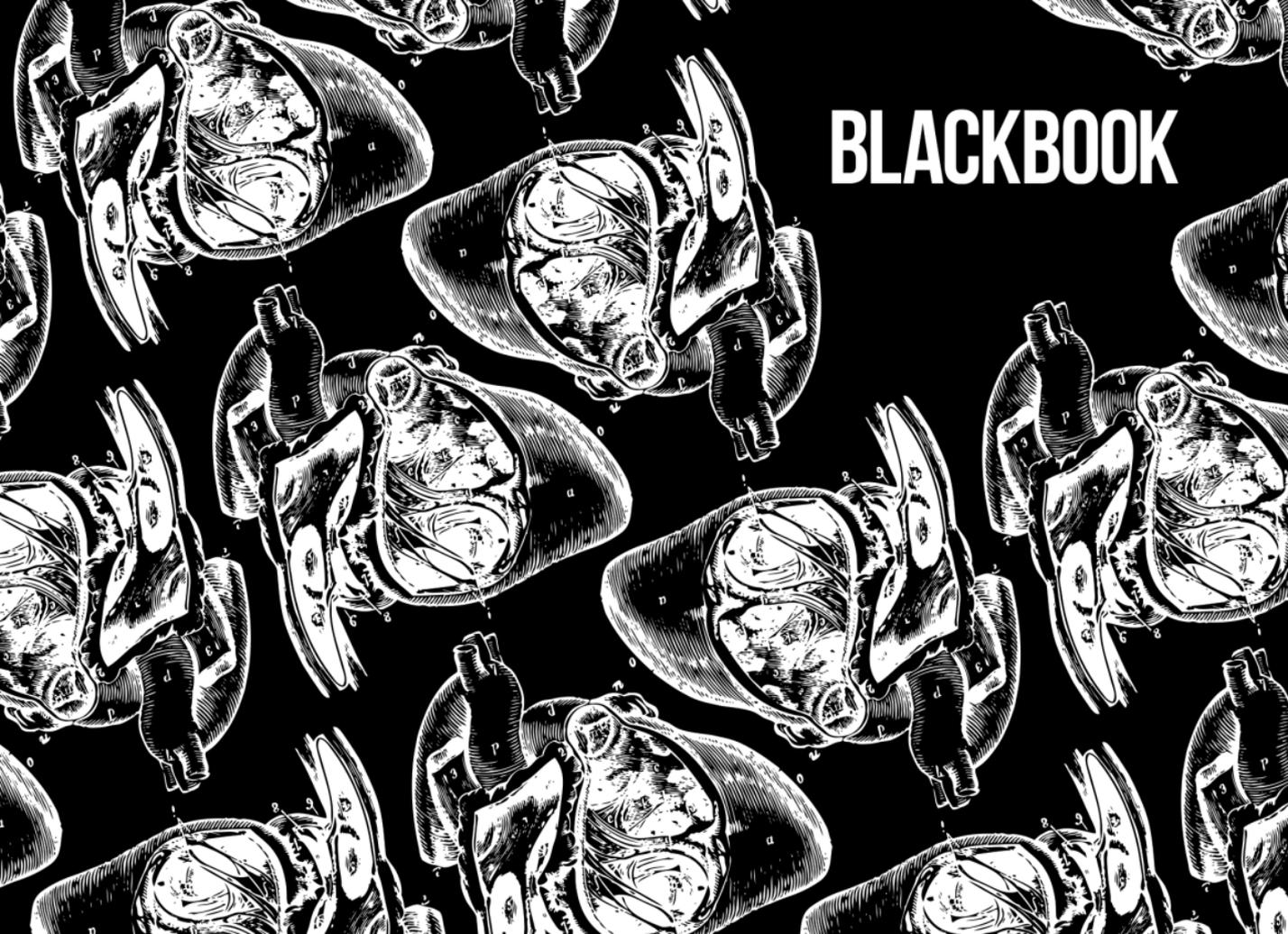


# BLACKBOOK





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# Blackbook

Approaches to Medical Presentations

*Produced by The Cumming School of Medicine, University of Calgary*



**UNIVERSITY OF CALGARY**  
CUMMING SCHOOL OF MEDICINE



# **Blackbook:** Approaches to Medical Presentations

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Vecteezy.com



# A Message from the Editors

Welcome to the *Blackbook*, an ongoing project organizing medical presentations into schemes. *Blackbook* is the result of the hard work and dedication of medical students and faculty at the University of Calgary, Cumming School of Medicine. We are proud that healthcare practitioners and trainees across North America find *Blackbook* to be a useful tool in their learning.

*Blackbook* continues to evolve and improve with each new version. This fourteenth edition has overhauled the *entirety* of the pediatrics section with 84 new schemes that incorporate the most up-to-date evidence and clinical practices! Furthermore, *Blackbook* continues to integrate with Calgary Cards, an online study aid using patient case centered multiple choice questions, facilitating the direct translation of scheme learning into clinical scenario practice.

We continue to strive to make Blackbook a leading study resource. Please email **blackbk@ucalgary.ca** with any feedback, corrections, or ideas for new schemes.

Thank you and happy learning! Bryan Ma and Hannah Yaphe



# Introduction to Schemes

The material presented in this book is intended to assist learners in organizing their knowledge into information packets, which are more effective for the resolution of the patient problems they will encounter. There are three major factors that influence learning and the retrieval of medical knowledge from memory: meaning, encoding specificity (the context and sequence for learning), and practice on the task of remembering. Of the three, the strongest influence is the degree of meaning that can be imposed on information. To achieve success, experts organize and “chunk” information into meaningful configurations, thereby reducing the memory load.

These meaningful configurations or systematically arranged networks of connected facts are termed schemata. As new information becomes available, it is integrated into schemes already in existence, thus permitting learning to take place. Knowledge organized into schemes (basic science and clinical information integrated into meaningful networks of concepts and facts) is useful for both information storage and retrieval. To become excellent in diagnosis, it is necessary to practice retrieving from memory information necessary for problem resolution, thus facilitating an organized approach to problem solving (scheme-driven problem solving).

The domain of medicine can be broken down to 121 (+/- 5) clinical presentations, which represent a common or important way in which a patient, group of patients, community or population presents to a physician, and expects the physician to recommend a method for managing the situation. For a given clinical presentation, the number of possible diagnoses may be sufficiently large that it is not possible to consider them all at once, or even remember all the possibilities. By classifying diagnoses into schemes, for each clinical presentation, the myriad of possible diagnoses become more manageable 'groups' of diagnoses. This thus becomes a very powerful tool for both organization of knowledge memory (its primary role at the undergraduate medical education stage), as well as subsequent medical problem solving.

There is no single right way to approach any given clinical presentation. Each of the schemes provided represents one approach that proved useful and meaningful to one experienced, expert author. A modified, personalized scheme may be better than someone else's scheme, and certainly better than having no scheme at all. It is important to keep in mind, before creating a scheme, the five fundamentals of scheme creation that were used to develop this book.

If a scheme is to be useful, the answers to the next five questions should be positive:

1. Is it simple and easy to remember? (Does it reduce memory load by "chunking" information into categories and subcategories?)
2. Does it provide an organizational structure that is easy to alter?
3. Does the organizing principle of the scheme enhance the meaning of the information?
4. Does the organizing principle of the scheme mirror encoding specificity (both context and process specificity)?
5. Does the scheme aid in problem solving? (E.g. does it differentiate between large categories initially, and subsequently progressively smaller ones until a single diagnosis is reached?)

By adhering to these principles, the schemes presented in this book, or any modifications to them done by the reader, will enhance knowledge storage and long term retrieval from memory, while making the medical problem-solving task a more accurate and enjoyable endeavour.

Dr. Henry Mandin

Dr. Sylvain Coderre

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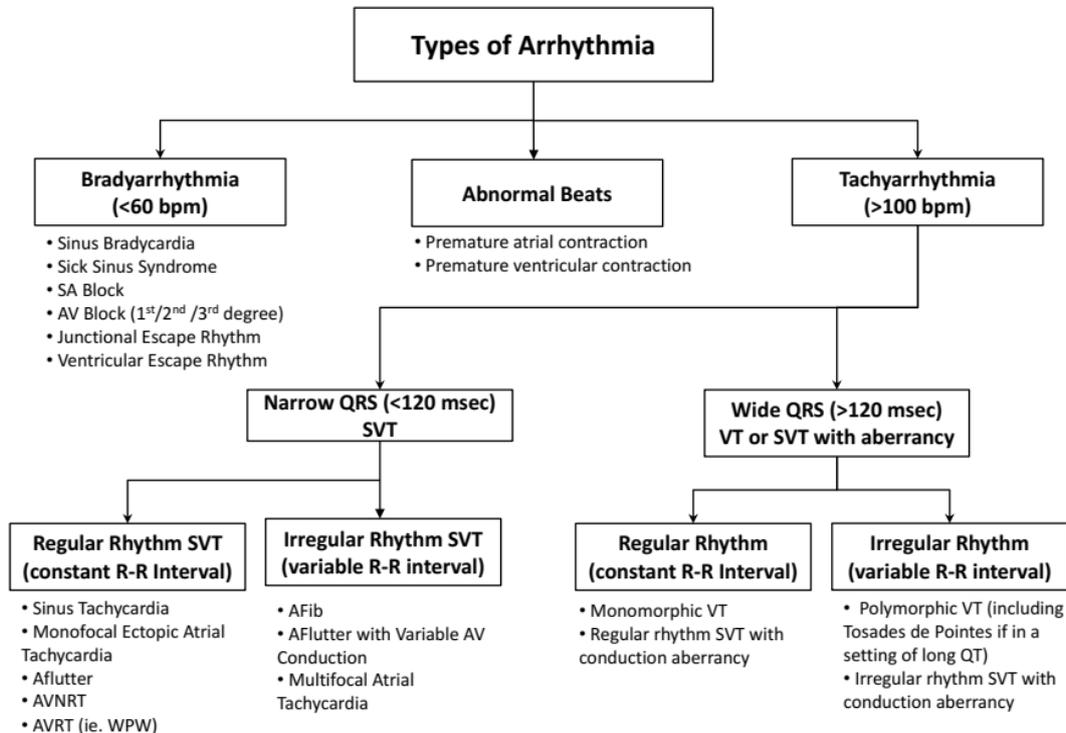
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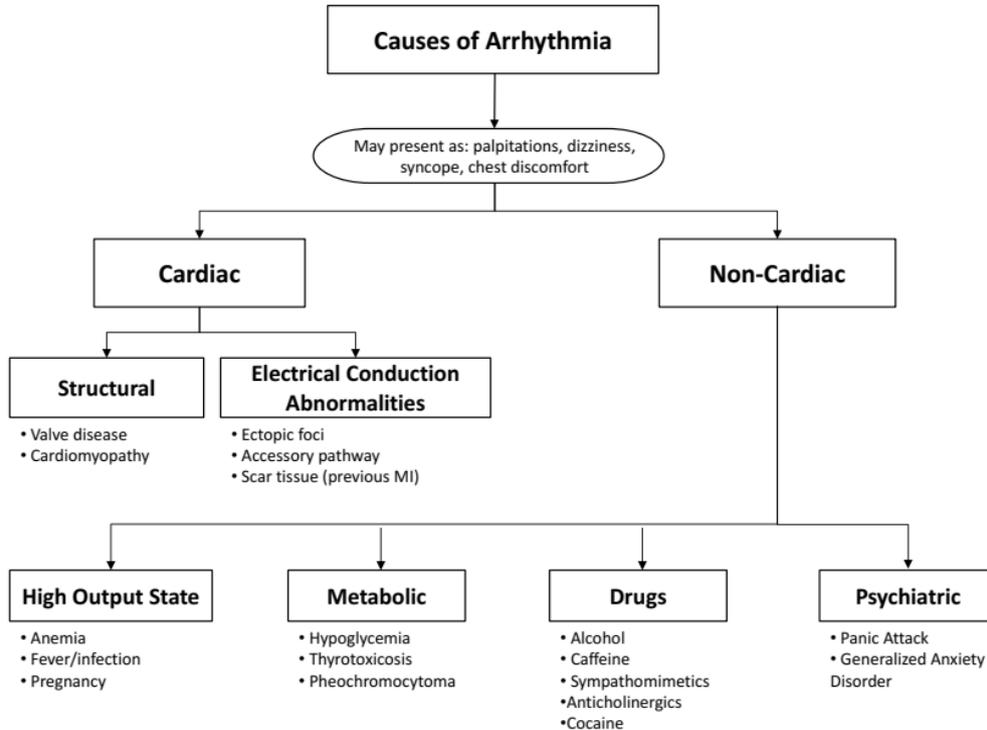
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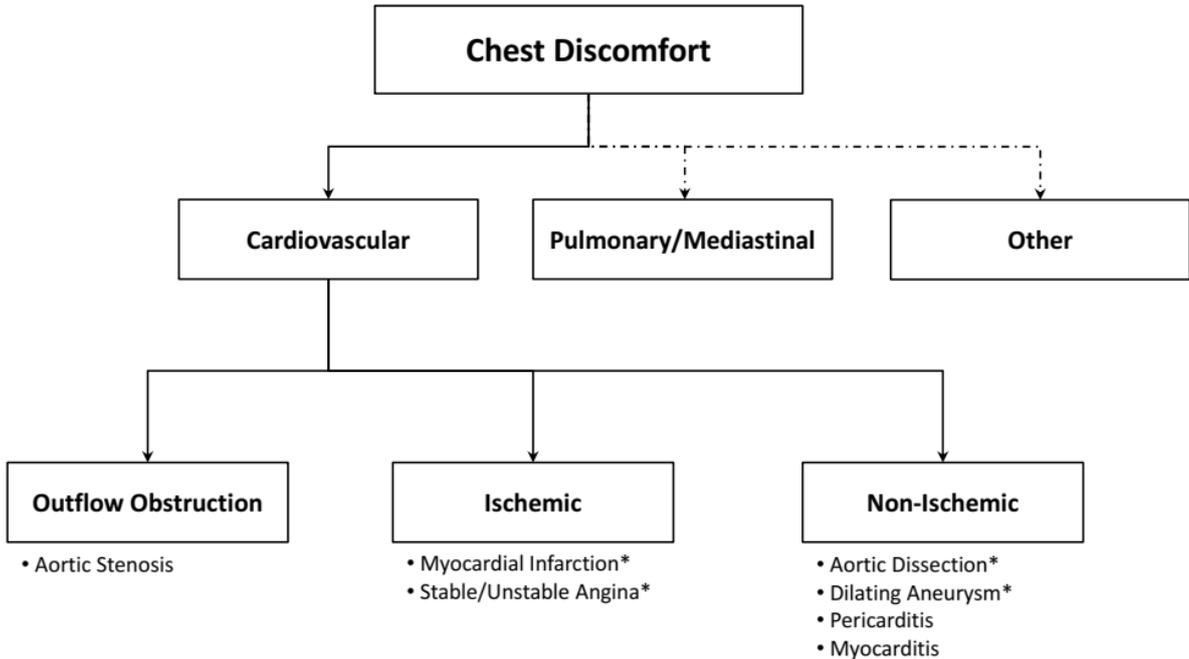
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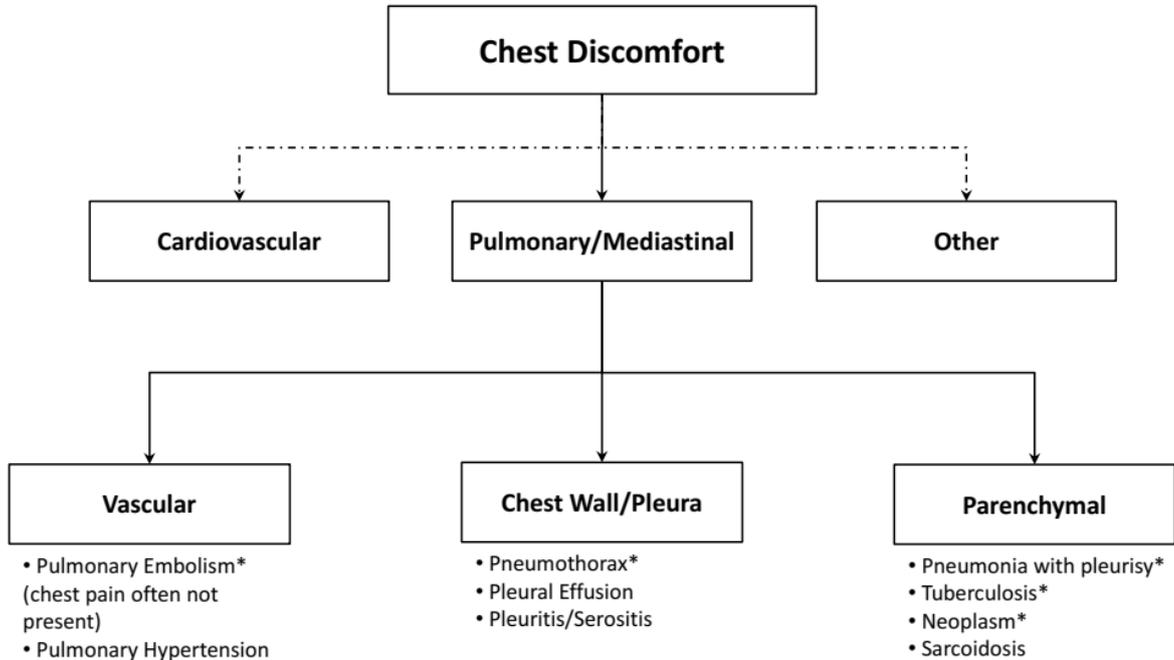


# Chest Discomfort

Cardiovascular



\* Denotes acutely life-threatening causes

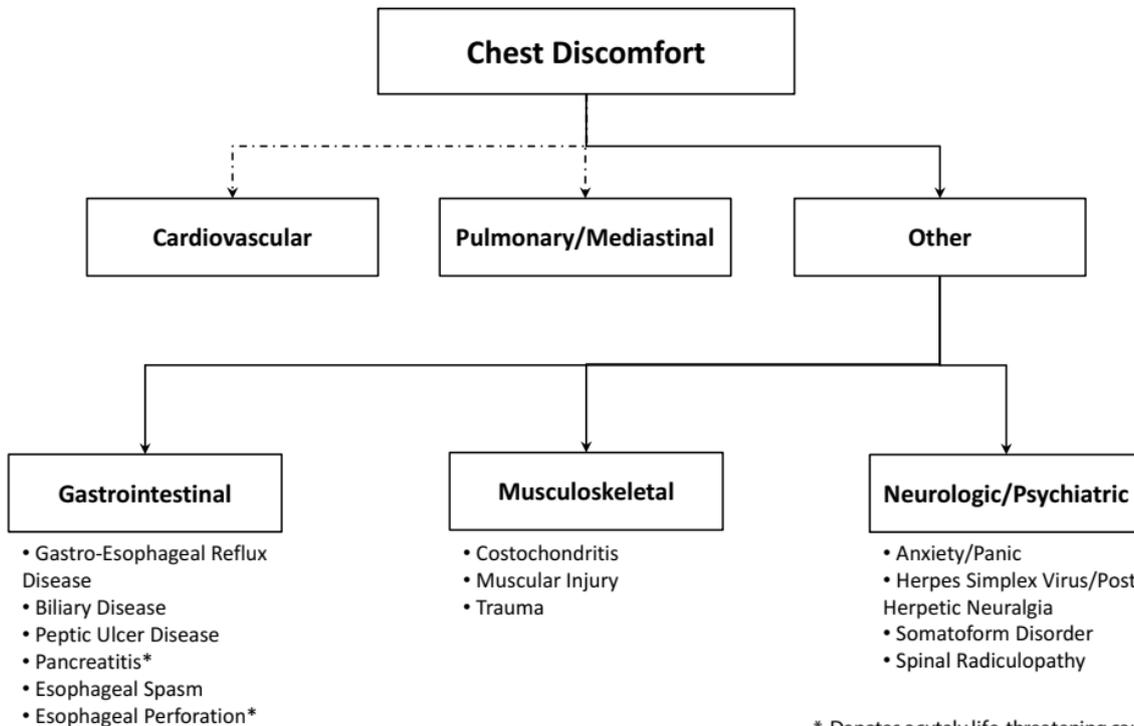


\* Denotes acutely life-threatening causes

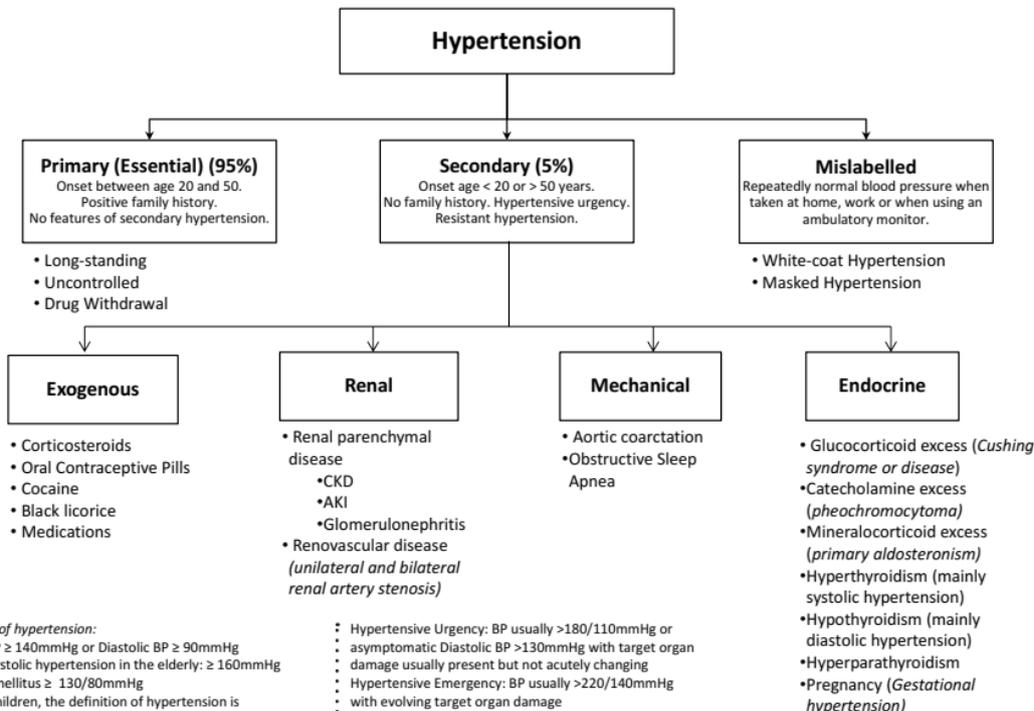
# Chest Discomfort



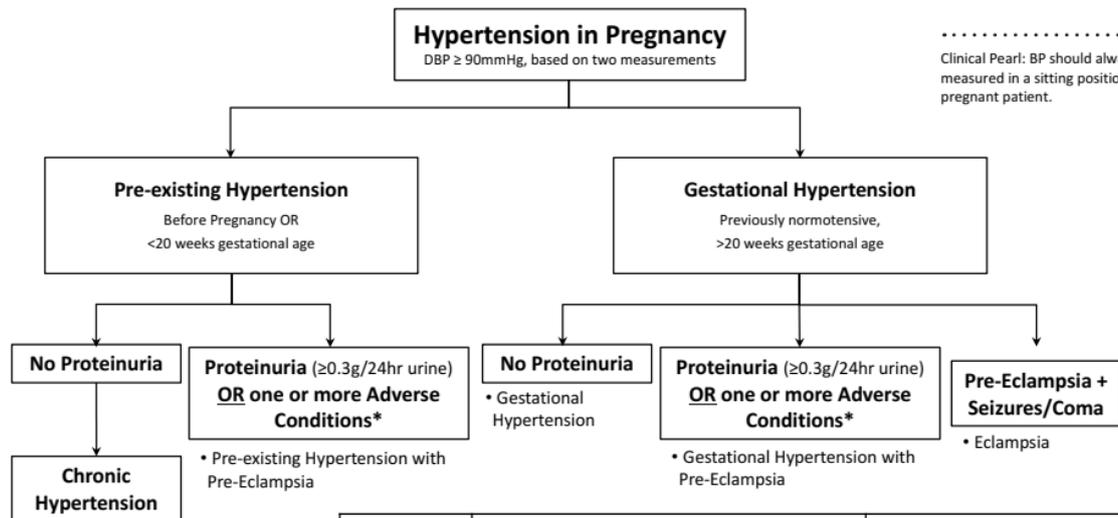
Other



\* Denotes acutely life-threatening causes



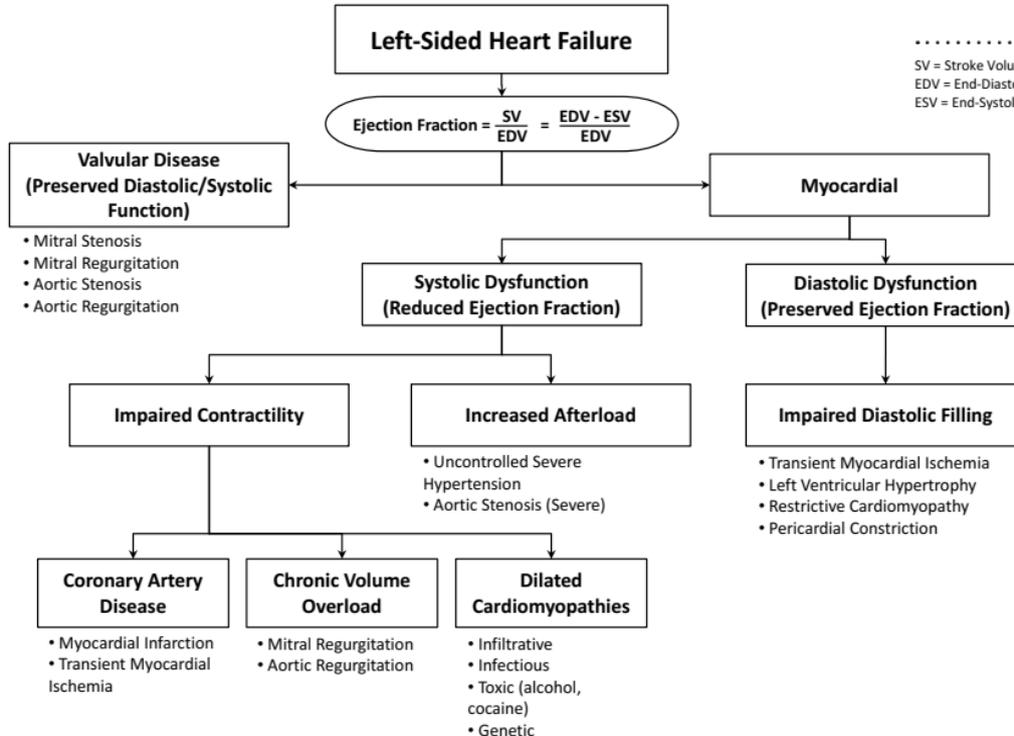
# Hypertension in Pregnancy



.....  
Clinical Pearl: BP should always be measured in a sitting position for a pregnant patient.

	Maternal	Fetal
<b>*Adverse Conditions:</b> (SOGC, 2008)	<ul style="list-style-type: none"> <li>• Persistent or new/unusual headache</li> <li>• Visual disturbances</li> <li>• Persistent abdominal/RUQ pain</li> <li>• Severe nausea or vomiting</li> <li>• Chest pain/dyspnea</li> <li>• Severe hypertension</li> </ul>	<ul style="list-style-type: none"> <li>• Pulmonary Edema</li> <li>• Suspected placental abruption</li> <li>• Elevated serum creatinine/AST/ALT/LDH</li> <li>• Platelet <math>&lt;100 \times 10^9/\text{L}</math></li> <li>• Serum albumin <math>&lt;20\text{g}/\text{L}</math></li> <li>• Oligohydramnios</li> <li>• Intrauterine growth restriction</li> <li>• Absent/reversed end-diastolic flow in the umbilical artery</li> <li>• Intrauterine fetal death</li> </ul>

# Left-Sided Heart Failure



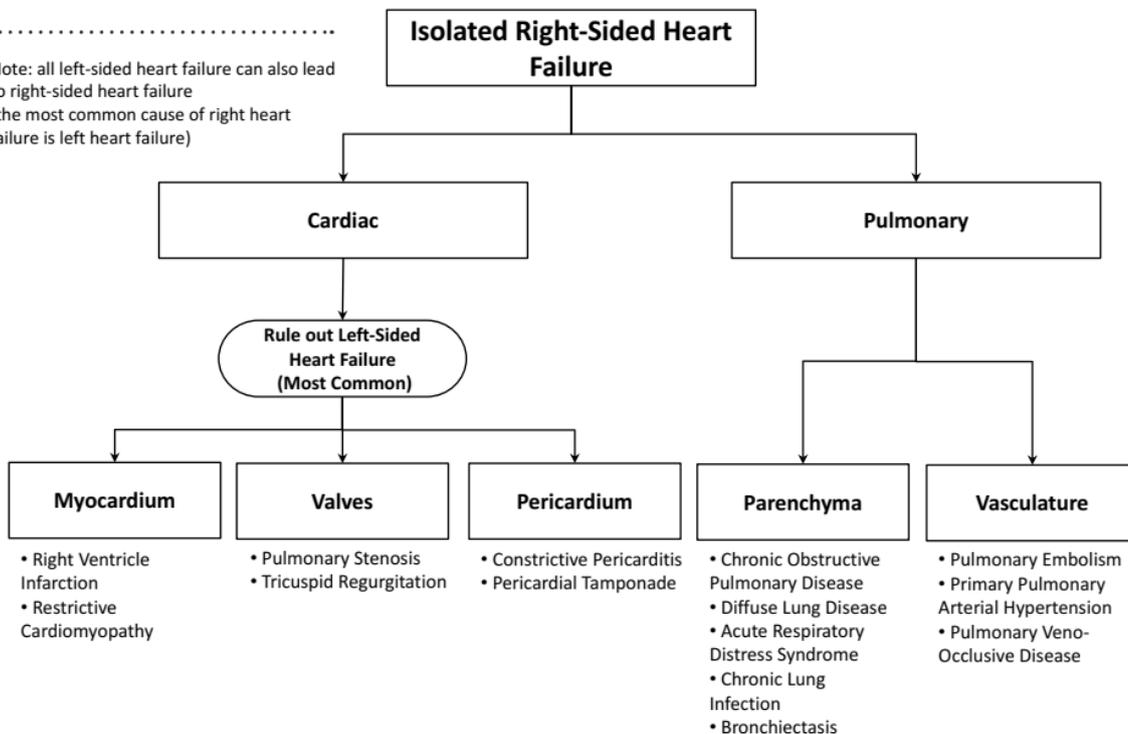
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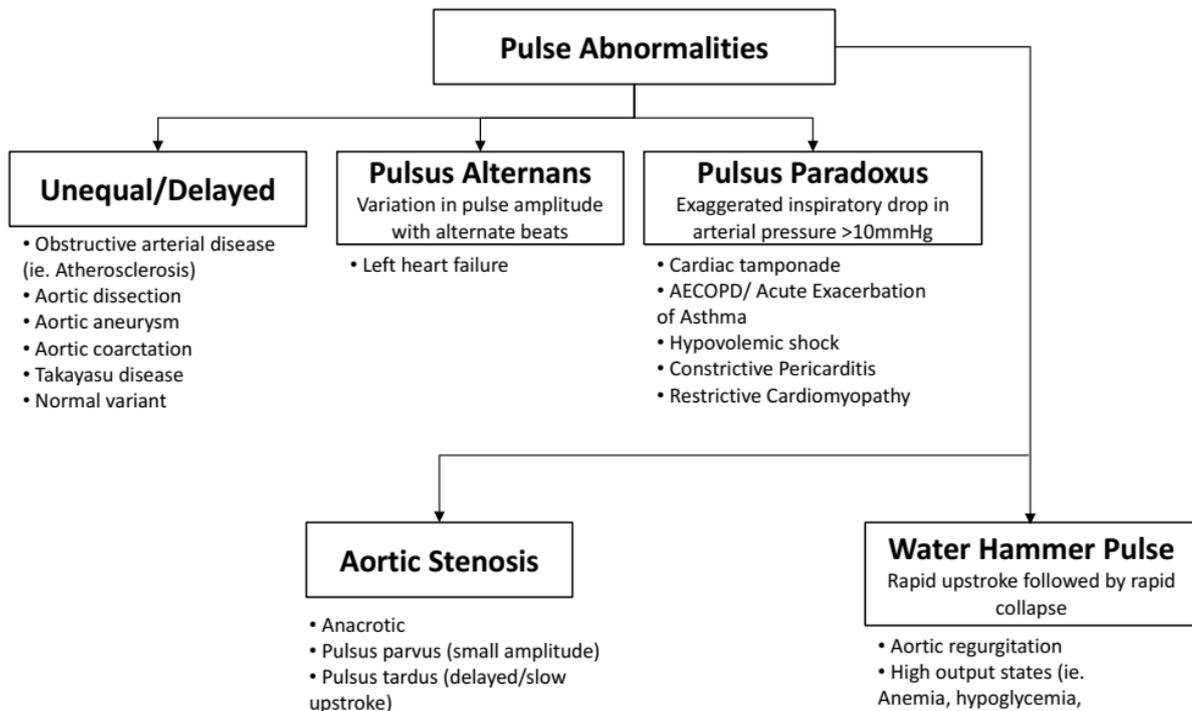
SV = Stroke Volume  
EDV = End-Diastolic Volume  
ESV = End-Systolic Volume

# Isolated Right-Sided Heart Failure

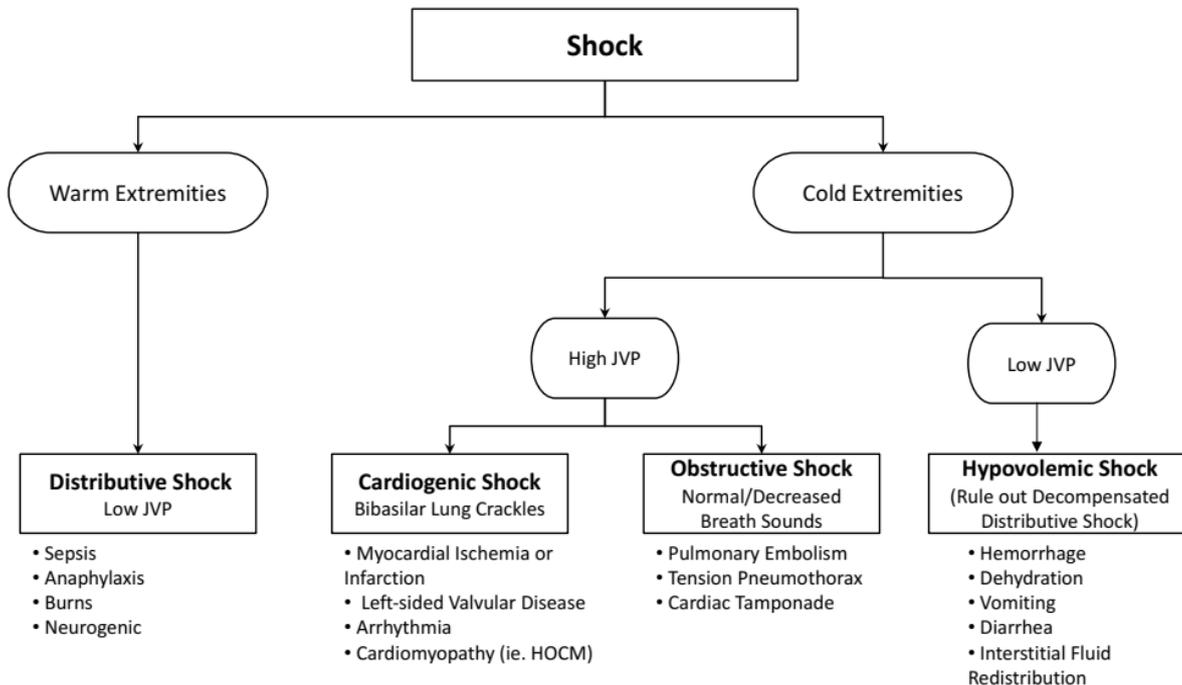


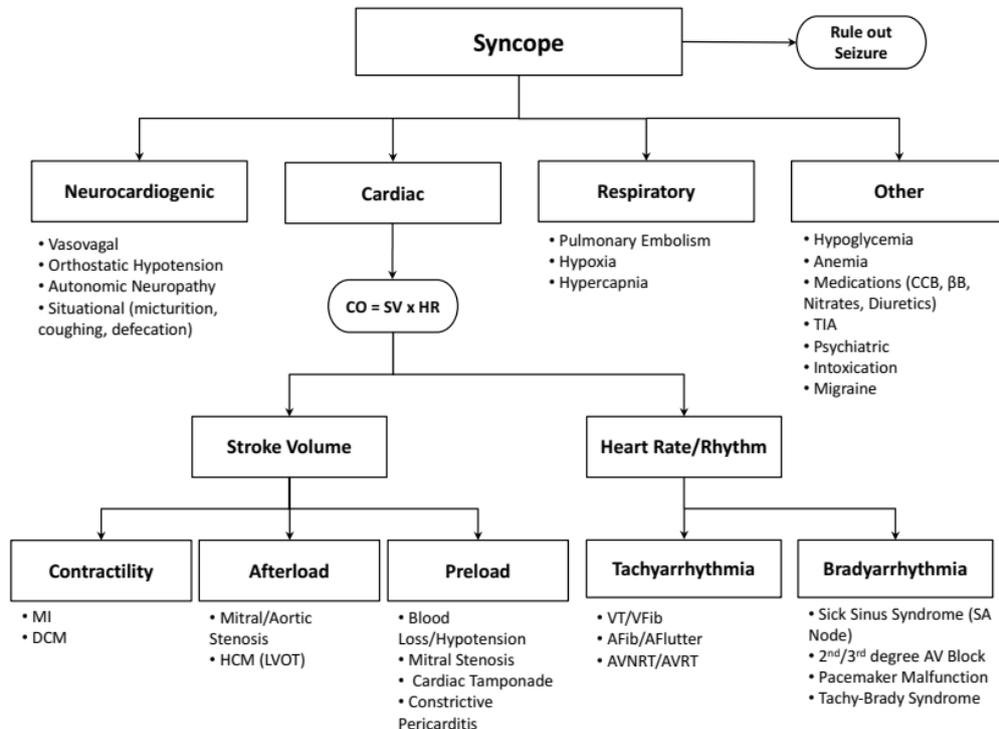
Note: all left-sided heart failure can also lead to right-sided heart failure (the most common cause of right heart failure is left heart failure)





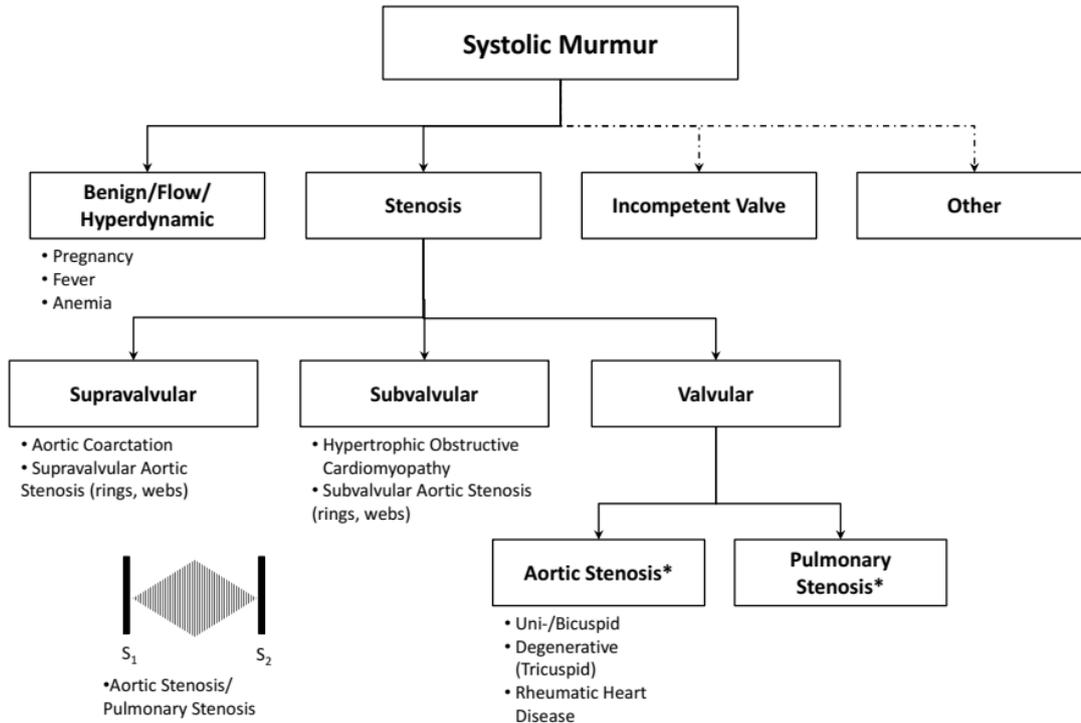
# Shock

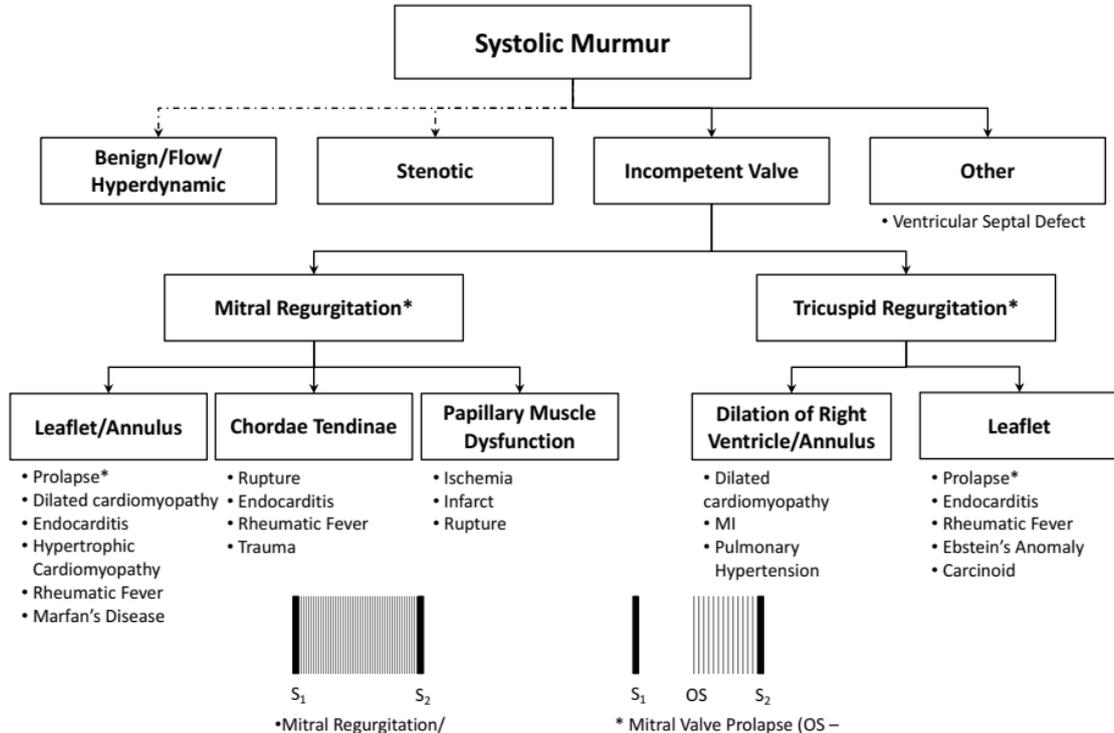




# Systolic Murmur

Benign & Stenotic





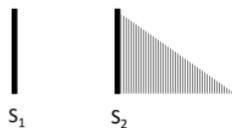
# Diastolic Murmur



## Diastolic Murmur

### Early Diastolic

- Aortic Regurgitation\*
- Pulmonary Regurgitation (Graham-Steell Murmur)\*



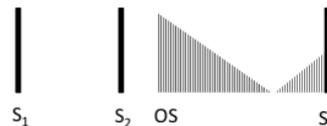
- Aortic Regurgitation/  
Pulmonary Regurgitation

### Mid-Diastolic

- Mitral Stenosis\*
- Tricuspid Stenosis\*
- Severe Aortic Regurgitation (Austin Flint Murmur)
- Atrial Myxoma Prolapse

### Late Diastolic

- Mitral Stenosis\*
- Tricuspid Stenosis\*
- Myxoma



- \* Mitral Stenosis/Tricuspid Stenosis  
(OS – opening snap)



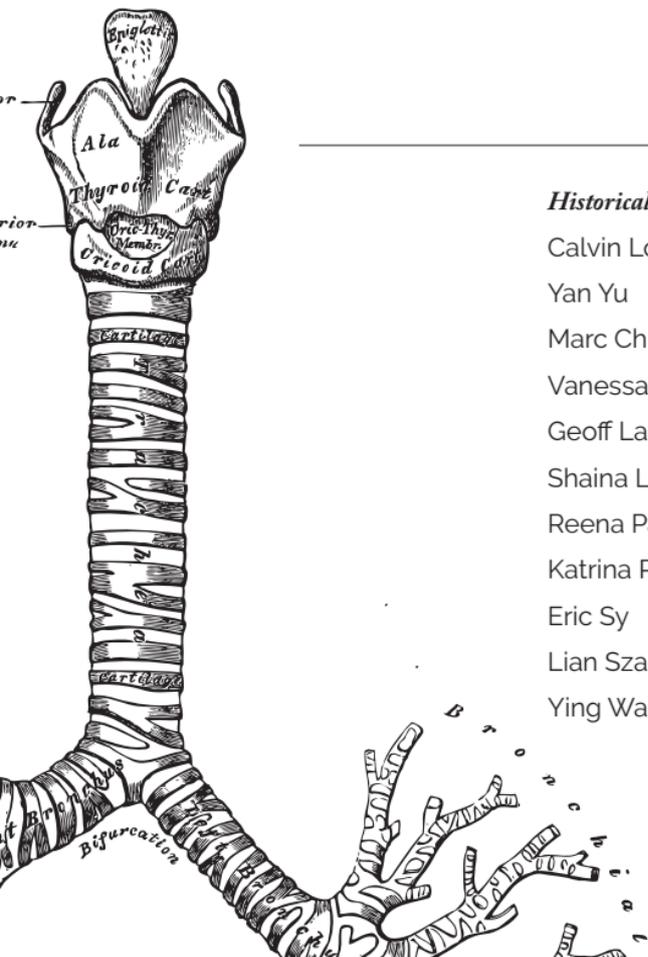
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Superior  
Cornu

Inferior  
Cornu





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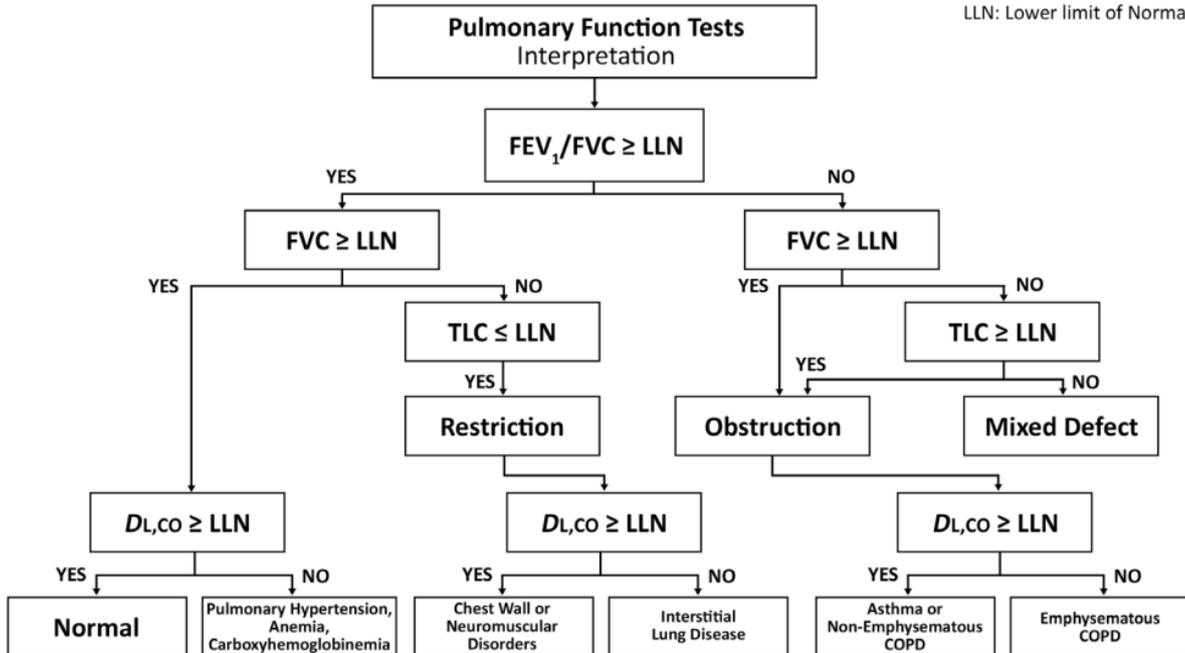
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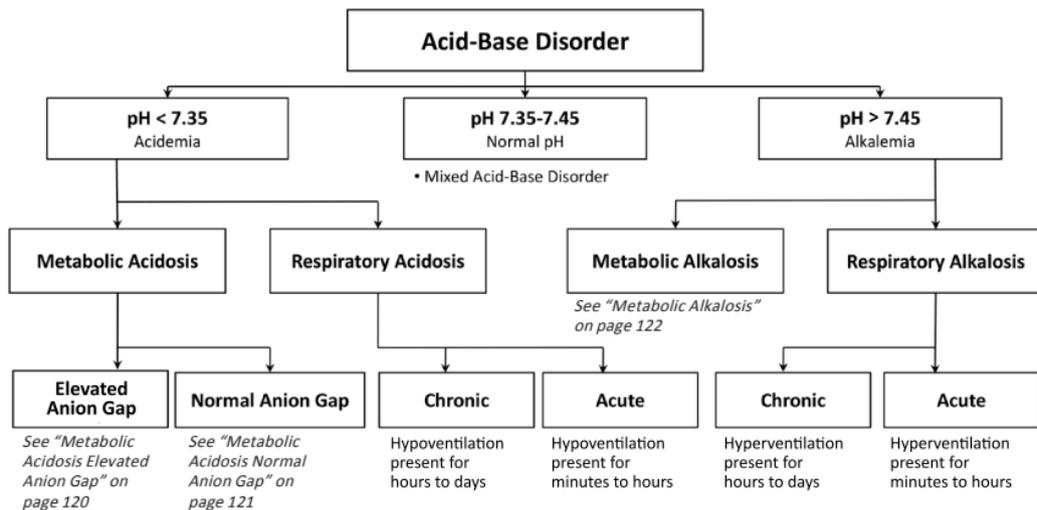
# Pulmonary Function Tests

## Interpretation



LLN: Lower limit of Normal

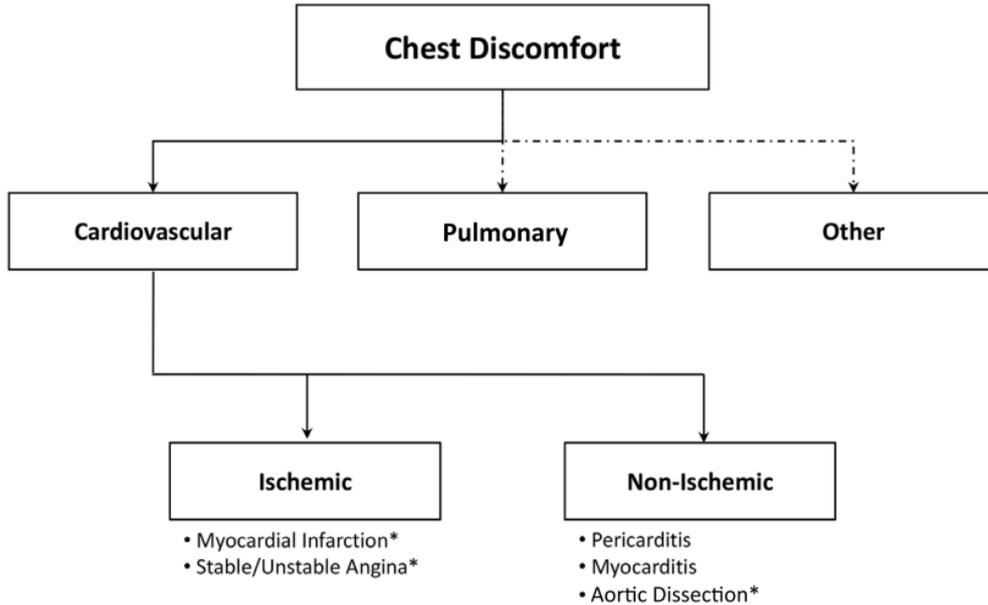


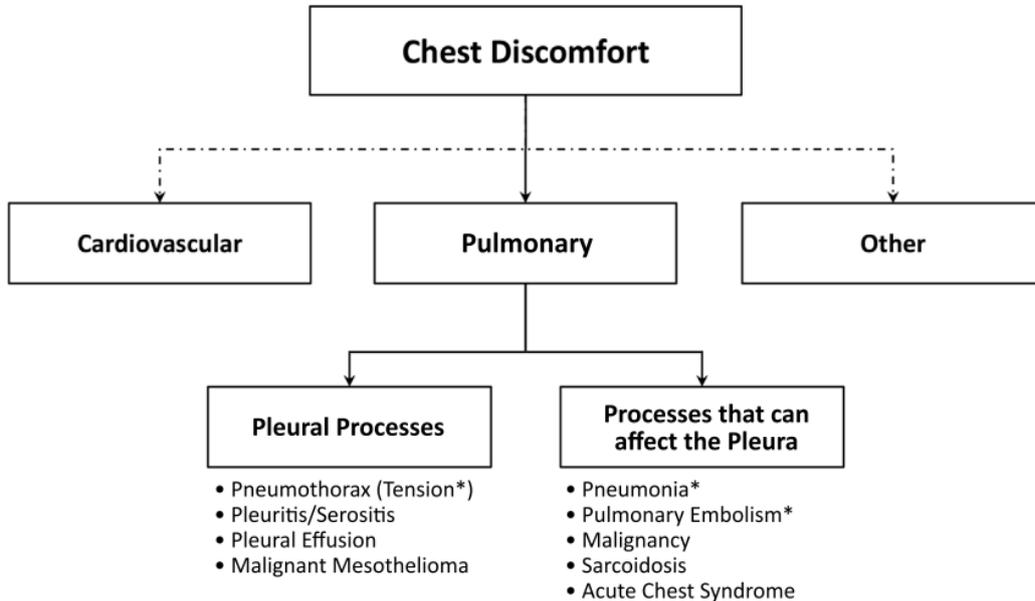


<b>Appropriate Compensation:</b>	Ratio (CO <sub>2</sub> :HCO <sub>3</sub> )
Metabolic Acidosis	12:10
Metabolic Alkalosis	7:10
Acute Respiratory Acidosis	10:1
Chronic Respiratory Acidosis	10:3
Acute Respiratory Alkalosis	10:2
Chronic Respiratory Alkalosis	10:4

# Chest Discomfort

Cardiovascular

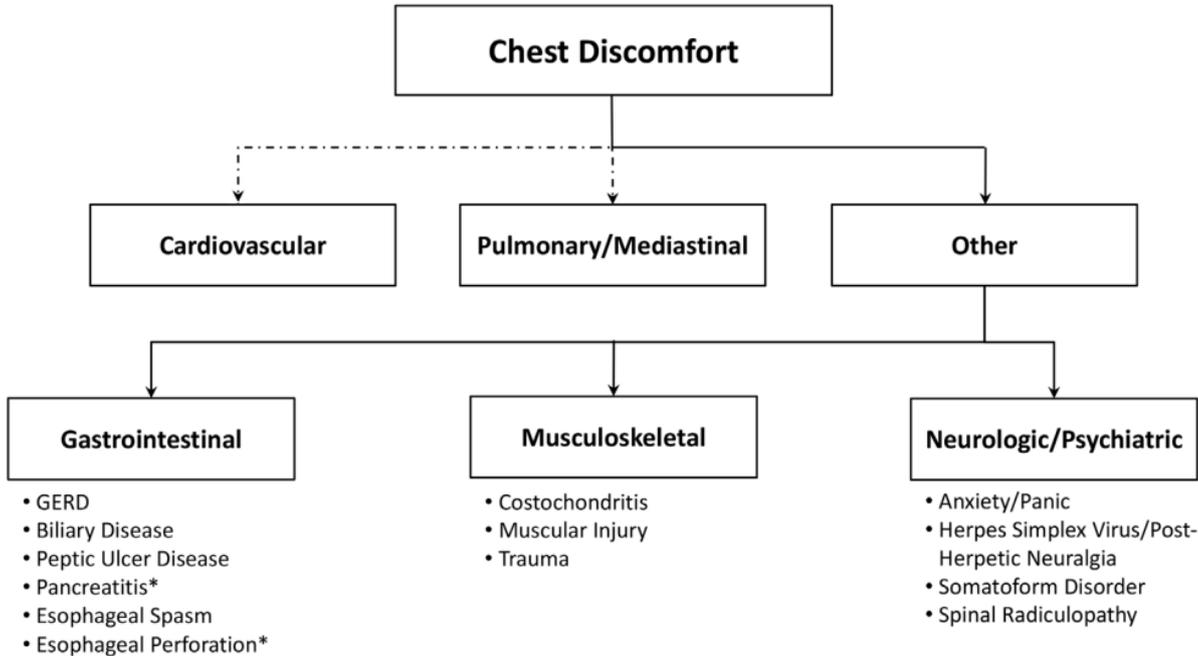




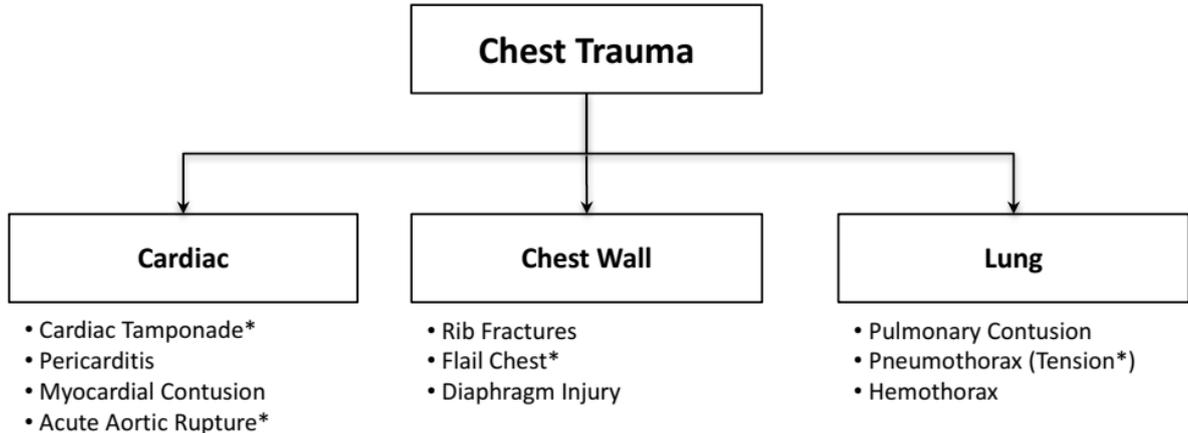
\* Potentially acutely life-threatening

# Chest Discomfort

Other



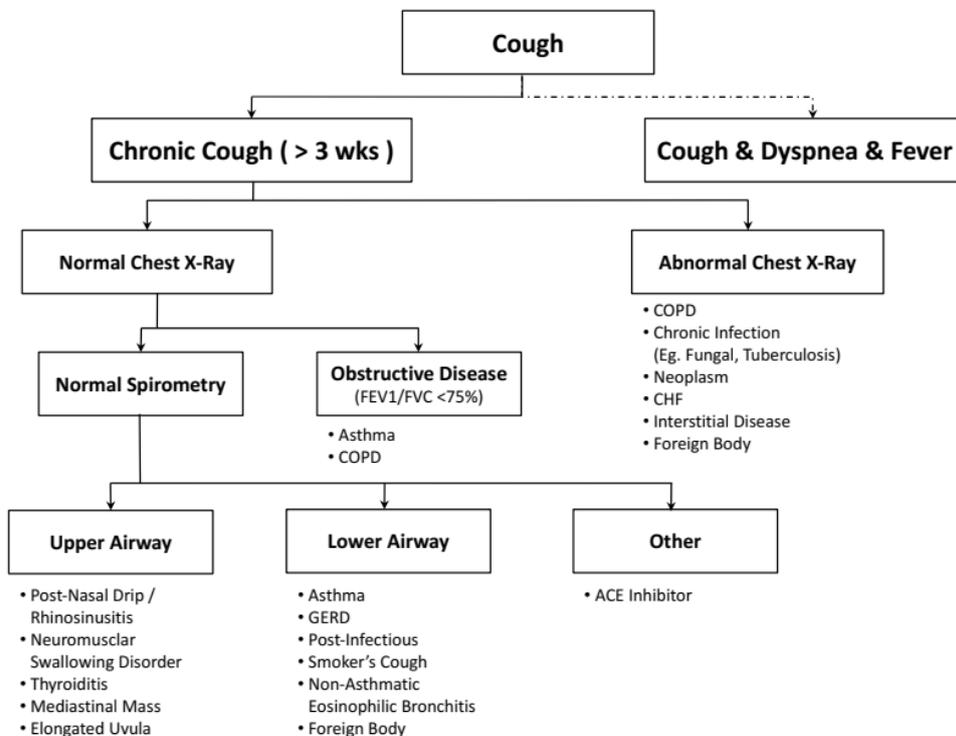
# Chest Trauma Complications



\* Potentially acutely life-threatening

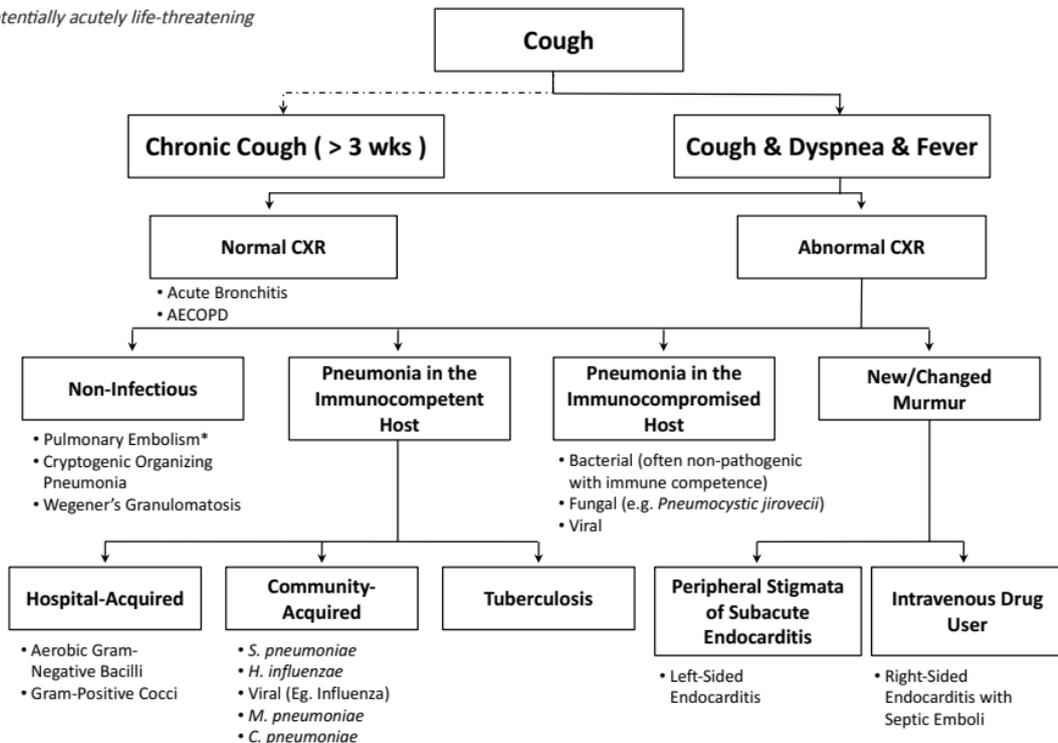
# Cough

## Chronic



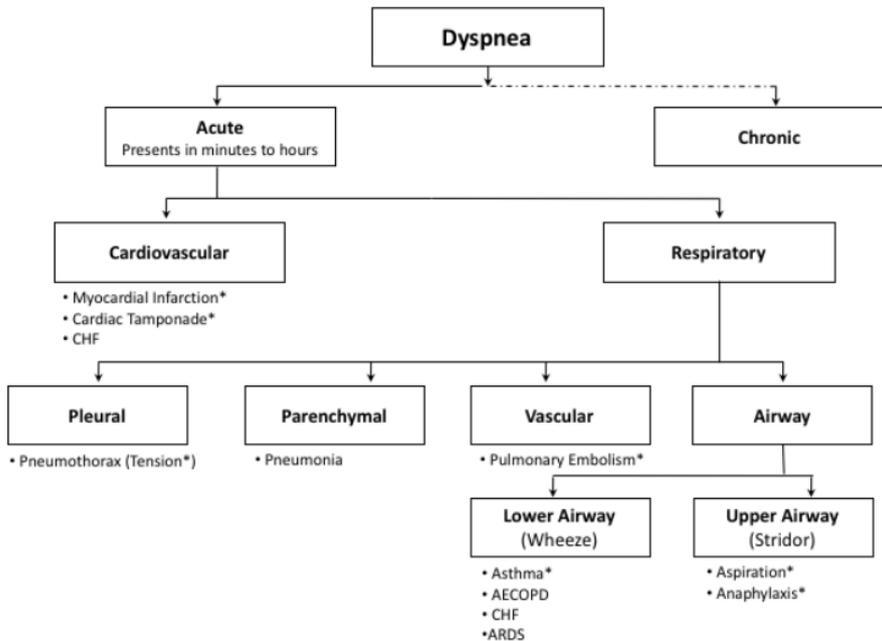
# Cough, Dyspnea & Fever

\* Potentially acutely life-threatening

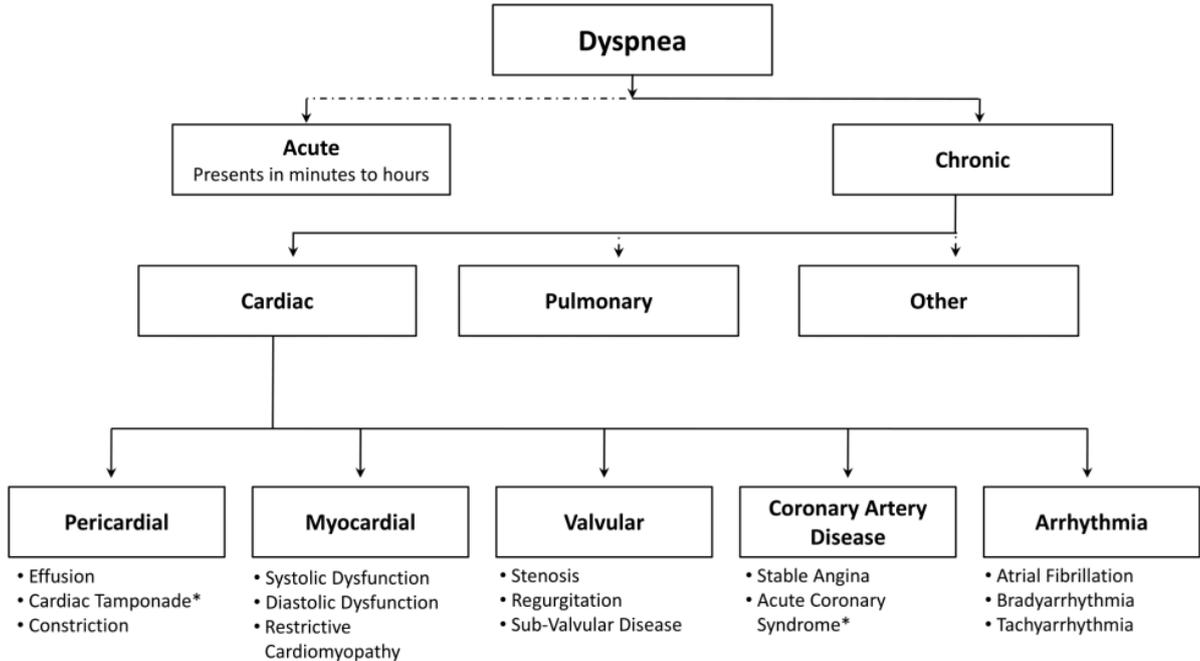


# Dyspnea

## Acute



\* Denotes acutely life-threatening causes

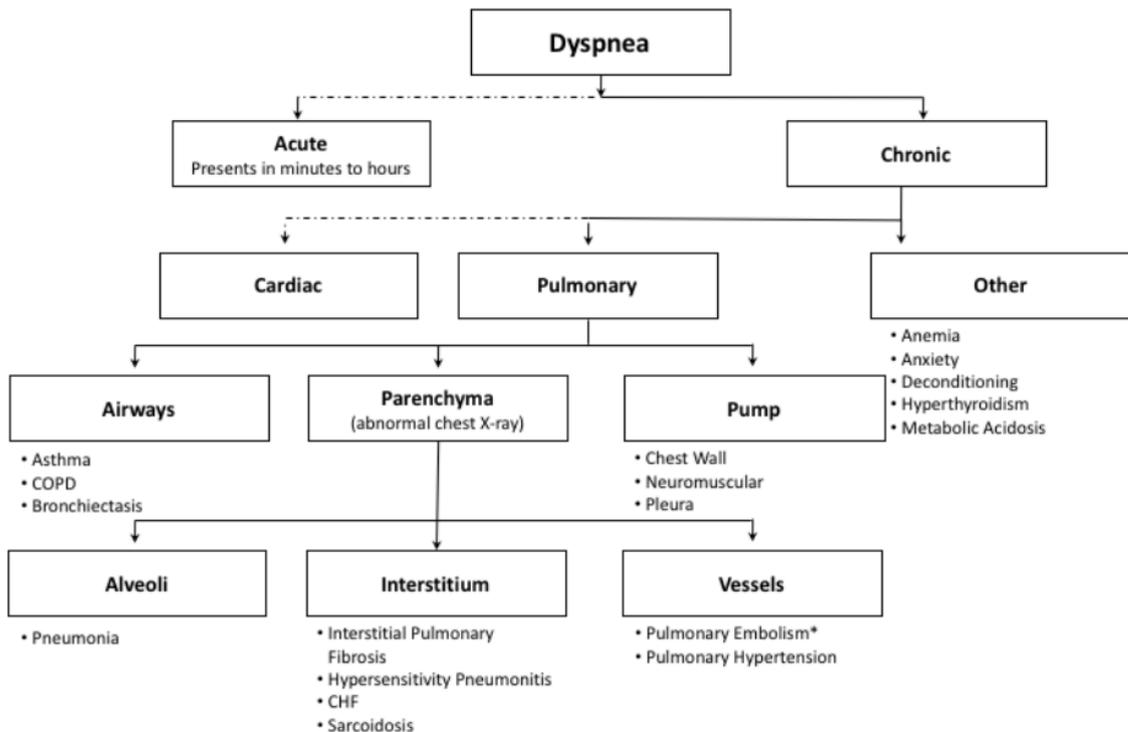


\* Potentially acutely life-threatening

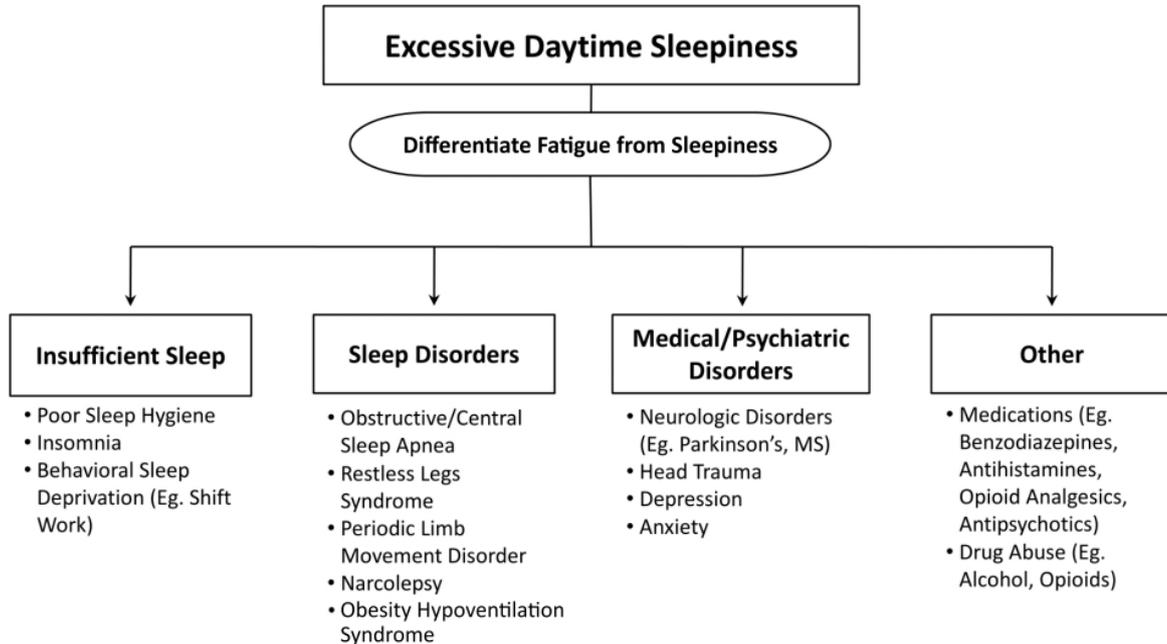
# Dyspnea Chronic



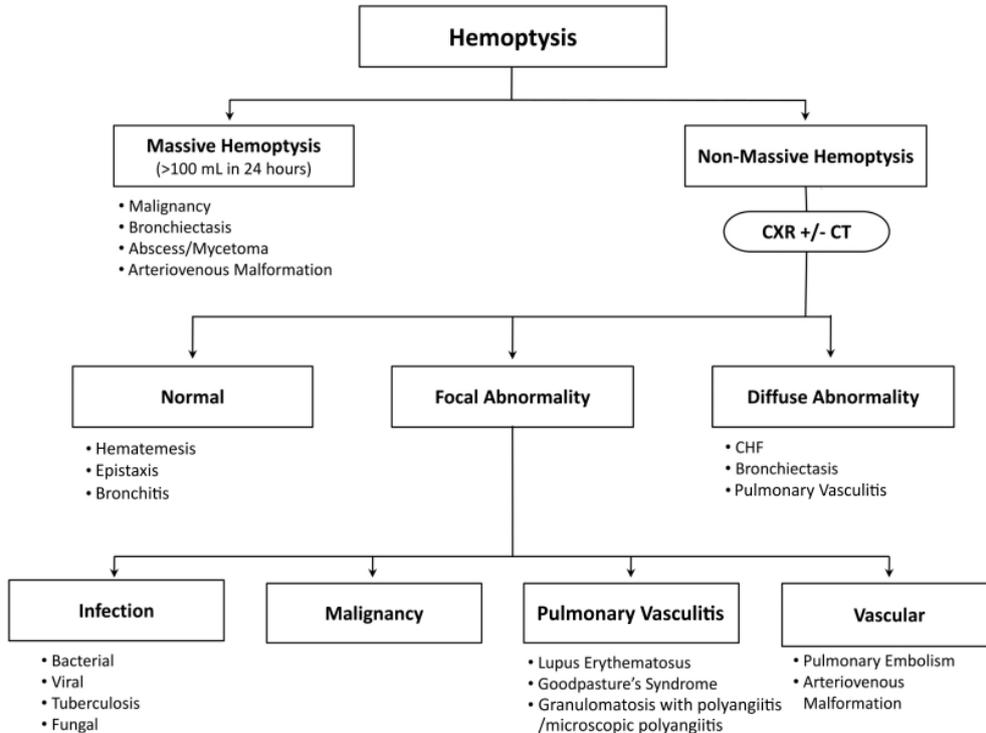
Pulmonary / Other

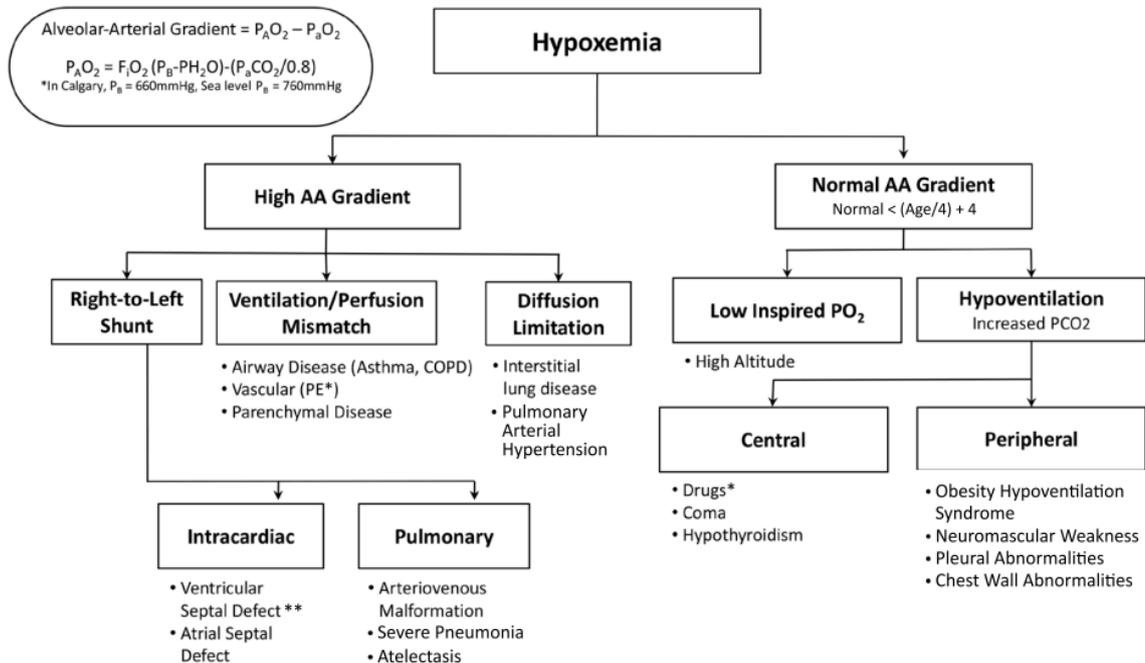


# Excessive Daytime Sleepiness



# Hemoptysis

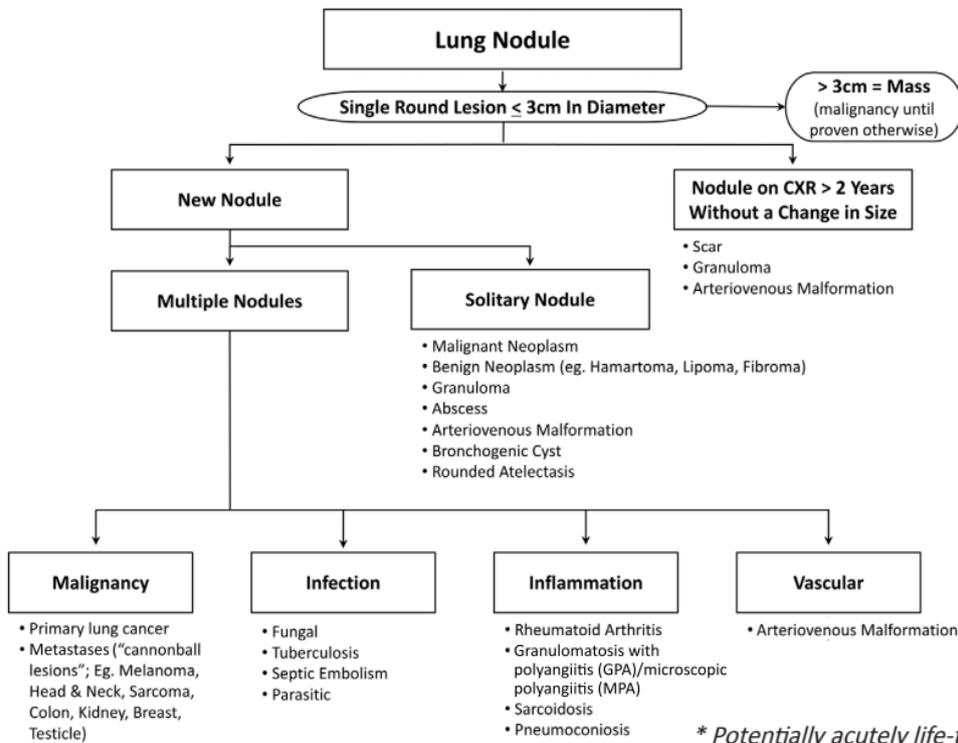


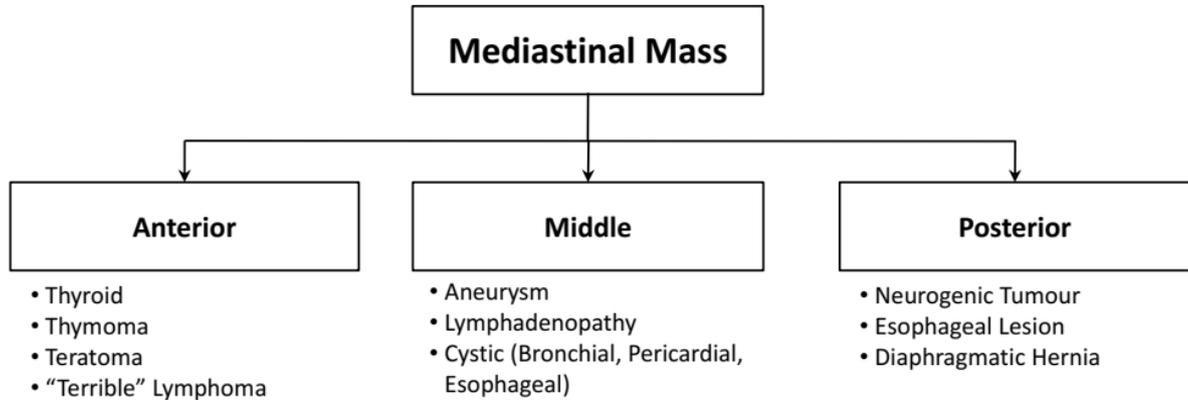


\* Potentially acutely life-threatening.

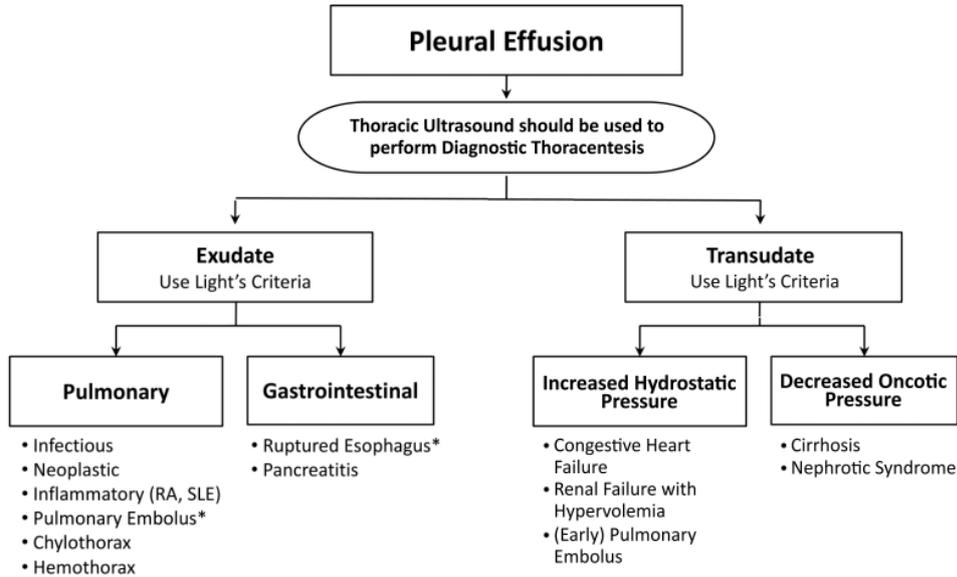
\*\* VSDs will be a Right-to-left shunt in infancy, become a Left-to-Right shunt in childhood to adulthood, and revert back to a right-to-left shunt when the left ventricle fails in severe disease, contributing to Eisenmenger's Syndrome.

# Lung Nodule





# Pleural Effusion

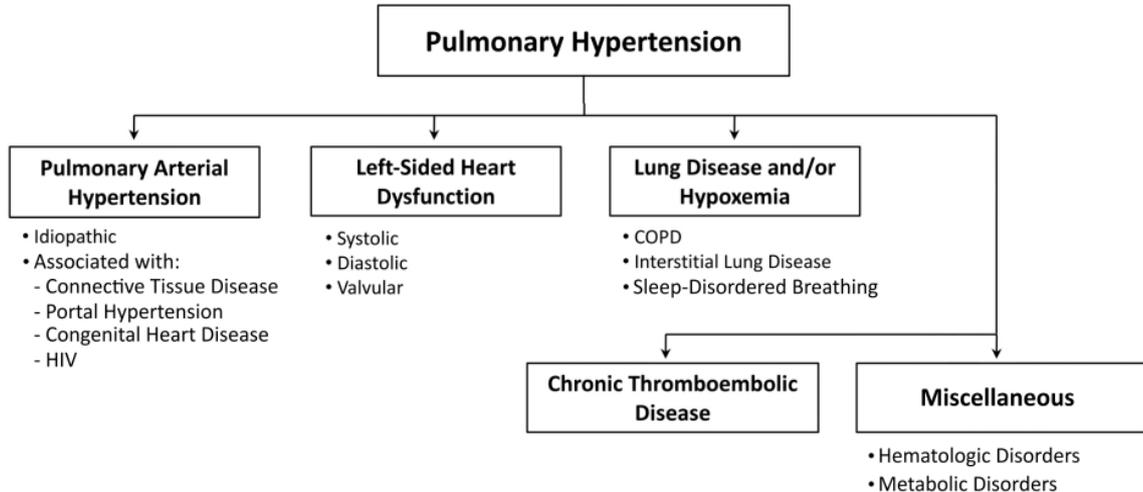


## Light's Criteria

- Pleural Fluid Protein/Serum Protein > 0.5
- Pleural Fluid Lactate Dehydrogenase (LDH)/Serum LDH > 0.6
- Pleural Fluid LDH > 2/3 Serum LDH Upper Limit of Normal

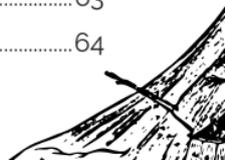
\* Potentially acutely life-threatening

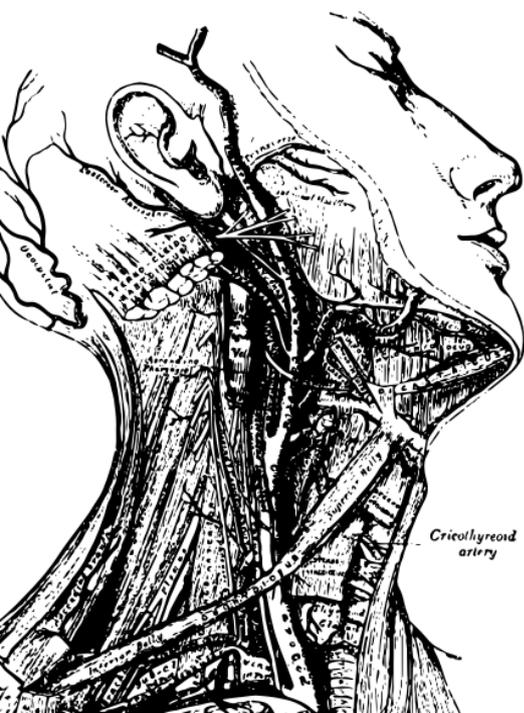
# Pulmonary Hypertension



# Hematologic

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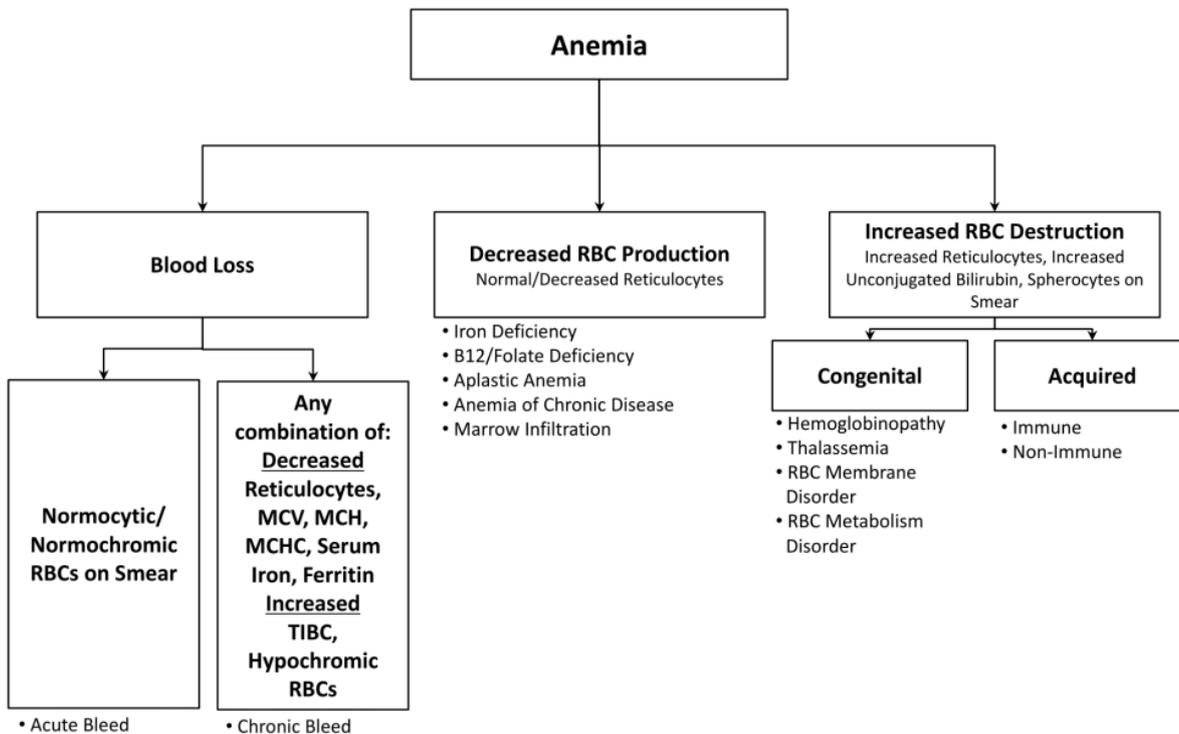
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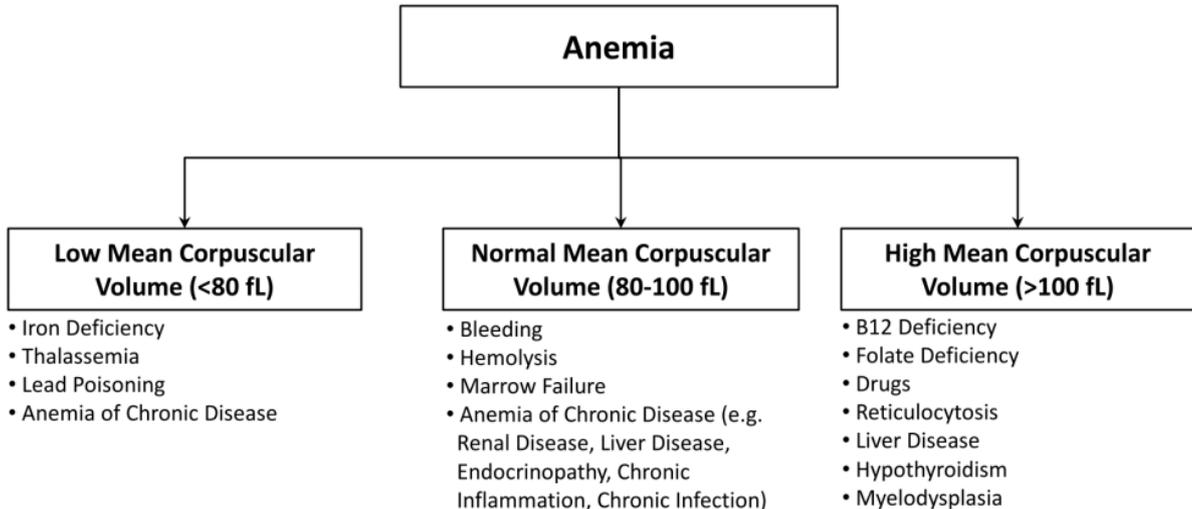
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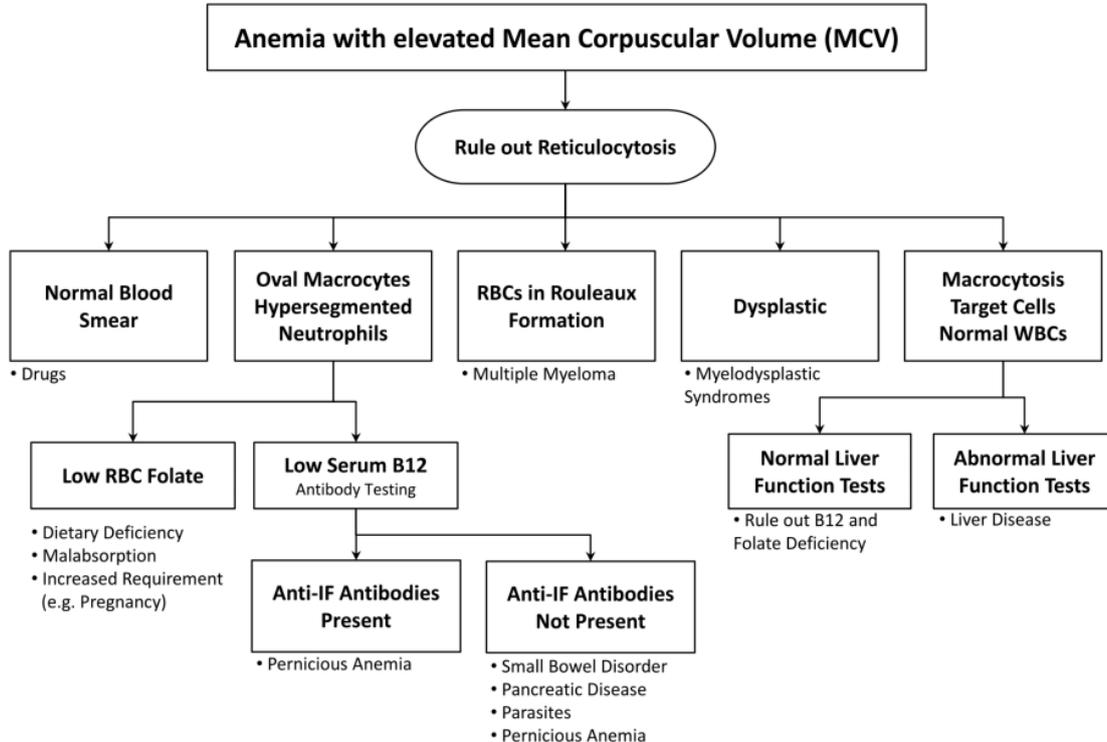
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# Overall Approach to Anemia

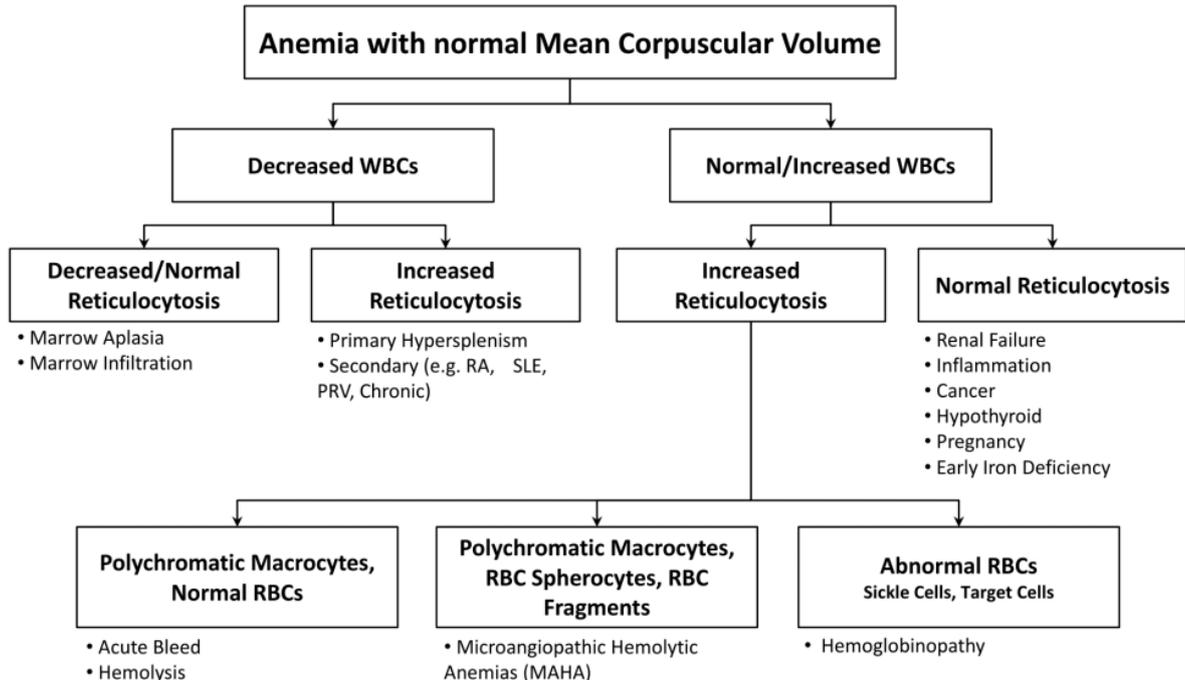




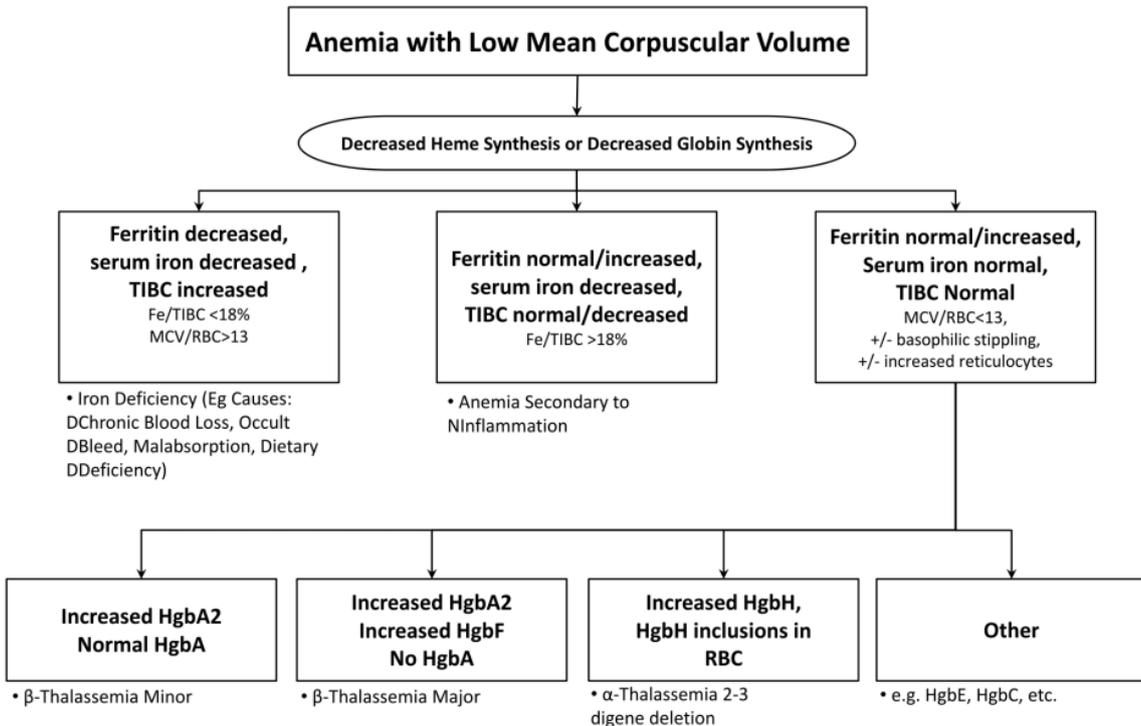
# Anemia with Elevated MCV



# Anemia with Normal MCV

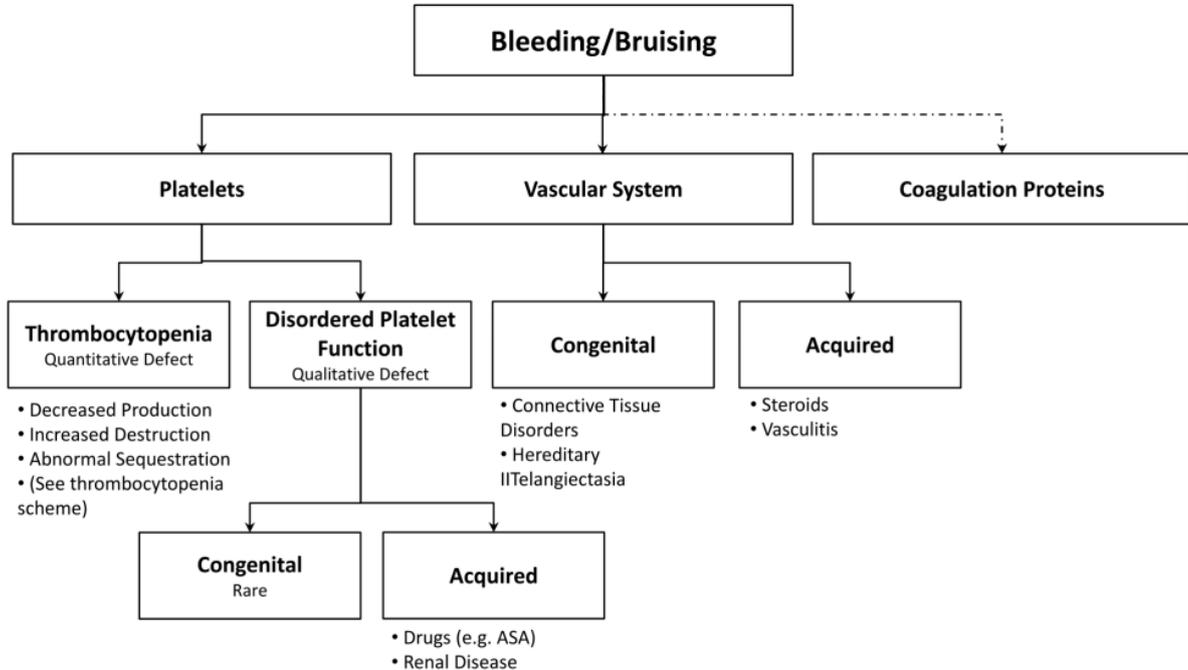


# Anemia with Low MCV



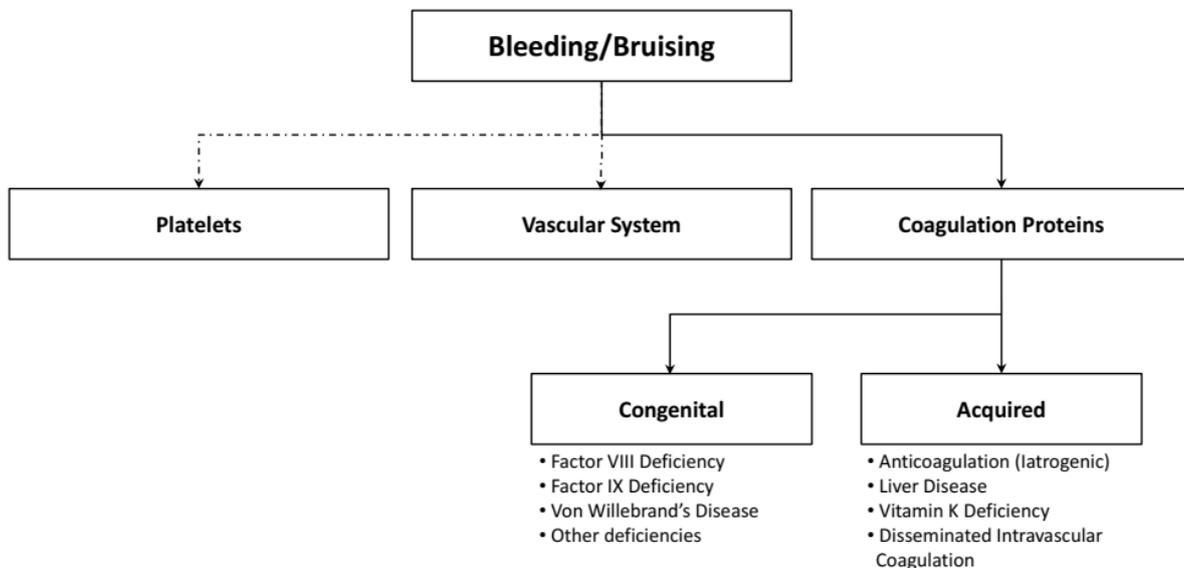
# Approach to Bleeding / Bruising

## Platelets & Vascular System



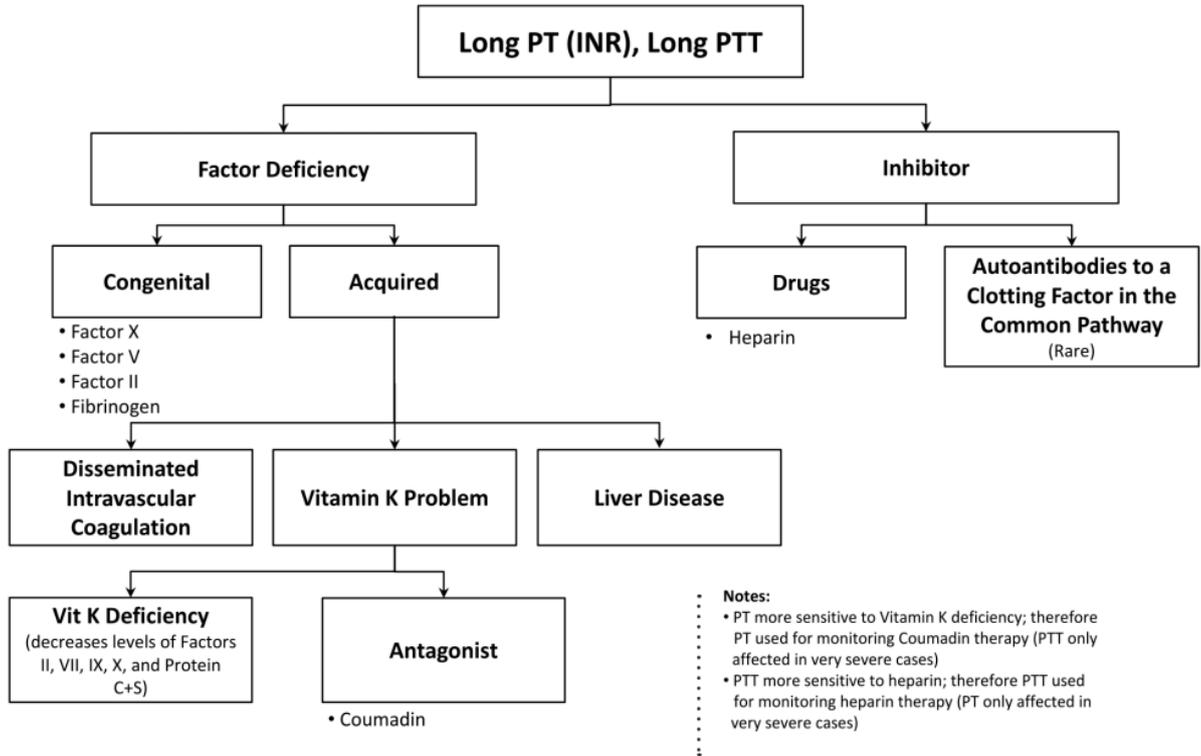
# Approach to Bleeding / Bruising

## Coagulation Proteins



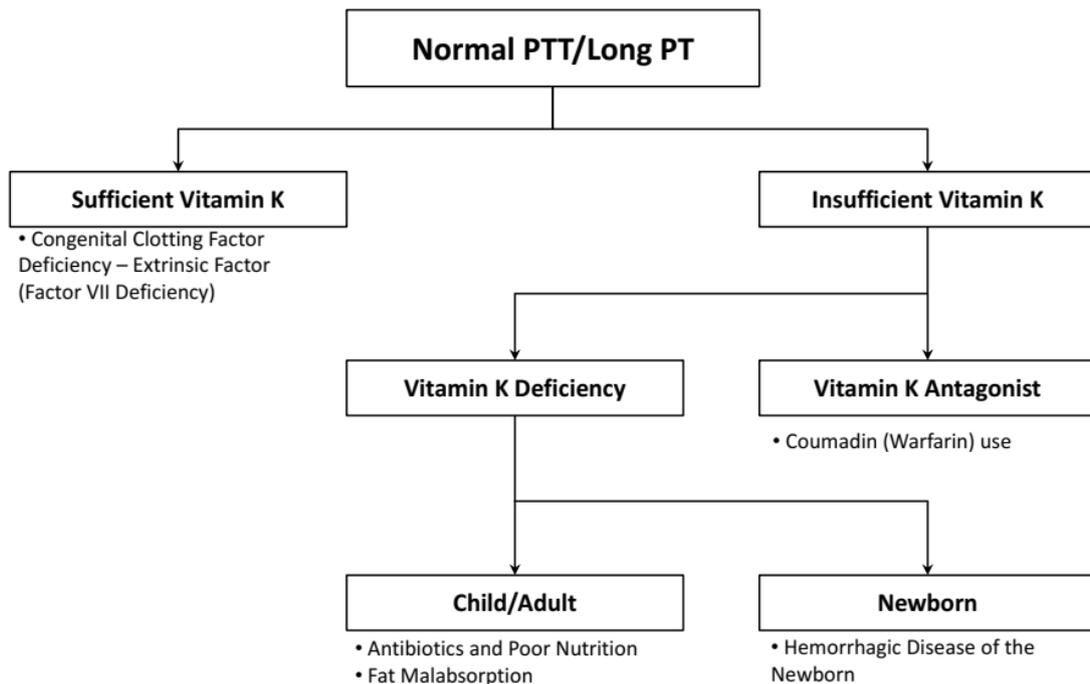


# Approach to Prolonged PT (INR), Prolonged PTT



- Notes:**
- PT more sensitive to Vitamin K deficiency; therefore PT used for monitoring Coumadin therapy (PTT only affected in very severe cases)
  - PTT more sensitive to heparin; therefore PTT used for monitoring heparin therapy (PT only affected in very severe cases)

