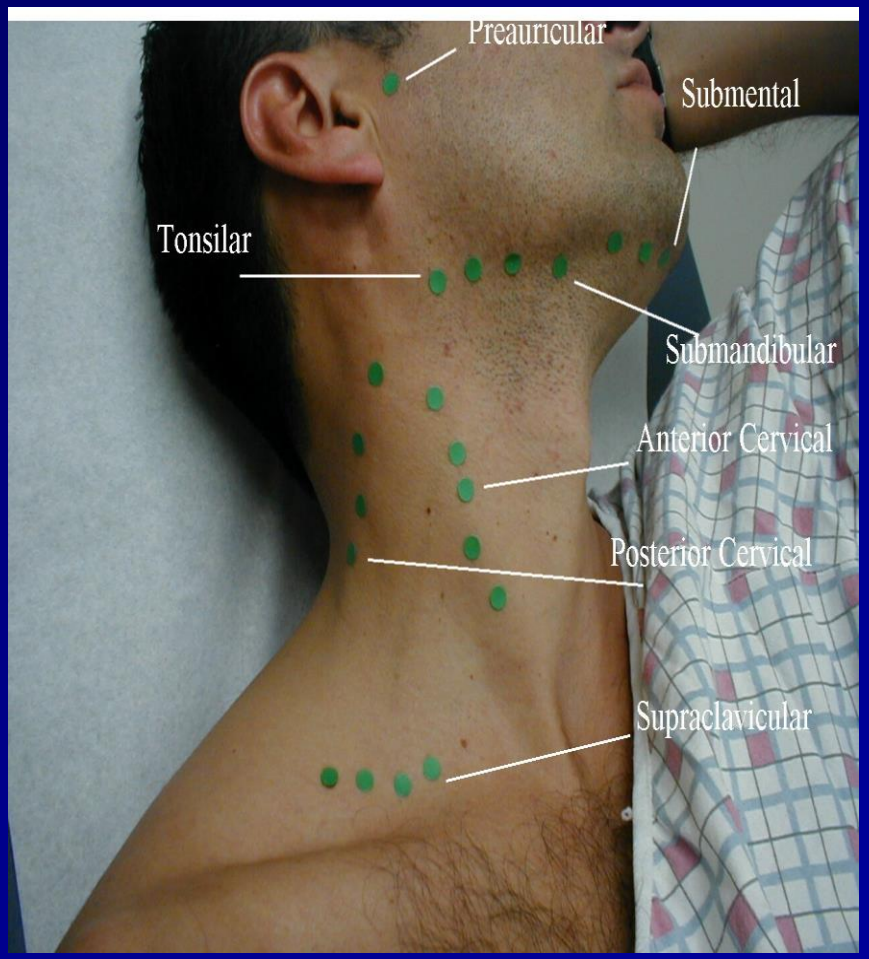

Pre-auricular
Post auricular
Occipital
Superior cervical
Posterior cervical
Submental
Submaxillary
Supraclavicular

Cervical Lymph Node Anatomy & Drainage

- **Ant Cerv:** Throat, tonsils, post pharynx, thyroid
- **Post Cerv:** Back of skull
- **Tonsillar:** Tonsils, posterior pharynx
- **Sub-Mandibular:** Floor of mouth
- **Sub-Mental:** Teeth
- **Supra-Clavicular:** Thorax
- **Pre-Auricular:** Ear



