Drug history

- Allopurinol
- Atenolol
- Captopril
- Carbamazepine
- Gold
- Hydralazine
- Penicillins
- Phenytoin
- Primidone
- Pyrimethamine
- Quinidine
- Trimethoprim/Sulfamethozole
- Suldinac

Points in Physical Exam

- **Full nodal examination** – nodal characteristics
- **Organomegaly**
- **Localized** – ***Examine area drained*** by the nodes for evidence of infection, skin lesions or tumours

Management

- Identify underlying cause and treat as appropriate – confirmatory tests
- Generalized adenopathy – usually has identifiable cause
- Localized adenopathy
  - 3-4 week observation period for resolution if not high clinical suspicion for malignancy
  - Biopsy if risk for malignancy - excisional

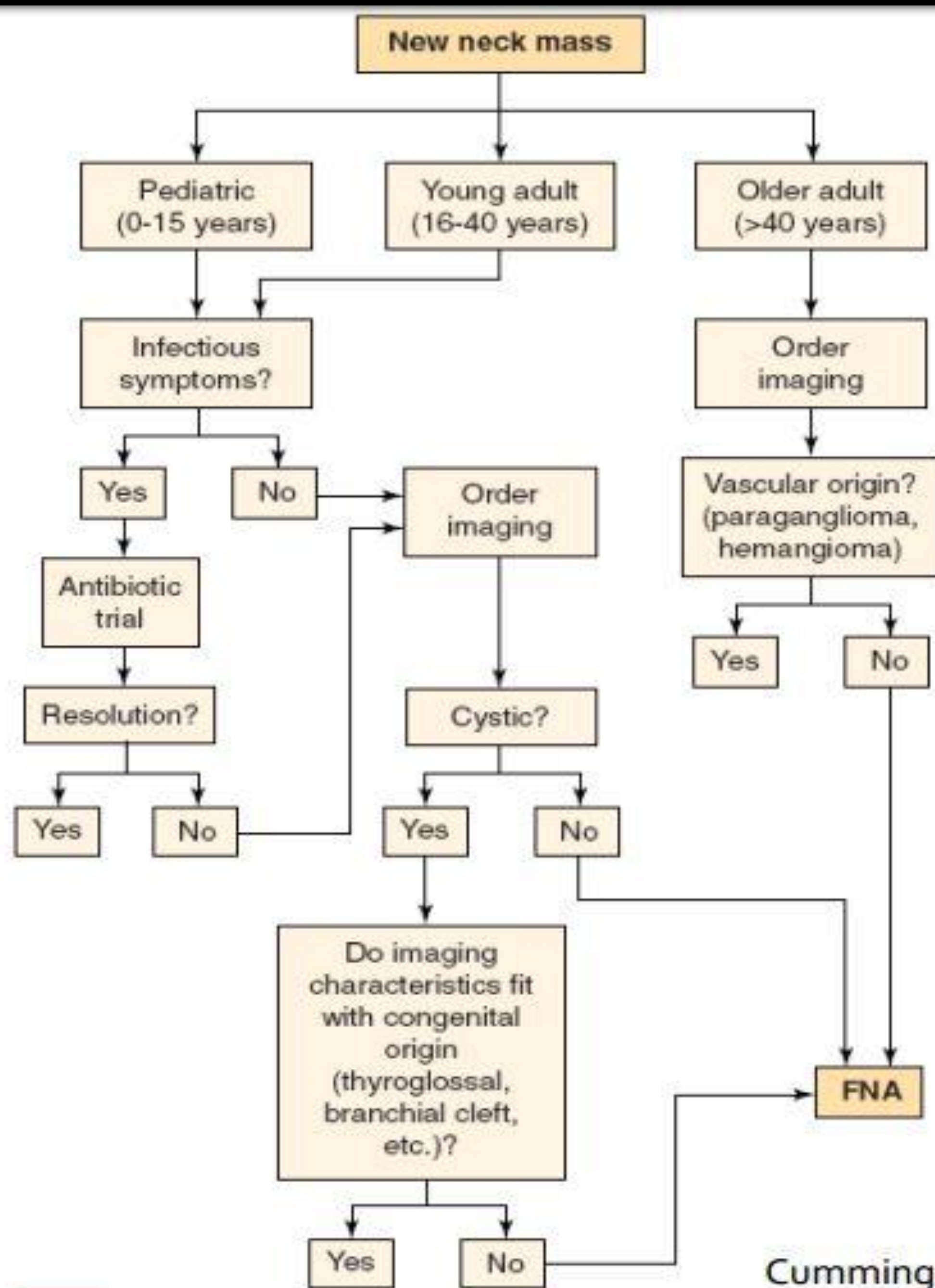

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Figure 116-2. Diagnostic schema for a new neck mass.