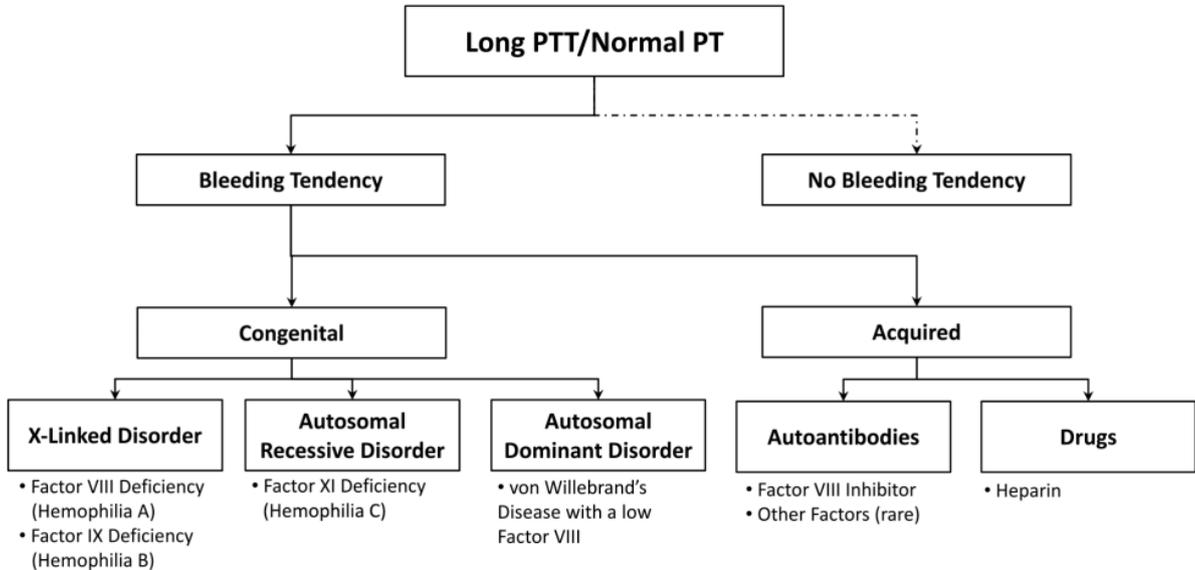
# Prolonged PT (INR), Normal PTT





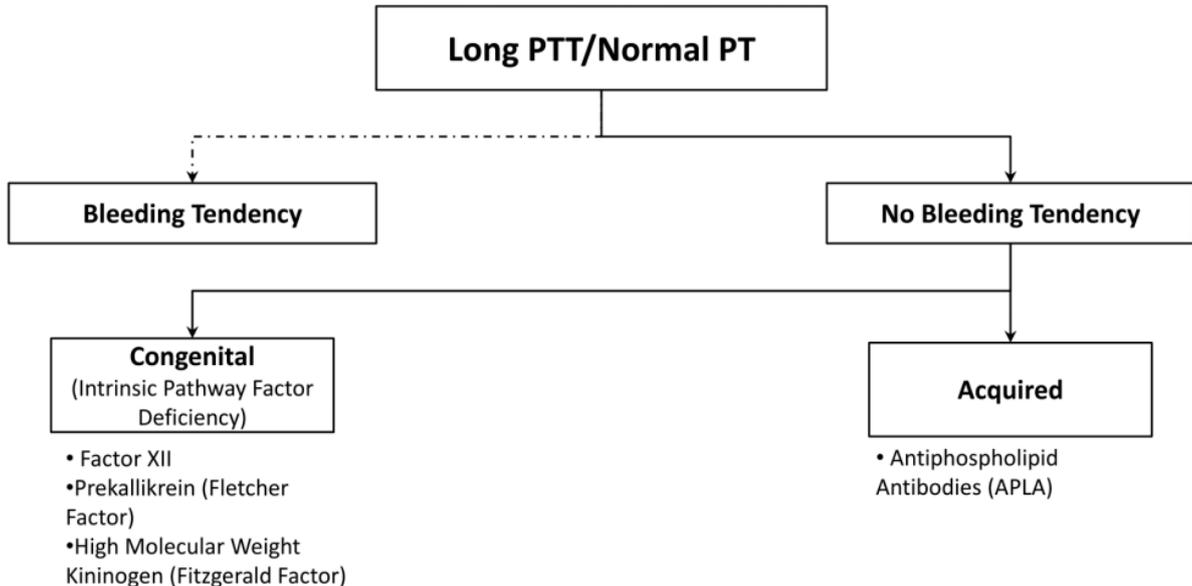
# Prolonged PTT, Normal PT (INR)

Bleeding Tendency

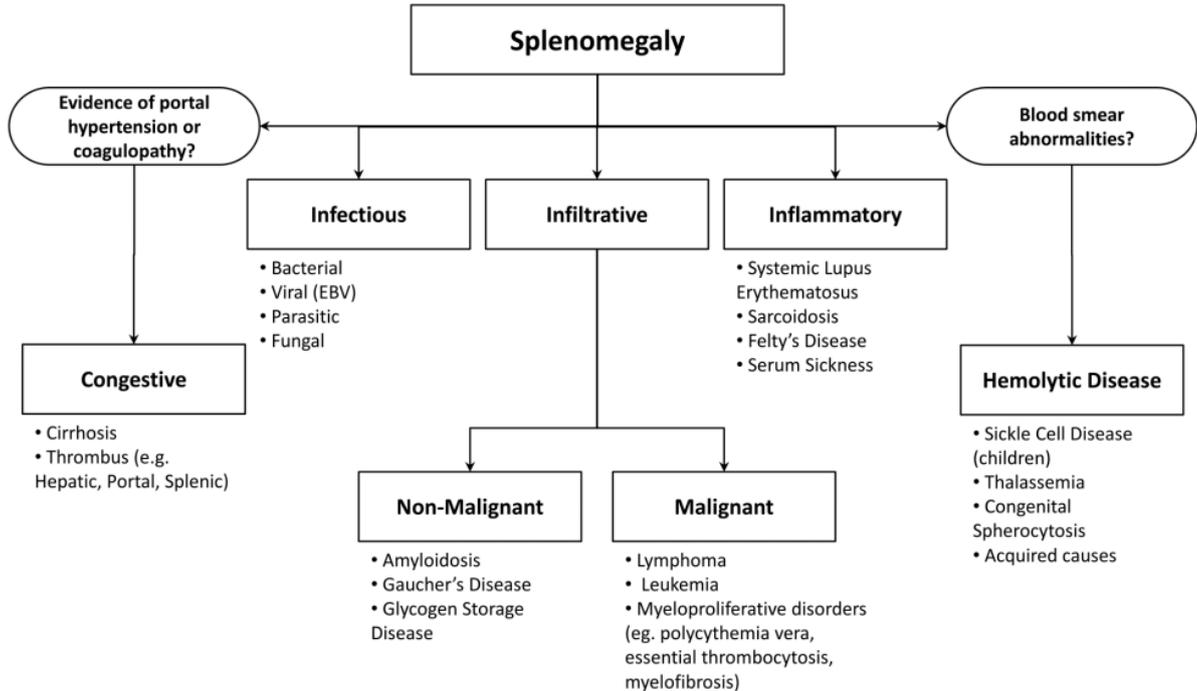


# Prolonged PTT, Normal PT (INR)

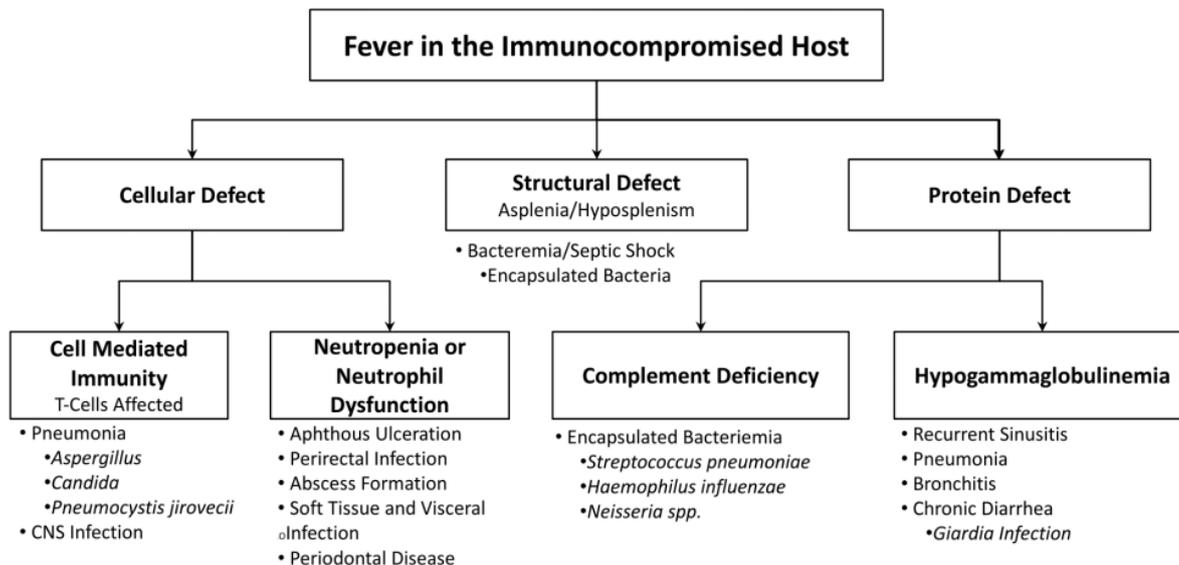
No Bleeding Tendency

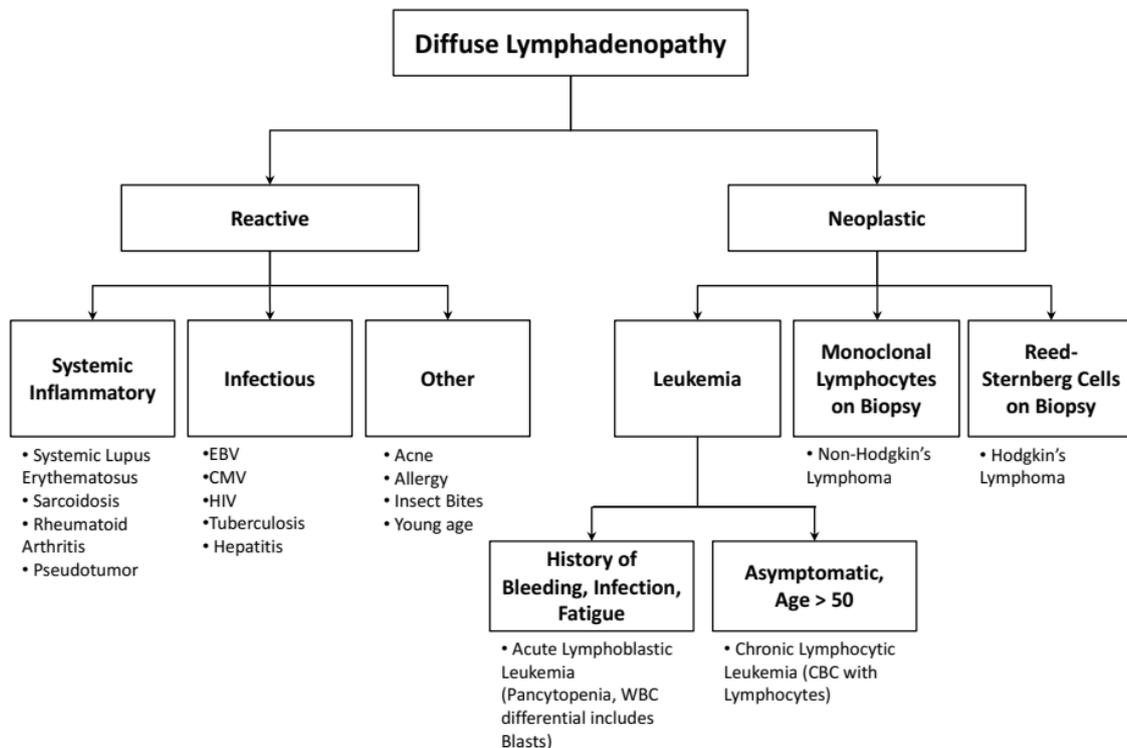


# Approach to Splenomegaly



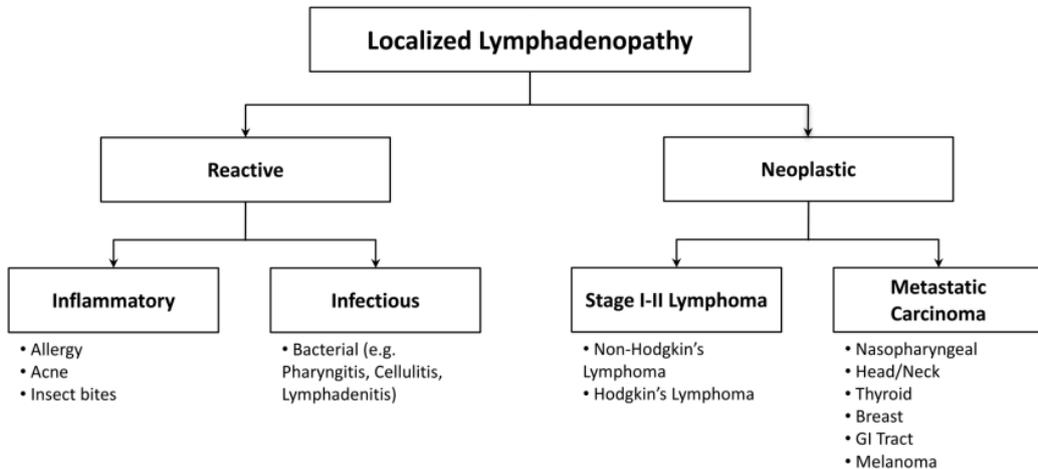
# Fever in the Immunocompromised Host



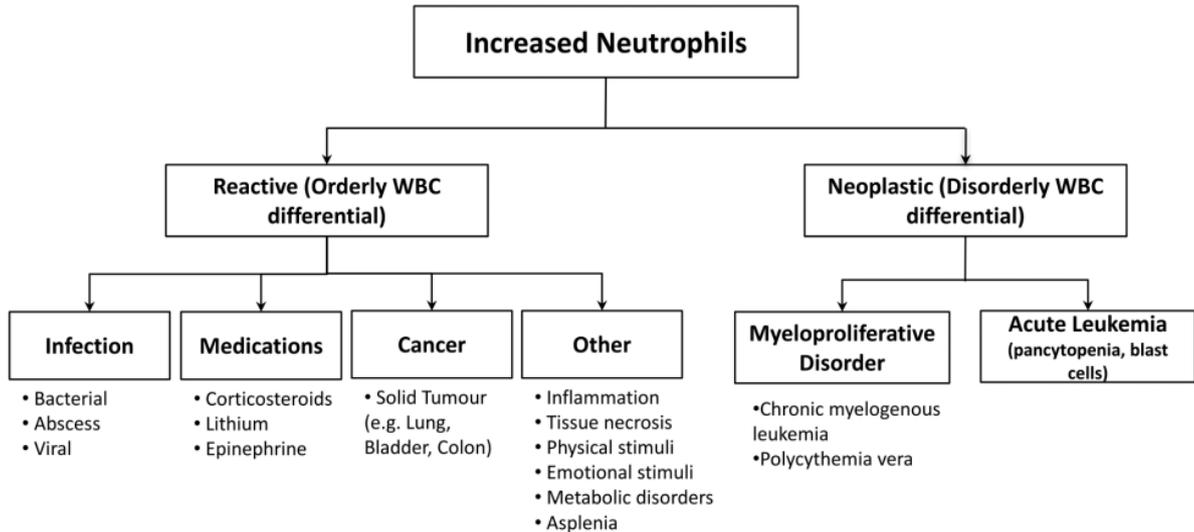


# Lymphadenopathy

Localized

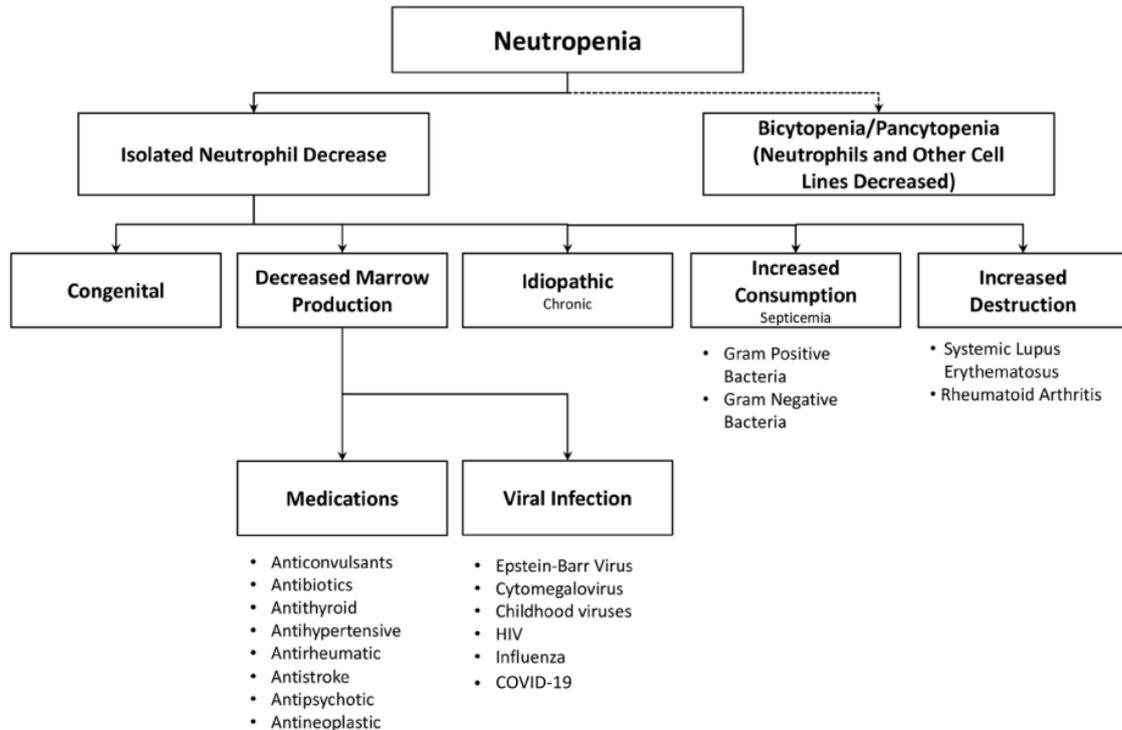


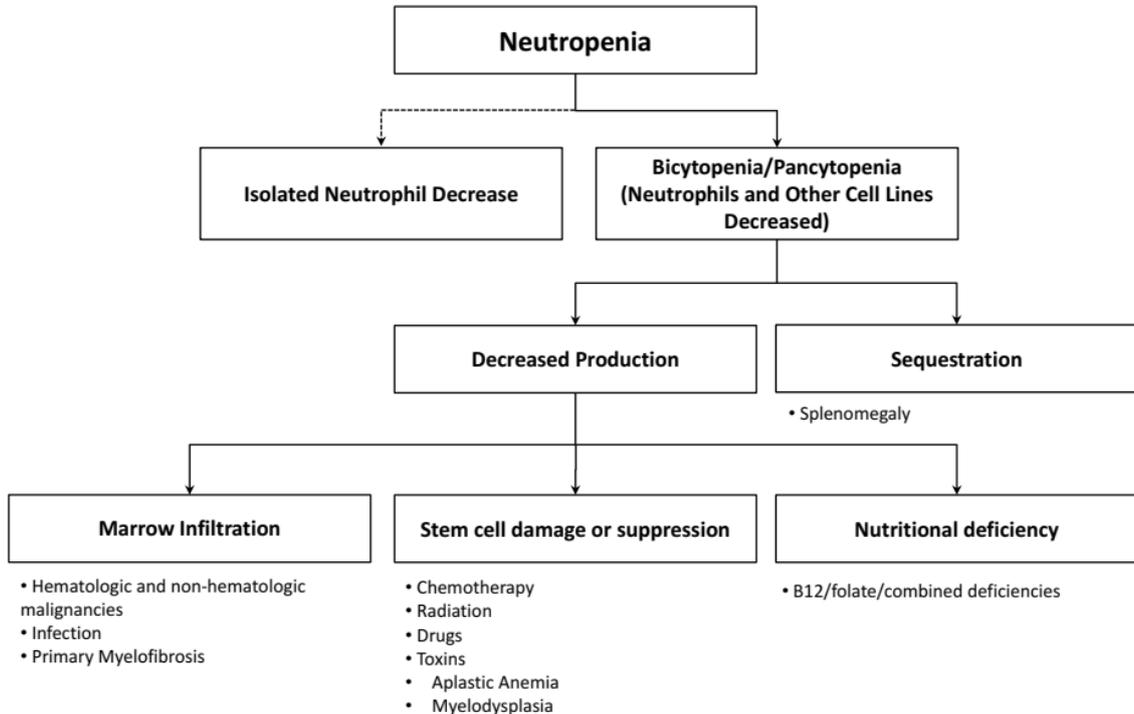
Cervical	Supraclavicular	Axillary	Epitrochlear (Always pathologic)	Inguinal
<u>Anterior</u> • Infection (e.g. Mononucleosis, Toxoplasmosis) <u>Posterior</u> • TB • Lymphoma • Kikuchi Disease • Head/Neck Malignancy	• Thoracic Malignancy (Breast, Mediastinum, Lungs, Esophagus) • Abdominal Malignancy (Virchow's Node)	• Infection (Arm, Thoracic Wall, Breast) • Cancer (In absence of infection in upper extremity)	• Infection (Forearm/Hand) • Lymphoma • Sarcoidosis • Tularemia • Secondary Syphilis	• Leg Infection • Sexually Transmitted Infection • Cancer



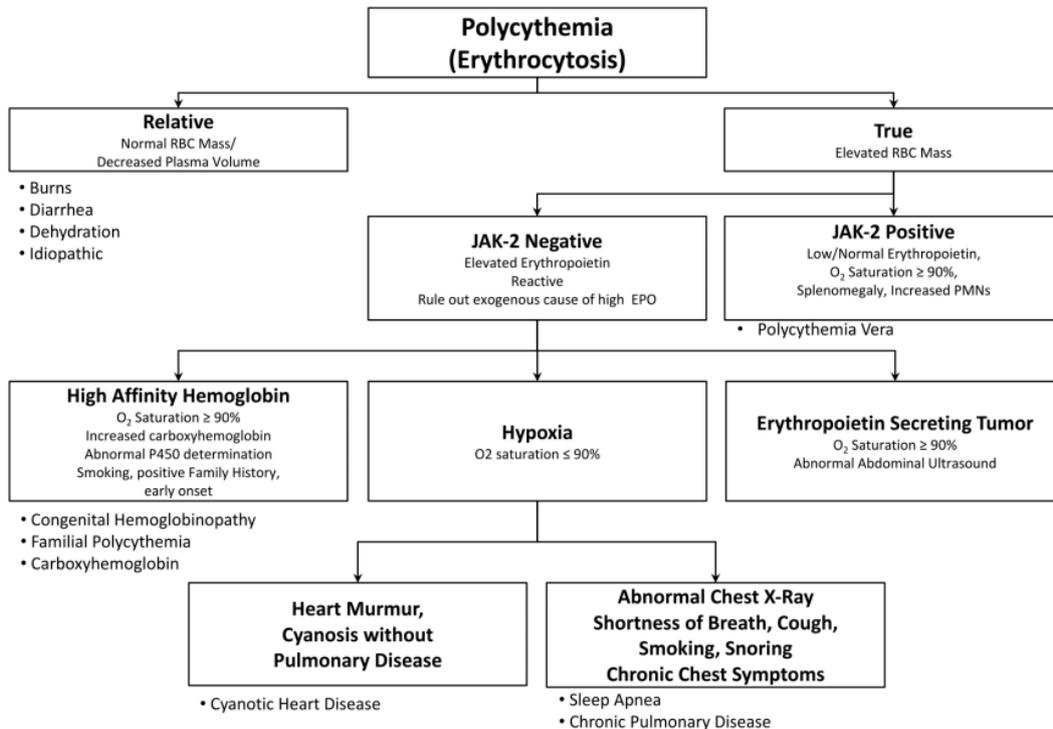
# Neutropenia

Decreased Neutrophils Only



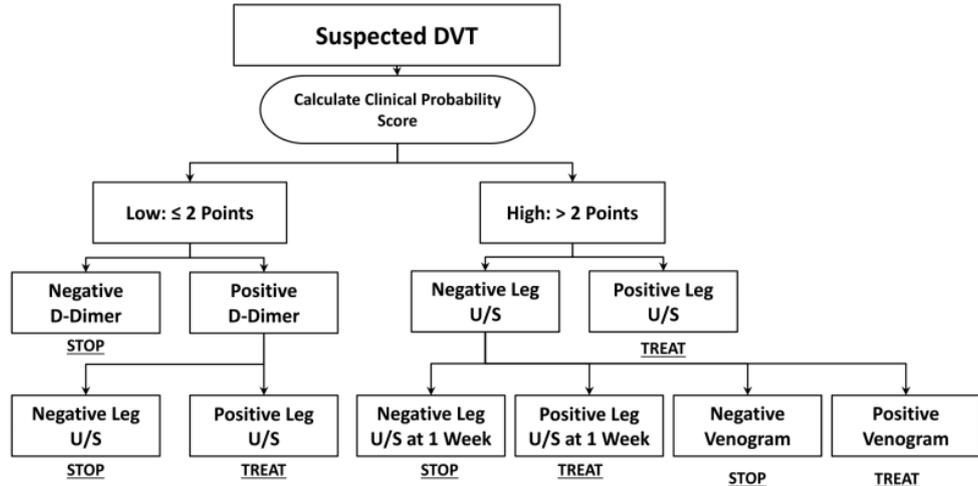


# Polycythemia





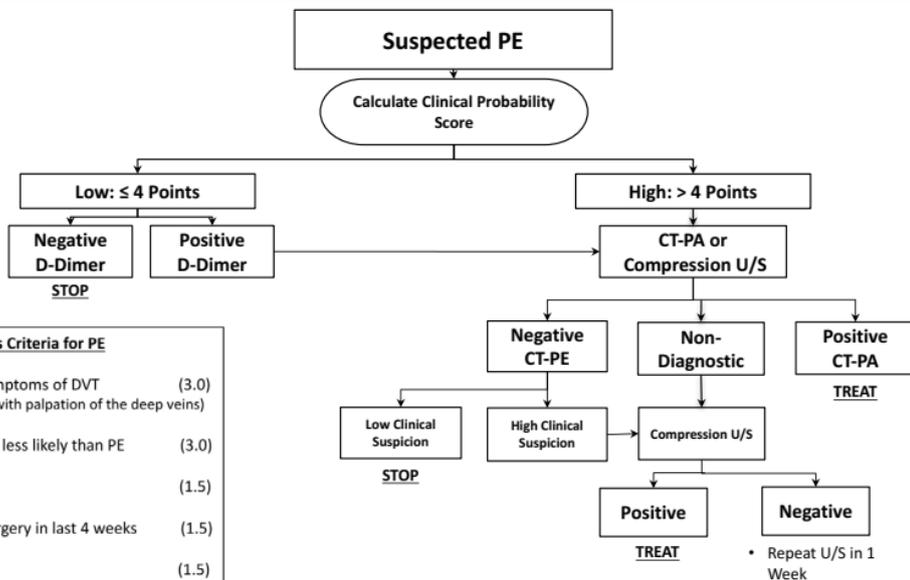
# Suspected Deep Vein Thrombosis (DVT)



### Well's Criteria for DVT

Active Cancer	(1)
Paralysis, paresis, recent immobilization of lower extremity	(1)
Recently bedridden for >3days, or major surgery in last 4 weeks	(1)
Localized tenderness along distribution of the deep venous system	(1)
Entire leg swollen	(1)
Calf swelling by >3cm compared to asymptomatic leg	(1)
Pitting edema (greater in symptomatic leg)	(1)
Collateral, nonvaricose superficial veins	(1)
Alternative diagnosis as or more likely than DVT	(-2)

# Suspected Pulmonary Embolism (PE)

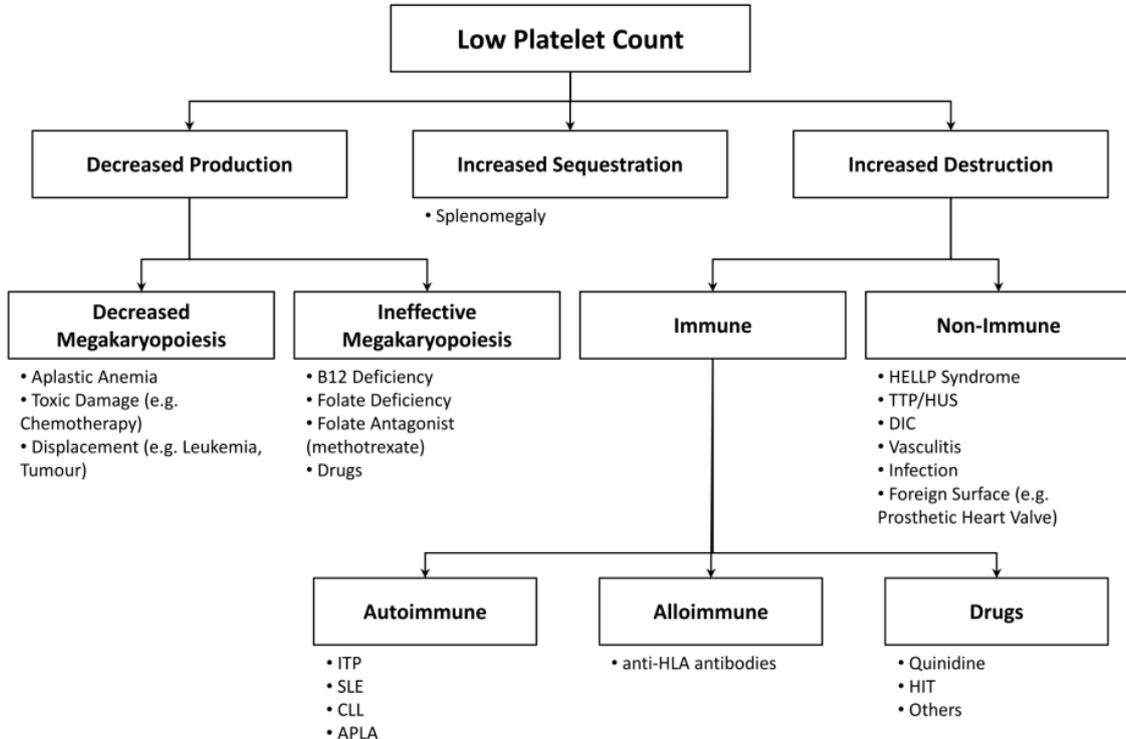


## Well's Criteria for PE

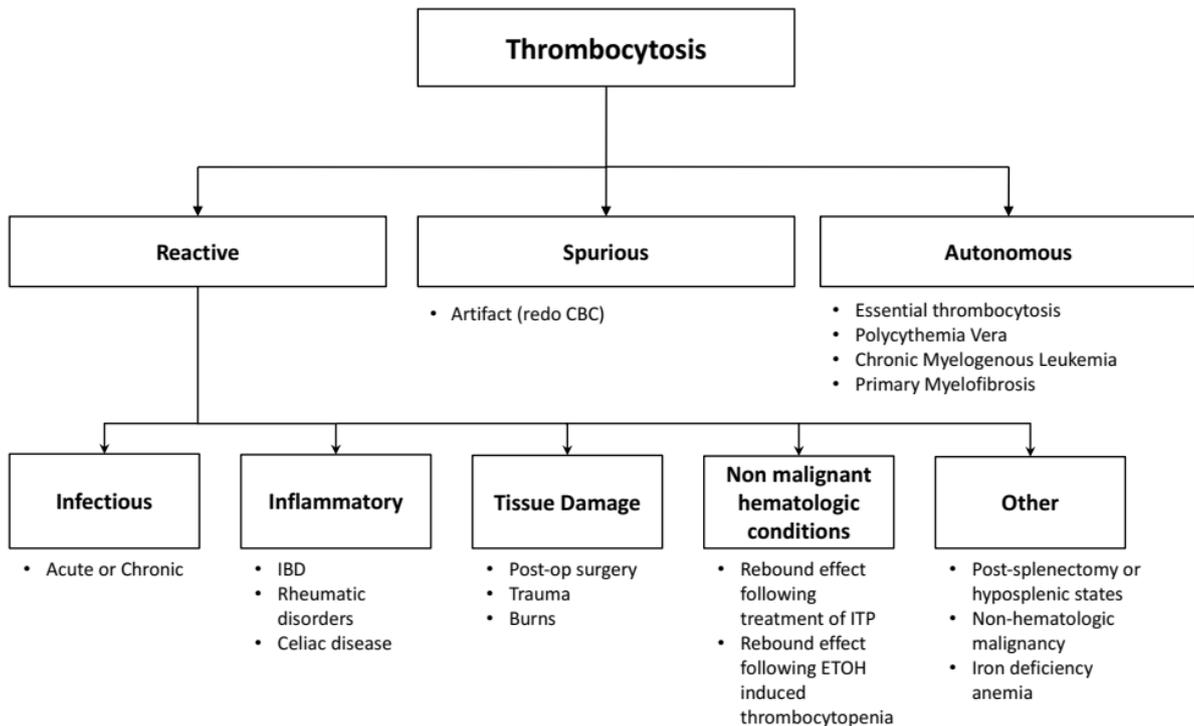
Clinical Signs and Symptoms of DVT (leg swelling and pain with palpation of the deep veins)	(3.0)
Alternative diagnosis less likely than PE	(3.0)
Heart rate >100bpm	(1.5)
Immobilization or surgery in last 4 weeks	(1.5)
Previous DVT or PE	(1.5)
Hemoptysis	(1.0)
Malignancy (ongoing or previous 6 months)	(1.0)

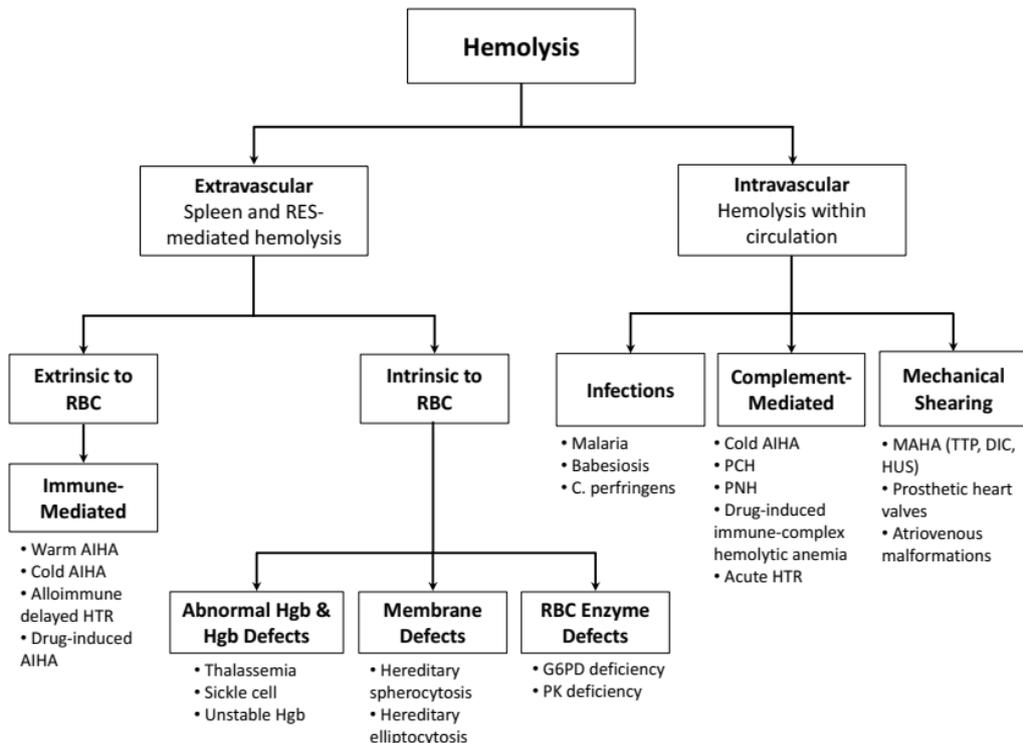
Wells P.S, et al. (2000). Derivation of a simple clinical model to categorize patients probability of pulmonary embolism: increasing the models utility with the SimpliRED D-dimer. *Thromb Haemost* 2003; 83: 416-20.  
 Writing Group for the Christopher Study Investigators. (2006). Effectiveness of managing suspected pulmonary embolism using an algorithm combining clinical probability, D-Dimer testing, and computer tomography. *JAMA*;295: 172-179.

# Thrombocytopenia



# Thrombocytosis





# Gastrointestinal

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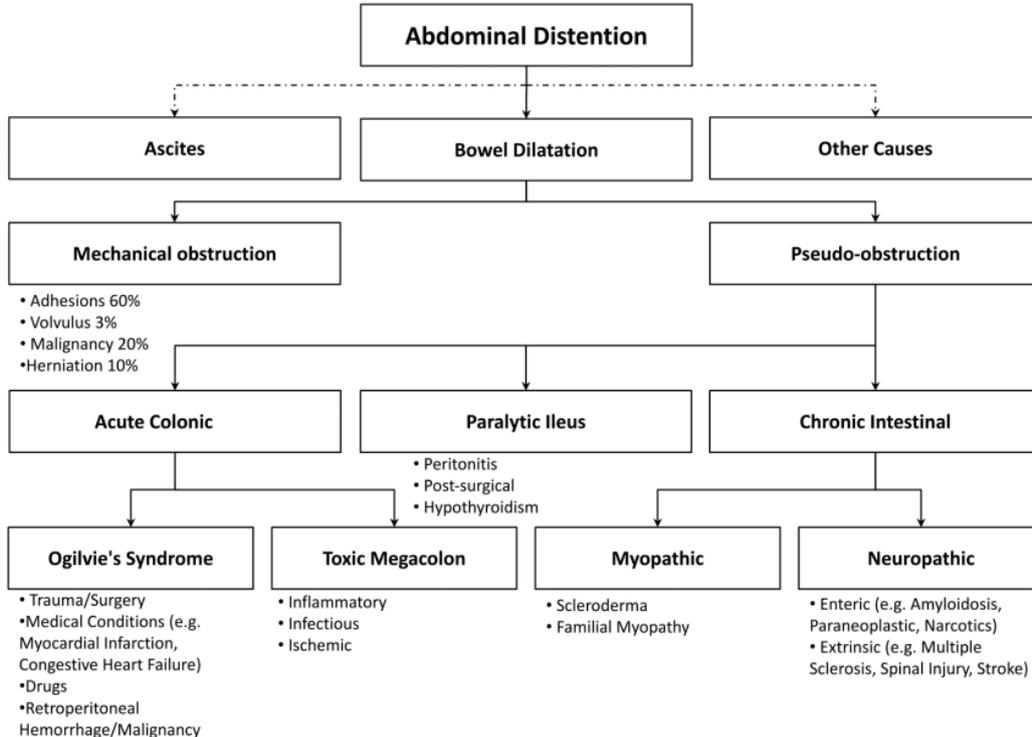
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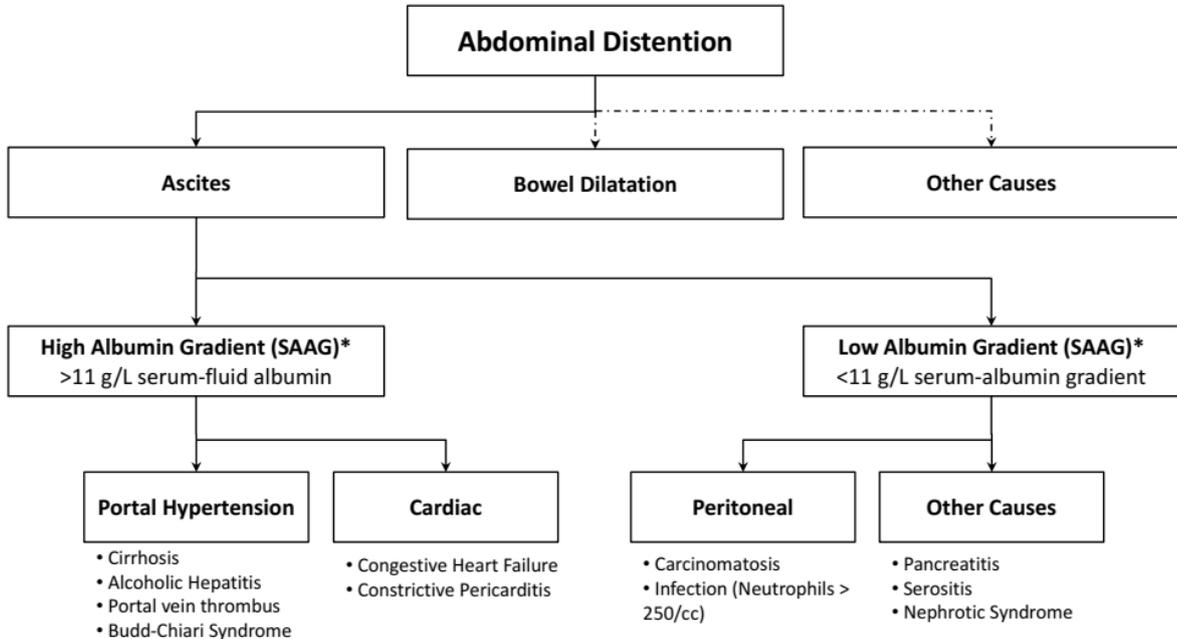
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Dr. Kelly Burak



# Abdominal Distention





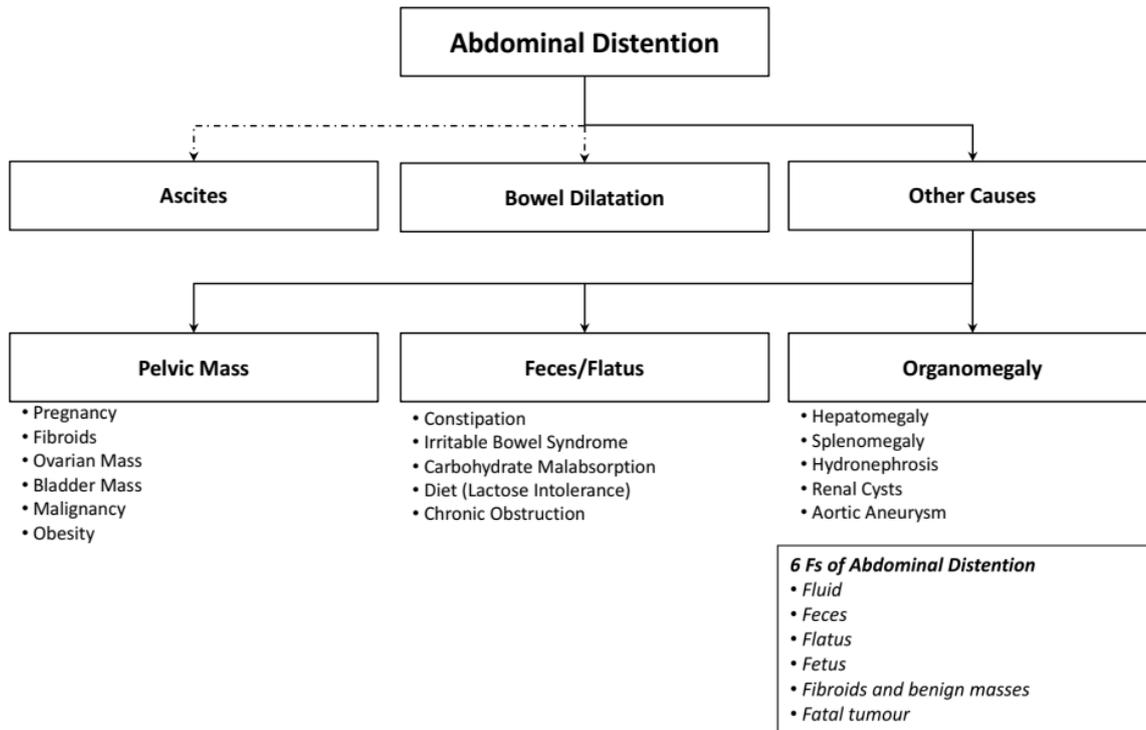
• Clinical pearl: "rule of 97": SAAG 97% accurate. If high SAAG, 97% of time it is cirrhosis/portal hypertension. If low SAAG, 97% time carcinomatosis (and cytology 97% sensitive)

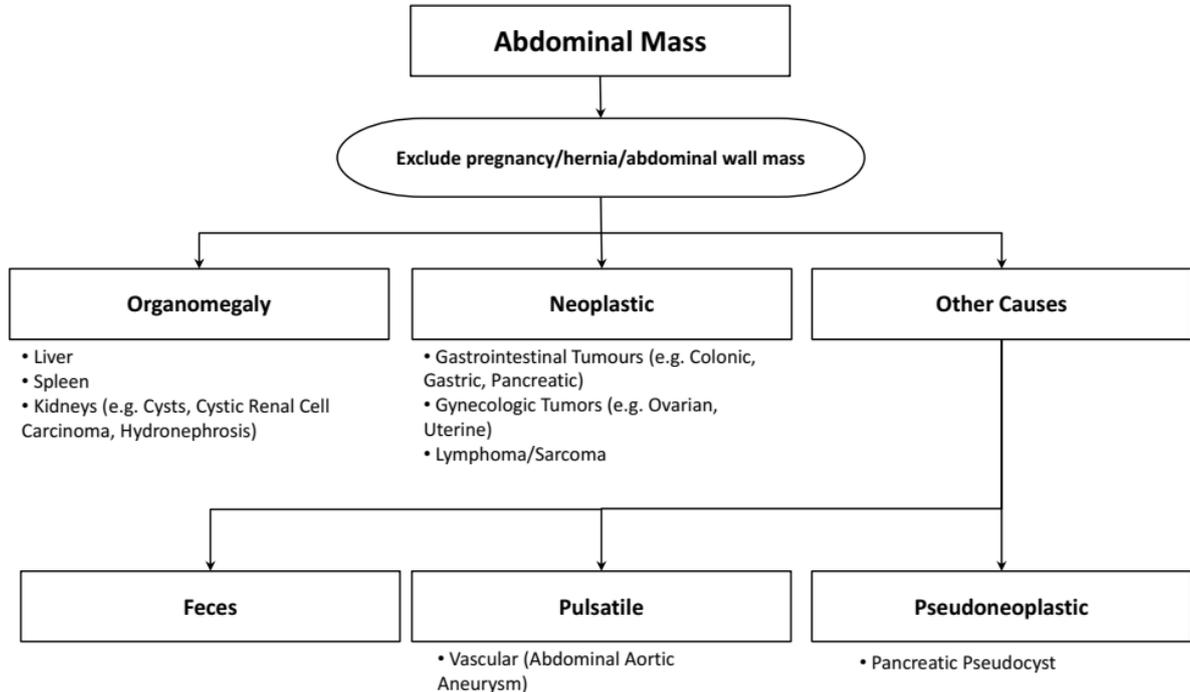
• \*Serum Ascites Albumin Gradient (SAAG) = [Serum albumin] – [Peritoneal fluid albumin]

# Abdominal Distention



## Other Causes

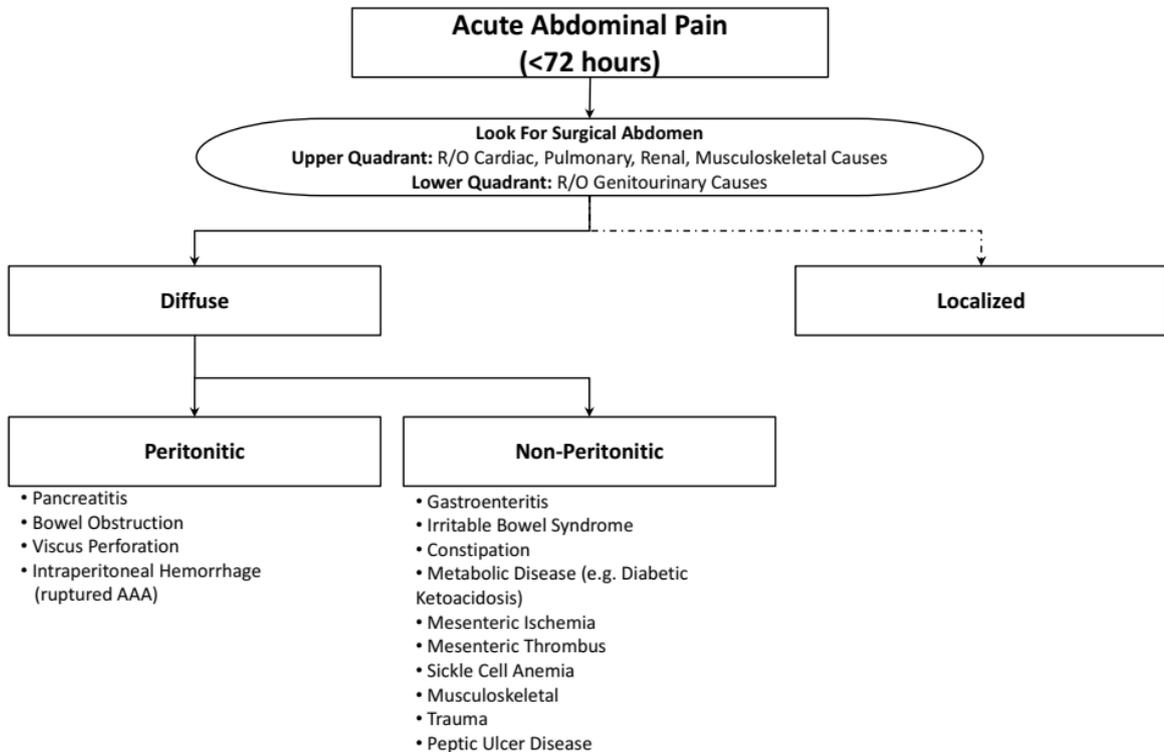


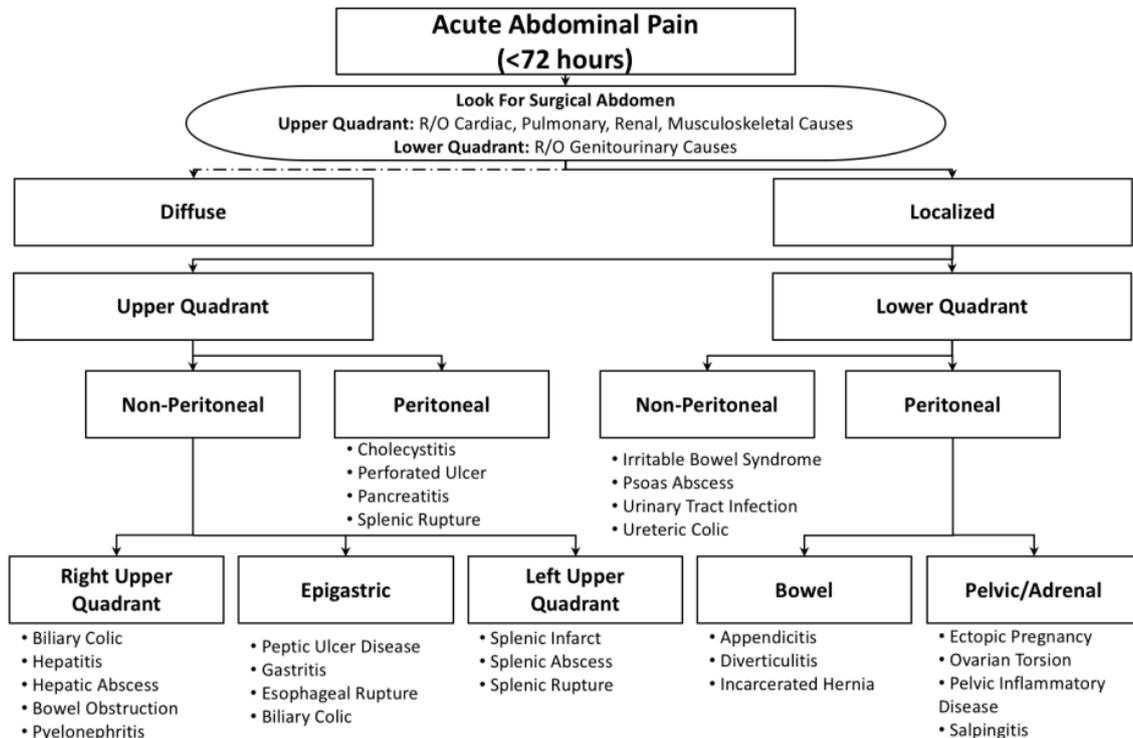


# Abdominal Pain (Adult)



Acute - Diffuse

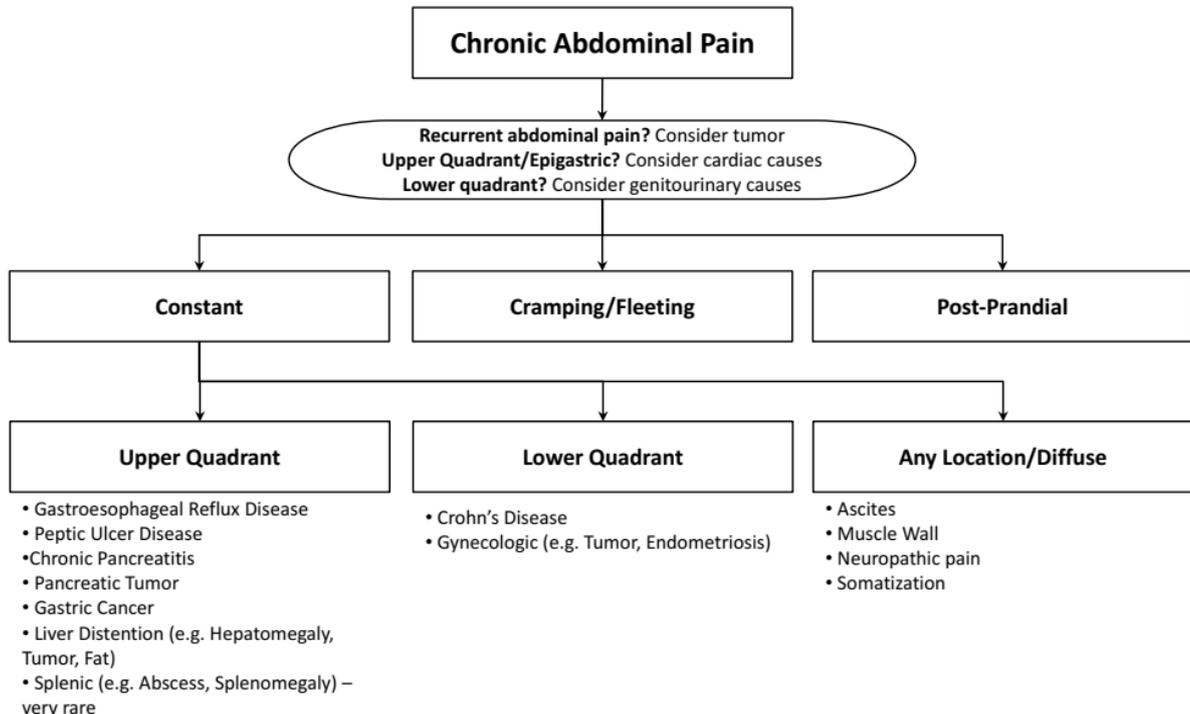




# Abdominal Pain (Adult)

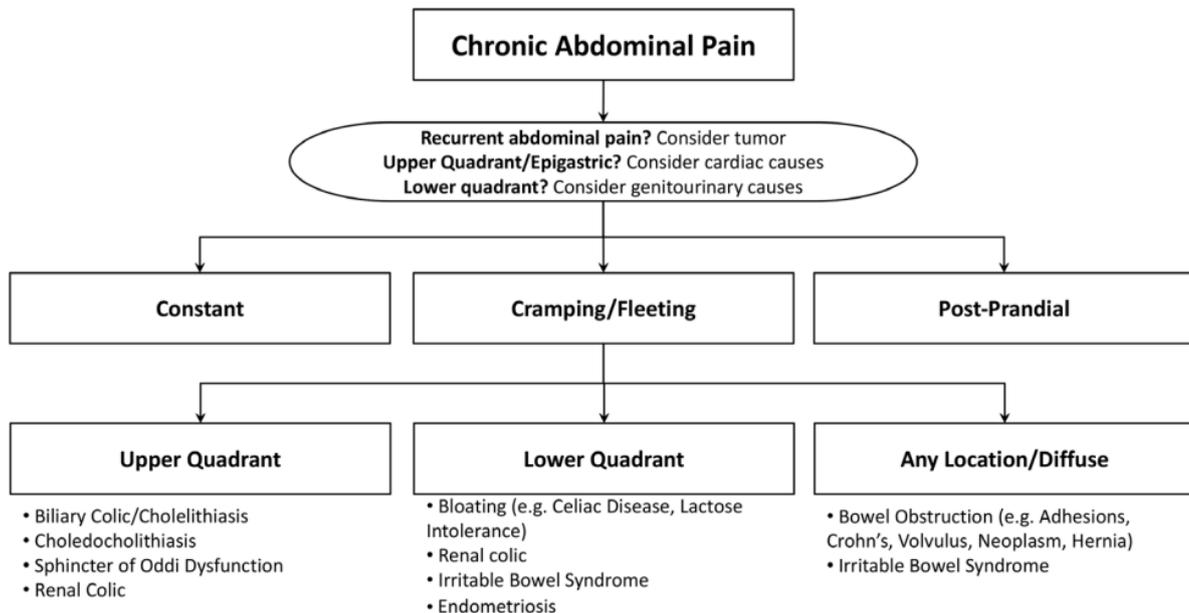


Chronic - Constant



# Abdominal Pain (Adult)

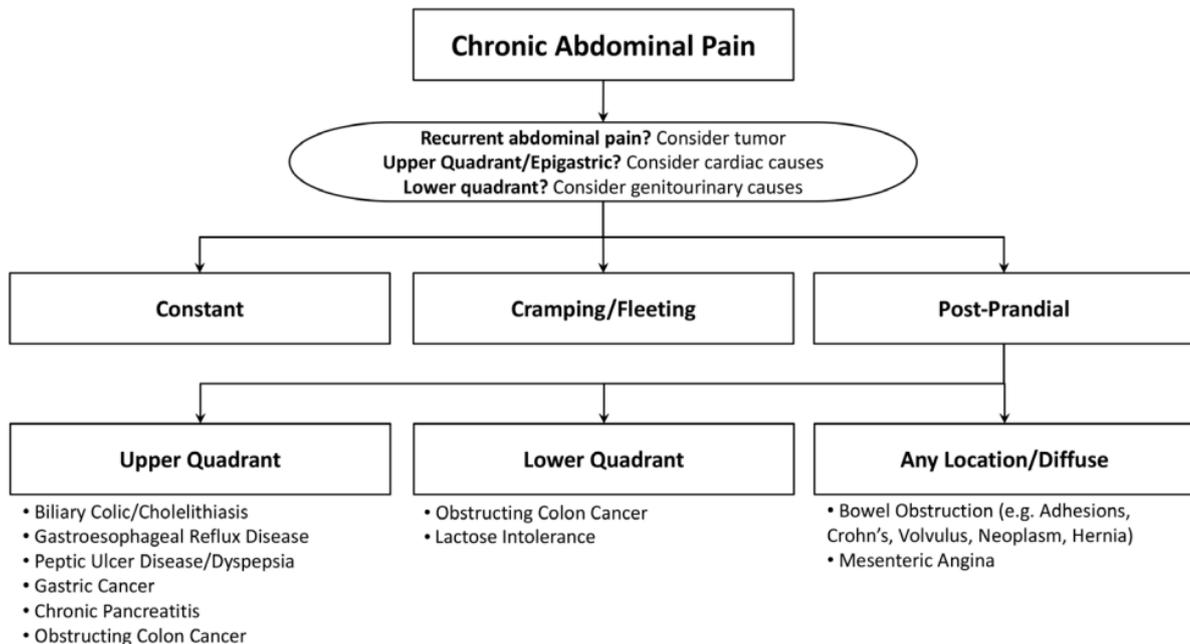
Chronic - Crampy / Fleeting

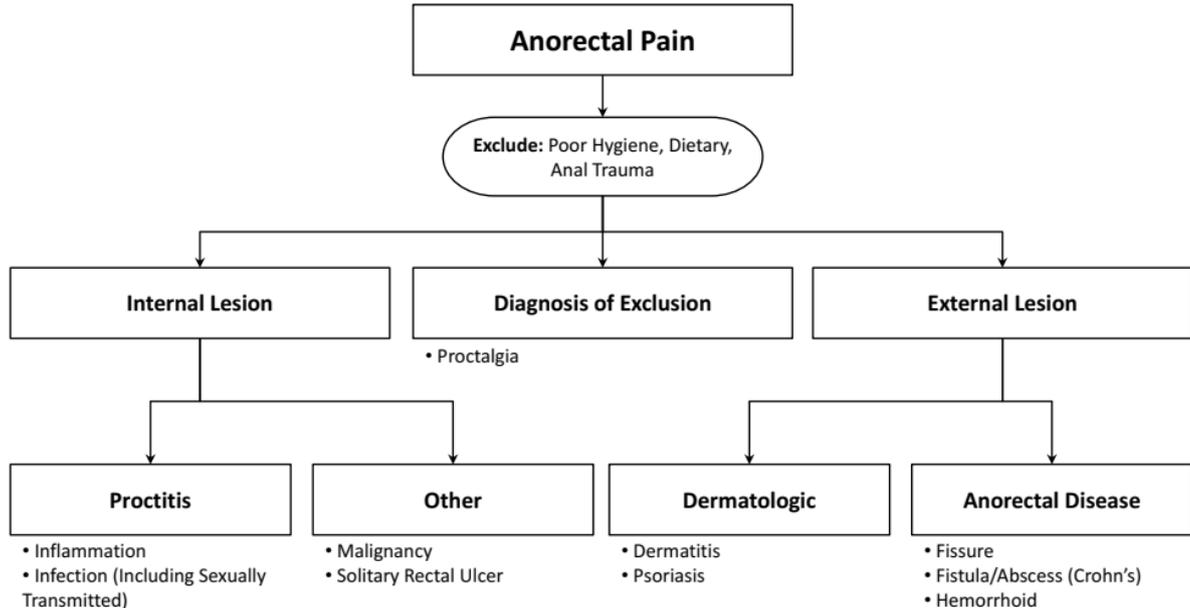


# Abdominal Pain (Adult)

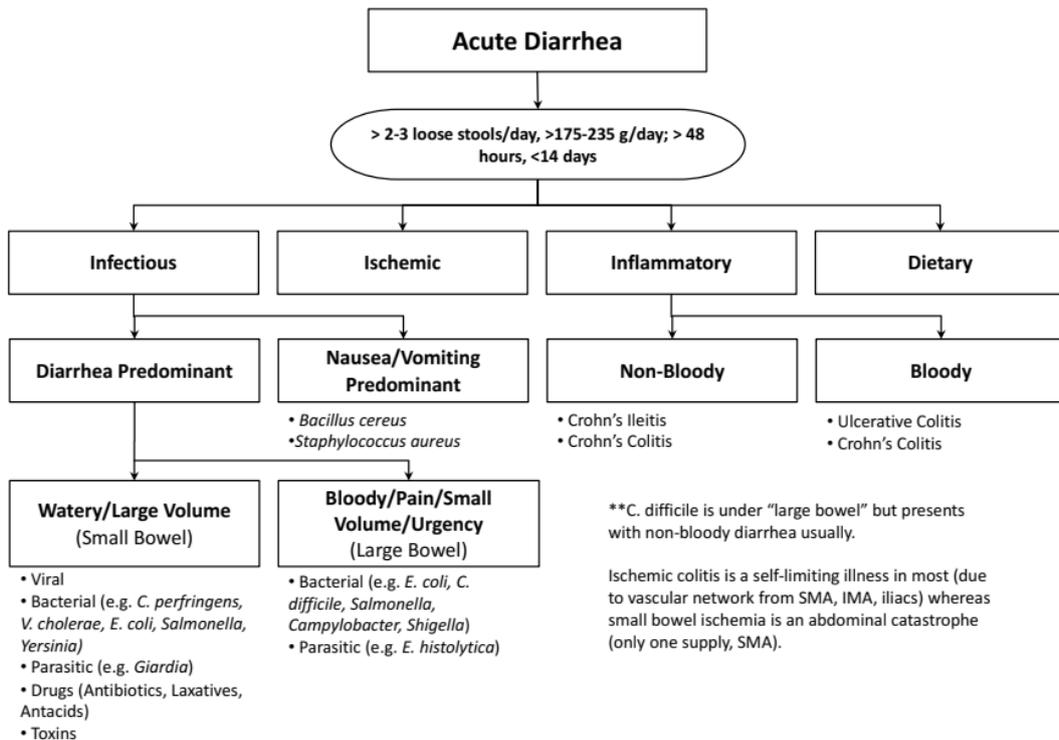


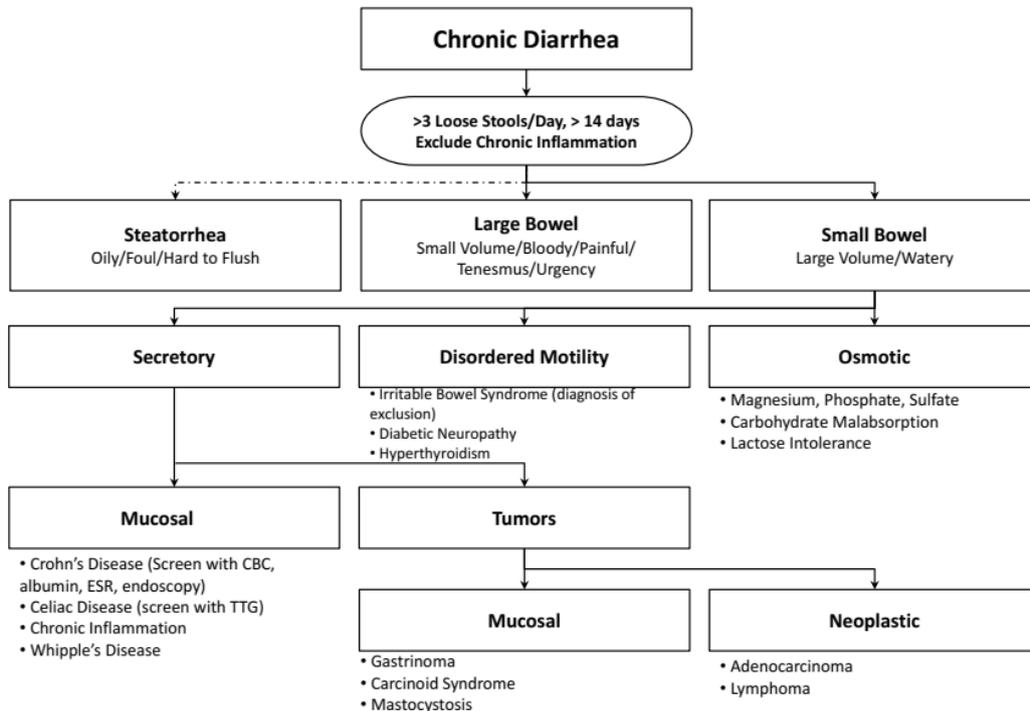
Chronic - Post-Prandial





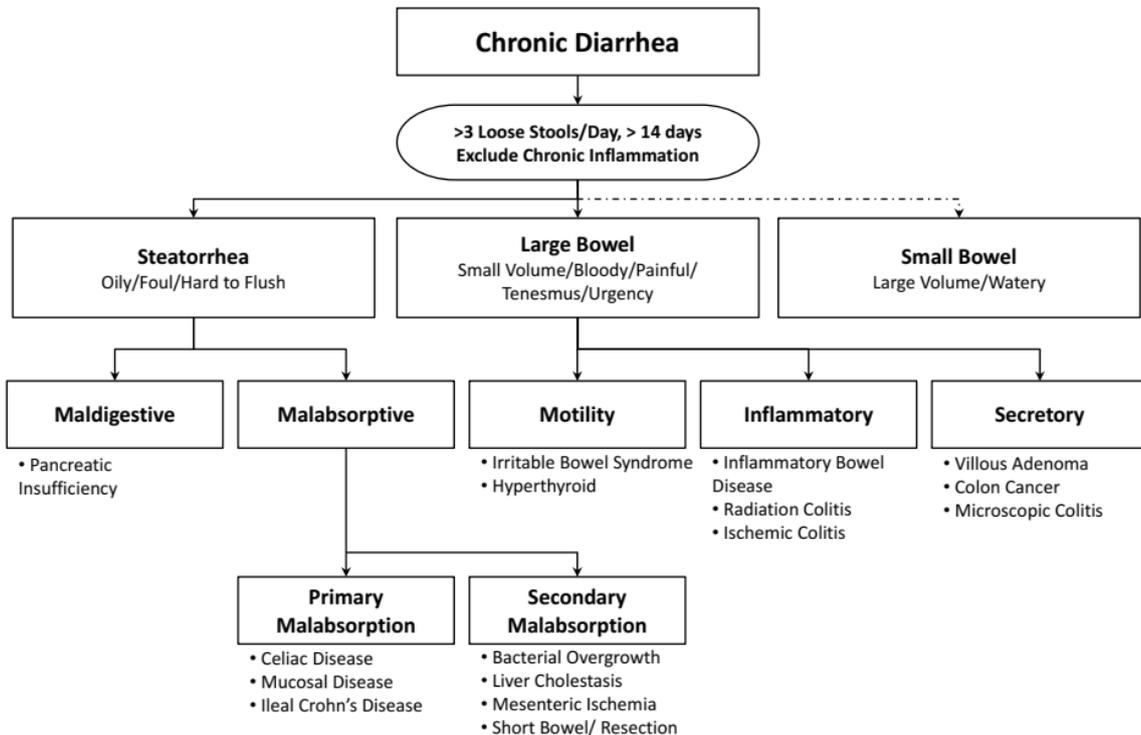
# Acute Diarrhea





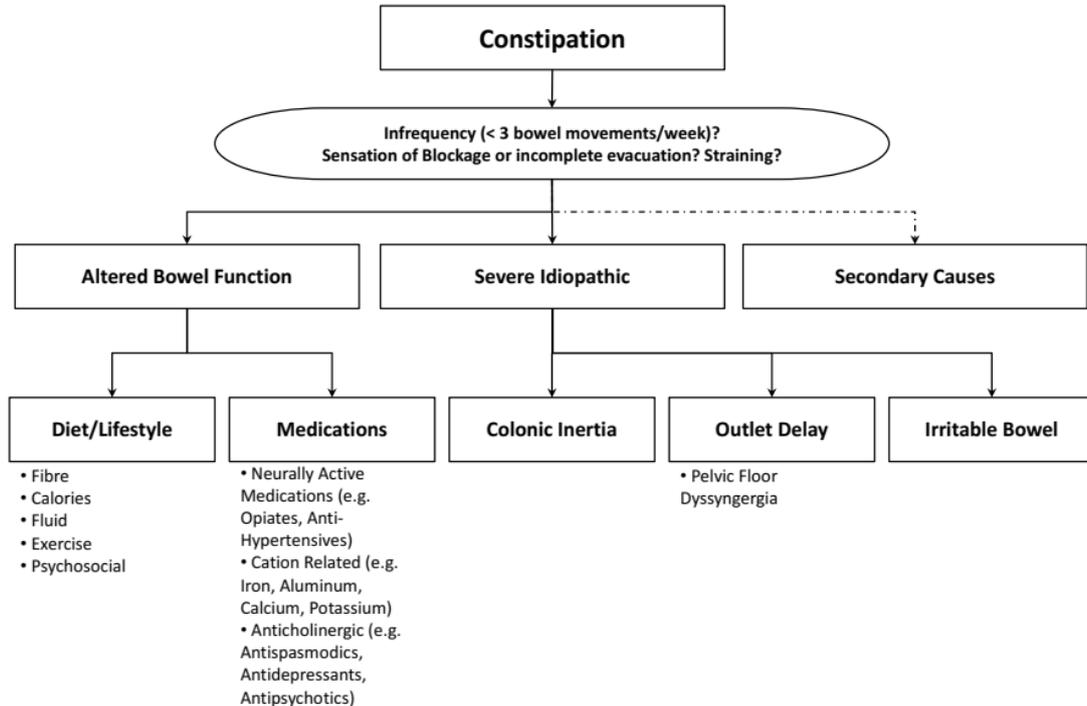
# Chronic Diarrhea

Steatorrhea & Large Bowel



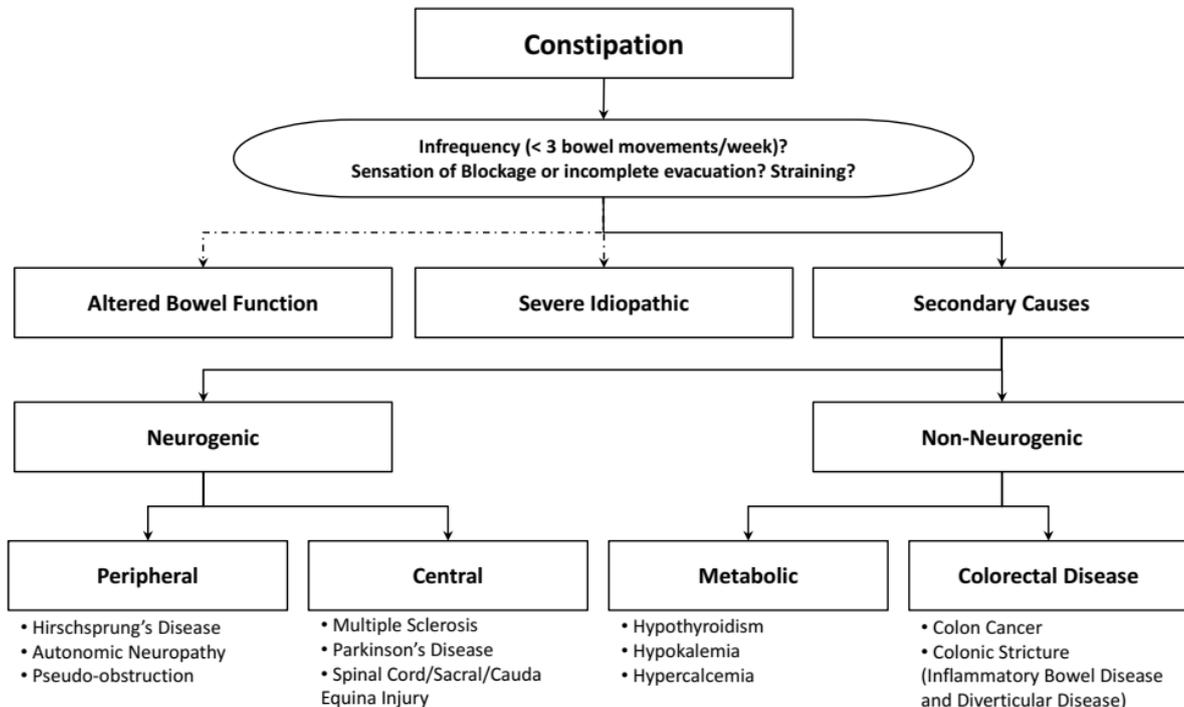
# Constipation (Adult)

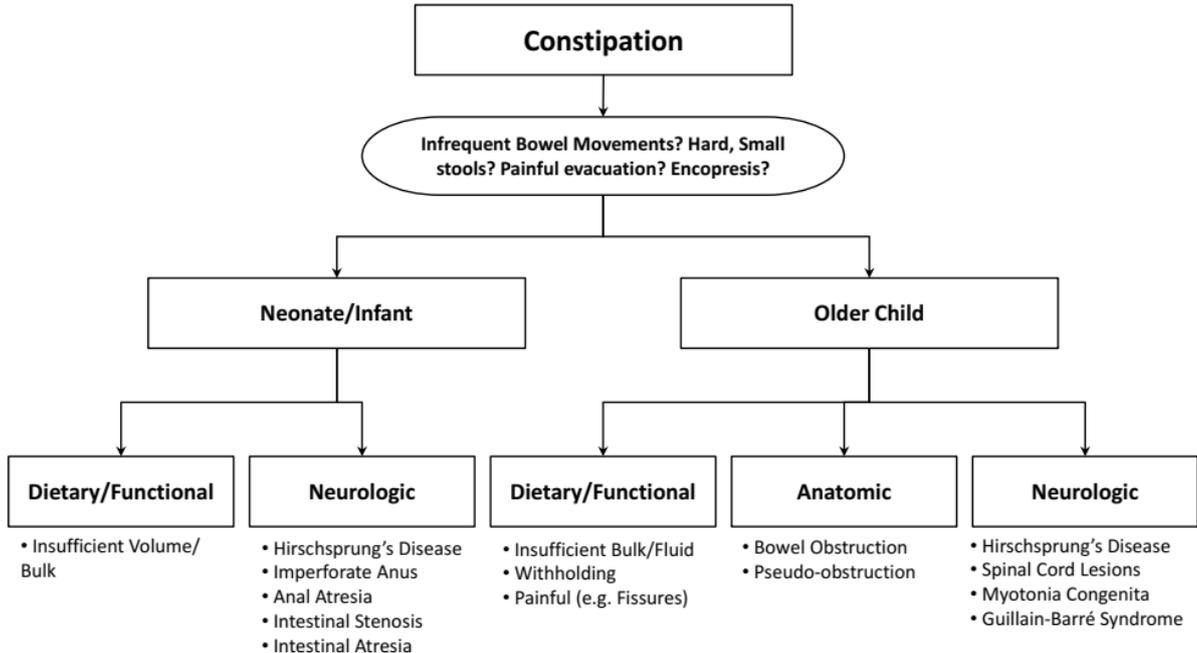
Altered Bowel Function & Idiopathic



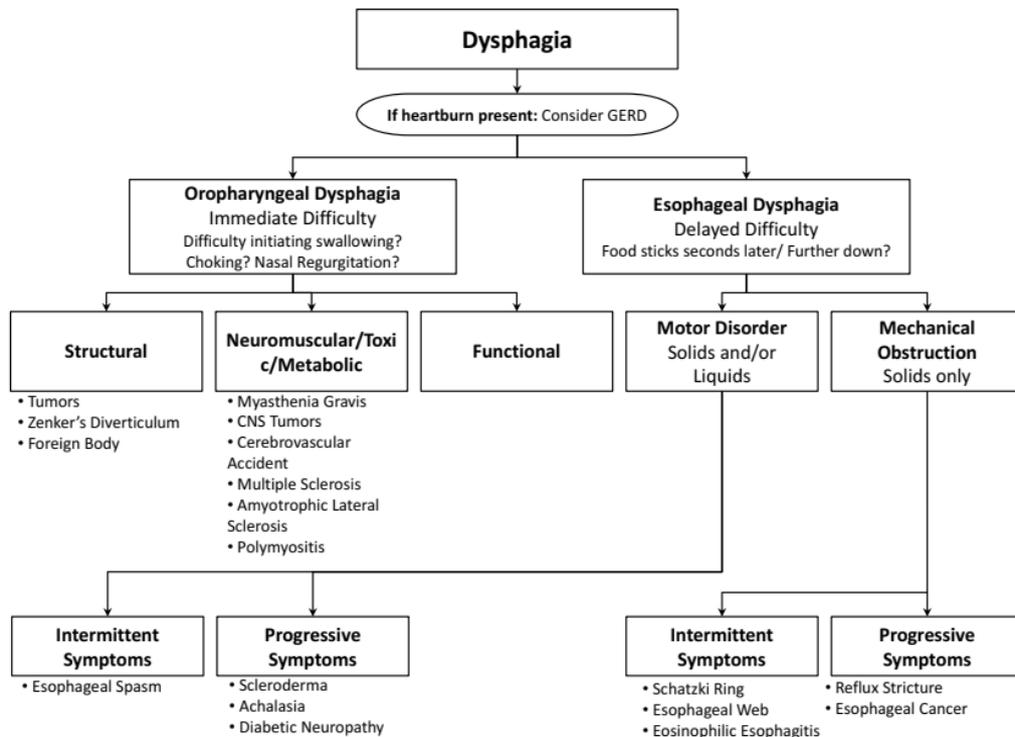
# Constipation (Adult)

## Secondary Causes



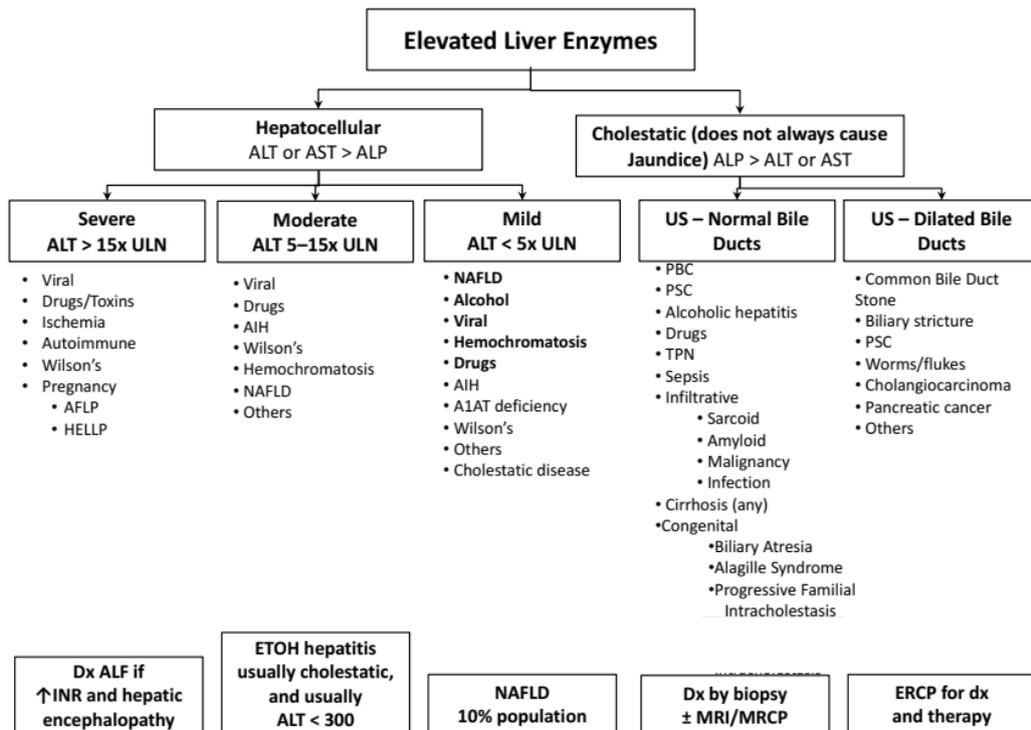


# Dysphagia

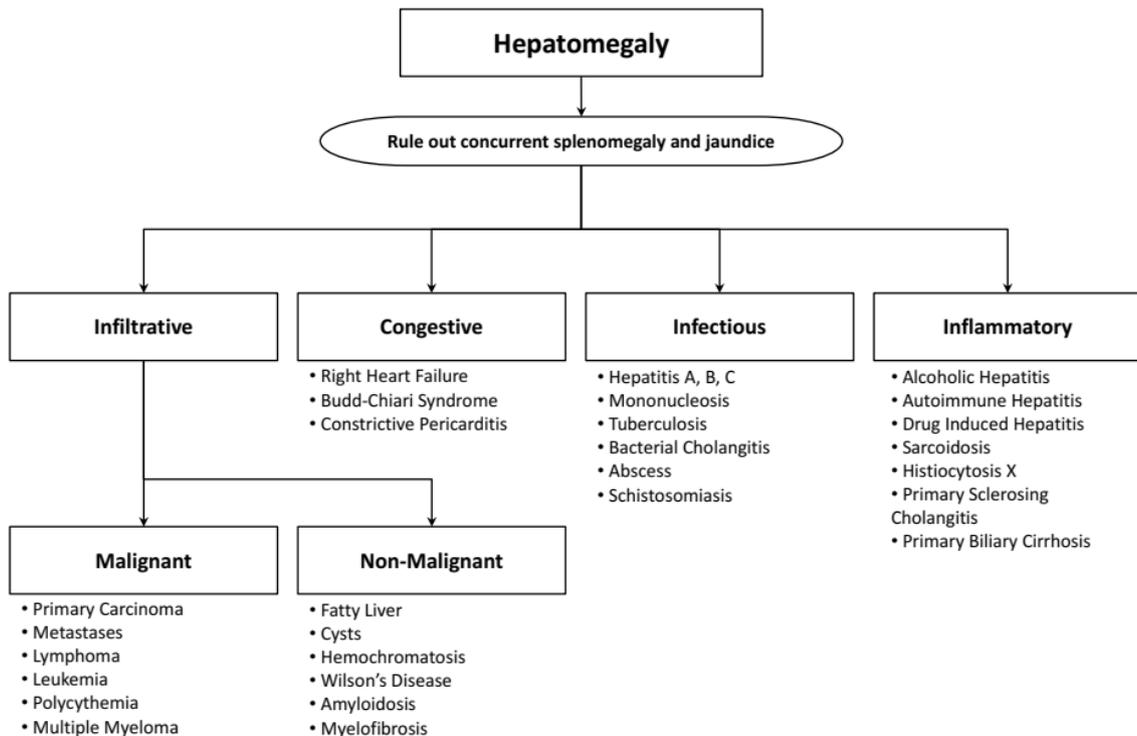


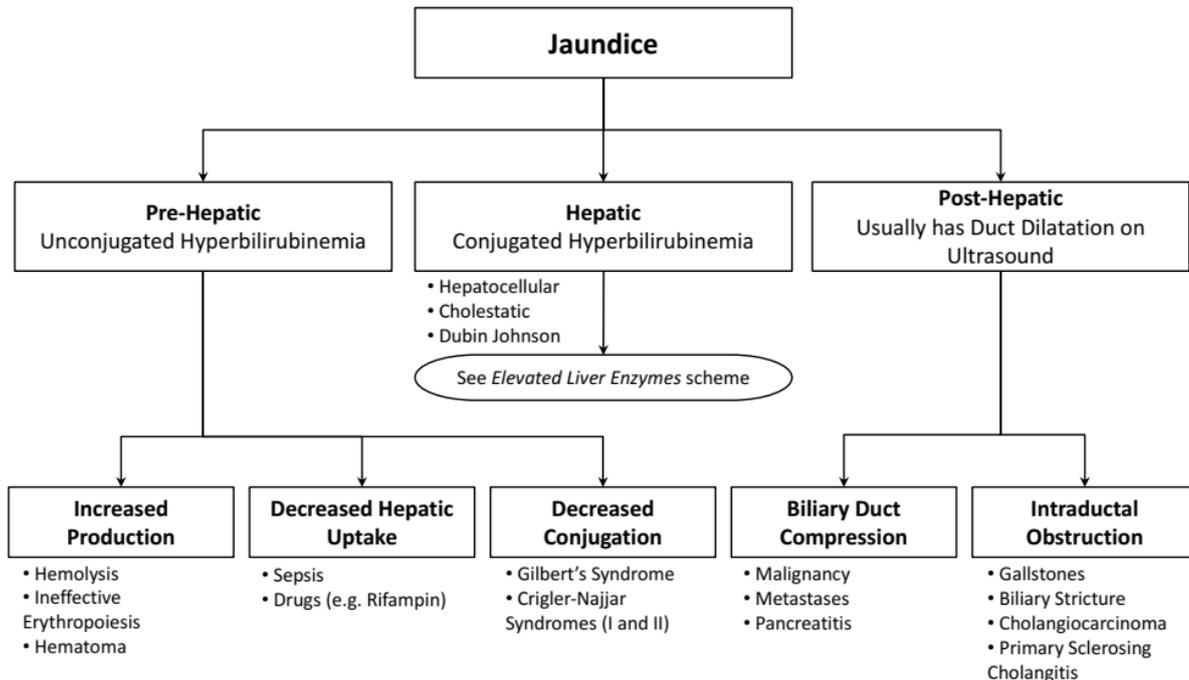


# Elevated Liver Enzymes

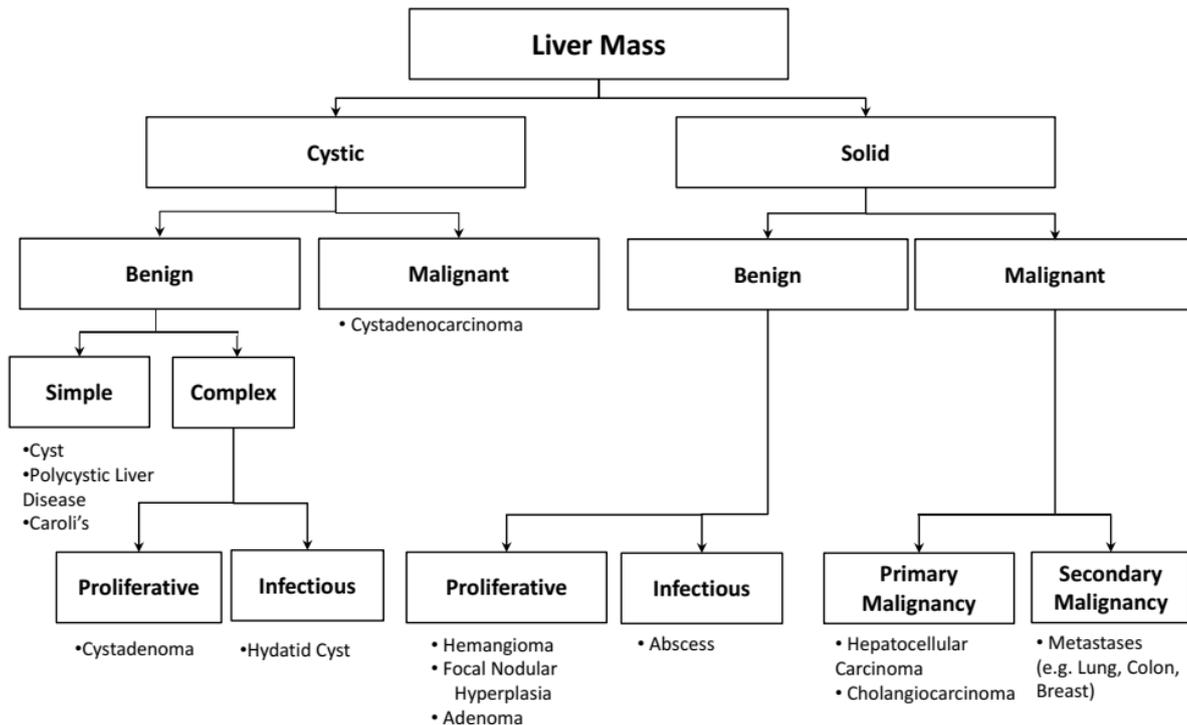


# Hepatomegaly

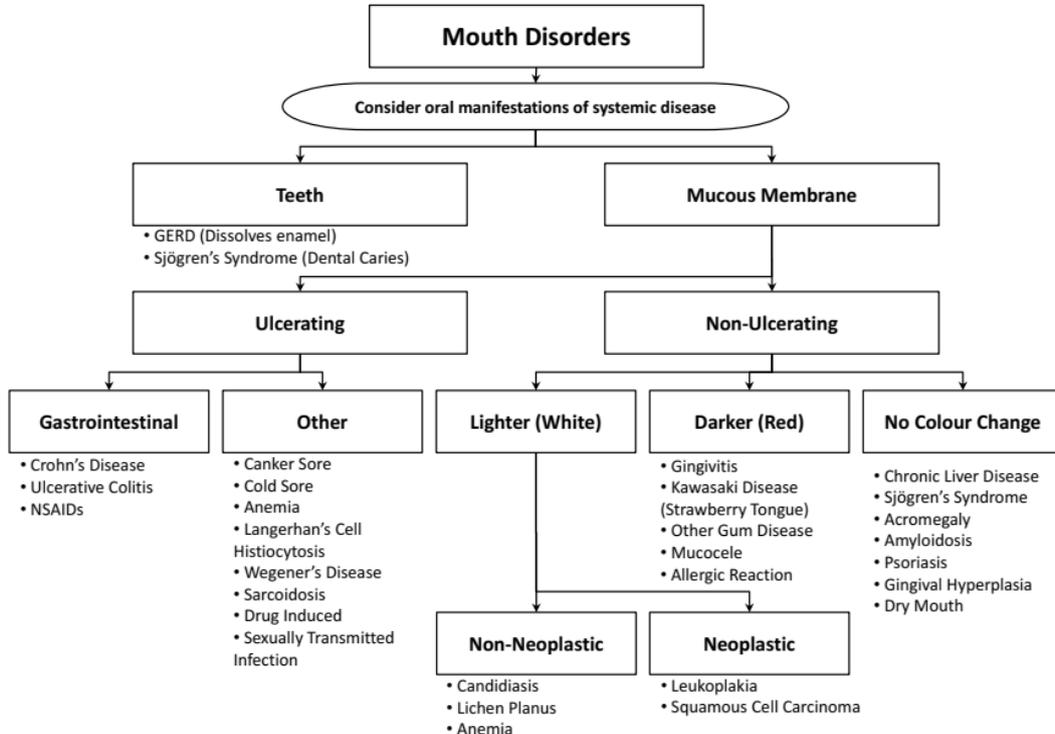




# Liver Mass

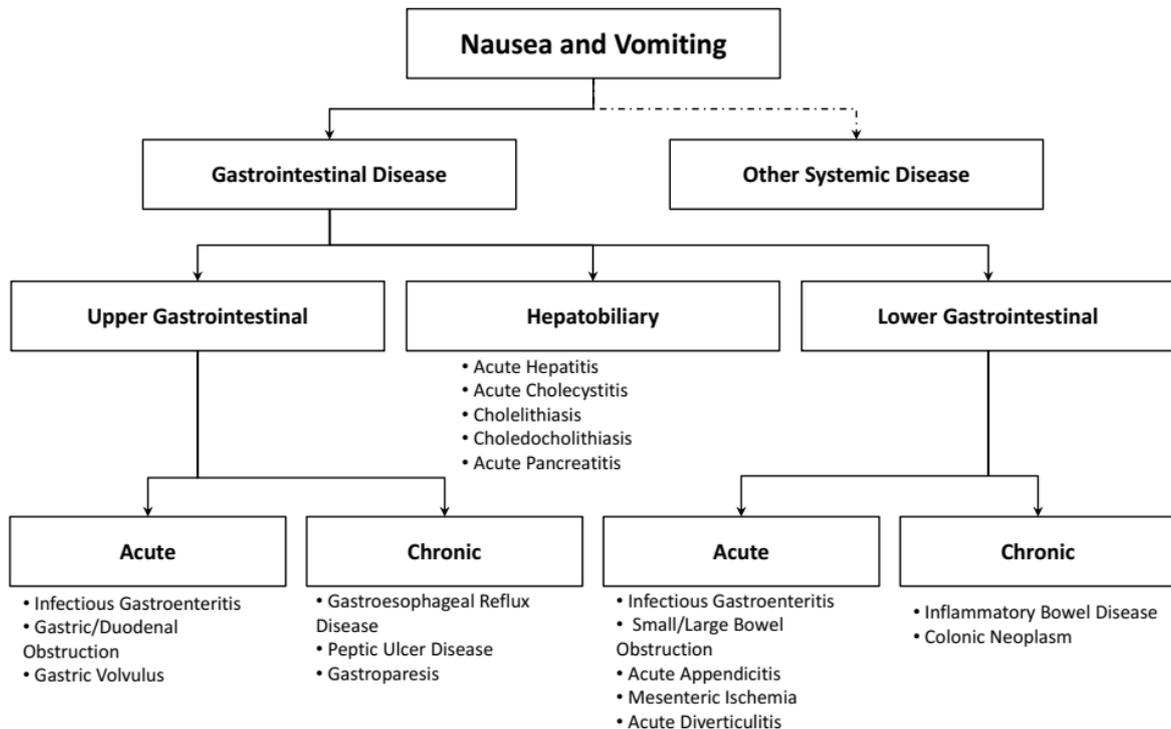


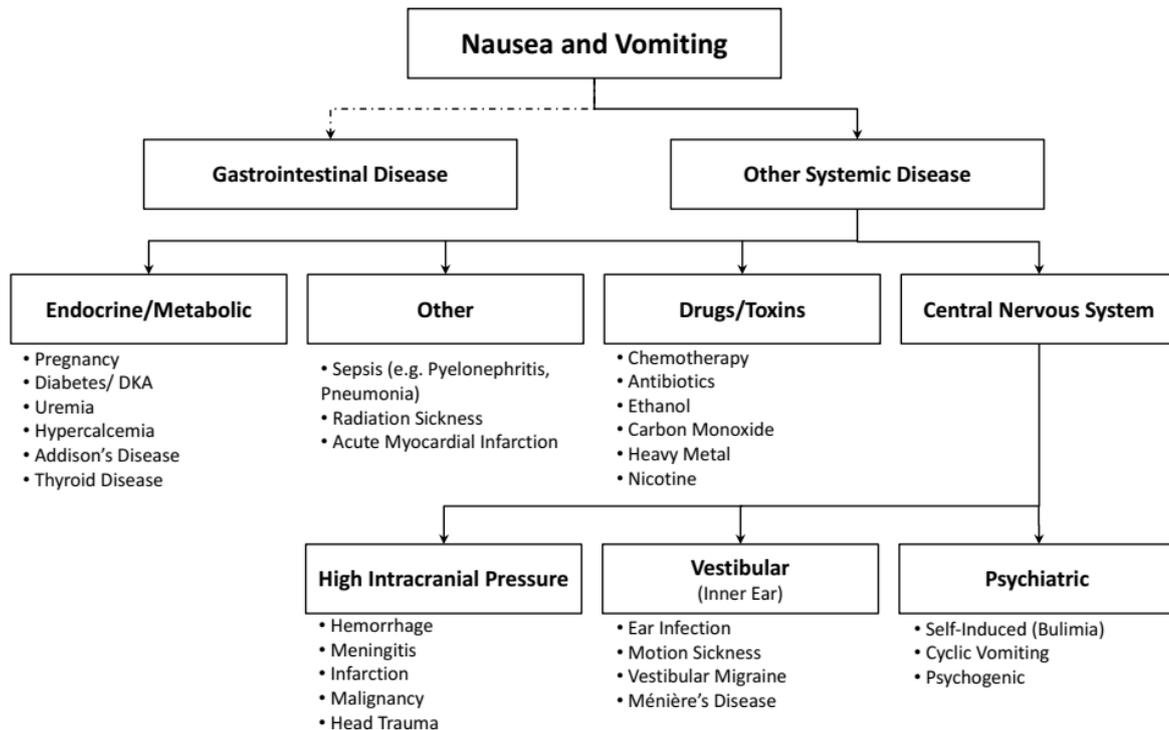
# Mouth Disorders (Adult & Elderly)