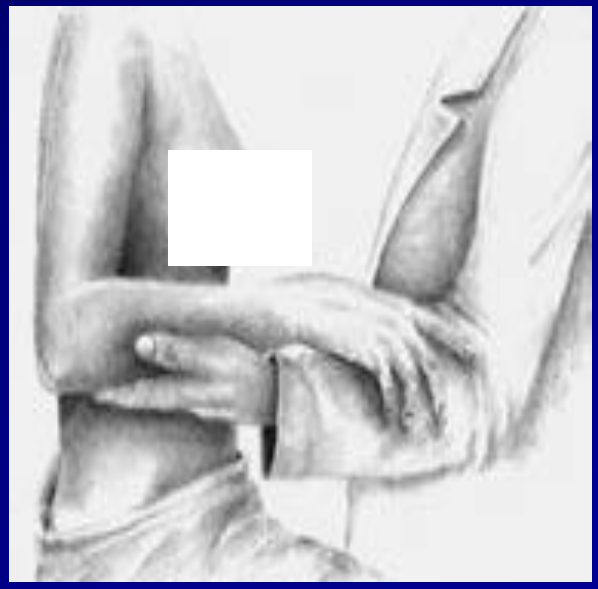
Lymph Node Exam

- Gently walk fingers along general regions – comparing R to L

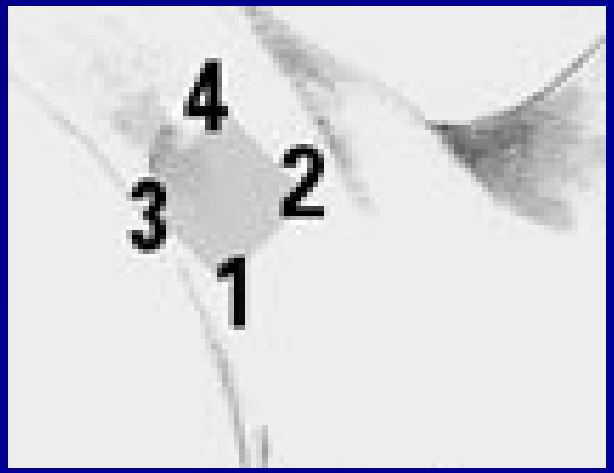
Palpation of supraclavicular LN

Axillary L.N. Examination

- Support the patient's arm and elbow with the non-examining hand to maintain optimal relaxation of musles



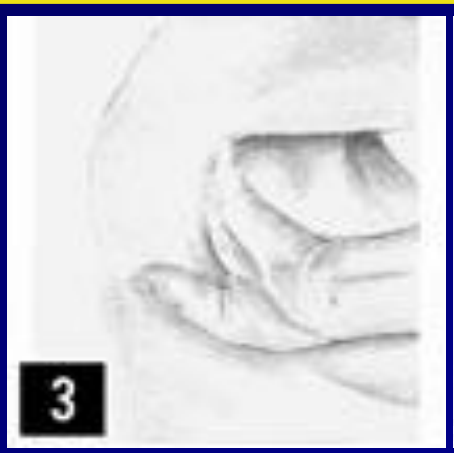
- Axillary nodes are palpated at deep pressure using a circular motion with the pads of the three middle fingers of the examining hand, in all four aspects of the axilla.



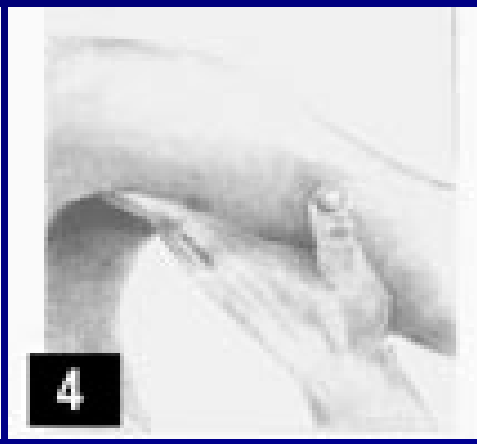
Axillary LN examination

start palpating the **central** nodes deep in the apex of the axilla. The hand is straight up, deep in the underarm

Proceeding down the mid-axillary chestwall, gently move the pads of the fingers medially and inside the border of the **pectoral** muscle



Continue by palpating the **subscapular** nodes. Sweep back up and return to the axilla with the palm facing laterally,



Check the **lateral** nodes with the palm of the hand facing the humeral head

Clinical Approach

Presentation:

-Swelling

-Pressure symptoms

-Pressure on veins ⟶ oedema

-Pressure on nerves ⟶ pain

-Constitional symptoms

-Mediastinal Syndrome

Age:

-TB: in children & young children

-HD: highest incidence () 20-40 years

- NHL: middle age & late life

-ALL: Highest in first 6 years

Clinical Approach

History:

of infectionss, drugs

Distribution:

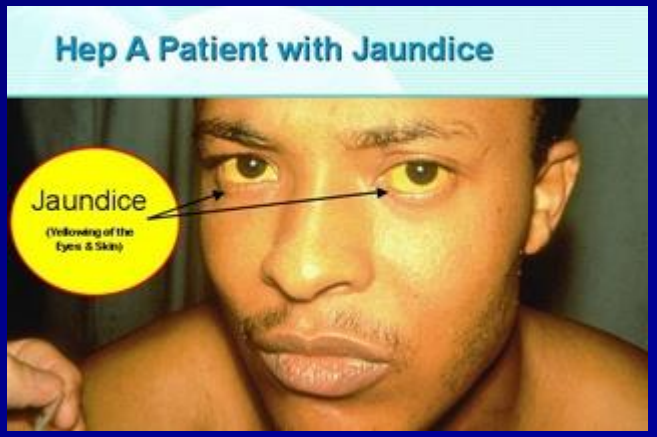
Localized or generelized

Single or multiple groups affected

Other signs:

Fever: H.D, NHL. Leukemia

Jaundice:



Eye: infection, subconjunctival Hage, exophalmos

Clinical Approach

Mouth: Tonsils, infection, parotid , gum hyperplasia

Skin:

pruritis: H.D, NHL

skin nodules: CLL, NHL

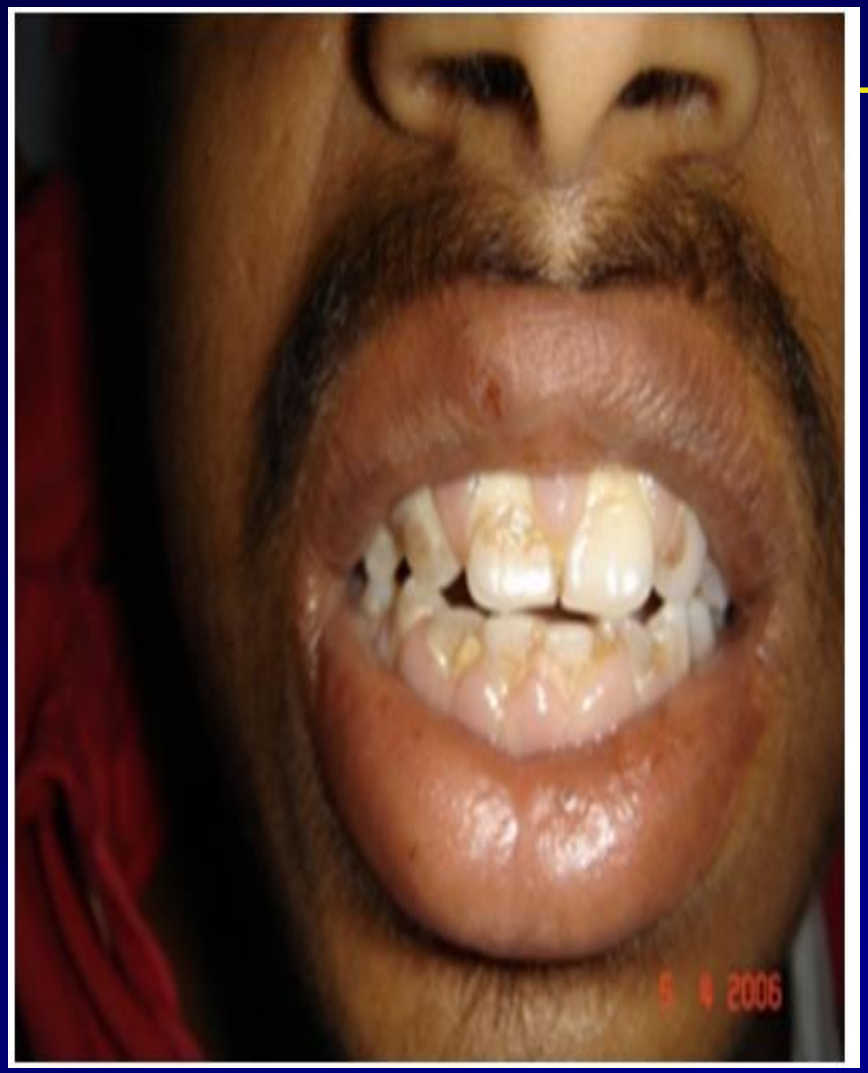
Herpes zoster

Tenderness of sternum: in CML

Bone tenderness

Abdominal examination:

- Ascitis & masses - liver
- Spleen: huge in CML



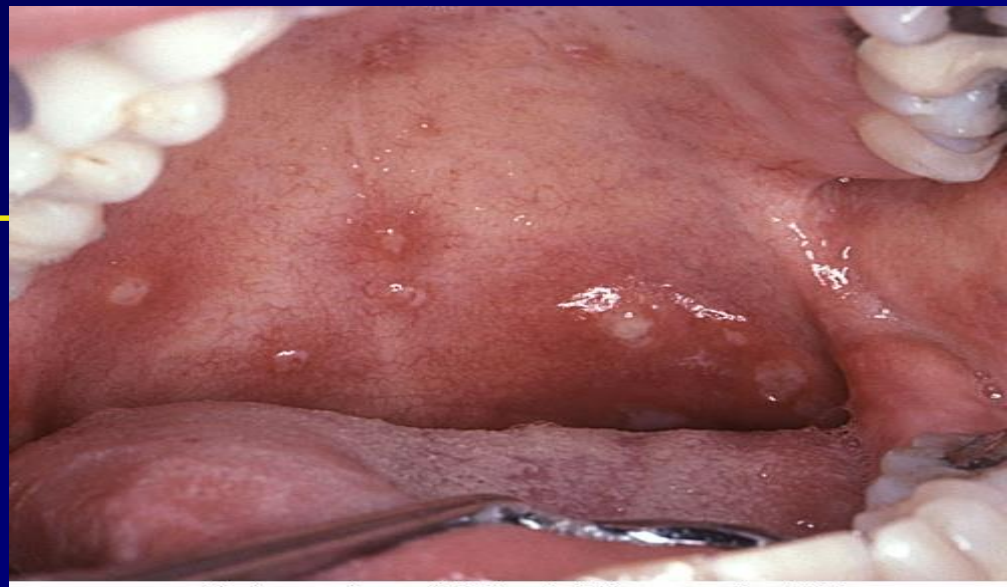
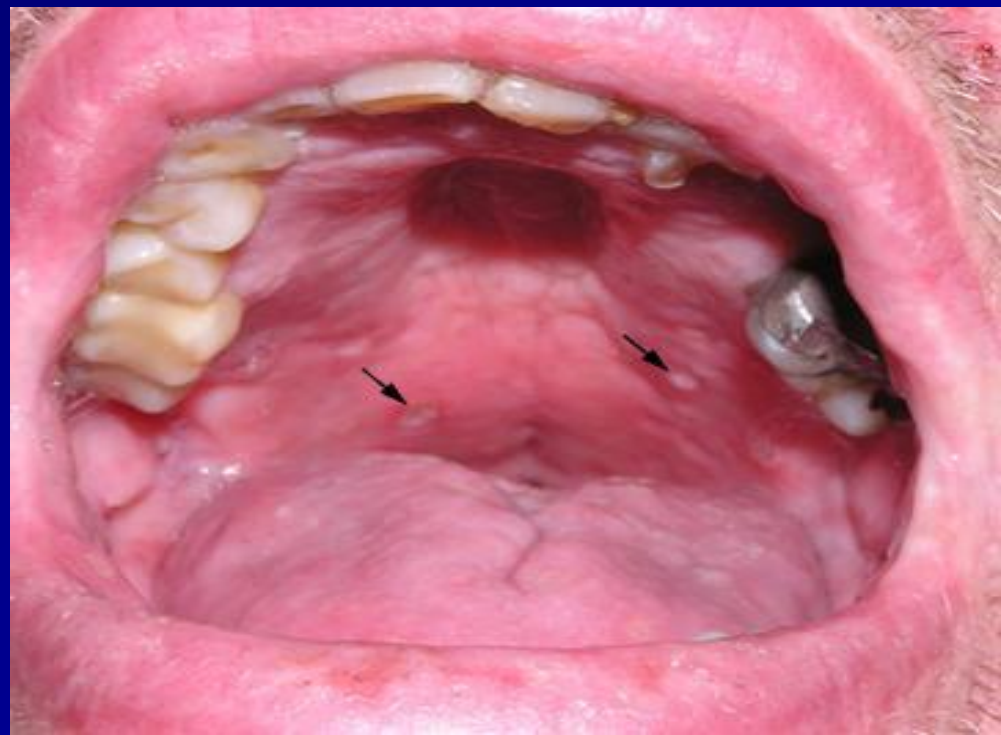


Photo courtesy of CDC – Sol Silverman, Jr., DDS




Thank You