Radiographic Investigation of the Head and Neck Masses

- ***MRI – Magnetic Resonance Imaging*** can clearly highlight soft tissue pathologies better than the C.T. Scan.
  - It uses a magnetic field rather than x-rays (radiation).
- ***CT SCAN – Computed tomography*** is less accurate than M.R.I for the soft tissue examination, but is very useful to locate bony tumors and their dimensions and extensions.
  - C.T with contrast is used to enhance the visibility of abnormal tissue during examination.
- ***PET (Positron Emission Tomography) and SPECT (Single Photon Emission Tomography)*** are useful after diagnosis to help determine the grade of a tumor or to distinguish between cancerous and dead or scar tissue.
  - They involve injection with a radioactive tracer.

Fine Needle Aspirate

- Safe Convenient, less invasive, quicker turn-around time
- ***especially beneficial for verification of lymphoid origin of the enlarged growth and in differentiating between*** metastatic, infectious, reactive and lymphomatous causes of lymphadenopathy. It also helps in the determination of the extent of tumor; detection of recurrence; monitoring of the course of disease; obtaining of material for special studies such as microbiological cultures, immunological or genetic studies as well as electron microscopy.
- overall **sensitivity** was 92.7%, **specificity** 98.5%

- Limitations of FNA:
  - the lack of proper tissue sample to run special studies including cytogenetics, flow cytometry, electron microscopy.
  - the potential risk of seeding a tract with malignancy as a result of FNA.

BIOPSY

- Can be done by bedside, open surgery, mediastinoscopy FNA ***cannot distinguish between lymphomas*** (nodal architecture needs to be intact) The preservation of nodal architecture is critical to the proper diagnosis of lymphadenopathy, particularly when differentiating lymphoma from benign reactive hyperplasia
- Biopsy should be avoided in patients with probable viral illness because lymph node pathology in these patients may sometimes simulate lymphoma and lead to a false-positive diagnosis of malignancy.
- The diagnostic yield of the biopsy can be maximized by obtaining an excisional biopsy of the largest and most abnormal node (which is not necessarily the most accessible node). If possible, *the physician should not select inguinal and axillary nodes* for biopsy, since they frequently show only reactive hyperplasia.
- Patients should be cautioned to remain alert for the reappearance of the nodes because lymphomatous nodes have been known to temporarily regress.

Differential Diagnosis

CHICAGO

Chicago Cancer

- Heme. malignancies:

  Hodgkin, NHL, acute and chronic leukemia , waldenstroms , multiple myeloma (plastmocytomas)
- Metastatic: solid tumor breast, lung, renal, cell ovarian.

cHicago
Hypersensitivity Syndromes

- Serum sickness.
- Serum sickness like illness.

- Drugs
- Silicone
- Vaccination
- Graft vs Host

CHICAGO

INFECTIONS

- Viral
- Bacterial
- Protozoan
- Mycotic
- Rickettsial (typhus)
- Helminthic (filariasis)

VIRAL

- **EBV**……Mono-spot test
- **CMV**……CMV antibody titers, immunsuppresed, transplant recipient, recent blood transfusion
- **HIV…** IV drug use, high risk sexual behavior
- **Hepatitis**….IV drug use
- **Herpes Zoster**….superficial cutaneous nodules

Bacterial

- **Staph/strep**: cutaneous source, lymphadenitis
- **Cat scratch**: bartonella hensalae, two weeks after inoculation
- **Mycobacterium**: ***TB*** and non-tb, host characteristics (HIV, foreign born, low socioeconomic status, homo….)

Spirochetes

- **Syphilis**: Treponema pallidum Primary localized inguinal lymph nodes and secondary, non-treponemal, treponemal
- **Lyme** disease(the most common tick-borne disease caused by Borrelia)

Protozoan

- **Toxoplasmosis**: ELISA assay, intracellular protozoan toxoplasmosis gondii….bilateral, symmetrical, non-tender cervical adenopathy

(consider undercooked meat, reactivation in immun-compromised host)

chiCago

Connective Tissue Disease

- Rheumatoid Arthritis.
- SLE.
- Dermato-myositis.
- Mixed connective tissue disease.
- Sjogren syndrome.