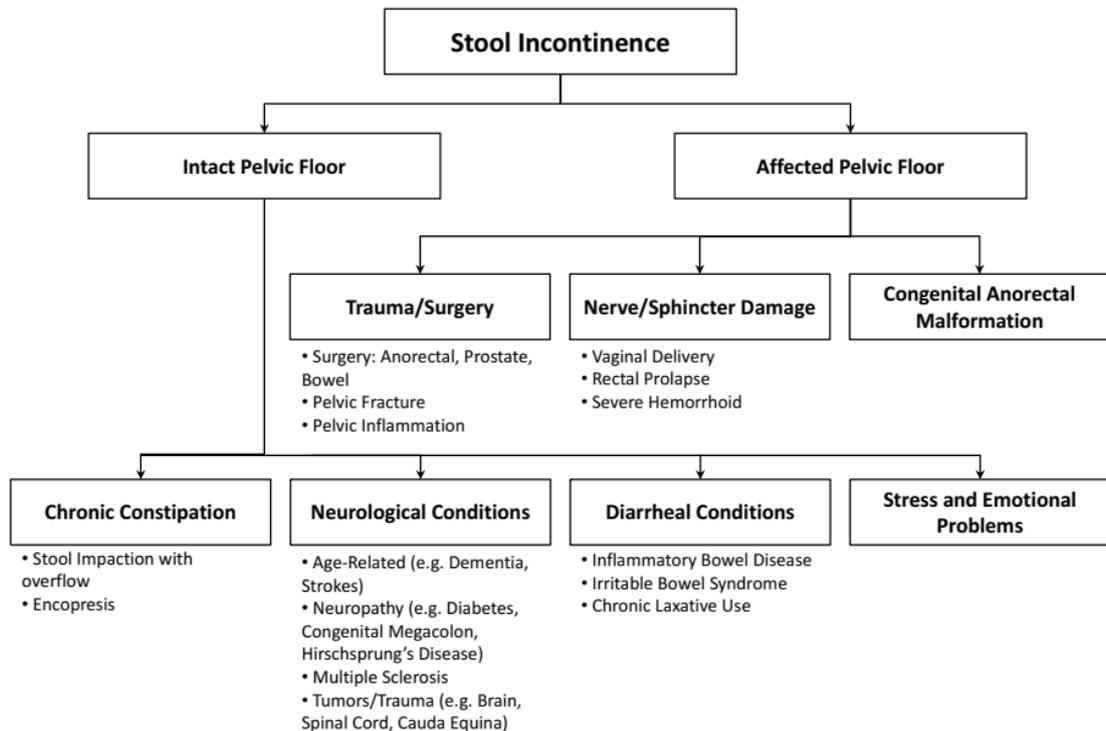
# Nausea & Vomiting

Gastrointestinal Disease



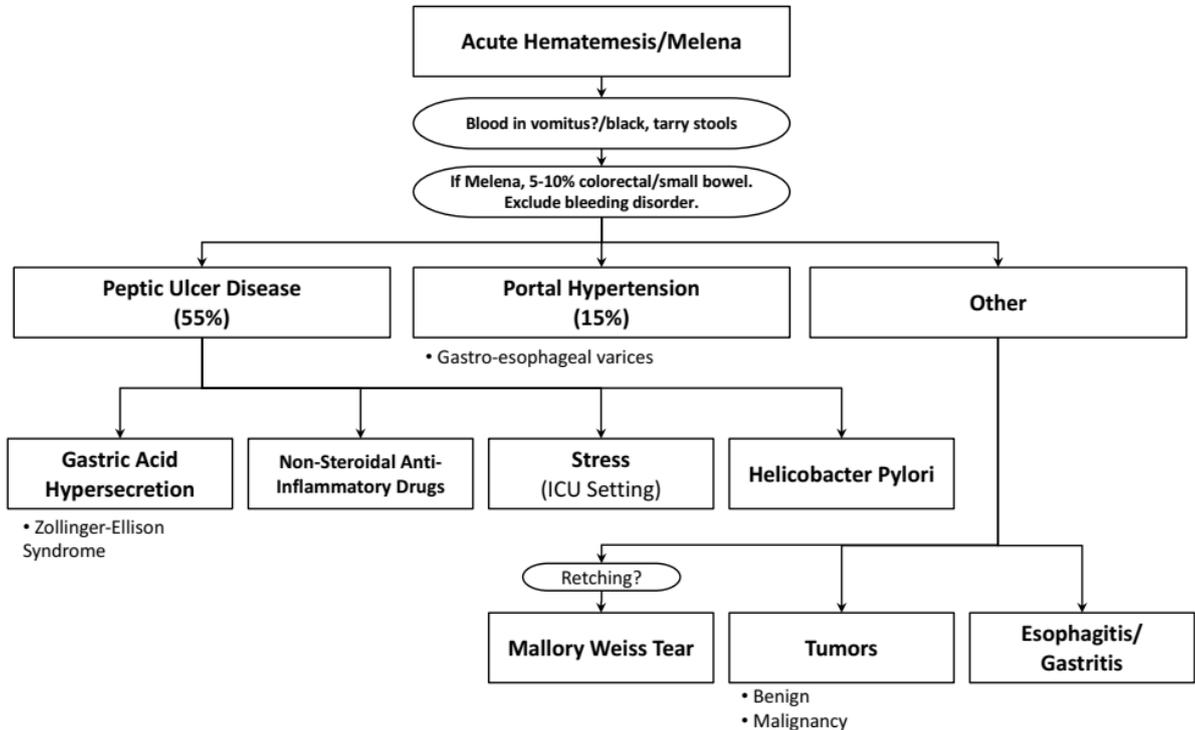


# Stool Incontinence

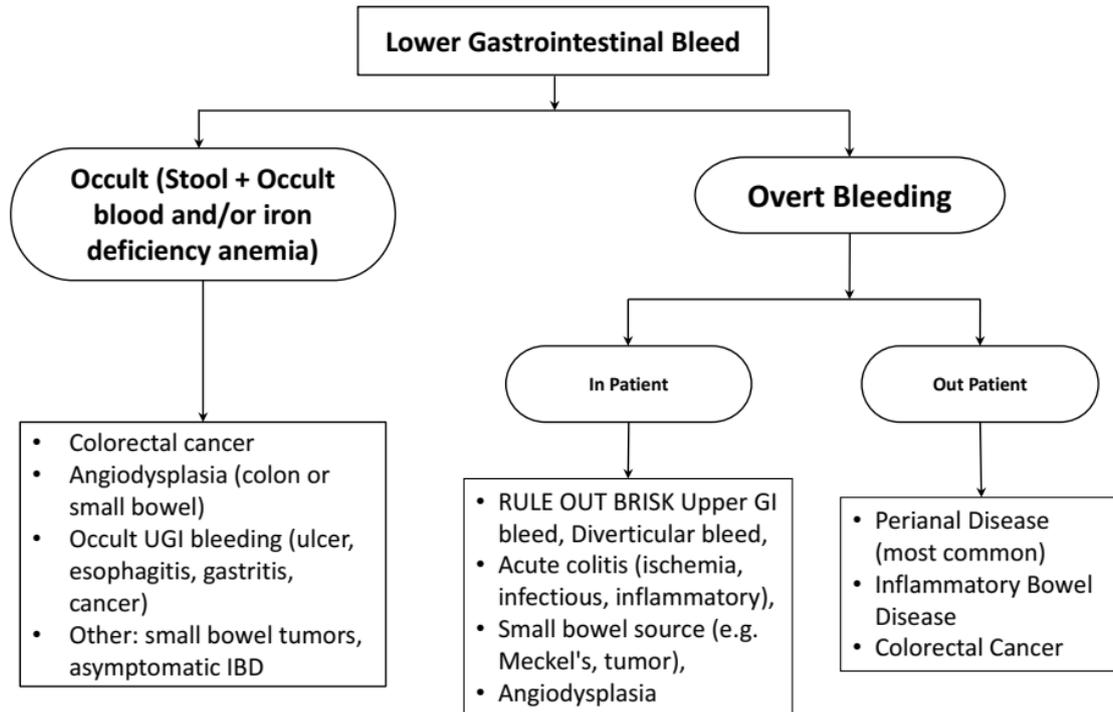


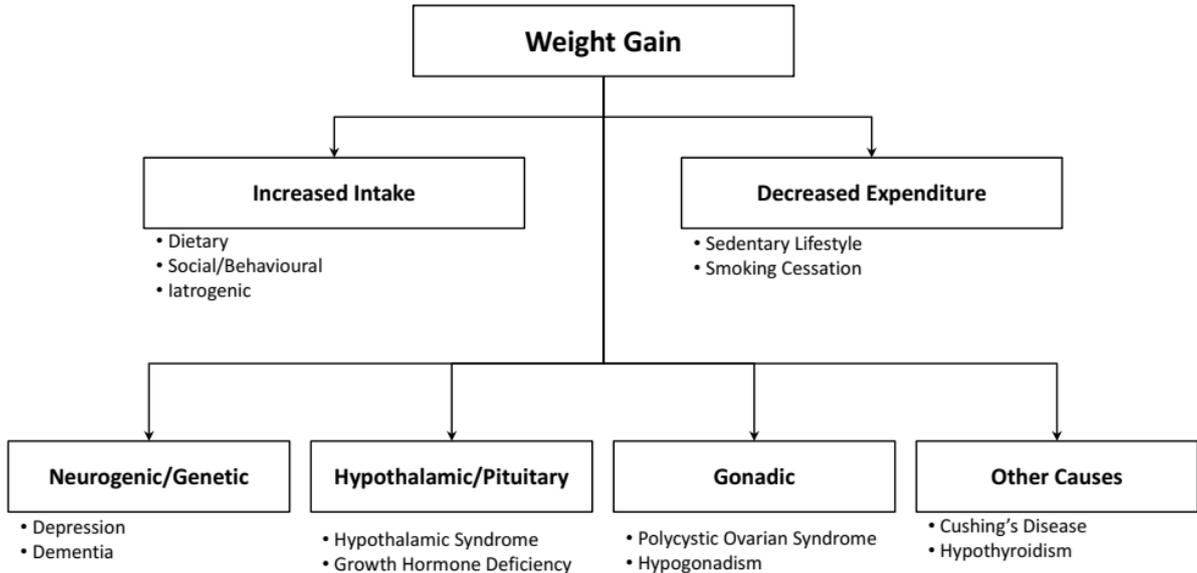
# Upper Gastrointestinal Bleed

(Hematemesis / Melena)

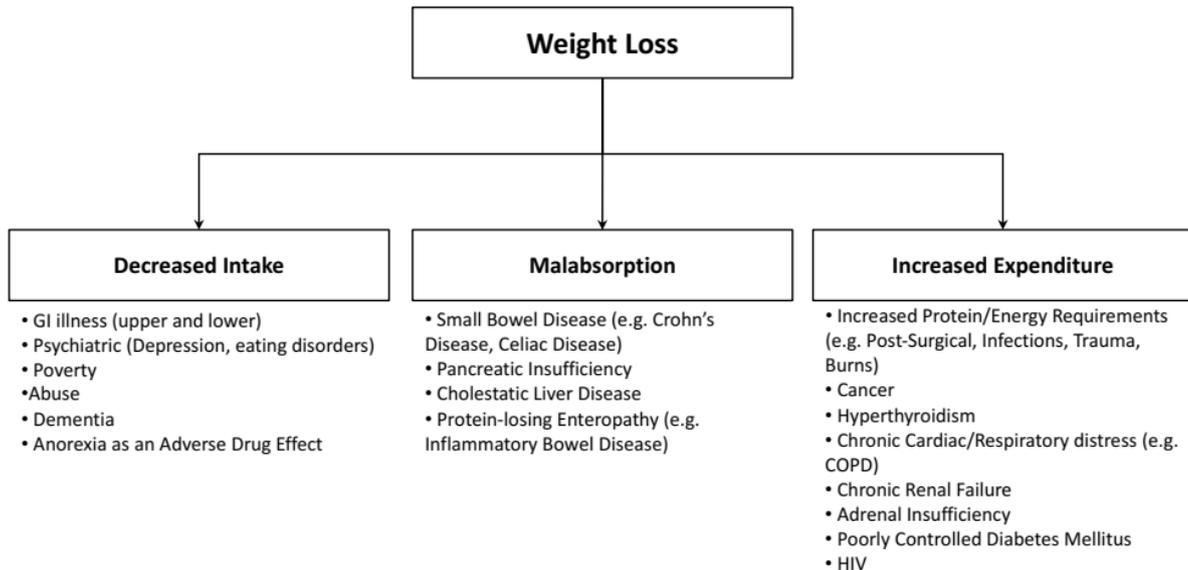


# Lower Gastrointestinal Bleed





# Weight Loss



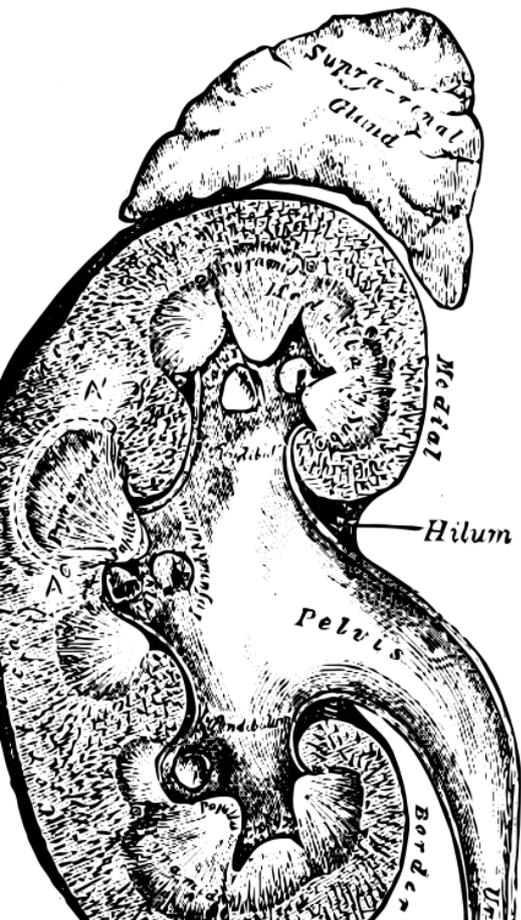


# Renal

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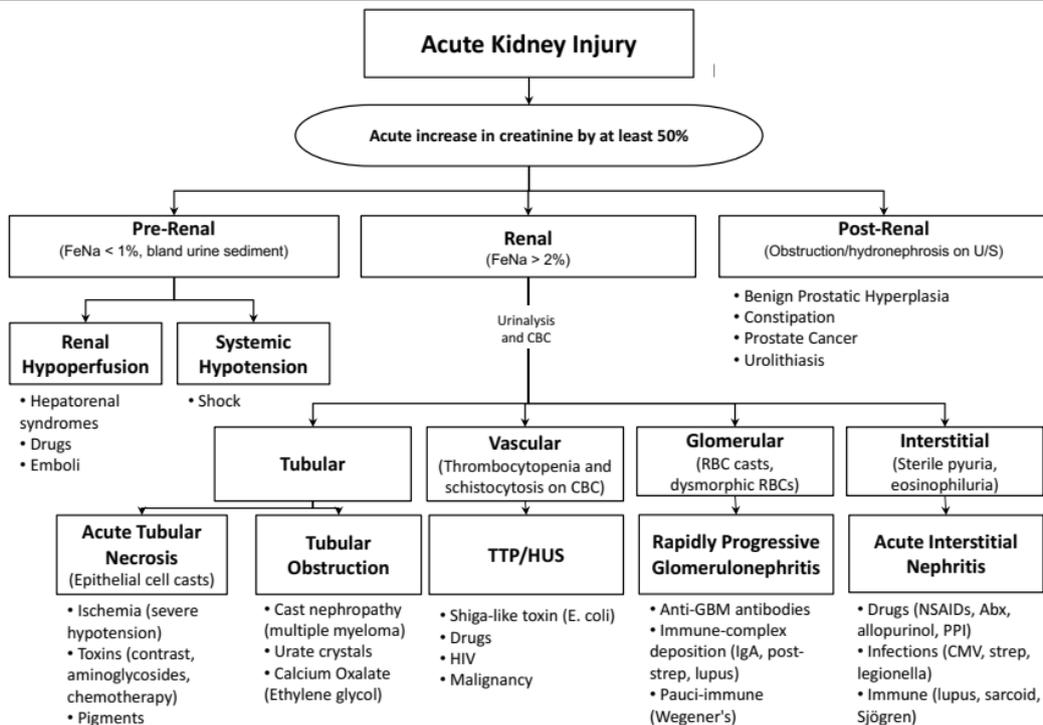
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Mark Elliot (Co-editor)

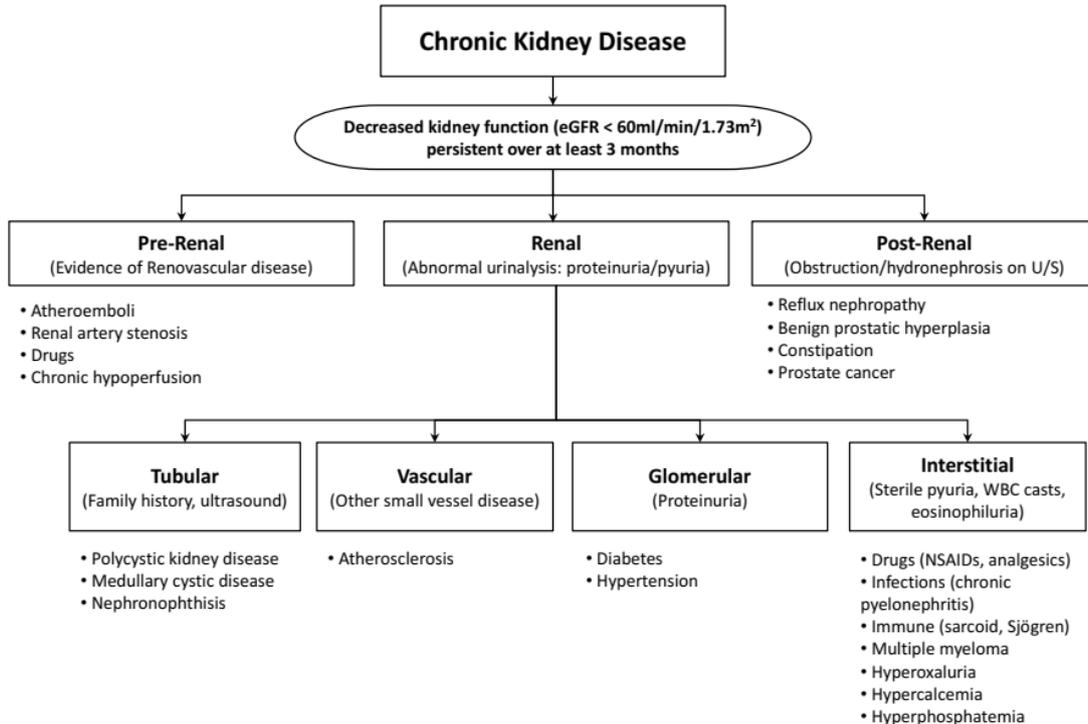
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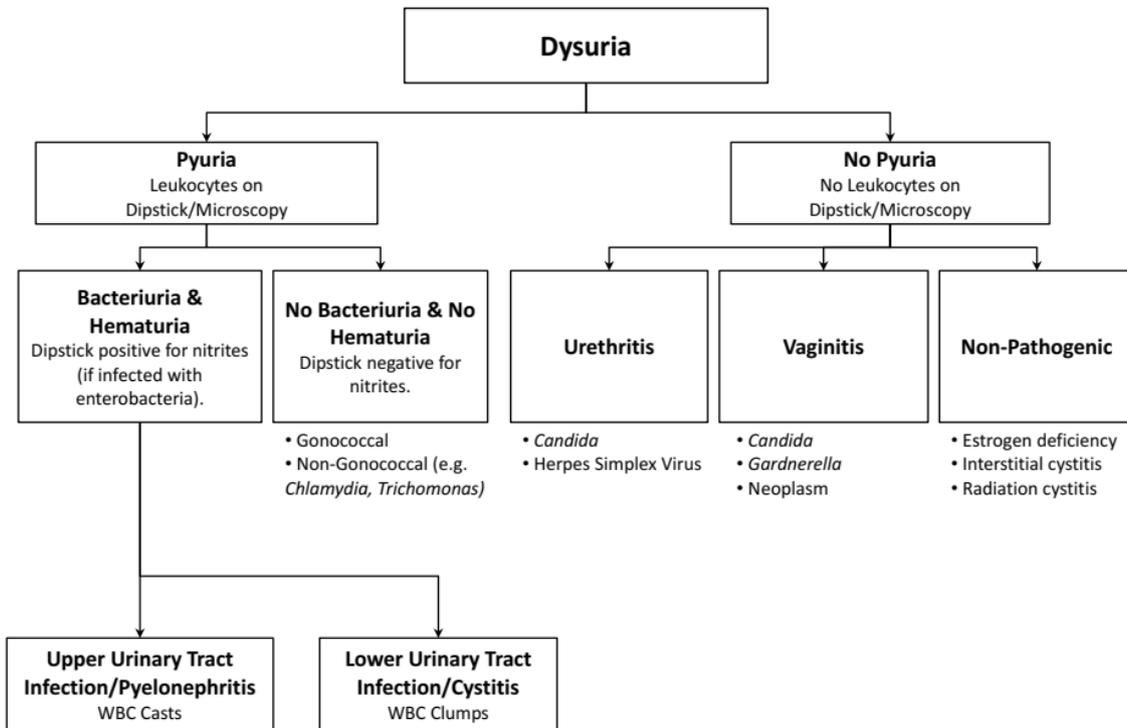
# Acute Kidney Injury

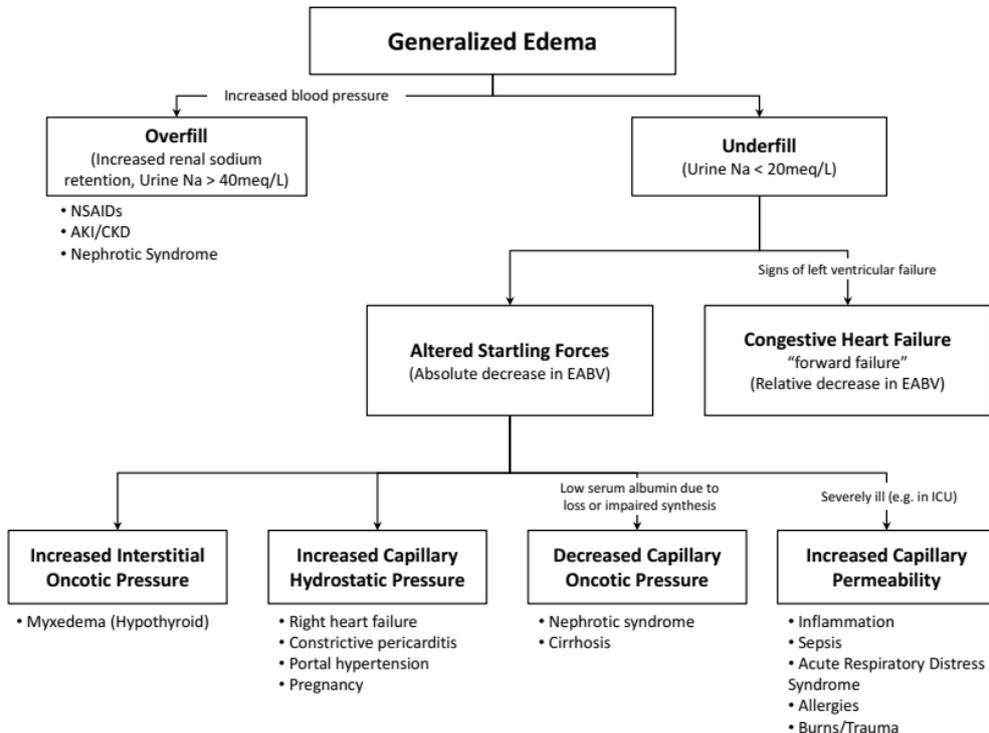


# Chronic Kidney Disease

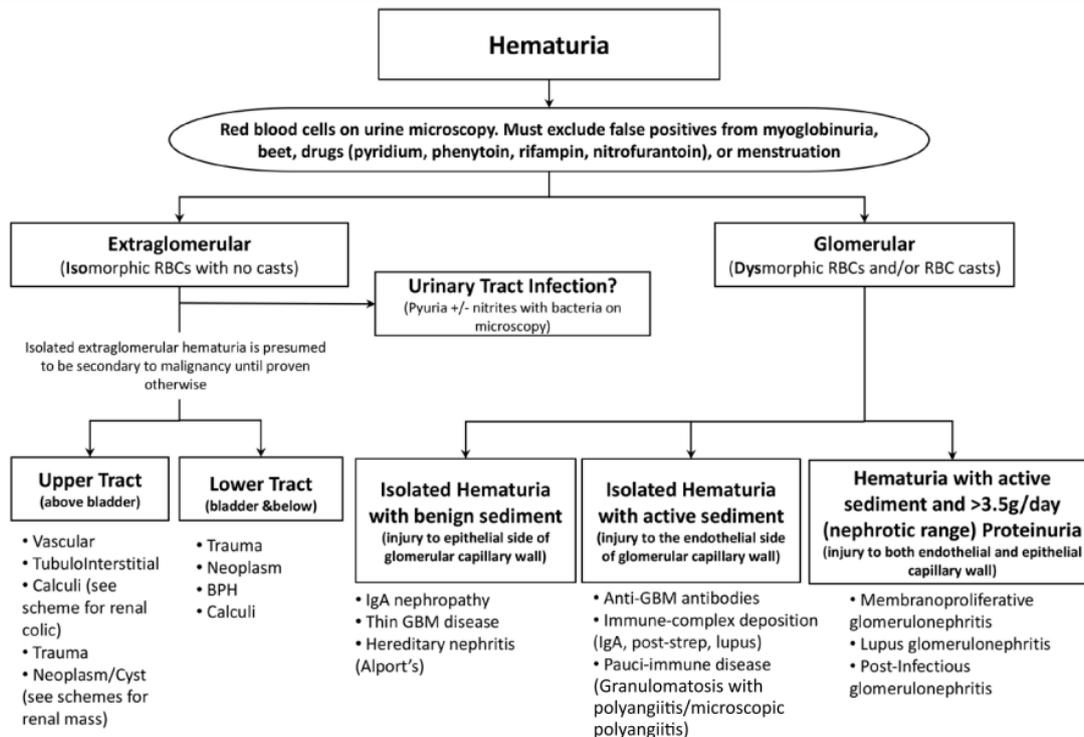


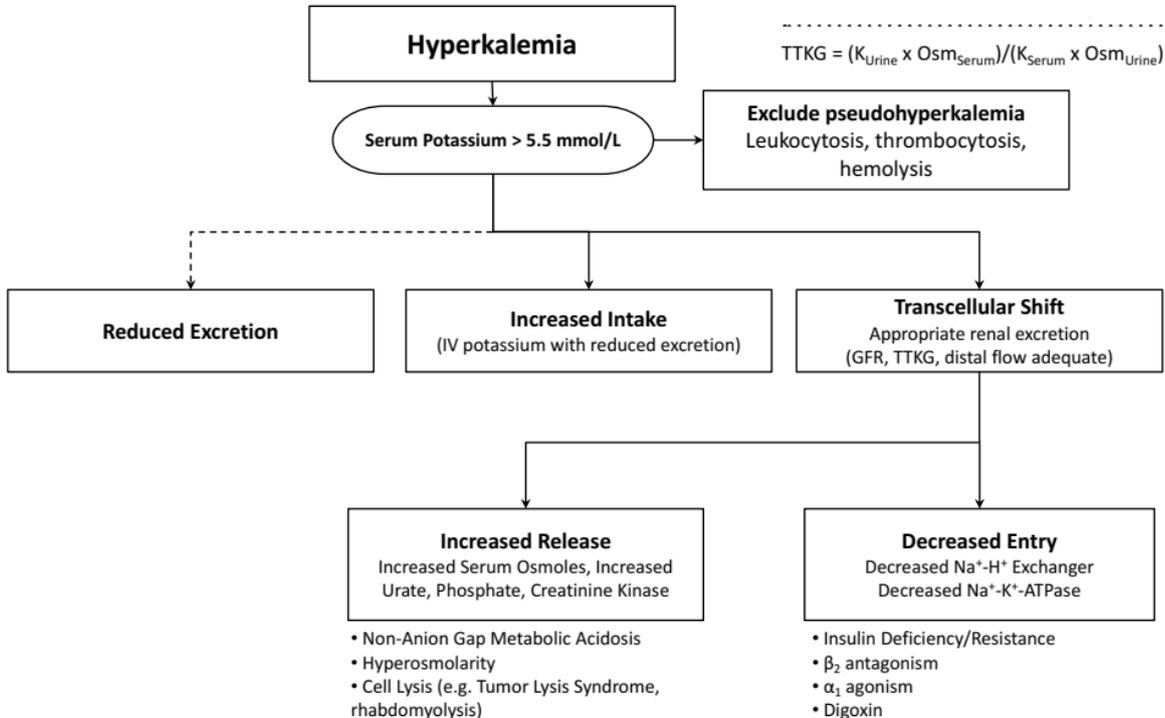
# Dysuria





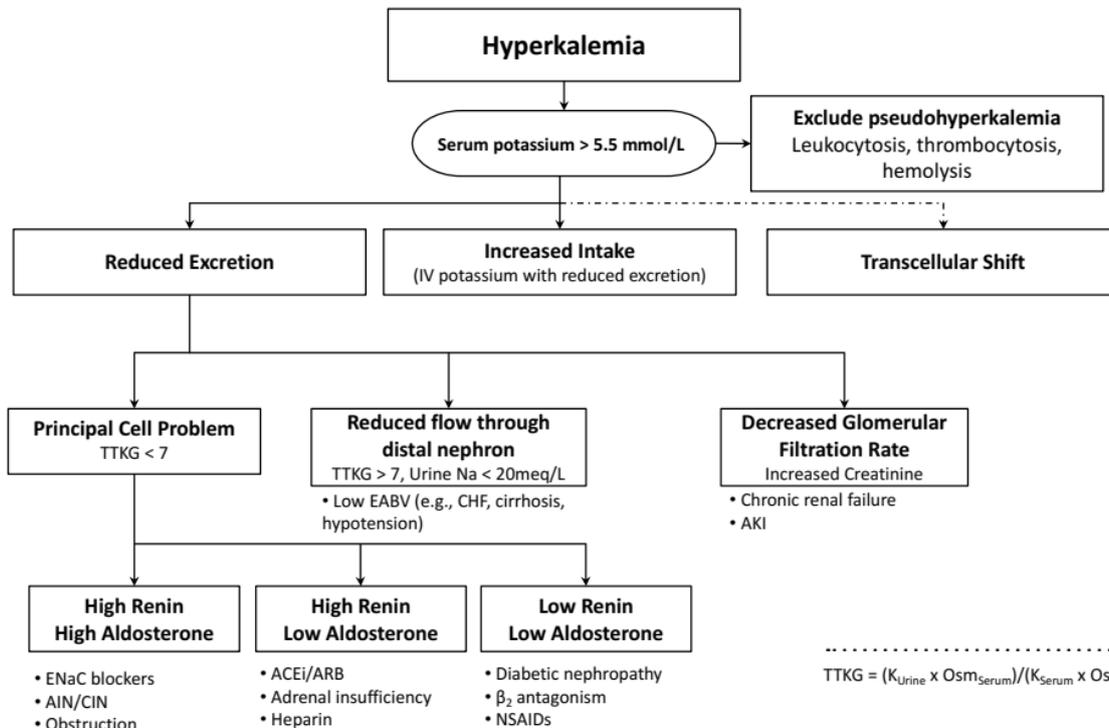
# Hematuria

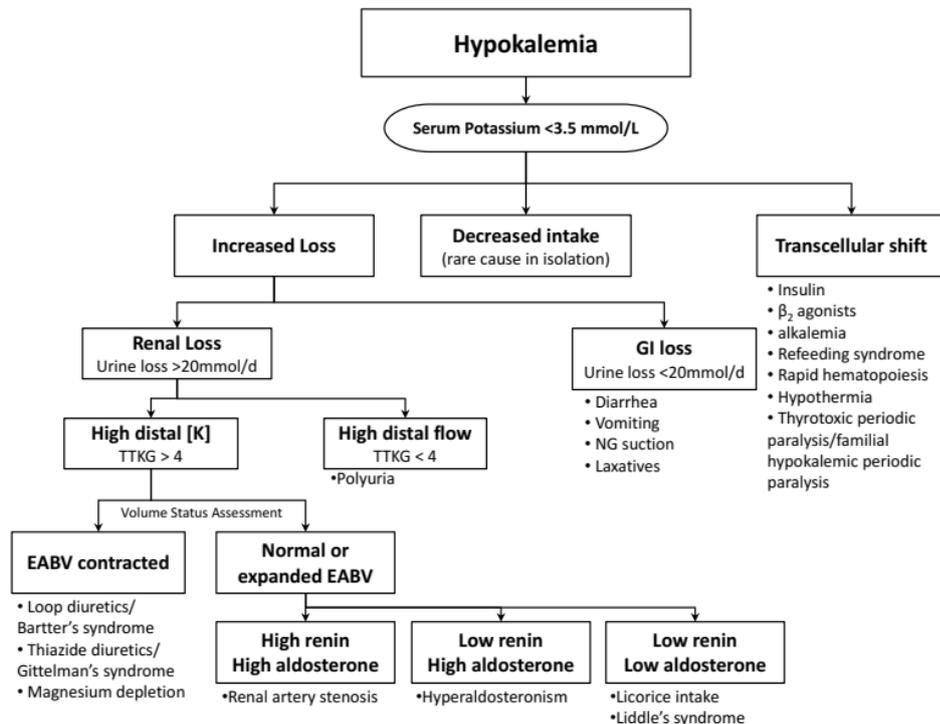




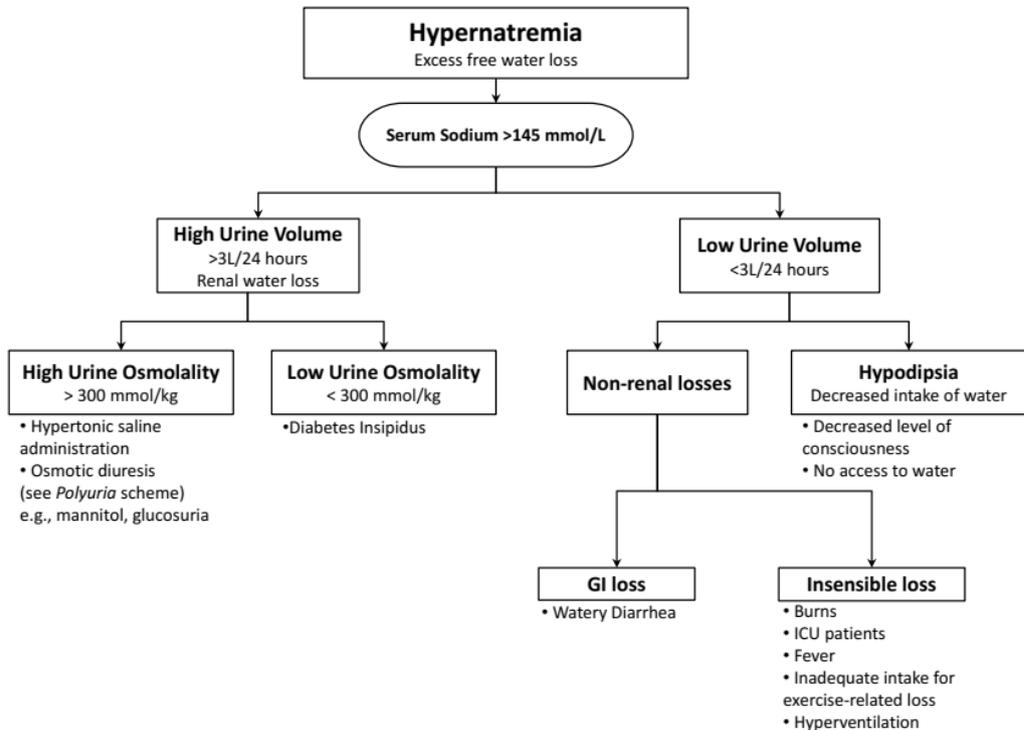
# Hyperkalemia

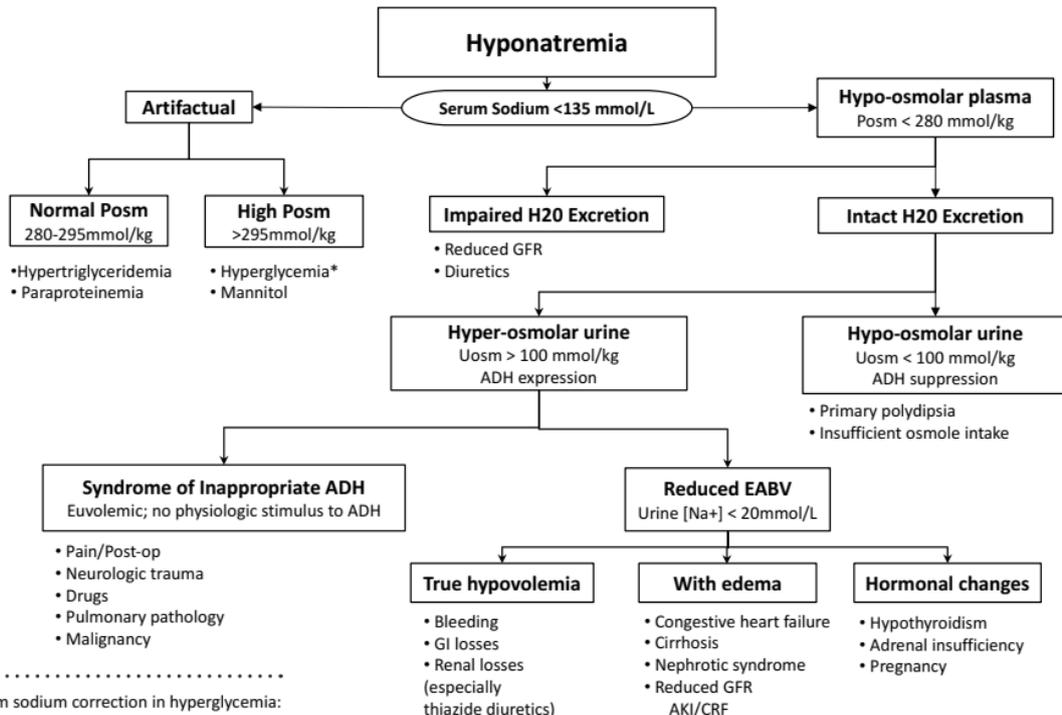
Reduced Excretion





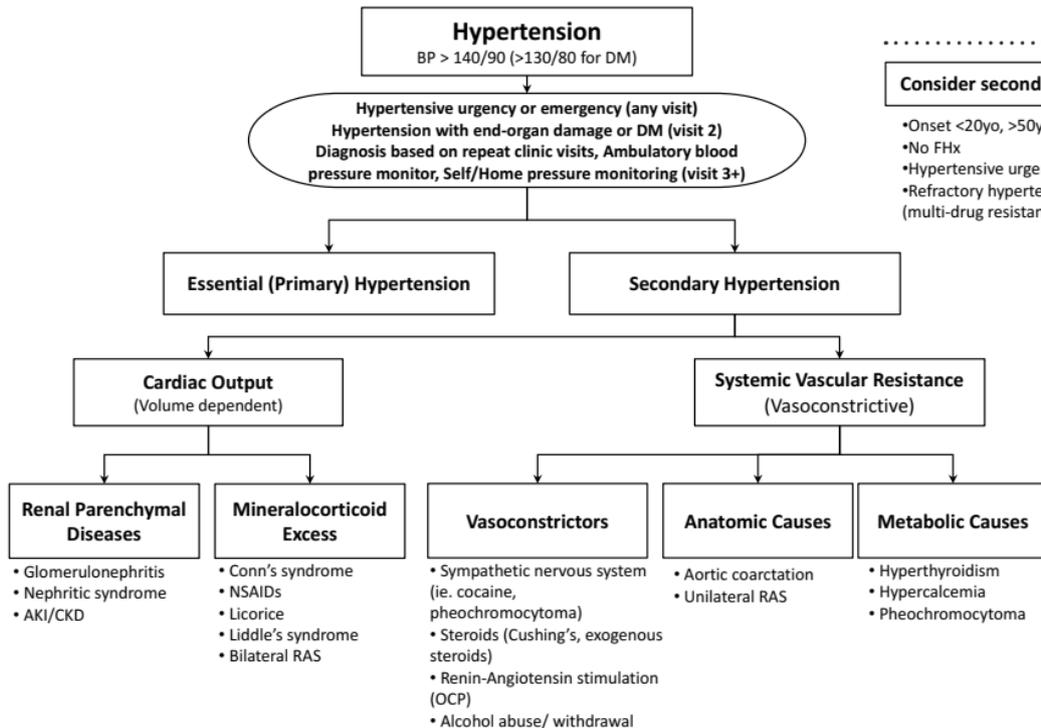
# Hypernatremia





\*serum sodium correction in hyperglycemia:  
 $[Na^+]_{corrected} = [Na^+] + (0.3 * ([glucose] - 5))$

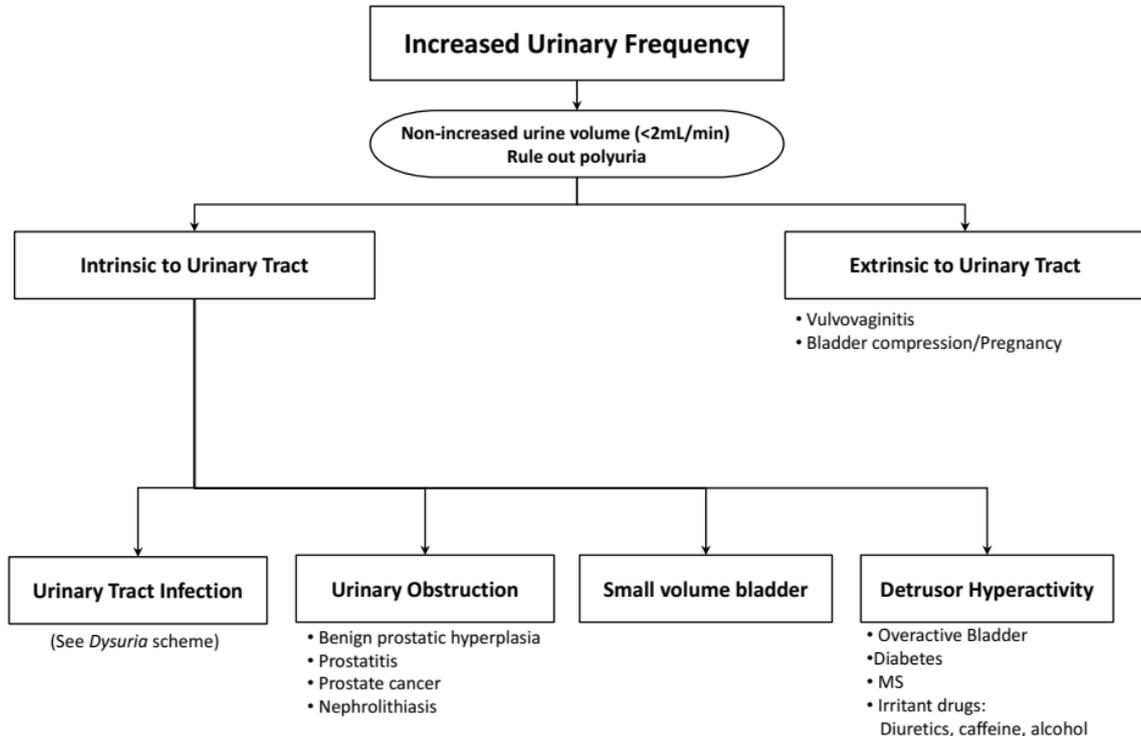
# Hypertension



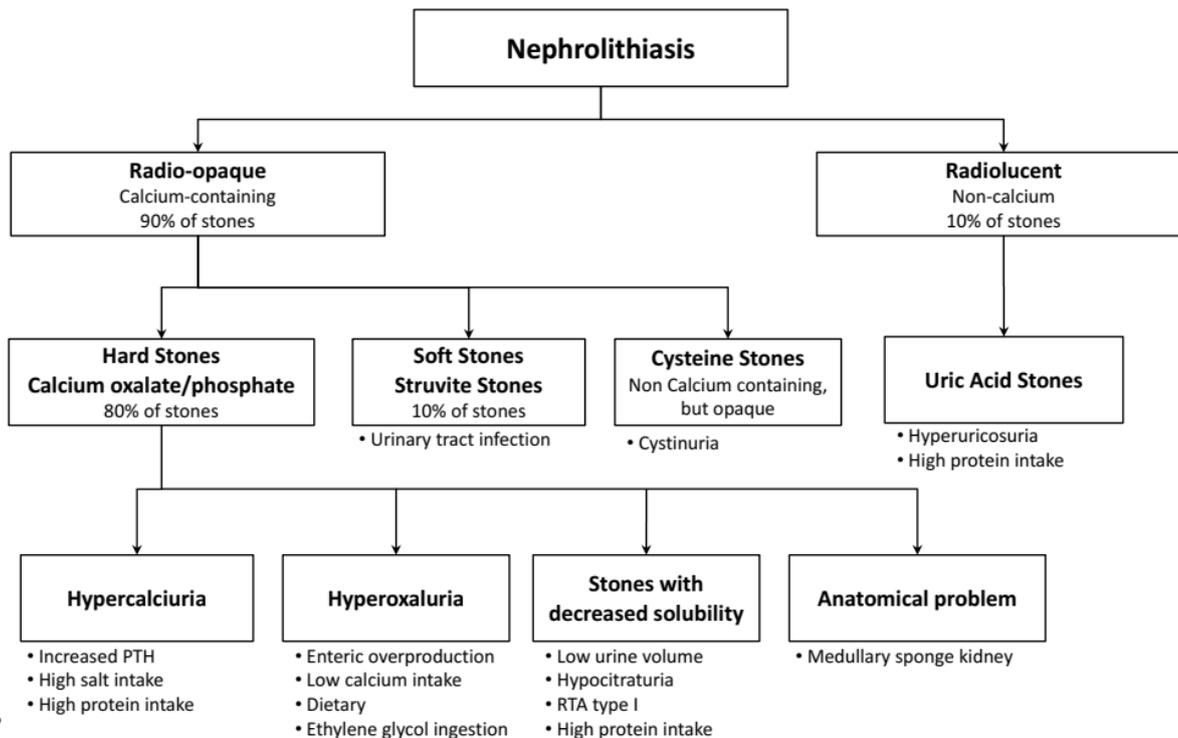
**Consider secondary HTN**

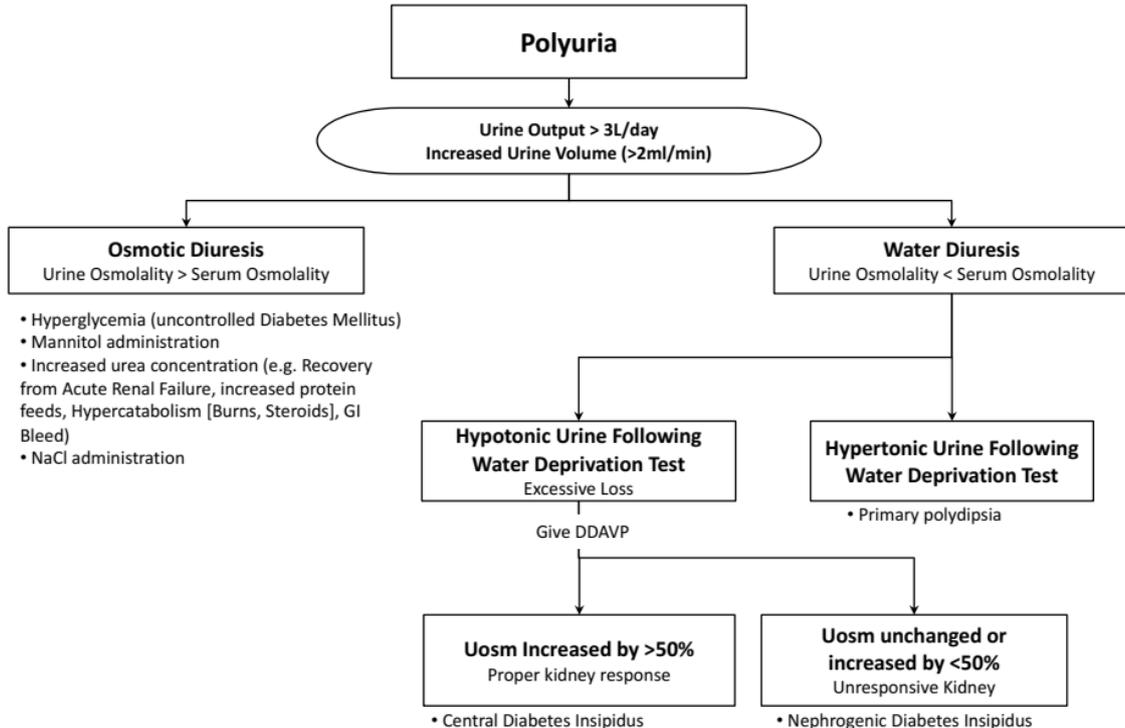
- Onset <20yo, >50yo
- No FHx
- Hypertensive urgency
- Refractory hypertension (multi-drug resistance)

# Increased Urinary Frequency

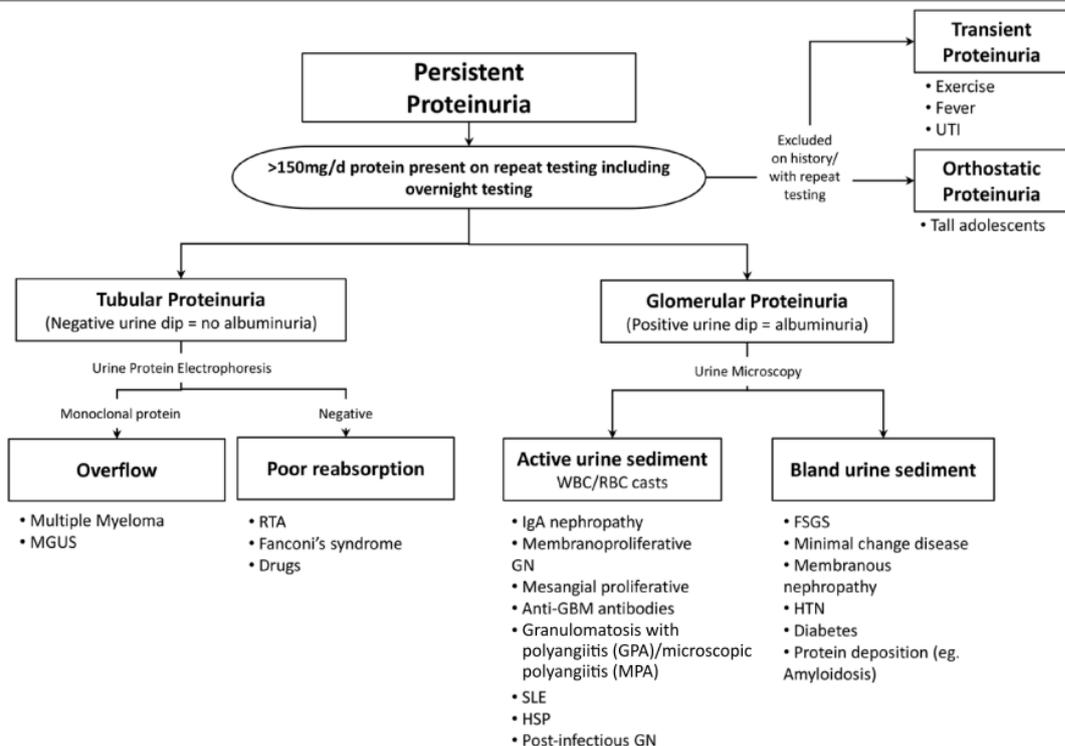


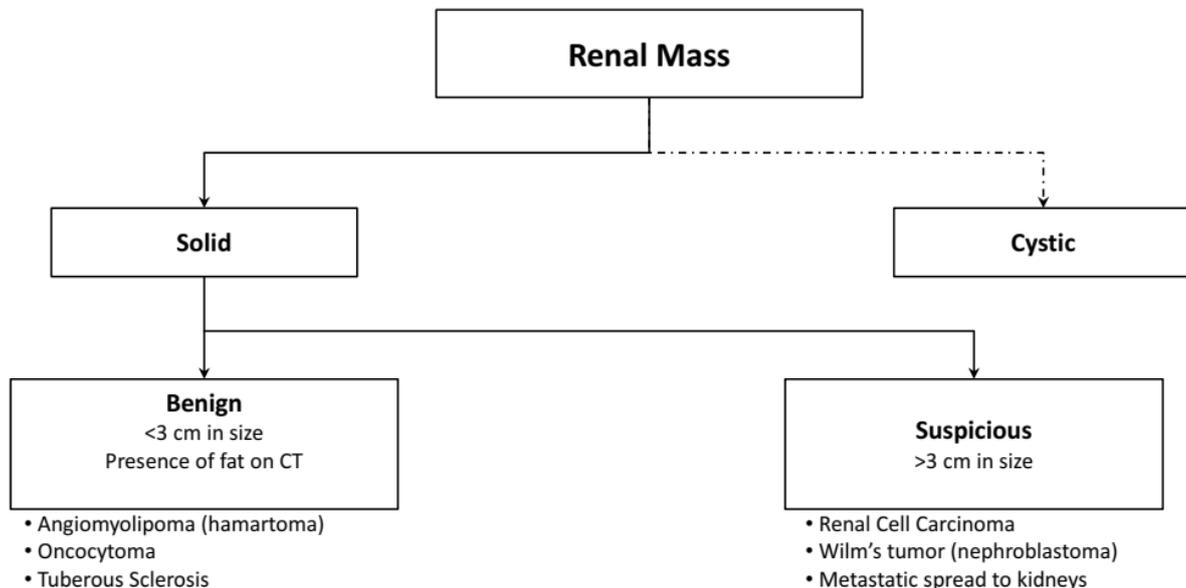
# Nephrolithiasis





# Proteinuria

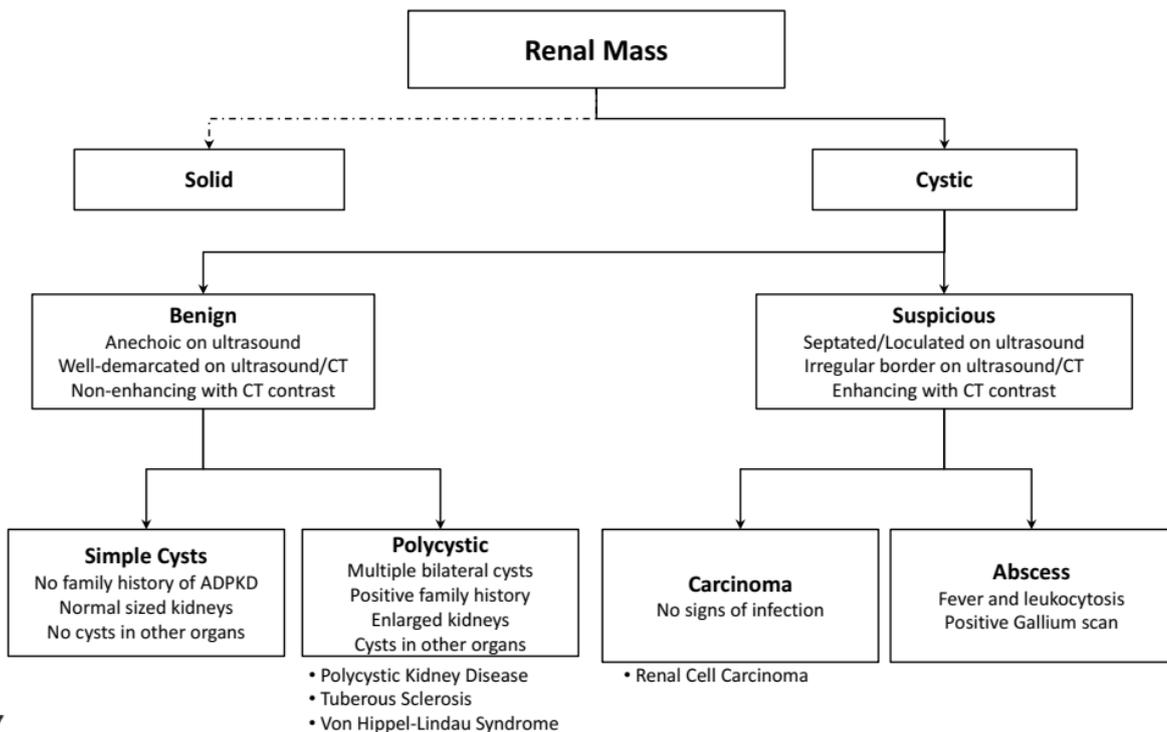


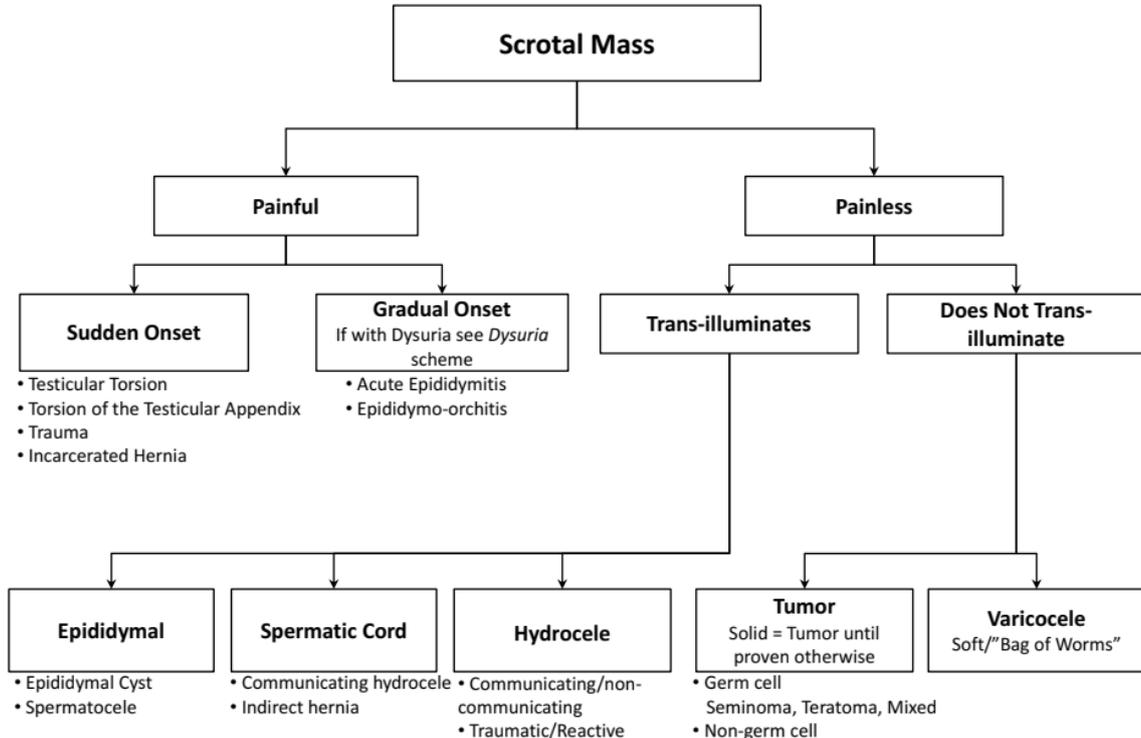


# Renal Mass

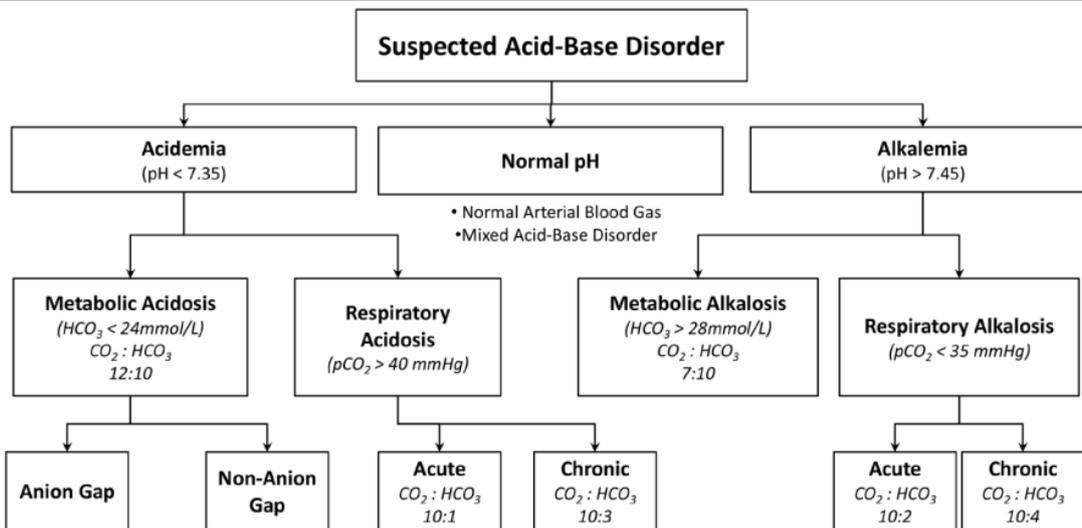


Cystic





# Suspected Acid-Base Disturbance



- Methanol
- Uremia
- Diabetic Ketoacidosis
- Propylene Glycol
- Isoniazid
- Lactic Acidosis
- Ethylene Glycol
- Acetylsalicylic Acid

- Renal
- Gastrointestinal (diarrhea)

Appropriate Compensation:	Ratio ( $CO_2 : HCO_3^-$ )
Metabolic Acidosis	12:10
Metabolic Alkalosis	7:10
Acute Respiratory Acidosis	10:1
Chronic Respiratory Acidosis	10:3
Acute Respiratory Alkalosis	10:2
Chronic Respiratory Alkalosis	10:4

$Anion\ Gap = Na - (Cl + HCO_3^-)$  (normal AG ~12)

**Diagnosis of Mixed Metabolic Disorders in Patients with Metabolic Acidosis:**

*Anion Gap Not Increased      Non-Anion Gap Acidosis Alone*

$\Delta Anion\ Gap = \Delta HCO_3^-$       *Anion Gap Acidosis Alone*

$\Delta Anion\ Gap < \Delta HCO_3^-$       *Mixed Anion Gap Acidosis + Non-Anion Gap Acidosis*

$\Delta Anion\ Gap > \Delta HCO_3^-$       *Mixed Anion Gap Acidosis + Metabolic Alkalosis*



Anion Gap =  $Na - (Cl + HCO_3)$  (normal AG ~12)

**Diagnosis of Mixed Metabolic Disorders in Patients with Metabolic Acidosis:**

Anion Gap Not Increased Non-Anion Gap Acidosis Alone

$\Delta$ Anion Gap =  $\Delta HCO_3$  Anion Gap Acidosis Alone

$\Delta$ Anion Gap <  $\Delta HCO_3$  Mixed Anion Gap Acidosis + Non-Anion Gap Acidosis

$\Delta$ Anion Gap >  $\Delta HCO_3$  Mixed Anion Gap Acidosis + Metabolic Alkalosis

### Metabolic Acidosis

Need to correct anion gap for albumin: For every drop of 10 for albumin (from 40) add 2.5 to the anion gap

**Elevated Anion Gap (>12)**  
(Gain of H<sup>+</sup>)

**Normal Anion Gap (≤12)**  
(loss of HCO<sub>3</sub>)

Elevated serum creatinine

**Excess acid addition**

**Decreased NH<sub>4</sub> production and anion secretion**

• AKI/CKD

Positive serum salicylate level

Elevated serum lactate

Positive serum ketones

Elevated osmolar gap

**Salicylate poisoning**

**Lactic acidosis**

**Ketosis**

**Toxic alcohol ingestion**

**Other ingestion**

- Shock
- Drugs
- Inborn errors

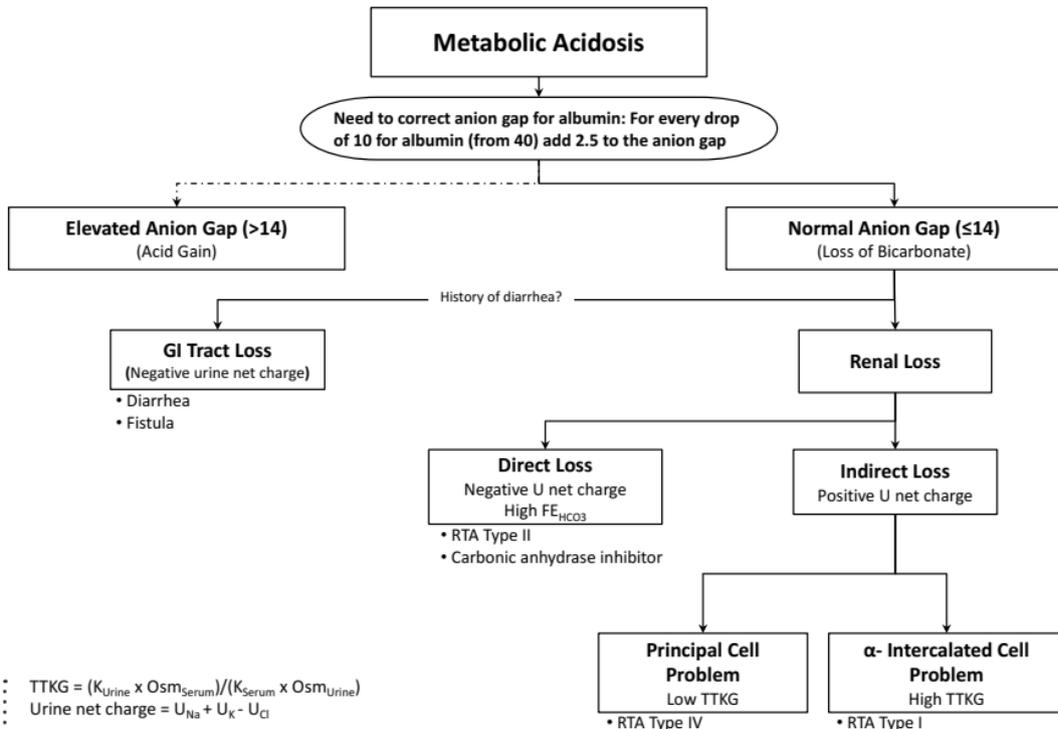
- Diabetic ketoacidosis
- Starvation/alcoholic ketosis

- Ethylene/Propylene glycol
- Methanol

- Paraldehyde, Iron, Isoniazid, Toluene, Cyanide

# Metabolic Acidosis

## Normal Anion Gap



•  $TTKG = (K_{Urine} \times Osm_{Serum}) / (K_{Serum} \times Osm_{Urine})$

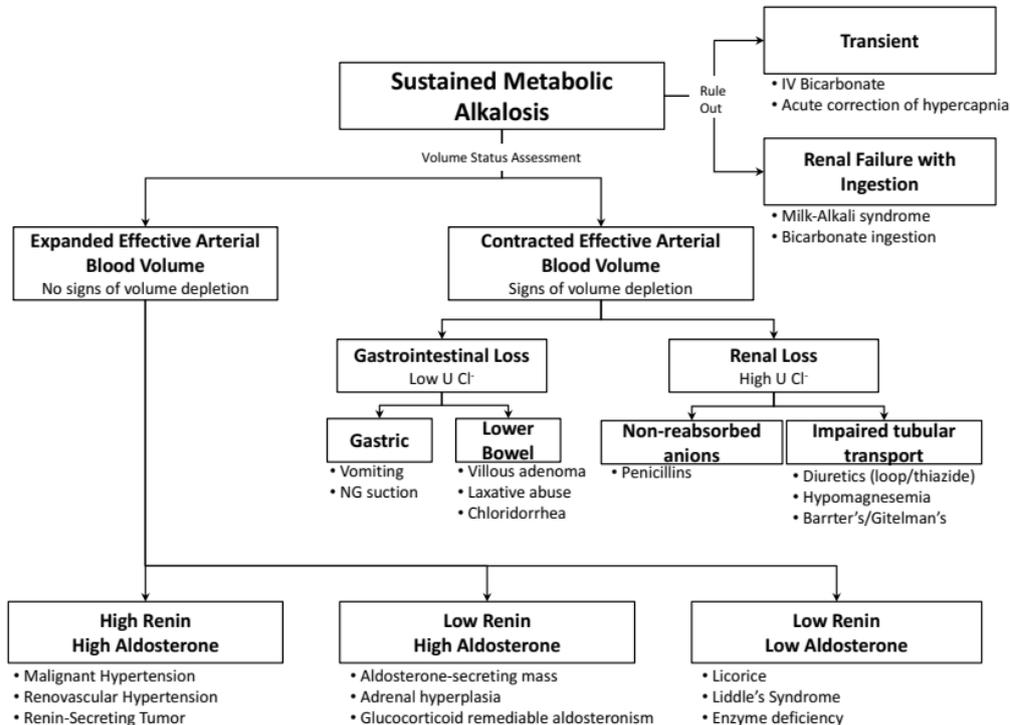
• Urine net charge =  $U_{Na} + U_K - U_{Cl}$

•

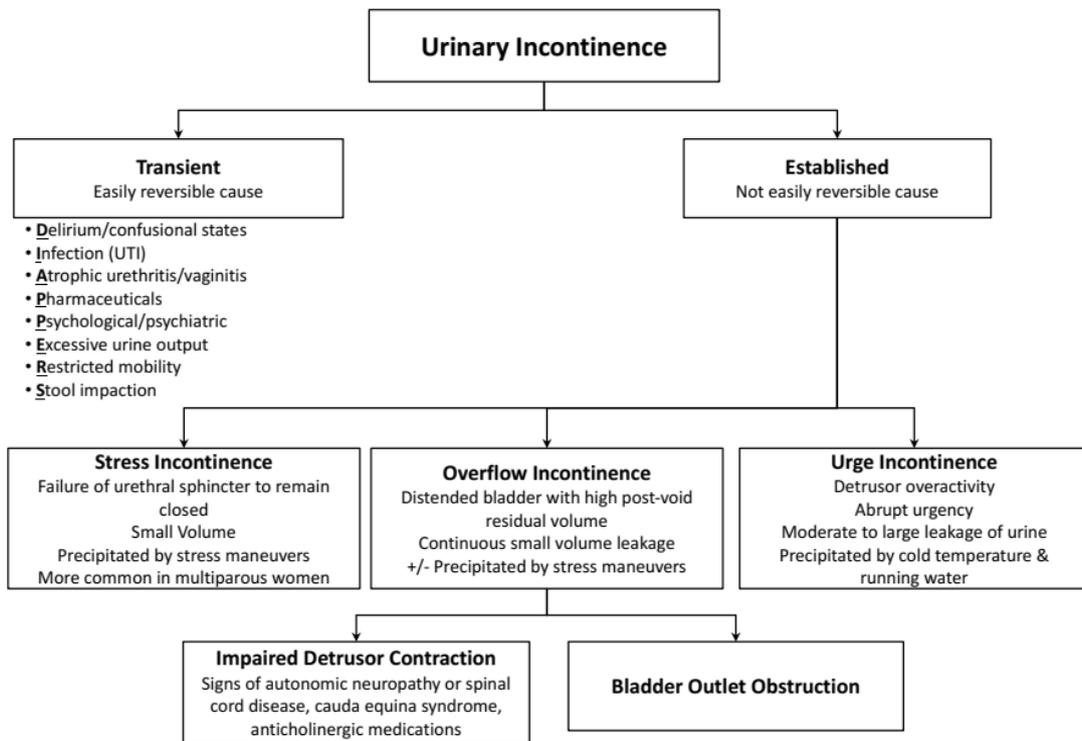
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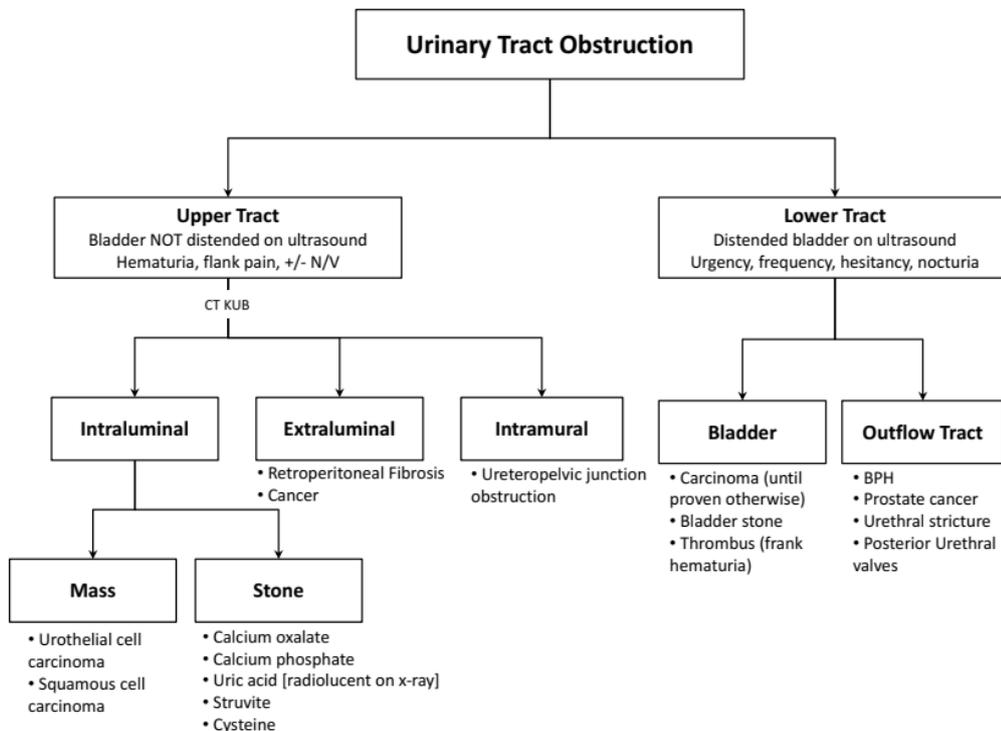
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# Urinary Incontinence



# Urinary Tract Obstruction



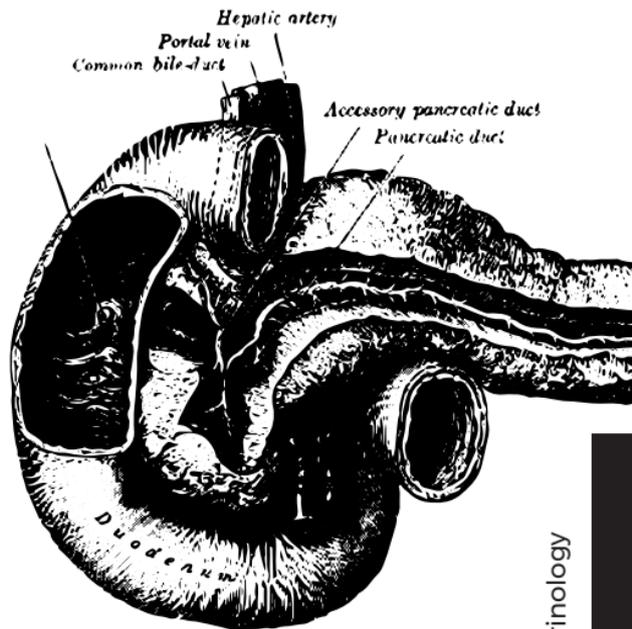
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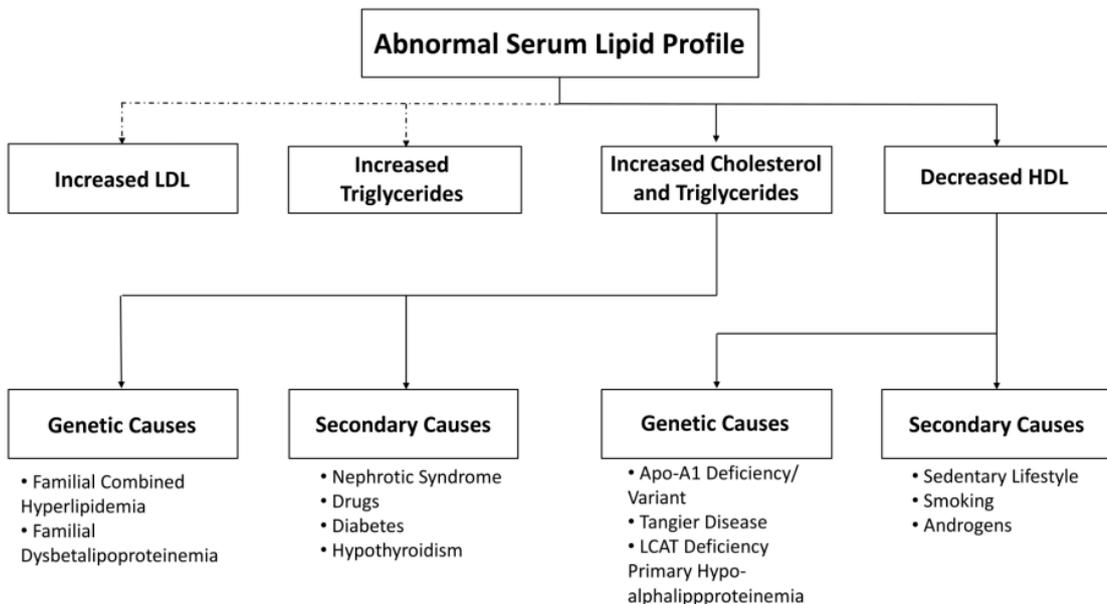
Dr. Kevin McLaughlin



# Abnormal Lipid Profile



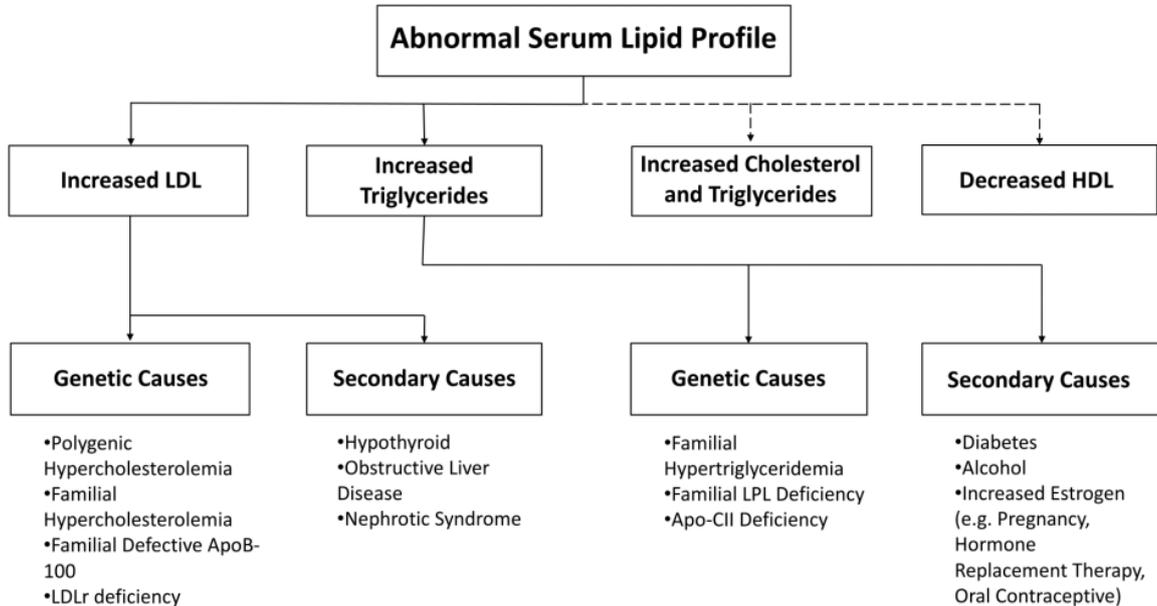
Combined & Decreased HDL



- **Physical signs:**
- Hypertriglyceridemia: eruptive xanthoma, lipemia retinalis
- Increased IDL: palmar crease xanthoma, tuberous xanthoma
- Increased LDL: tendon xanthomata on Achilles tendon, knuckles

# Abnormal Lipid Profile

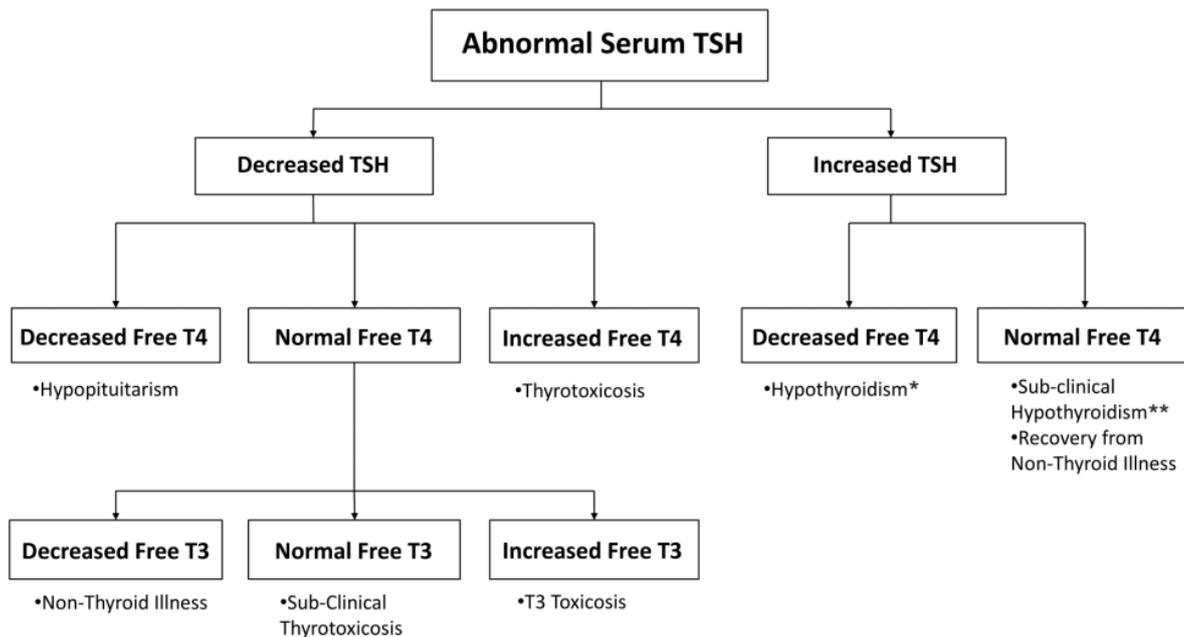
Increased LDL & Increased Triglycerides



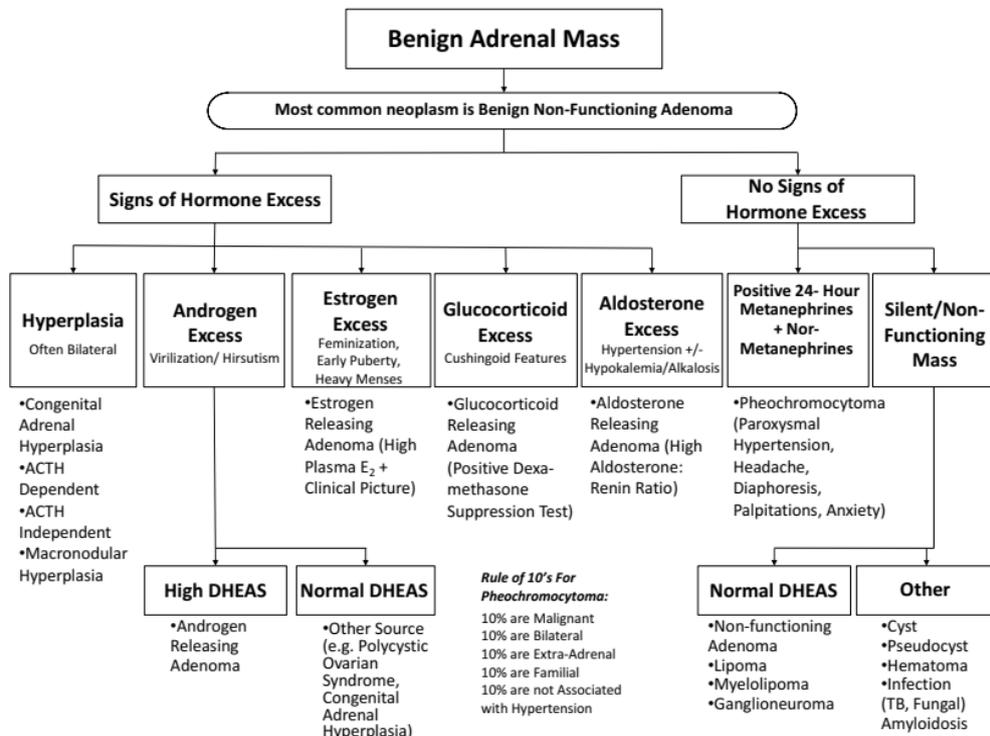
**Physical signs:**

- Hypertriglyceridemia: eruptive xanthoma, lipemia retinalis
- Increased IDL: palmar crease xanthoma, tuberous xanthoma
- Increased LDL: tendon xanthomata on Achilles tendon, knuckles

# Abnormal Serum TSH

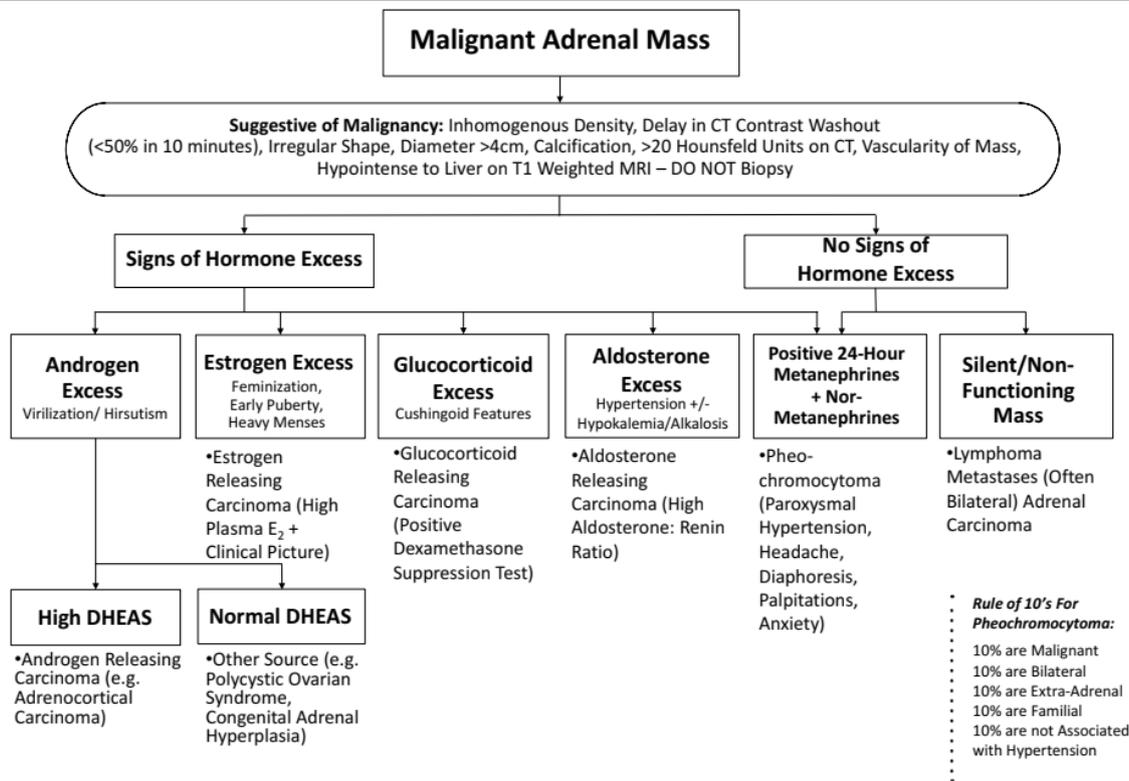


• Refer to Hyperthyroidism (1) on page 150  
•• Refer to Hyperthyroidism (2) on page 151

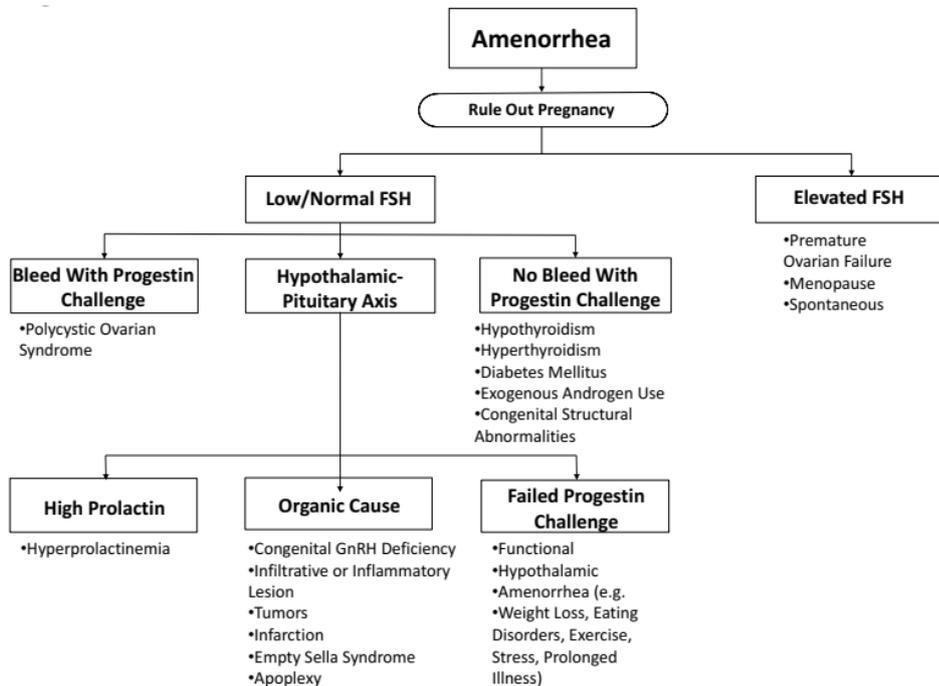


# Adrenal Mass

Malignant

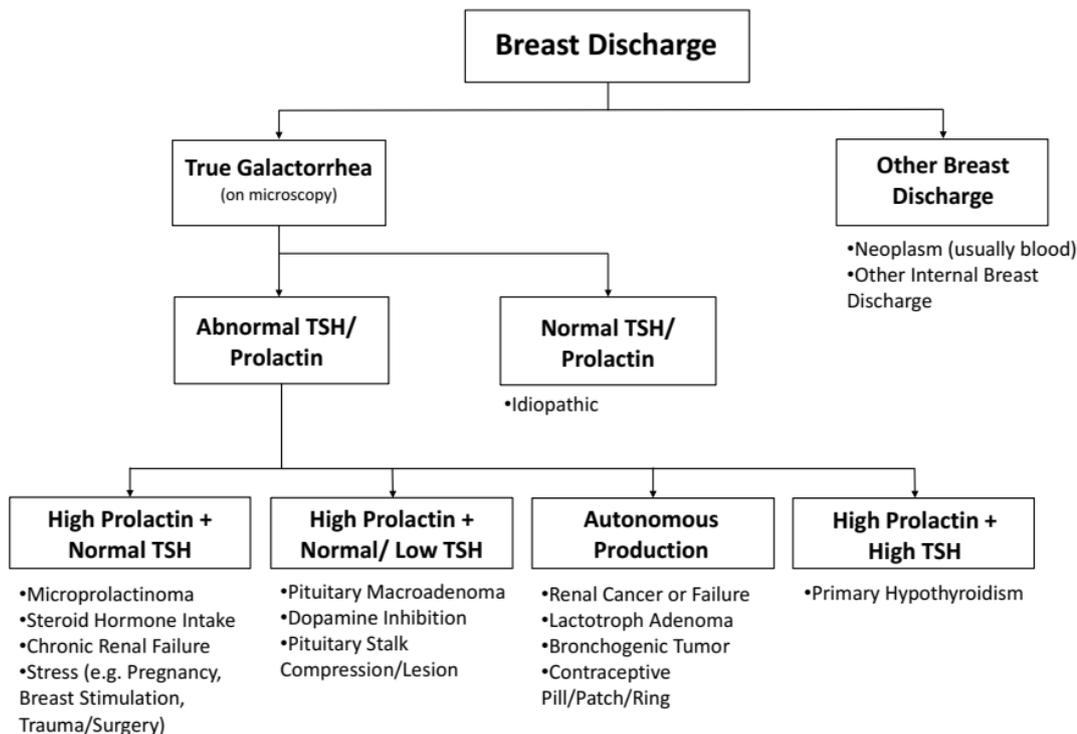


- **Rule of 10's For Pheochromocytoma:**
- 10% are Malignant
- 10% are Bilateral
- 10% are Extra-Adrenal
- 10% are Familial
- 10% are not Associated with Hypertension



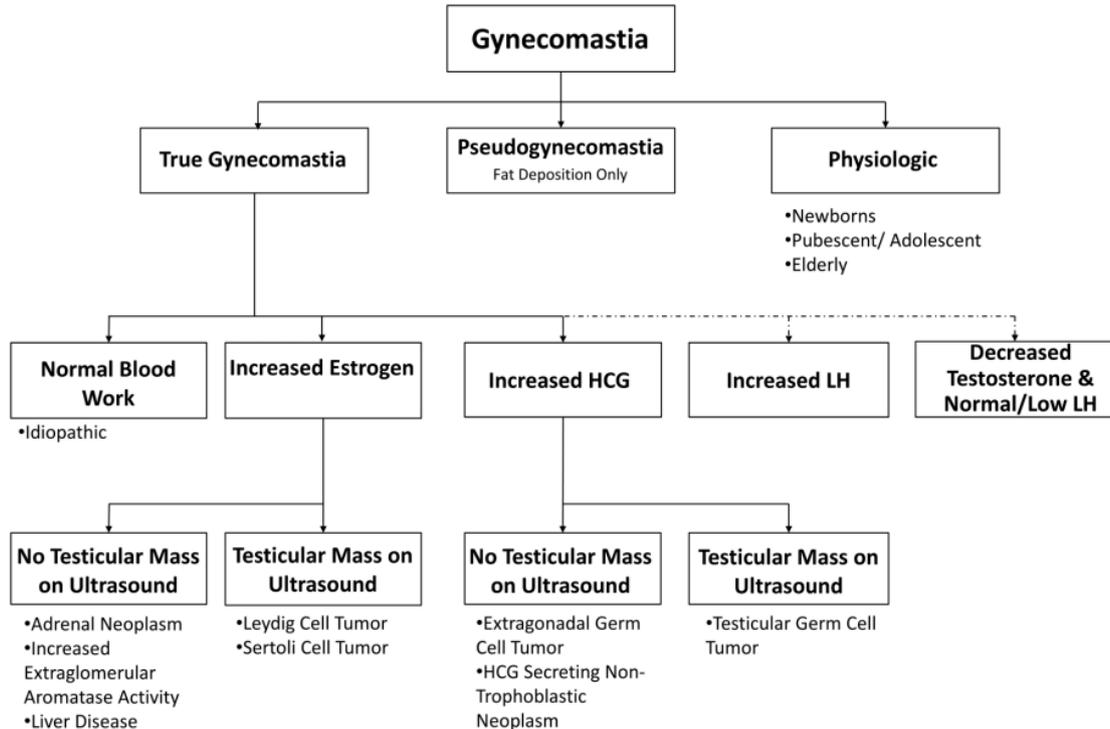
.....  
 If bleed with progestin challenge = estrogenized  
 If no bleed with progestin challenge = non-estrogenized  
 .....

# Breast Discharge



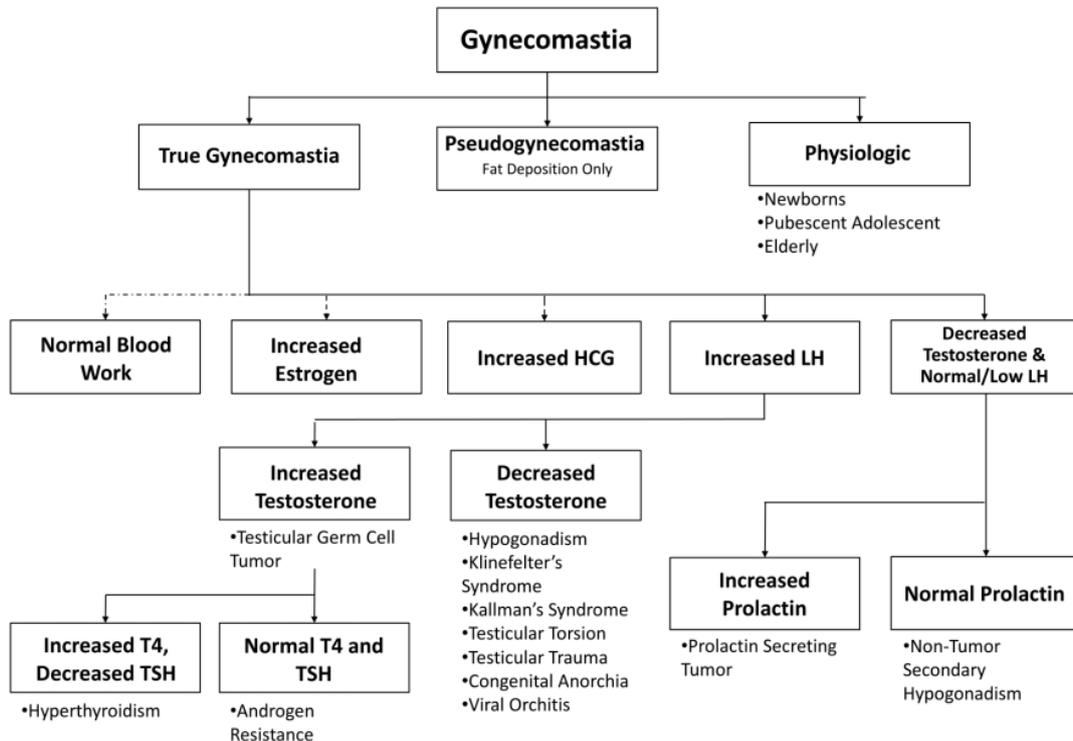
# Gynecomastia

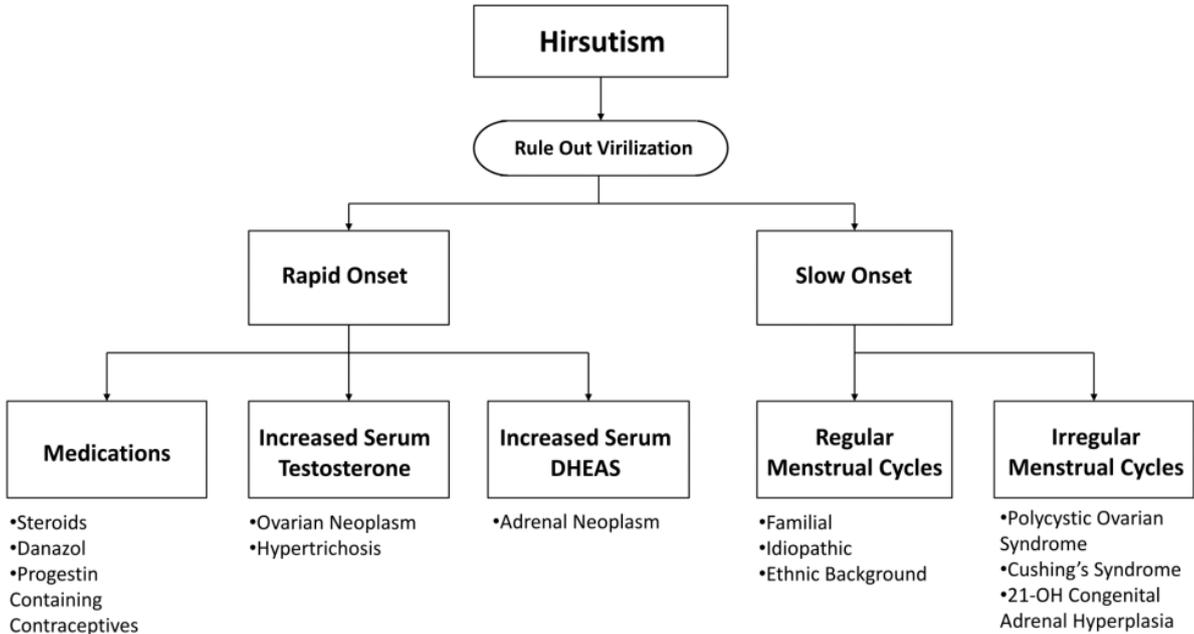
Increased Estrogen & Increased HCG



# Gynecomastia

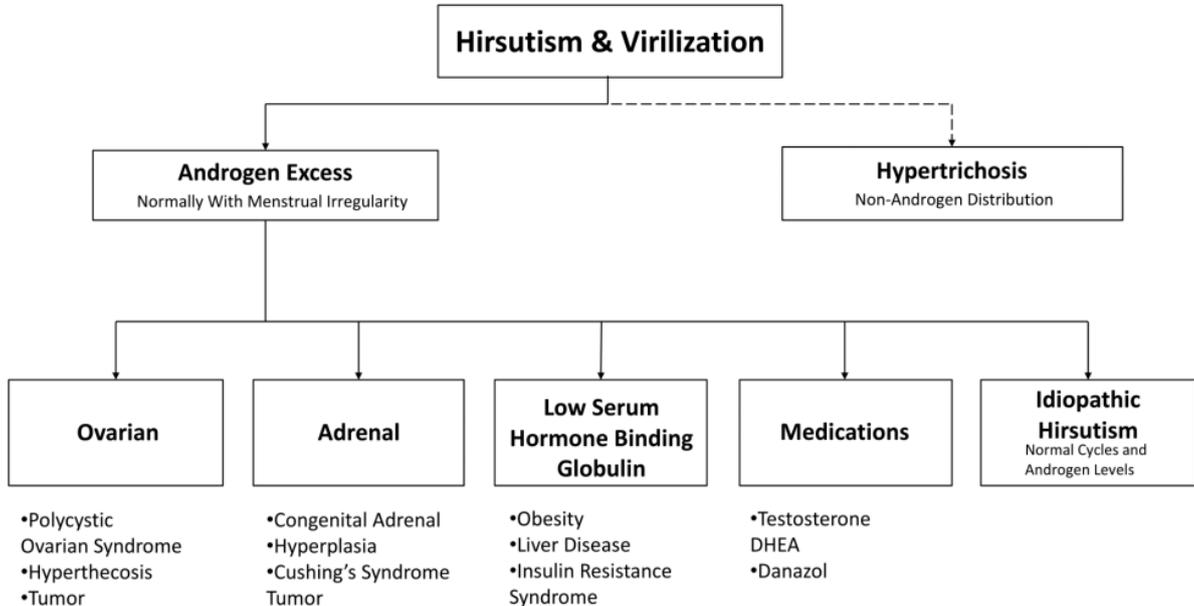
Increased LH & Decreased Testosterone

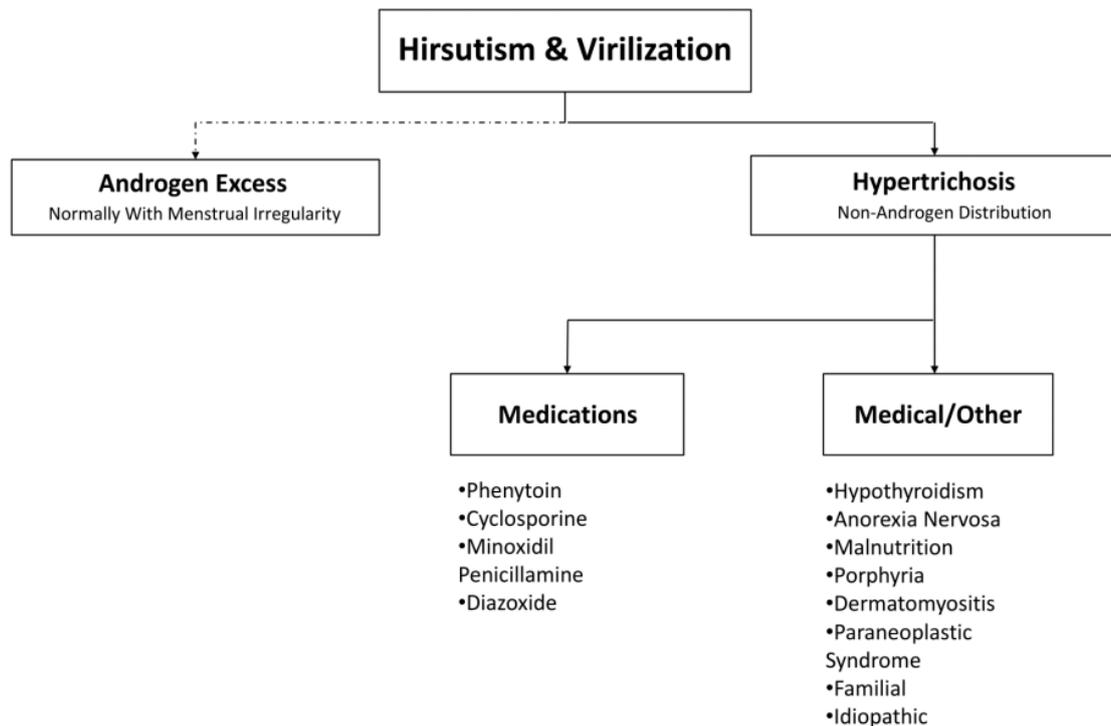




# Hirsutism & Virilization

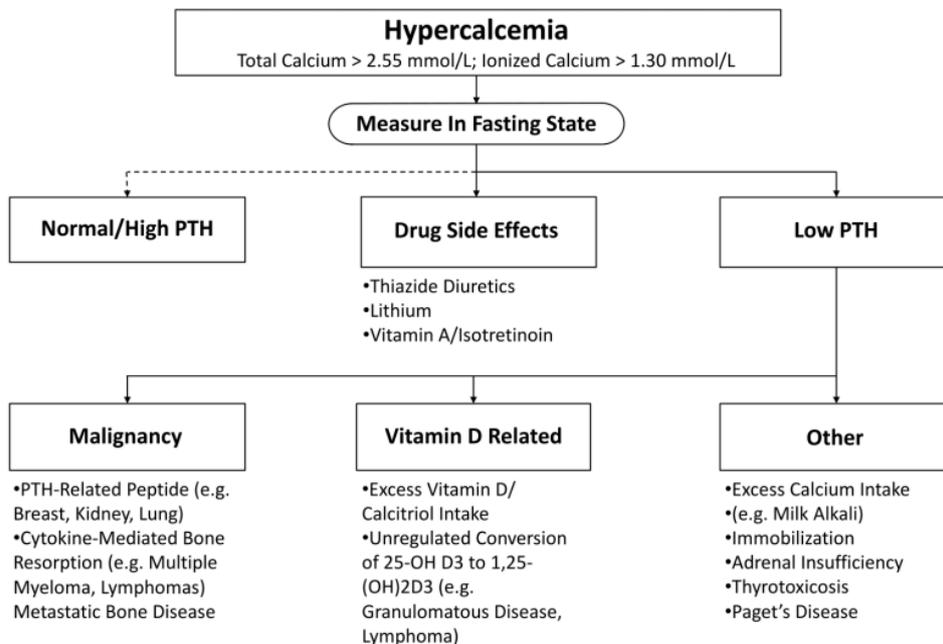
Androgen Excess





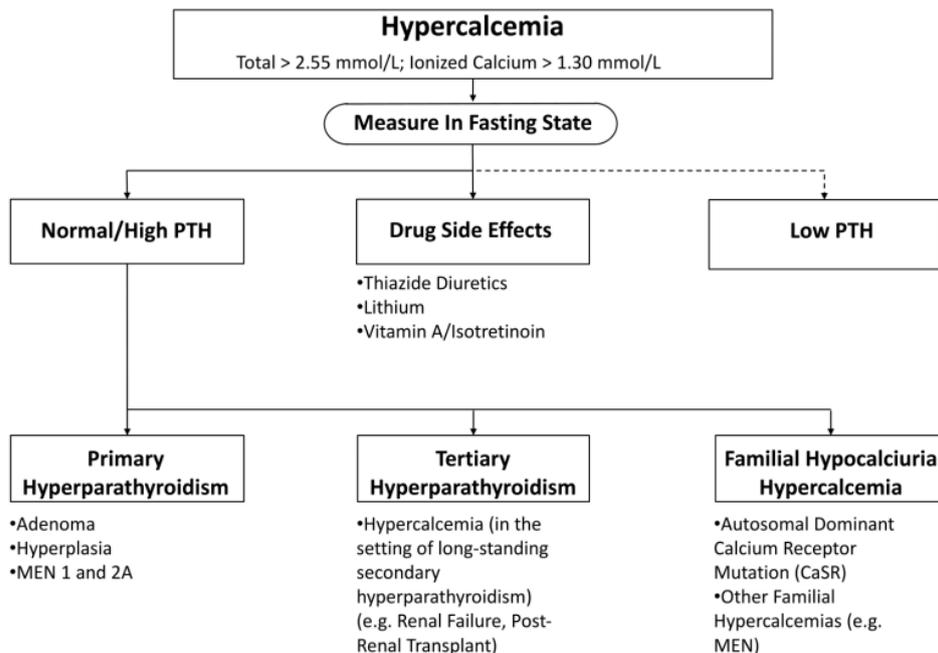
# Hypercalcemia

Low PTH



.....

$$\text{Corrected total serum calcium concentration (mmol/L)} = \text{measured total serum calcium concentration (mmol/L)} + 0.02[40 \text{ g/L} - \text{albumin(g/L)}]$$

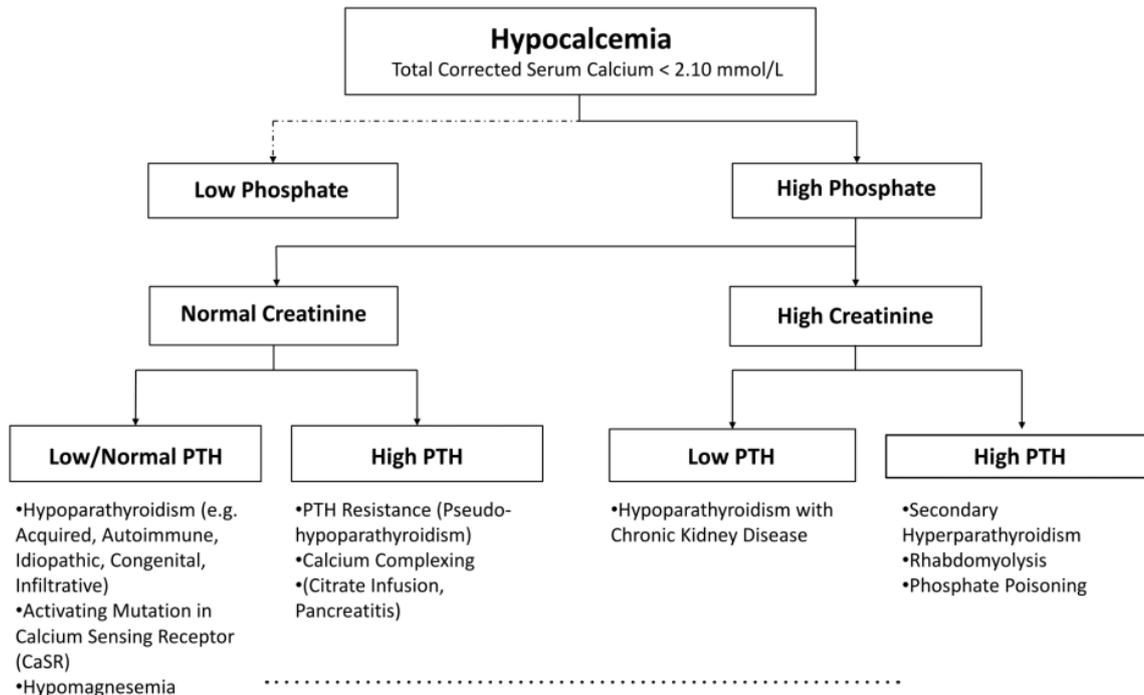


.....

$$\text{Corrected total serum calcium concentration (mmol/L)} = \text{measured total serum calcium concentration (mmol/L)} + 0.02[40 \text{ g/L} - \text{albumin(g/L)}]$$

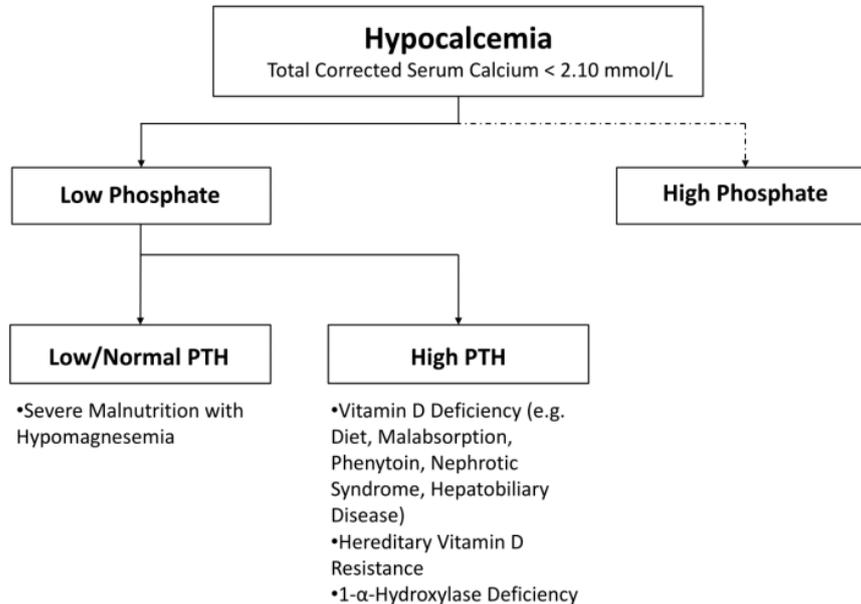
# Hypocalcemia

## High Phosphate



.....

Corrected total serum calcium concentration (mmol/L) =  
measured total serum calcium concentration (mmol/L) + 0.02[40 g/L – albumin(g/L)]

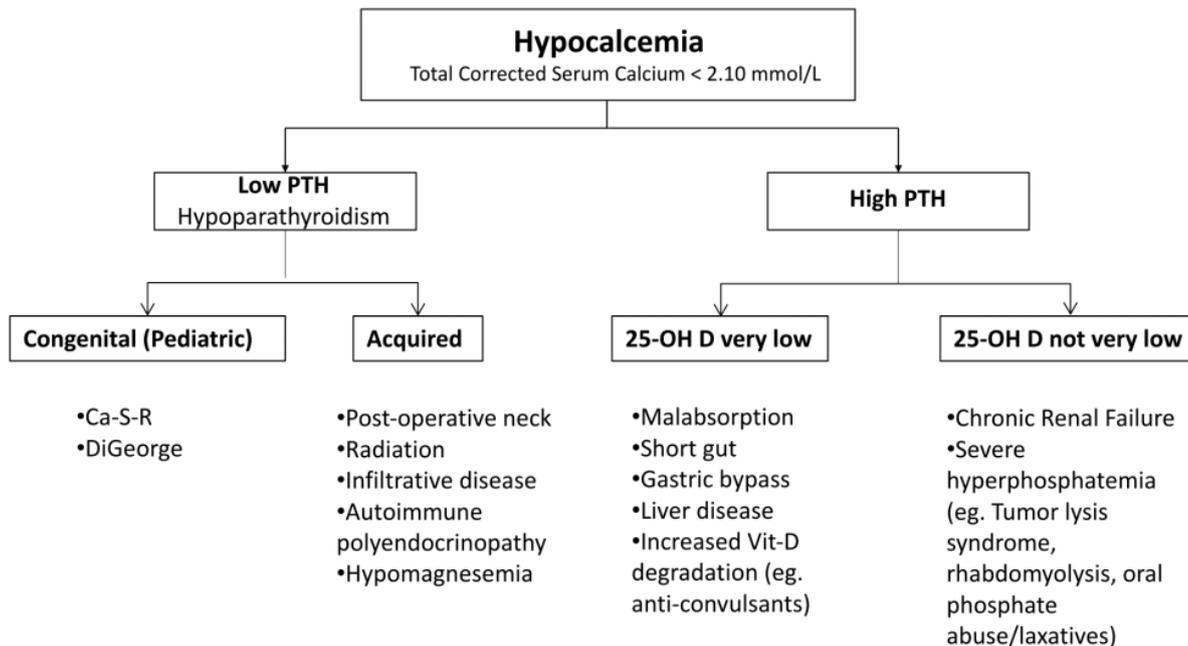


.....

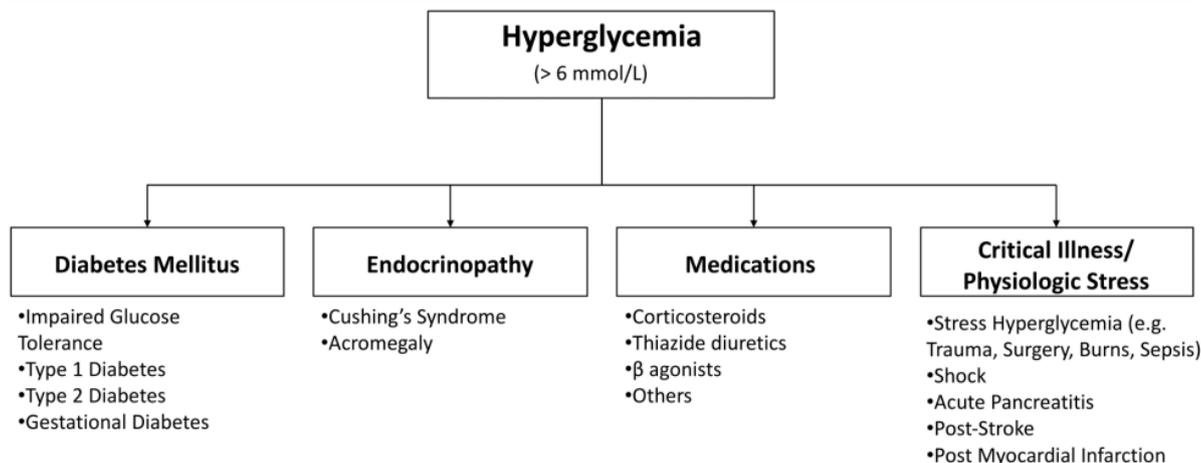
$$\text{Corrected total serum calcium concentration (mmol/L)} = \text{measured total serum calcium concentration (mmol/L)} + 0.02[40 \text{ g/L} - \text{albumin(g/L)}]$$

# Hypocalcemia

High / Low PTH

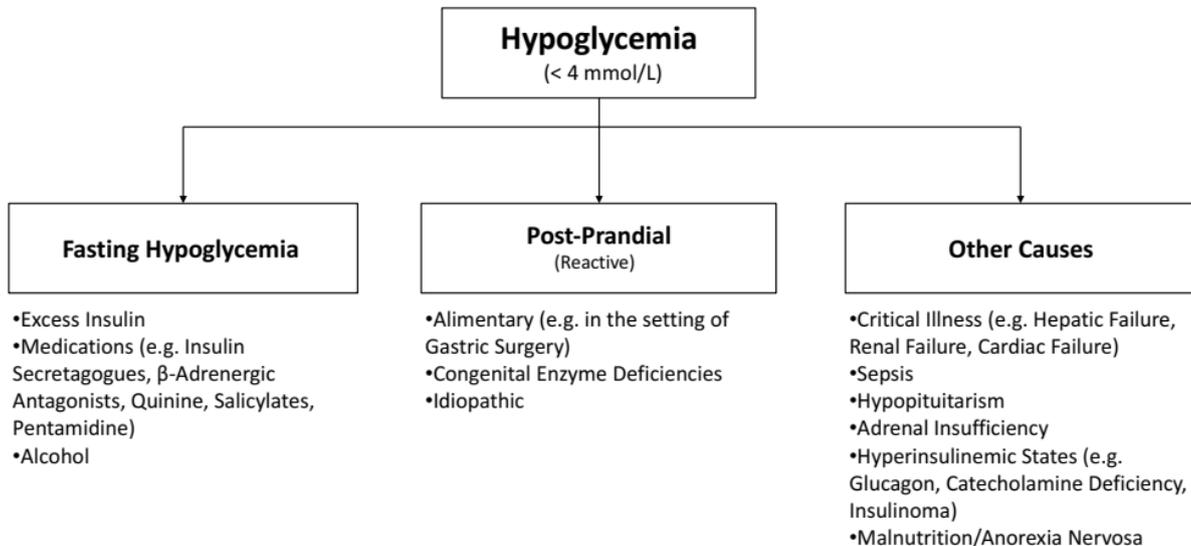


.....  
Corrected total serum calcium concentration (mmol/L) =  
measured total serum calcium concentration (mmol/L) + 0.02[40 g/L – albumin(g/L)]



⋮ **Signs/Symptoms of Hyperglycemia:**  
 ⋮ Polyphagia, polydipsia, polyuria, blurred vision, fatigue and weight loss  
 ⋮

# Hypoglycemia

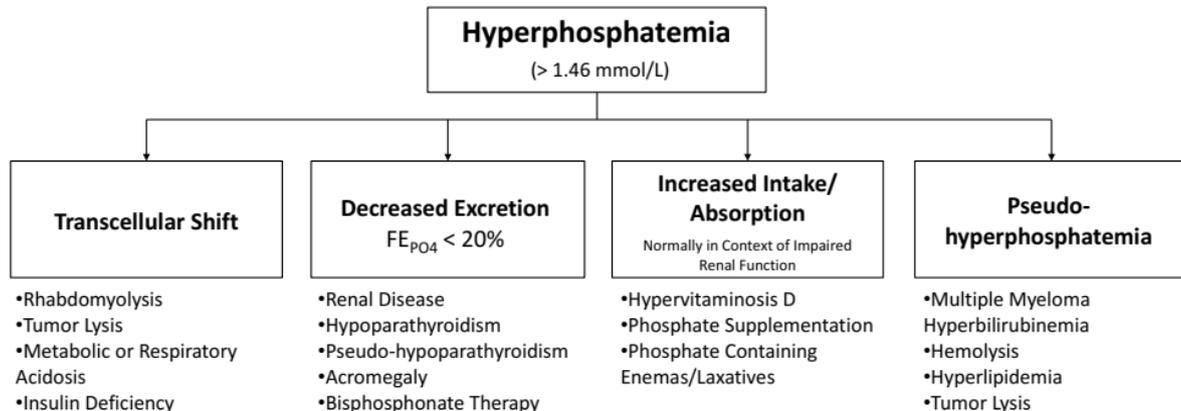


• **Signs/Symptoms of Hypoglycemia:**

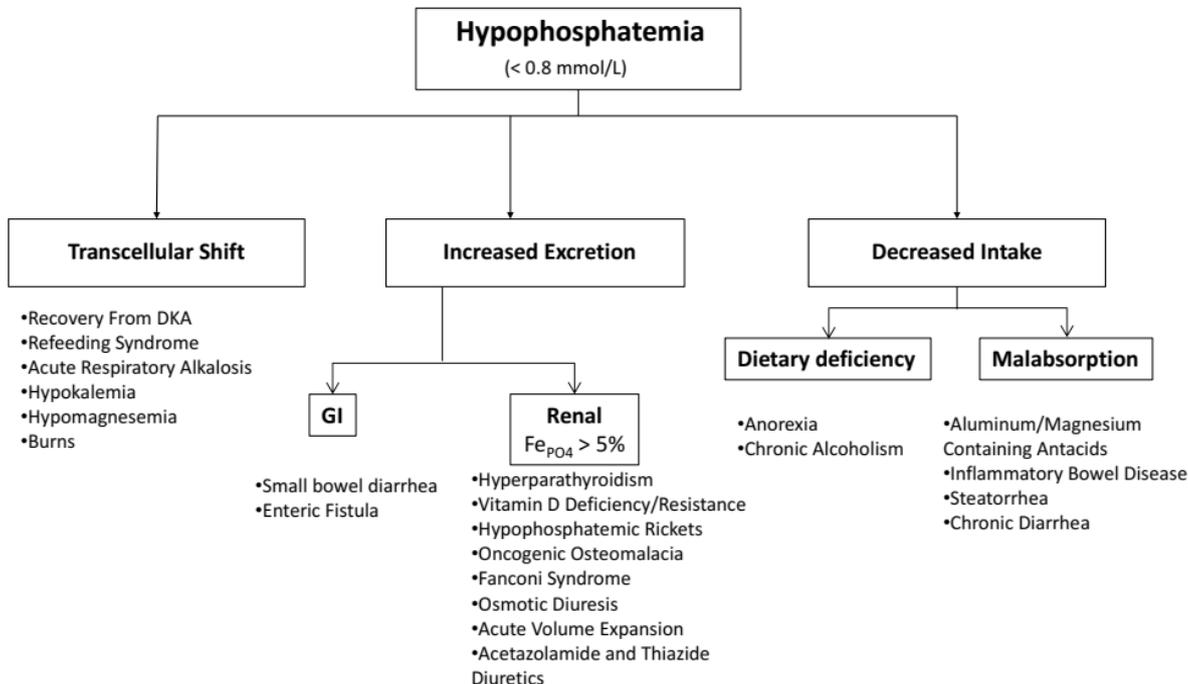
- Neurogenic: irritability, tremor, anxiety, palpitations, tachycardia, sweating, pallor, paresthesias
- Neuroglycopenia: confusion, lethargy, abnormal behaviour, amnesia, weakness, blurred vision, seizures



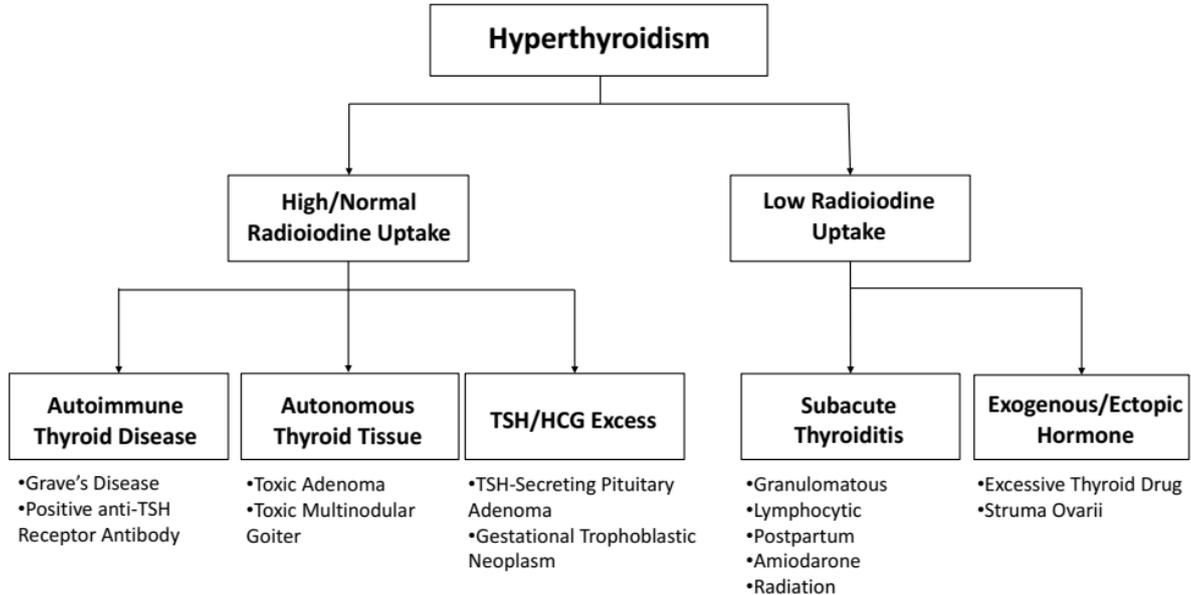
# Hyperphosphatemia



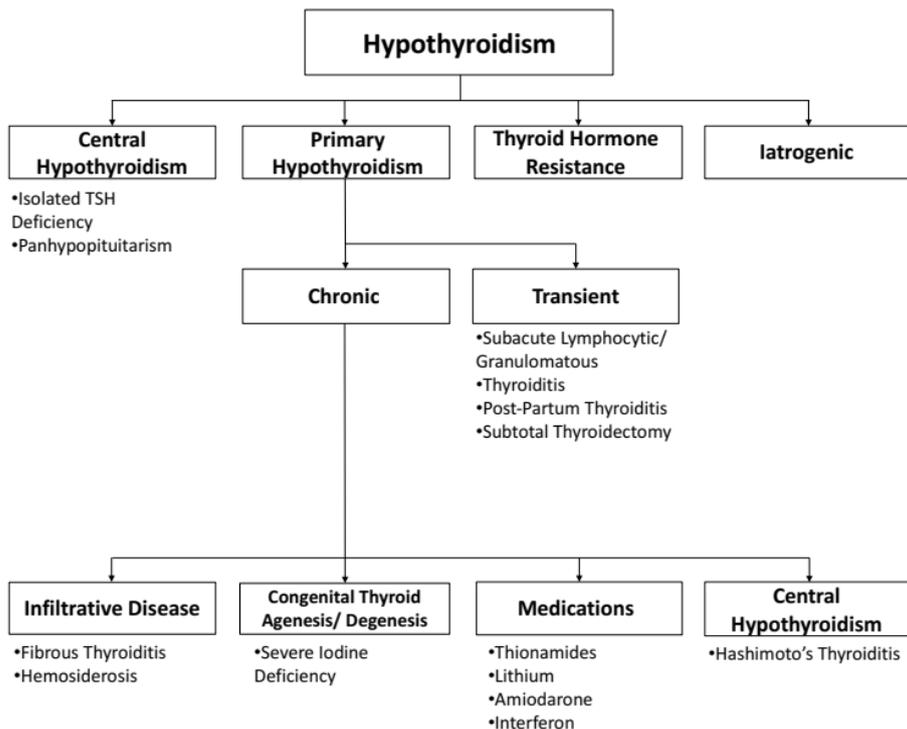
# Hypophosphatemia

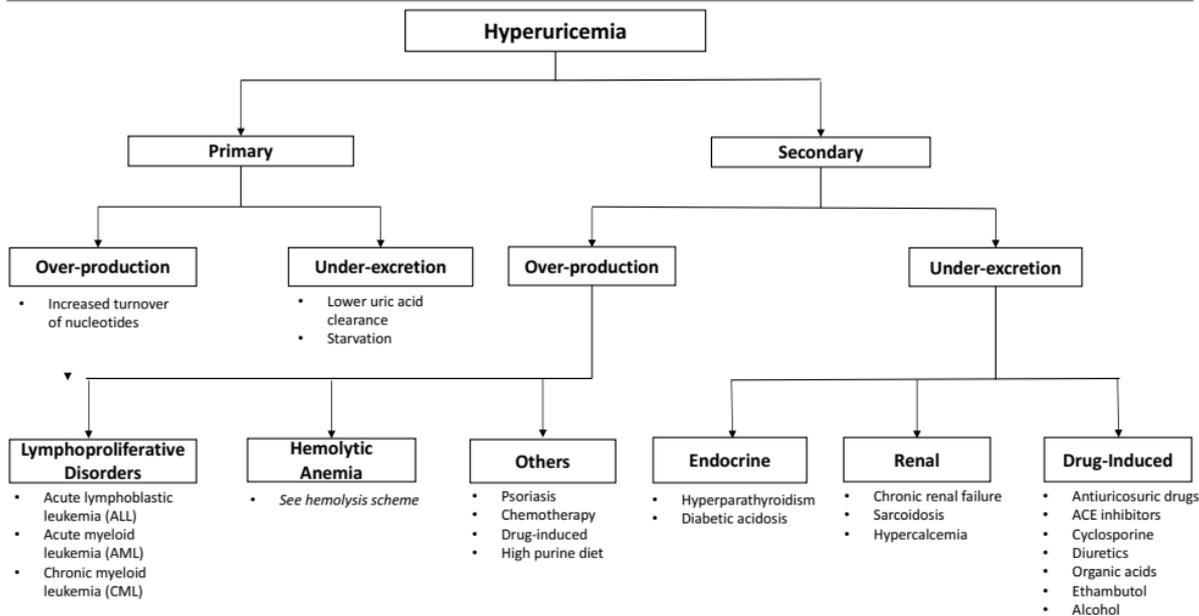


# Hyperthyroidism

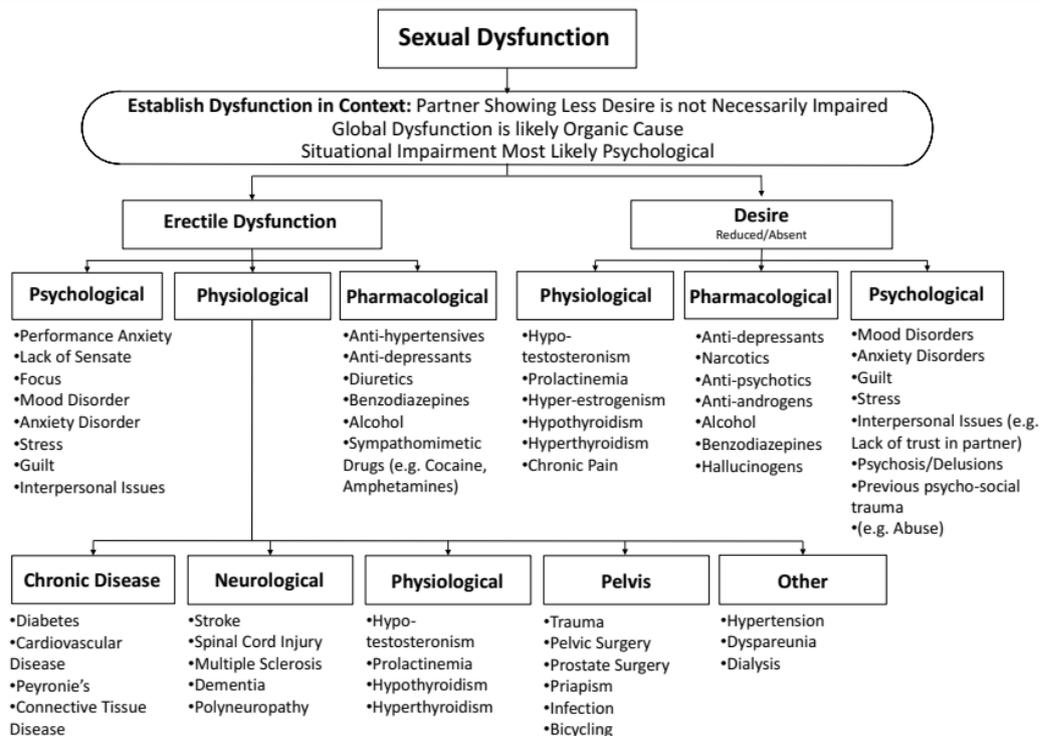


# Hypothyroidism



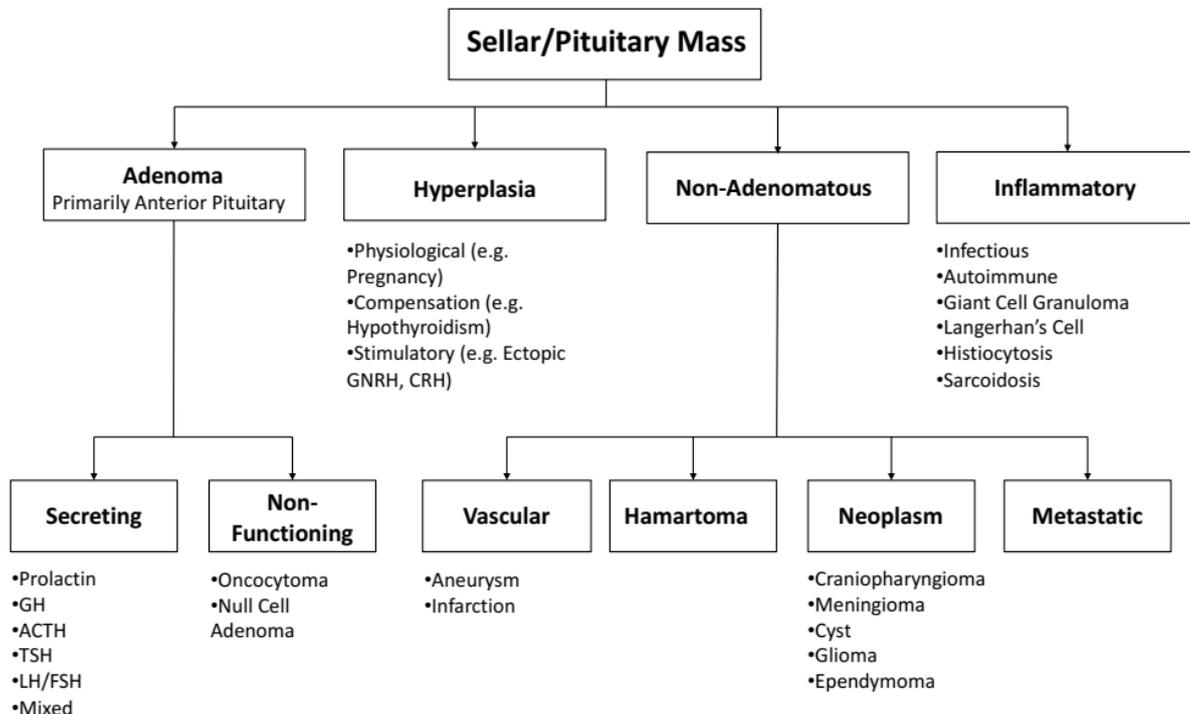


# Male Sexual Dysfunction





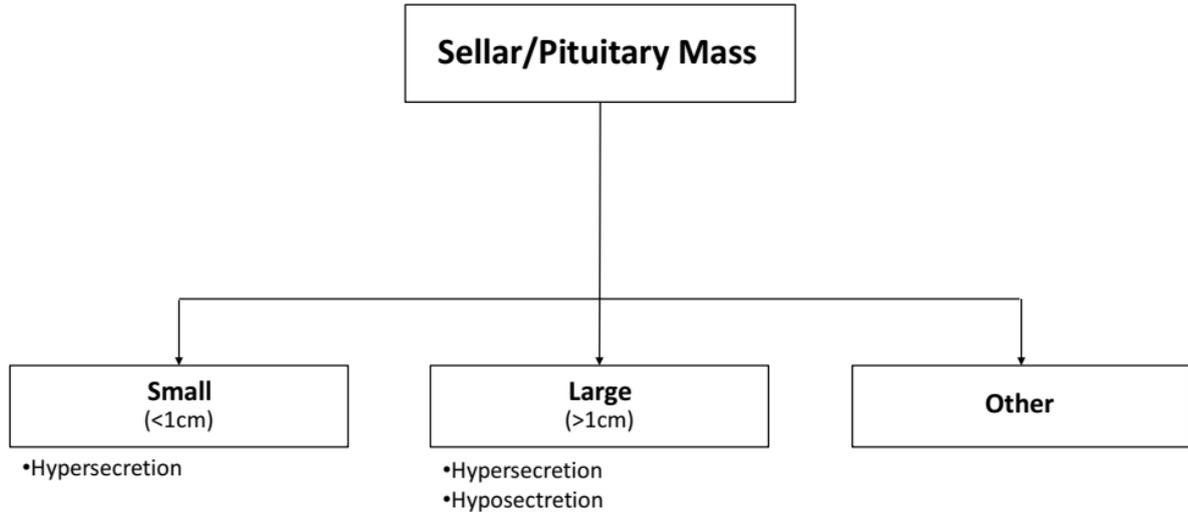
# Sellar / Pituitary Mass

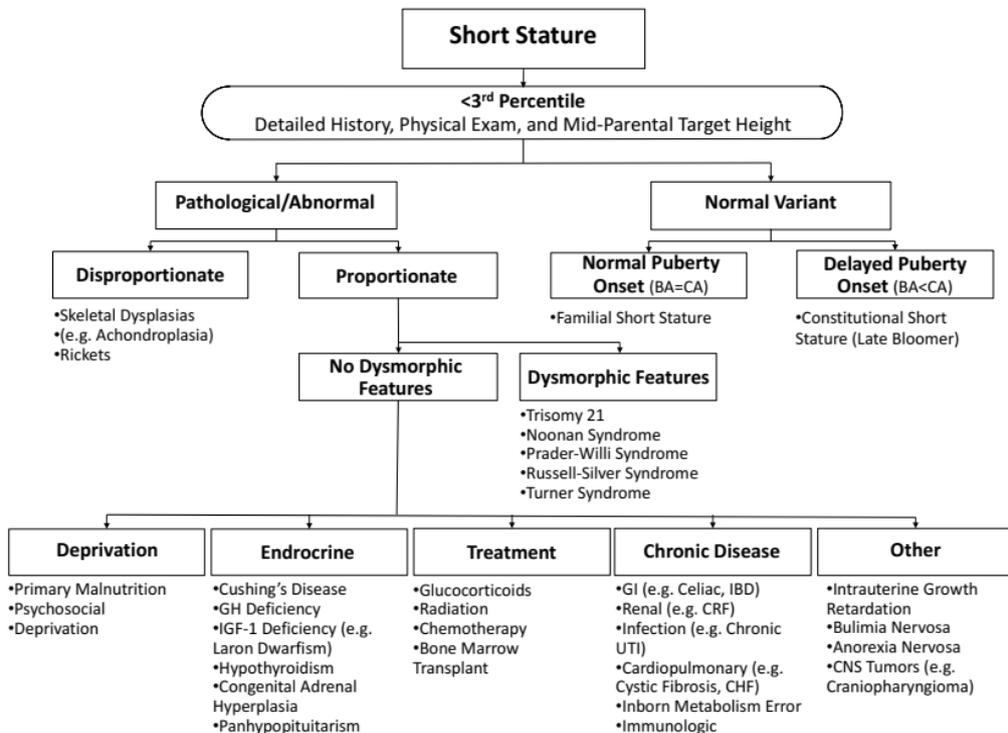


# Sellar / Pituitary Mass

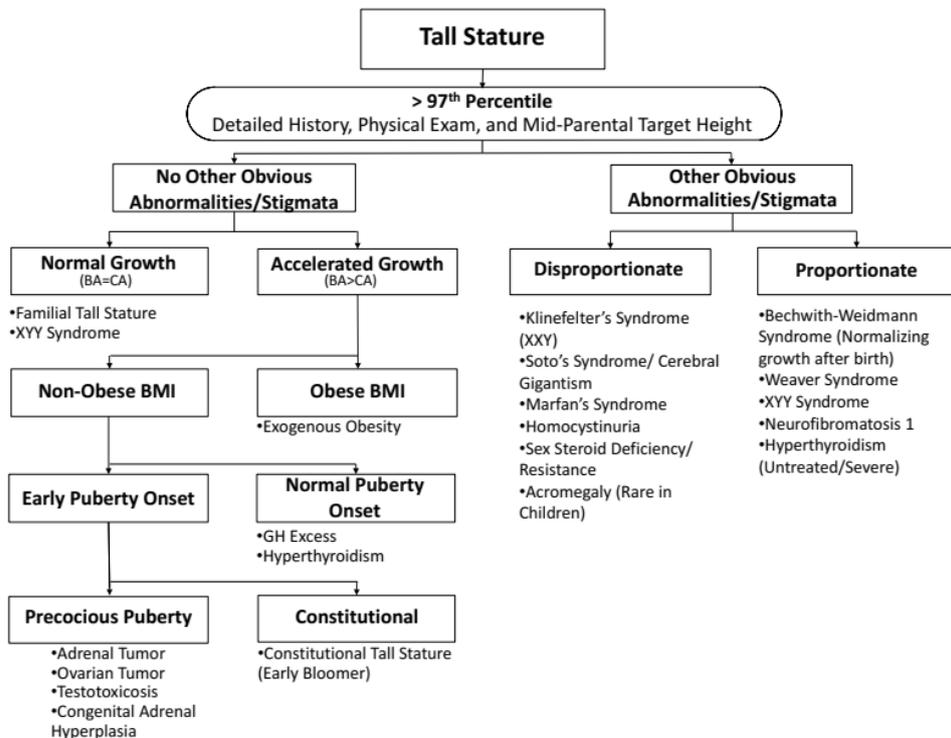


Size

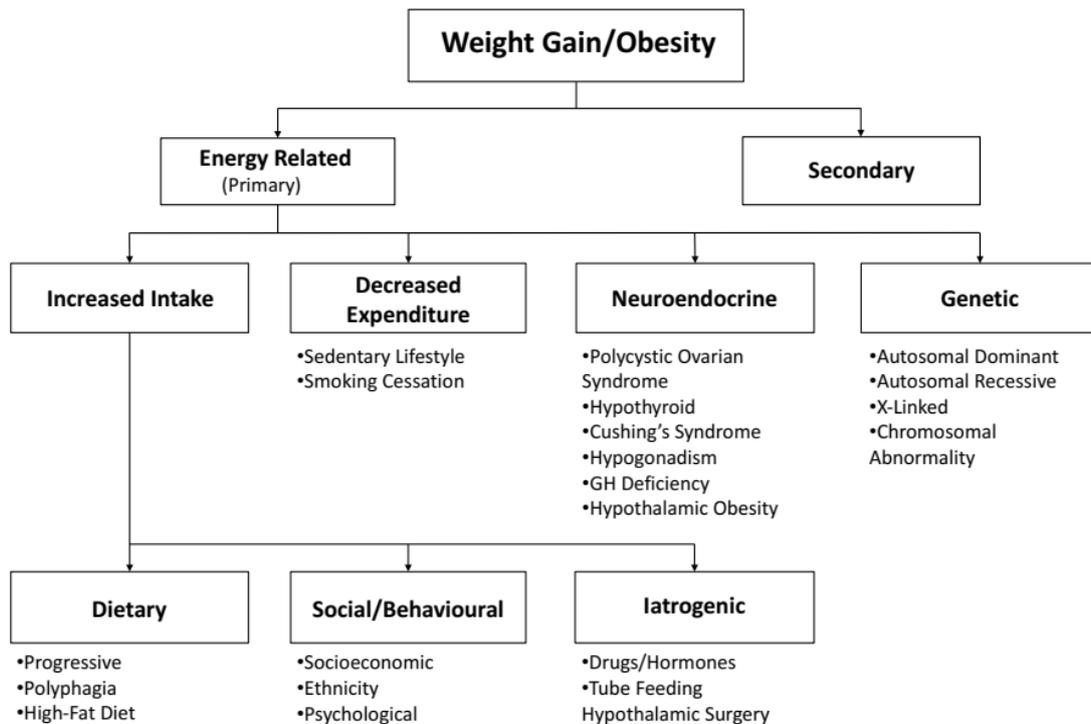




# Tall Stature



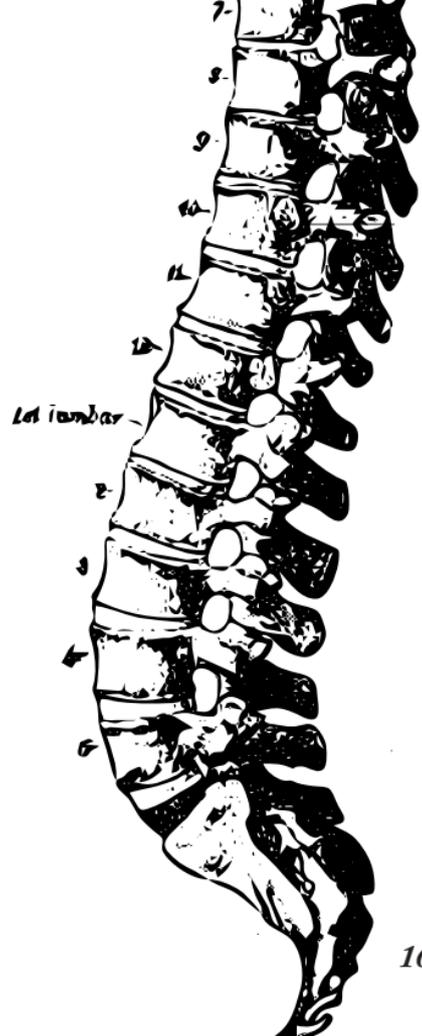
# Weight Gain / Obesity



# Neurologic

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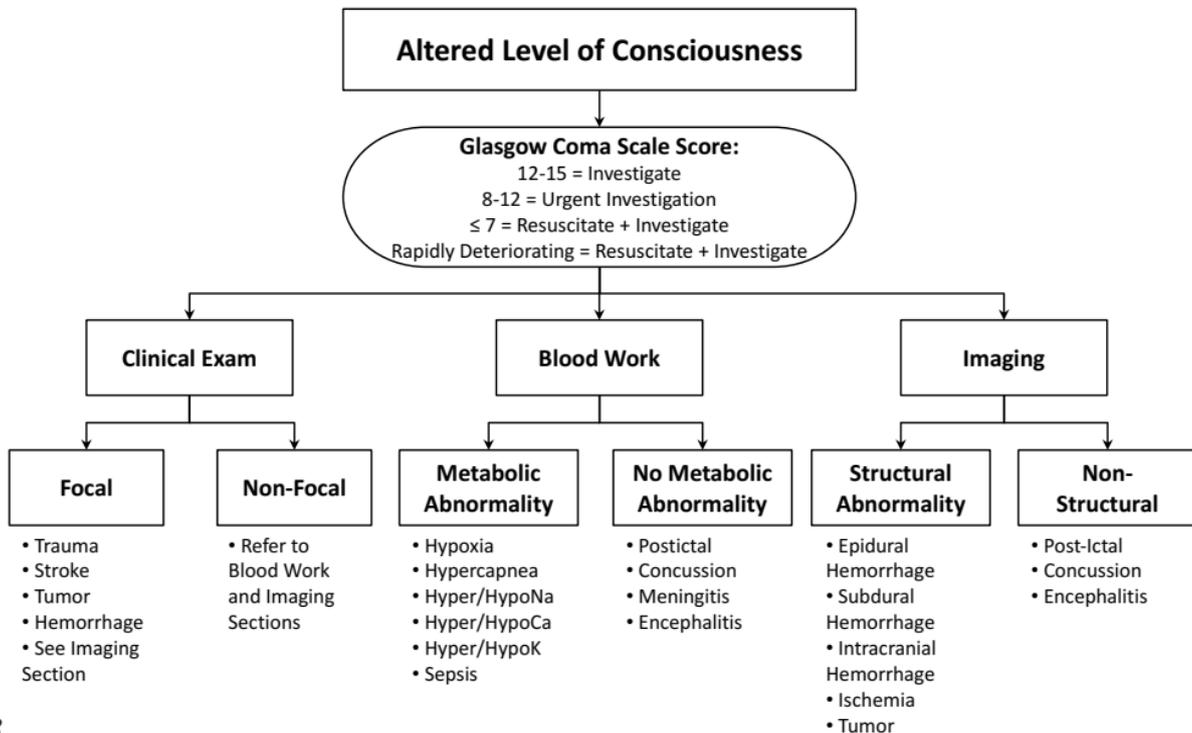
Dr. Kevin Busche



# Altered Level of Consciousness

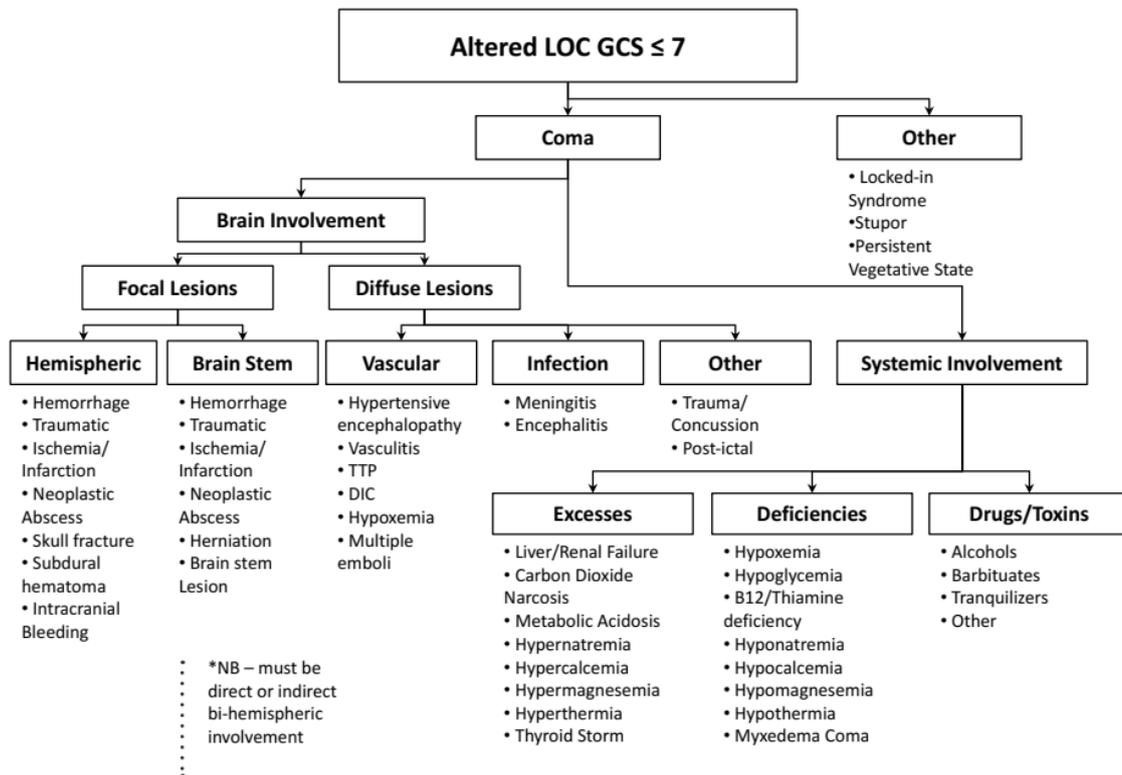


## Approach



# Altered Level of Consciousness

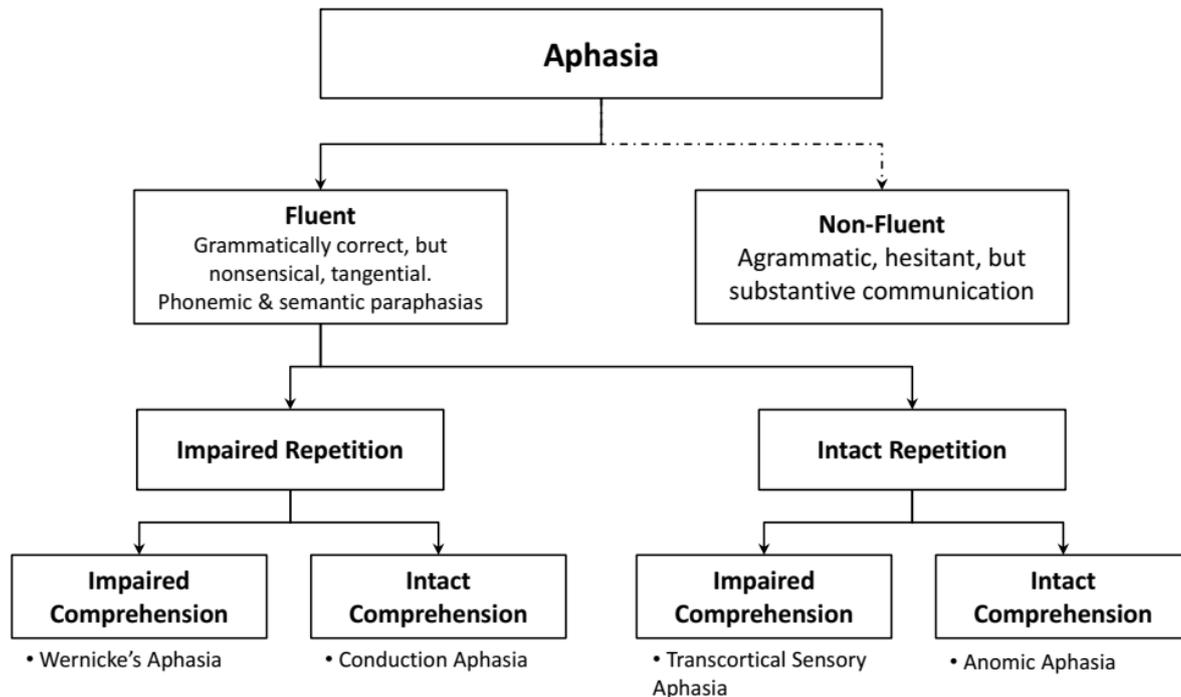
GCS  $\leq 7$

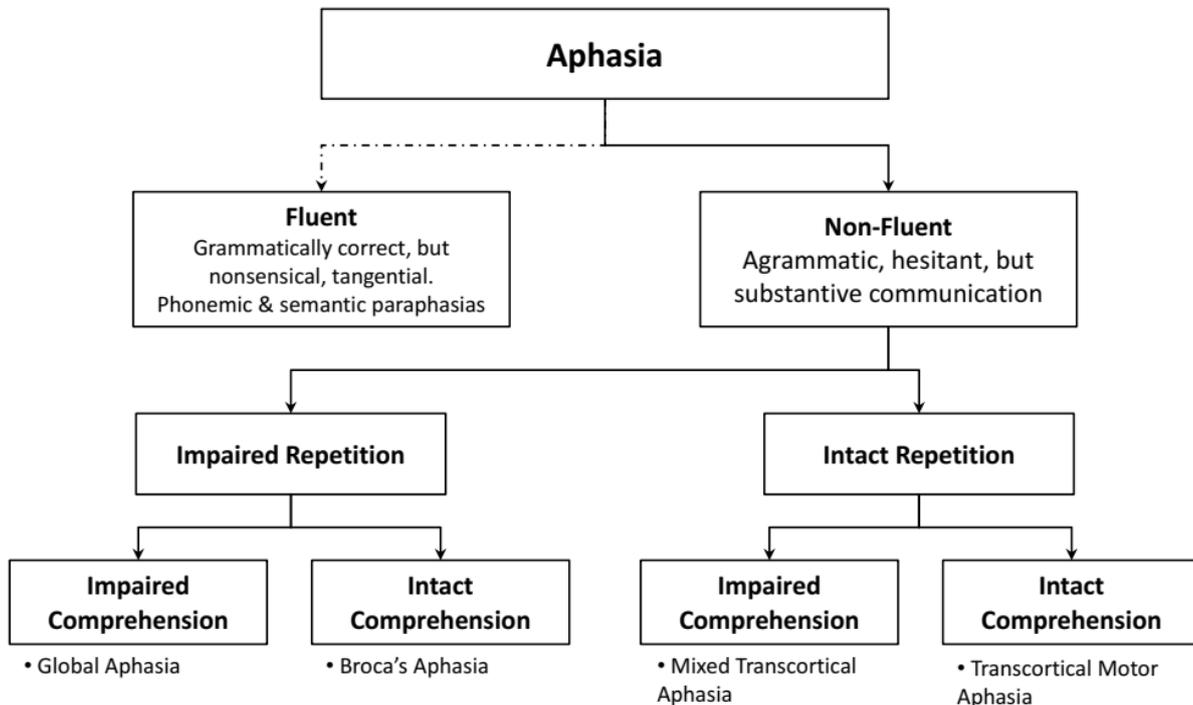


: \*NB – must be  
 : direct or indirect  
 : bi-hemispheric  
 : involvement  
 :  
 :

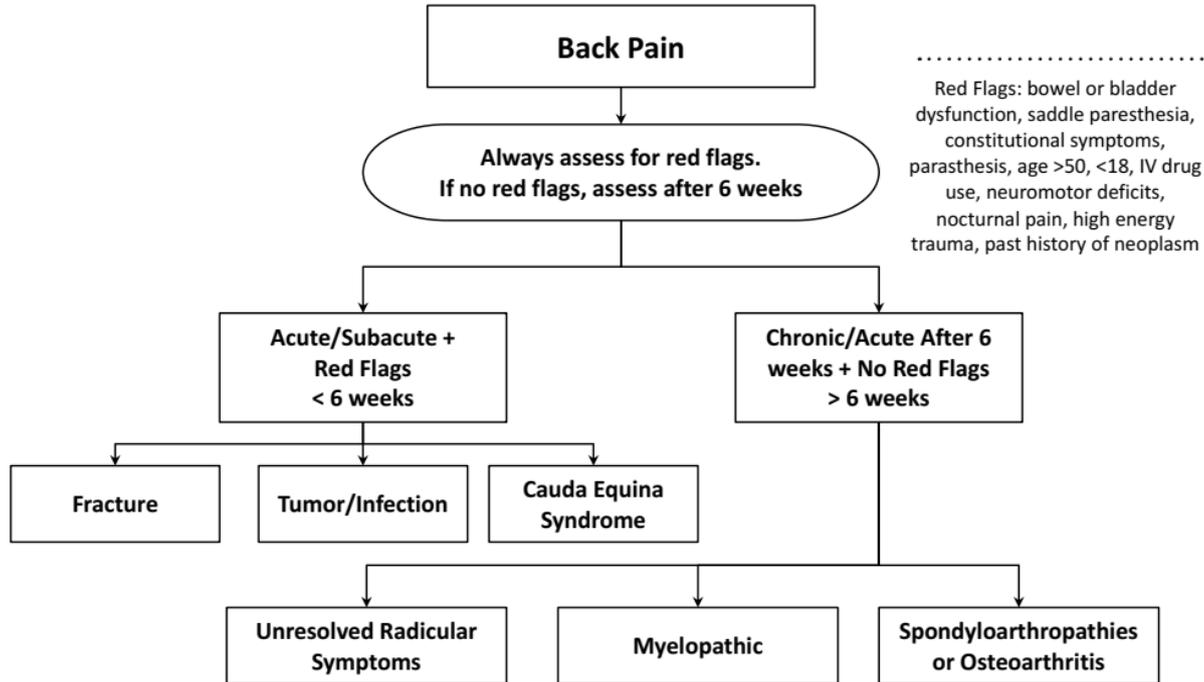
# Aphasia

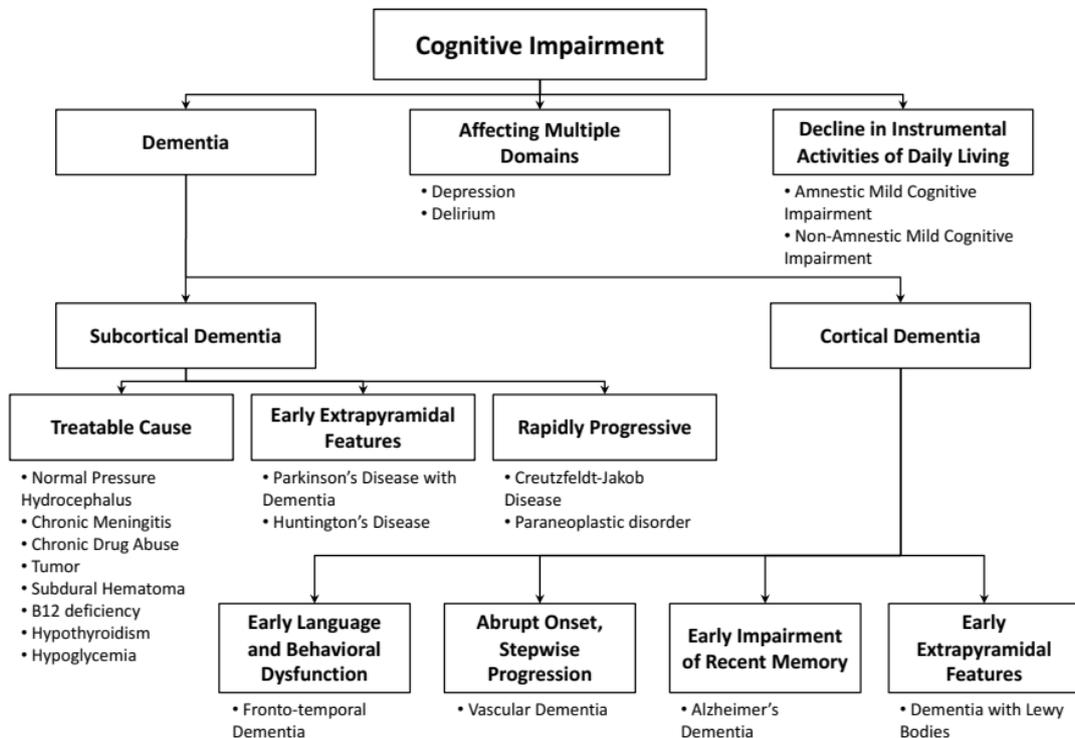
Fluent



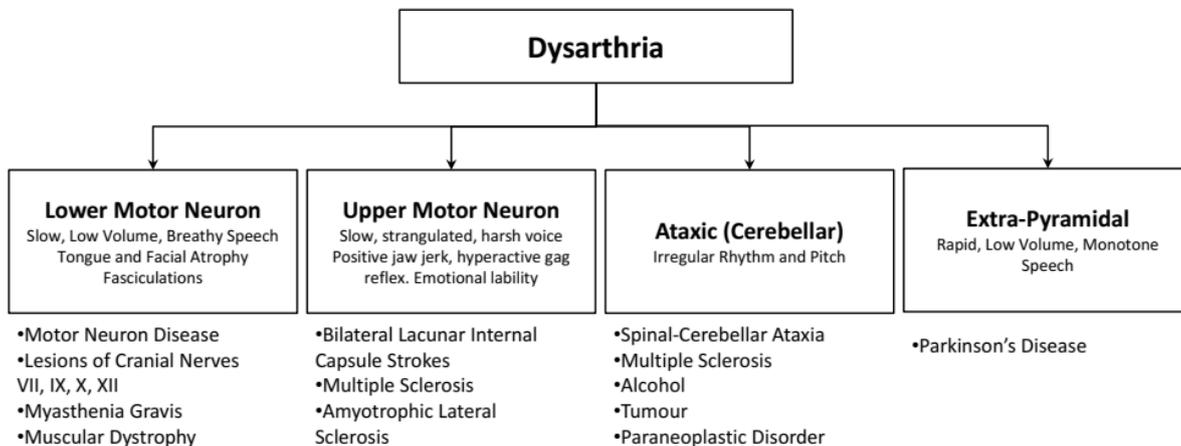


# Back Pain

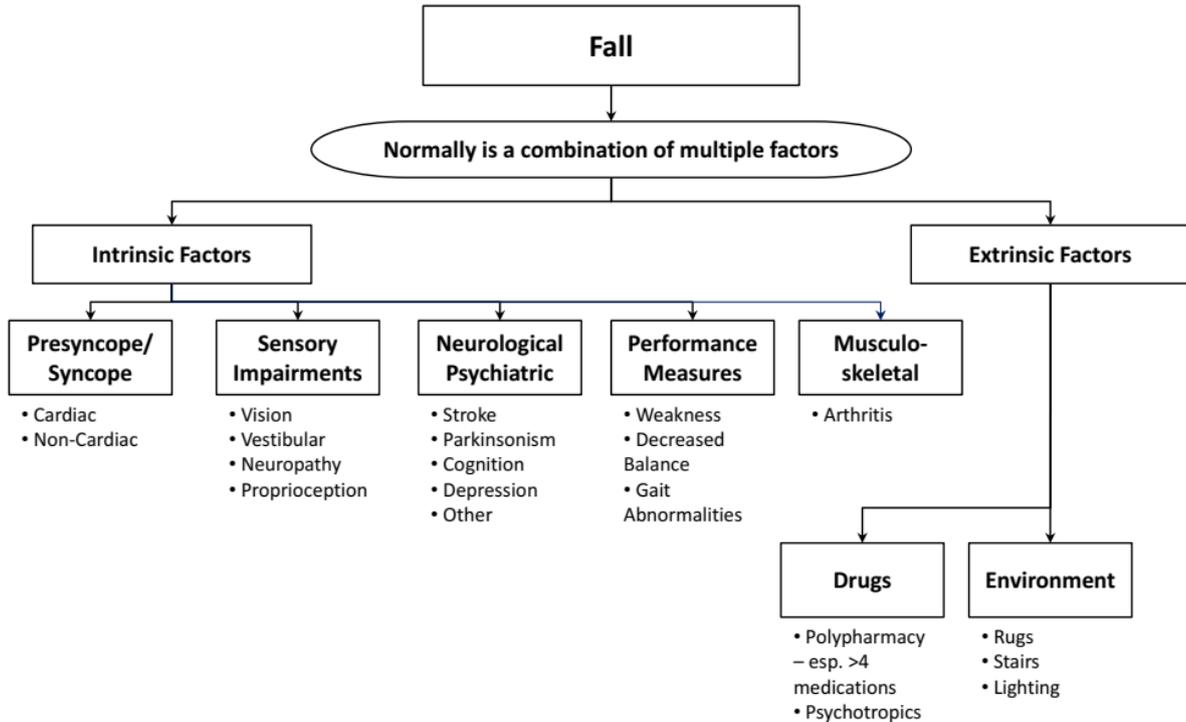




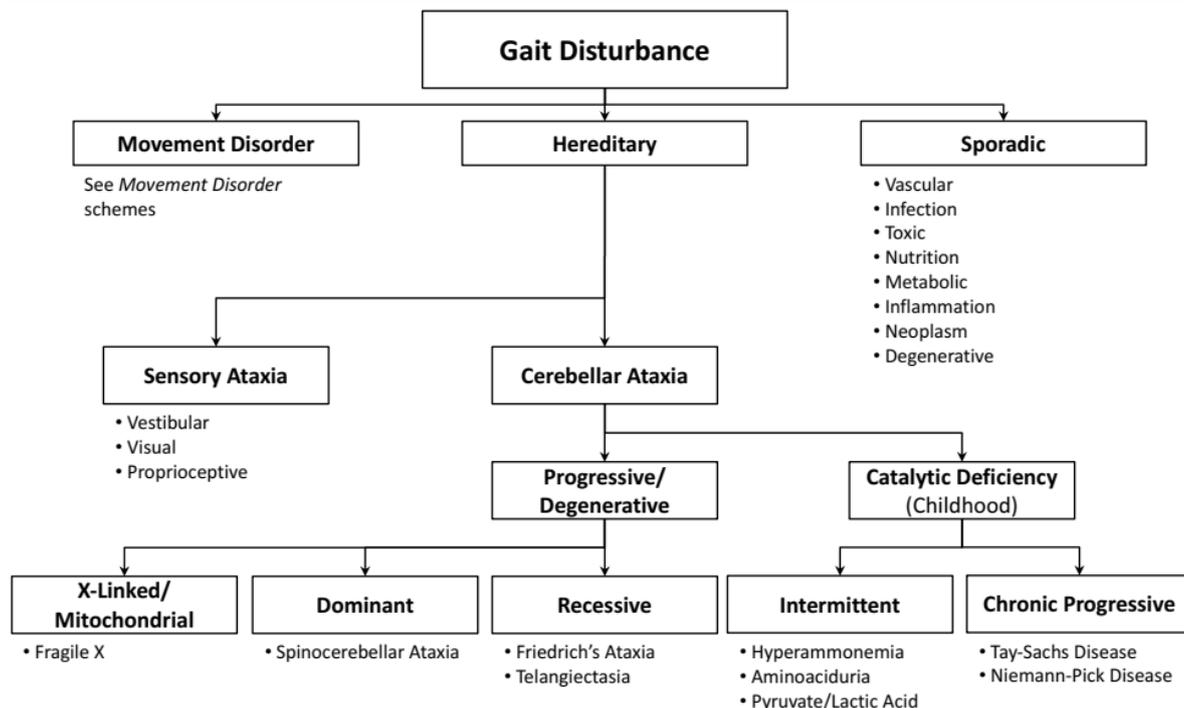
# Dysarthria

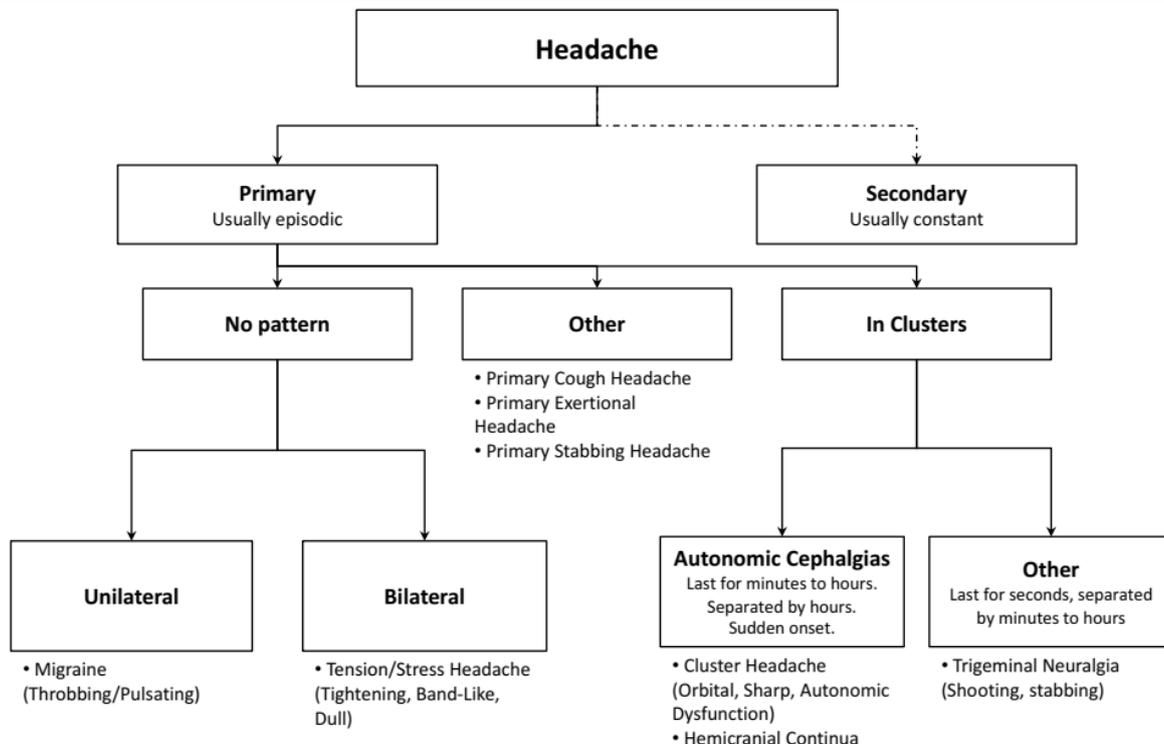


# Falls in the Elderly



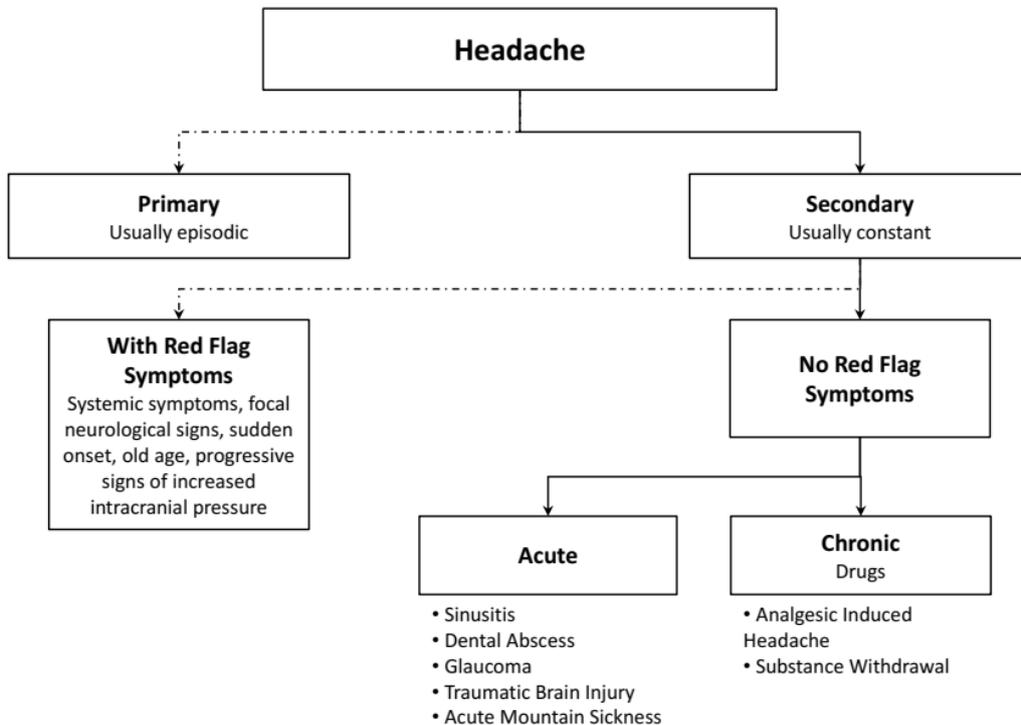
# Gait Disturbance

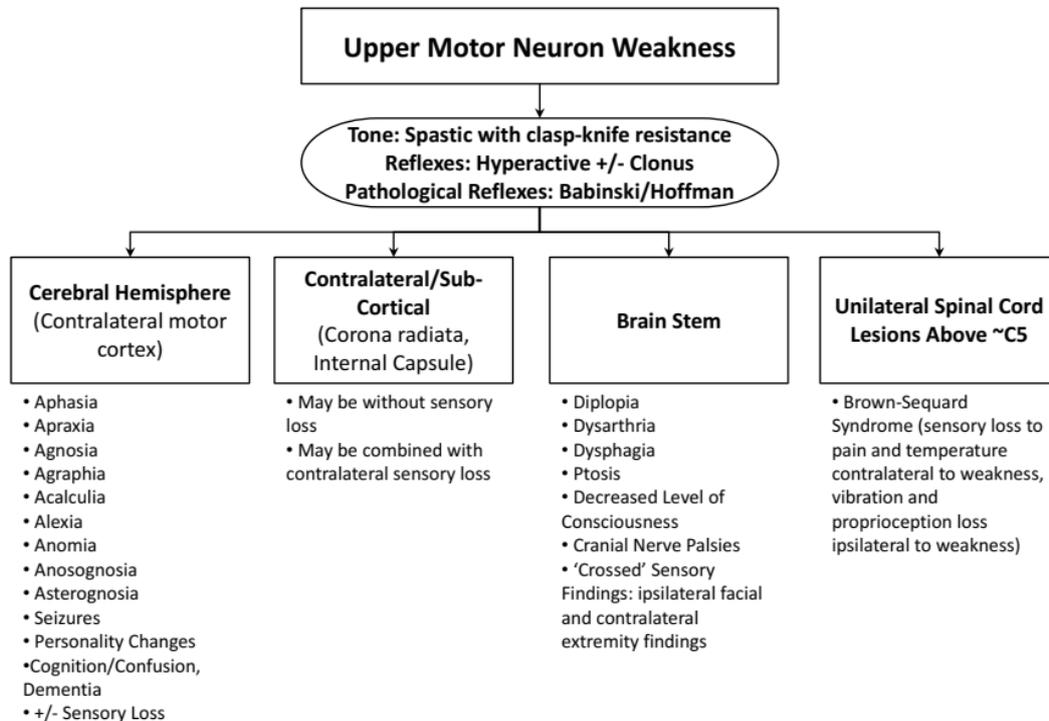




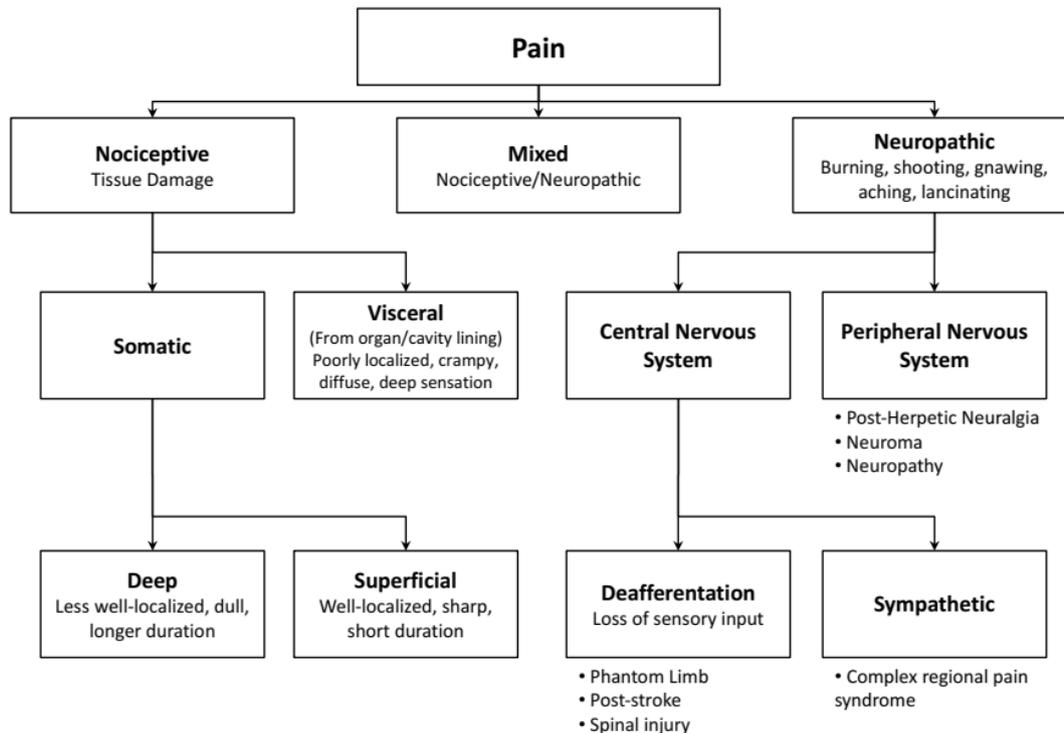
# Headache

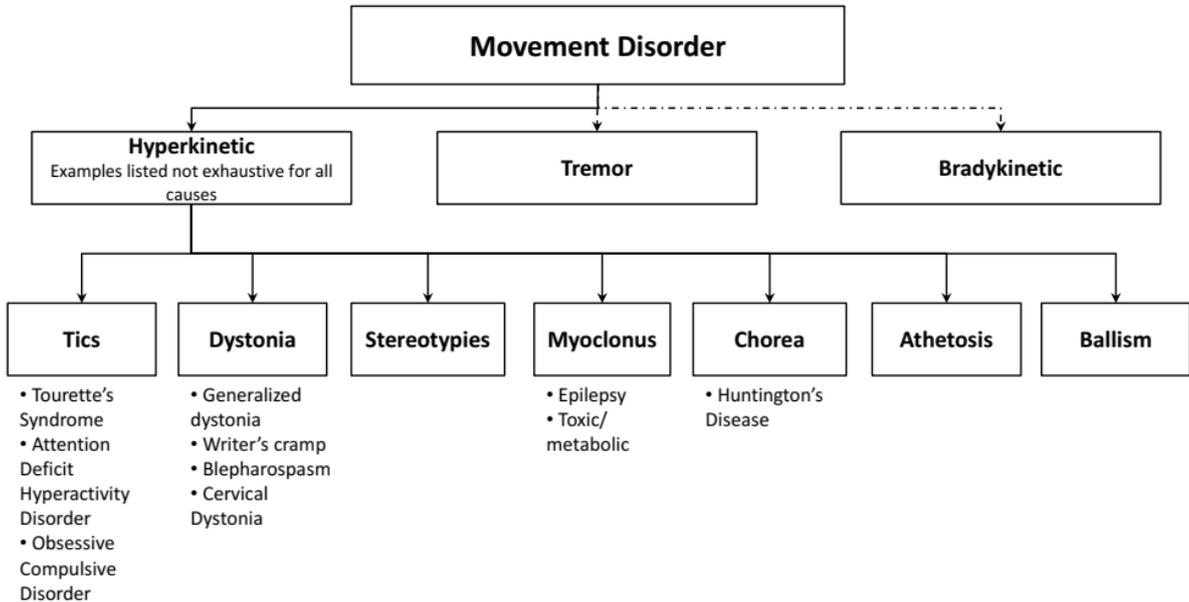
Secondary, without Red Flag Symptoms





# Mechanisms of Pain

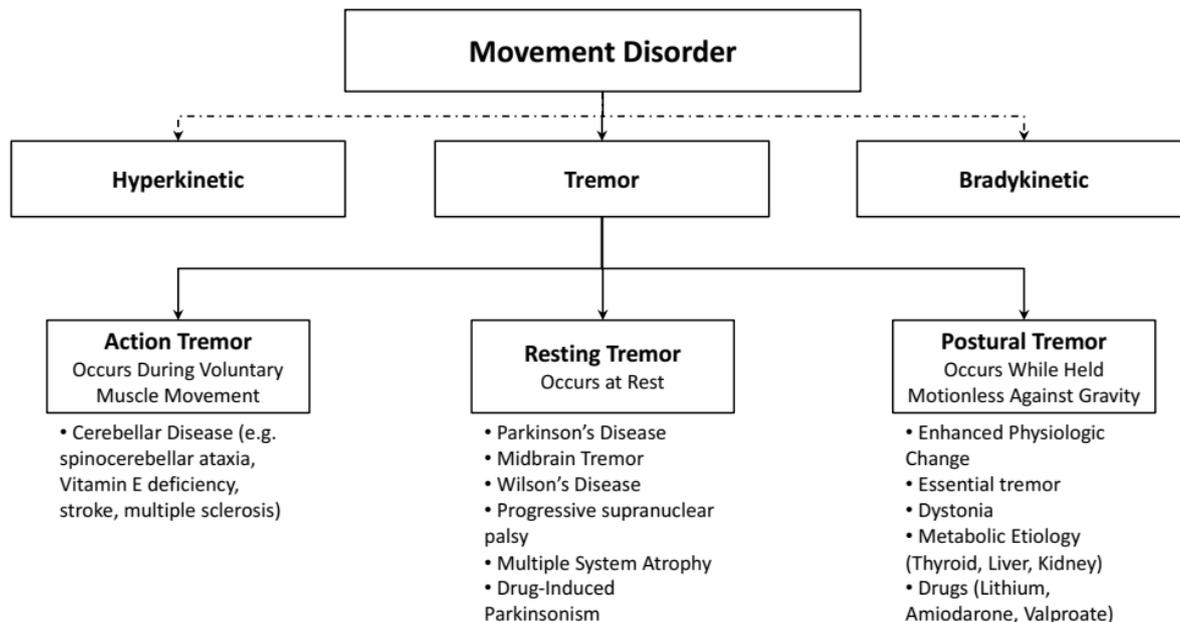


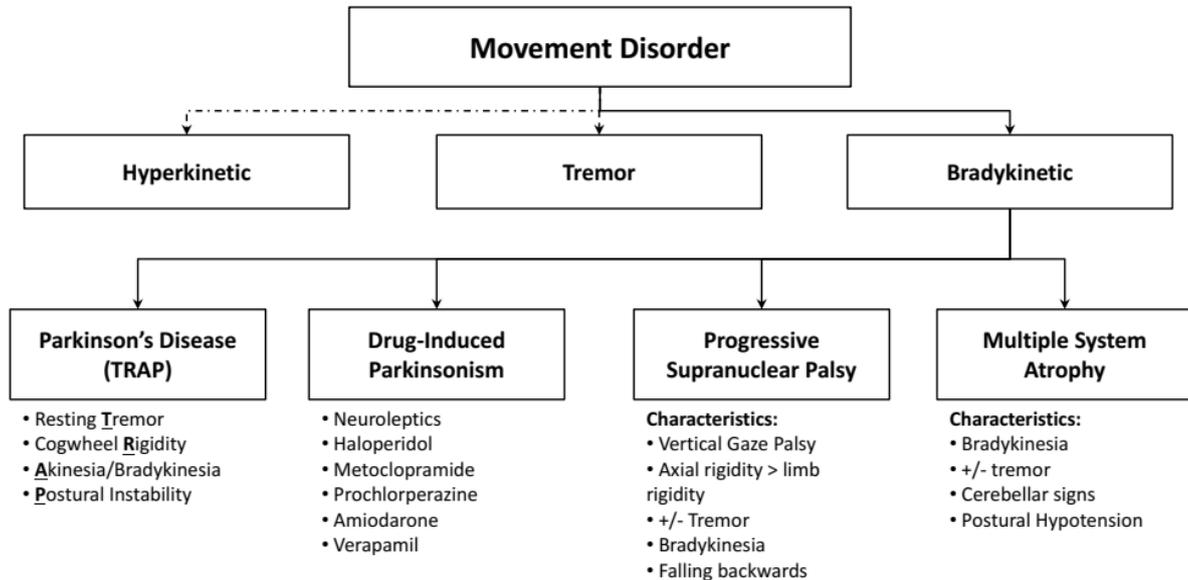


# Movement Disorder

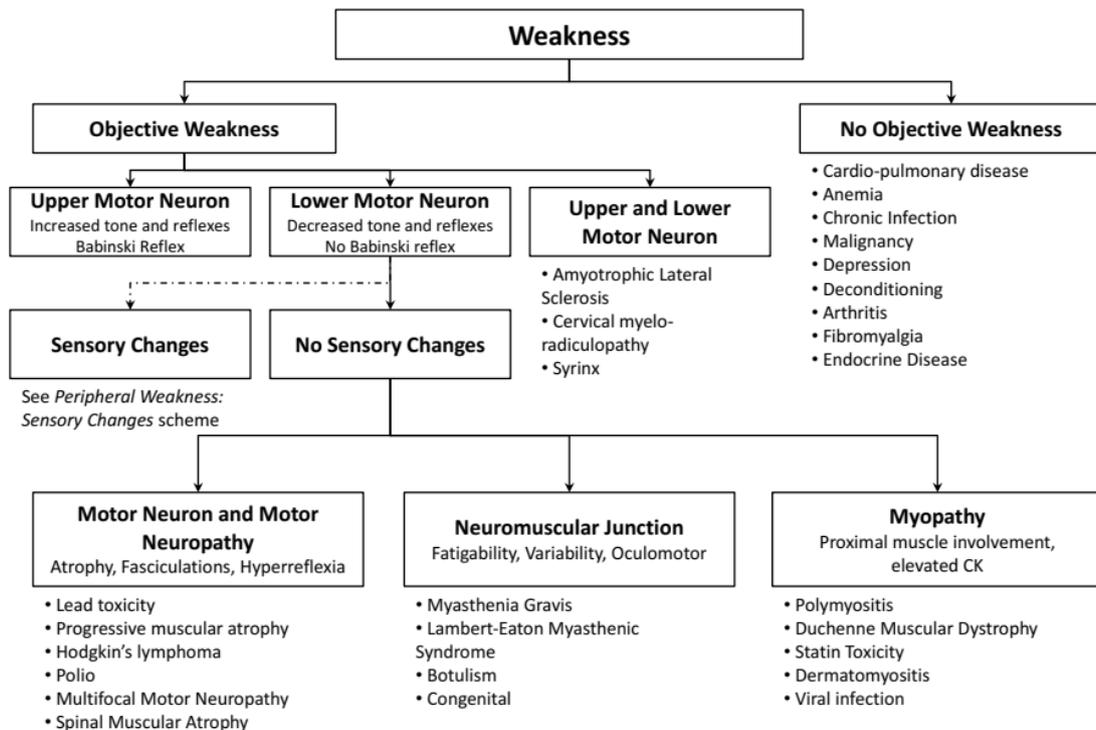


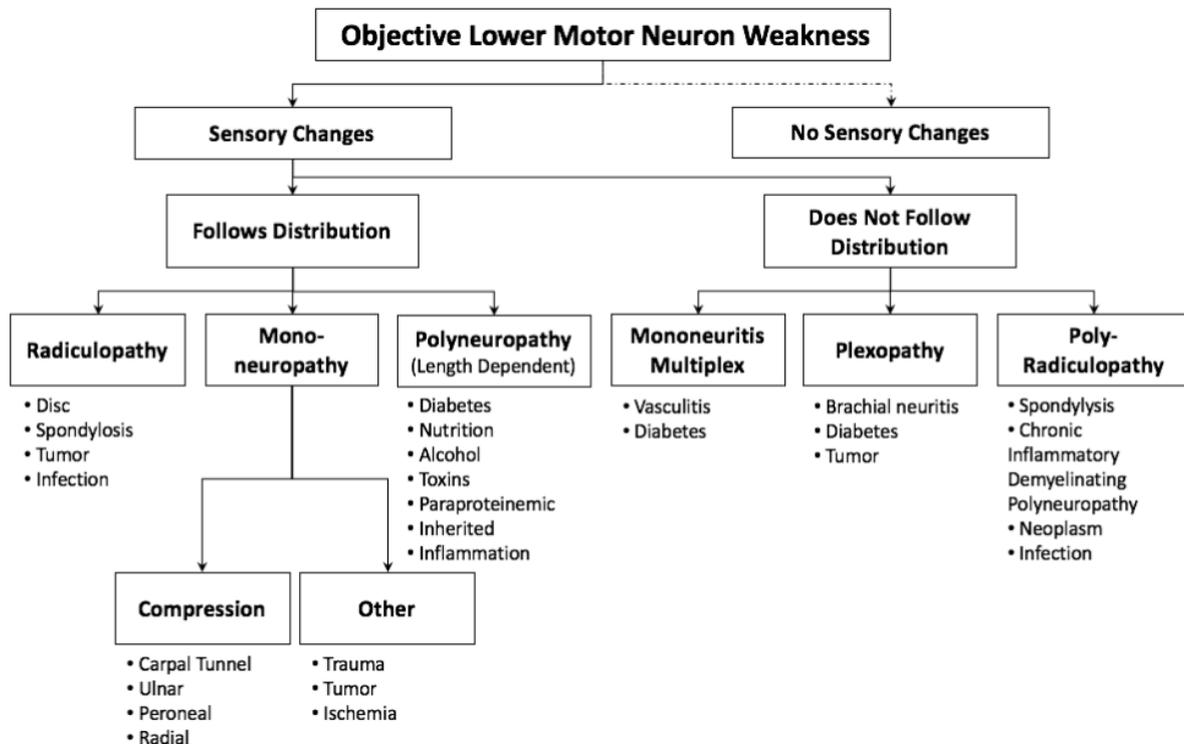
## Tremor





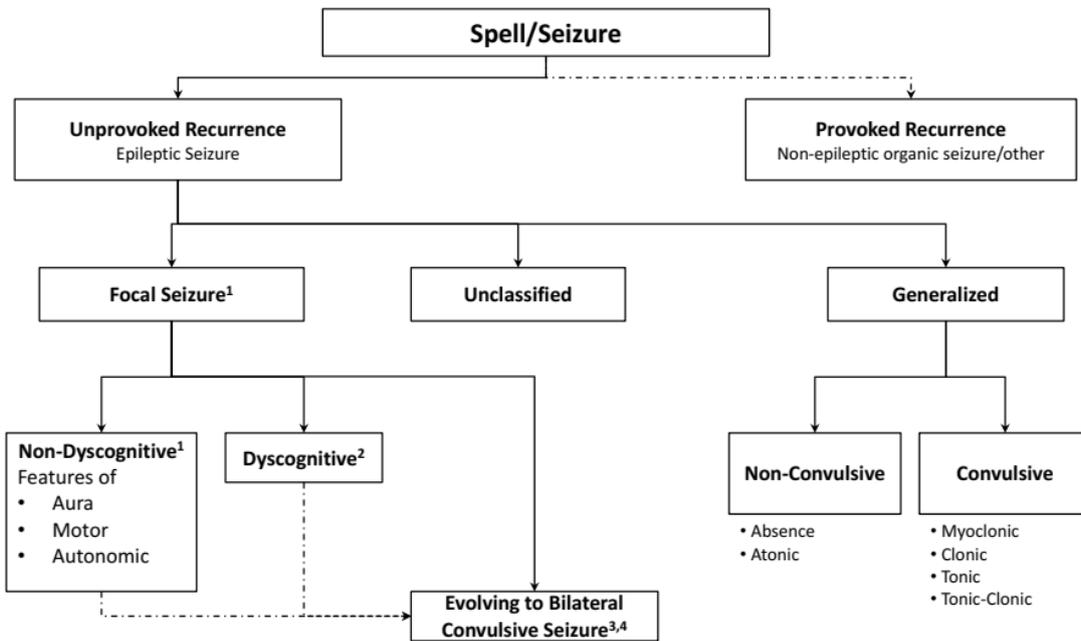
# Peripheral Weakness



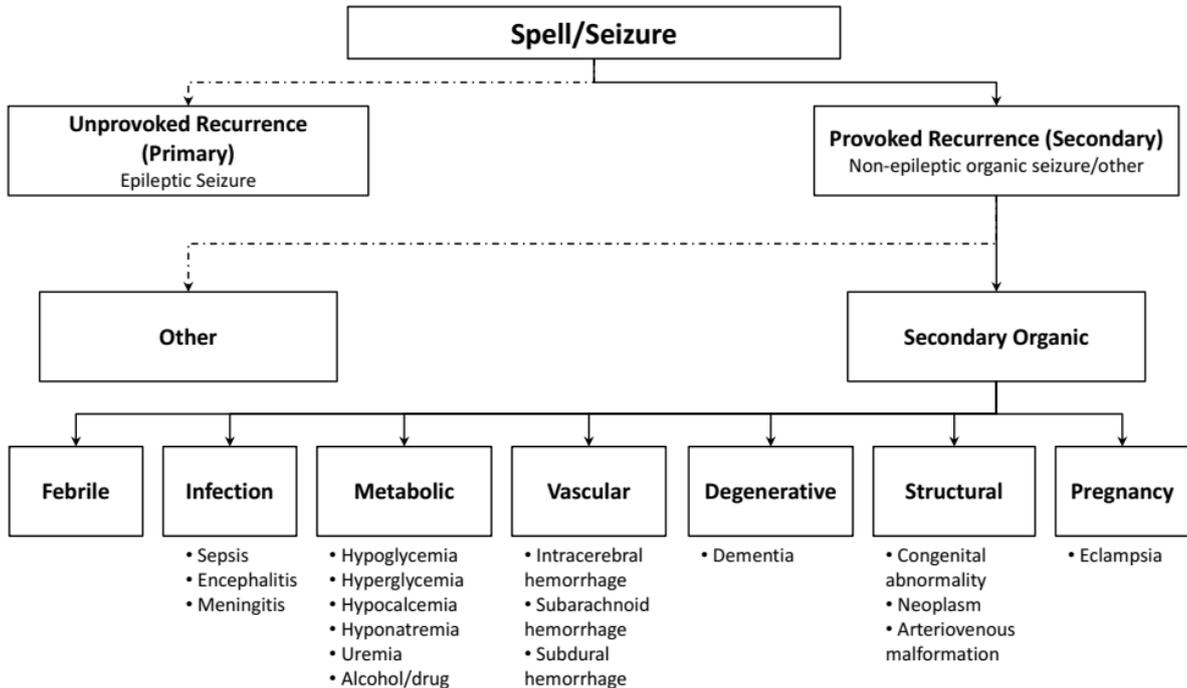


# Spell / Seizure

## Epileptic Seizure



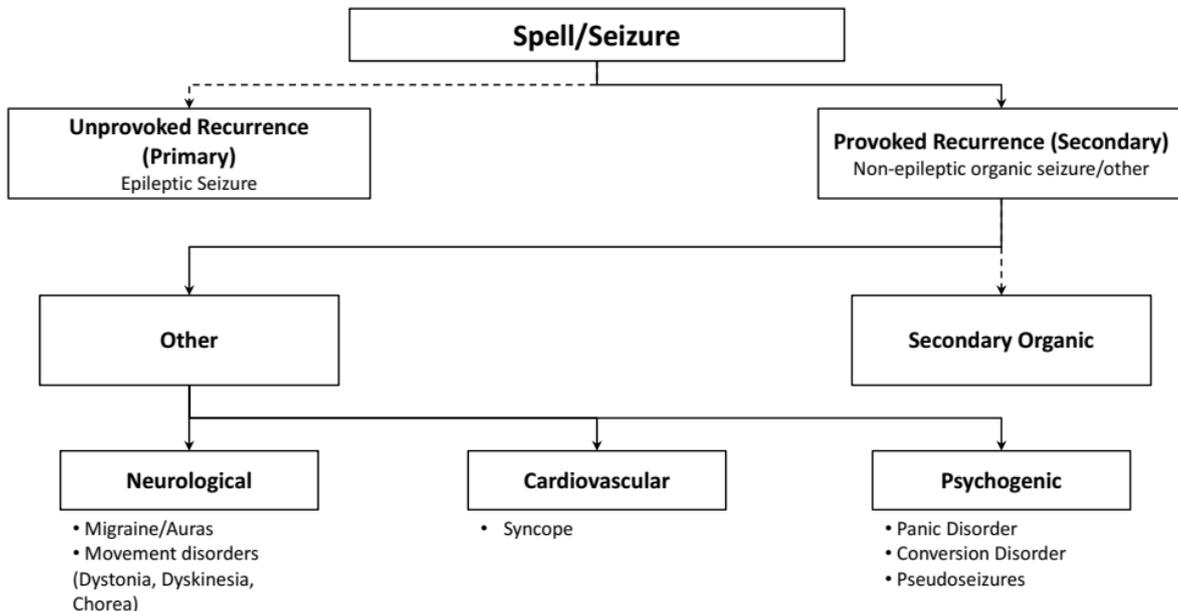
- 1 Previously named Simple Partial Seizure
- 2 Previously named Complex Partial Seizure
- 3 Previously named Secondary Generalized Tonic-Clonic Seizure
- 4 A focal seizure may evolve so rapidly to a bilateral convulsive seizure that no initial distinguishing features are apparent.
- 
- 
-

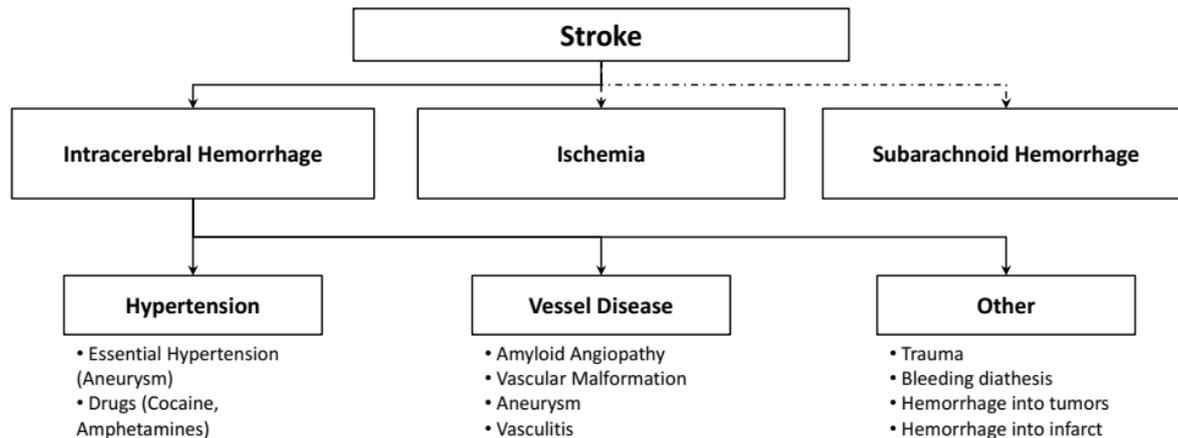


# Spell / Seizure



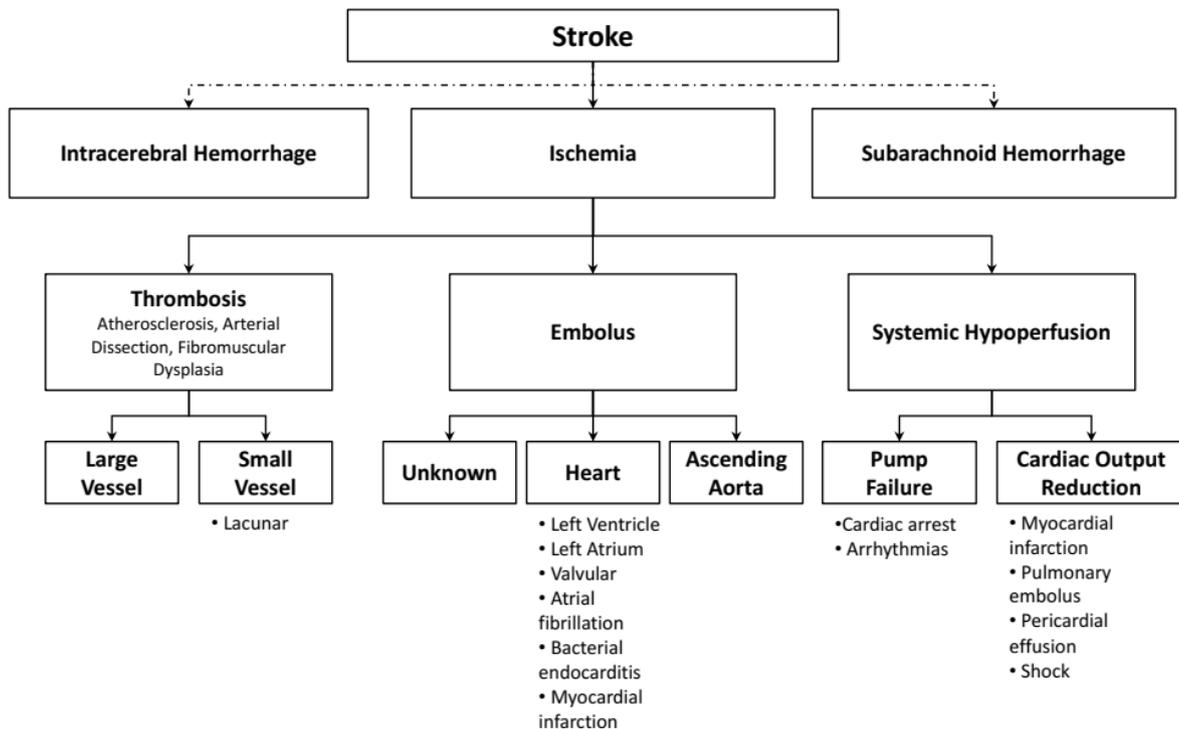
Other

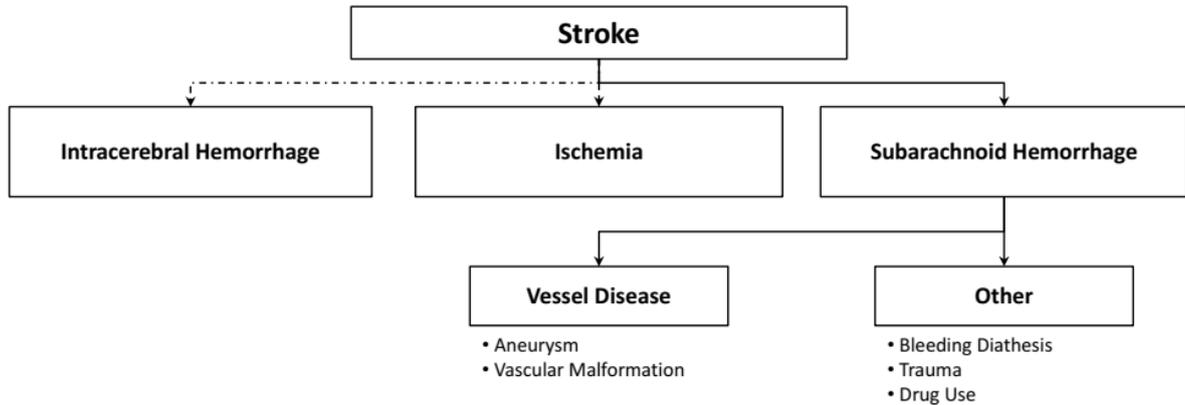




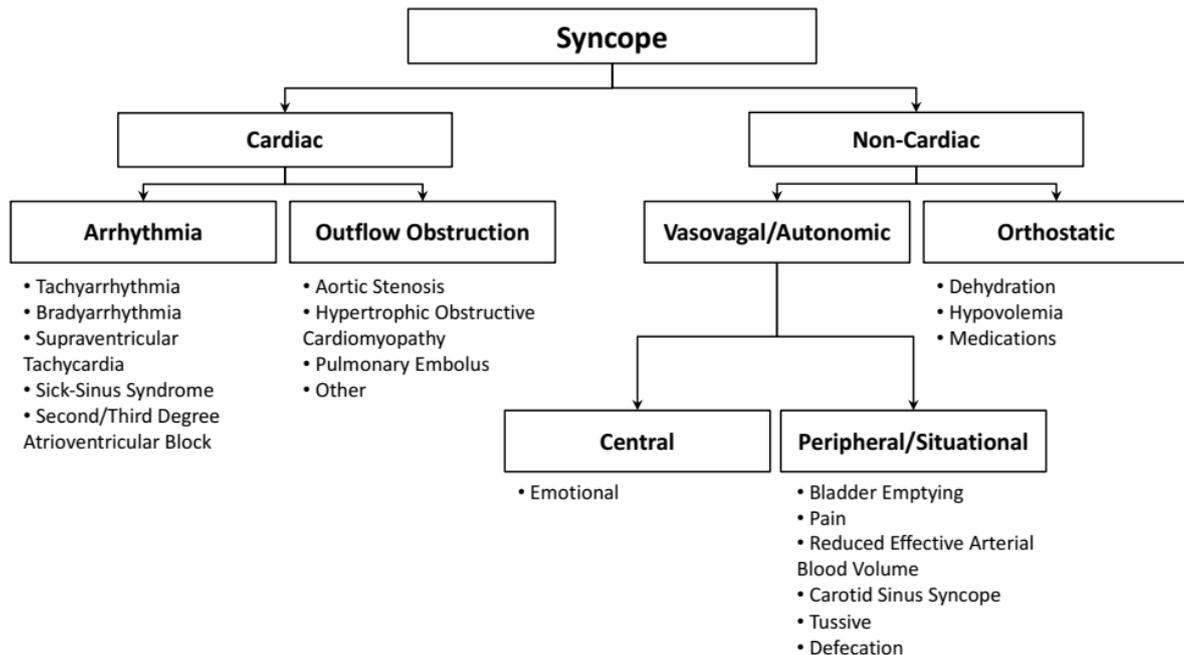
# Stroke

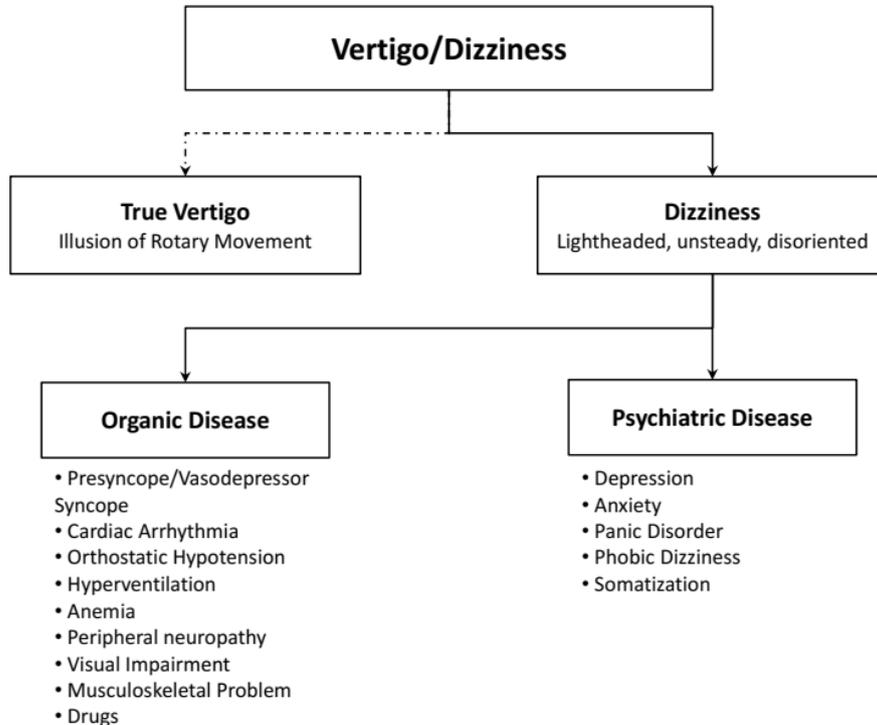
## Ischemia



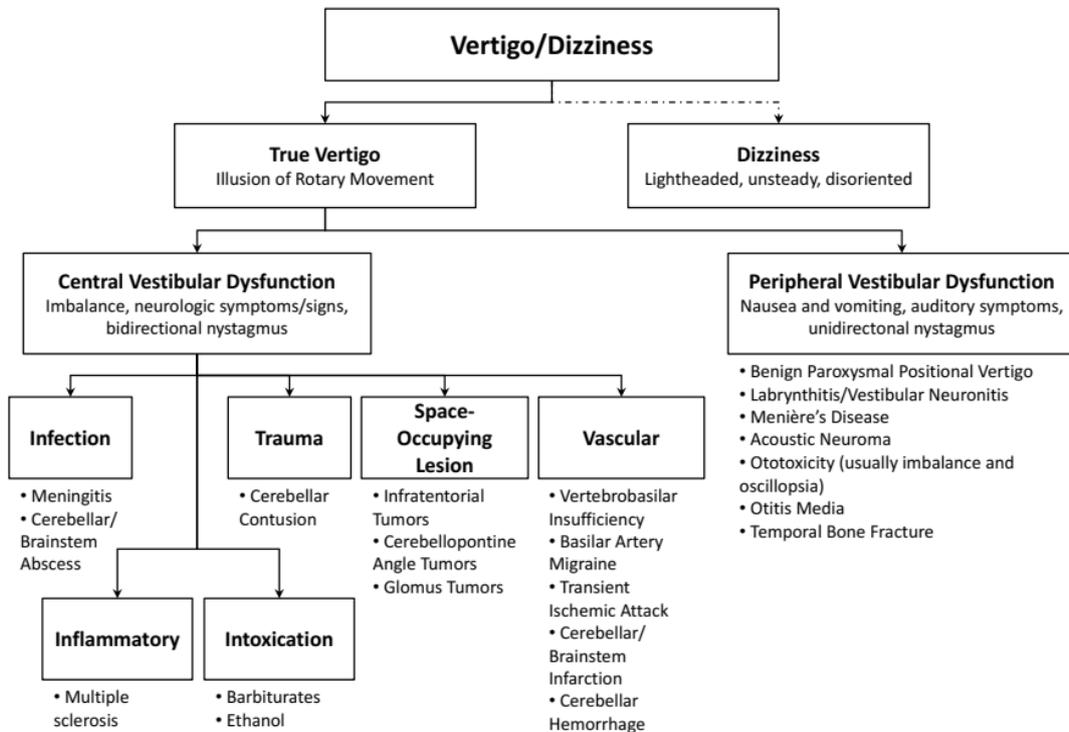


# Syncope





# Vertigo





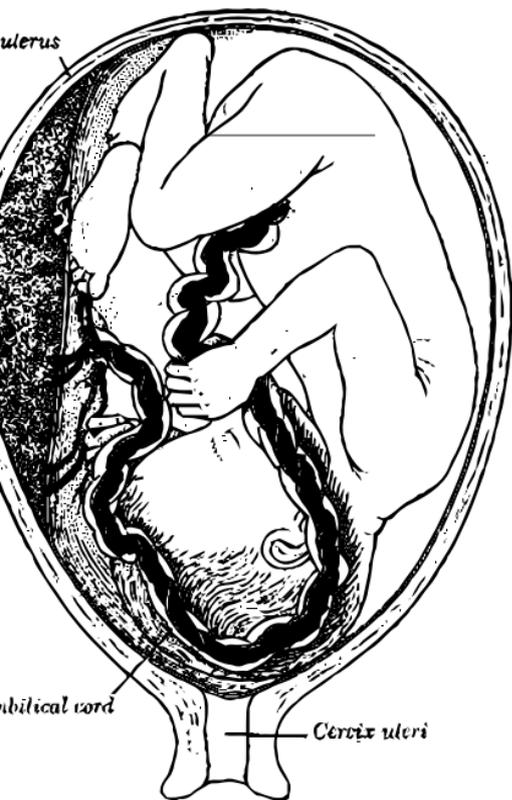
# Obstetrical & Gynecological

Wall of uterus

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Umbilical



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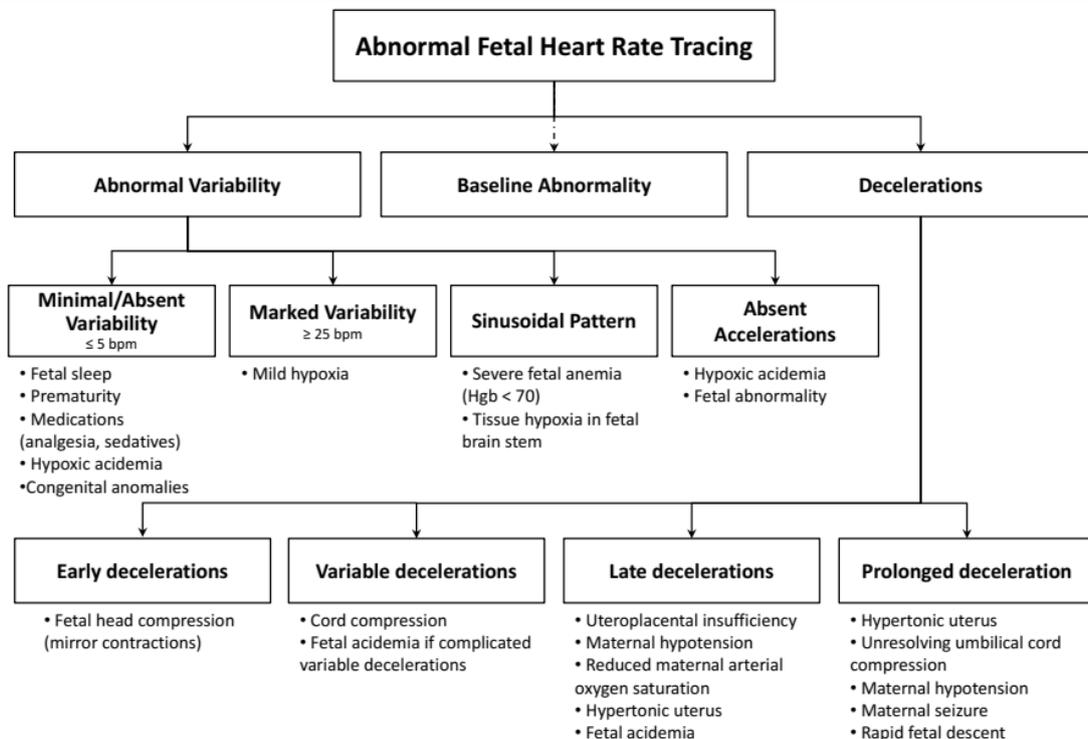
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# Intrapartum Abnormal Fetal HR Tracing