ChicAgo
Atypical lymphoproliferative disorders

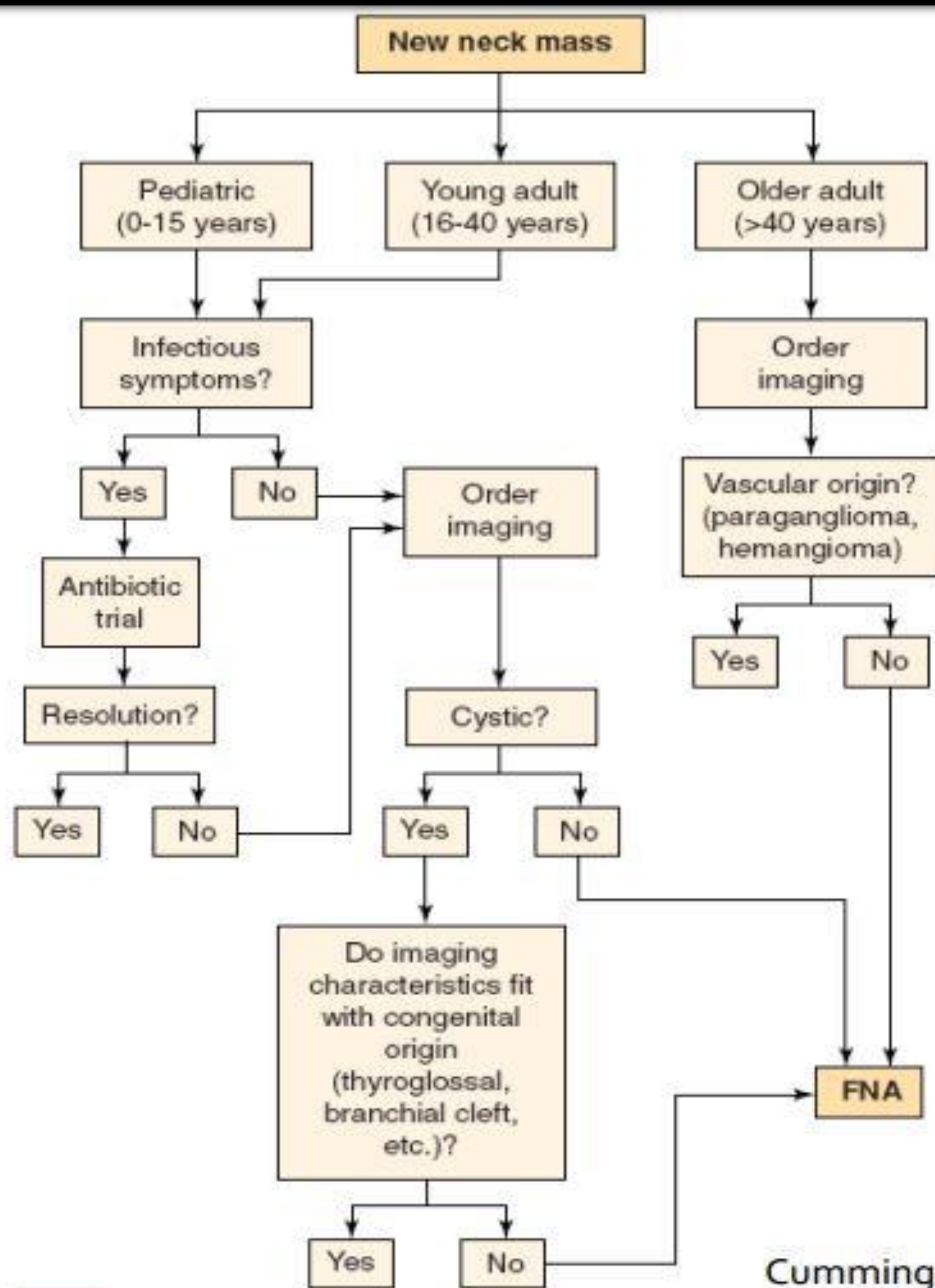
- *Castleman’s disease.*
- *Wegener's granulomatosis (a form of vasculitis that affects the lungs, kidneys and other organs..)*
- *Angio-immuonplastic lymph-adenopathy with dysproteinemia.*

CHICAGO GRANULOMATOUS

- Histoplasmosis.
- Mycobacterial infections.
- Cryptococcus.
- Silicosis: coal, foundry, ceramics, glass.
- Berylliosis: metal, alloys.
- Cat Scratch .

CHICAGO
OTHERS

- *RARE*
- *Kikuchi (histiocytic necrotizing lymphadenitis (non-cancerous enlargement of the lymph nodes)*
- *Rosi Dorfman disease (sinus histiocytosis with massive lymphadenopathy, is a rare, benign disorder of unknown etiology)*



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Thank you