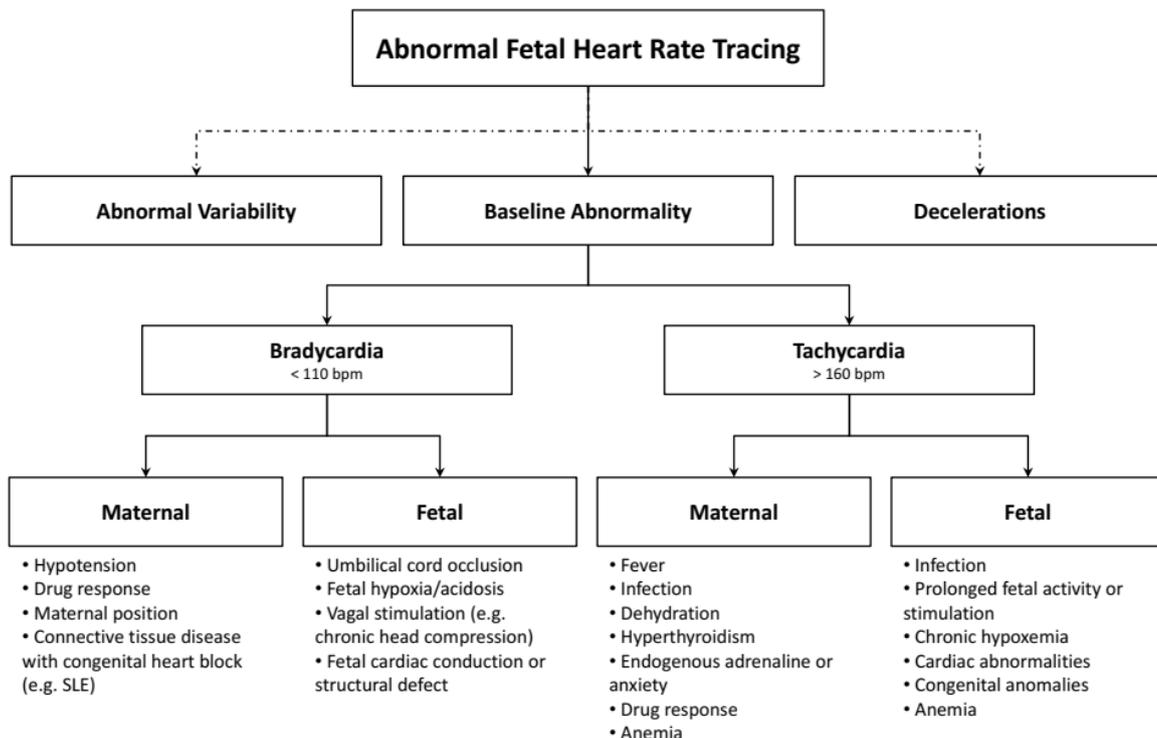


## Variability & Decelerations

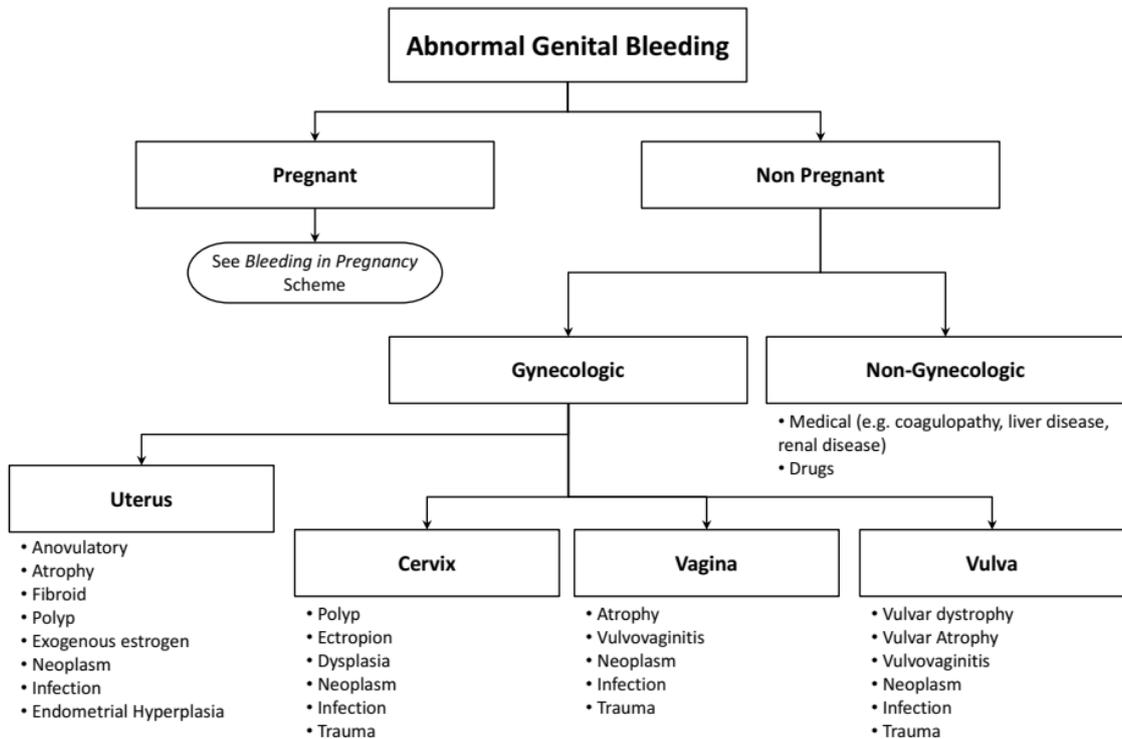


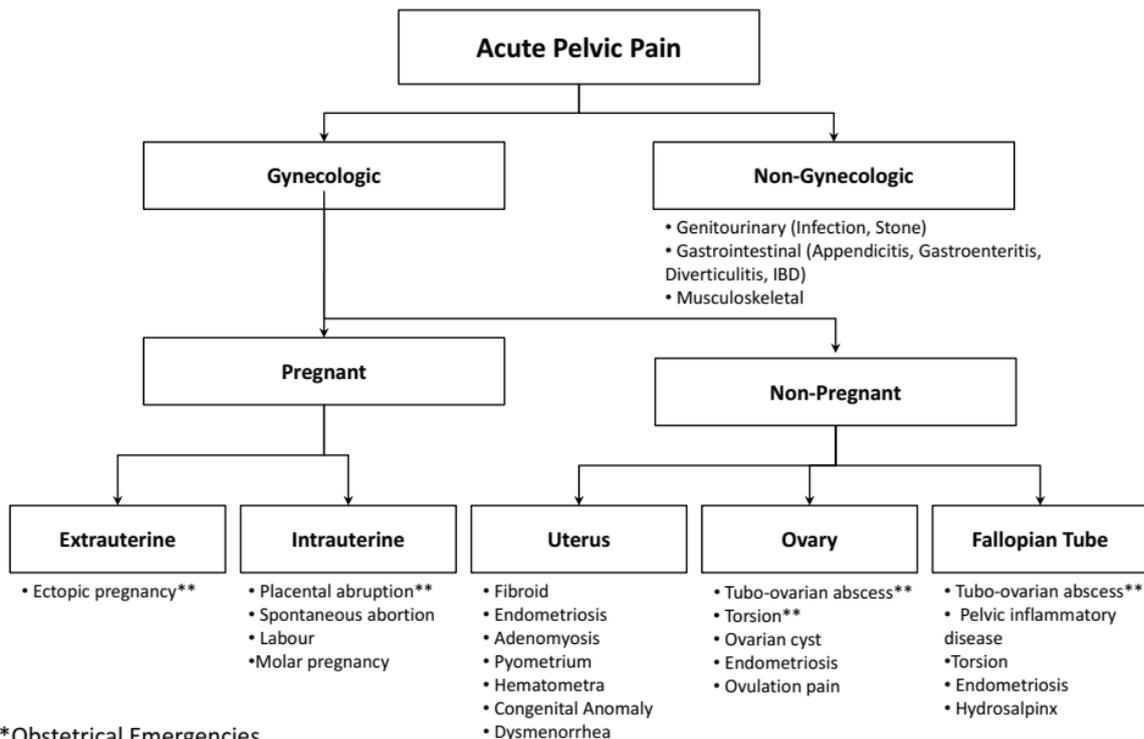
# Intrapartum Abnormal Fetal HR Tracing

Baseline



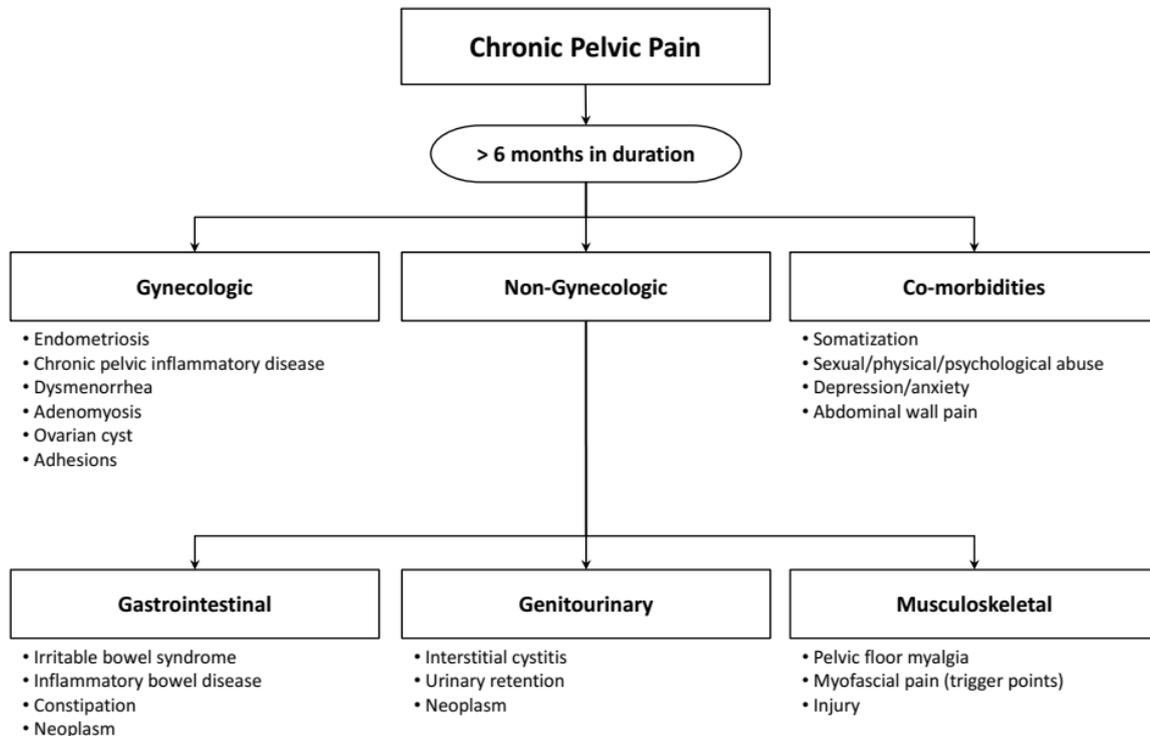
# Abnormal Genital Bleeding

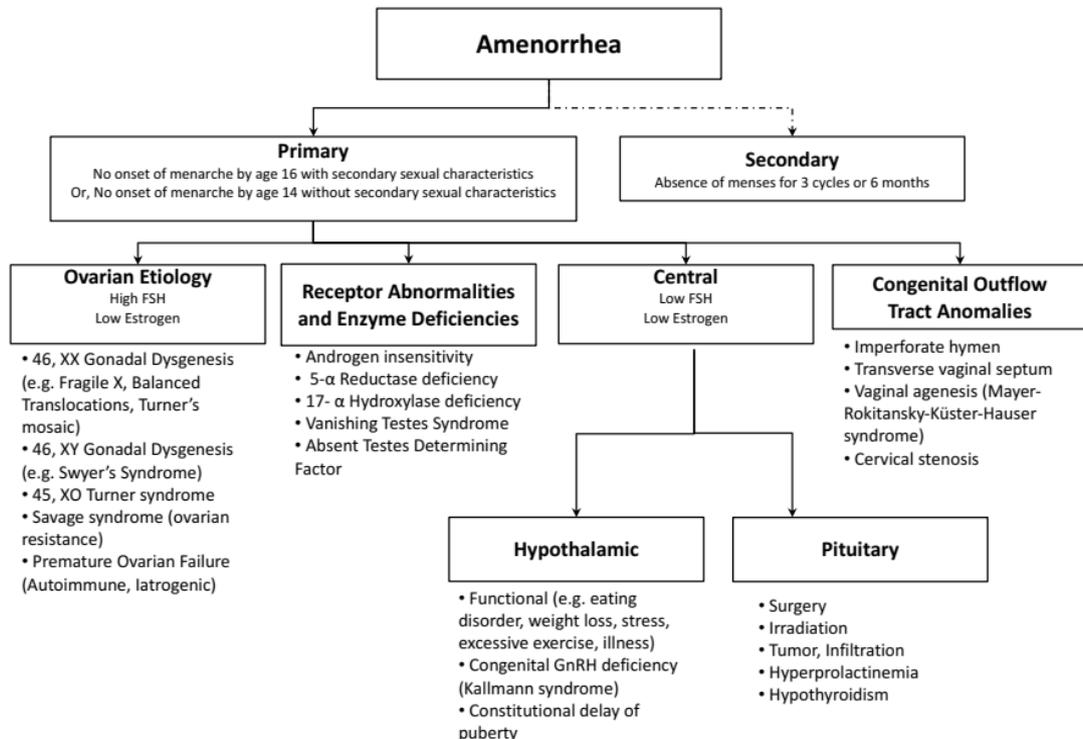




\*\*Obstetrical Emergencies

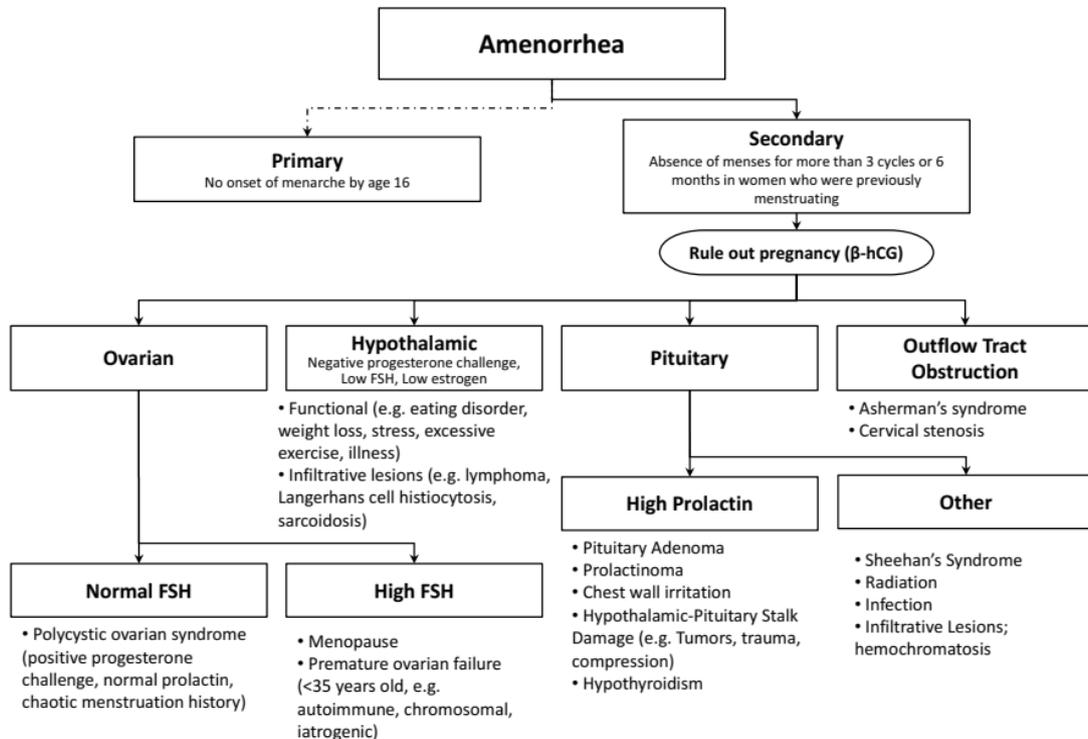
# Chronic Pelvic Pain

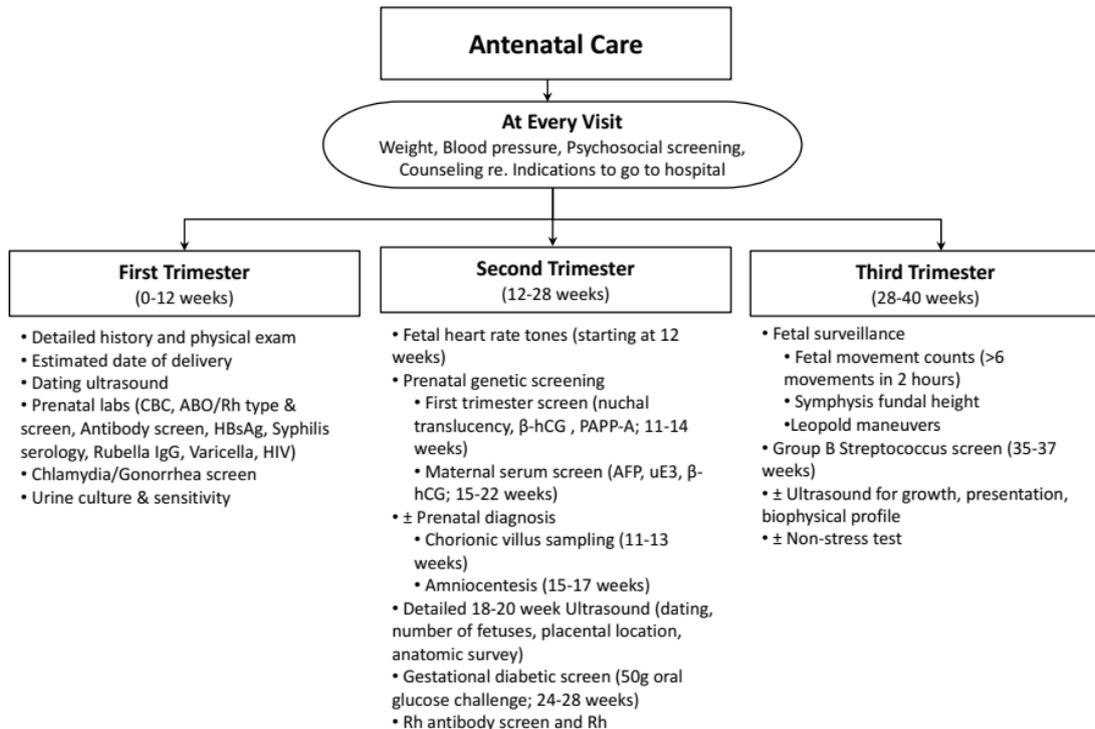




# Amenorrhea

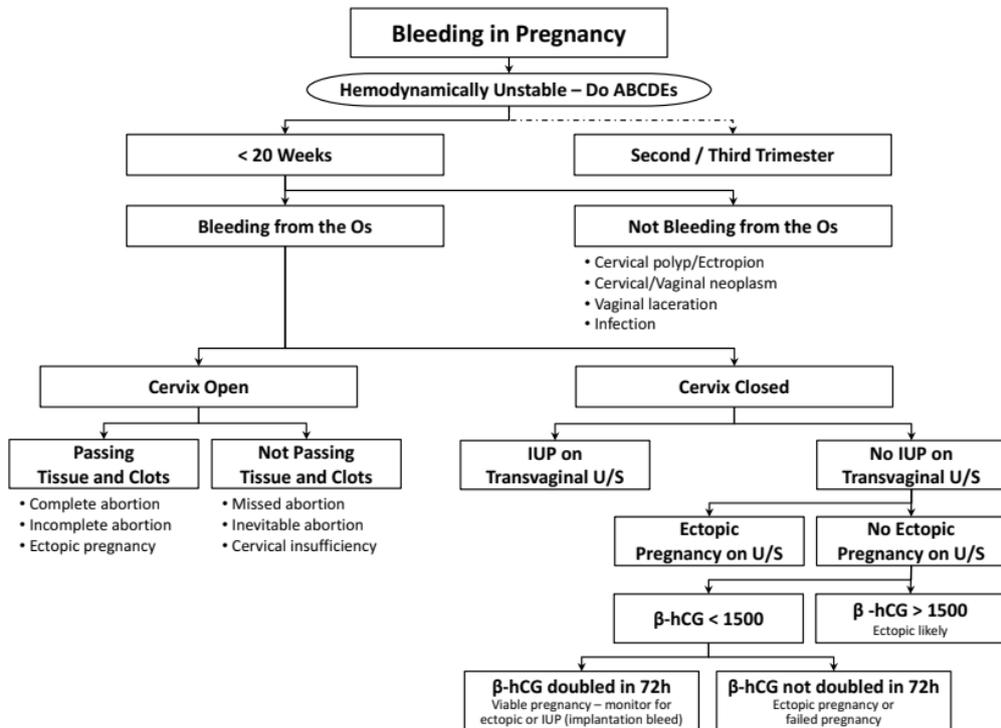
## Secondary

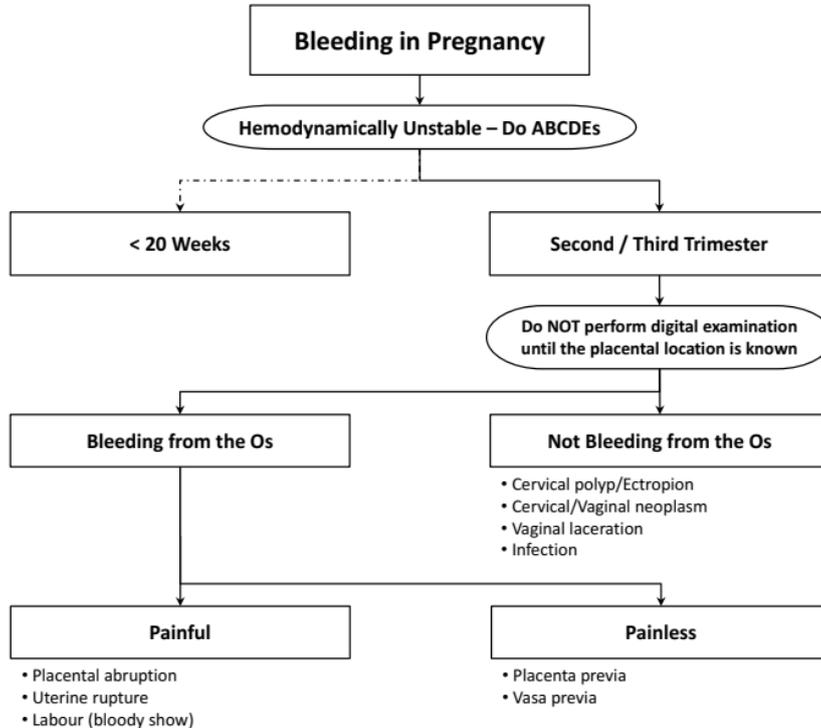




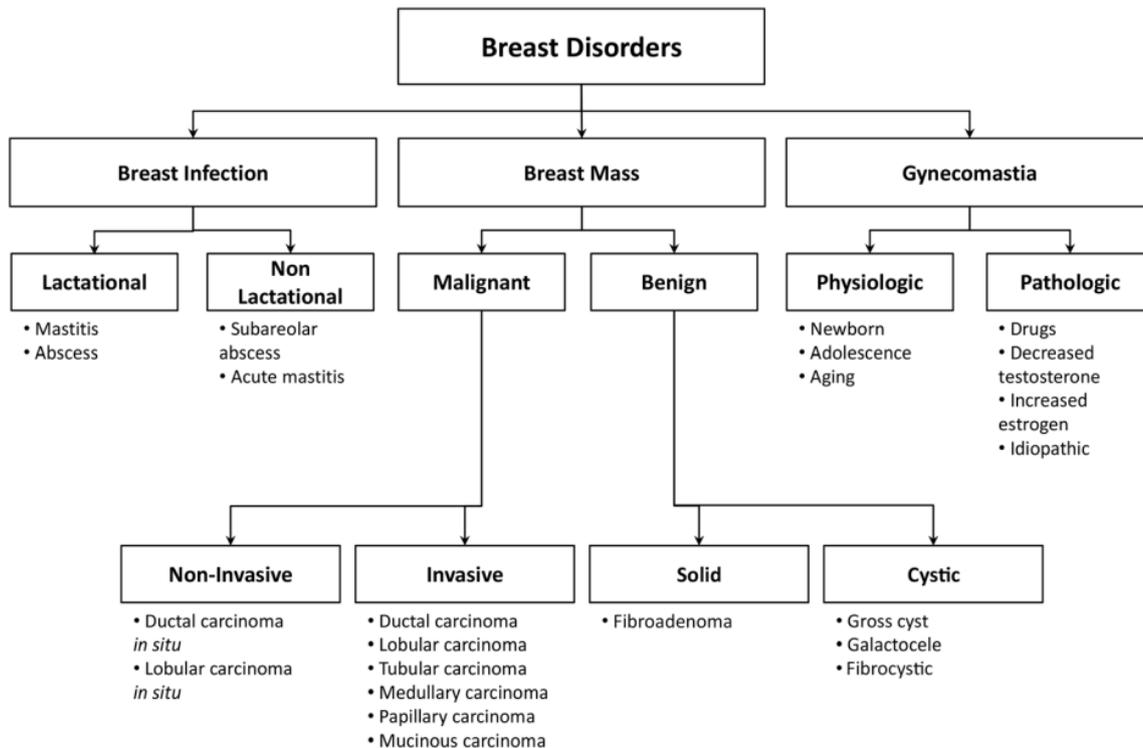
# Bleeding in Pregnancy

< 20 Weeks



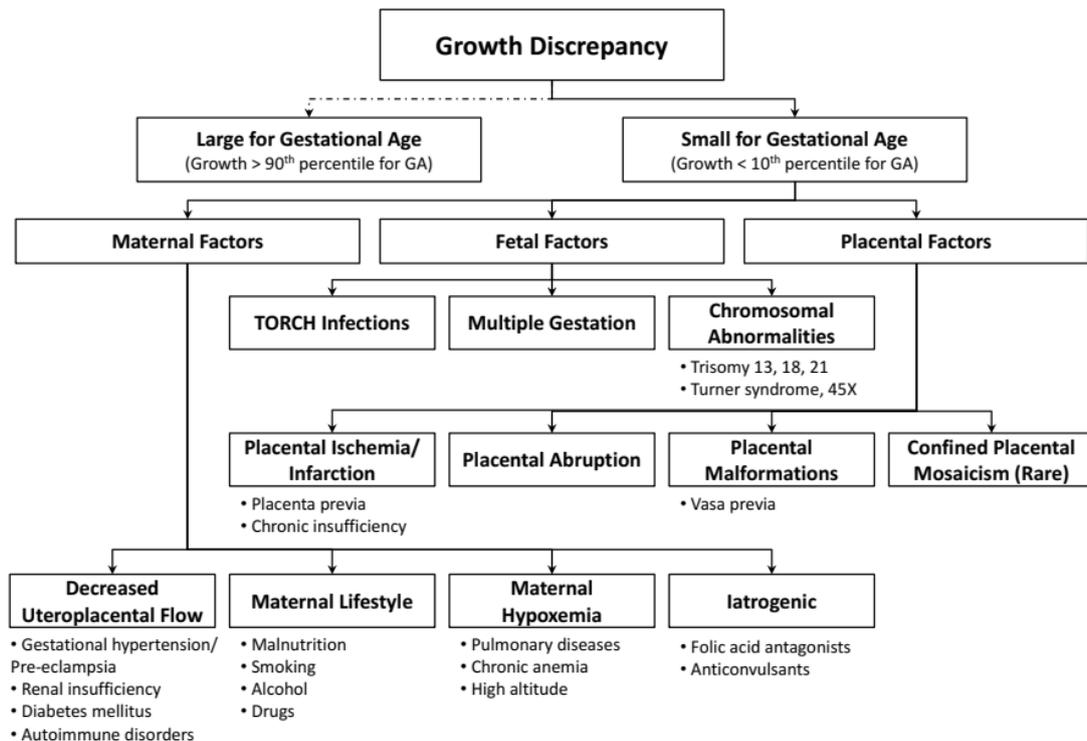


# Breast Disorder



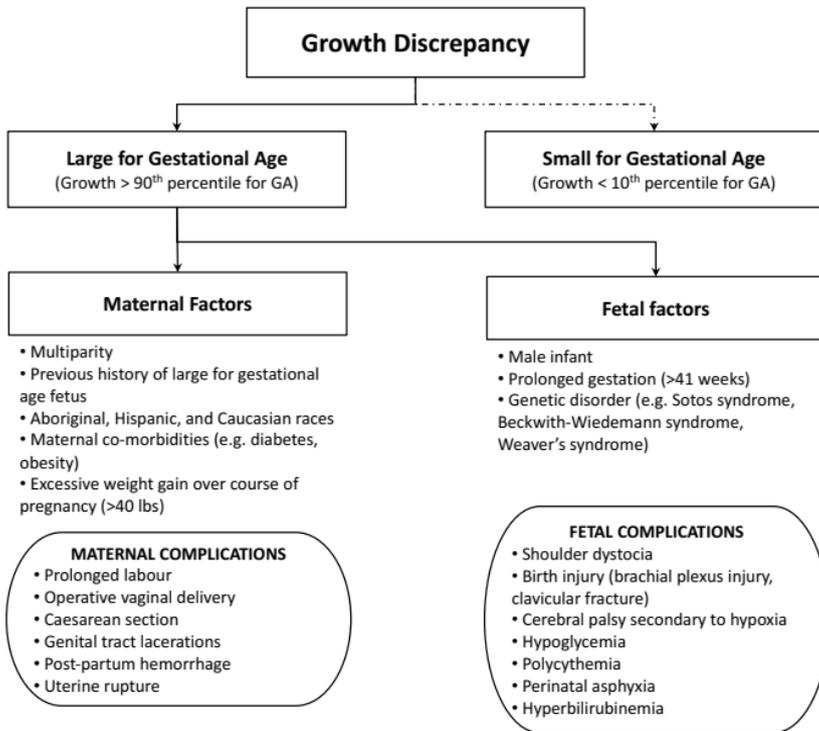
# Growth Discrepancy

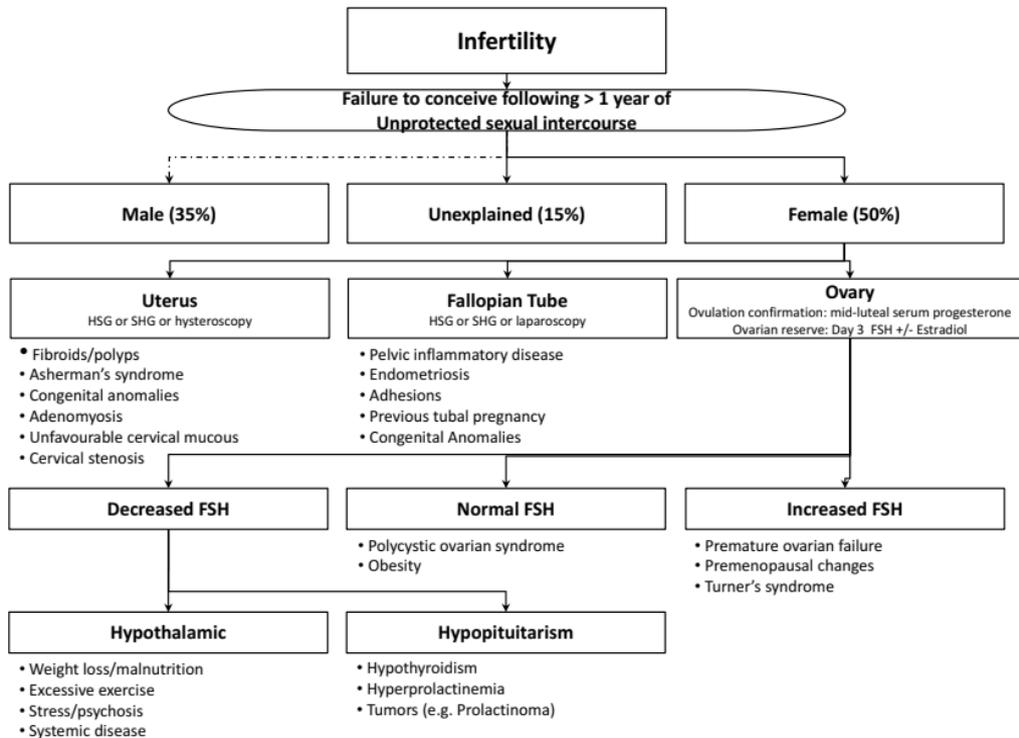
Small for Gestational Age / Intrauterine Growth Restriction



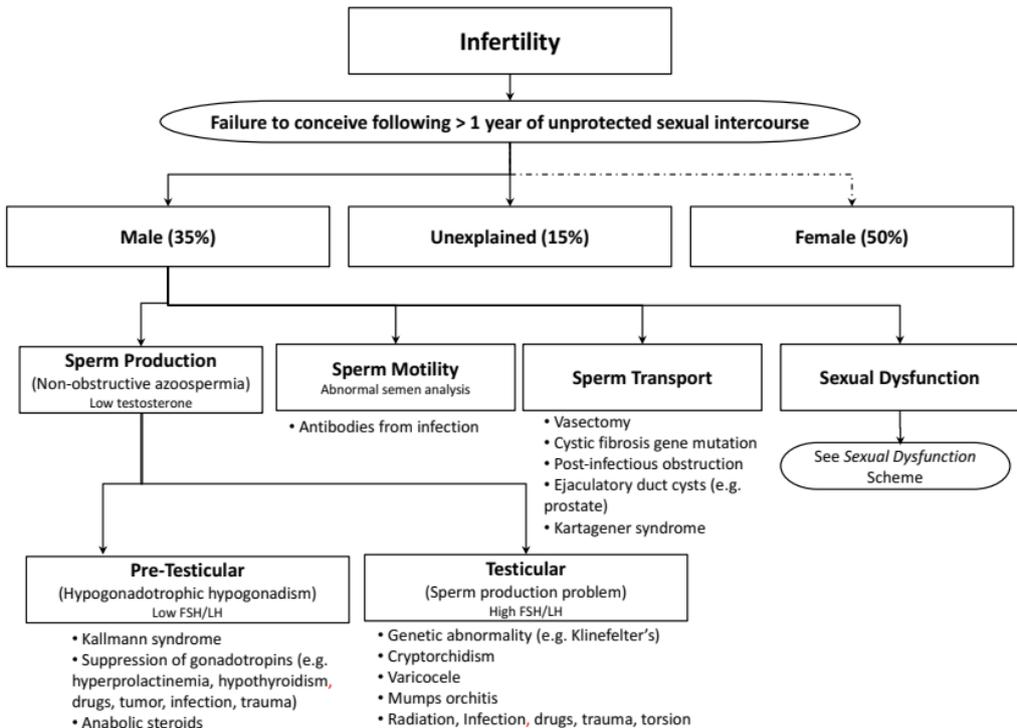
# Growth Discrepancy

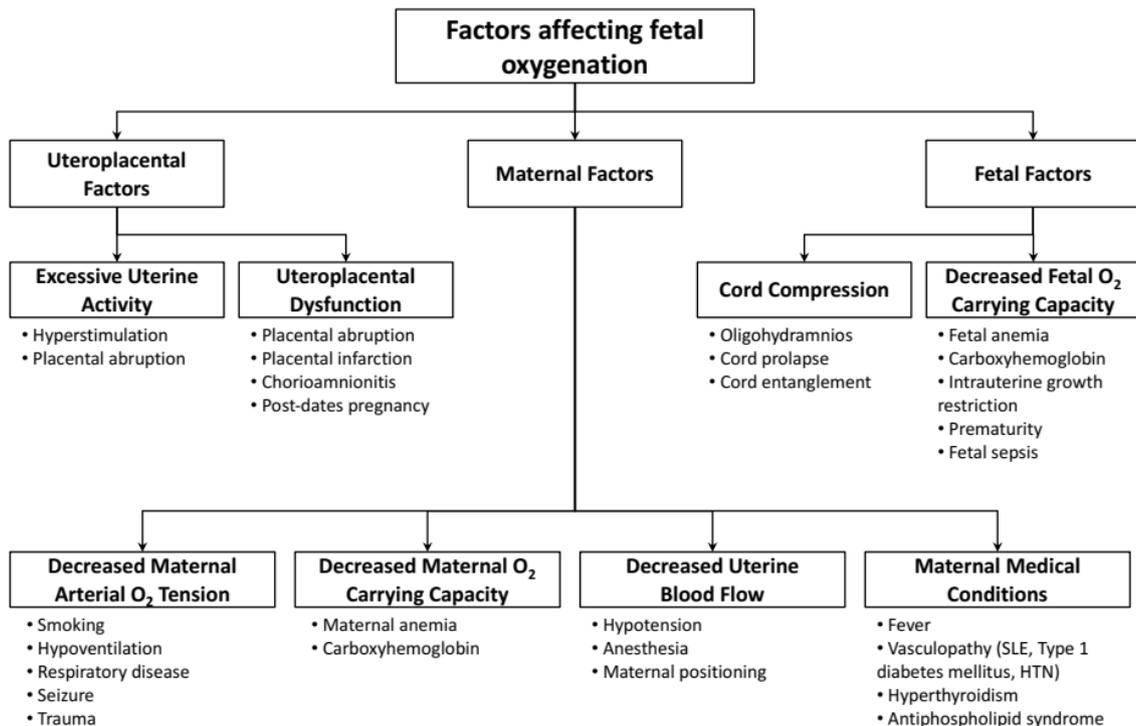
Large for Gestational Age



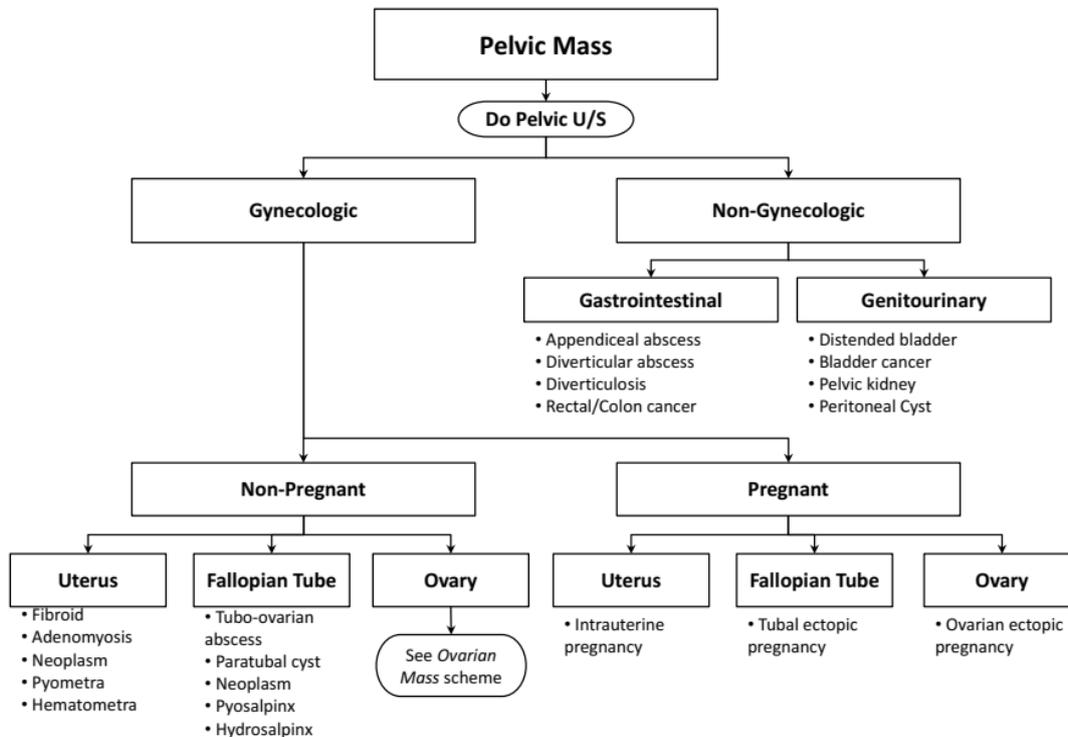


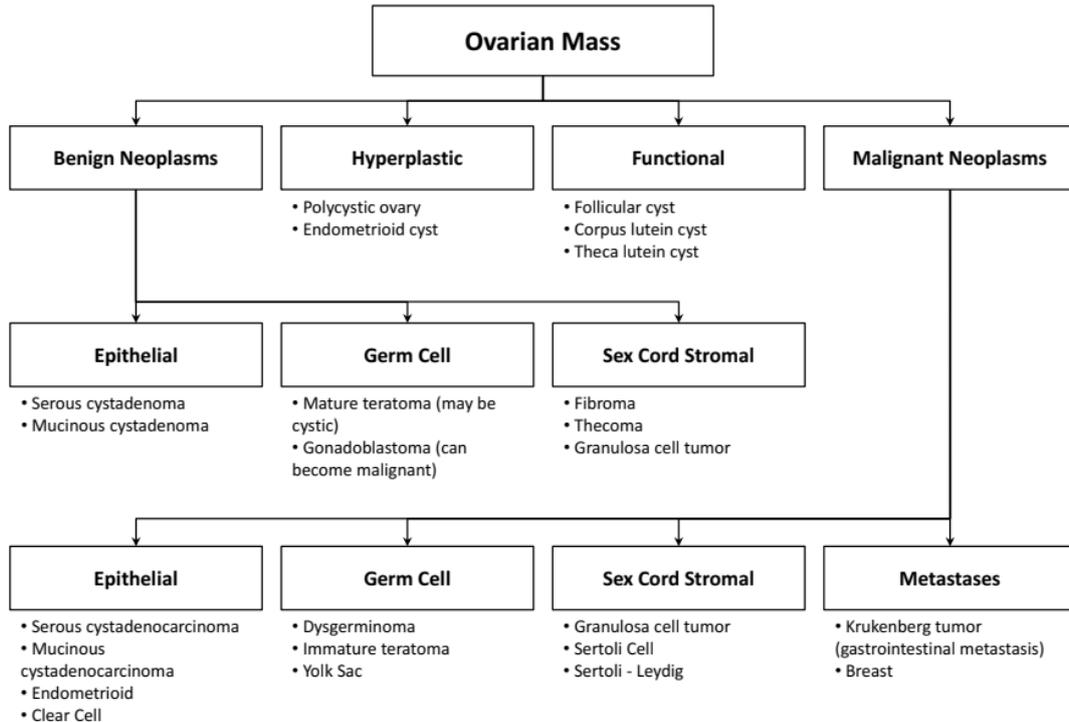
# Infertility (Male)



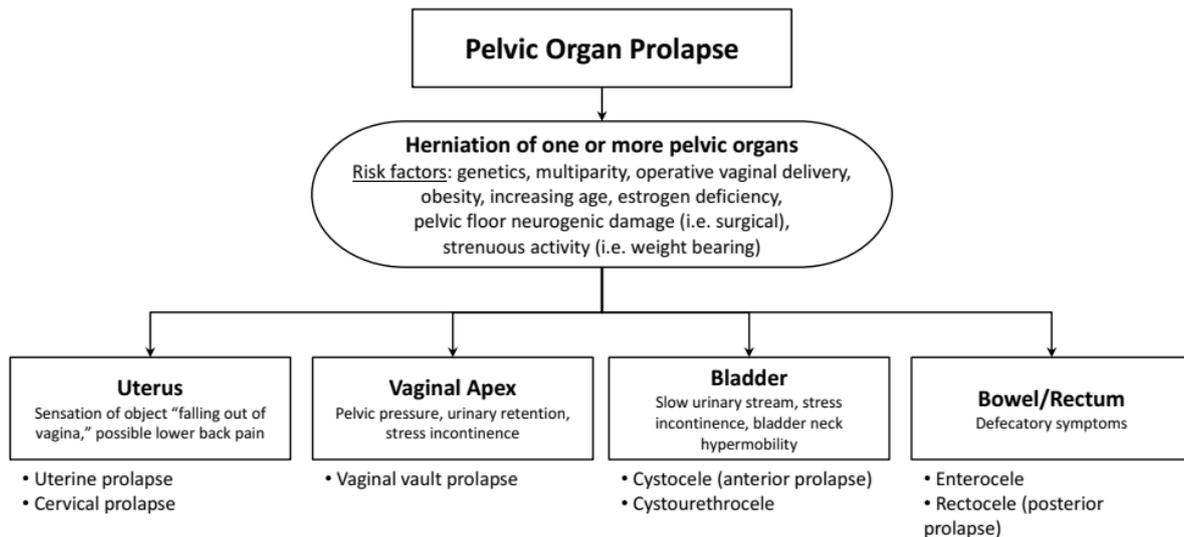


# Pelvic Mass





# Pelvic Organ Prolapse



6 W's for causes of PPF

Wind: pneumonia, atelectasis

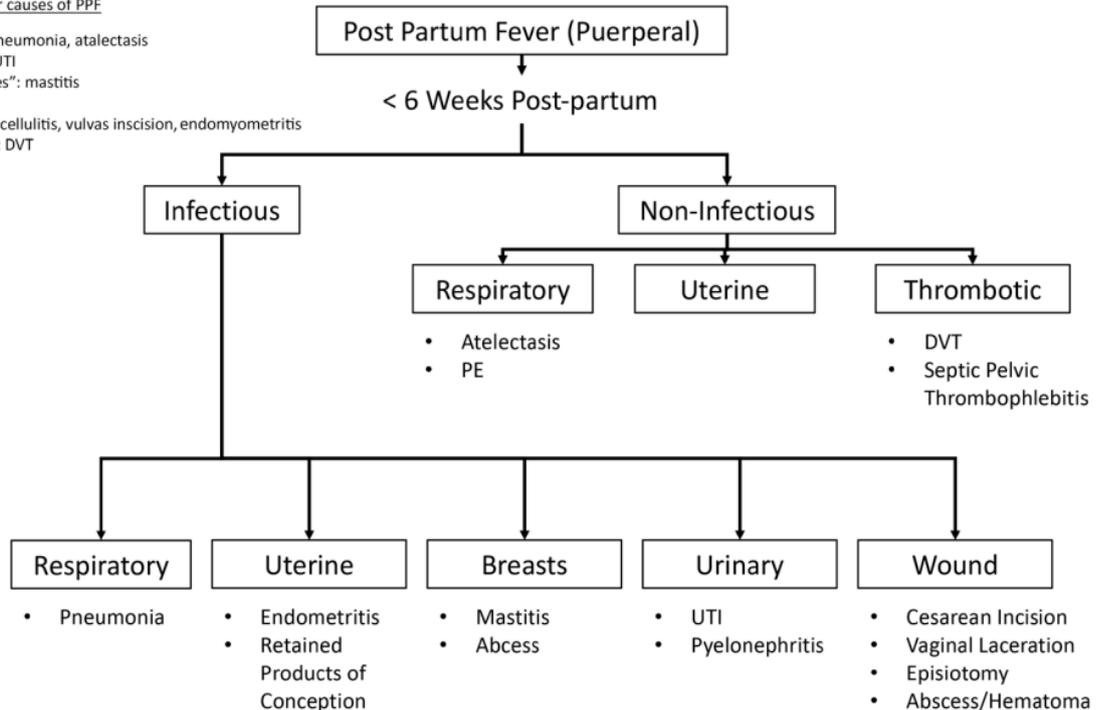
Water: UTI

"Woobies": mastitis

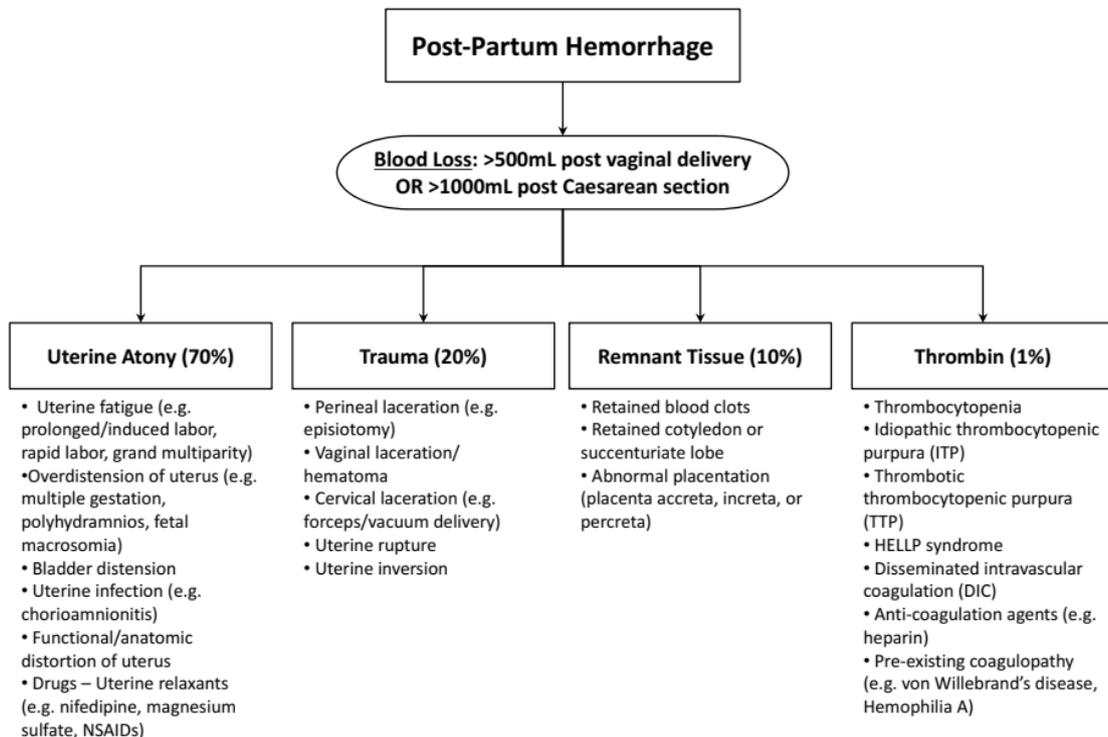
Womb

Wound: cellulitis, vulvas incision, endomyometritis

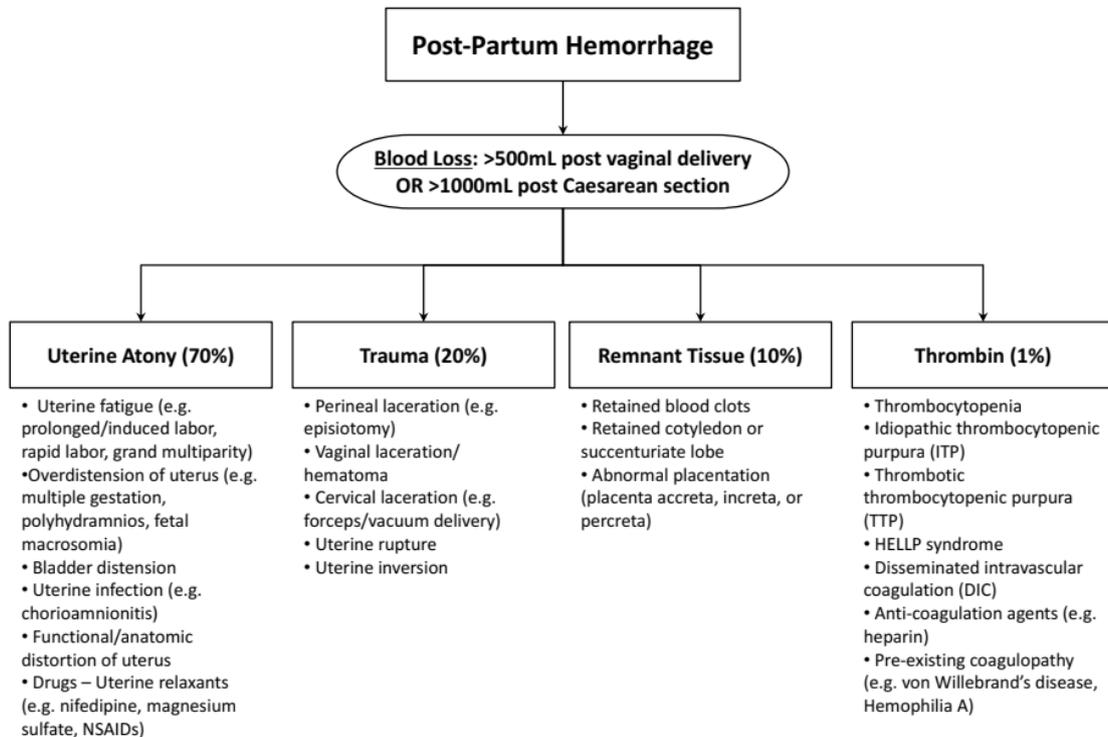
Walking: DVT



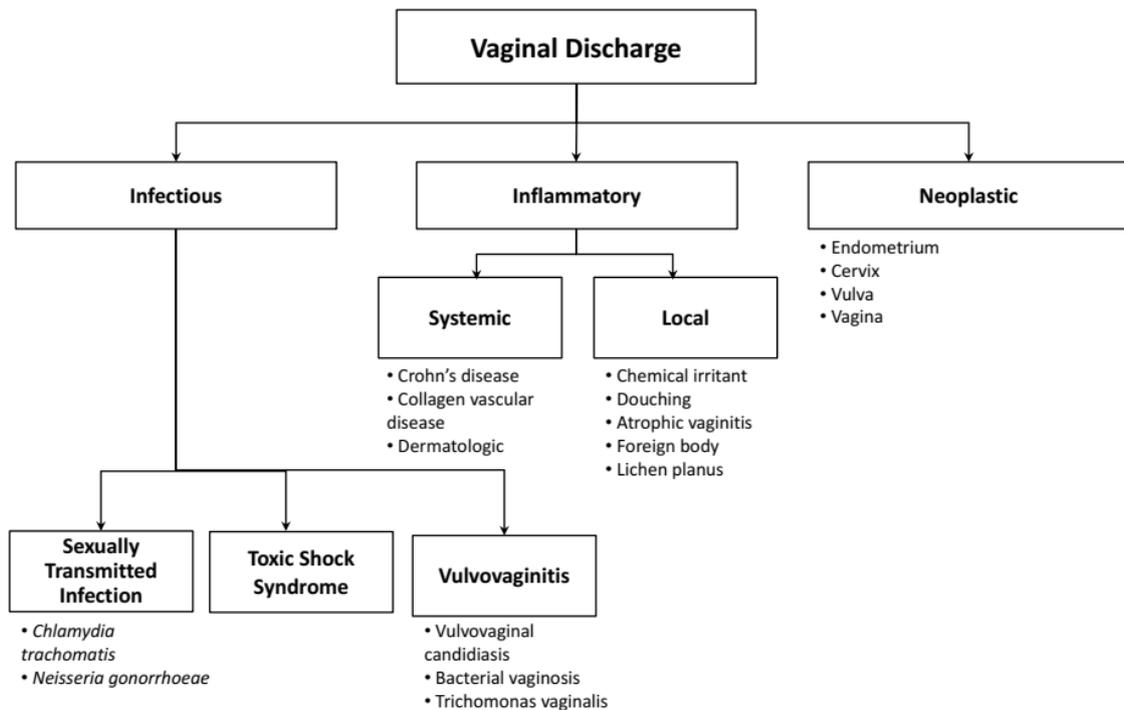
# Post-Partum Hemorrhage



# Recurrent Pregnancy Loss



# Vaginal Discharge





# Dermatologic

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*Submaxillary triangle*  
*Hyoid bone*  
*Thyroid cartilage*  
*Cricoid cartilage*

---

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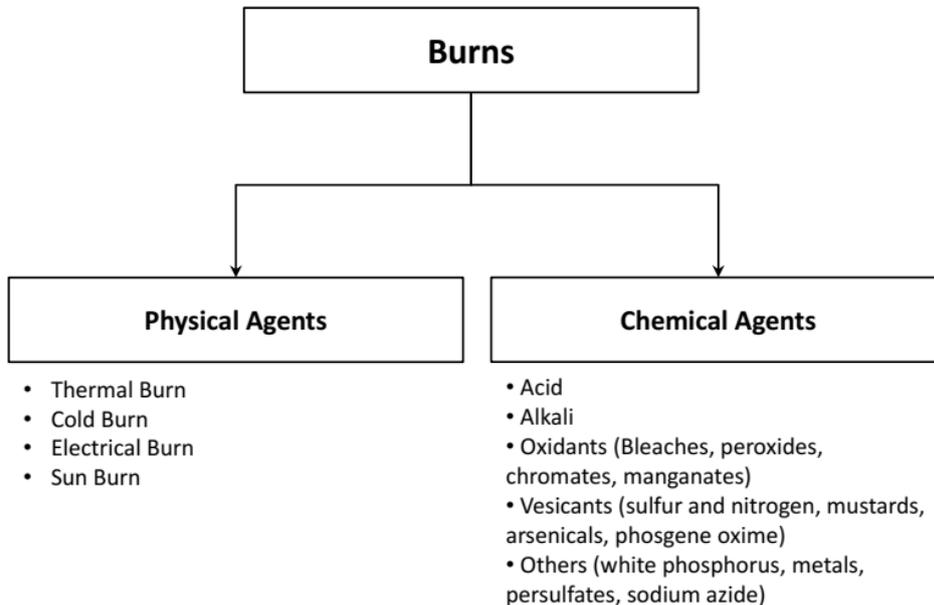
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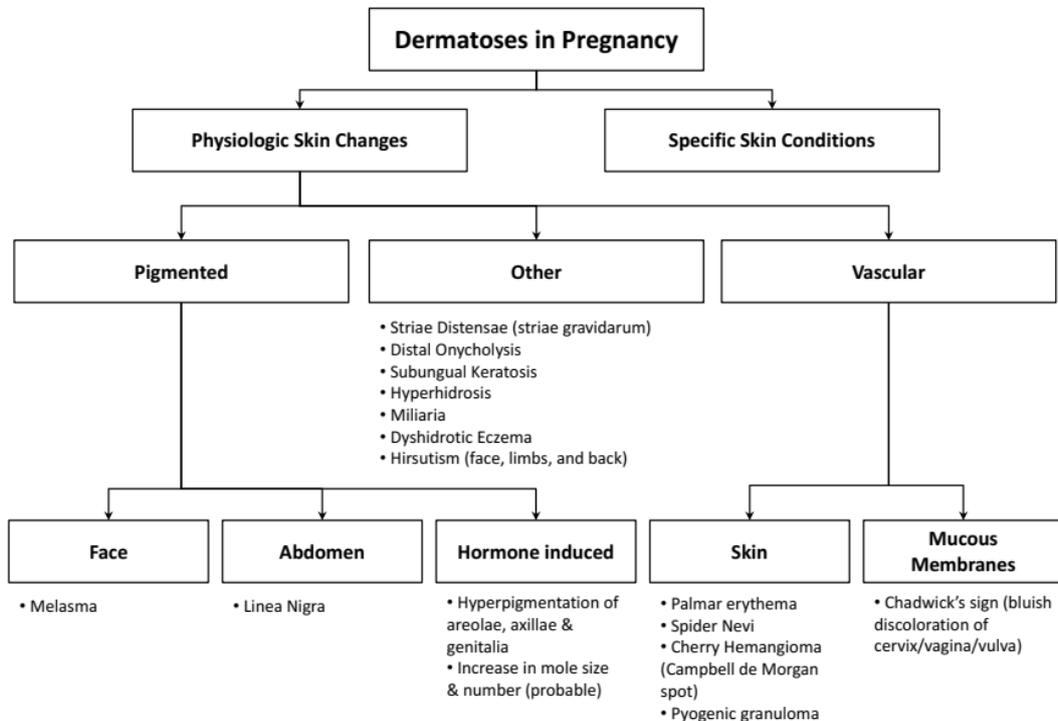
Dr. Laurie Parsons



# Burns



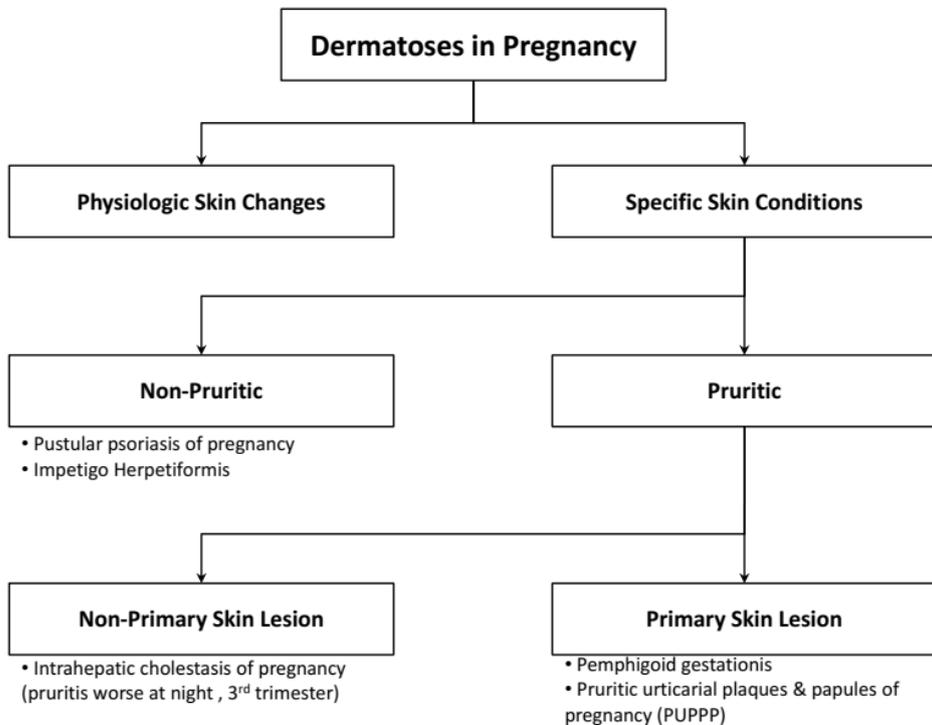
∴ Parkland formula for fluid resuscitation:  
∴  $4\text{cc} \times \text{Weight (kg)} \times \% \text{TBSA burn}$   
∴

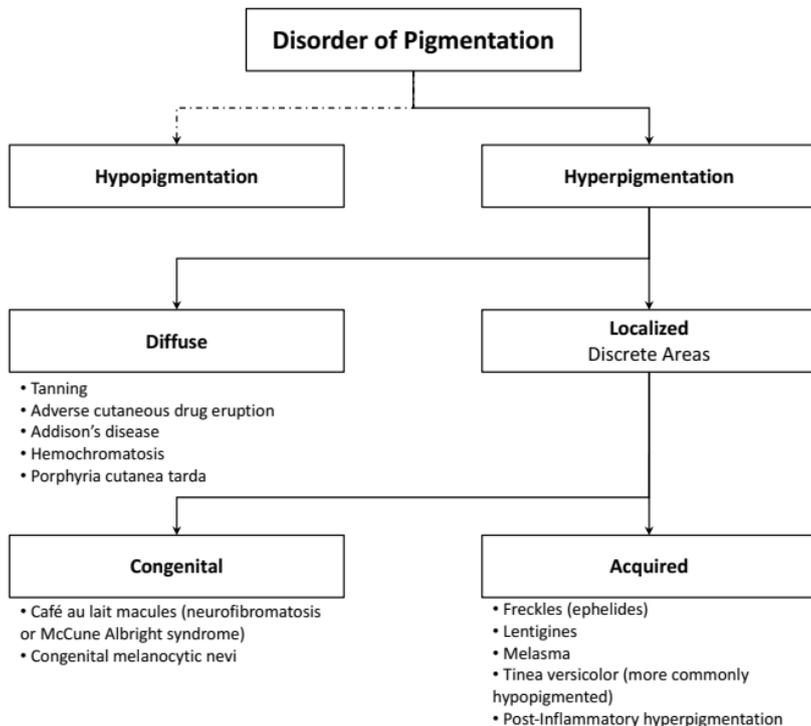


# Dematoses in Pregnancy



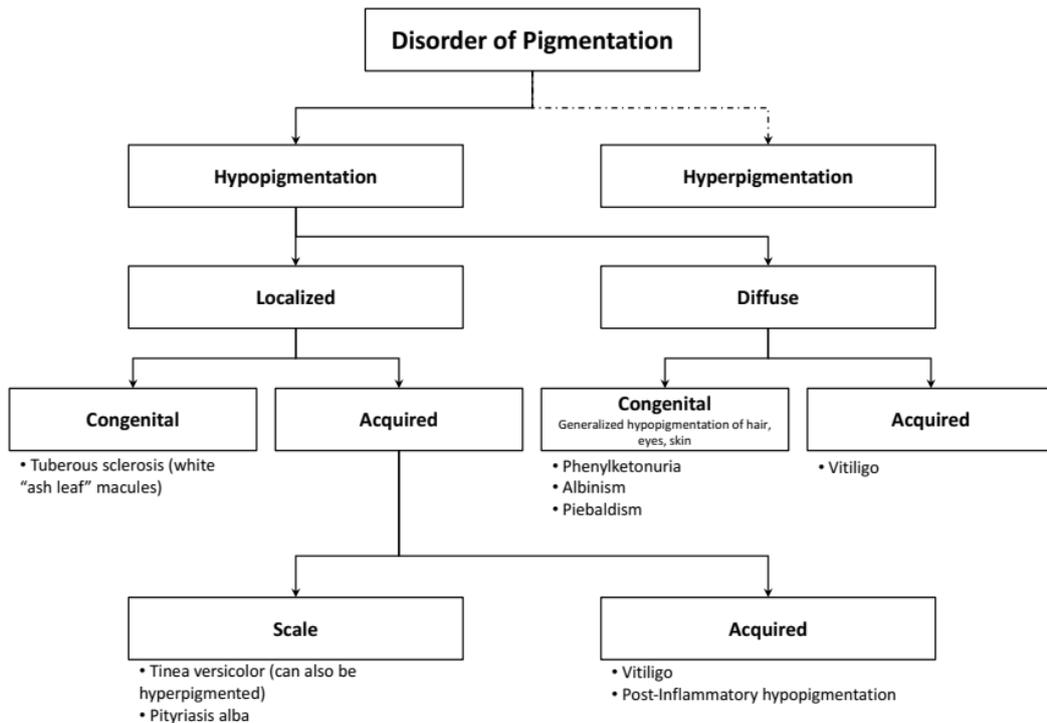
## Specific Skin Conditions

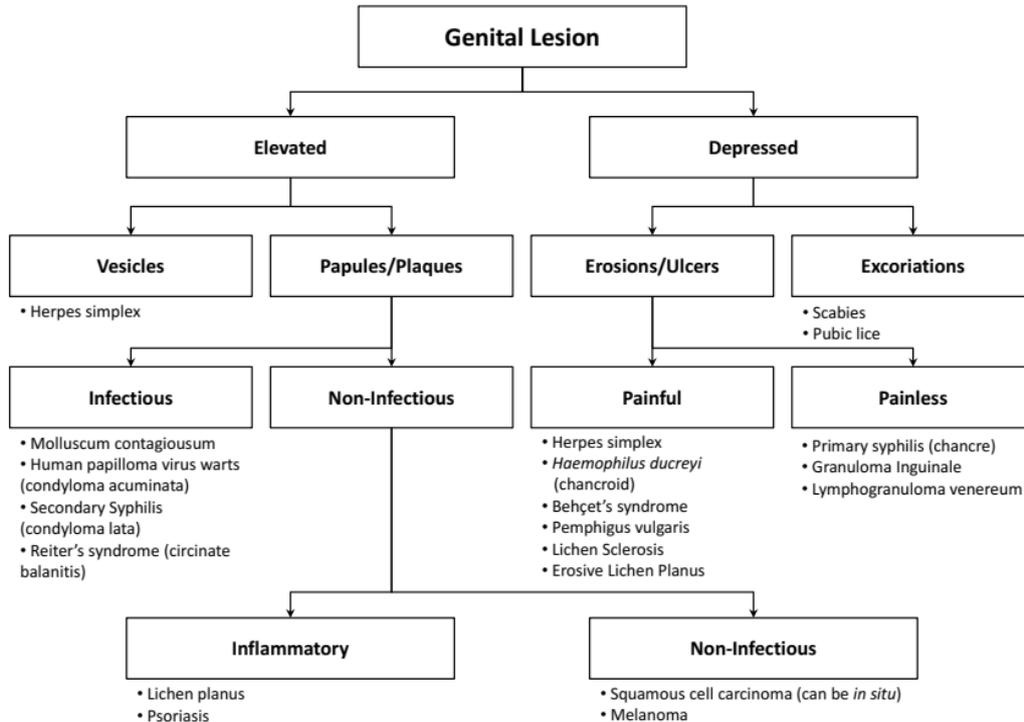




# Disorders of Pigmentations

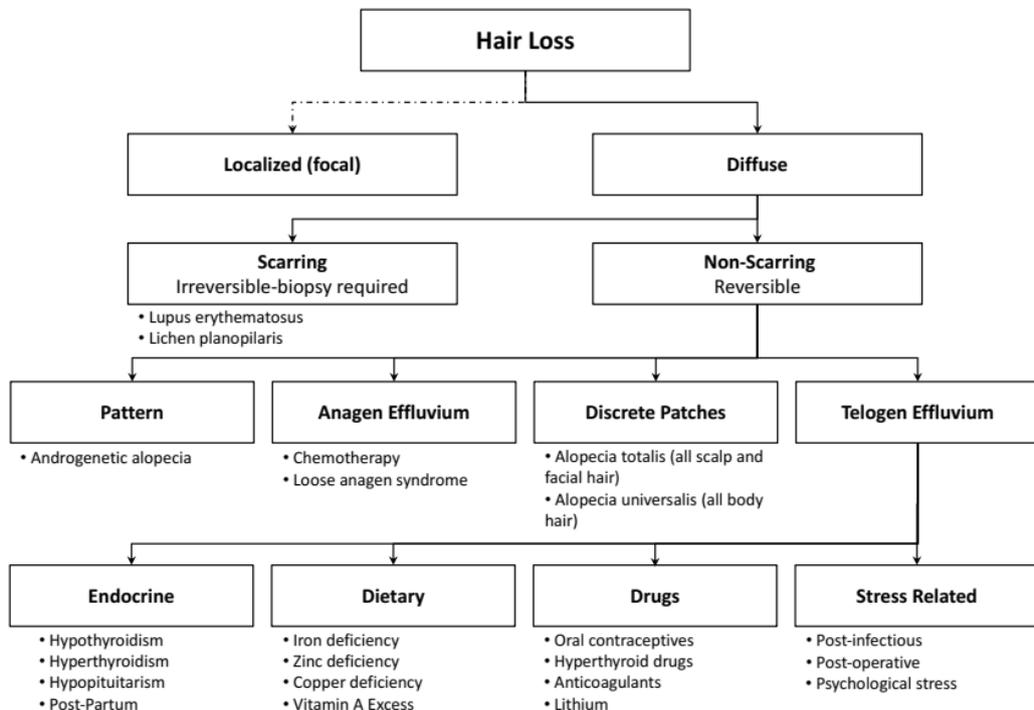
## Hypopigmentation

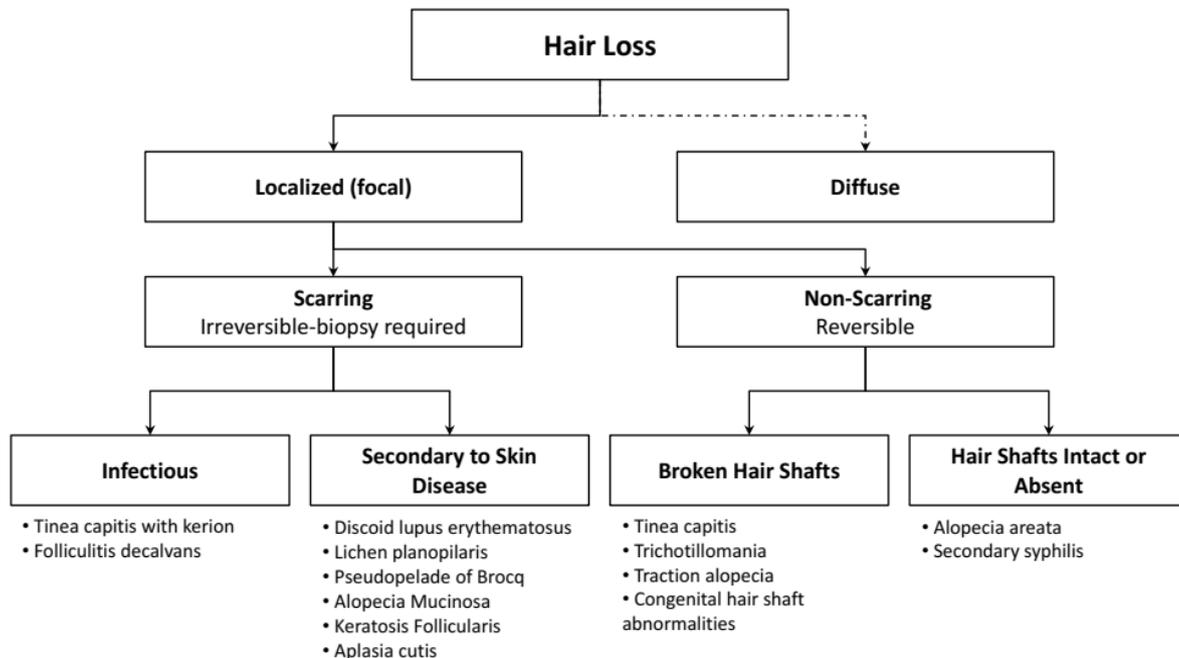




# Hair Loss (Alopecia)

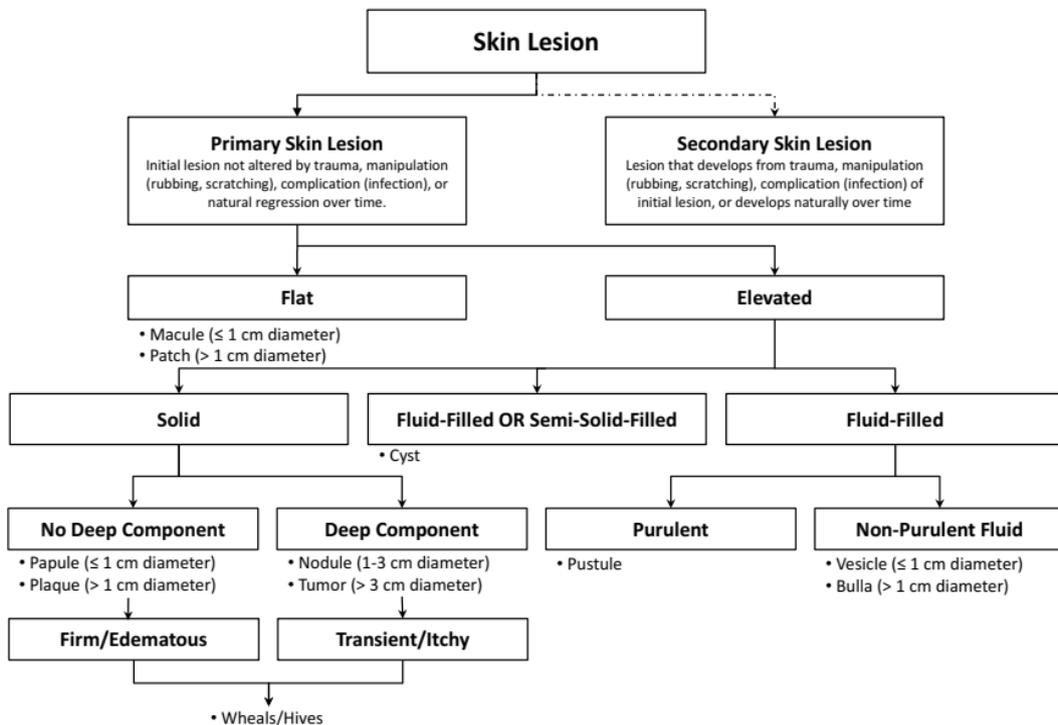
Diffuse

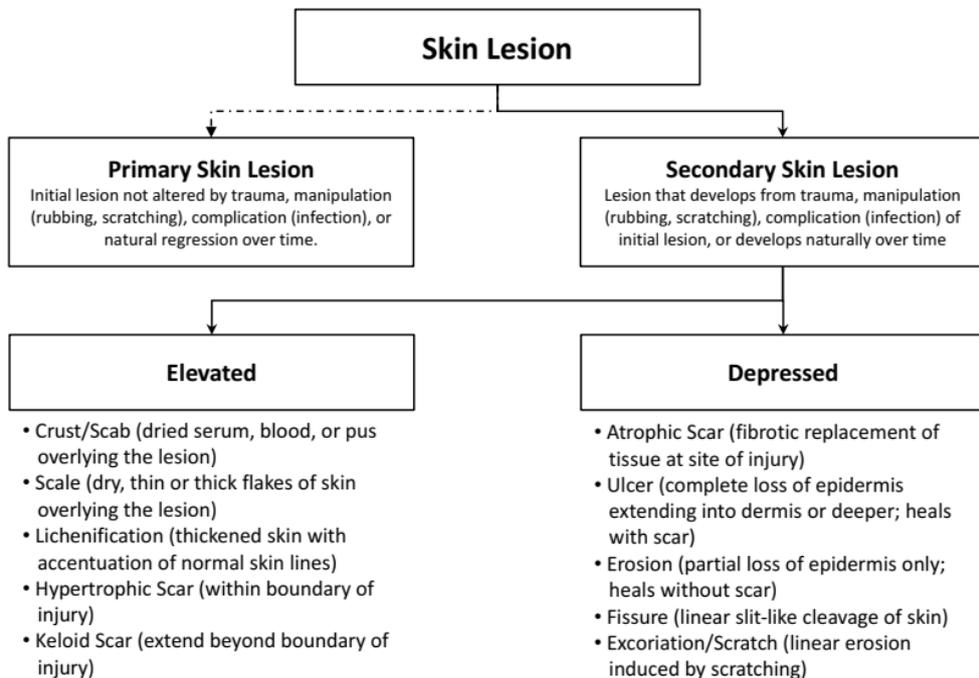




# Morphology of Skin Lesions

## Primary Skin Lesions

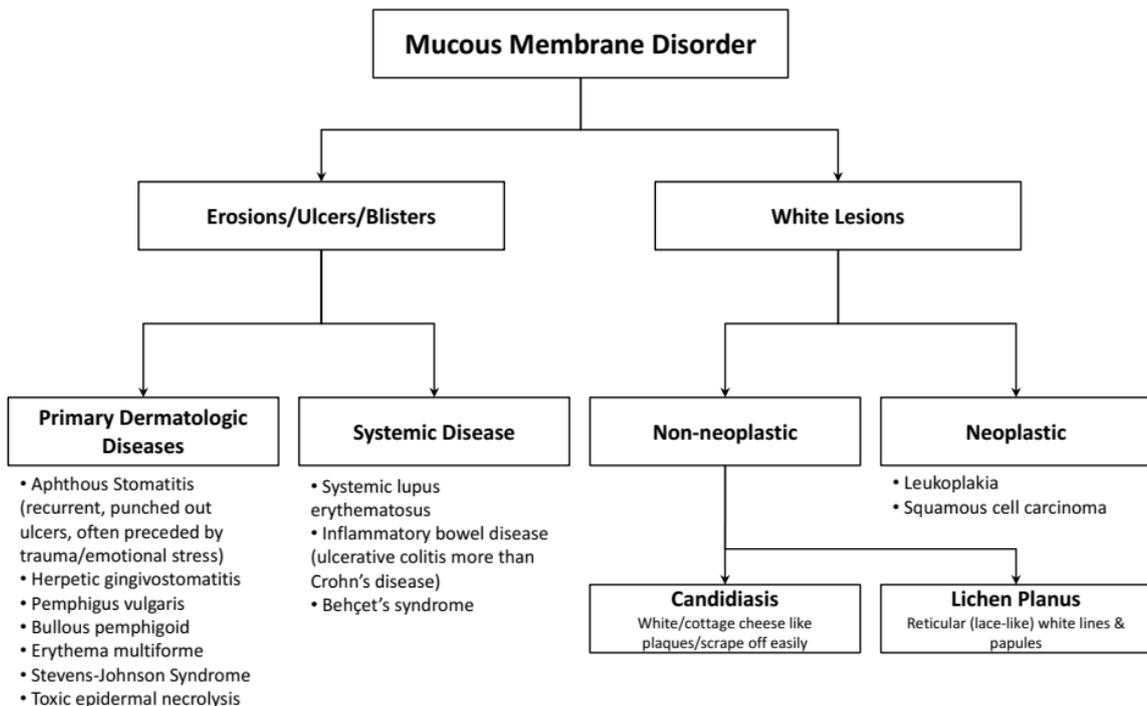


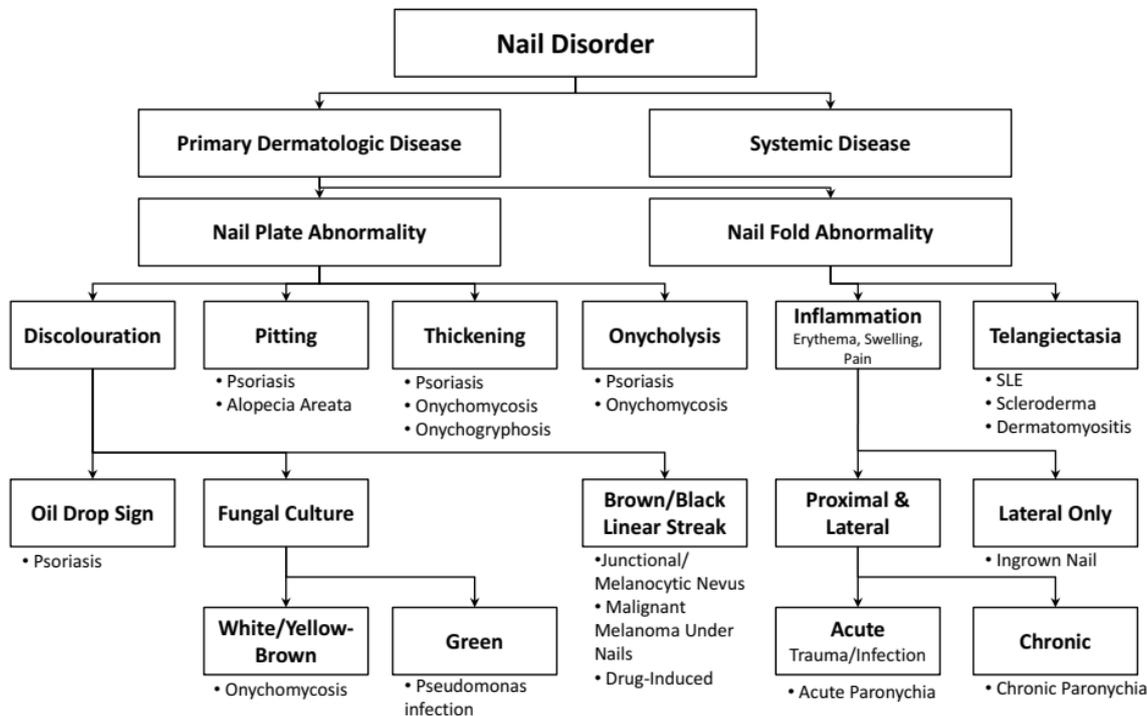


# Mucous Membrane Disorder



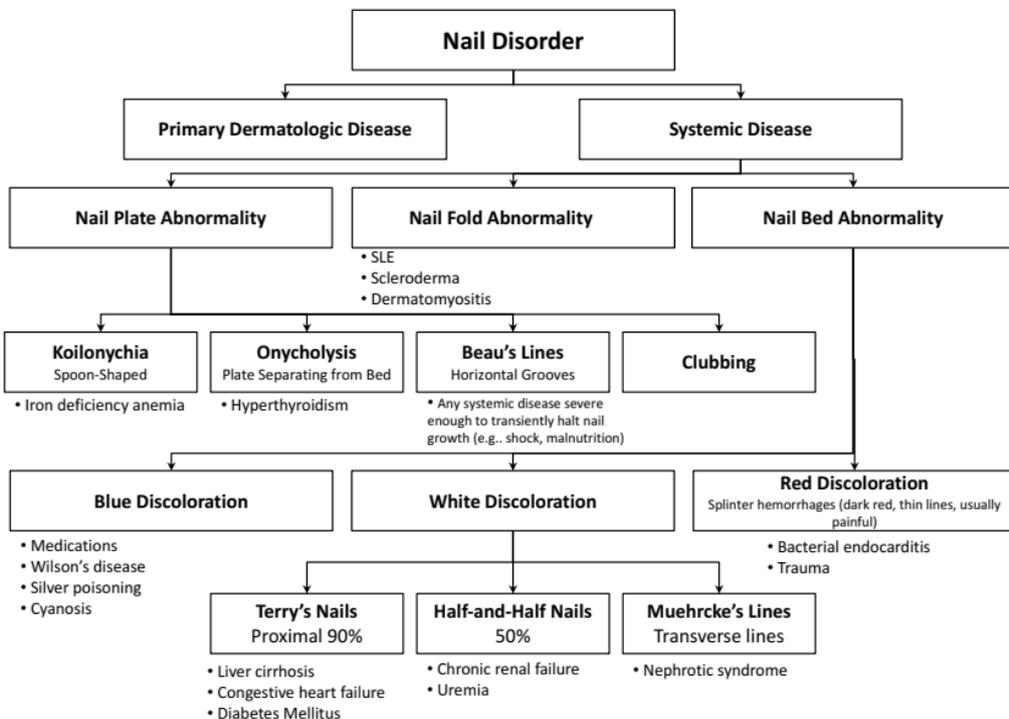
Oral Cavity

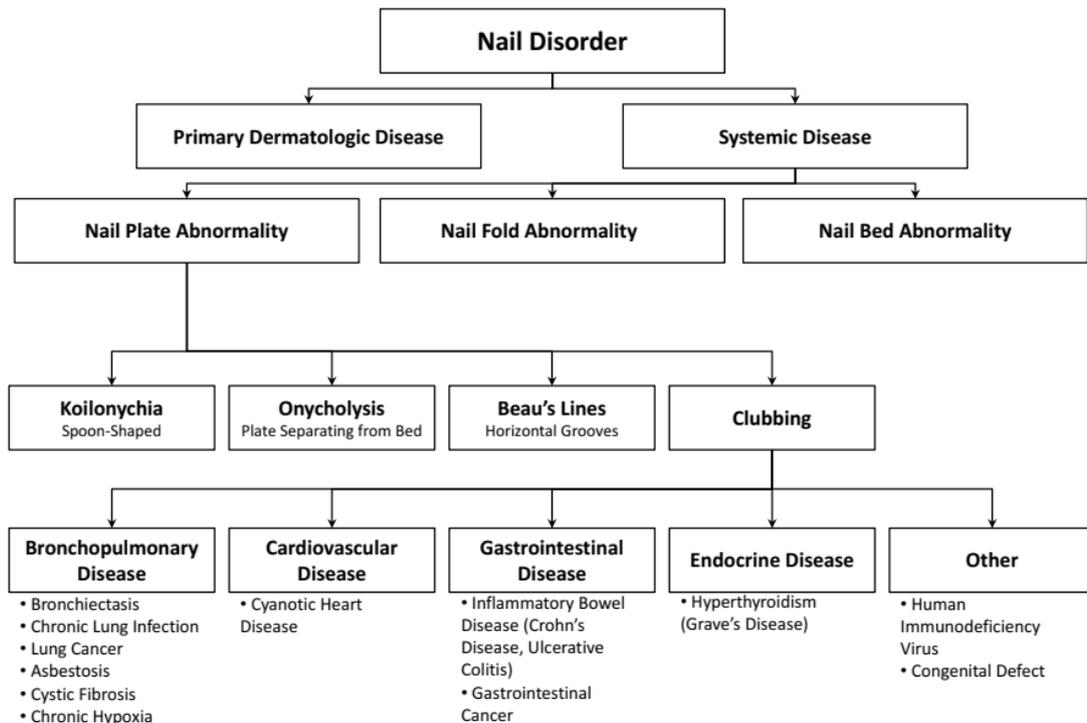




# Nail Disorders

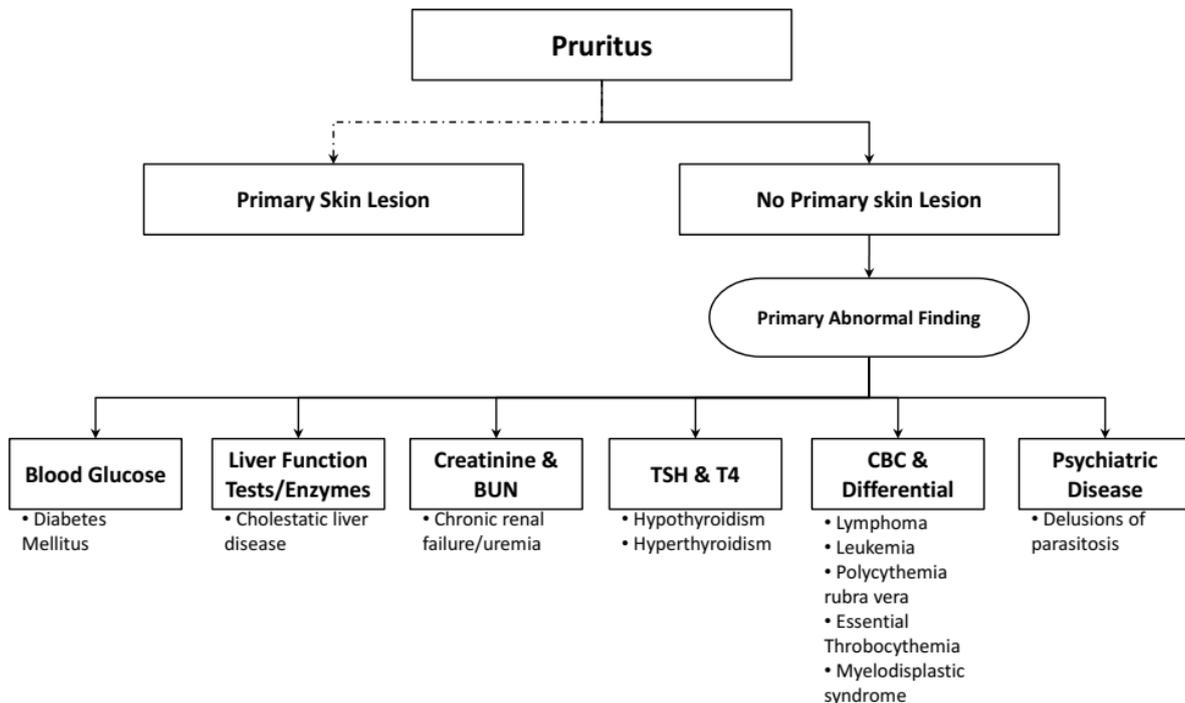
## Systemic Disease

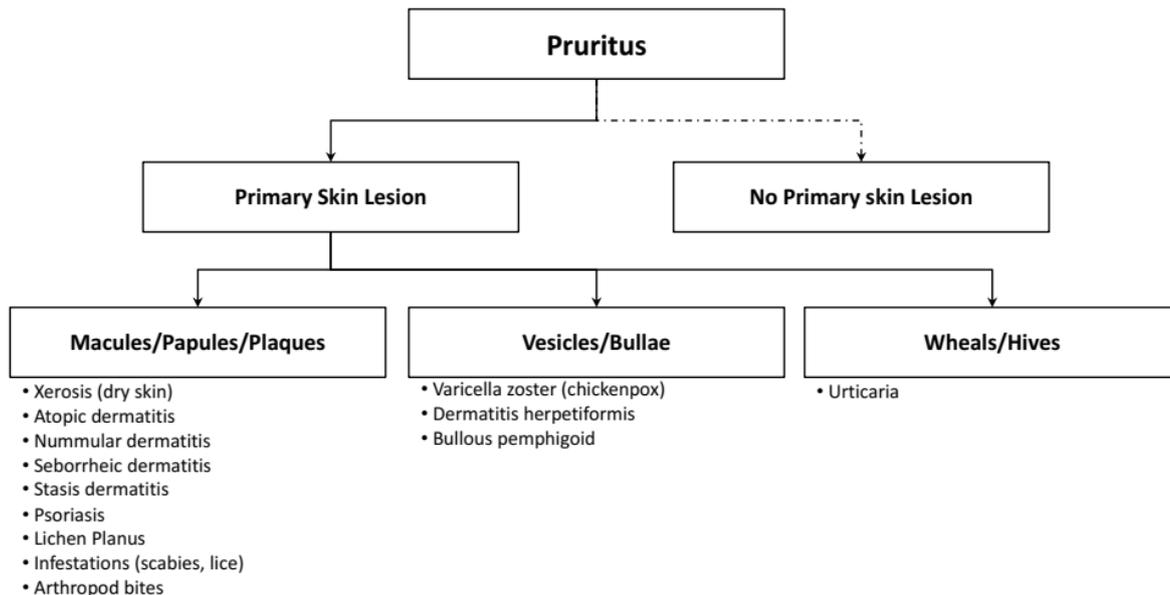




# Pruritus

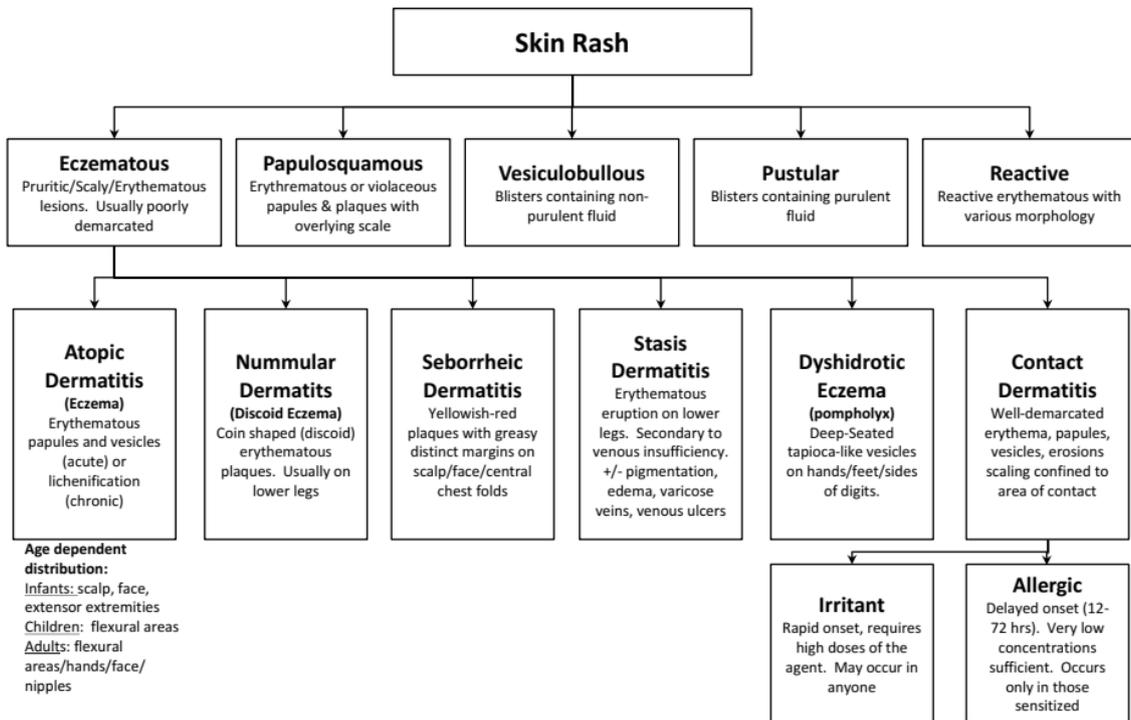
No Primary Skin Lesion

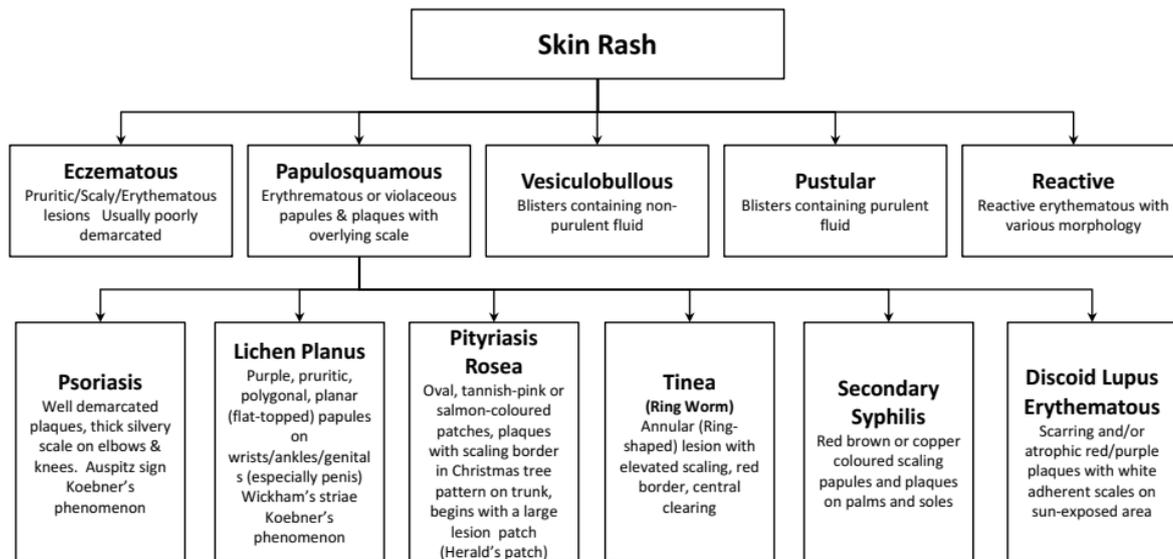




# Skin Rash

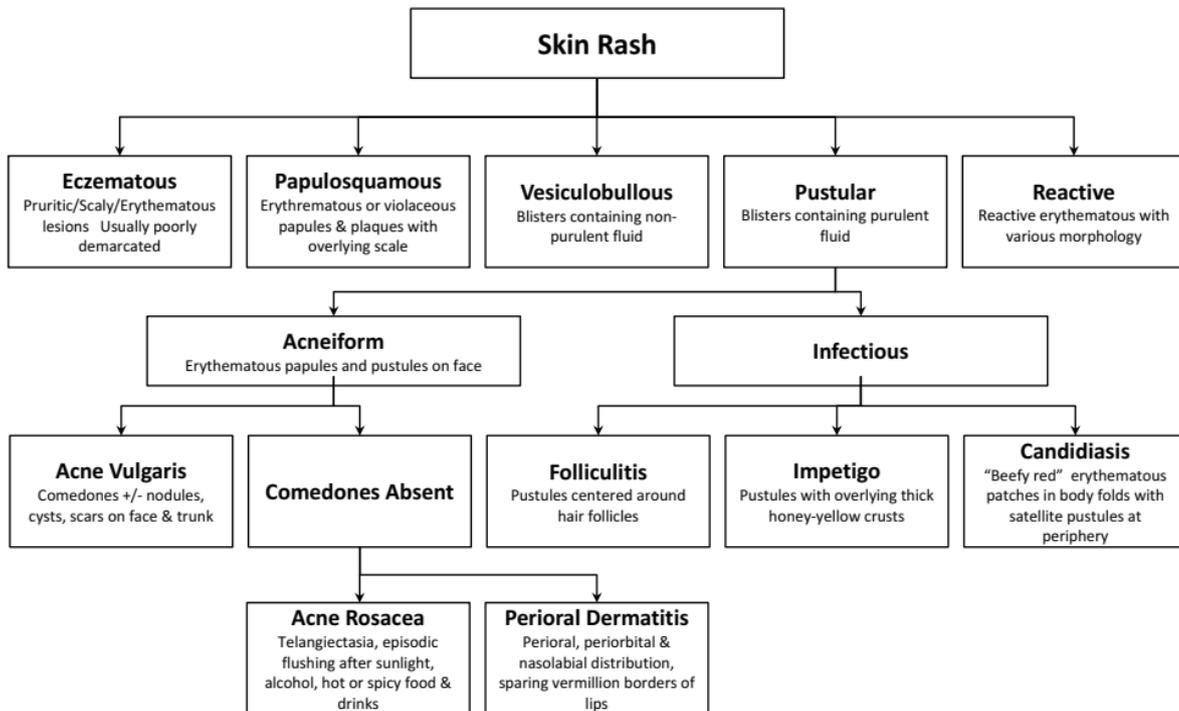
## Eczematous

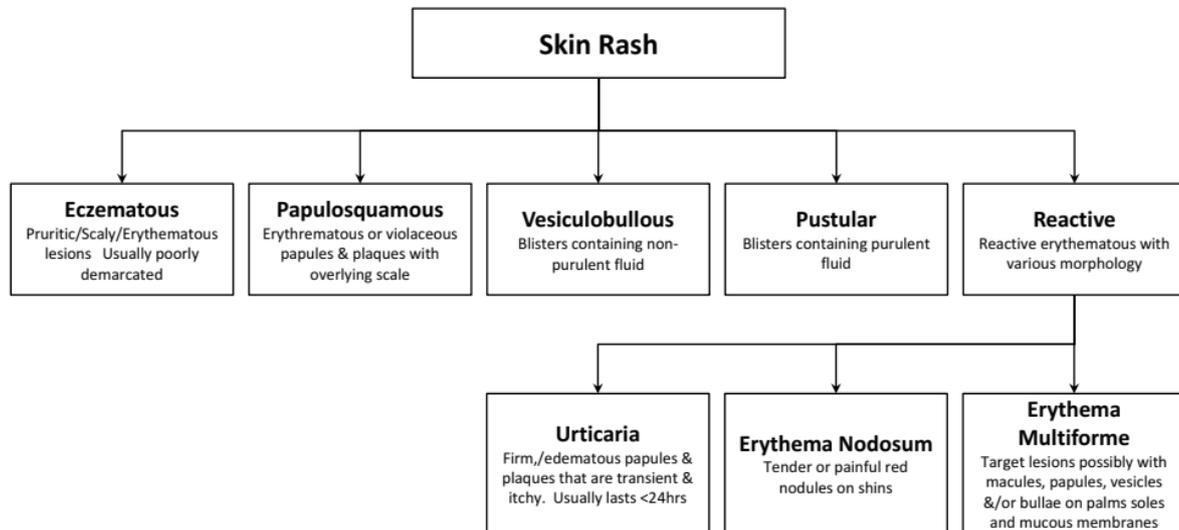




# Skin Rash

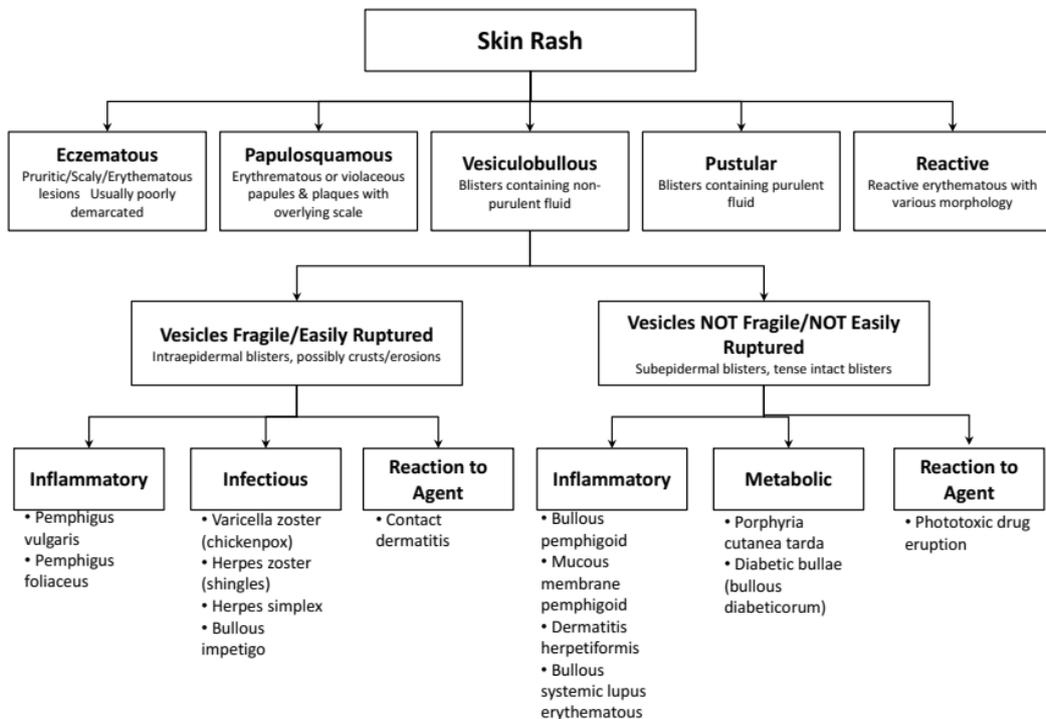
## Pustular



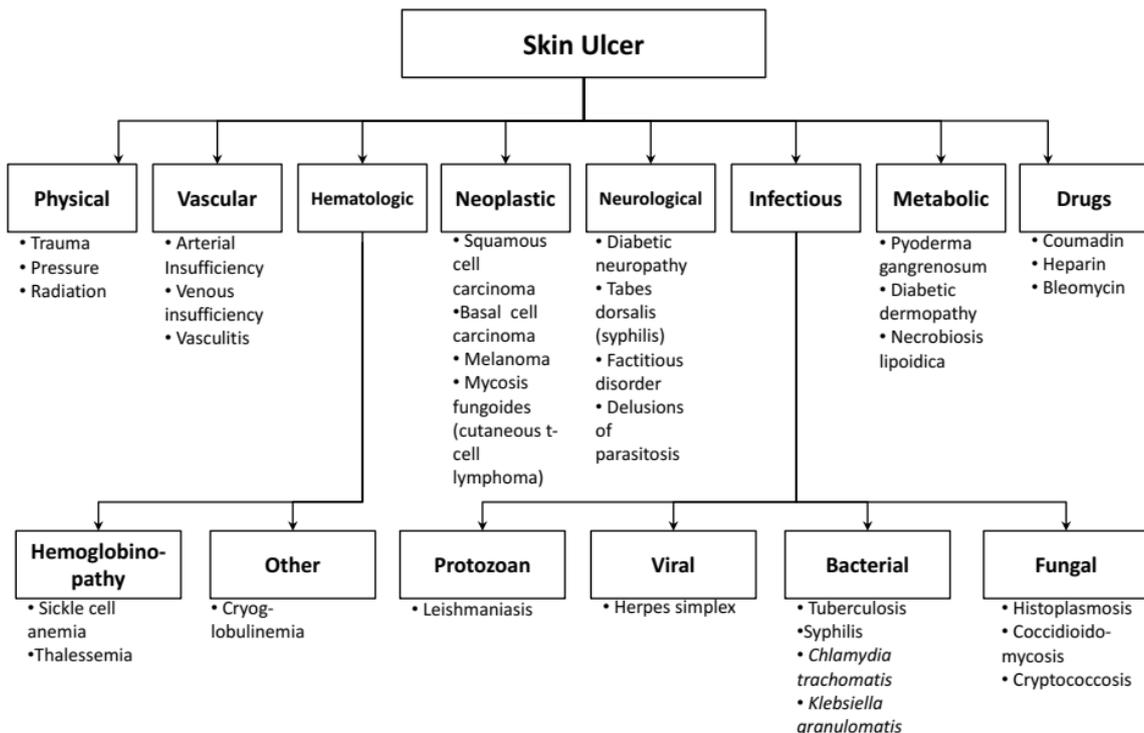


# Skin Rash

## Vesiculobullous



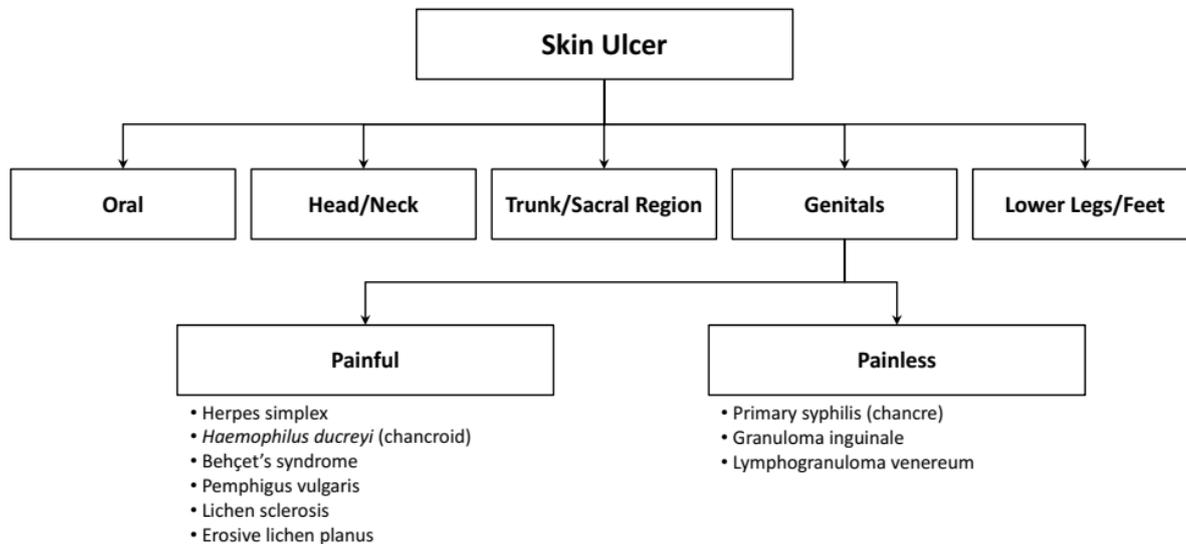
# Skin Ulcer by Etiology

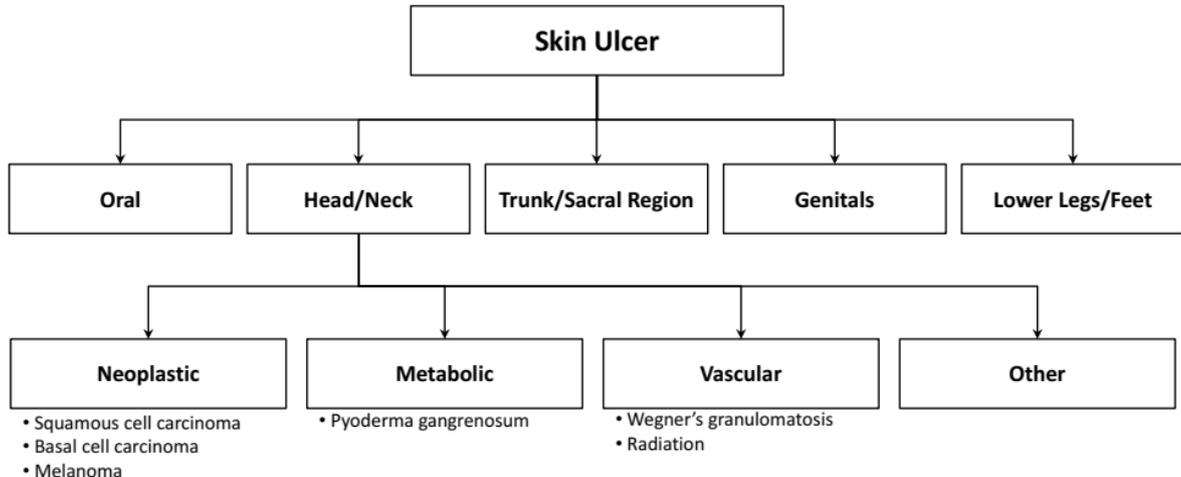


# Skin Ulcer by Location



## Genitals

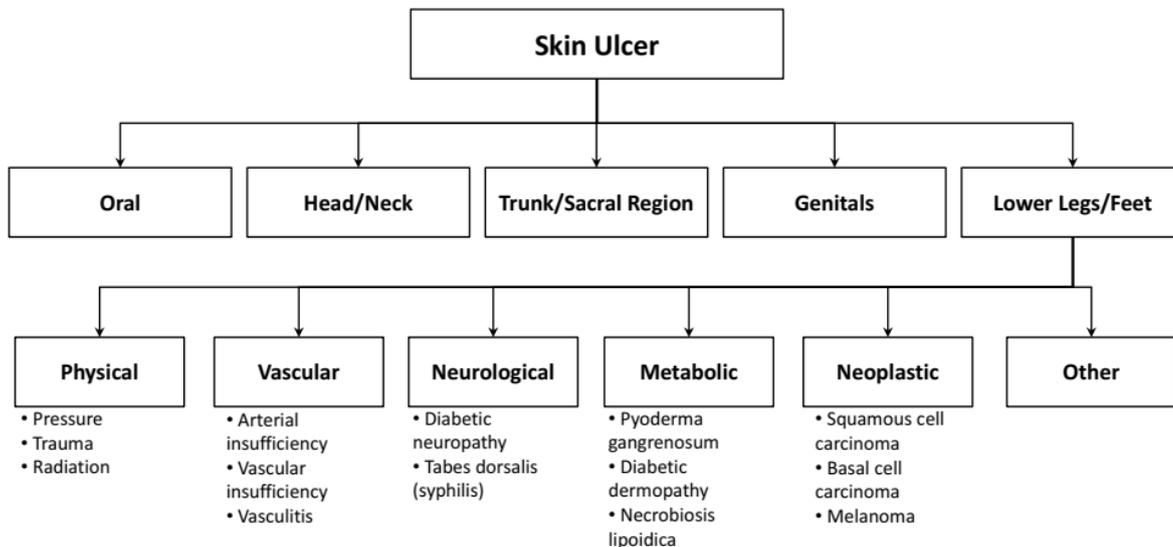


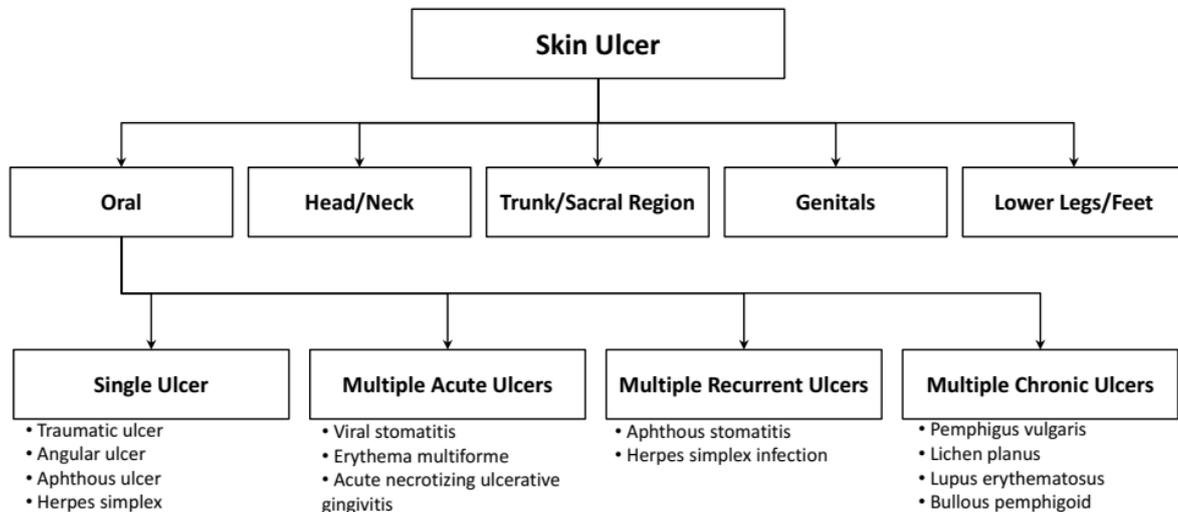


# Skin Ulcer by Location



Lower Legs / Feet

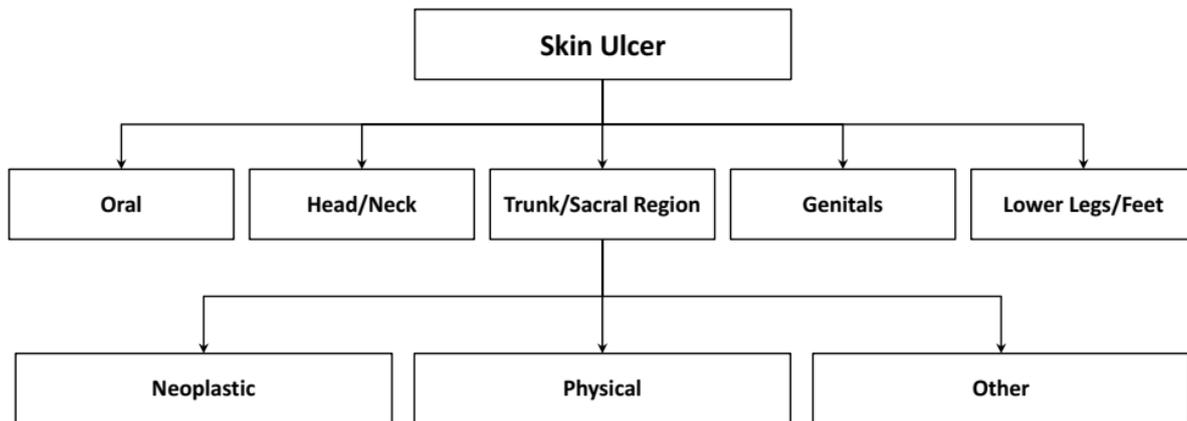




# Skin Ulcer by Location

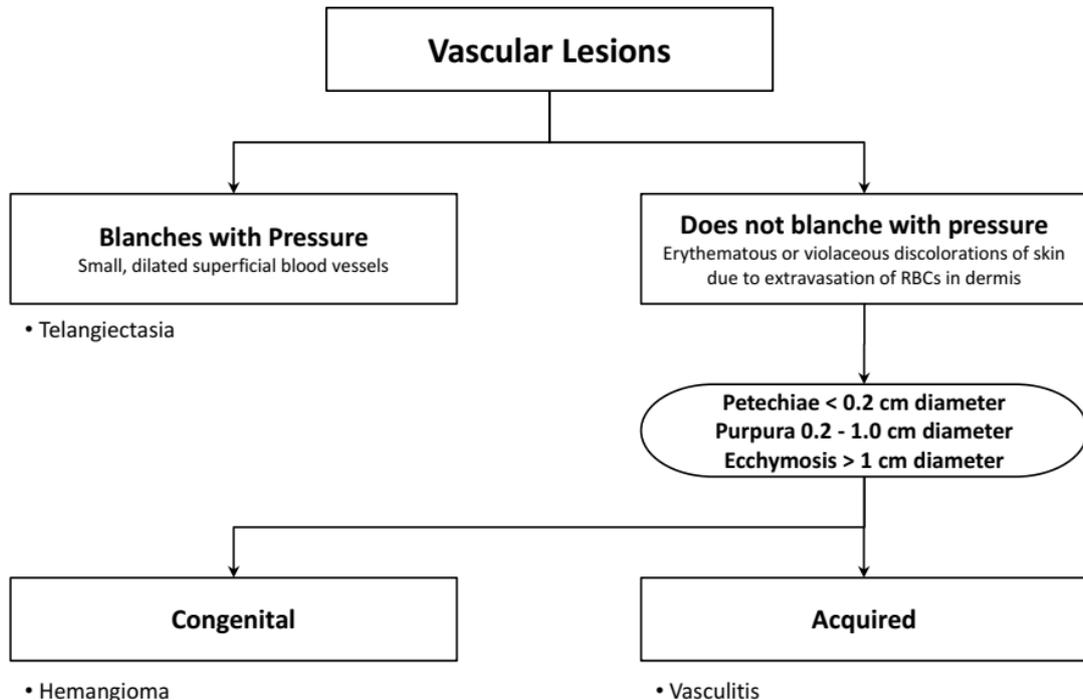


Trunk / Sacral Region



- Squamous cell carcinoma
- Basal cell carcinoma
- Melanoma
- Mycosis fungoides (cutaneous t-cell lymphoma)

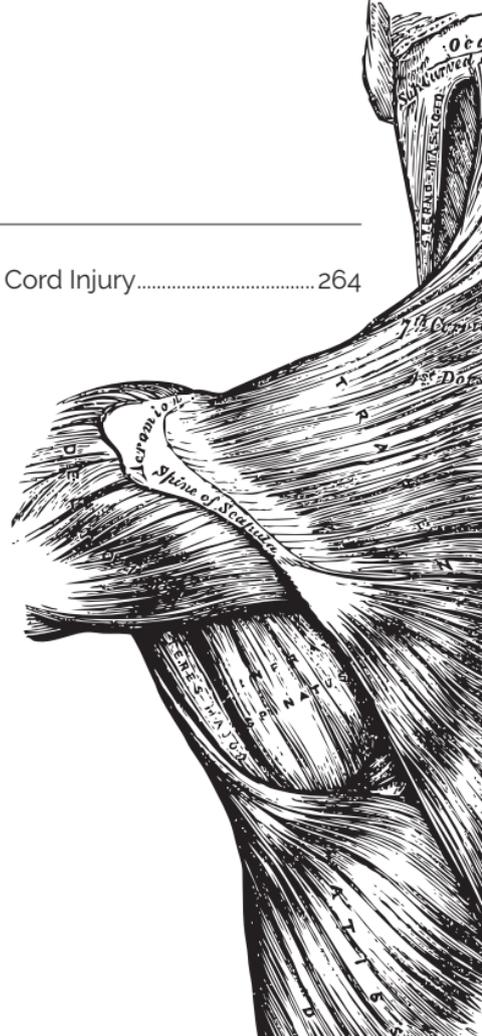
- Physical
- Trauma
- Radiation

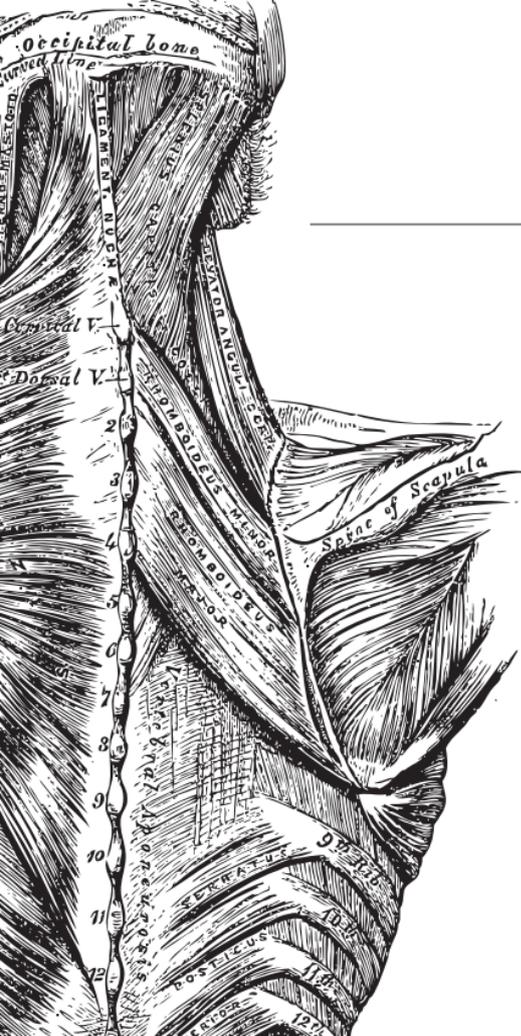


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Dr. Carol Hutchison

# Acute Joint Pain



Vitamin CD

---

**Vascular**

- See *vascular joint pain*

**Infectious**

- See *infectious joint pain*

**Trauma**

- Multiple injury sites, Open Fracture, Infectious joint pain

**Autoimmune**

- See *inflammatory joint pain*

**Metabolic**

- See *pathologic fractures*

**Iatrogenic**

- Hx of prior surgery

**Neoplastic**

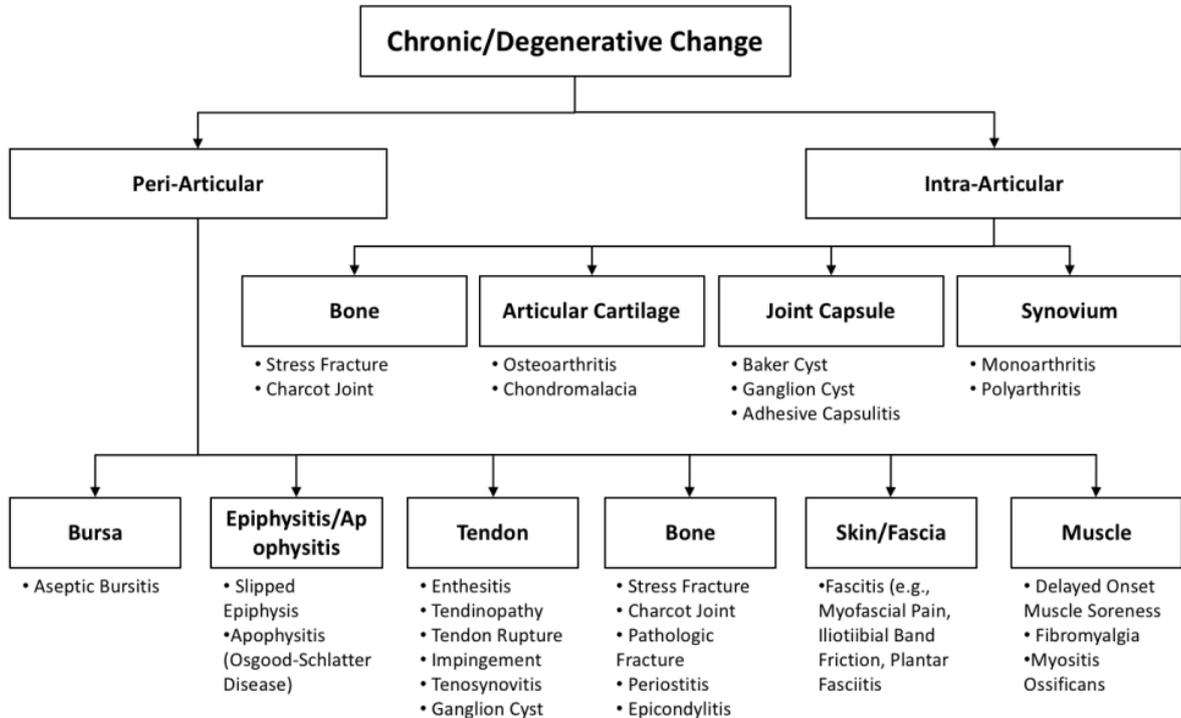
- See *Tumour*

**Congenital**

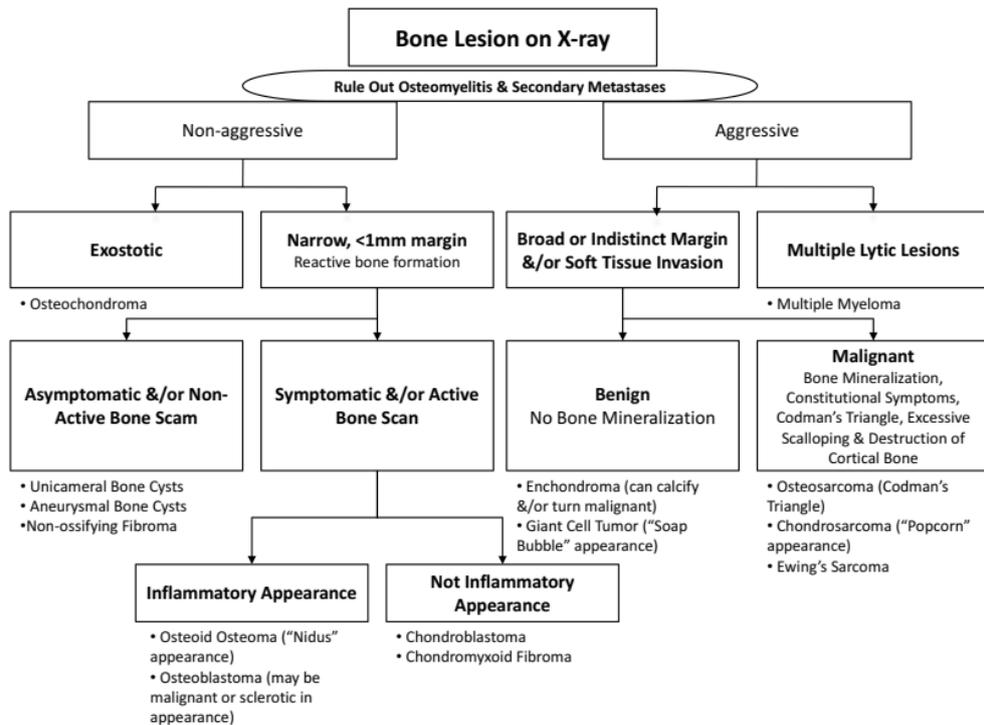
- Scoliosis, Talipes Equinovarus, Meta tarsus adductus, Bow leg, Knock-Knee'd

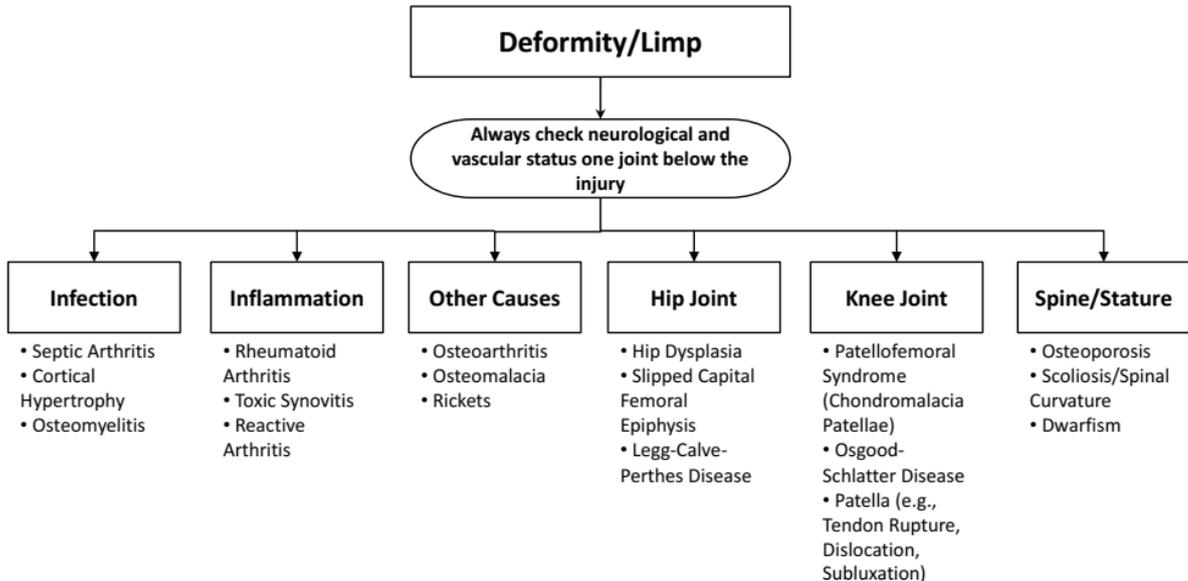
**Degenerative**

- Degenerative Disc Disease, Osteoarthritis, Osteoporosis

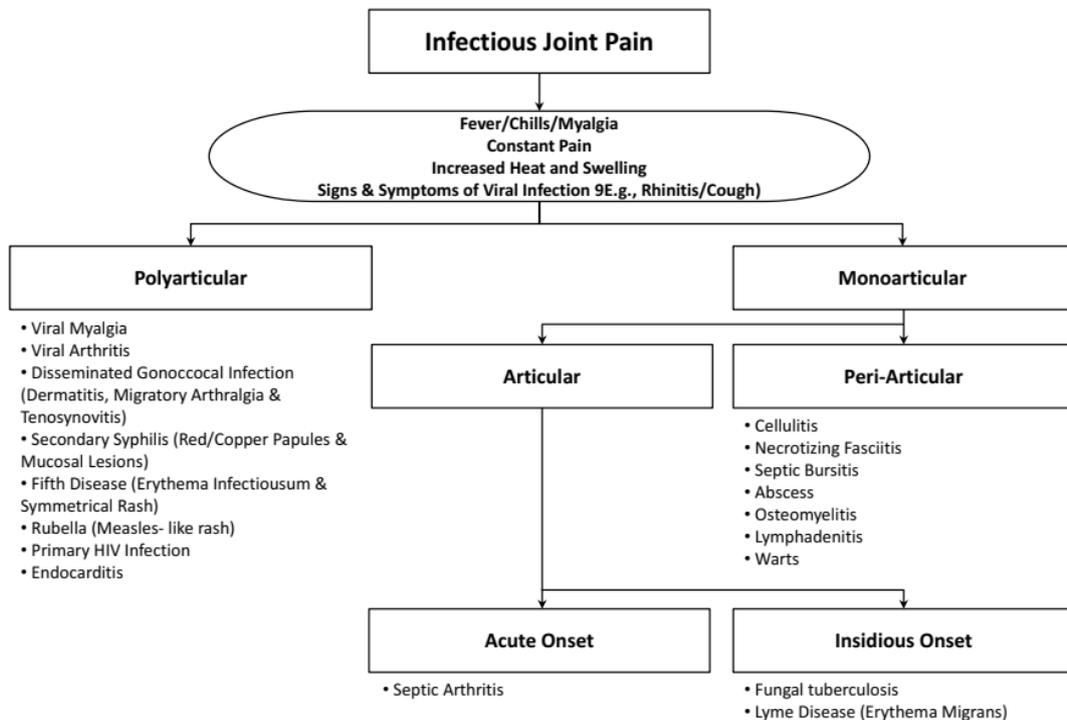


# Bone Lesion



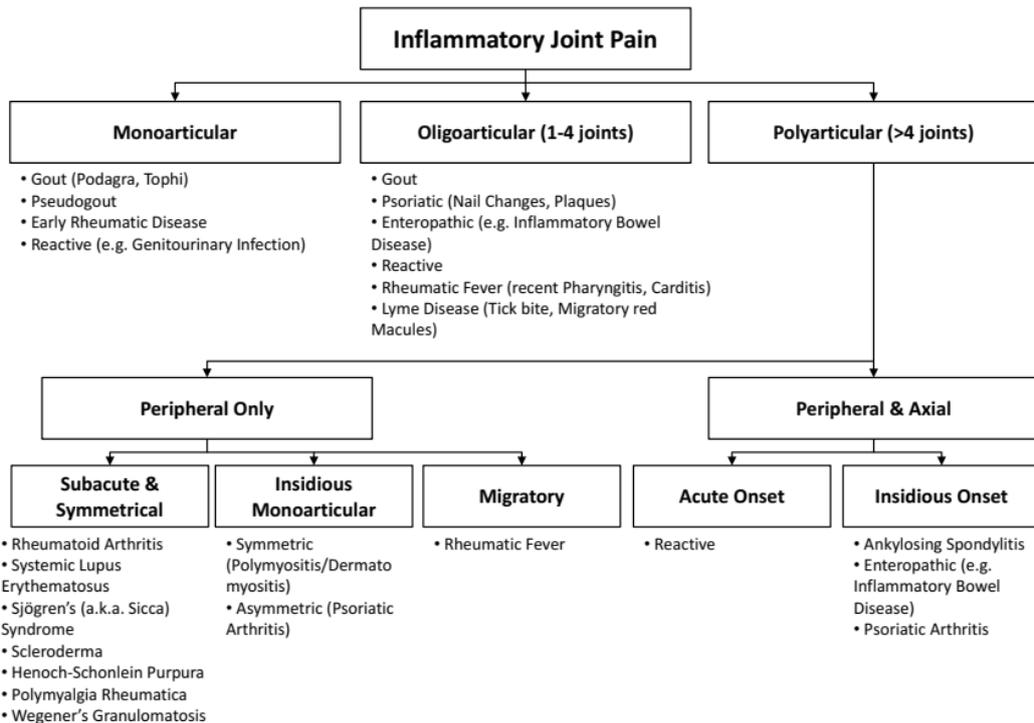


# Infectious Joint Pain

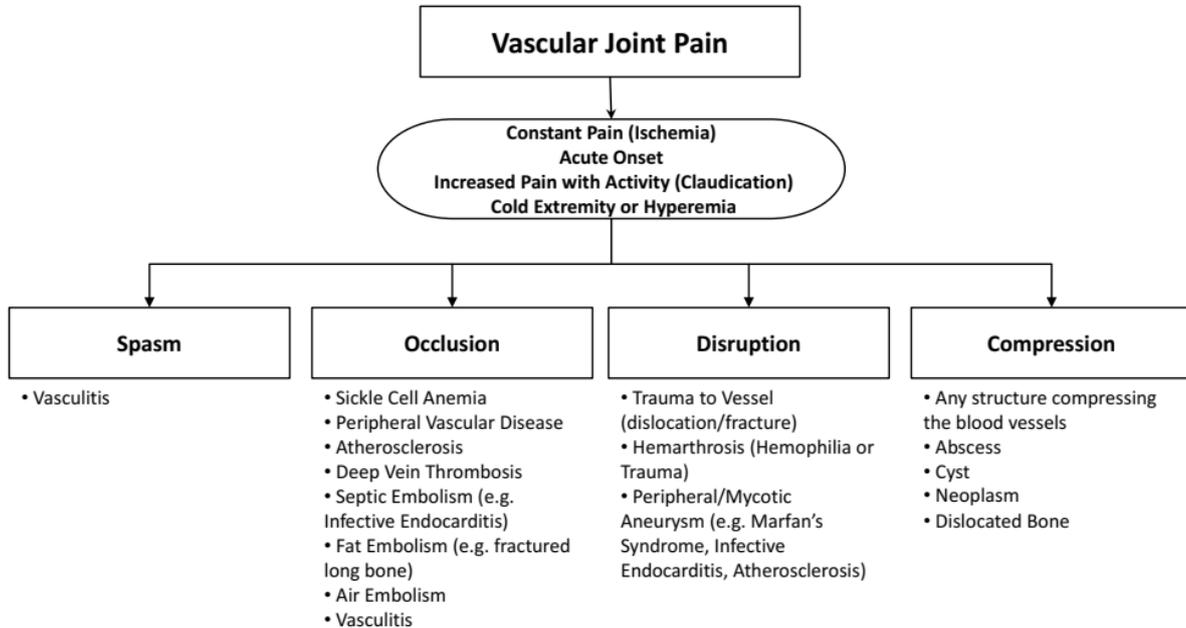


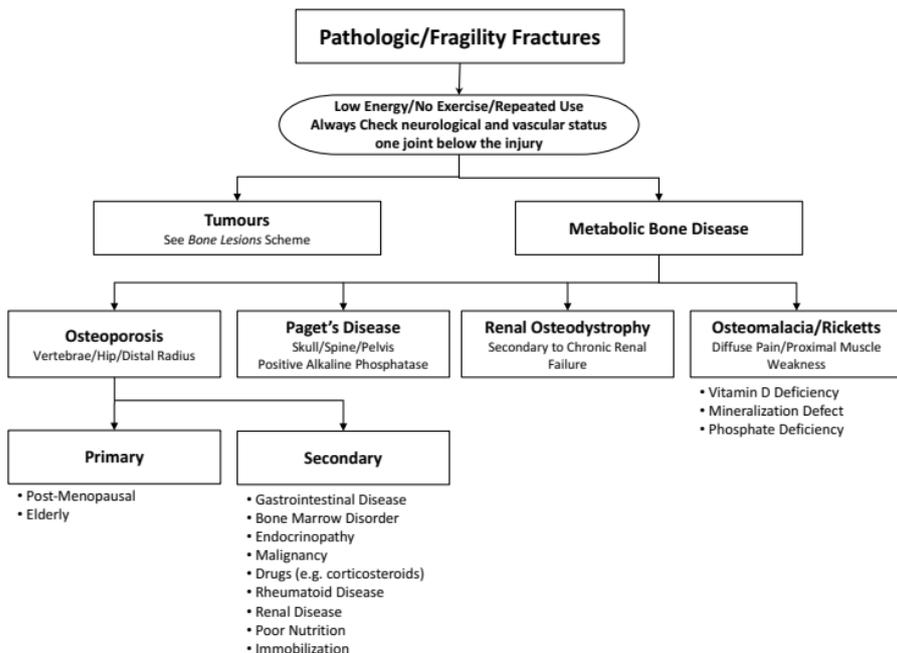


# Inflammatory Joint Pain

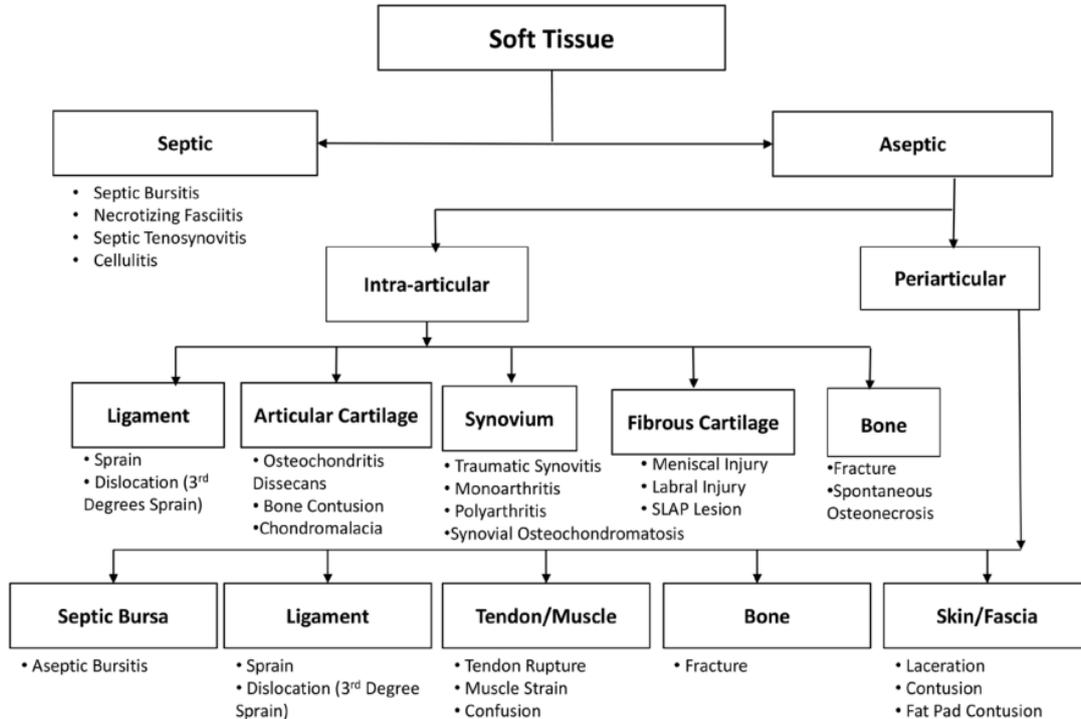


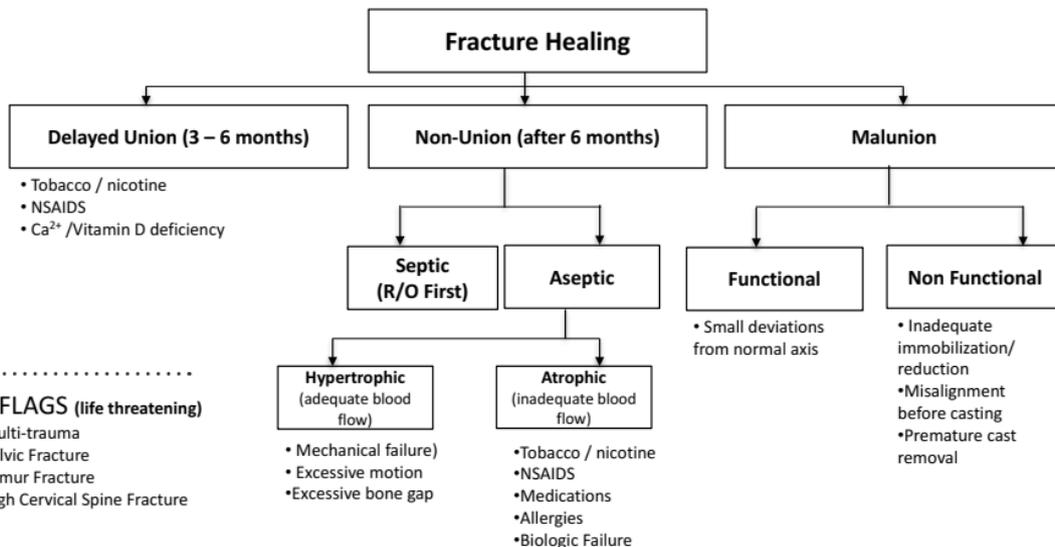
# Vascular Joint Pain





# Soft Tissue

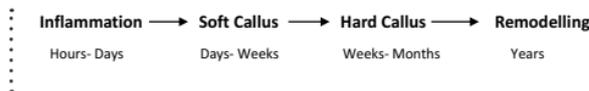




**RED FLAGS (life threatening)**

- Multi-trauma
- Pelvic Fracture
- Femur Fracture
- High Cervical Spine Fracture

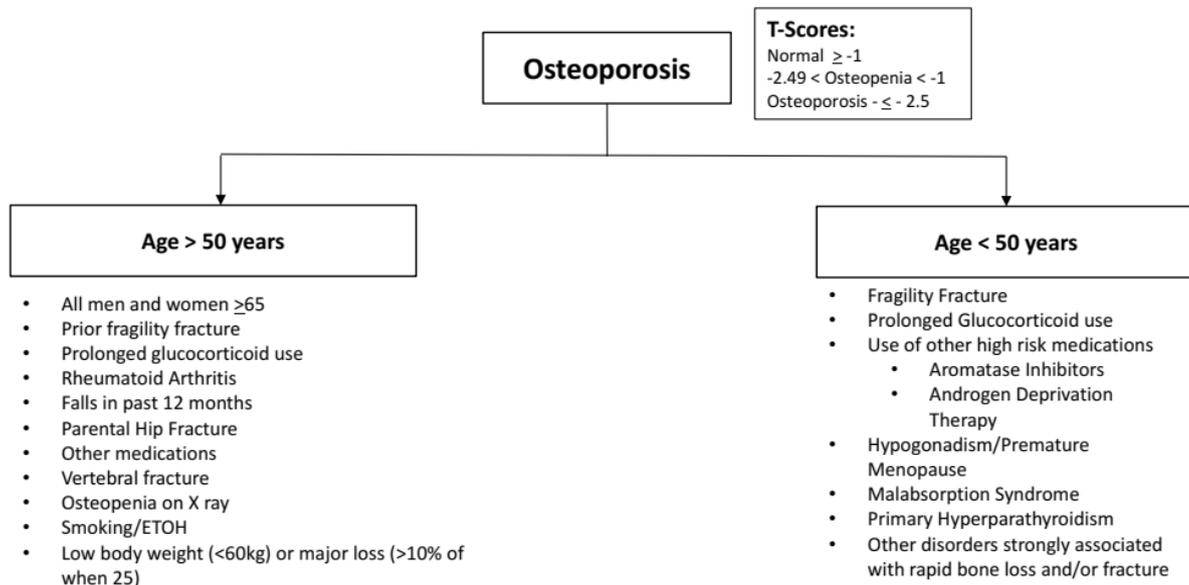
- |                             |                                 |
|-----------------------------|---------------------------------|
| <b>Operative Fractures:</b> | <b>Non-Operative Fractures:</b> |
| • Open                      | • Closed                        |
| • Unstable                  | • Stable                        |
| • Displaced                 | • Undisplaced                   |
| • Intra-articular           | • Extra-articular               |

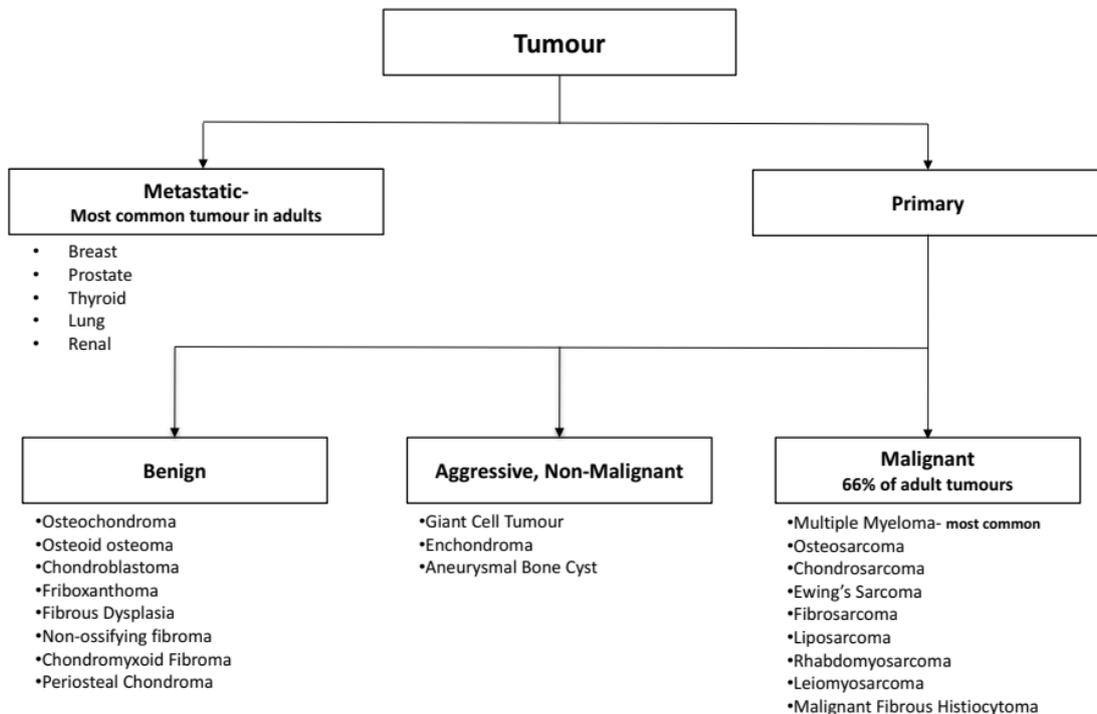


# Osteoporosis



## BMD Testing





# Myotomes

## Segmental Innervation of Muscles



<u>Muscle Group</u>	<u>Action</u>	<u>Myotome</u>	<u>Peripheral Nerve</u>
Shoulder	Abduction	C5	Axillary Nerve
	Adduction	C6-C8	Thoracodorsal Nerve
Elbow	Flexion	C5	Musculocutaneous Nerve
	Extension	C7	Radial Nerve
Wrist	Extension	C6	Radial Nerve
Fingers	Flexion	C8	Median Nerve
	Abduction	T1	Ulnar Nerve
Hip	Flexion	L2	Nerve to Psoas
	Extension	S1	Inferior Gluteal Nerve
	Abduction	L5	Superior Gluteal Nerve
Knee	Flexion	L5	Tibial Nerve
	Extension	L3	Femoral Nerve
Ankle	Dorsiflexion	L4	Deep Peroneal Nerve
	Plantarflexion	S1	Tibial Nerve



# Guide to Spinal Cord Injury

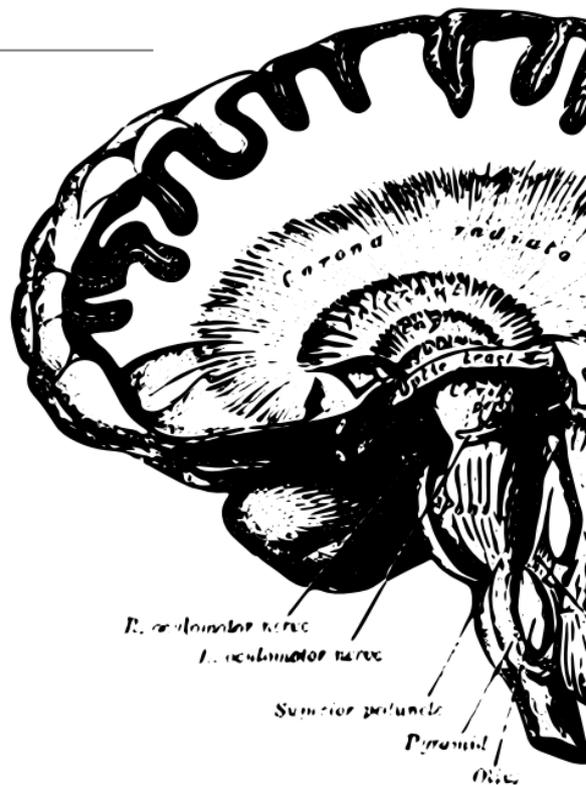
<u>Spinal Root</u>	<u>Sensory</u>	<u>Motor</u>	<u>Reflex</u>
C4	Acromioclavicular Joint	Respiration	None
C5	Radial Antecubital Fossa	Elbow Flexion	Biceps Reflex
C6	Dorsal Thumb	Wrist Extension	Brachioradialis Reflex
C7	Dorsal Middle Finger	Elbow Extension	Triceps Reflex
C8	Dorsal Little Finger	Finger Flexion	None
T1	Ulnar Antecubital Fossa	Finger Abduction	None
T7-12	See Dermatomes	Abdominal Muscles	Abdominal Reflex
L2	Anterior Medial Thigh	Hip Flexion	Cremasteric Reflex
L3	Medial Femoral Condyle	Knee Extension	None
L4	Medial Malleolus	Ankle Dorsiflexion	Knee Jerk Reflex
L5	First Web Space (1 <sup>st</sup> /2 <sup>nd</sup> MTP)	Big Toe Extension	Hamstring Reflex
S1	Lateral Calcaneus	Ankle Plantarflexion	Ankle Jerk Reflex
S2	Popliteal Fossa	Anal Sphincter	Bulbocavernosus
S3/S4	Perianal Region	Anal Sphincter	None

N.B. There is considerable variability in spinal cord levels for motor and reflex testing. Always test the level above and below the suspected injury

# Psychiatric

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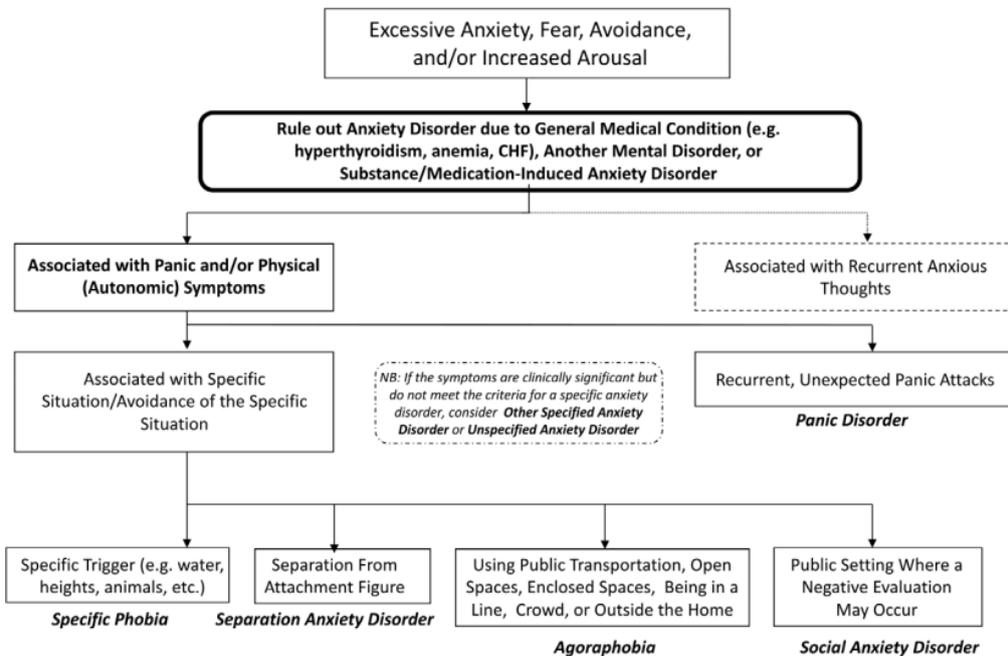
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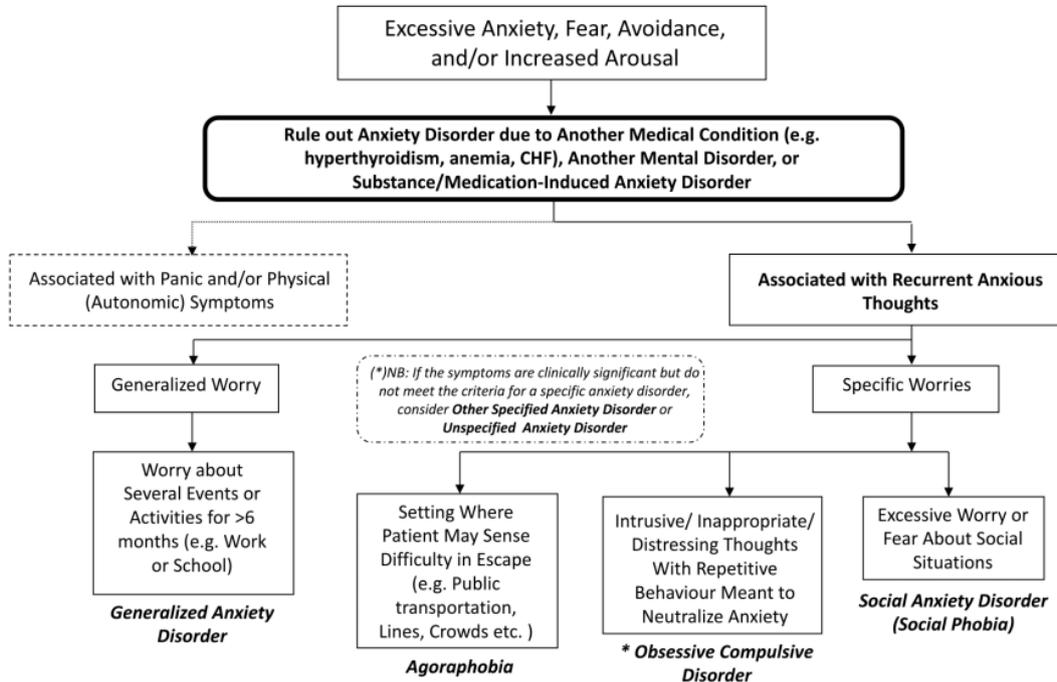
Dr. Aaron Mackie

# Anxiety Disorders

Associated with Panic



1. Anxiety Review Panel, Evans M, Bradwejn J, Dunn L (Eds) (2000). Guidelines for the Treatment of Anxiety Disorders in Primary Care. Toronto: Queen's Printer of Ontario, pp. 41  
2. American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed. DSM-V).



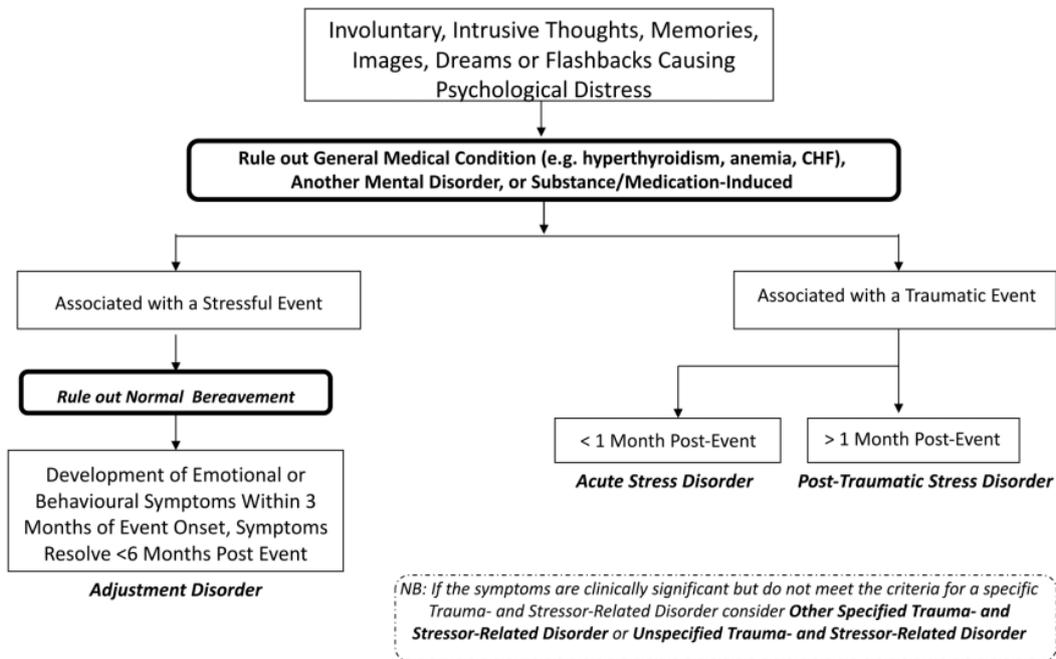
\* Not considered an anxiety disorder according to DSM-V

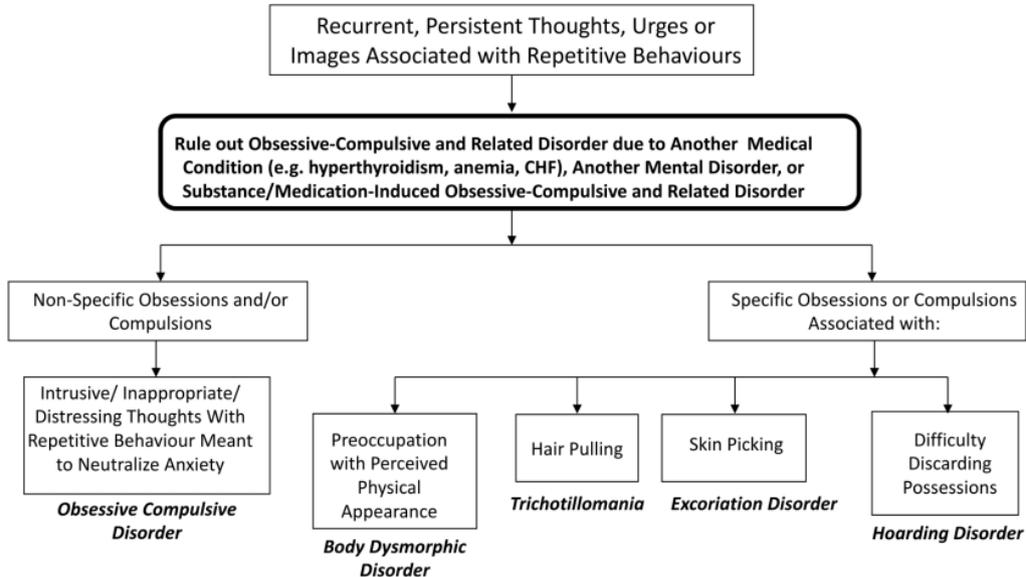
American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed. DSM-V).

# Trauma & Stressor



## Related Disorders

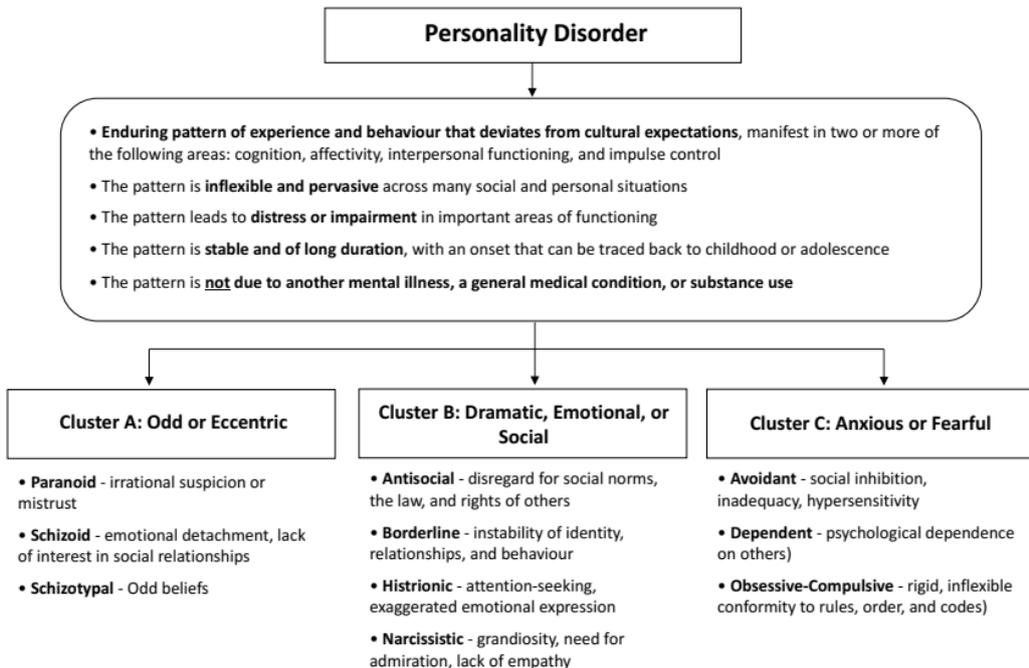


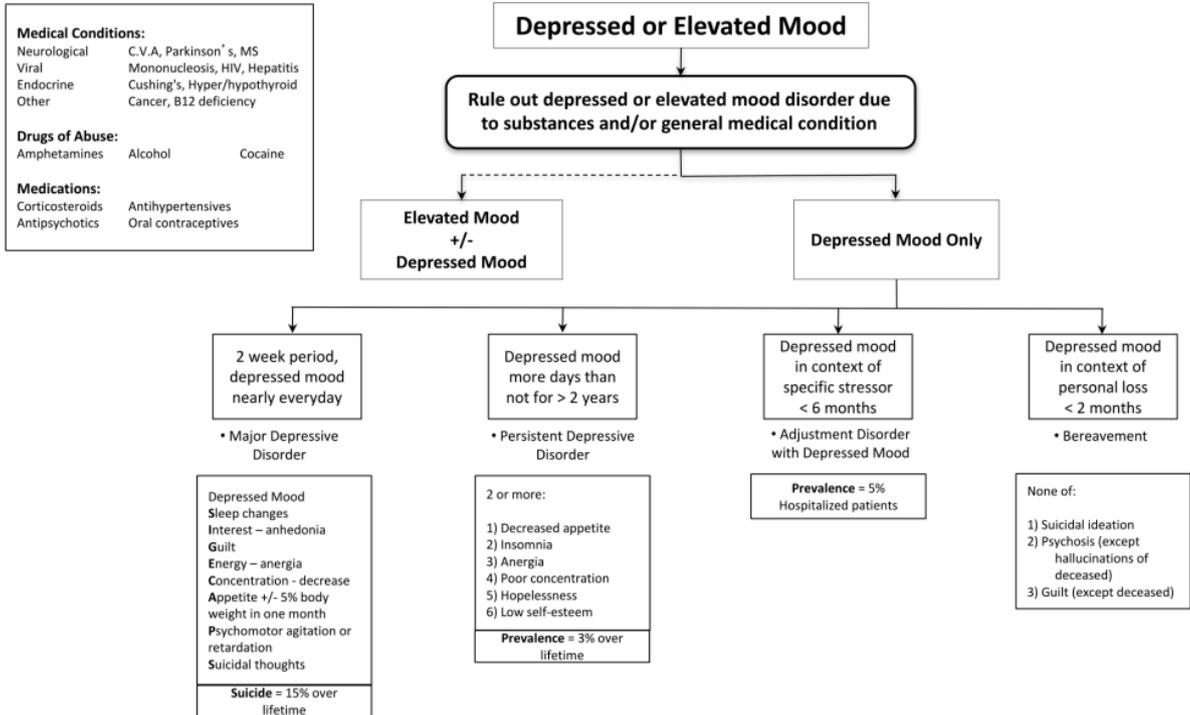


*NB: If the symptoms are clinically significant but do not meet the criteria for a specific **Obsessive-Compulsive or Related Disorder** consider **Other Specified Obsessive-Compulsive or Related Disorder** or **Unspecified Obsessive-Compulsive or Related Disorder***

1. American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed. DSM-V.

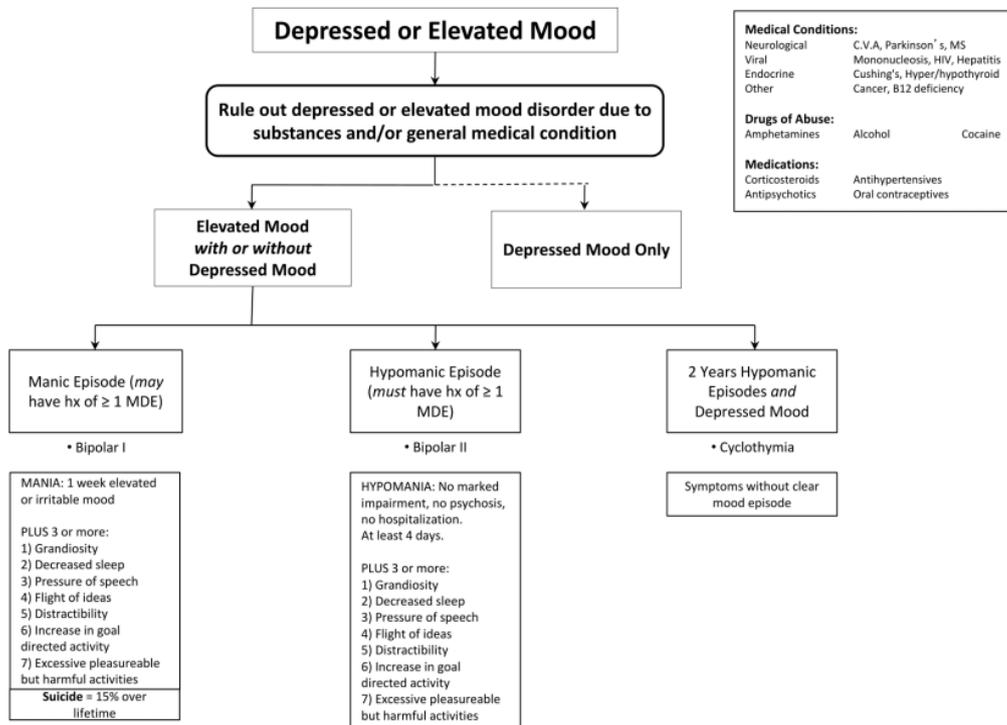
# Personality Disorder





# Mood Disorders

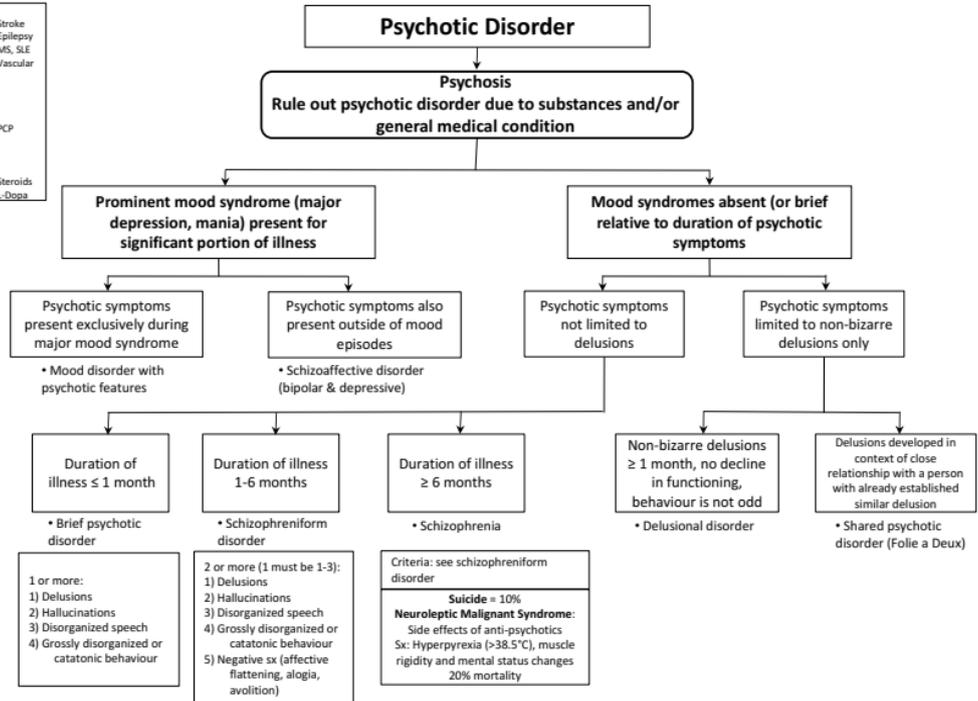
## Elevated Mood



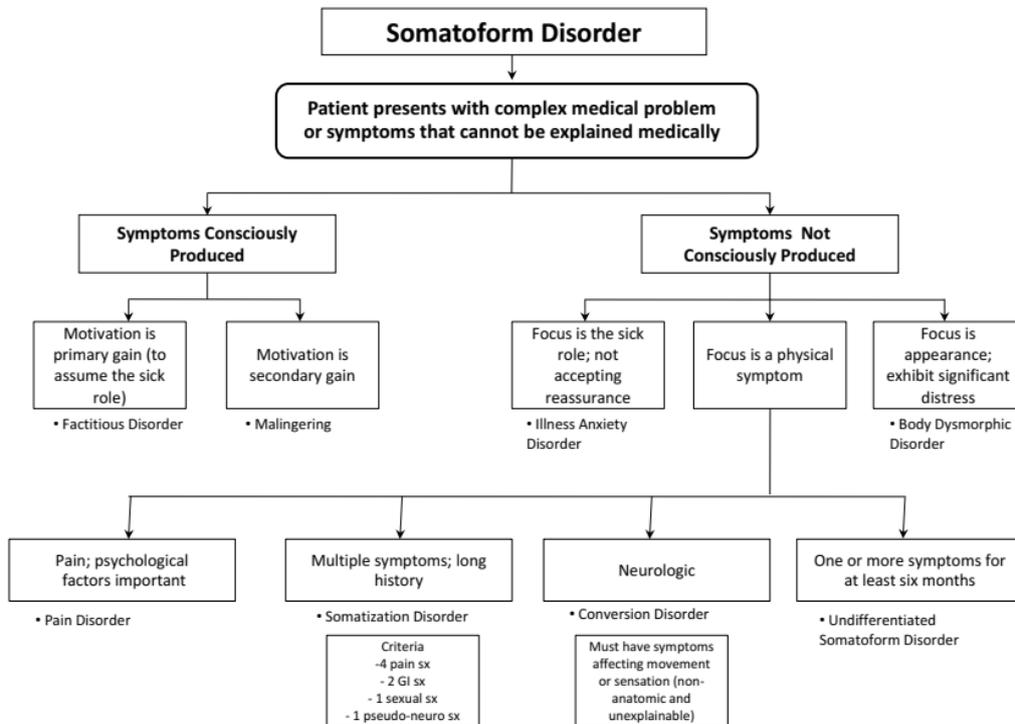


# Psychotic Disorders

<b>Medical Conditions:</b>		
Para/Neoplastic	Brain tumour	Stroke
Parkinson's	AIDS, syphilis	Epilepsy
Infectious	Cushing's	MS, SLE
Degenerative	Endocrine	Vascular
<b>Drugs of Abuse:</b>		
Cocaine	Cannabis	Alcohol (rare)
Amphetamines	Opiates (rare)	PCP
Hallucinogens		
<b>Medications:</b>		
Amphetamines	Methylphenidate	Steroids
Dopamine Agonist	Anticholinergic	L-Dopa



# Somatoform Disorders

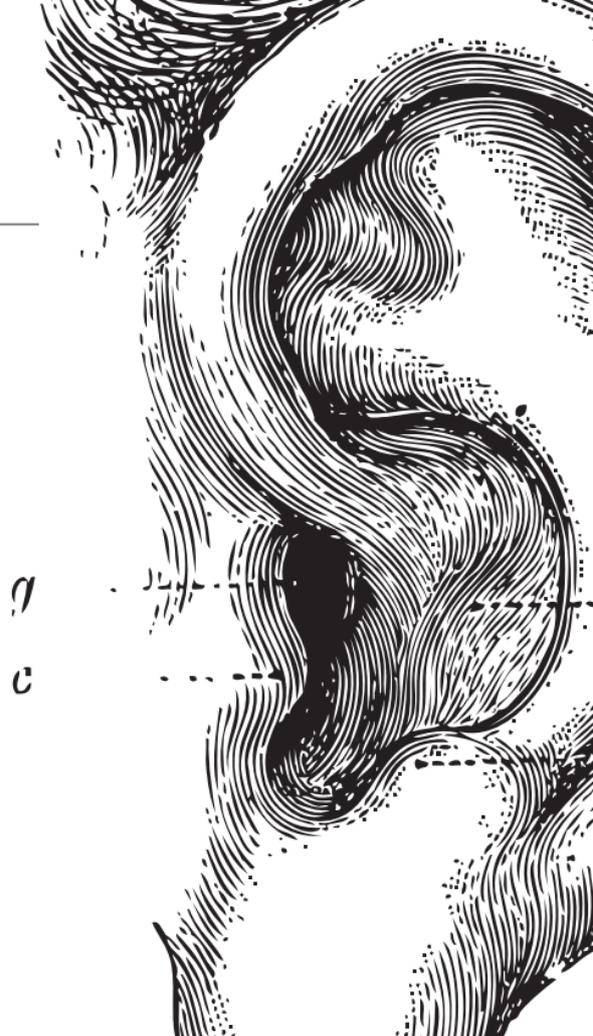




# Otolaryngologic

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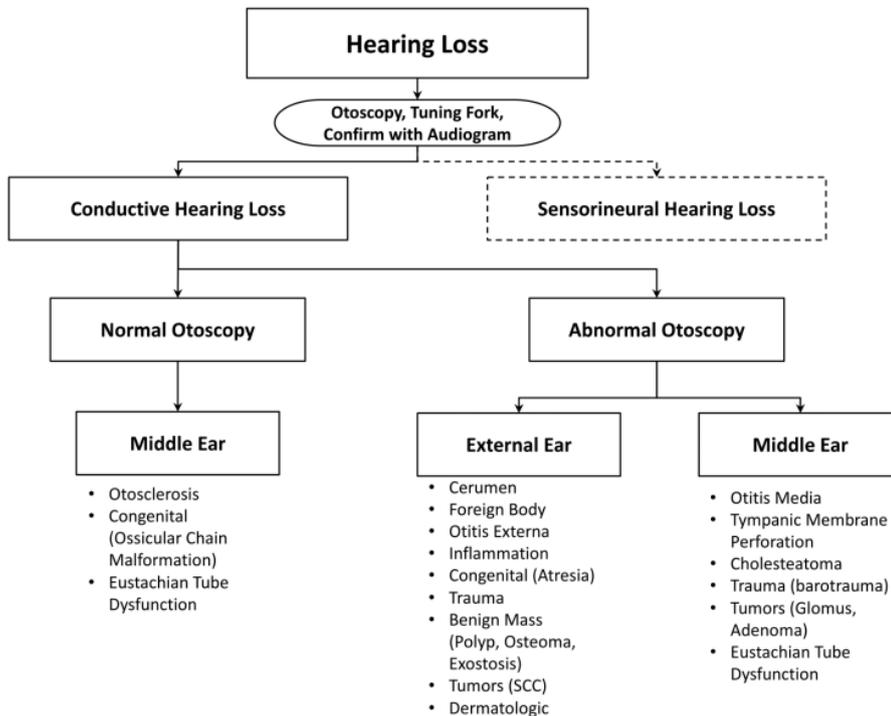
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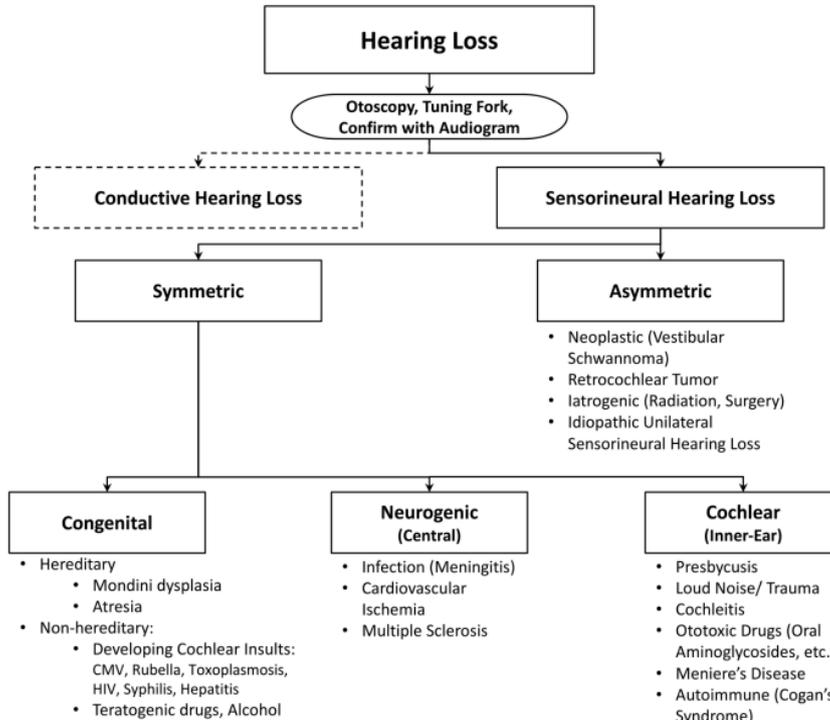
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# Hearing Loss

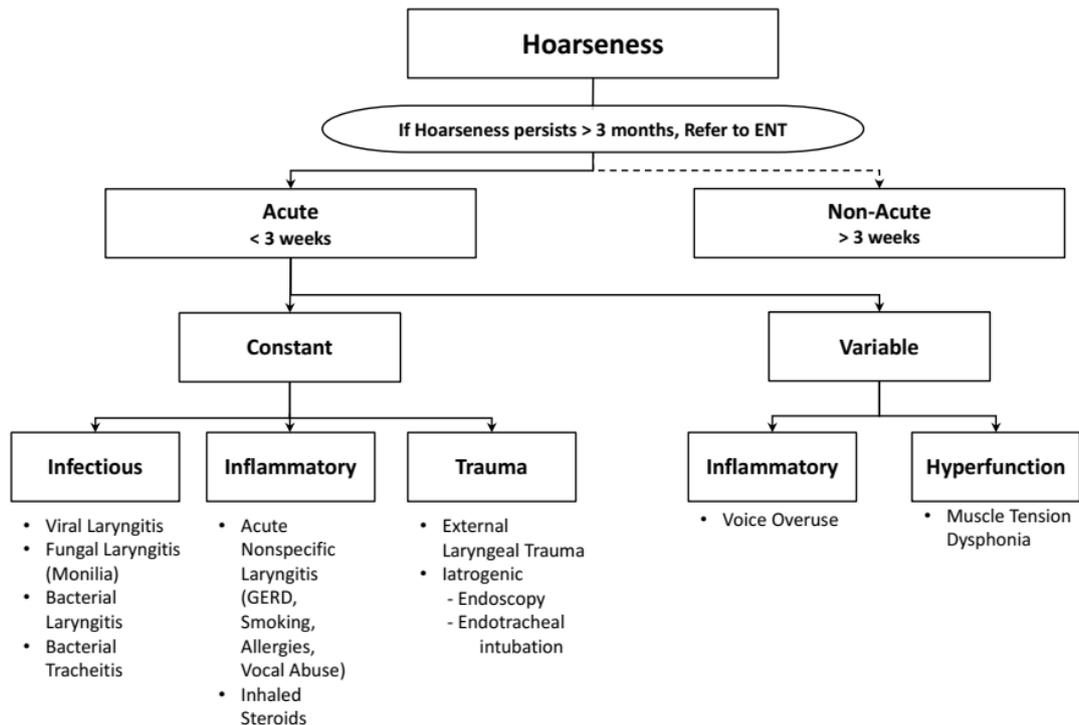
Conductive

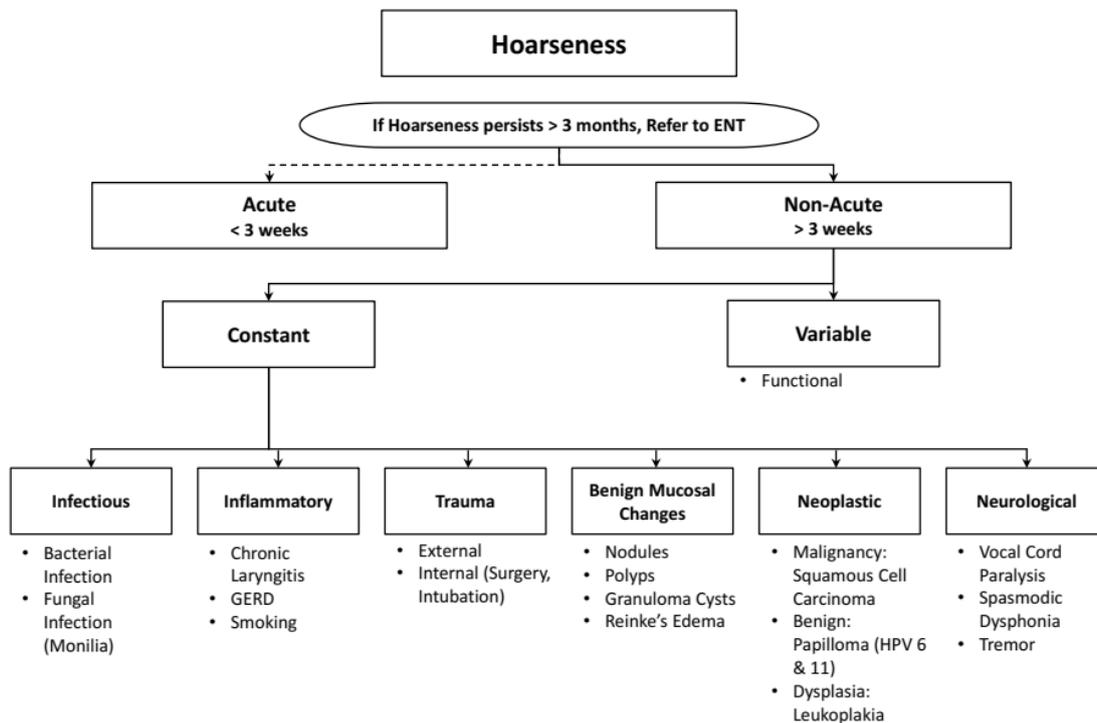




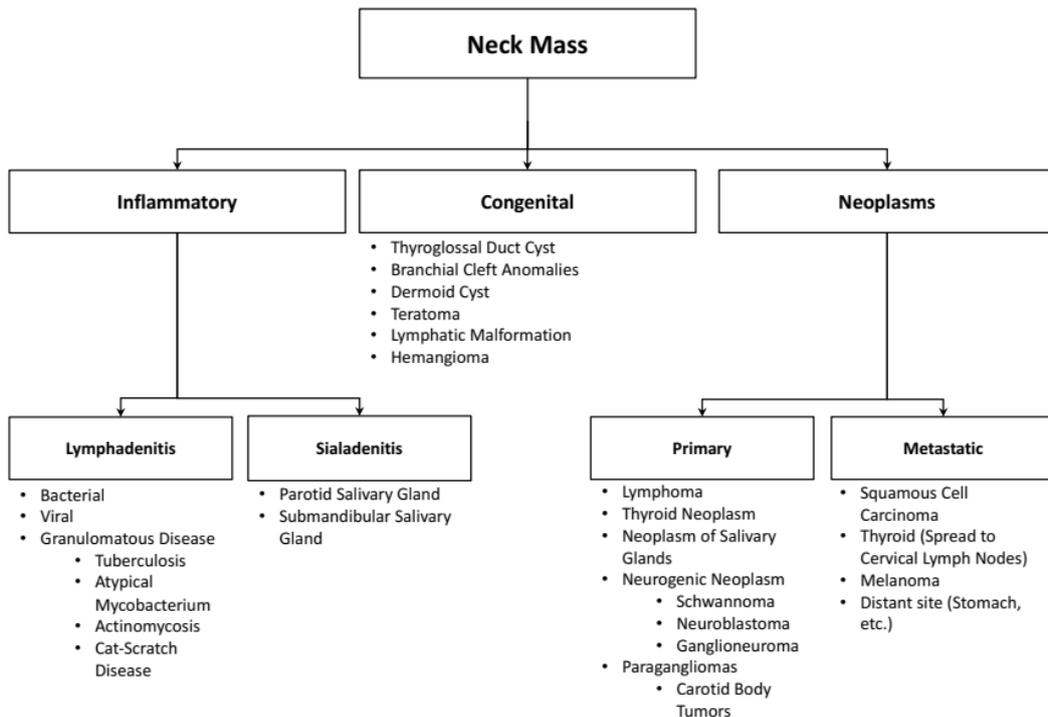
# Hoarseness

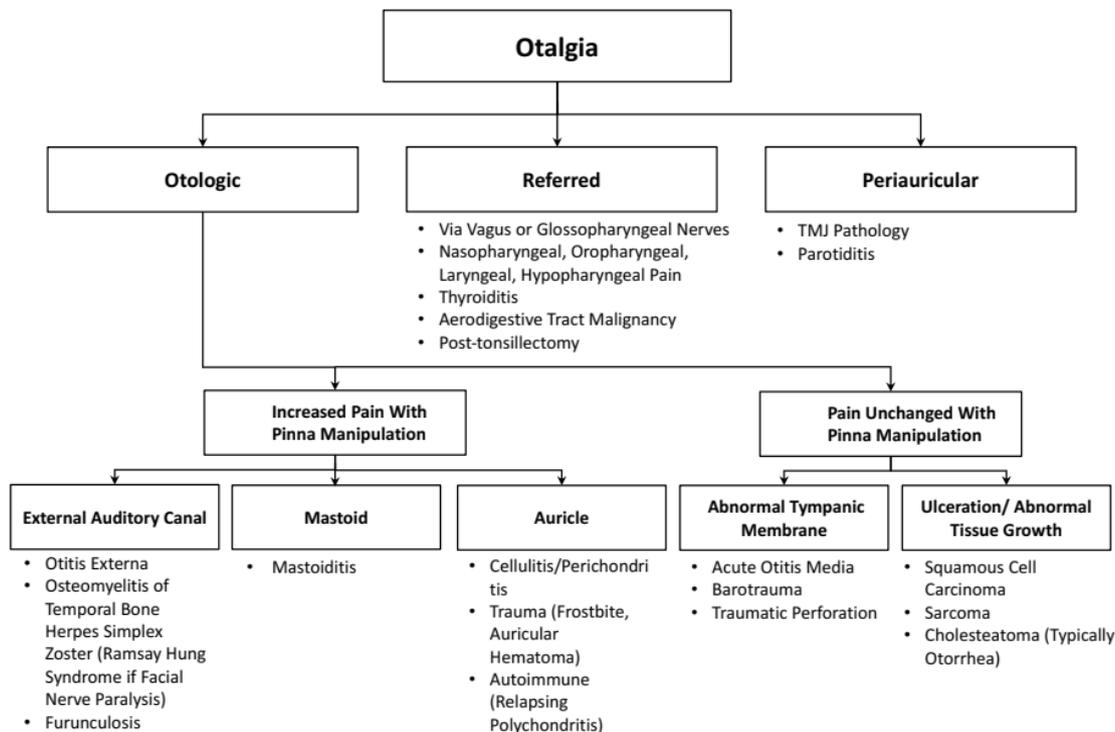
Acute



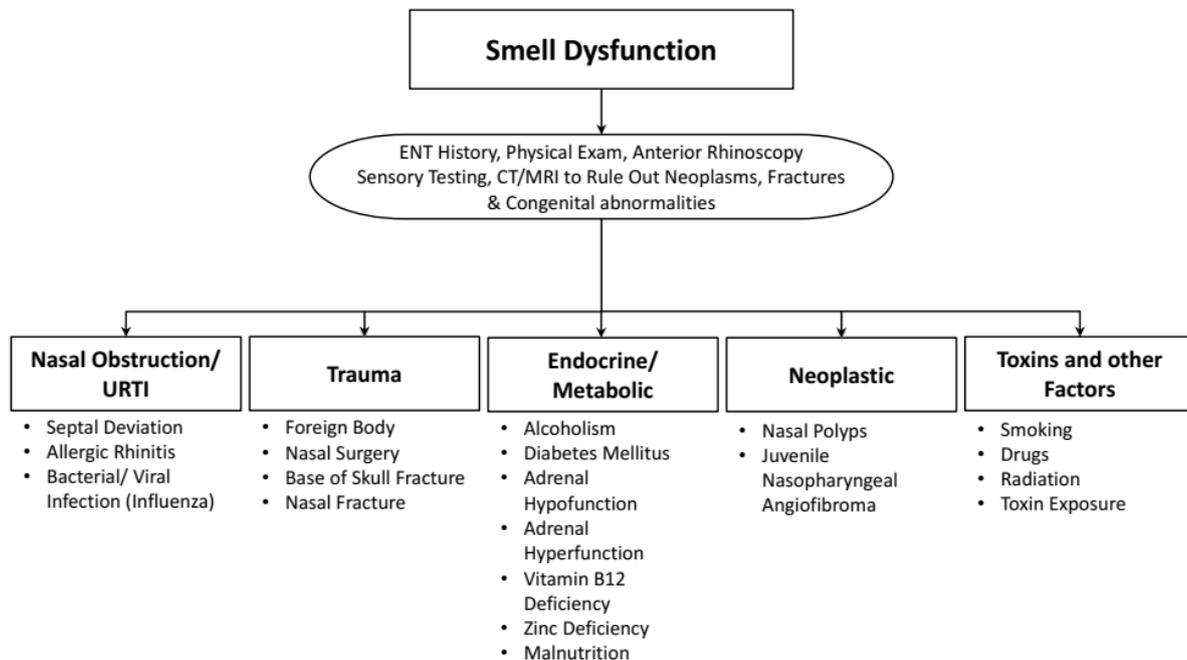


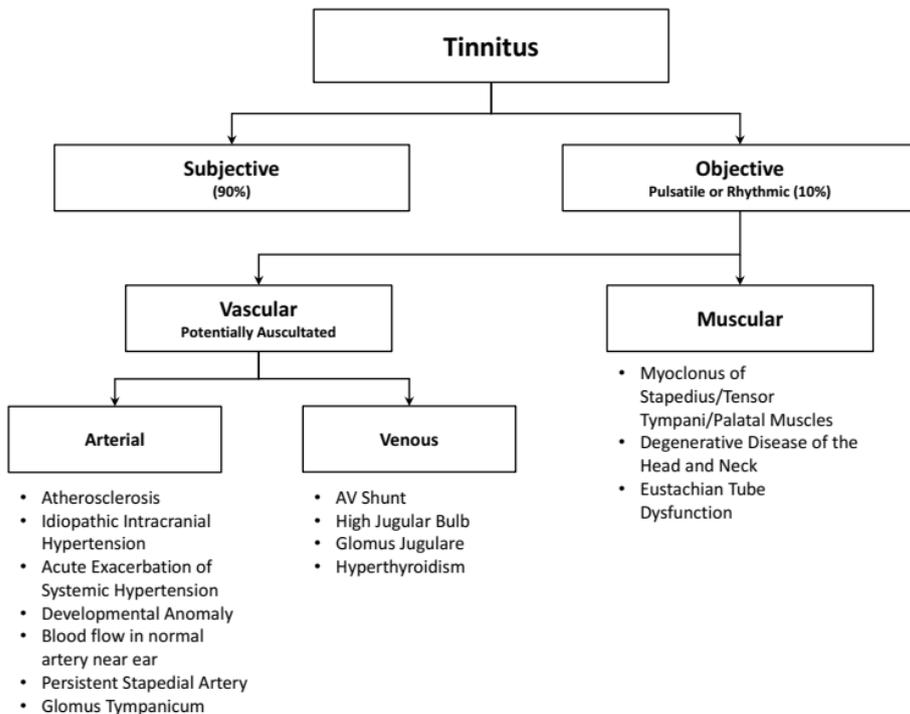
# Neck Mass





# Smell Dysfunction

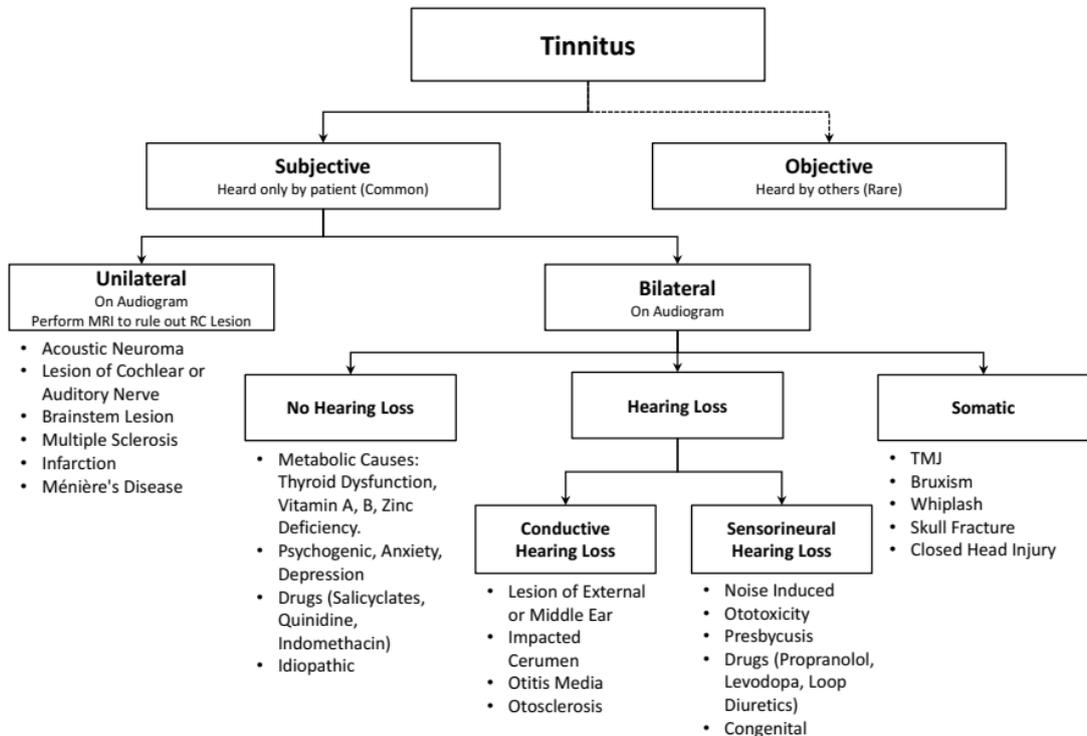




# Tinnitus



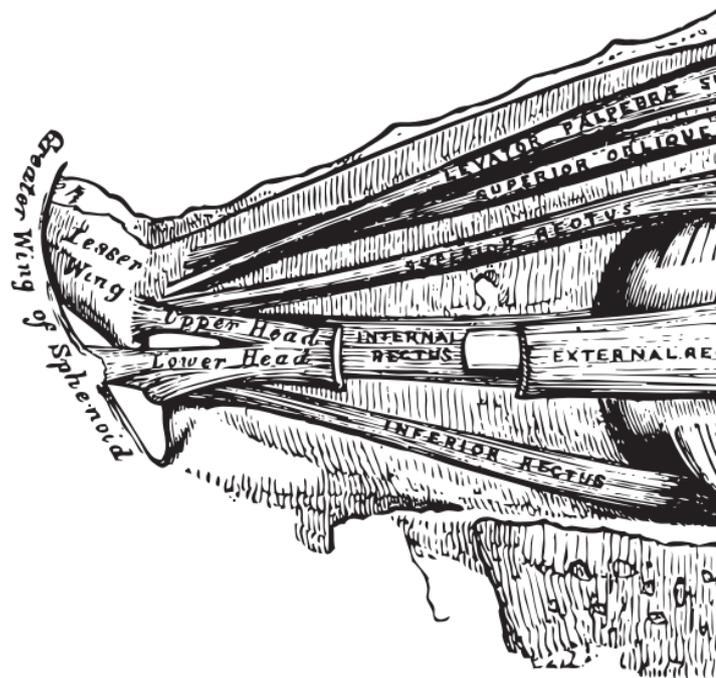
## Subjective

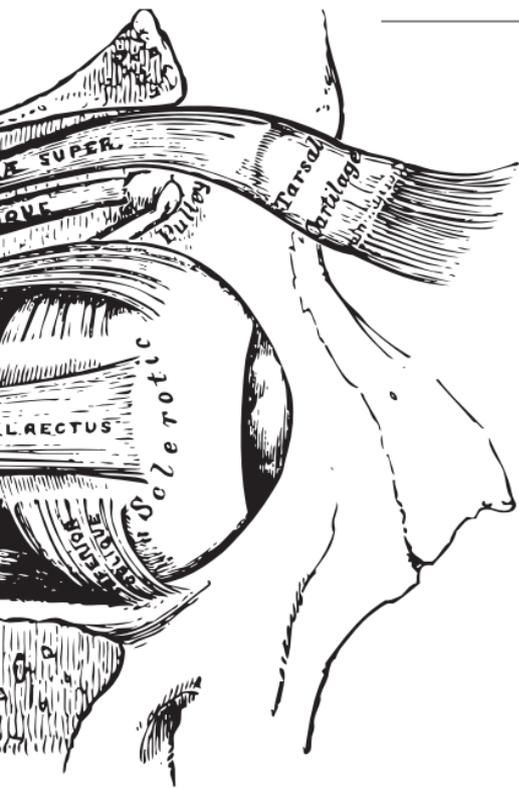




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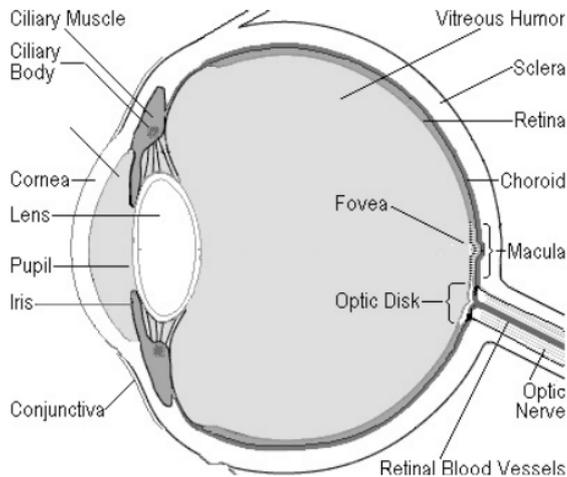
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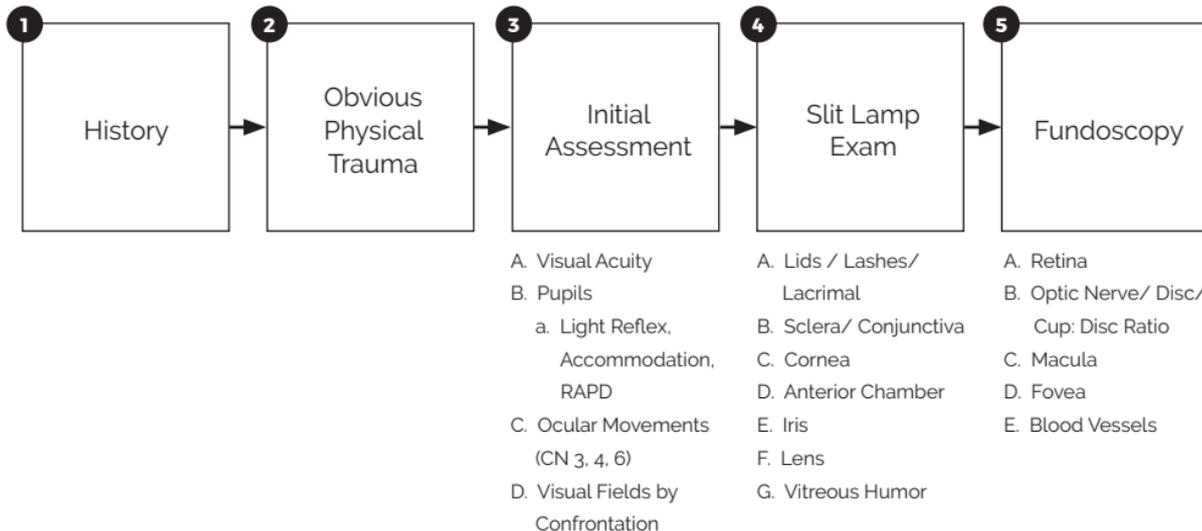
# Cross Section of the Eye & Acronyms



## Ophthalmology Acronyms

<b>EOM</b>	Extra ocular movements
<b>IOL</b>	Intraocular Lens
<b>IOP</b>	Intraocular Pressure
<b>OD</b>	Oculus Dexter (right eye)
<b>OS</b>	Oculus Sinister (left eye)
<b>OU</b>	Oculus Uterque (both eyes)
<b>PERRLA</b>	Pupils Equal, Round, Reactive to Light & Accommodation
<b>RAPD</b>	Relative Afferent pupillary defect
<b>SLE</b>	Slit Lamp Exam
<b>VA</b>	Visual Acuity

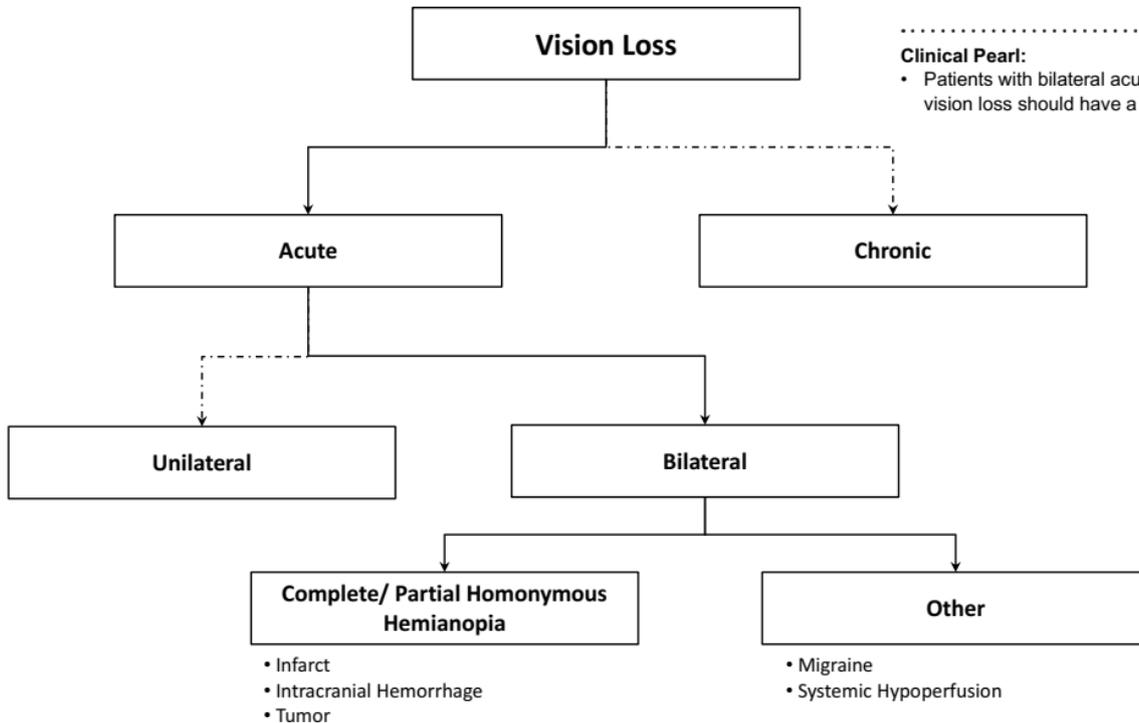
# Approach to an Eye Exam

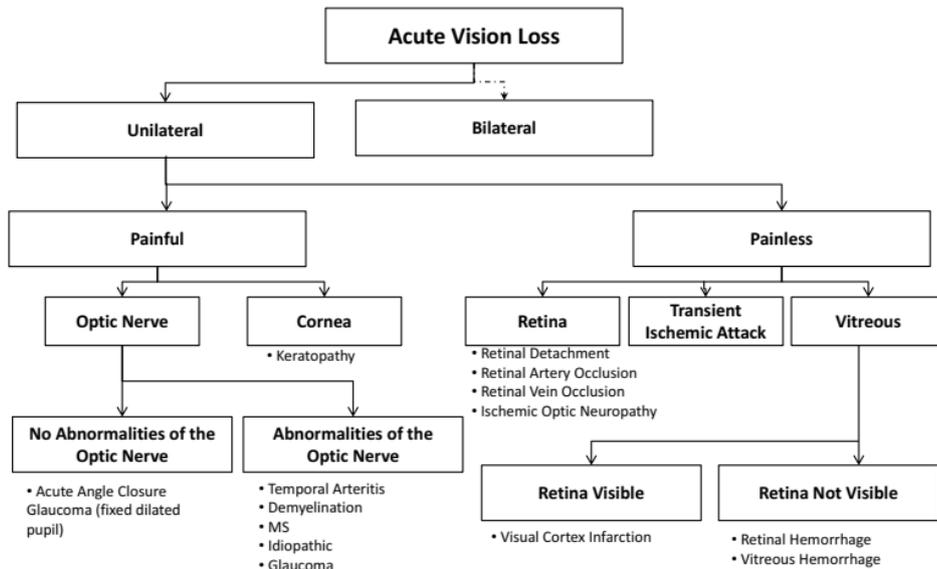


# Acute Vision Loss



Bilateral





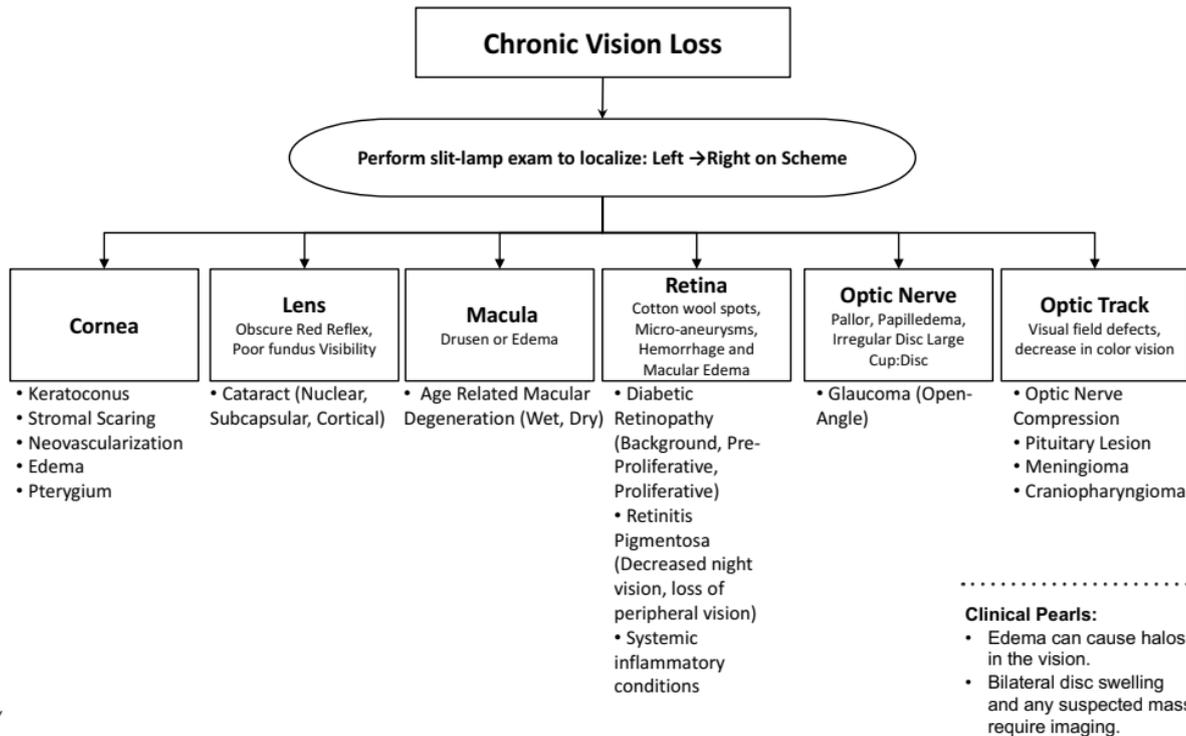
**Clinical Pearls:**

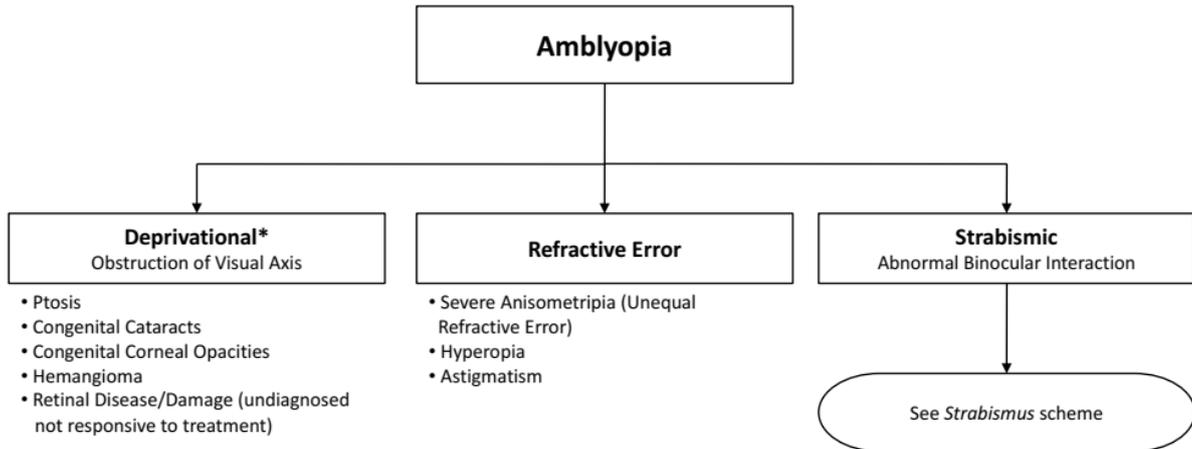
- Optic neuritis causes pain with EOM
- Temporal arteritis causes temporalis pain and pain with mastication
- Acute angle closure glaucoma causes high intraocular pressure, unilateral eye pain, mid-dilated pupil and n/v
- Retinal detachment can present as a veil over the vision and with flashes and floaters.
- TIA, vein or artery occlusion requires stroke work-up

# Chronic Vision Loss



Anatomic



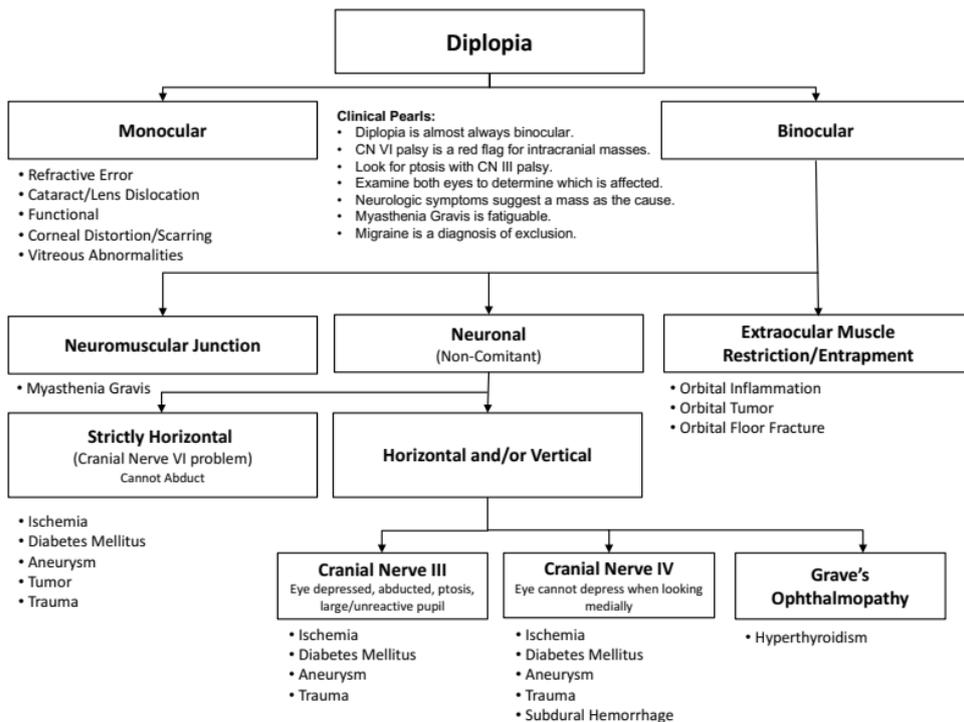


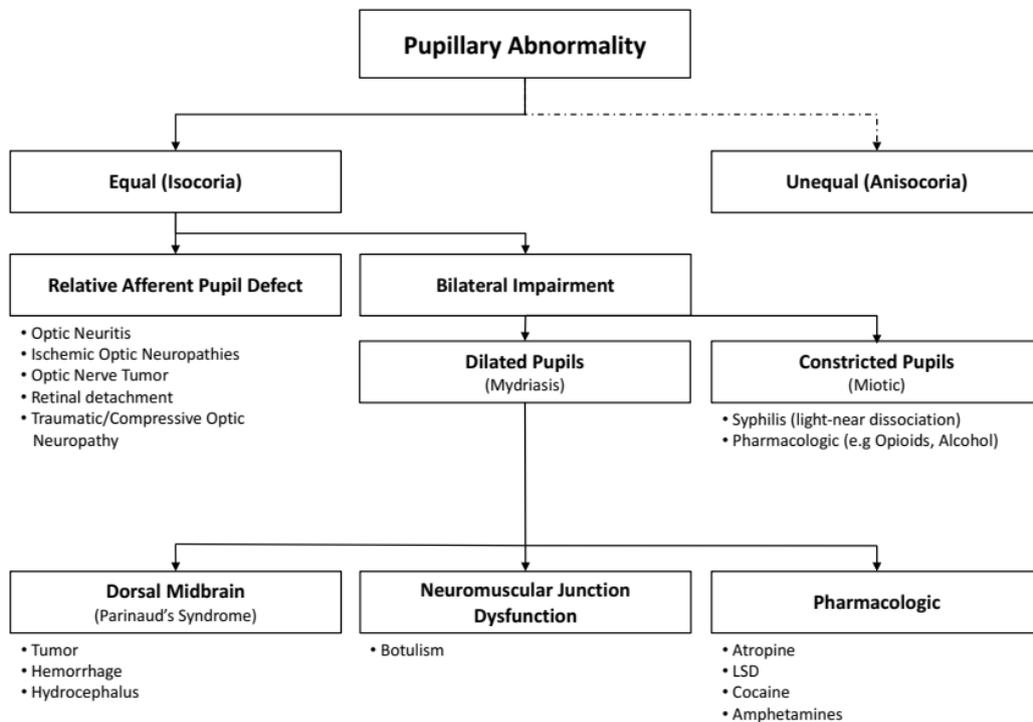
**Clinical Pearl:**

- Congenital cataracts and retinoblastoma's cause leukocoria and a decreased red reflex

\* Can cause permanent visual impairment if not treated urgently in infancy

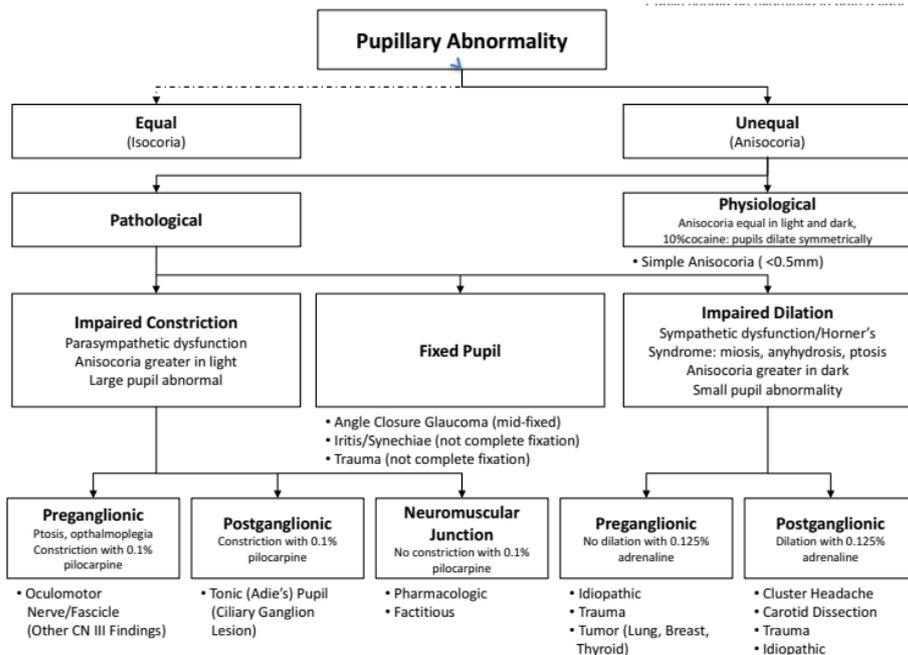
# Diplopia



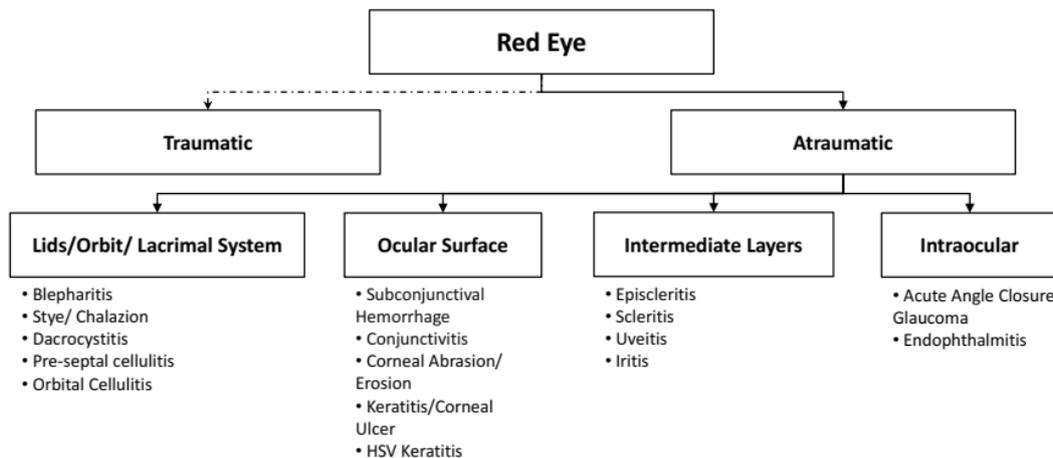


# Pupillary Abnormalities

Anisocoria



- **Clinical Pearl:**
- Pupils should be examined in both a light and dark setting to determine whether the big pupil or the small pupil is abnormal.
- 
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- 
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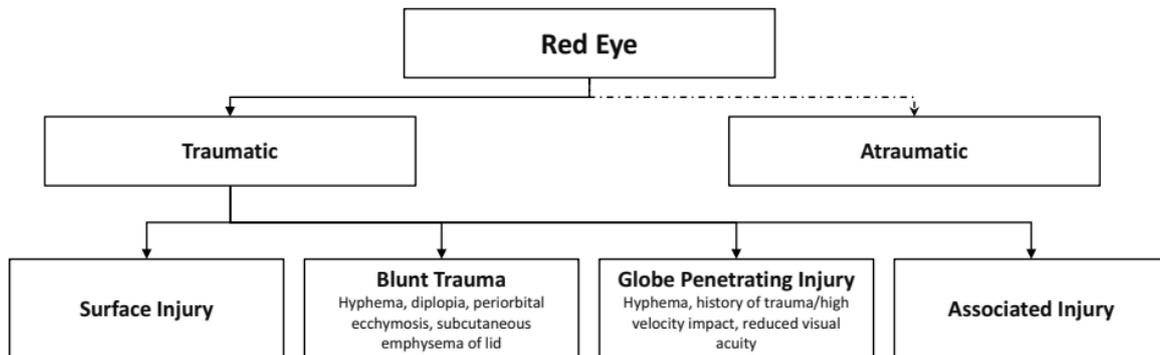


**Clinical Pearl:**

- Orbital cellulitis can present with pain on EOM and orbital signs of involvement

# Red Eye

## Traumatic



- Corneal Abrasion
- Ultraviolet Keratitis
- Chemical (Acid, alkali)

**Blunt Trauma**  
Hyphema, diplopia, periorbital ecchymosis, subcutaneous emphysema of lid

- Orbital Rim/Mid-facial Fracture
- Orbital Floor Fracture
- Orbital Apex Injury/ Retrobulbar Fracture\*\*

\*\* Urgent lateral canthotomy

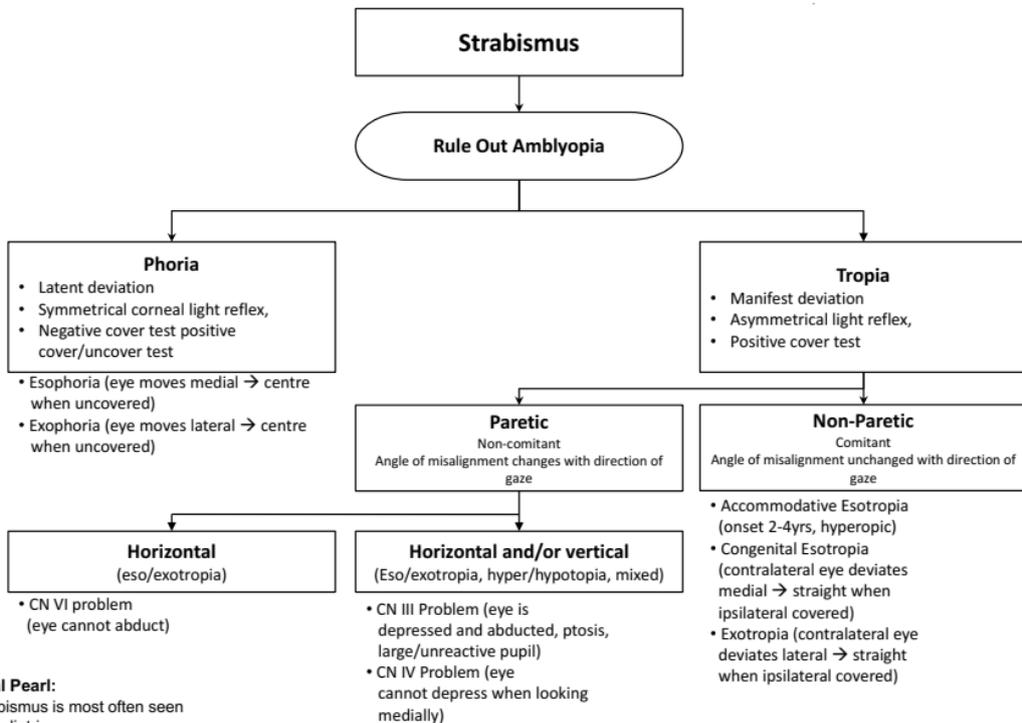
• **Clinical Pearls:**

- With chemical burns, it is important to determine if the burn was caused by acid or worse, alkali.
- With a globe-penetrating injury, call ophthalmology, shield the eye, and do not touch the eye.

**Globe Penetrating Injury**  
Hyphema, history of trauma/high velocity impact, reduced visual acuity

**Associated Injury**

- Lids: Swelling, Laceration
- Conjunctiva: Subconjunctival hemorrhage
- Cornea: Abrasion
- Iris: Laceration, iritis, iridodialysis
- Pupil: Traumatic mydriasis
- Lens: Cataract, dislocation
- Vitreous hemorrhage
- Retina: Tear, hemorrhage, choroidal rupture
- Glaucoma
- Optic Neuropathy



- Clinical Pearl:**
- Strabismus is most often seen in pediatrics.





# Pediatric

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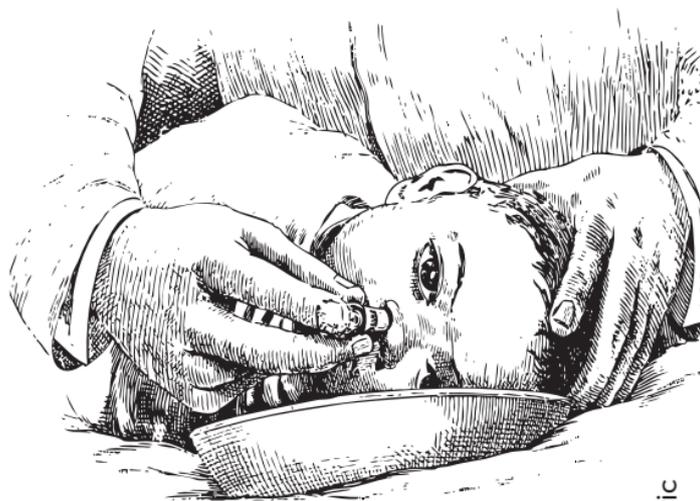
# Pediatric

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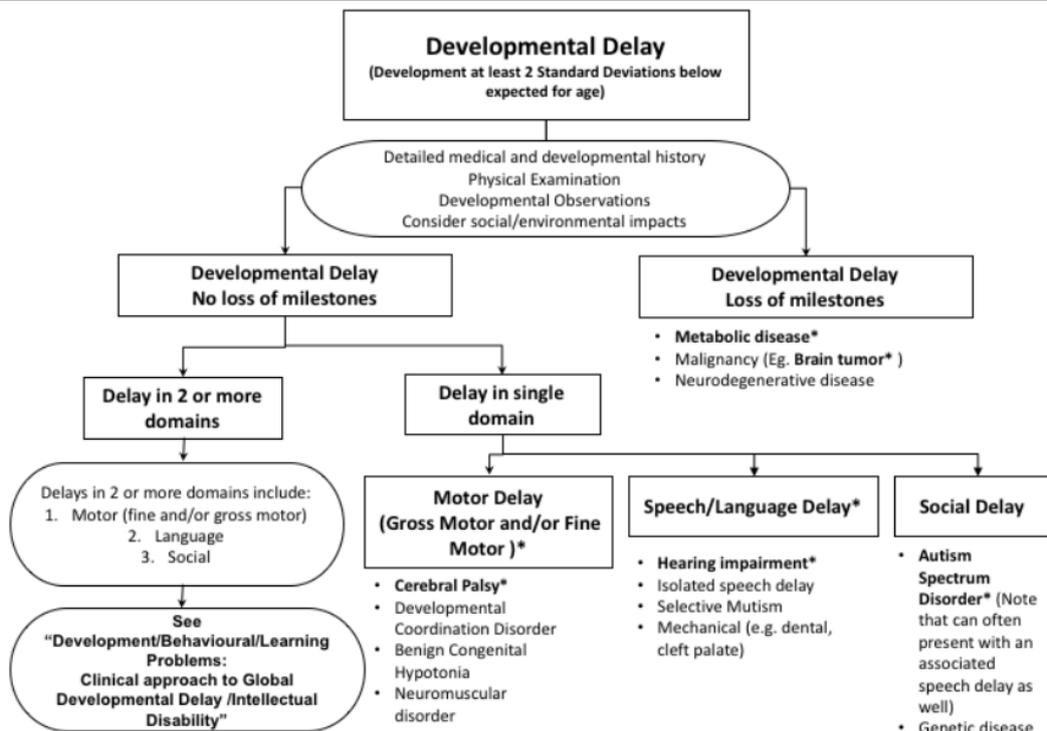
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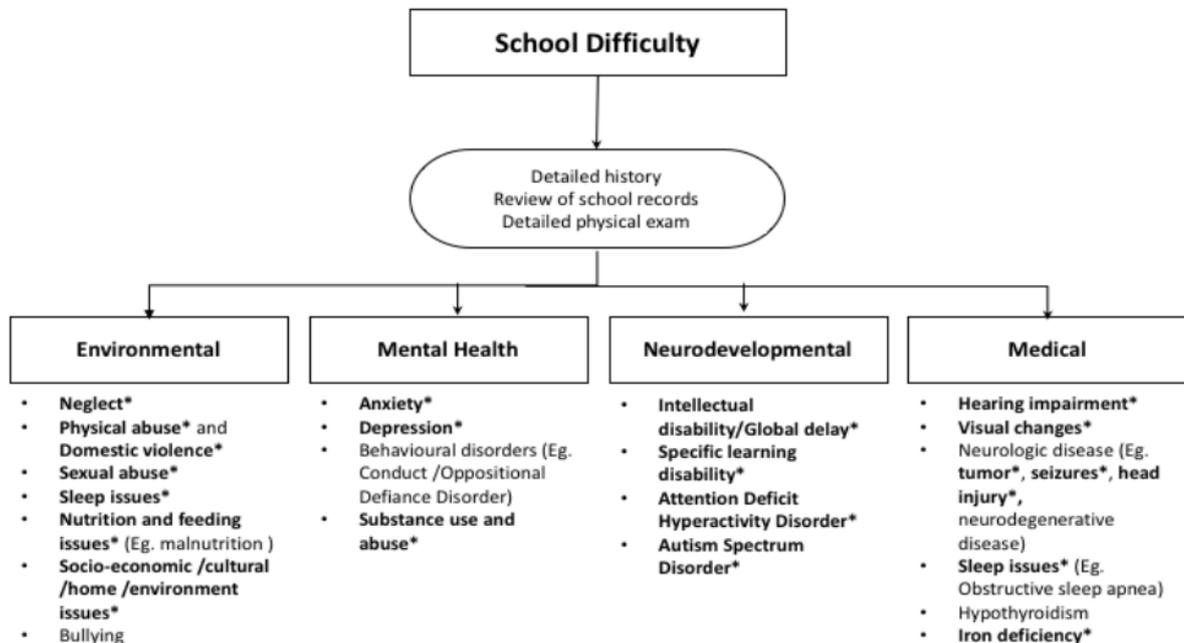
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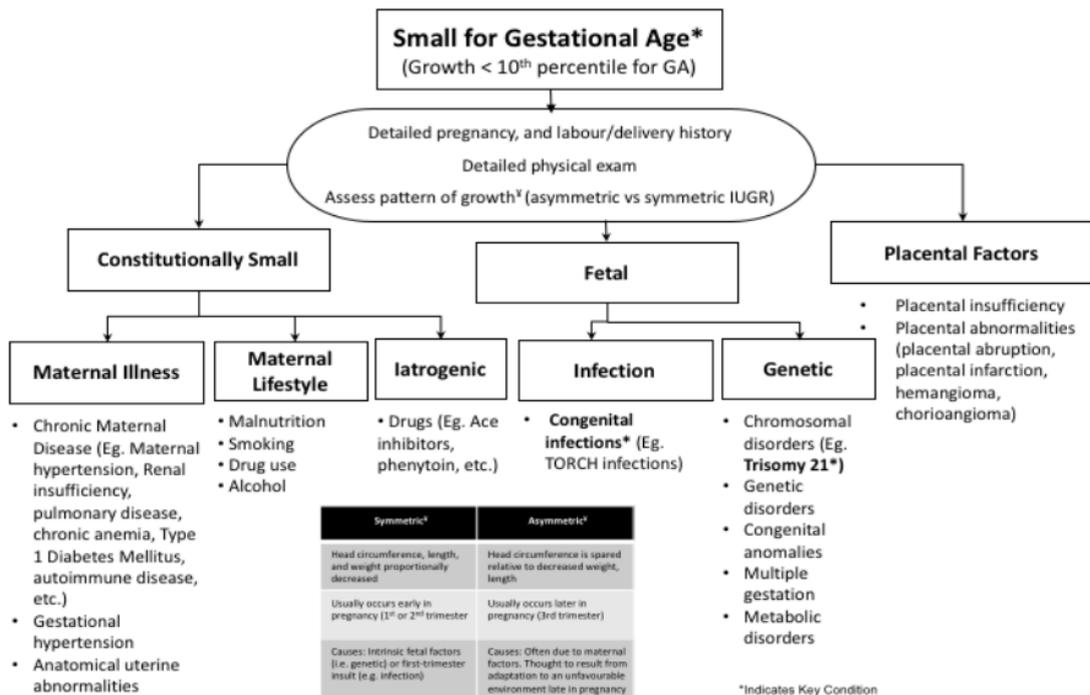


# Developmental Delay

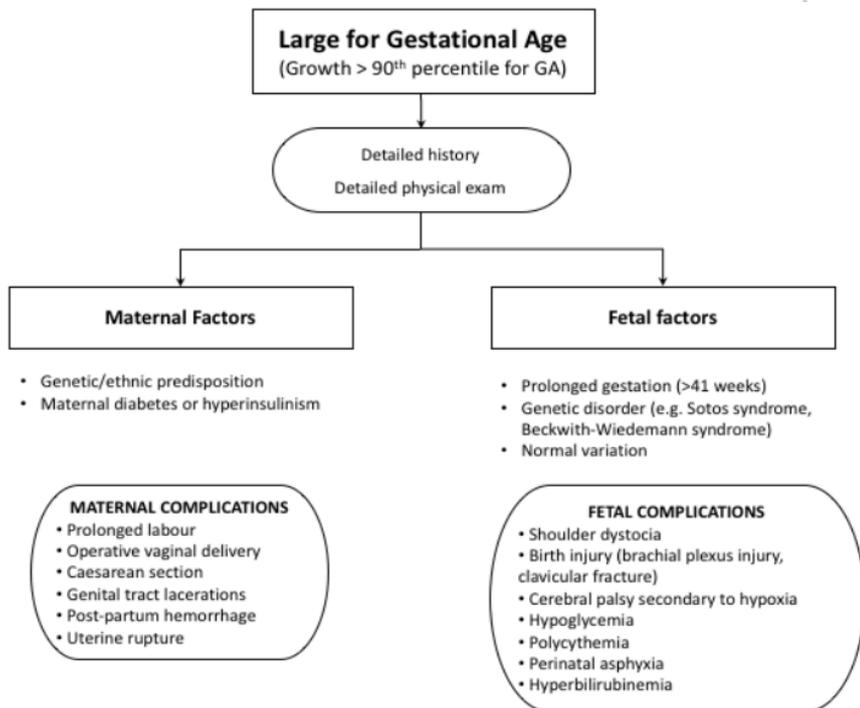




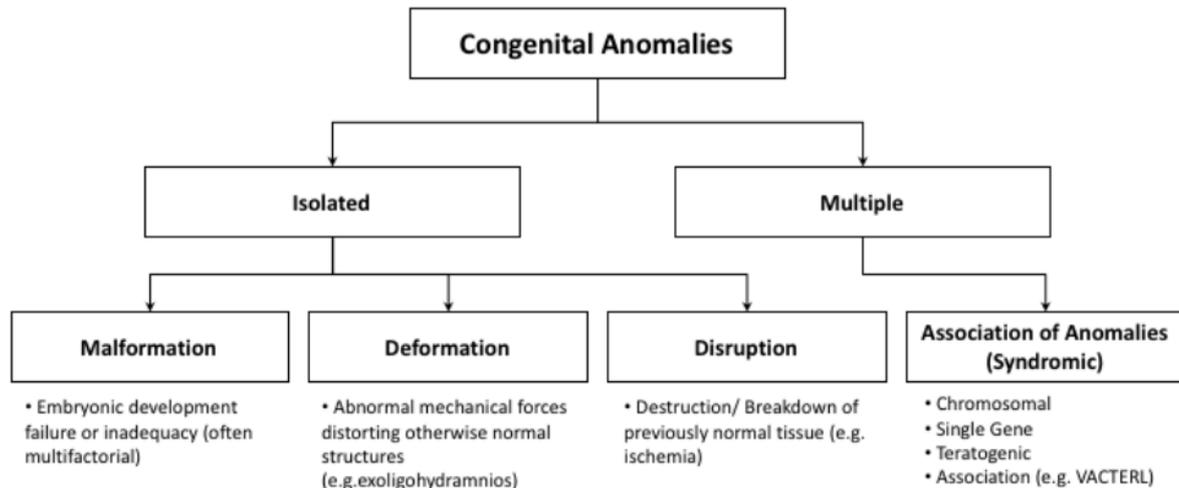
# Small for Gestational Age\*



# Large for Gestational Age

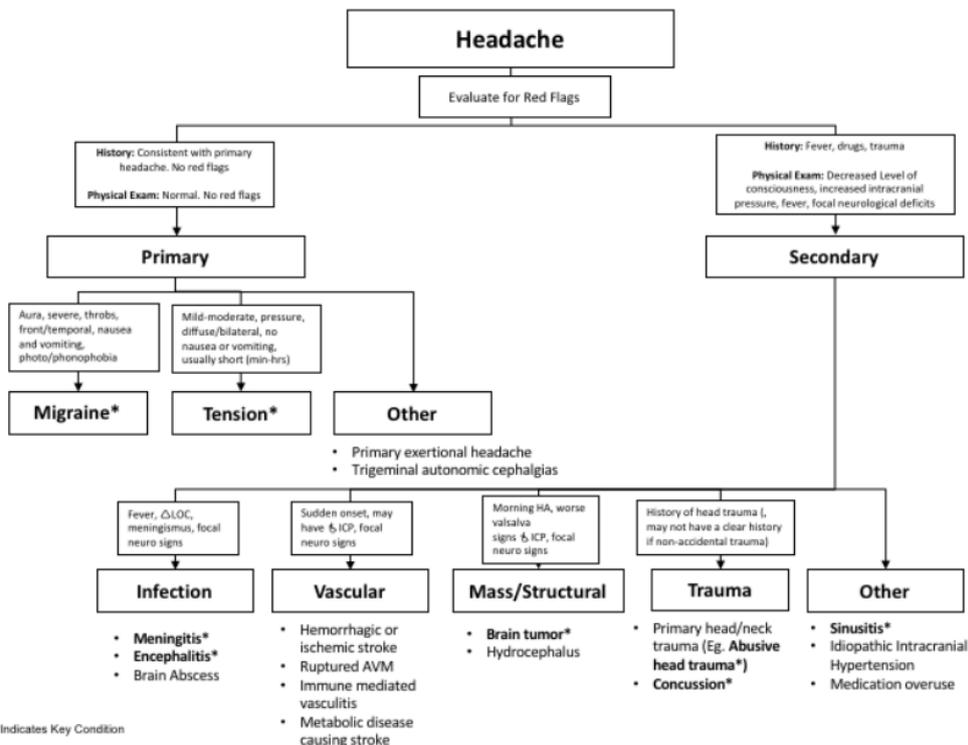


# Congenital Anomalies



• **Things to Consider:**

- **History** – Prenatal: maternal health, exposures, screening, ultrasounds; delivery; neonatal
- **Family History** – Three Generations: prior malformations, stillbirths, recurrent miscarriages, consanguinity
- **Physical Exam** – Variants, minor anomalies, major malformation
- **Diagnostic Procedures** – Chromosomes, molecular/DNA, radiology, photography, metabolic
- **Diagnostic Evaluations** – Prognosis, recurrence, prenatal diagnosis, surveillance, treatment

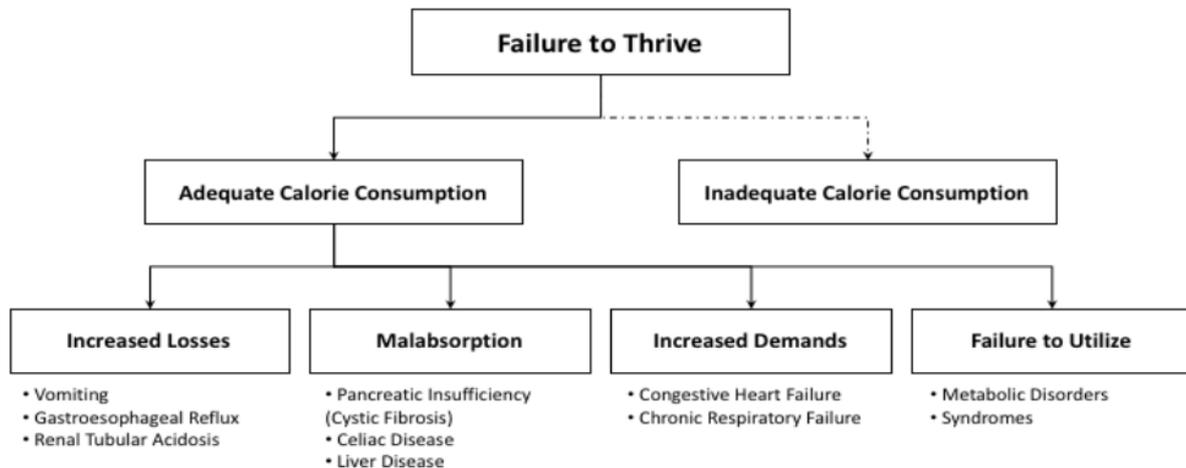


\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

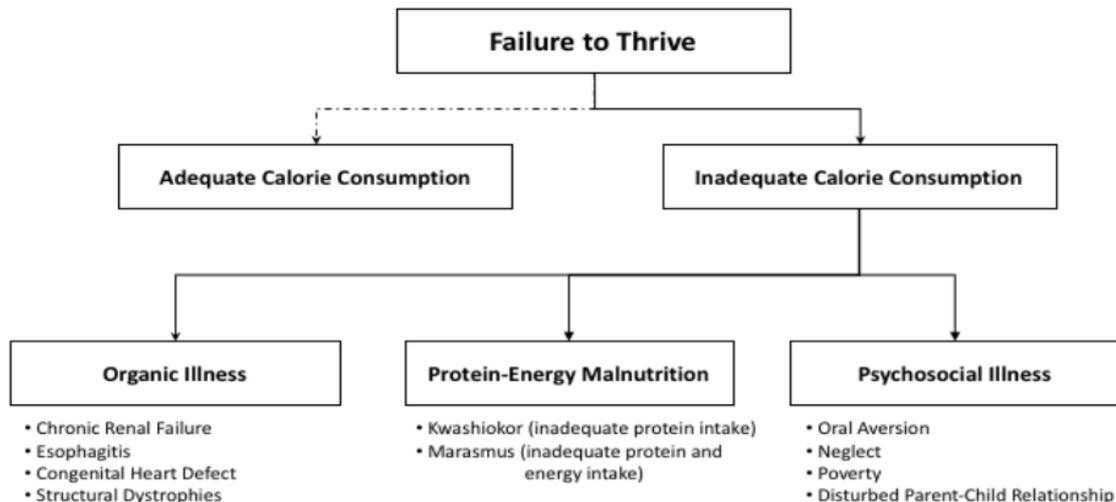
# Failure to Thrive

## Adequate Calorie Consumption

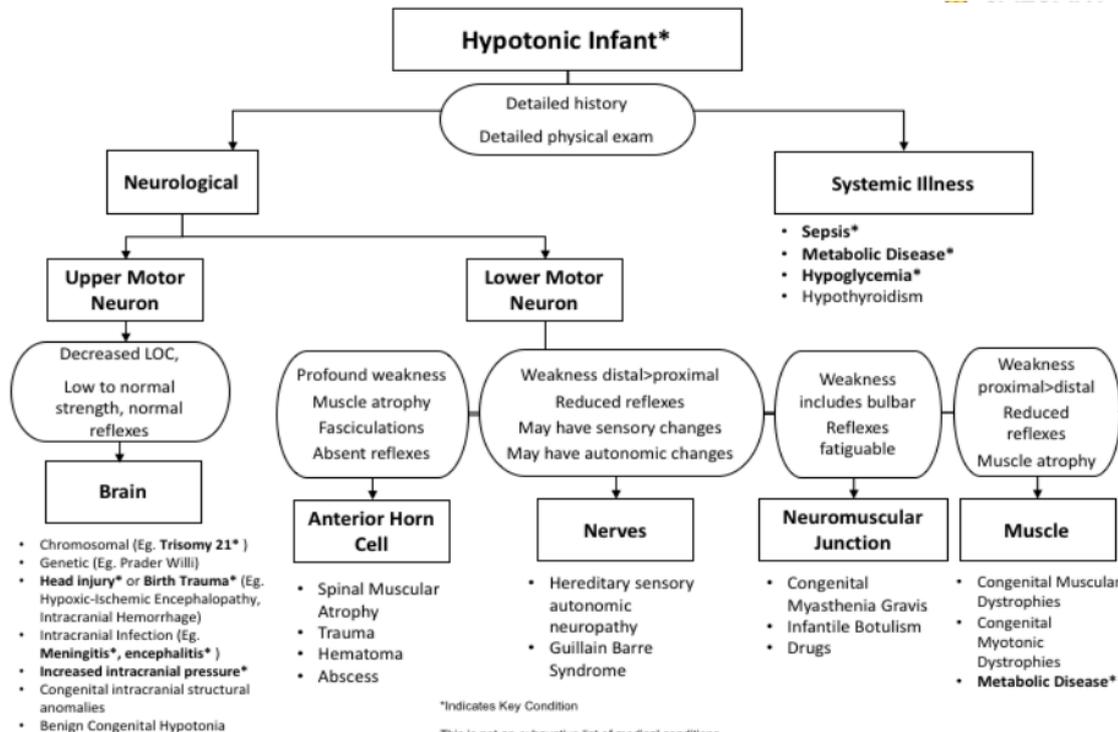


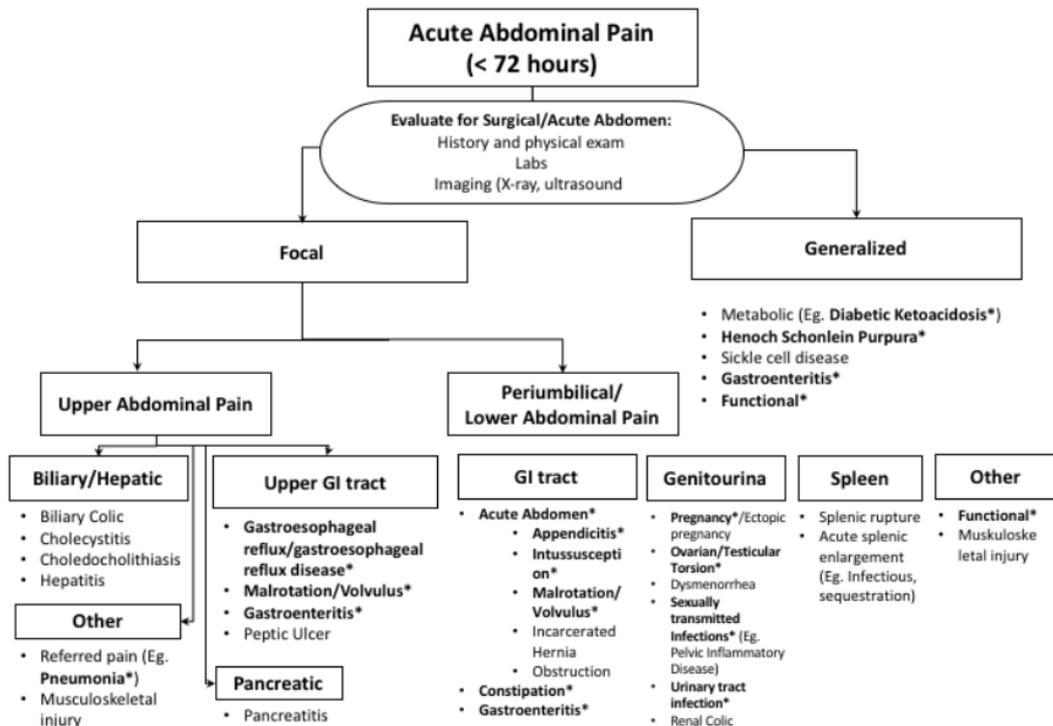
# Failure to Thrive

## Inadequate Calorie Consumption

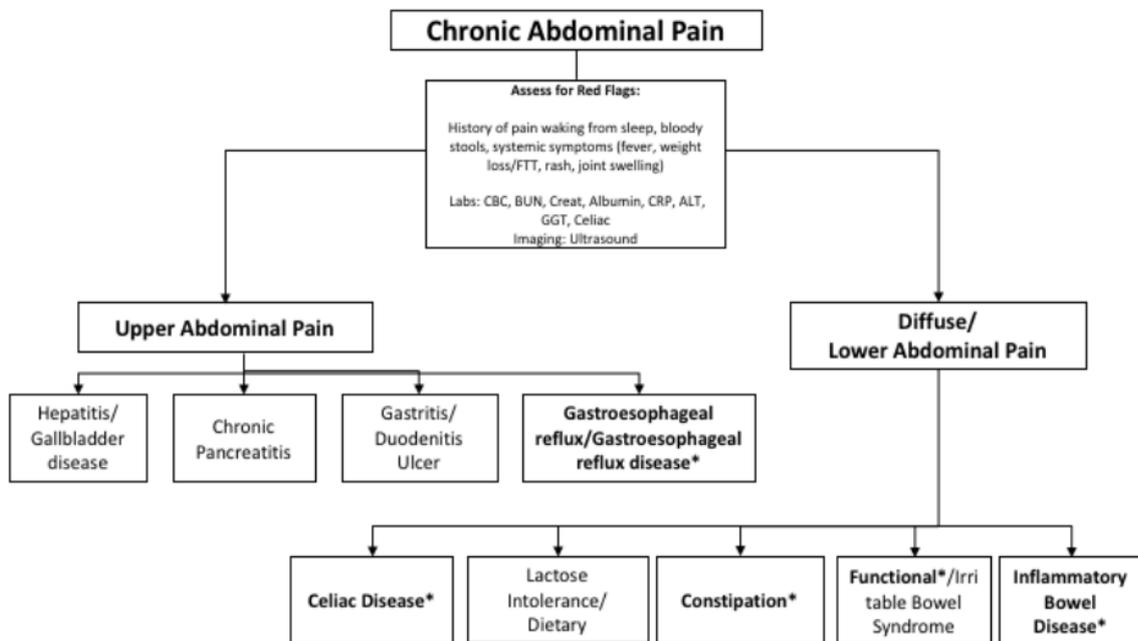


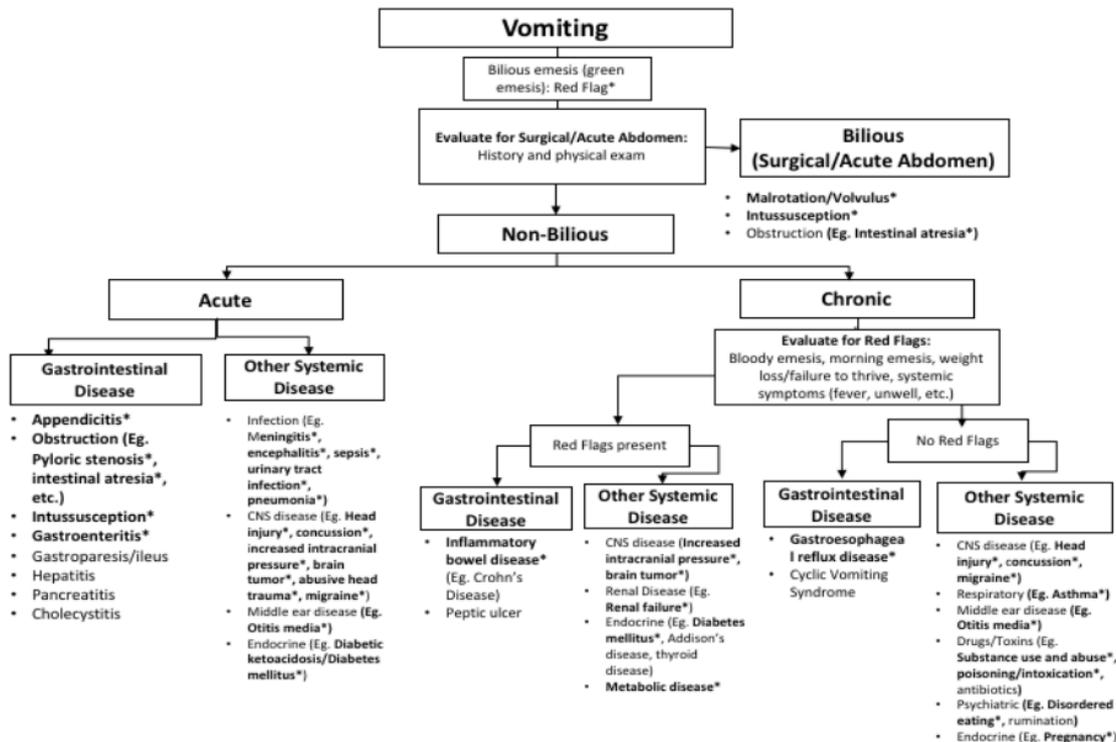
# Hypotonic Infant (Floppy Newborn)





# Chronic Abdominal Pain

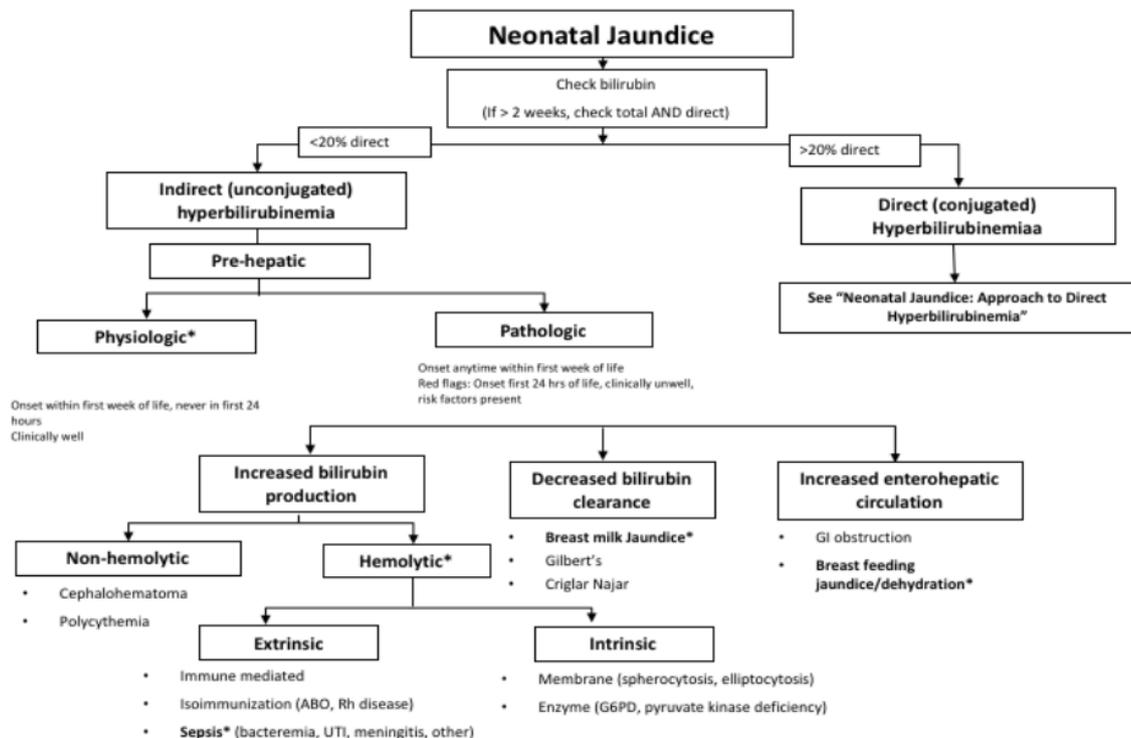


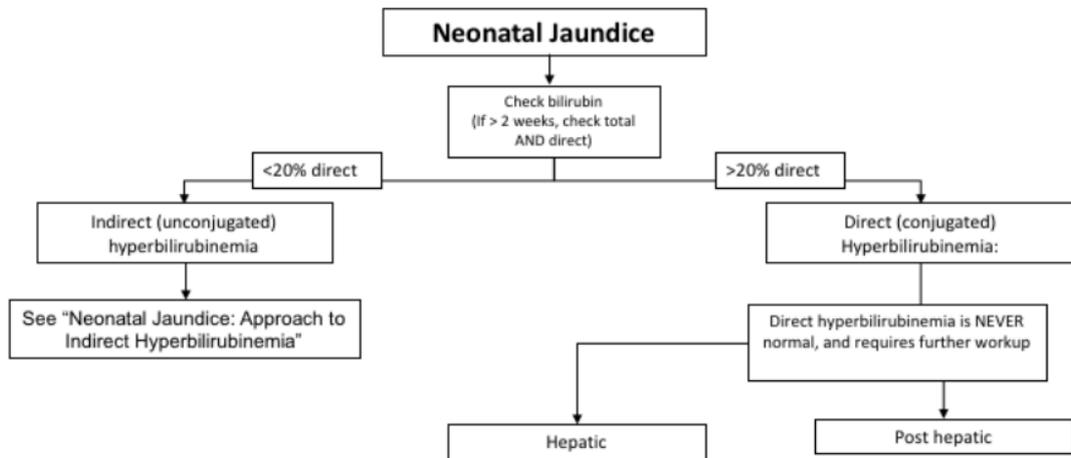


# Neonatal Jaundice



## Approach To Indirect Hyperbilirubinemia

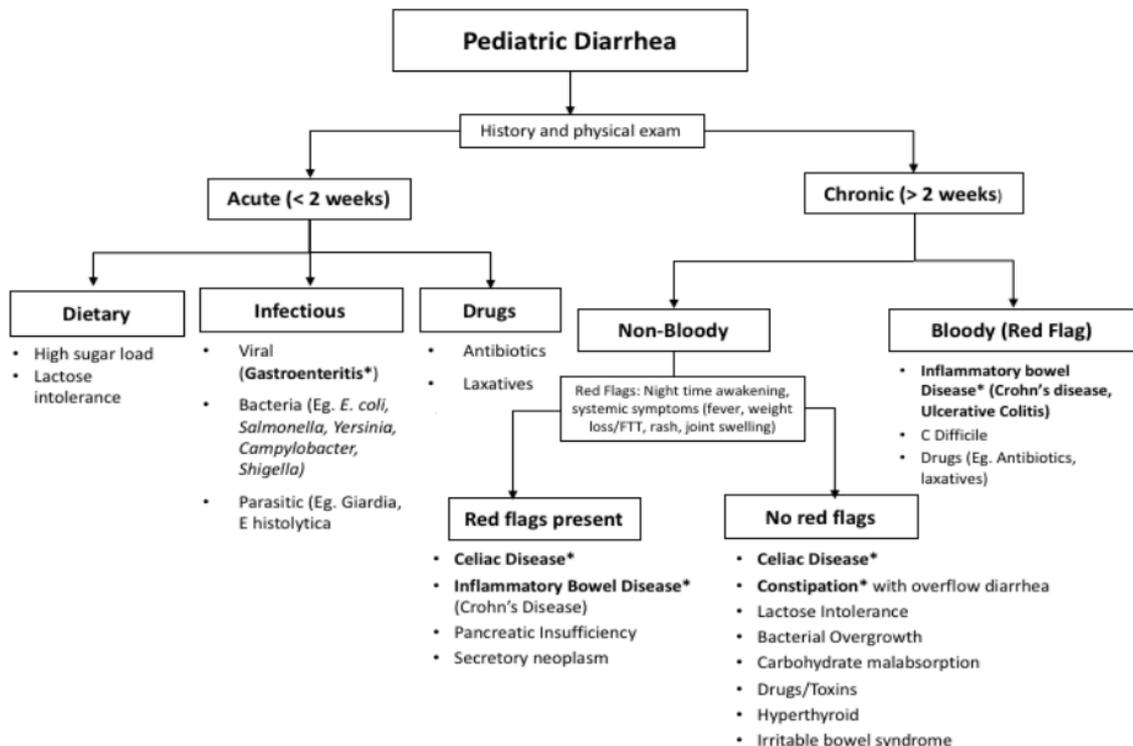




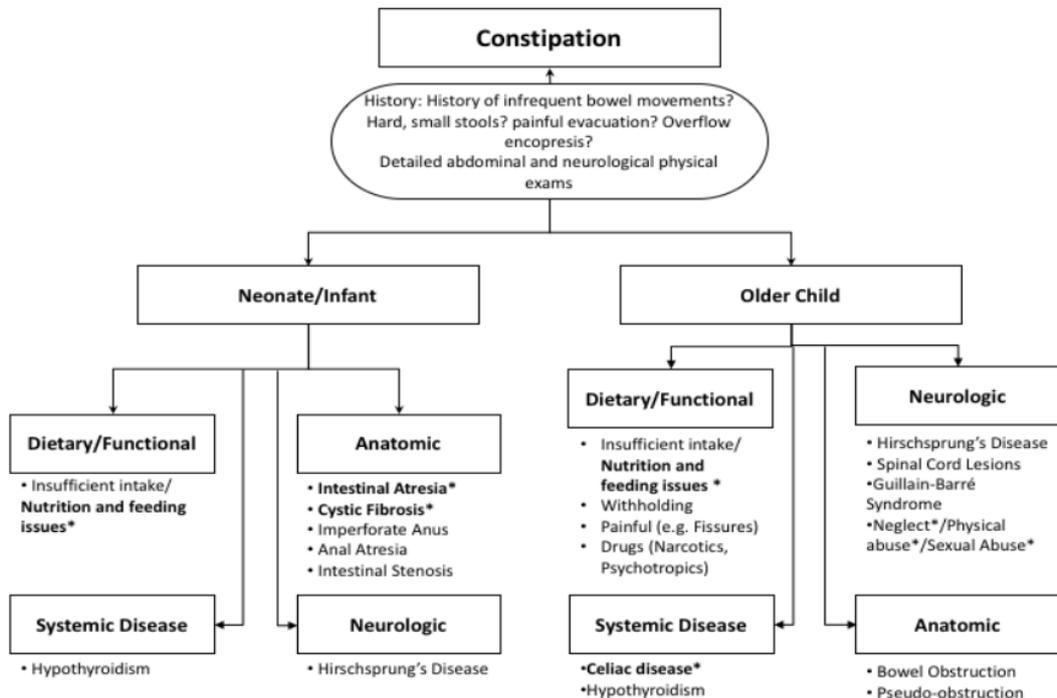
- Infectious (TORCH, hepatitis virus, **bacterial sepsis\***, UTI\*)
- Genetic (**Cystic fibrosis\***, Alagille Syndrome)
- Metabolic (Inborn errors of metabolism, alpha-1-antitrypsin deficiency)
- Endocrine (Hypothyroid, hypopituitarism)
- Iatrogenic (TPN, other drugs)
- Neoplastic (hepatoblastoma)

- **Biliary atresia\***
- Other obstructive (choledochal cyst, mass, intestinal obstruction)

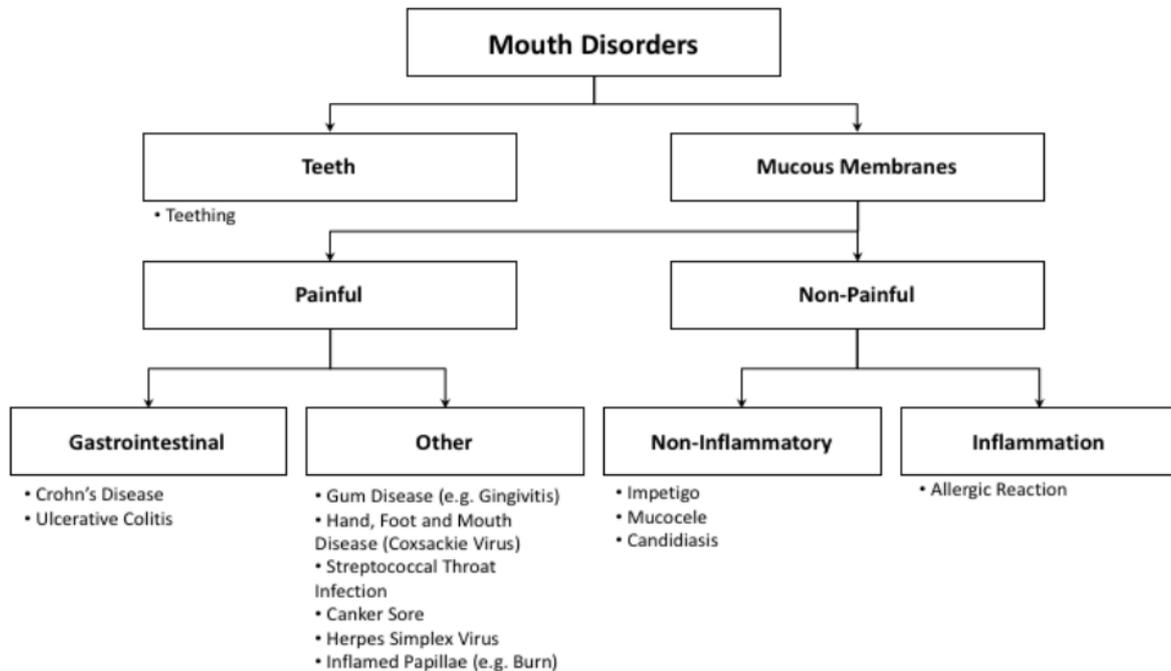
# Diarrhea (Pediatric)



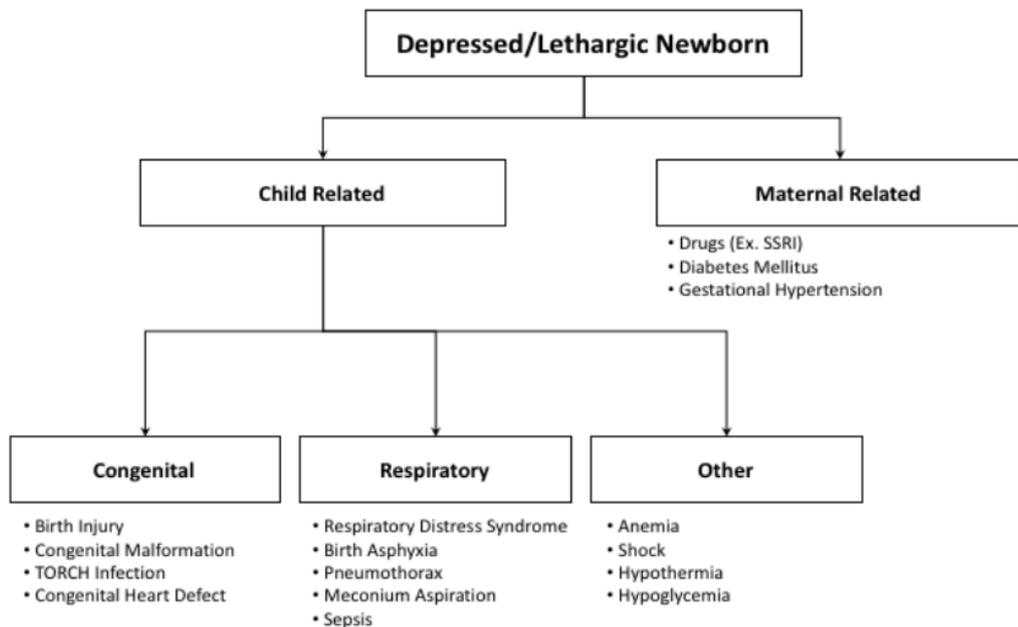
# Constipation (Pediatric)



# Mouth Disorders (Pediatric)



# Depressed/Lethargic Newborn

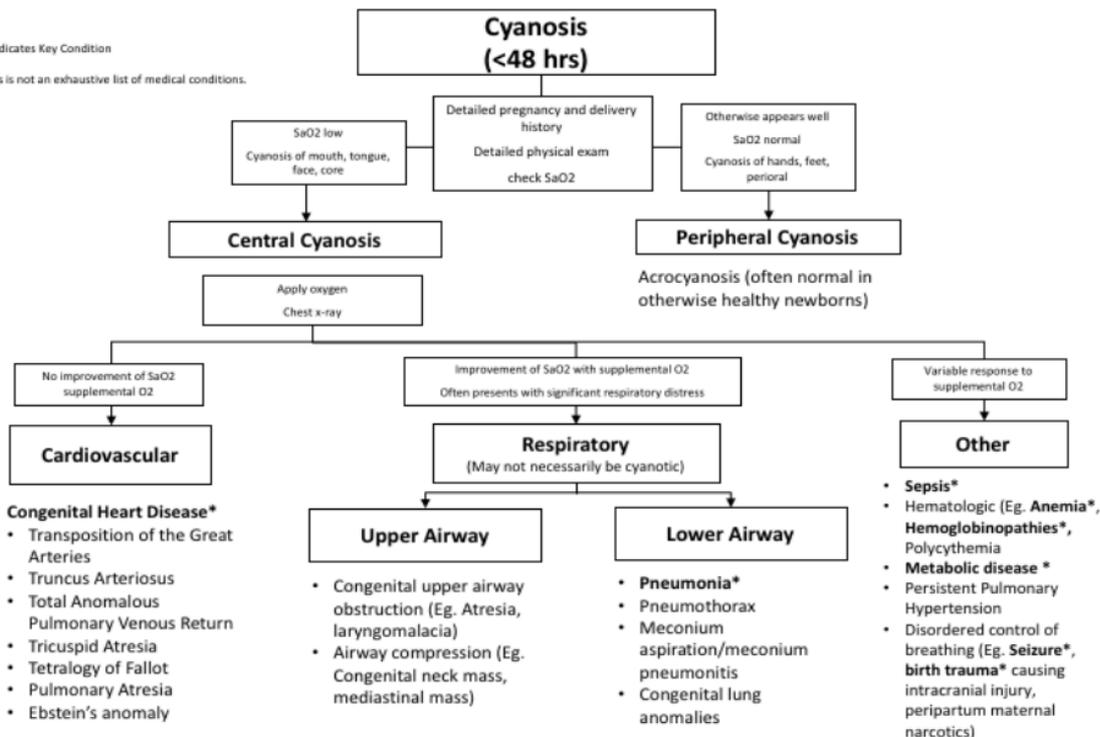


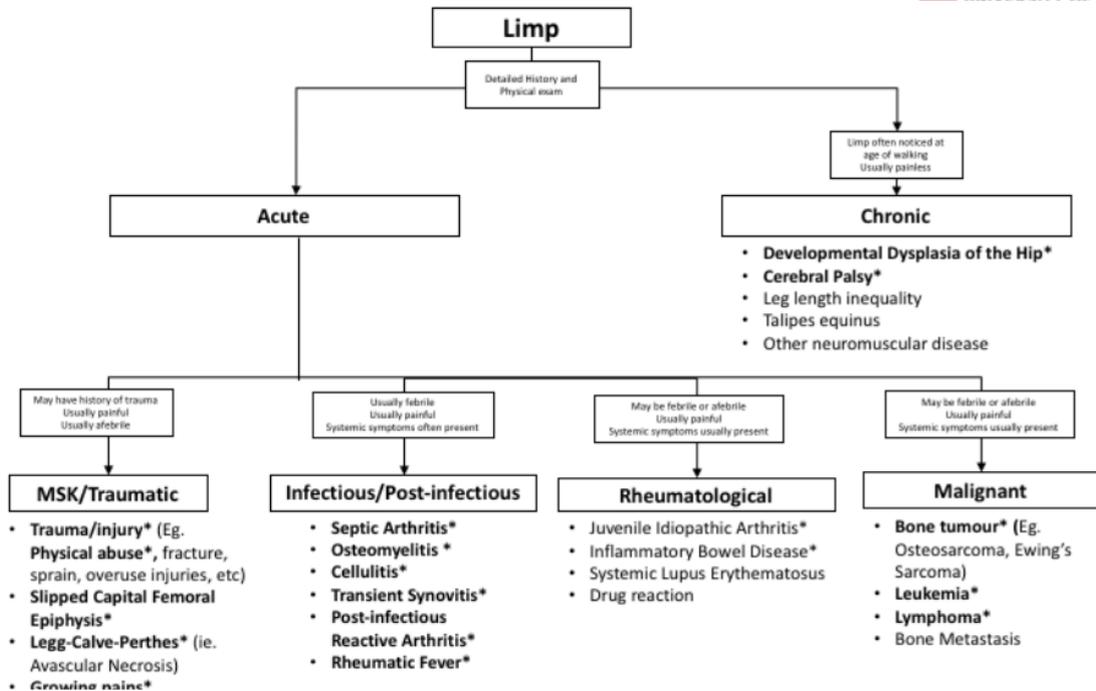
# Cyanosis in the Newborn



\*Indicates Key Condition

This is not an exhaustive list of medical conditions.





\*Indicates Key Condition

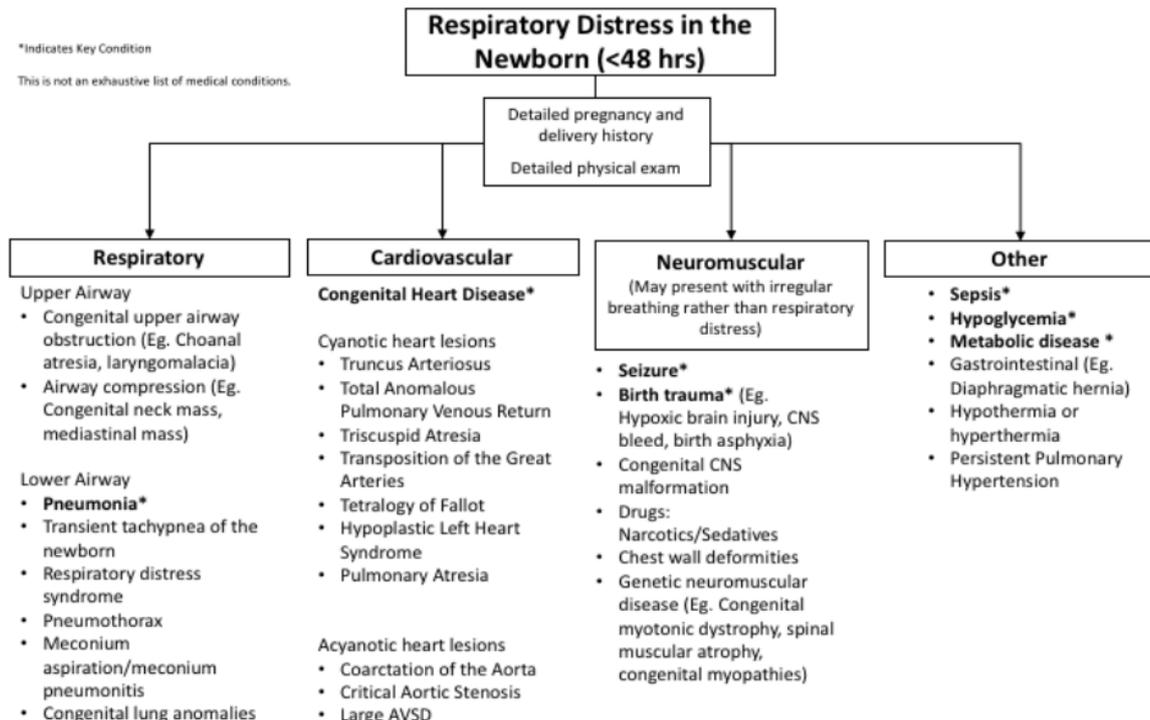
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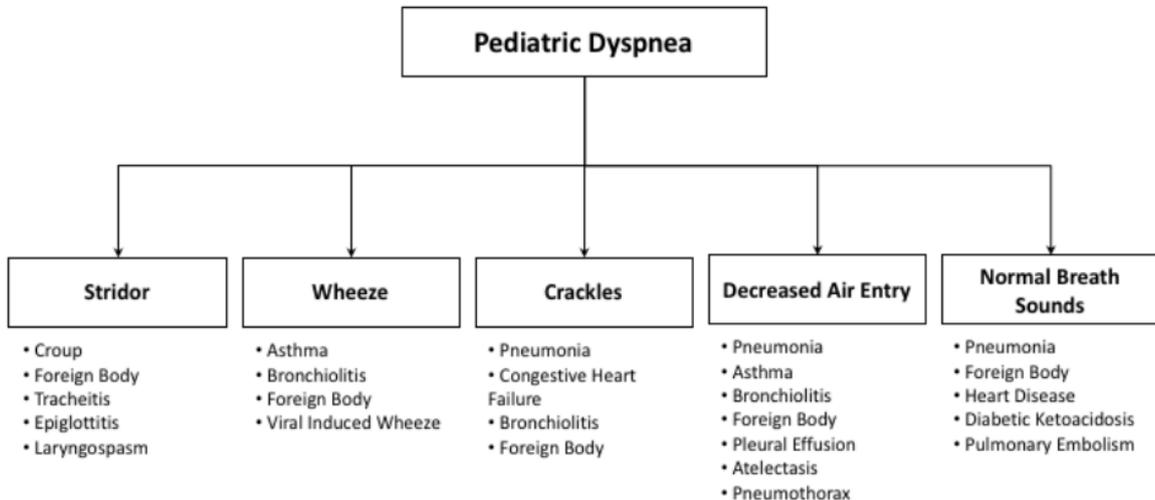
# Respiratory Distress In The Newborn



\*Indicates Key Condition

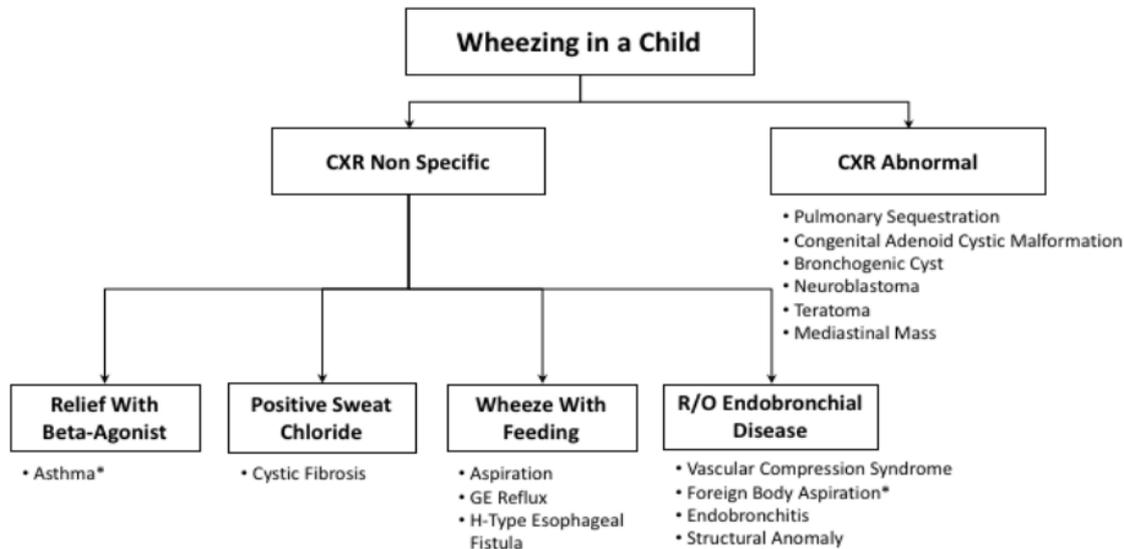
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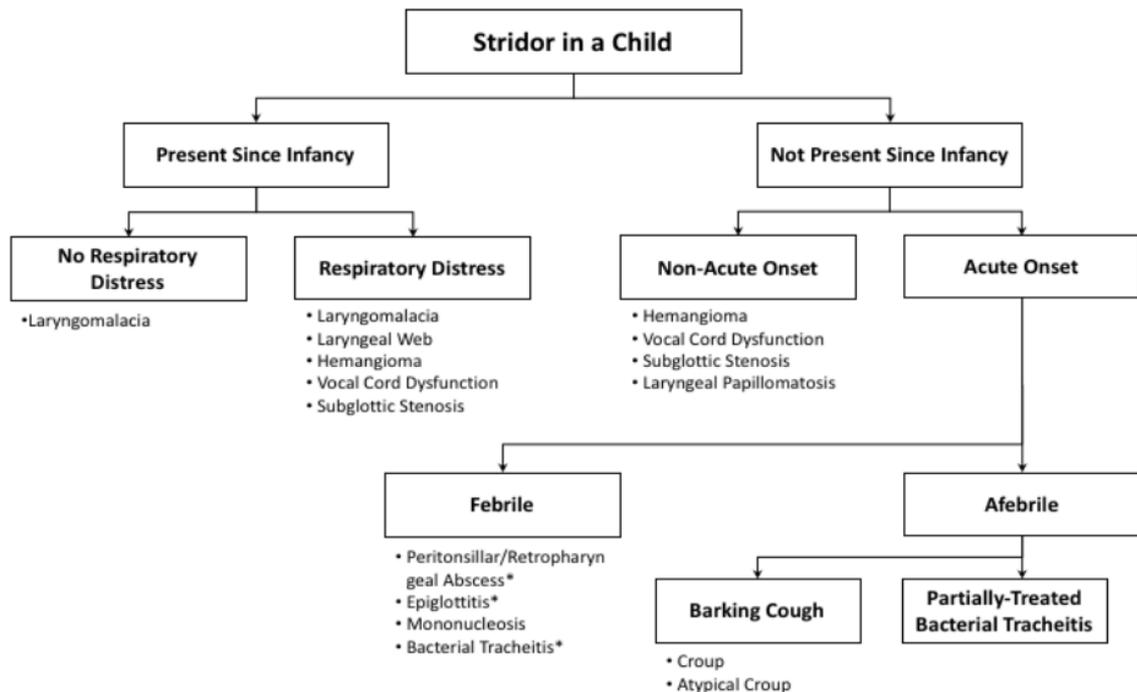


# Noisy Breathing

## Pediatric Wheezing



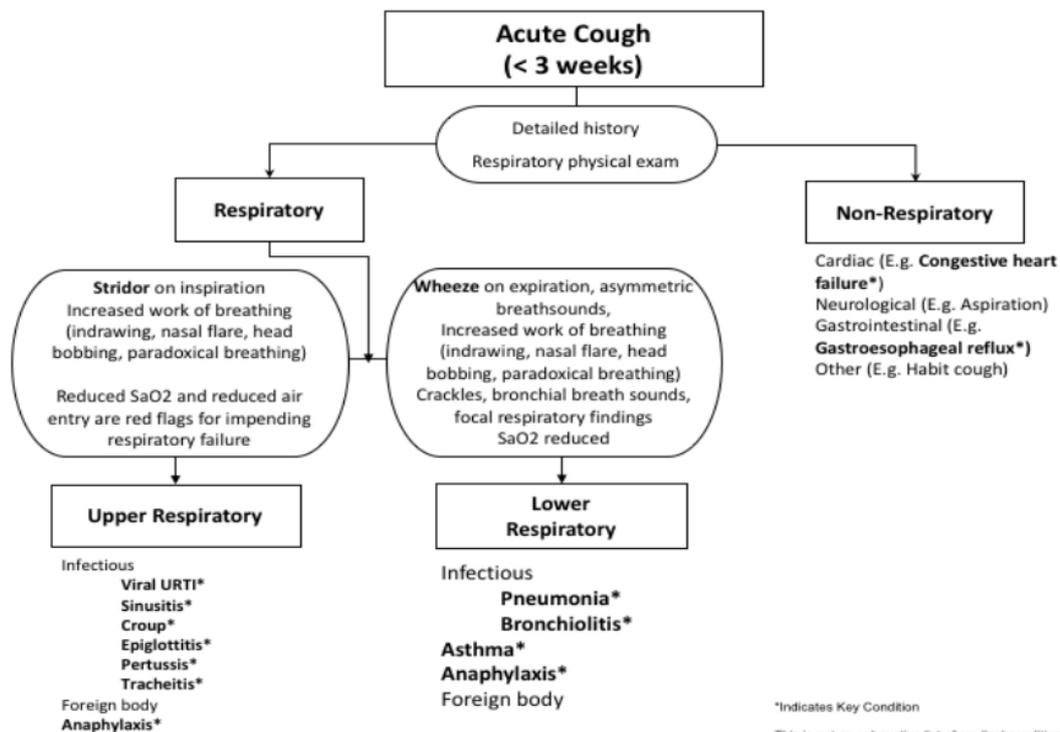
\* Denotes acutely life-threatening causes

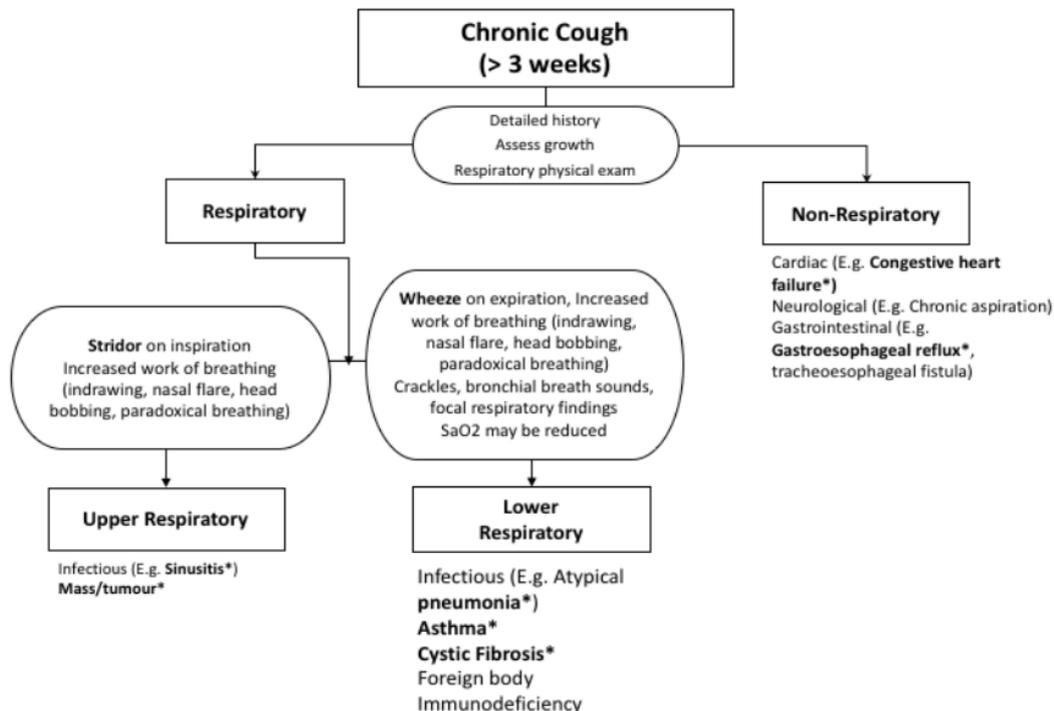


\* Denotes acutely life-threatening causes

# Pediatric Cough

Acute

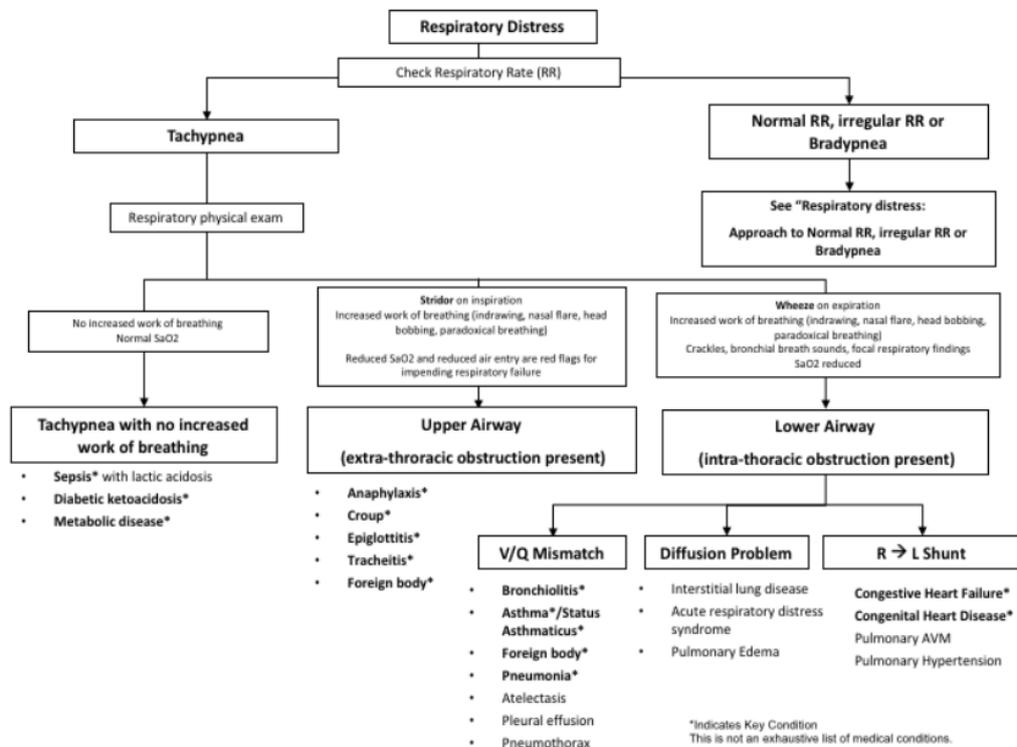




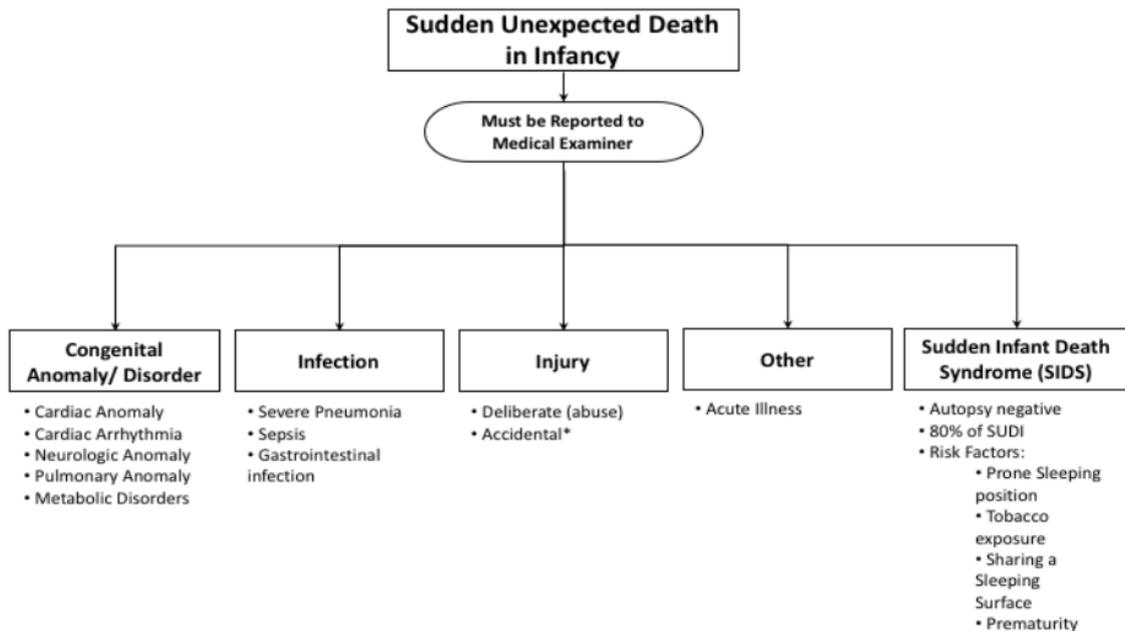
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Respiratory Distress In The Newborn

## Tachypnea



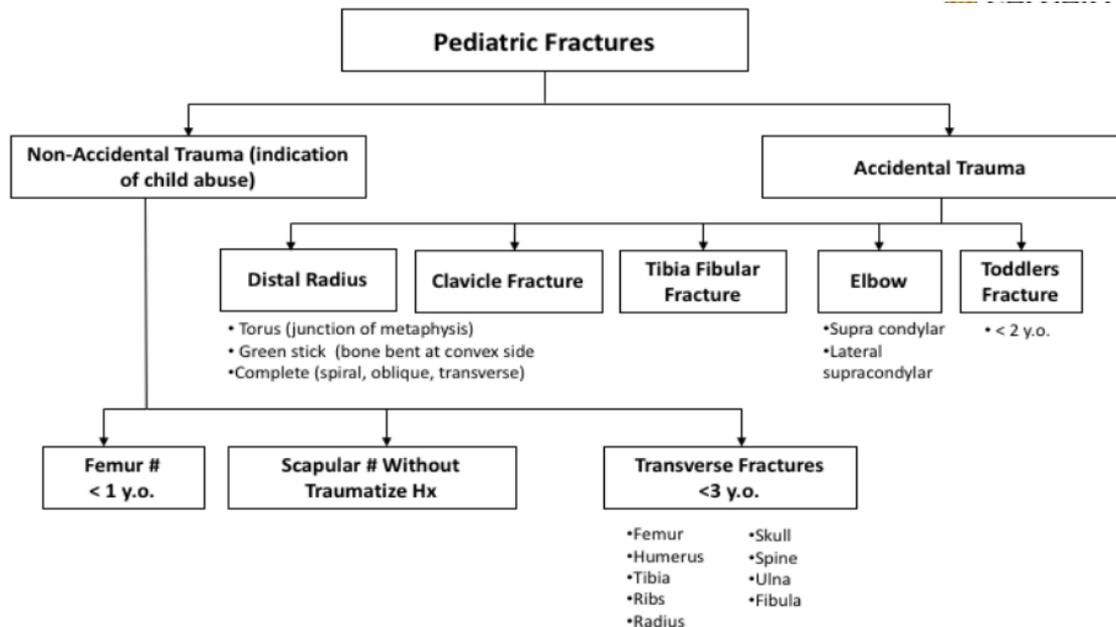
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.



\* SUDI with negative investigations and infant found in prone position or in bed with parent may be called either SIDS or injury (new ideas evolving)

\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

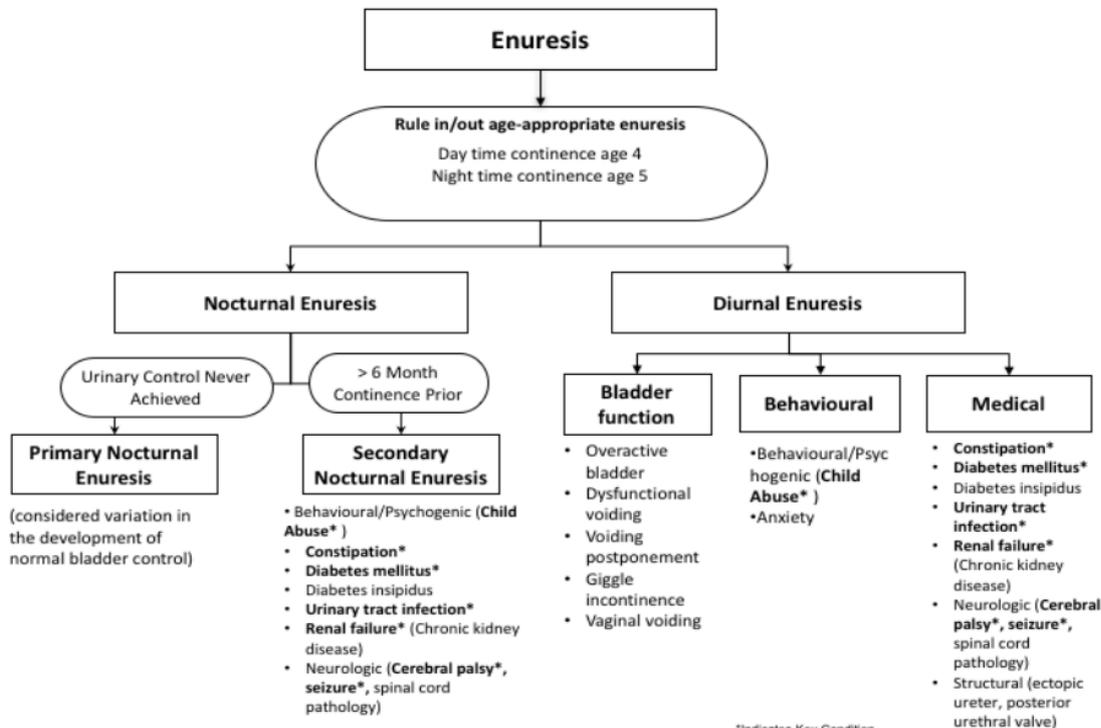
# Pediatric Fractures





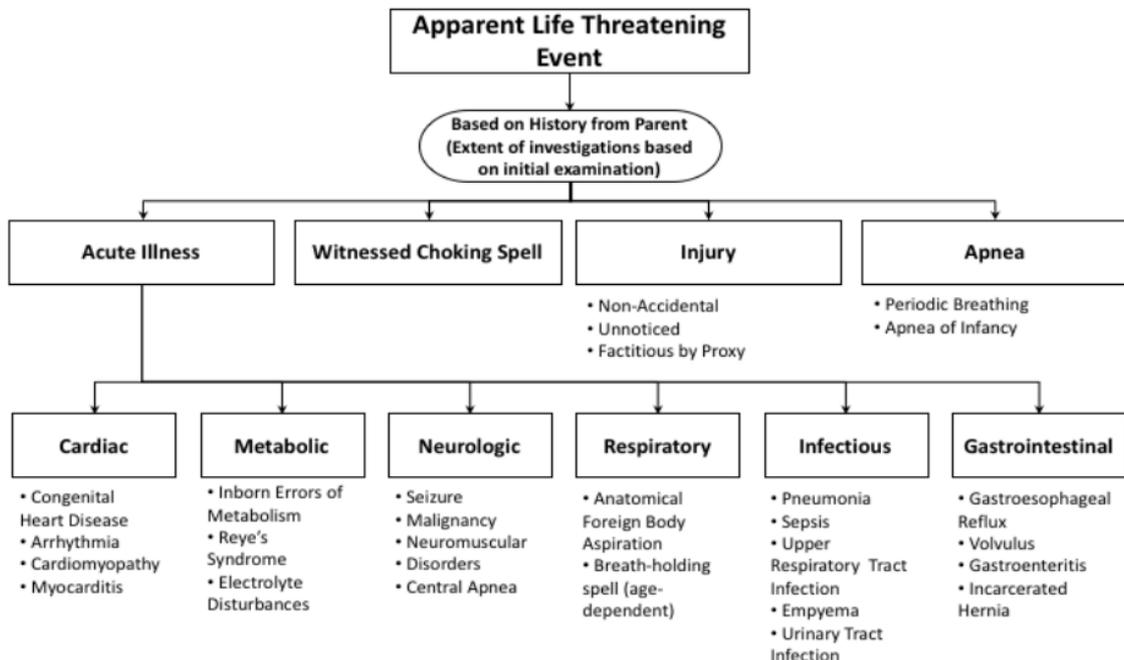
Type	Population	Features		
I	Younger Children	Separation through the physis	S	Straight through
II	Older Children (75%)	Fracture through a portion of the physis that extends through the metaphyses	A	Above
III	Older Children (75%)	Fracture line goes below the physis through the epiphysis, and into the joint	L	Lower
IV		Fracture Line through the metaphysis, physis and epiphysis	T	Through
V		Compression fracture of the growth plate	R	Crush

# Enuresis



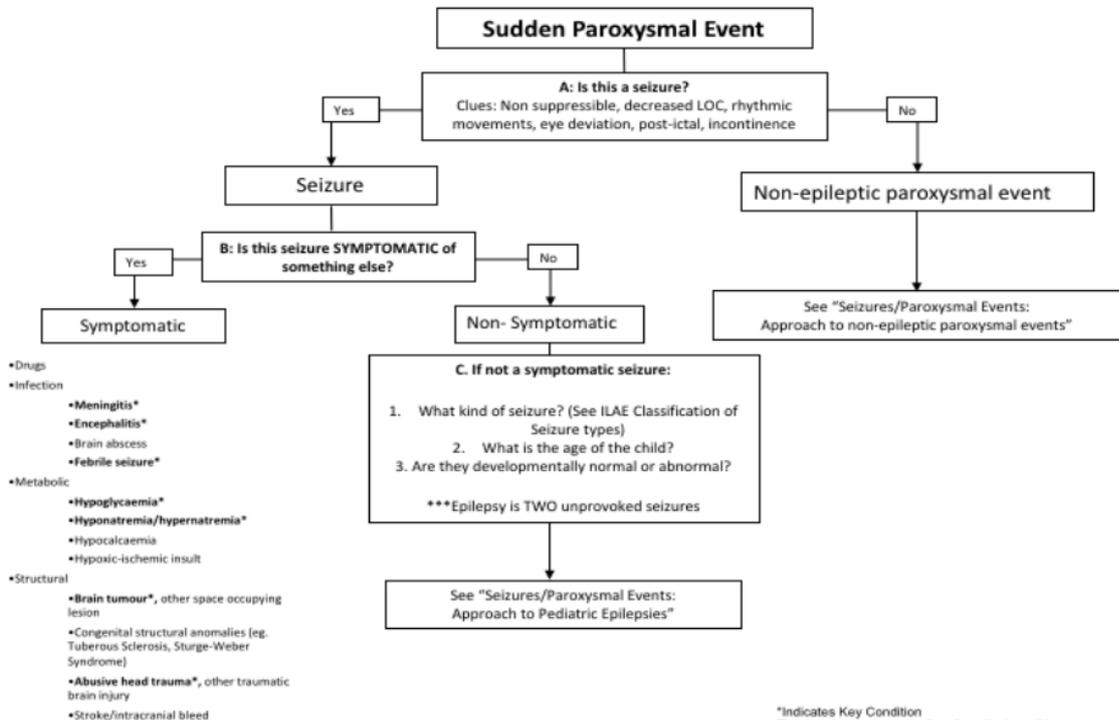
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Apparent Life Threatening Event



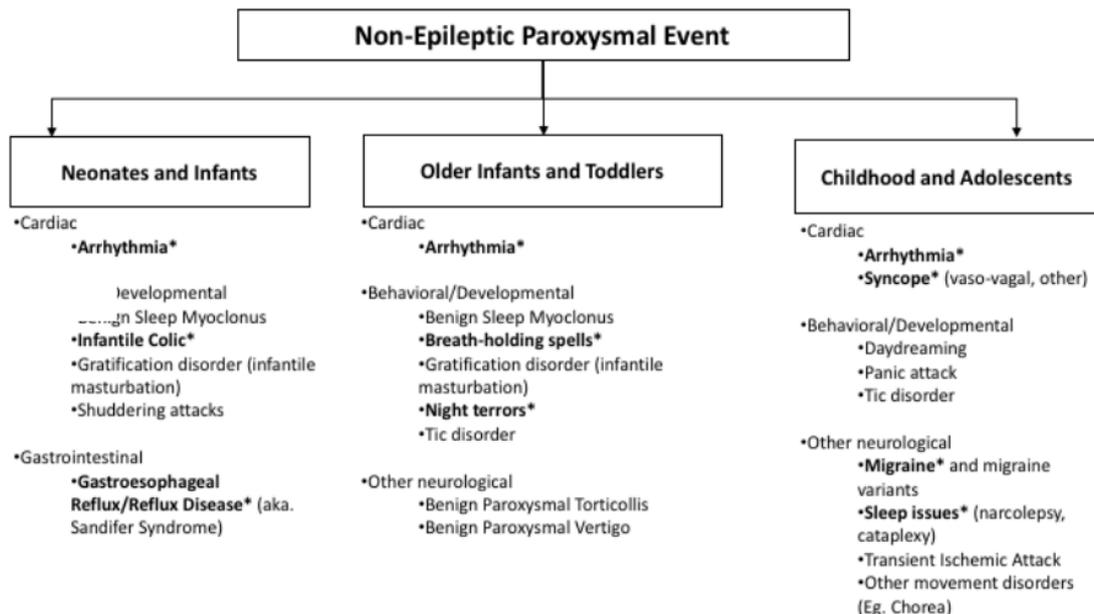
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Sudden Paroxysmal Event



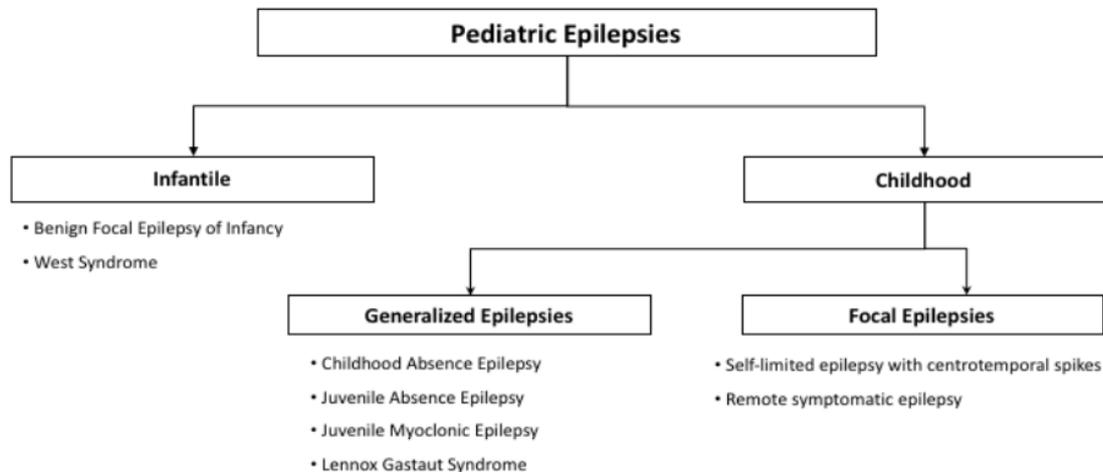


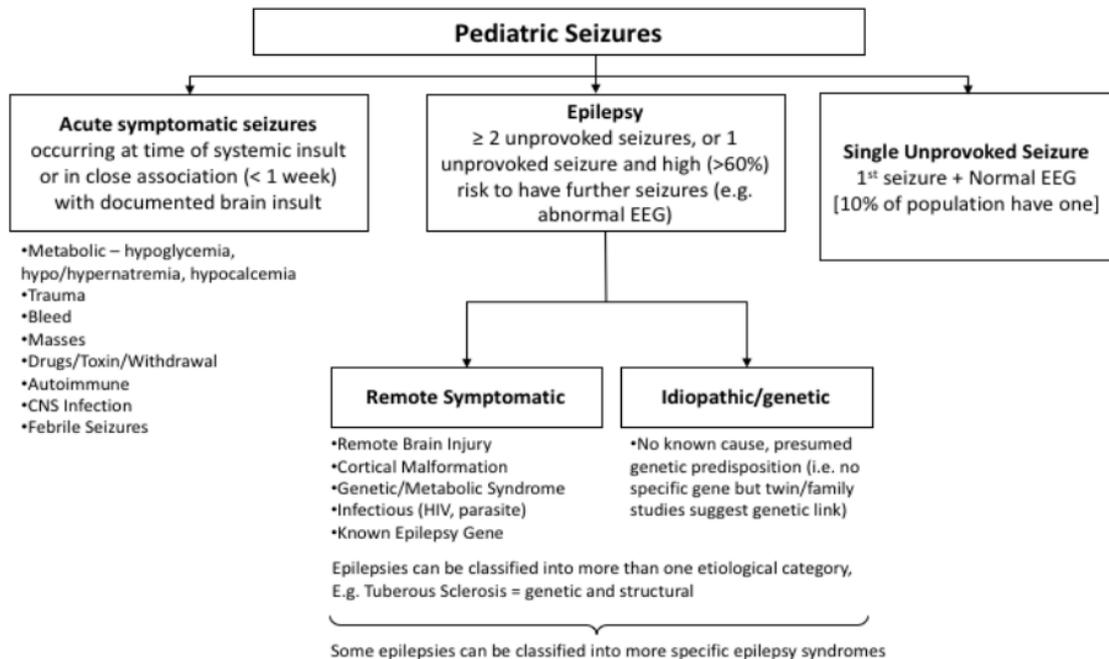
# Non-Epileptic Paroxysmal Event



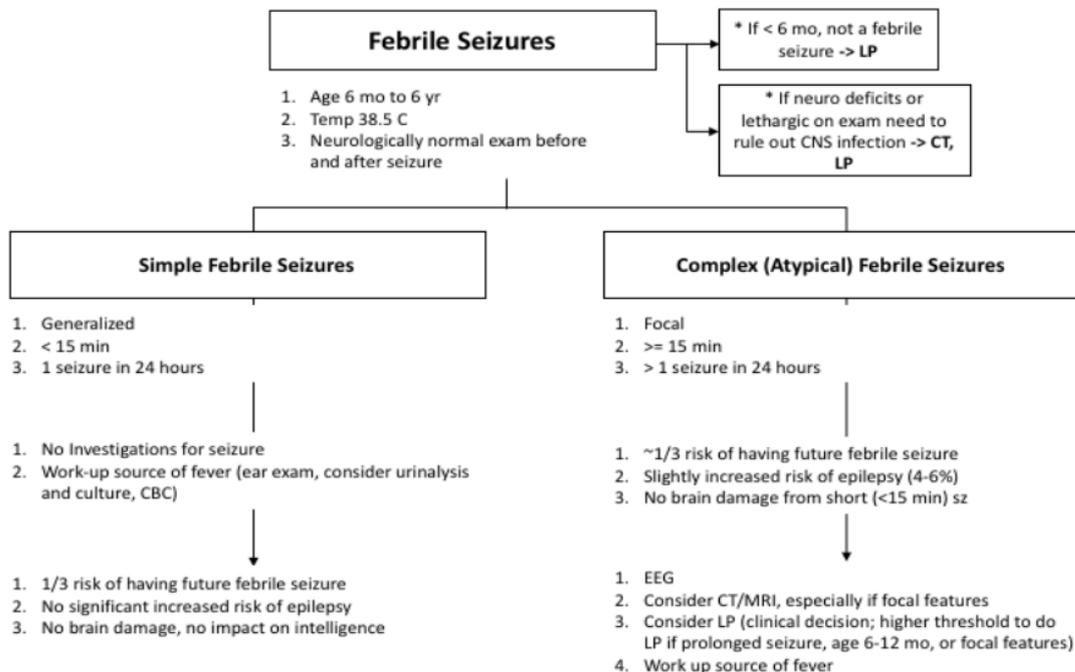
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Pediatric Epilepsies



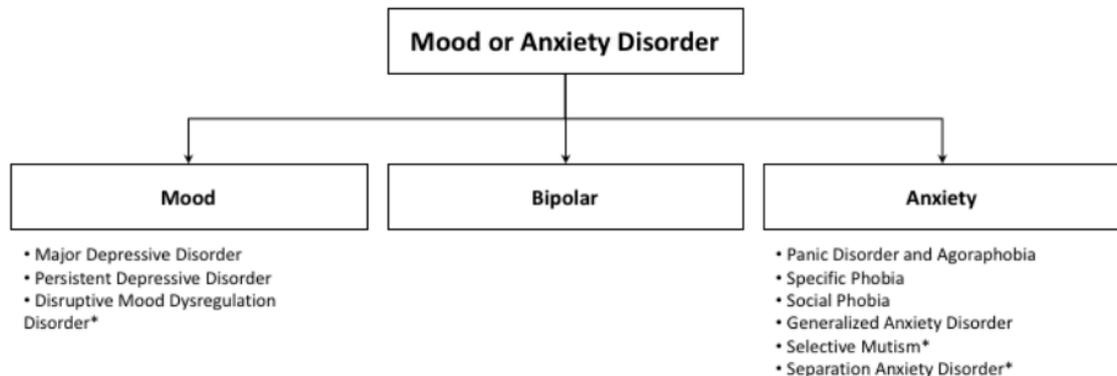


# Febrile Seizures



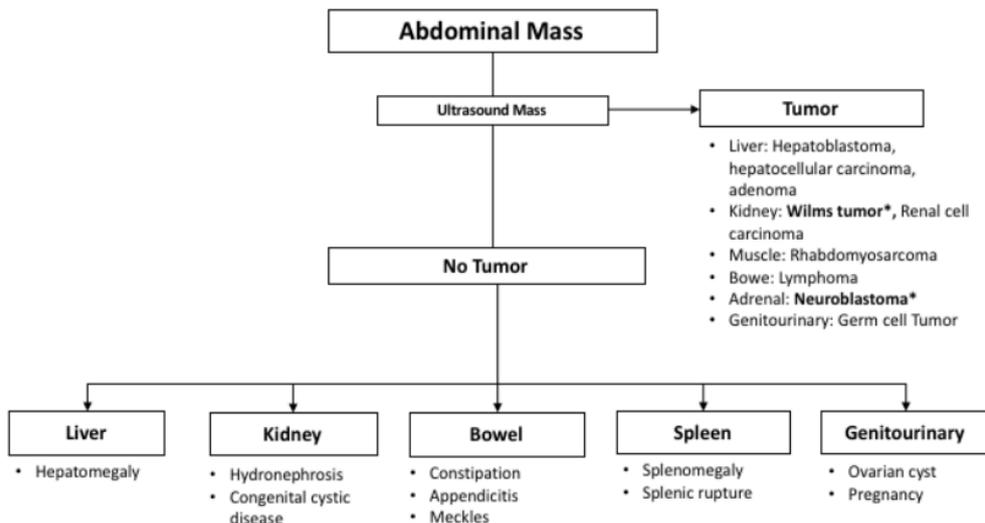


# Pediatric Mood And Anxiety Disorders



\*More commonly or exclusively found in pediatric populations

# Abdominal Mass

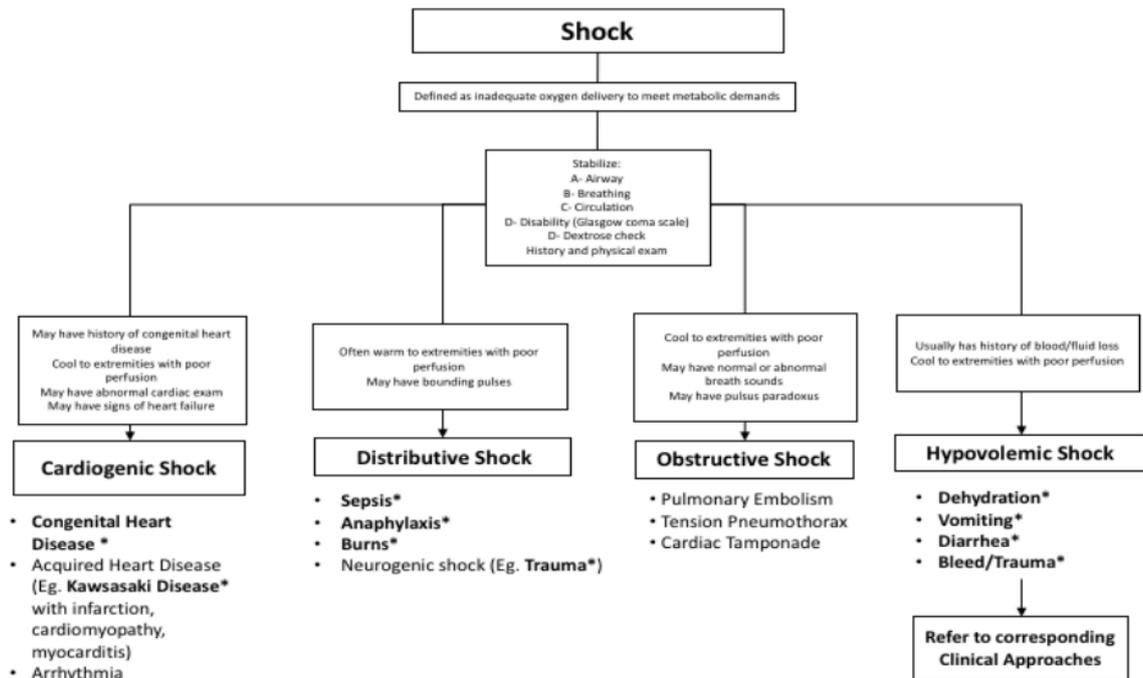


\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

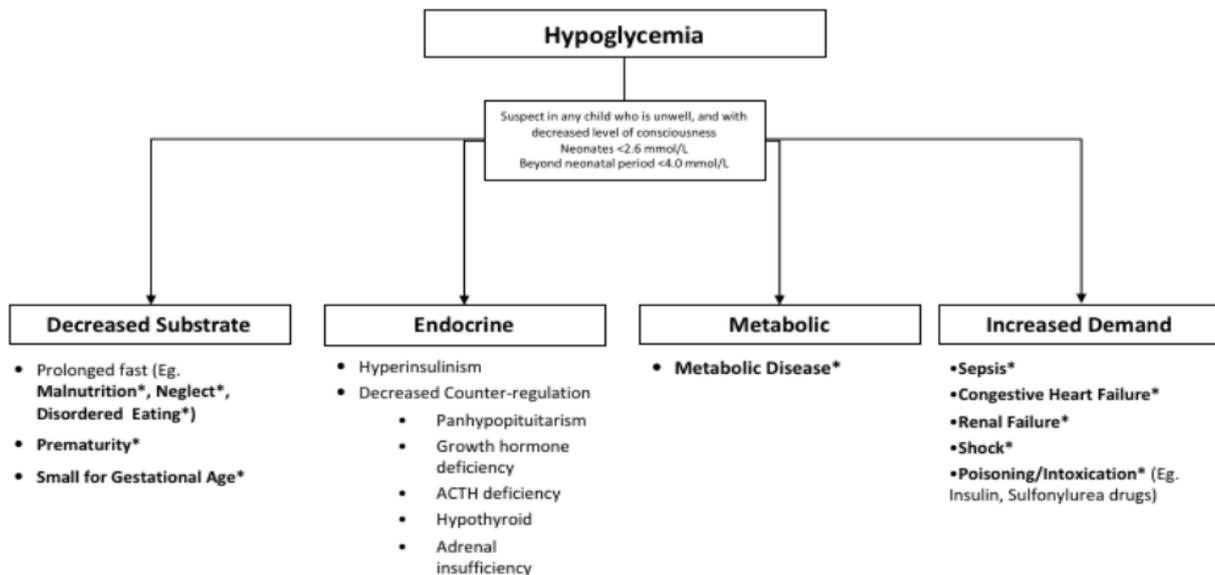
\*Indicates Key Condition

This is not an exhaustive list of medical conditions.



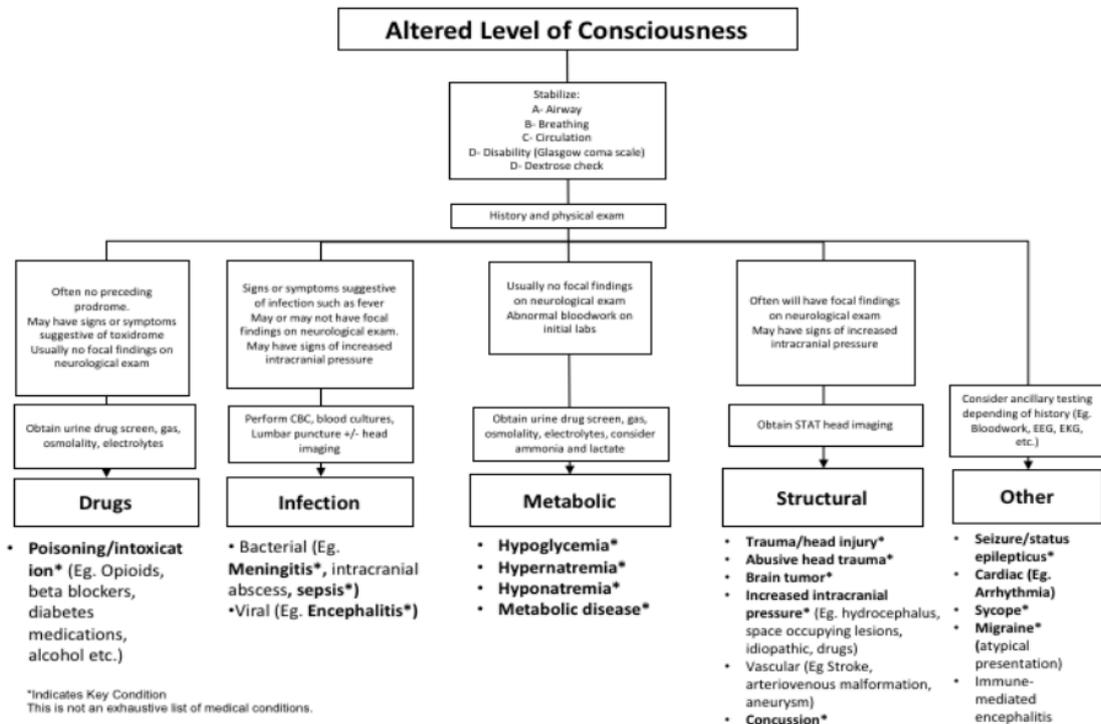
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Hypoglycemia

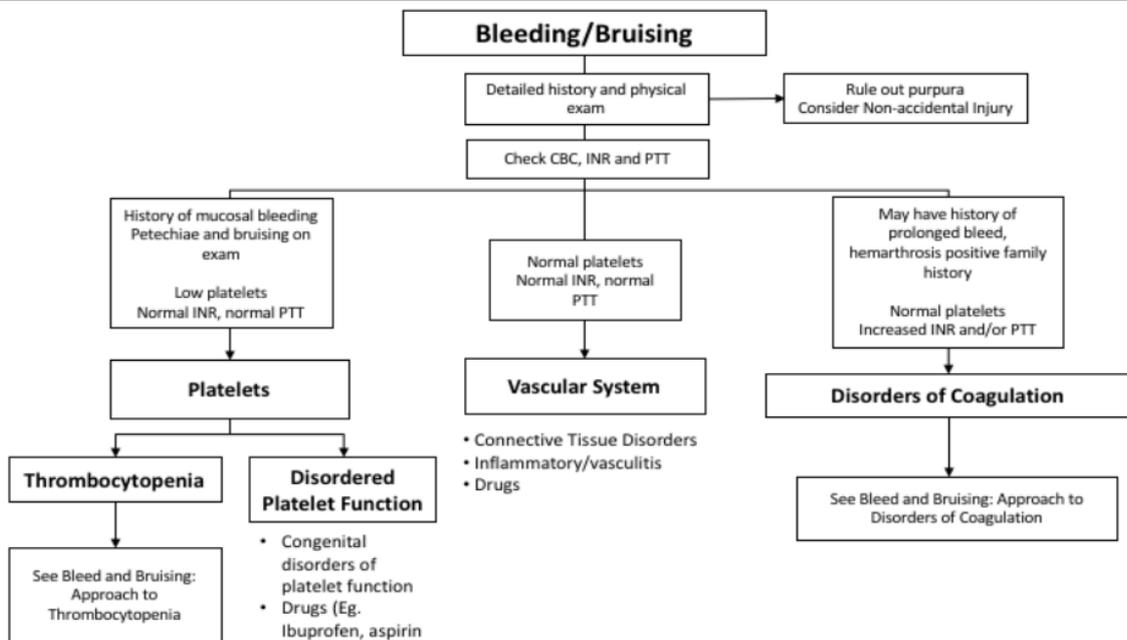


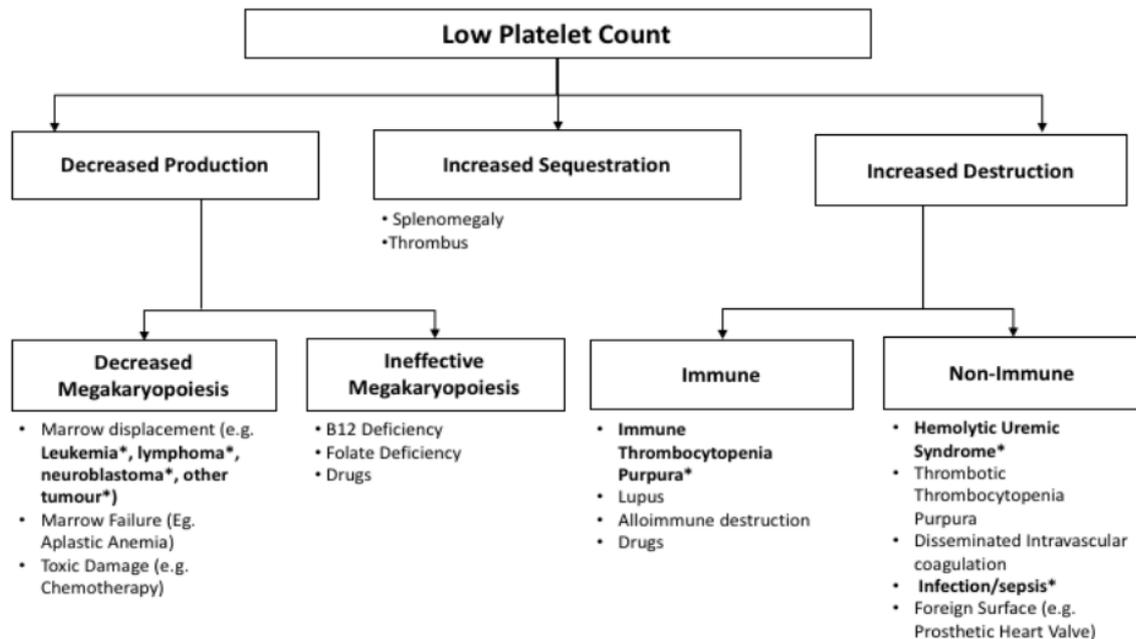
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Altered Level Of Consciousness



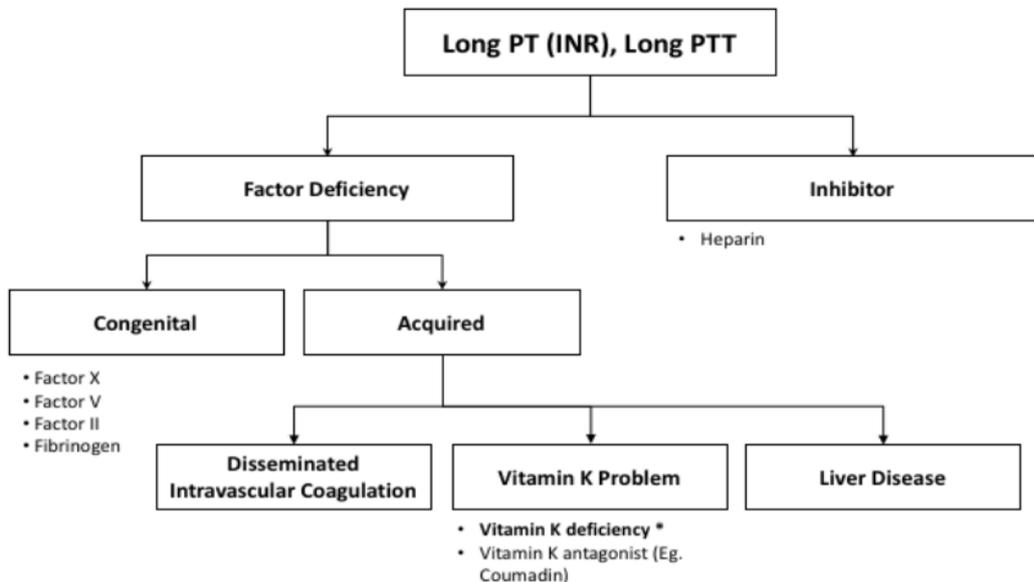
# Bleeding/Bruising





\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Long PT (INR), Long PTT

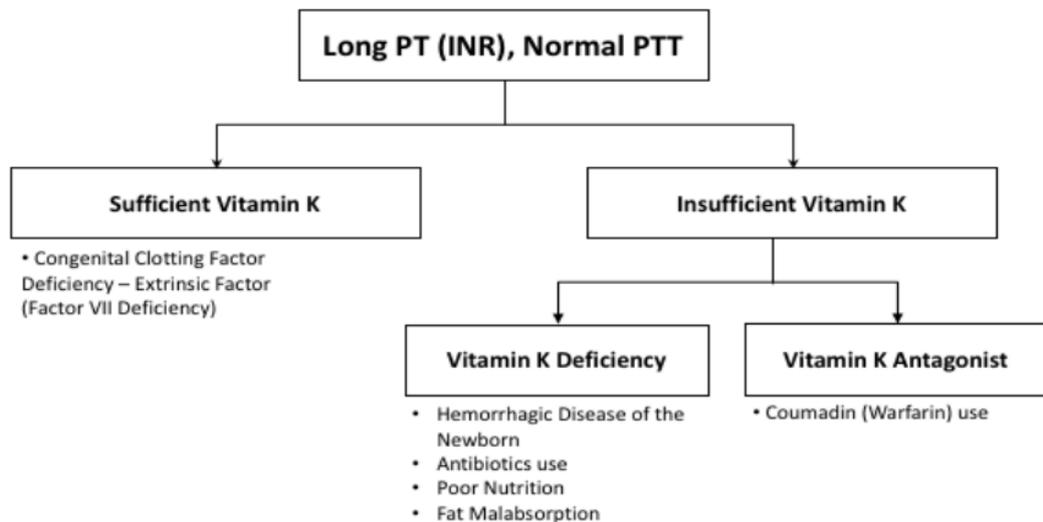


**Notes:**

- PT more sensitive to Vitamin K deficiency; therefore PT used for monitoring Coumadin therapy (PTT only affected in very severe cases)
- PTT more sensitive to heparin; therefore PTT used for monitoring heparin therapy (PT only affected in very severe cases)

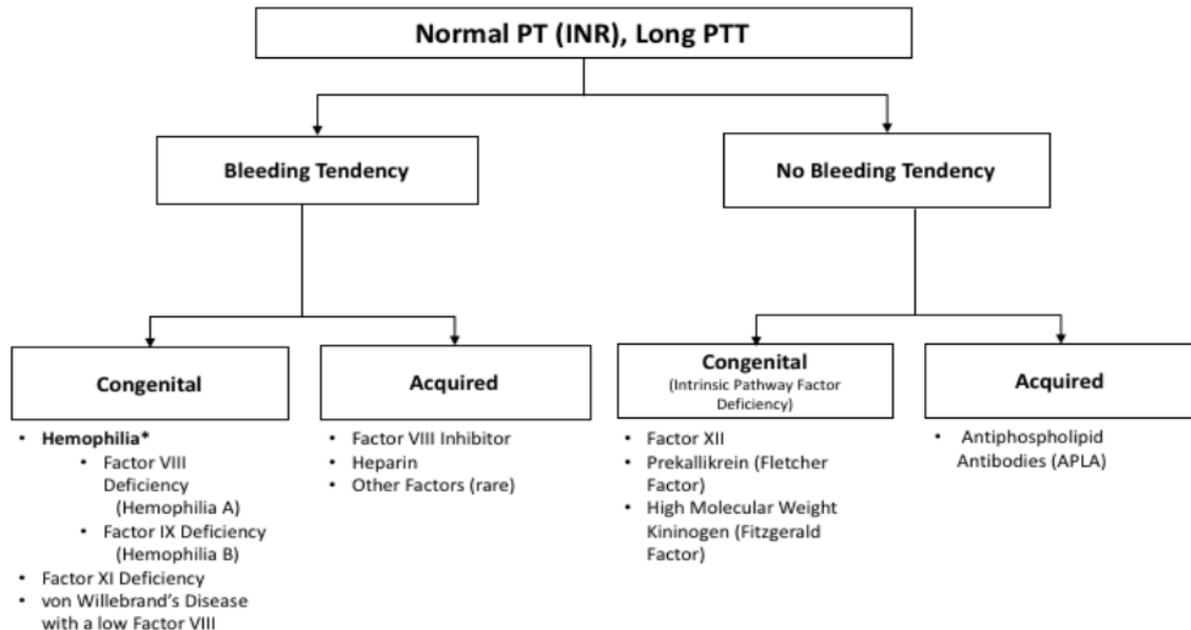
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Long PT (INR), Normal PTT

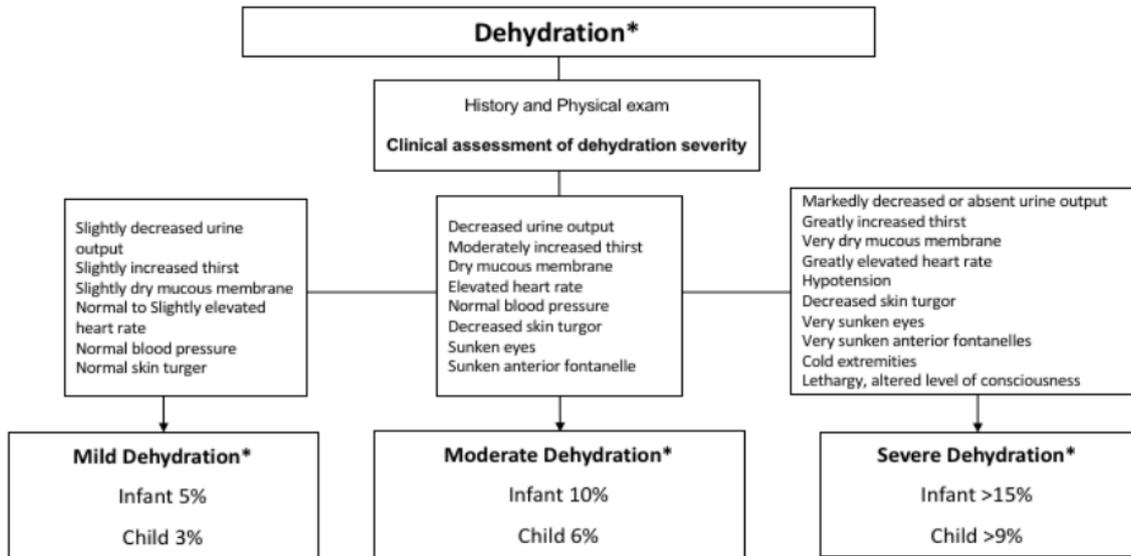


\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Normal PT (INR), Long PTT

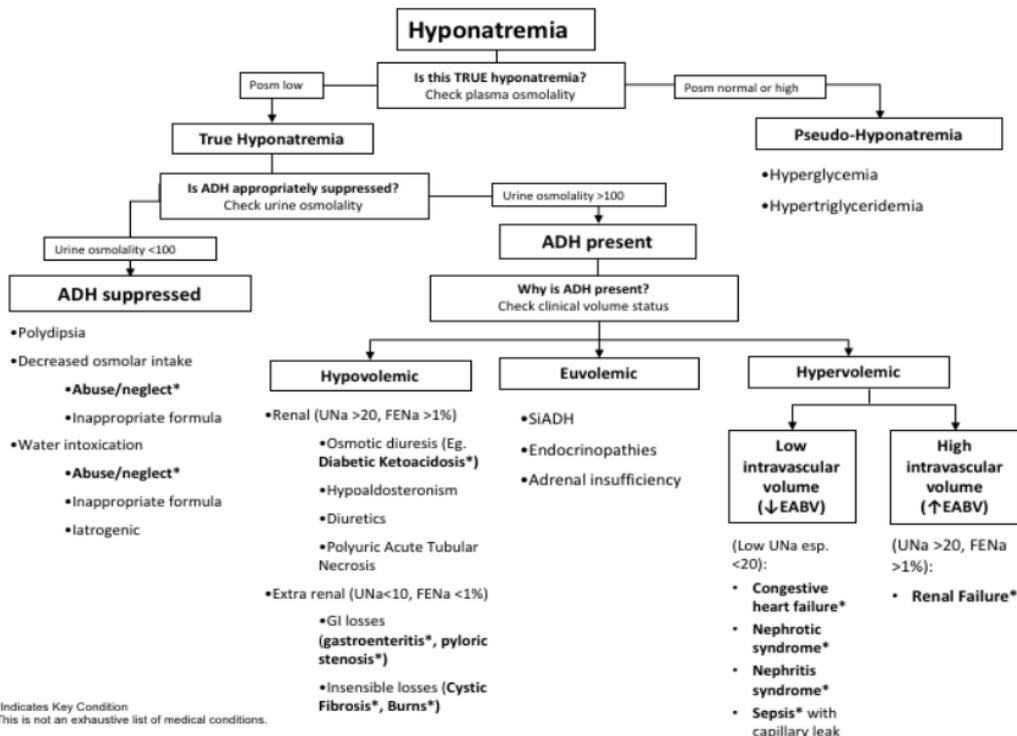


\*Indicates Key Condition  
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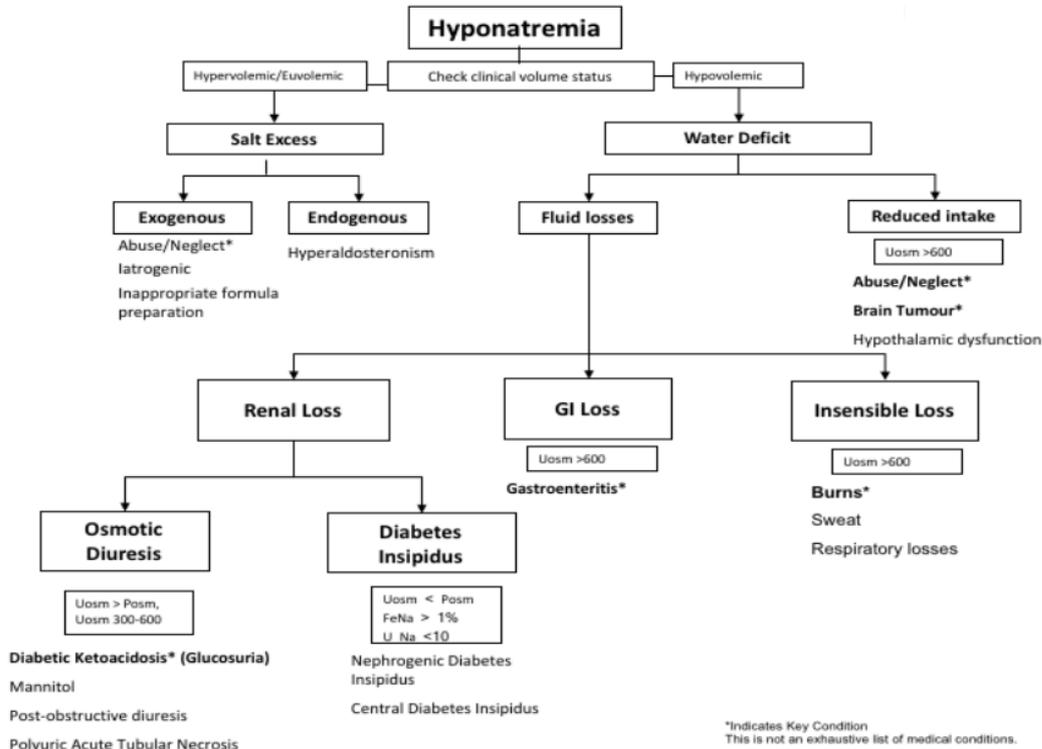


\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Hyponatremia

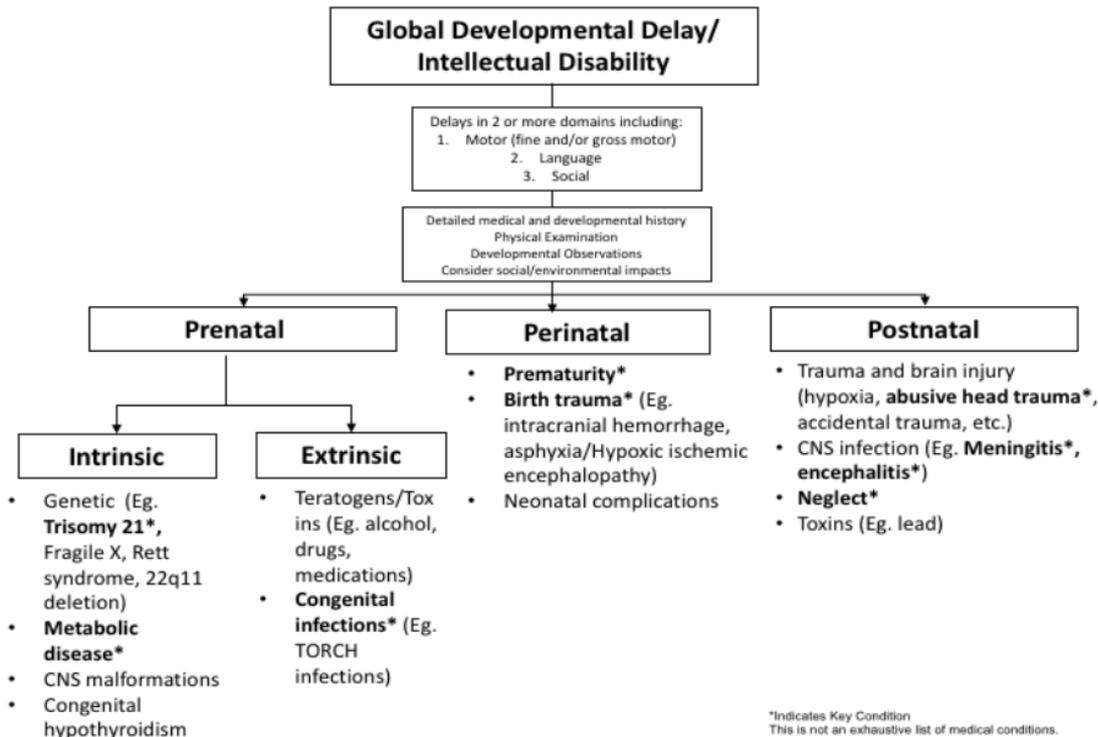


\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.



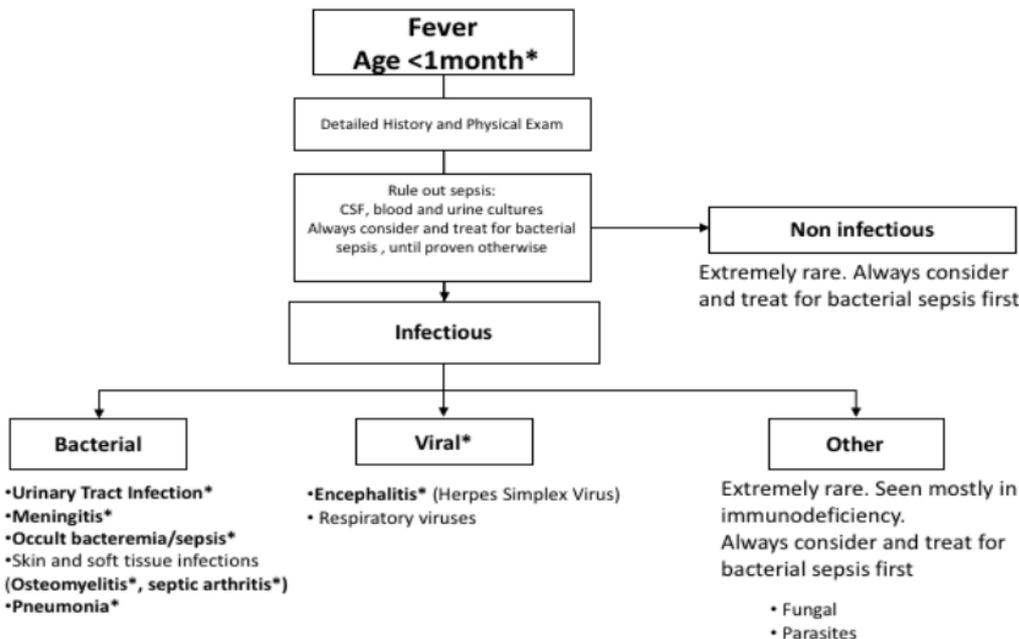
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Global Developmental Delay/ Intellectual Disability



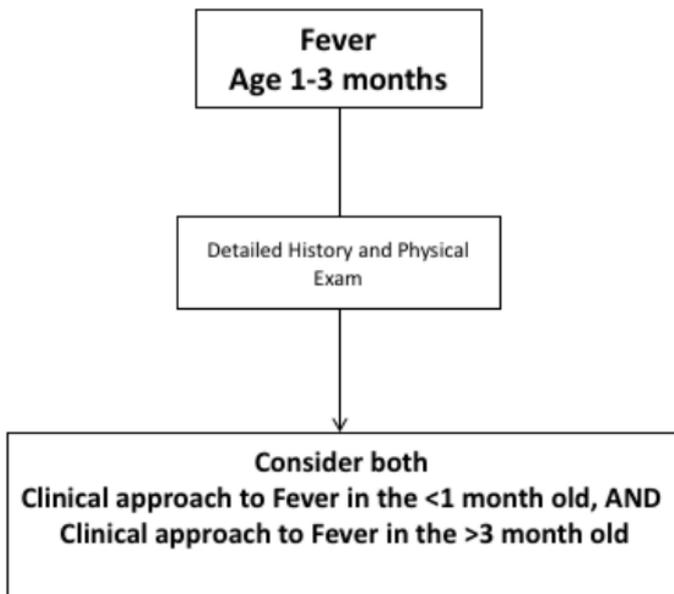


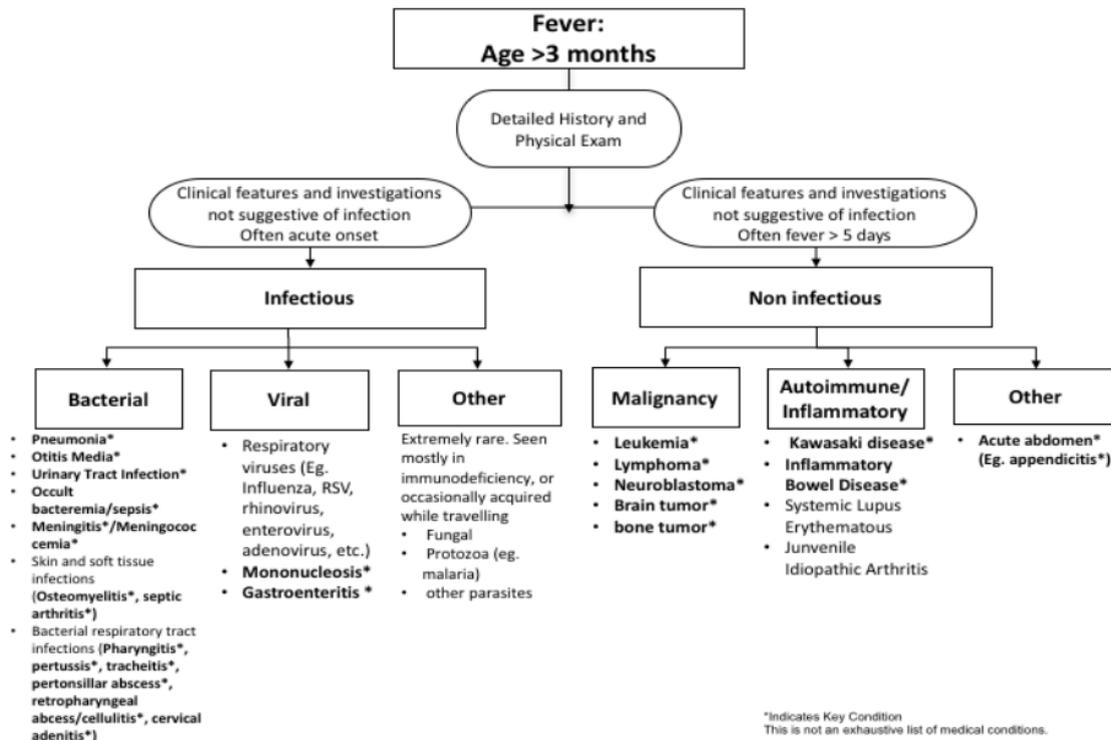
# Fever (Age <1 Month)



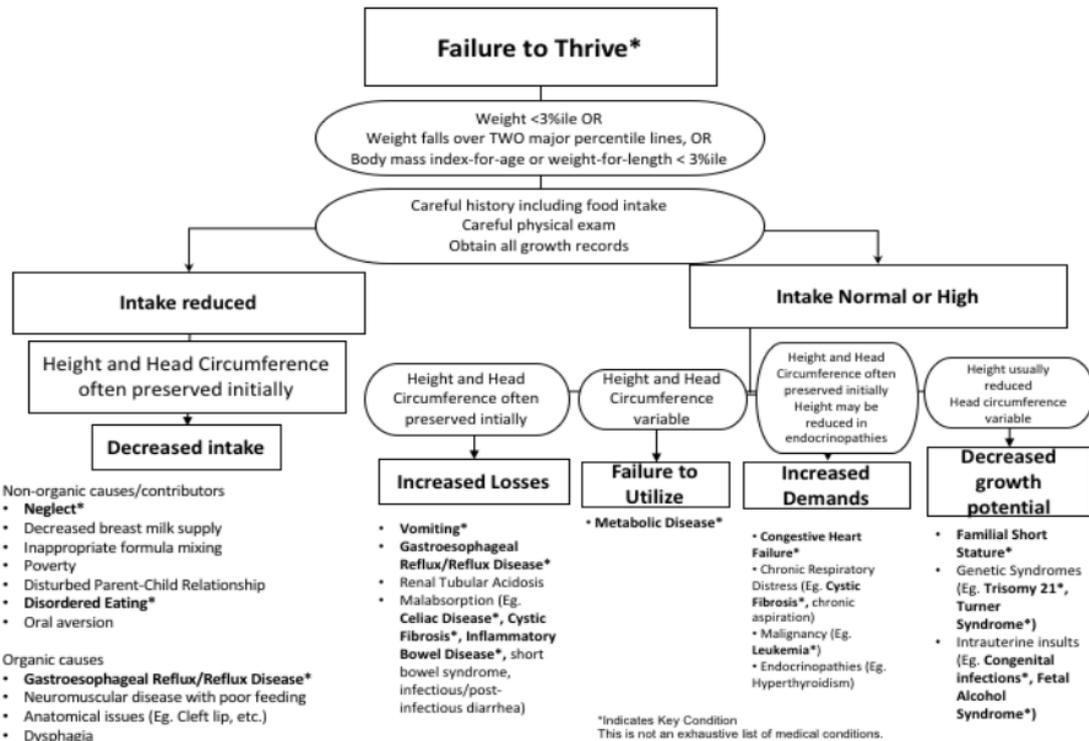
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

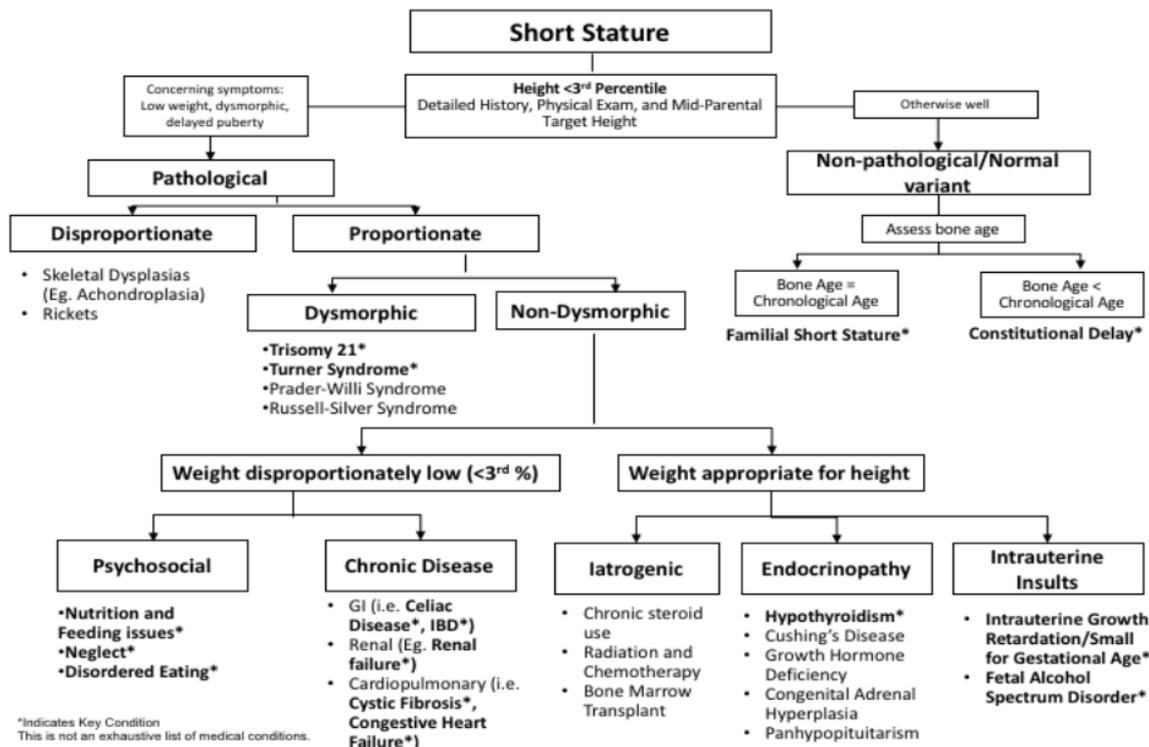
# Fever (Age 1-3 Months)



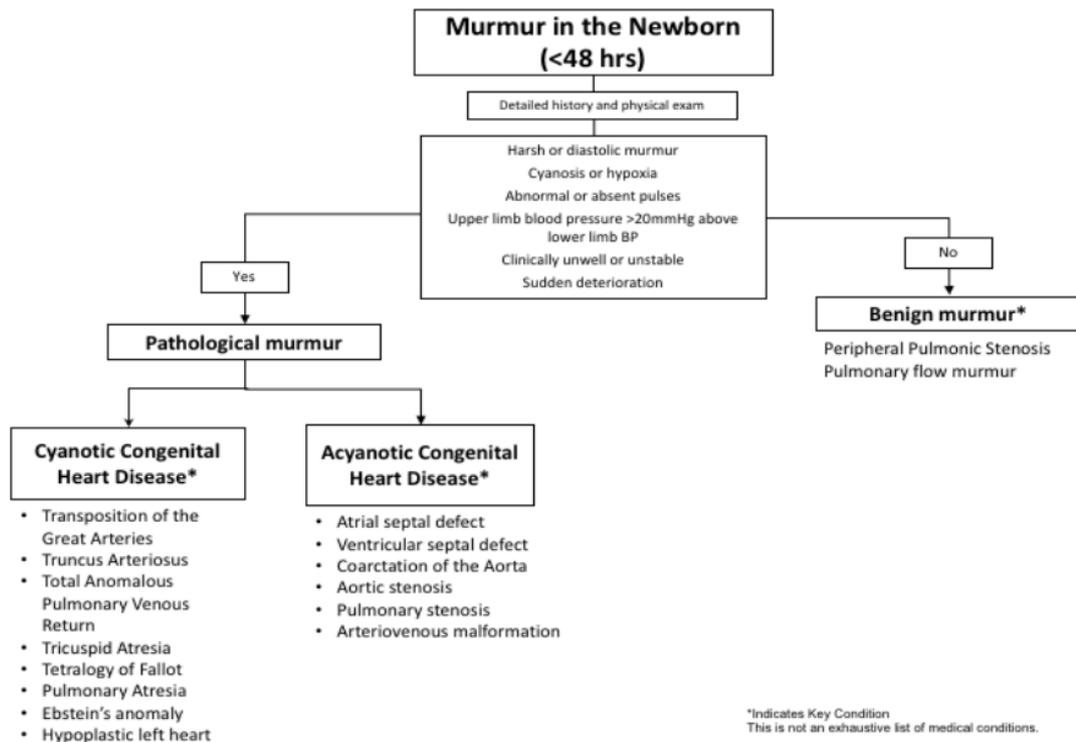


# Failure To Thrive



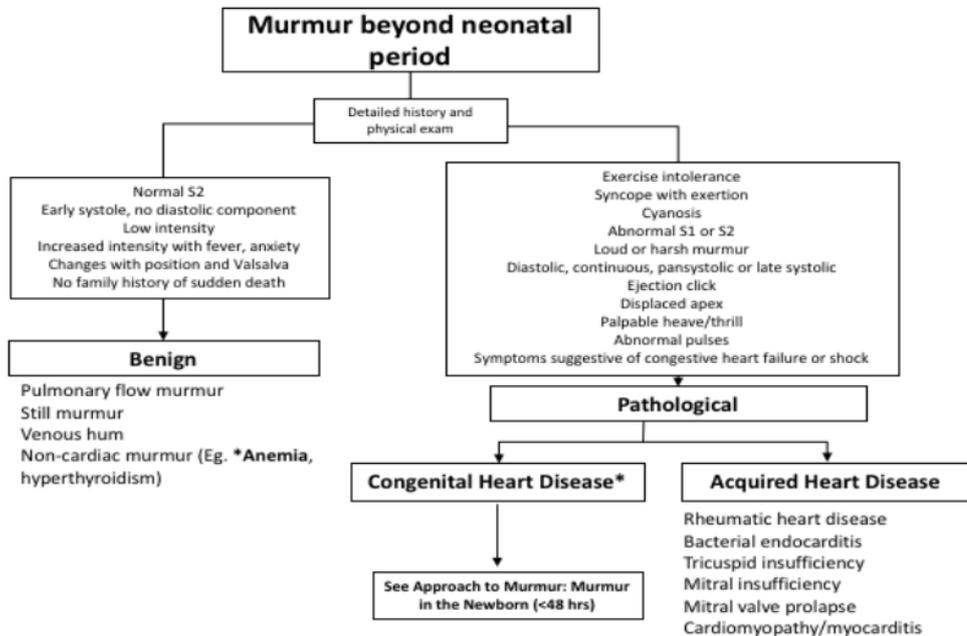


# Murmur In The Newborn (<48 Hours)



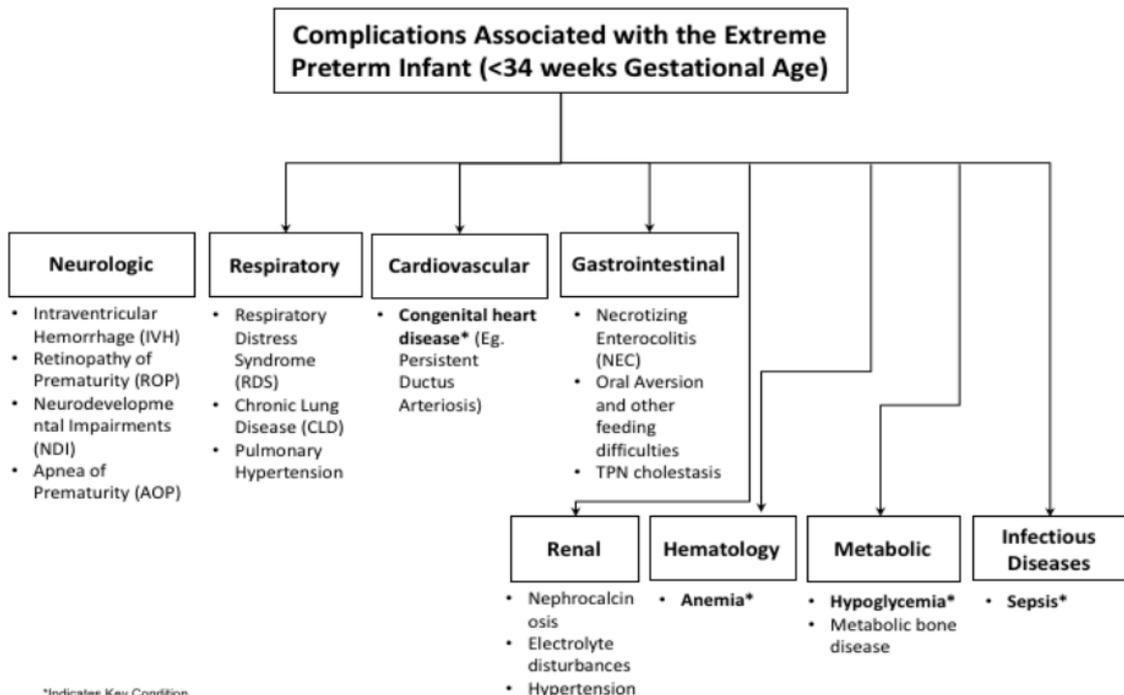
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Murmur In The Newborn Beyond Neonatal Period



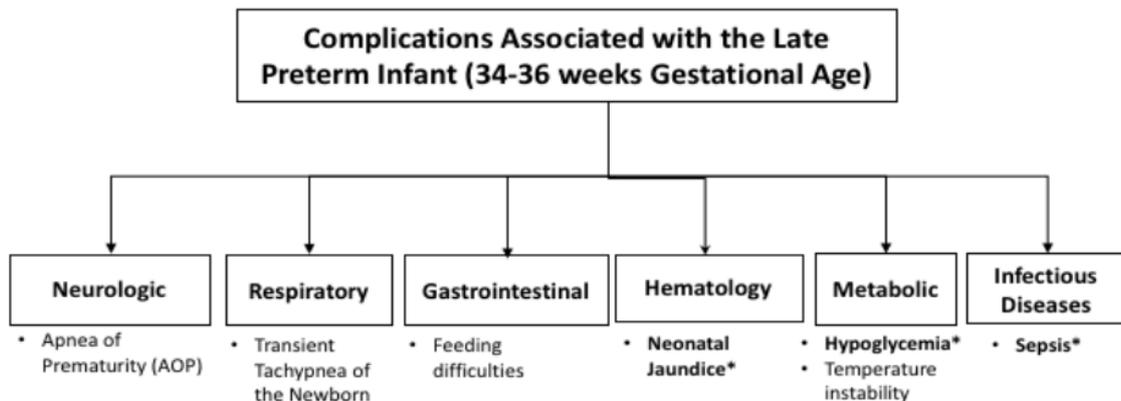
\*Indicates Key Condition  
This is not an exhaustive list of medical conditions.

# Preterm Infant Complications (<34 Weeks)



\*Indicates Key Condition

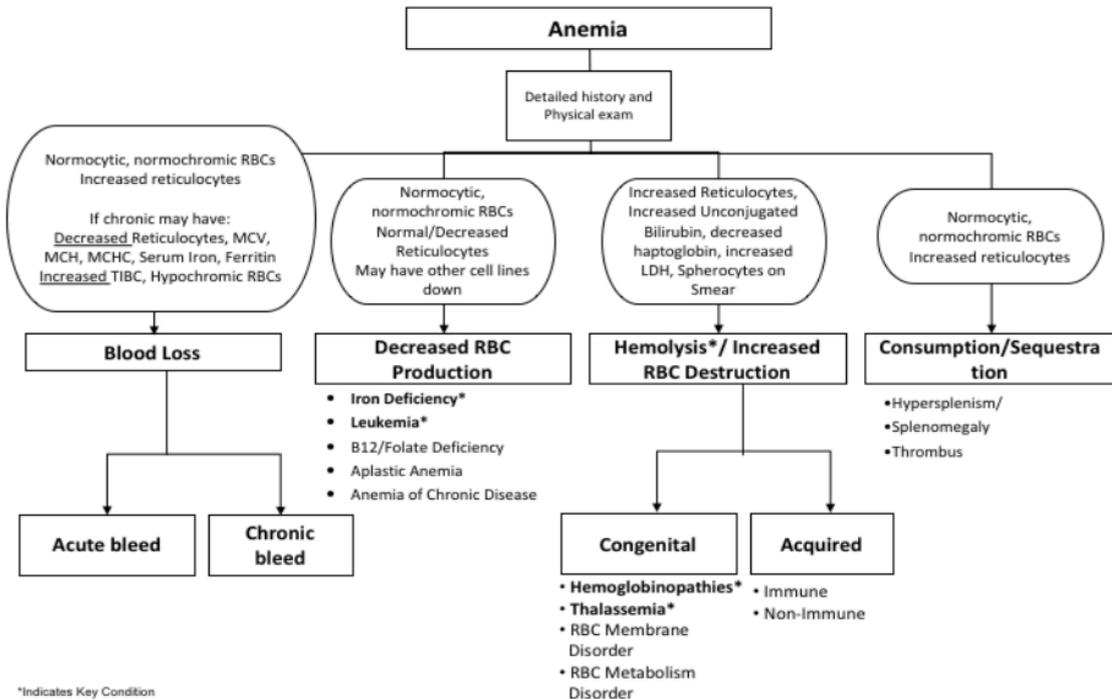
This is not an exhaustive list of medical conditions.



\*Indicates Key Condition

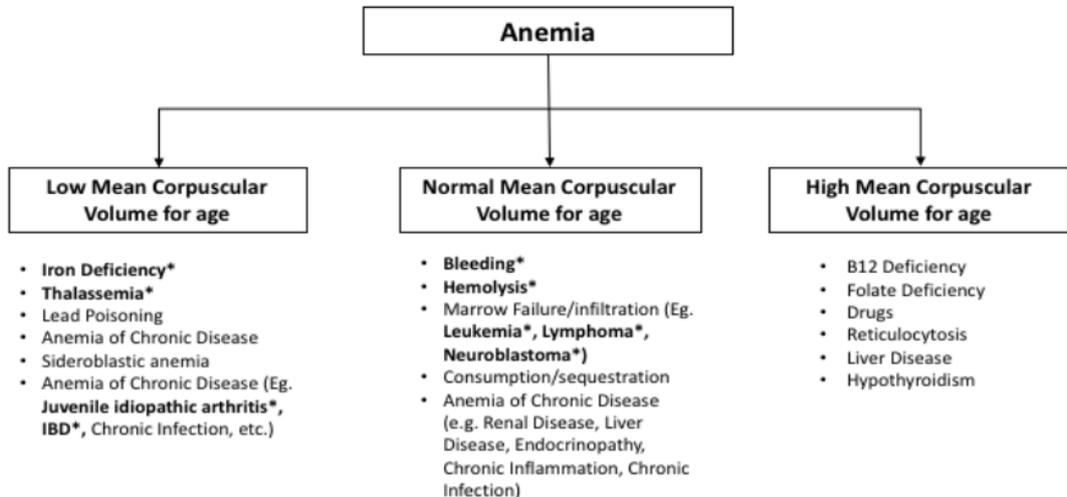
This is not an exhaustive list of medical conditions.

# Anemia By Mechanism



\*Indicates Key Condition

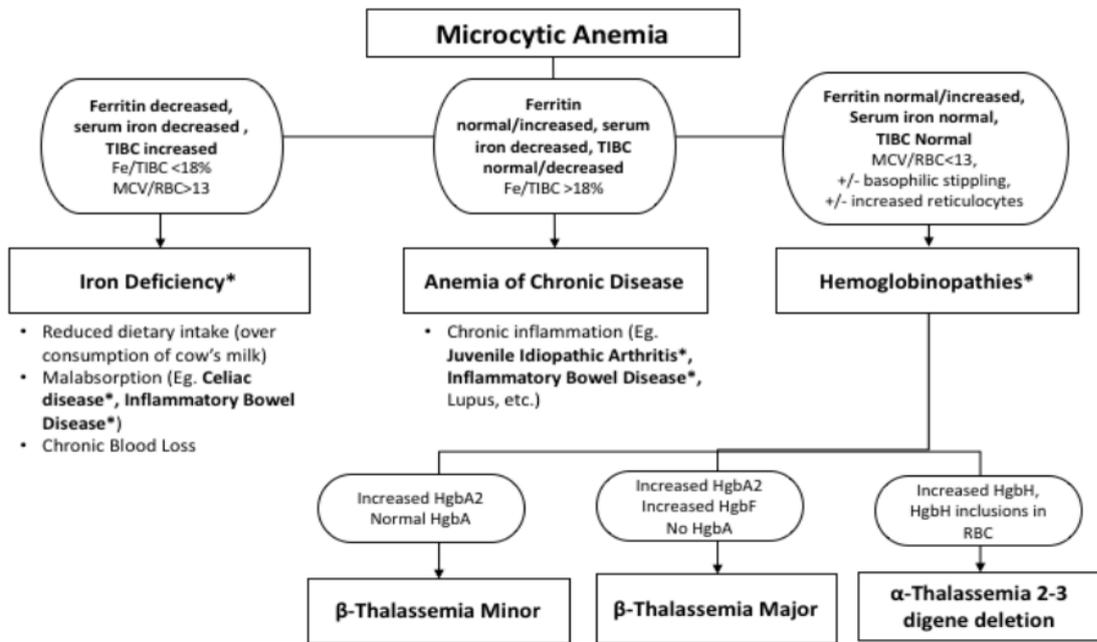
This is not an exhaustive list of medical conditions.



\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

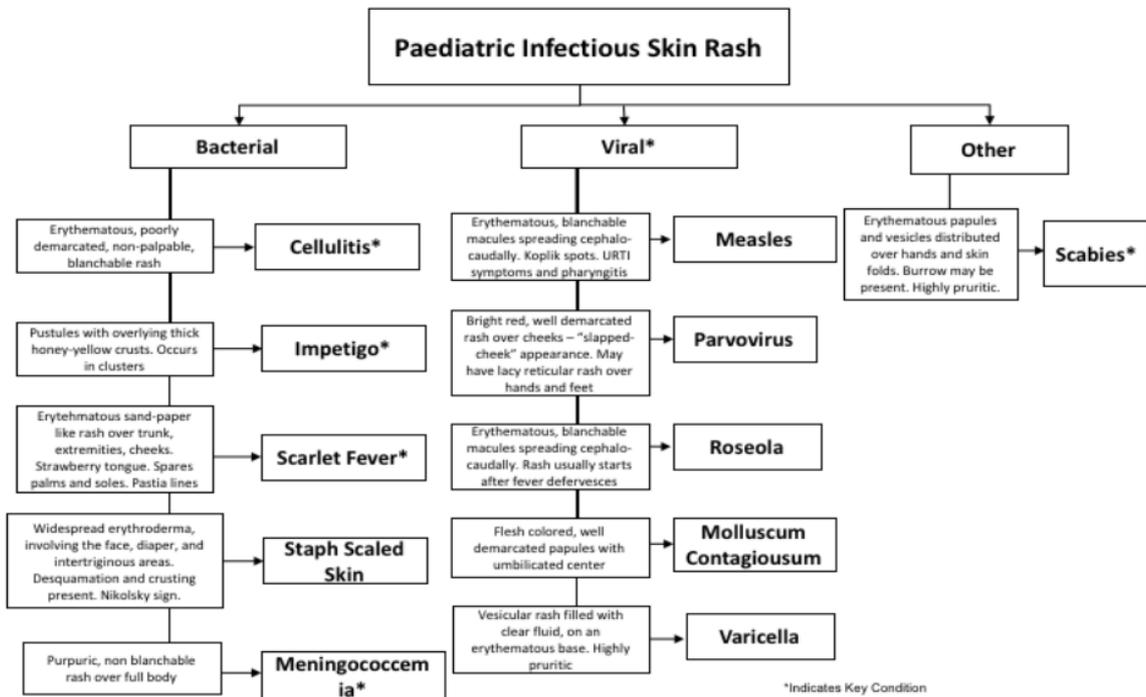
# Microcytic Anemia



\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

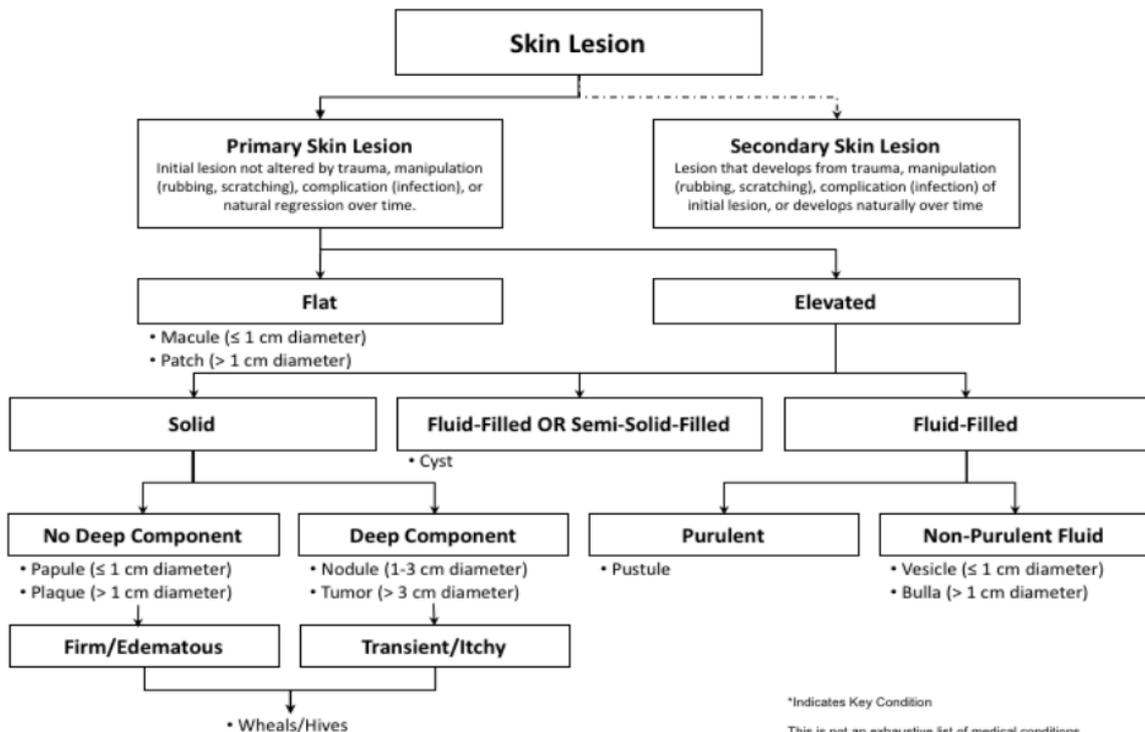
# Paediatric Infectious Skin Rash



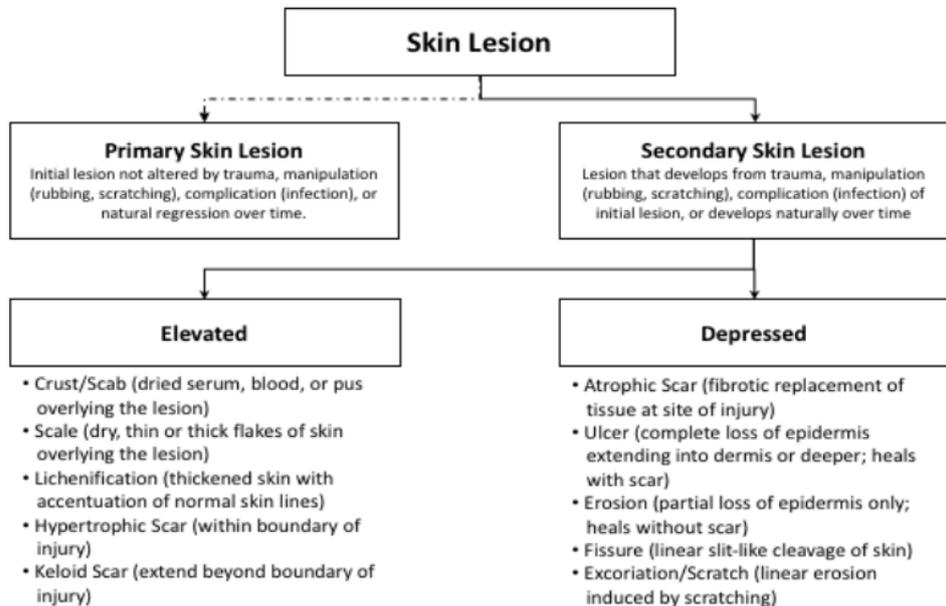
\*Indicates Key Condition

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# Skin Lesion (Primary Skin)



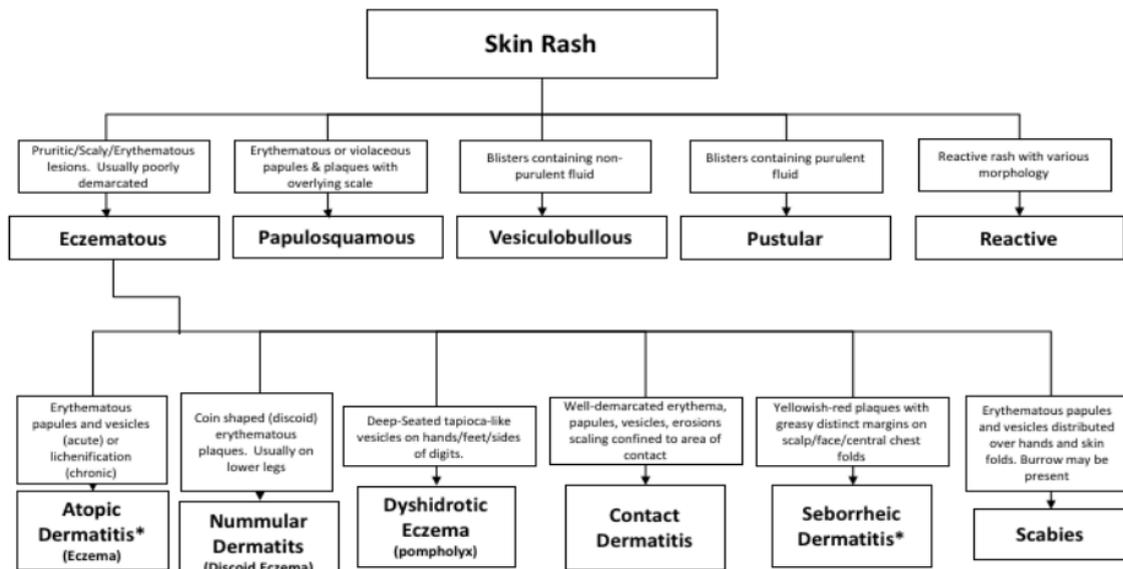
# Skin Lesion (Secondary Skin)



\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

# Rash (Eczematous)



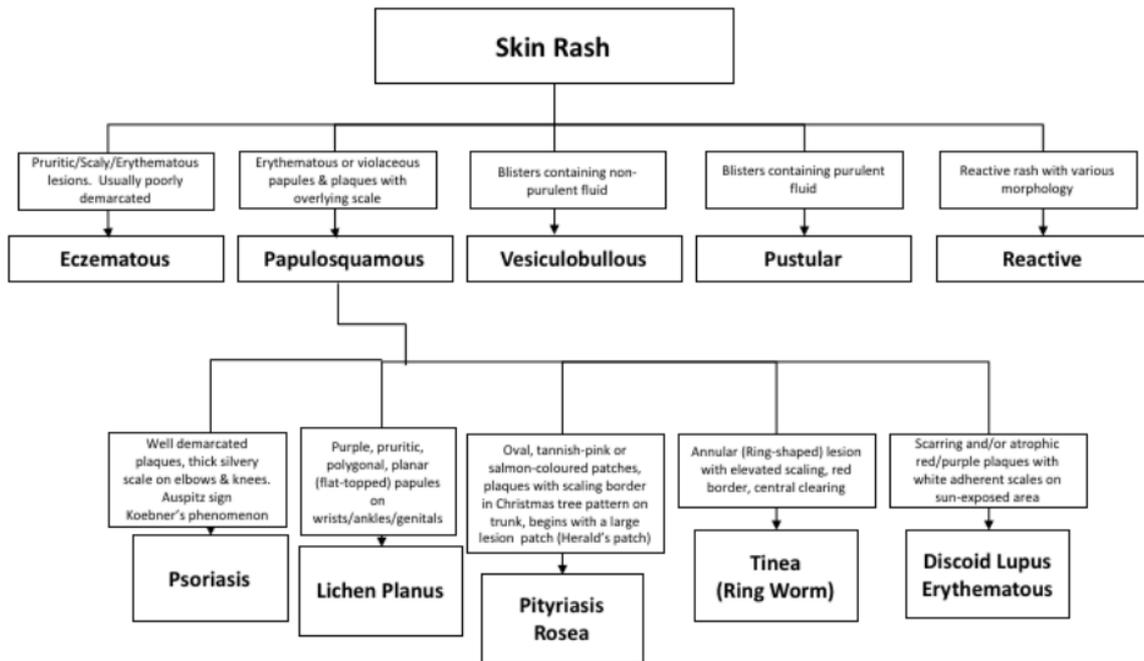
**Age dependent distribution:**  
**Infants:** scalp, face, extensor extremities  
**Children:** flexural areas  
**Adults:** flexural areas/hands/face/nipples

\*Indicates Key Condition

This is not an exhaustive list of medical conditions.



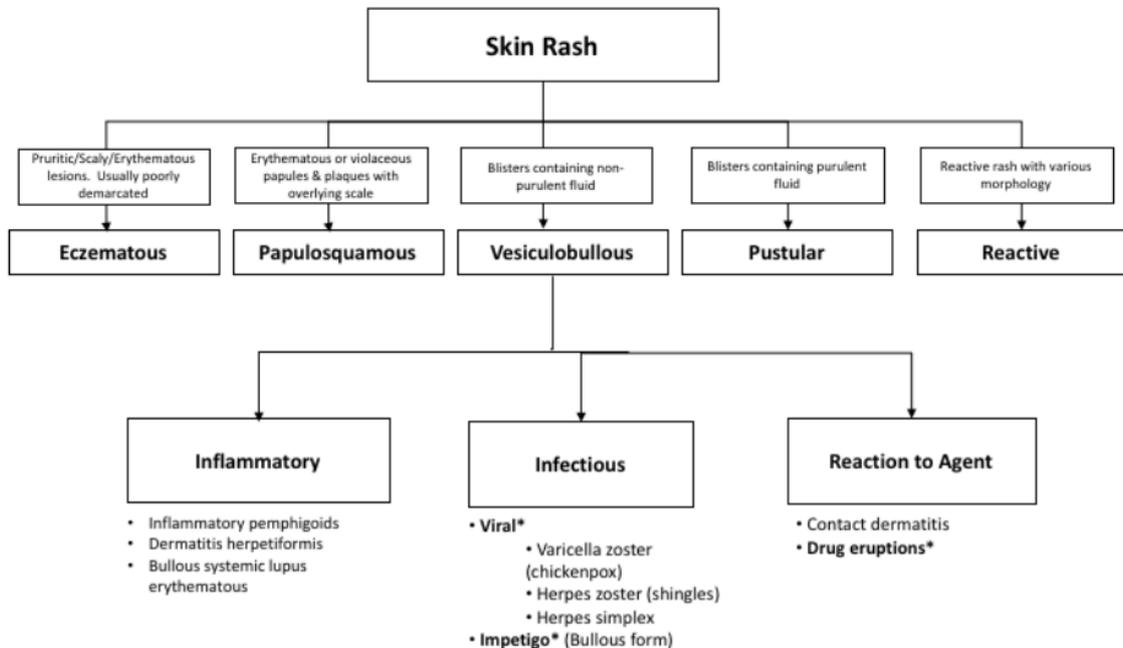
# Rash (Papulosquamous)



\*Indicates Key Condition

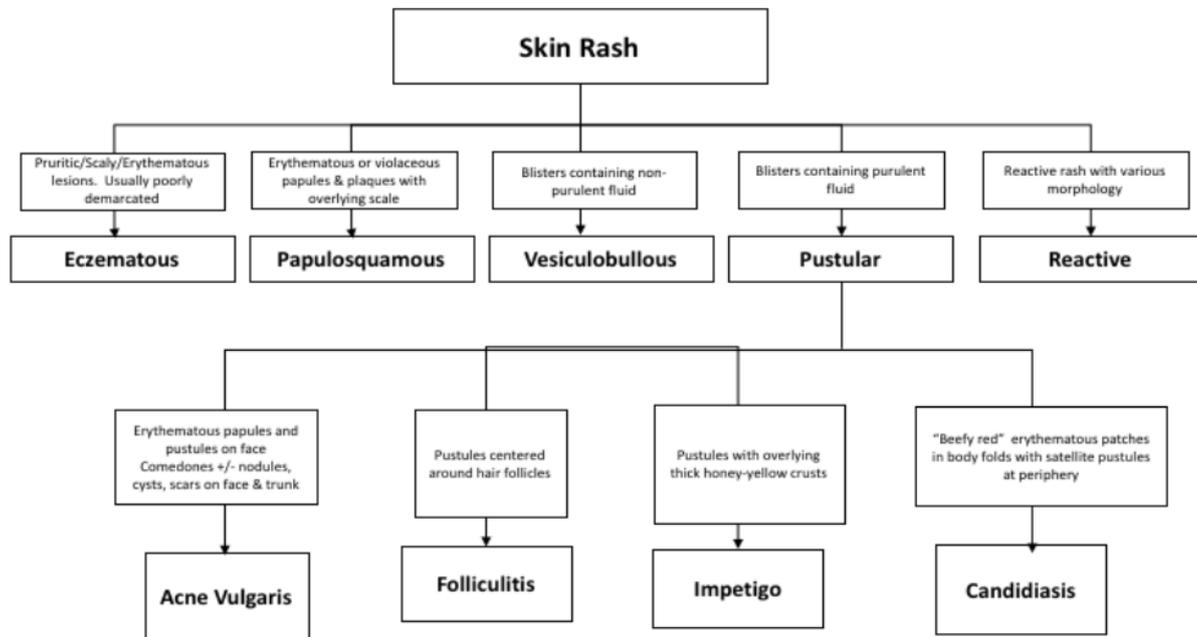
This is not an exhaustive list of medical conditions.

# Rash (Vesiculobullous)



\*Indicates Key Condition

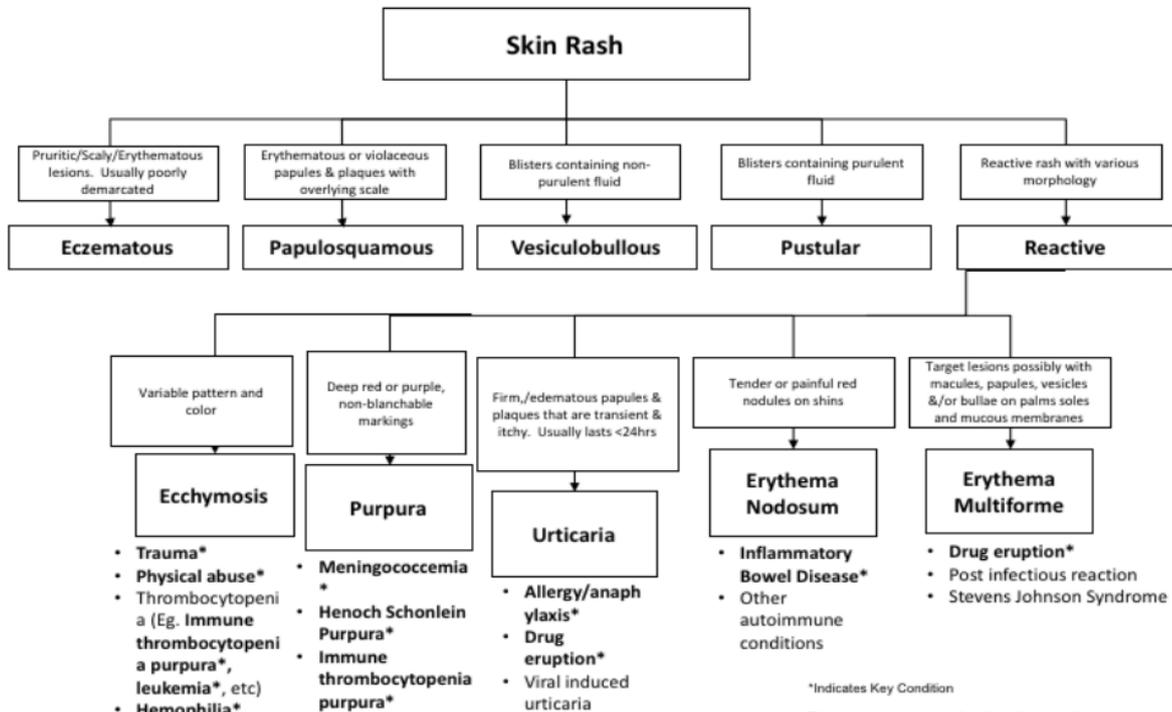
This is not an exhaustive list of medical conditions.

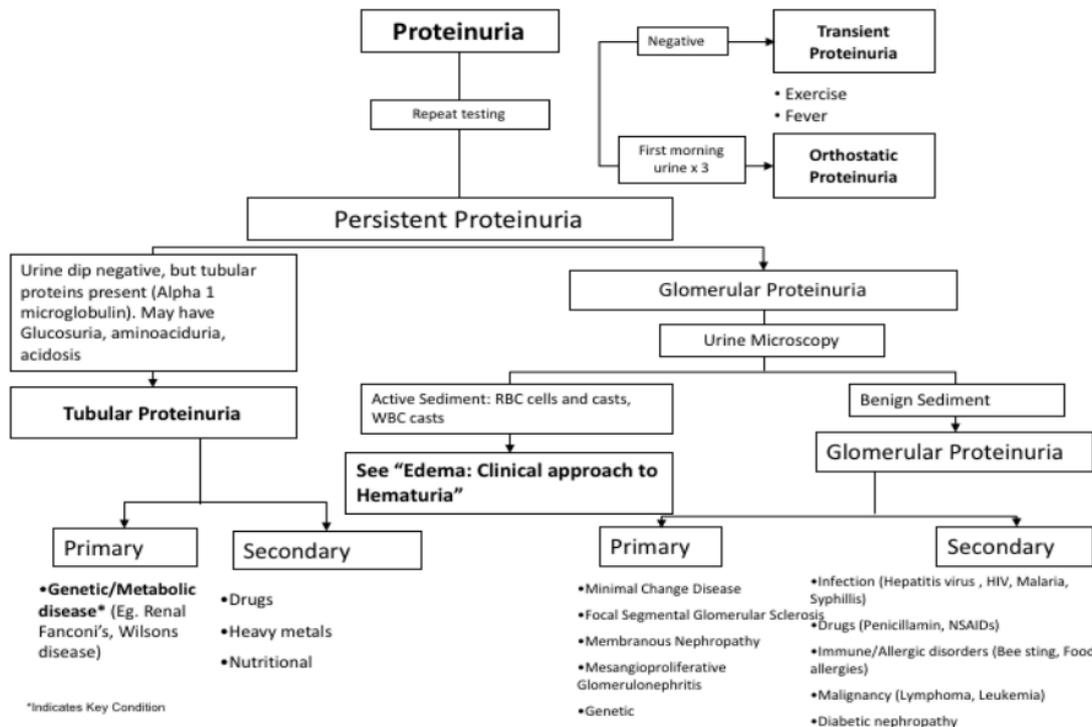


\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

# Rash (Reactive)

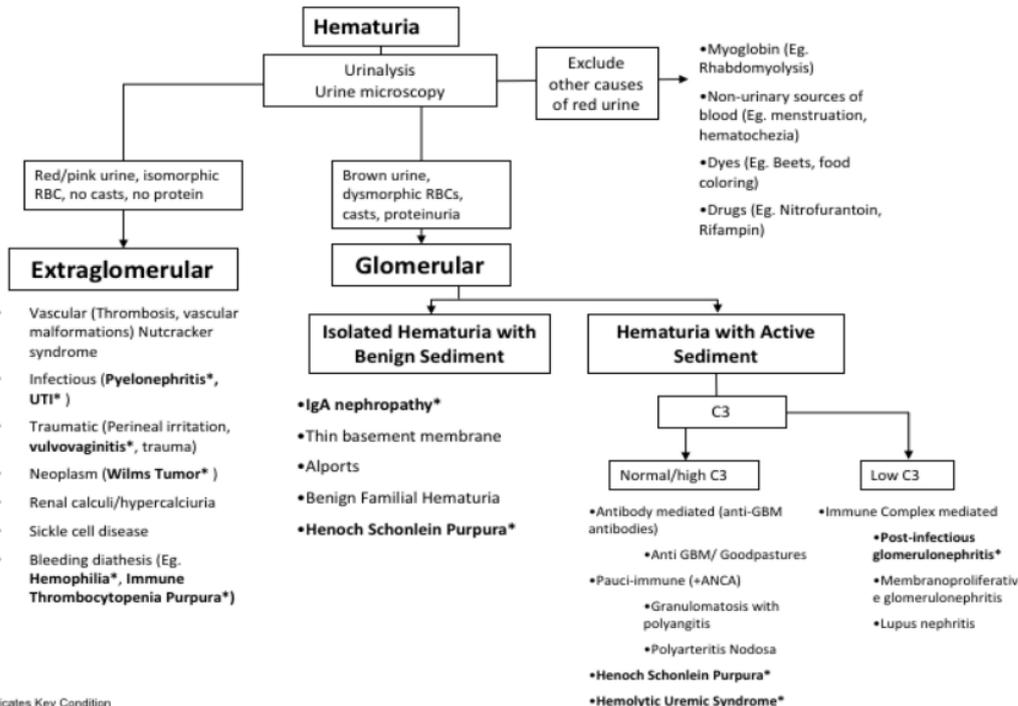




\*Indicates Key Condition

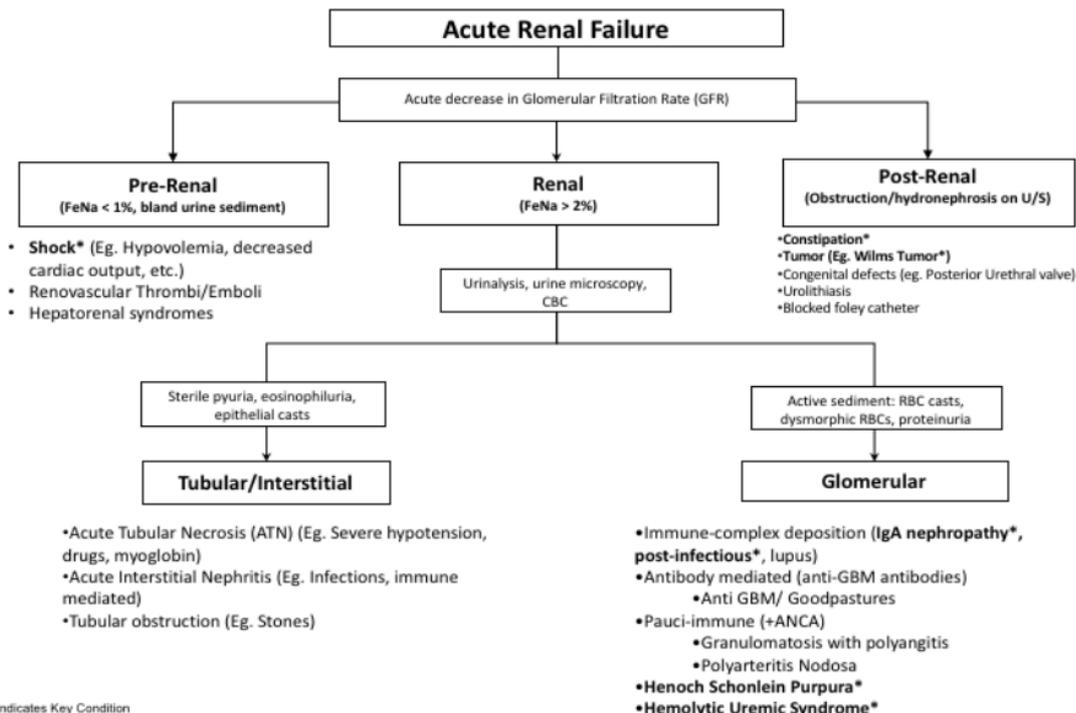
This is not an exhaustive list of medical conditions.

# Hematuria



\*Indicates Key Condition

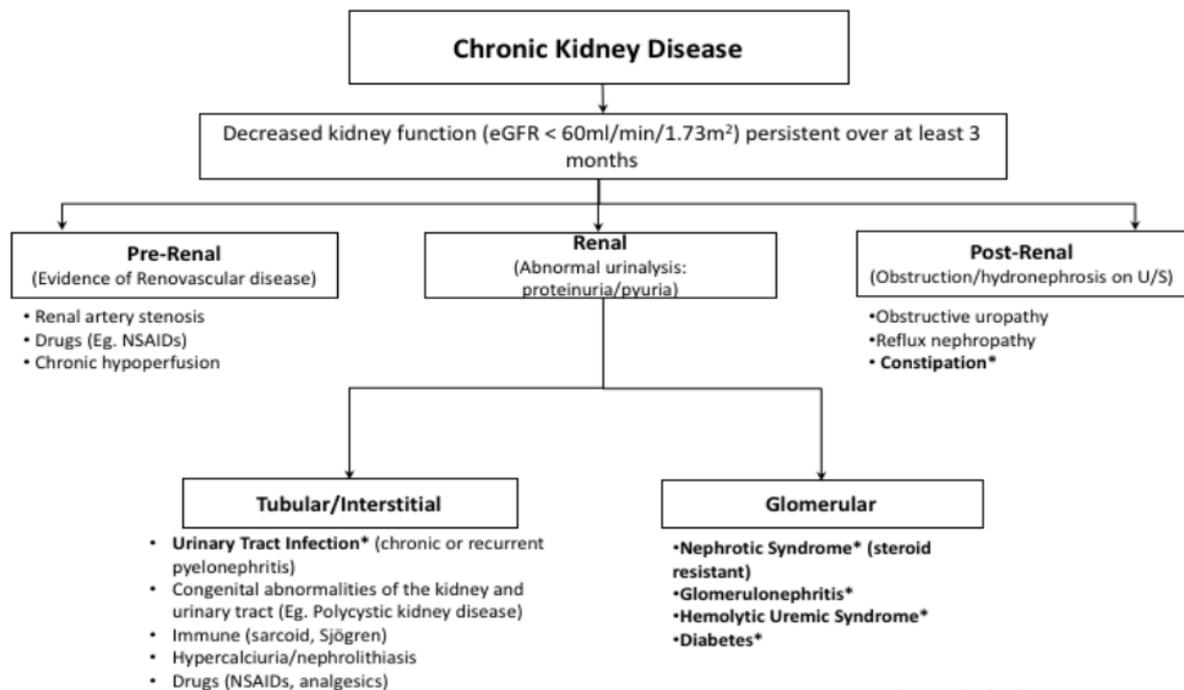
This is not an exhaustive list of medical conditions.



\*Indicates Key Condition

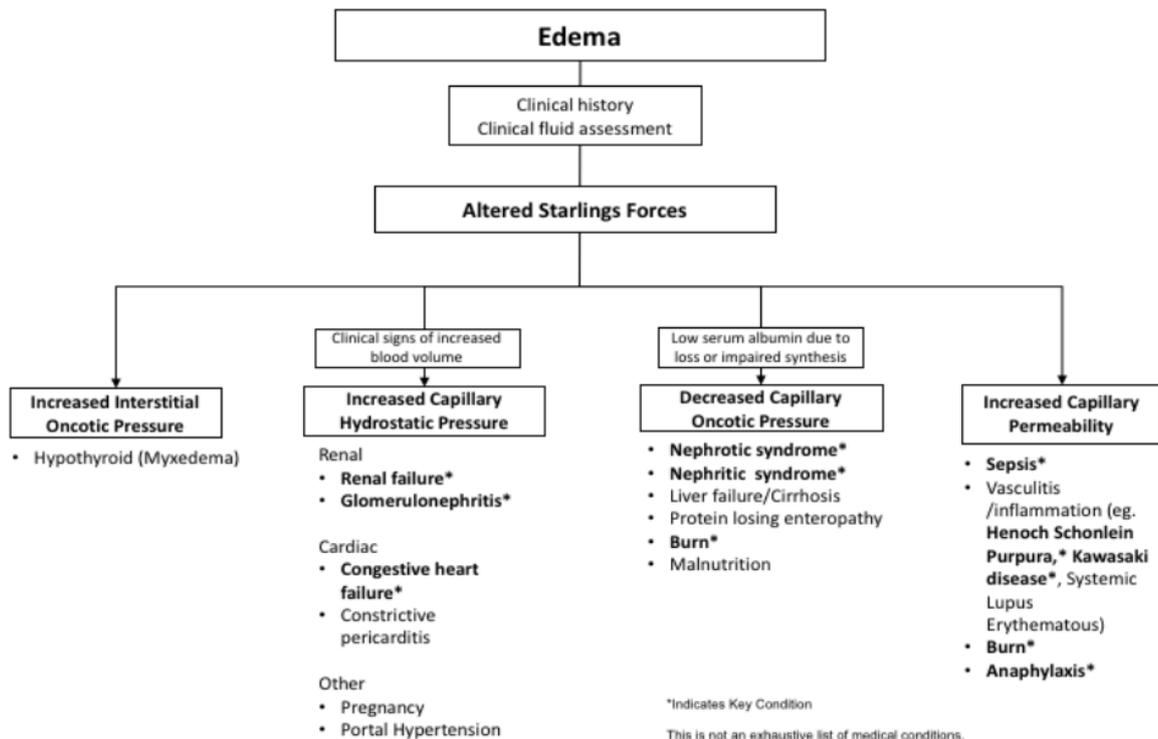
This is not an exhaustive list of medical conditions.

# Chronic Kidney Disease

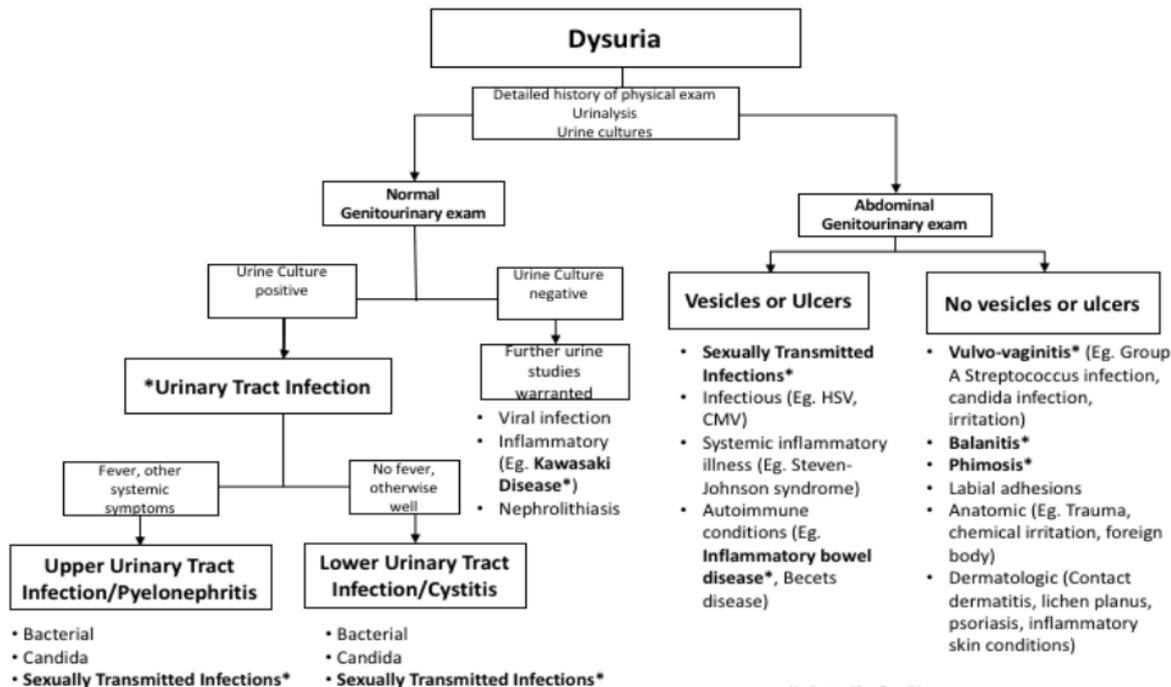


\*Indicates Key Condition

This is not an exhaustive list of medical conditions.



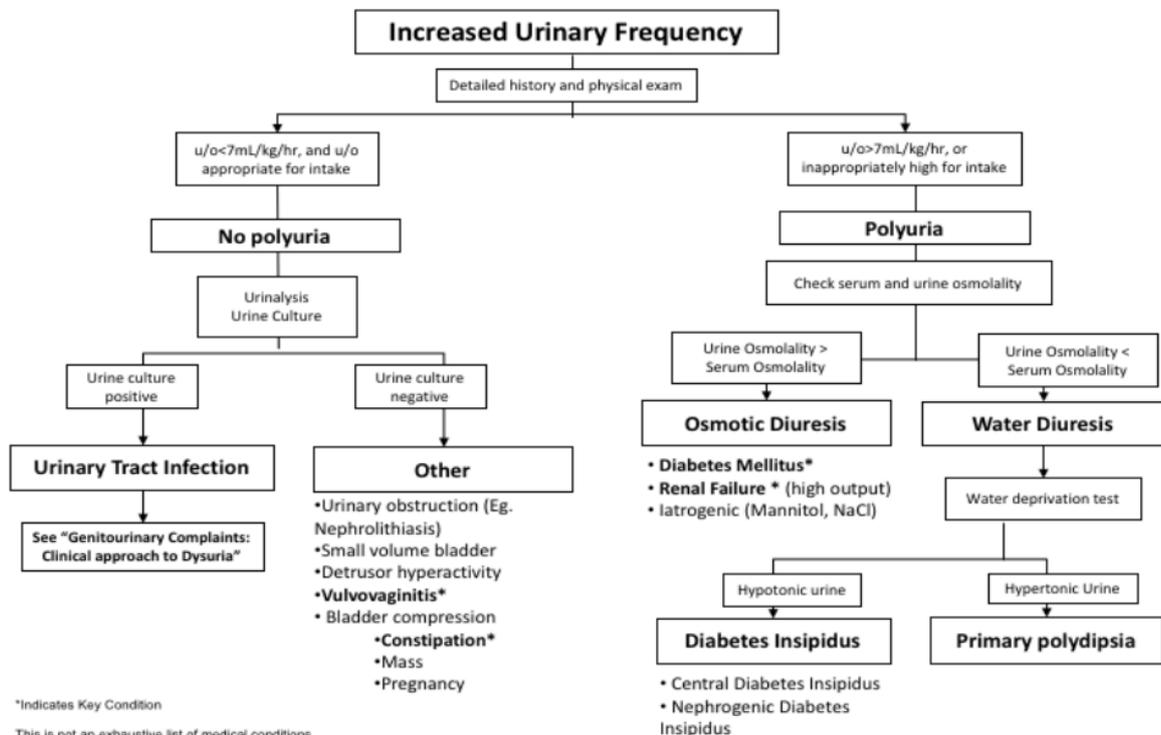
# Dysuria



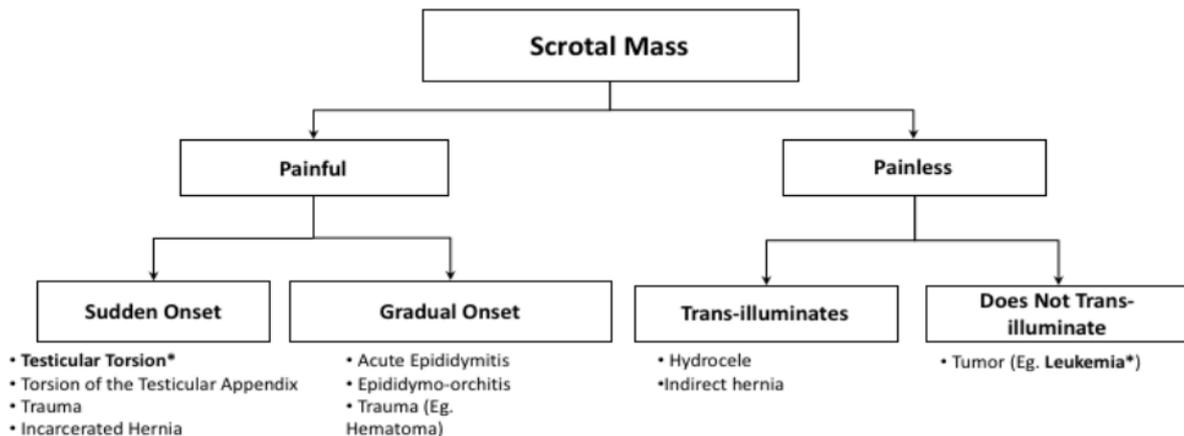
\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

# Increased Urinary Frequency

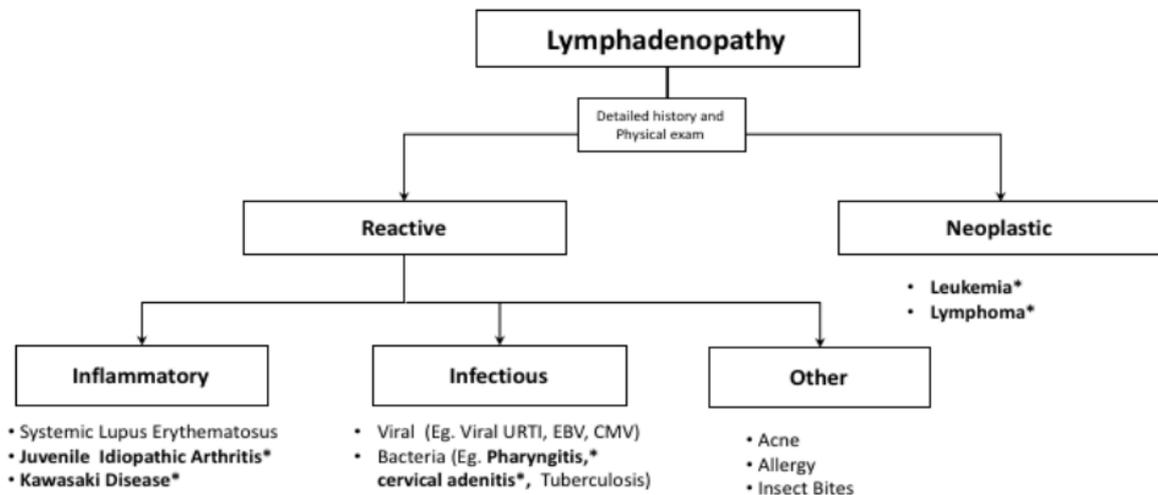


# Scrotal Mass



\*Indicates Key Condition

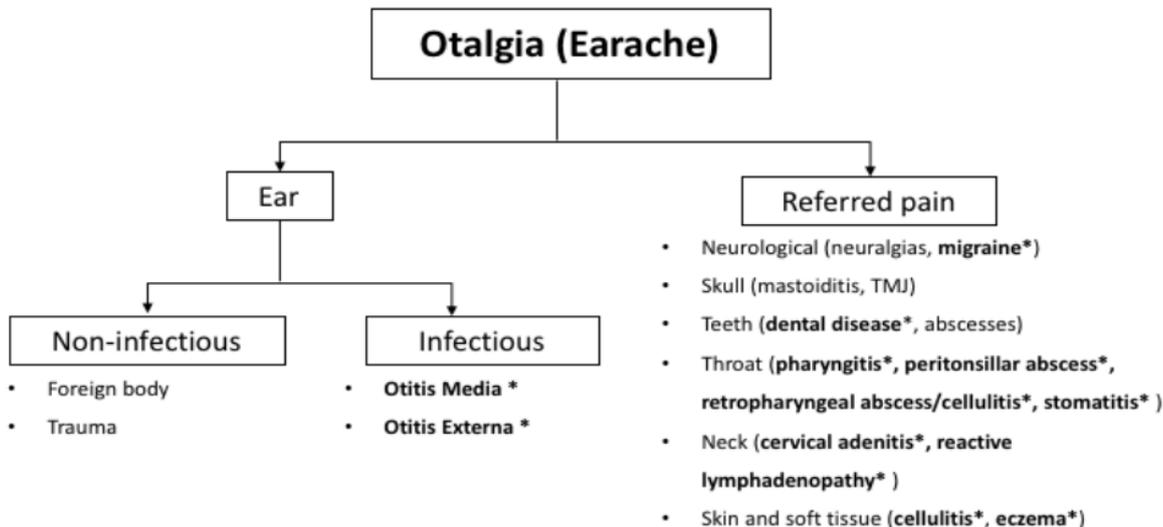
This is not an exhaustive list of medical conditions.



\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

# Otalgia (Earache)

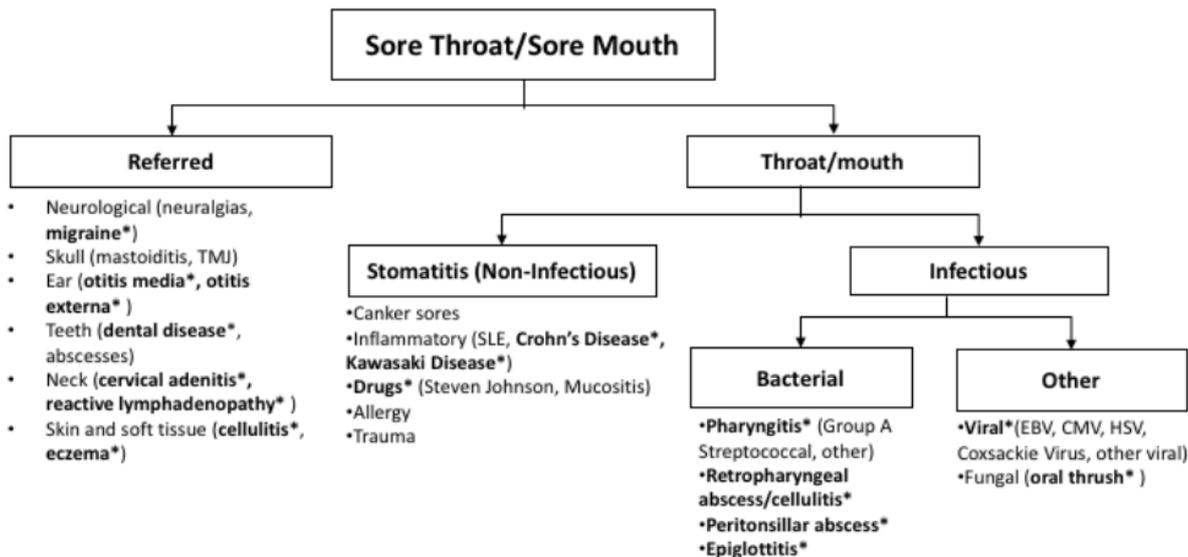


\*Indicates Key Condition

This is not an exhaustive list of medical conditions.



# Sore Throat/Sore Mouth



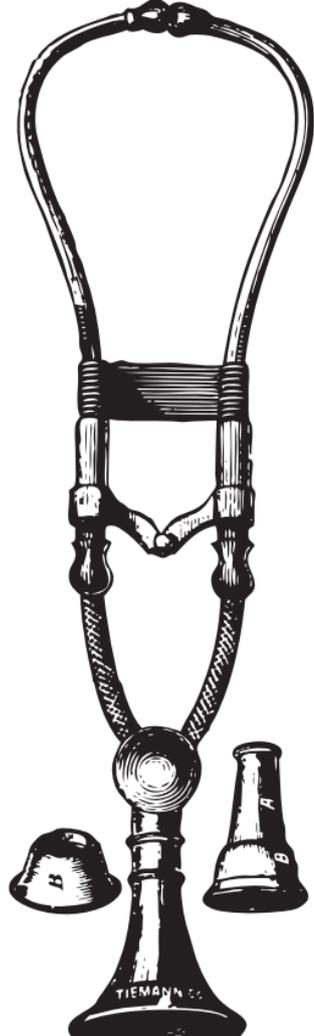
\*Indicates Key Condition

This is not an exhaustive list of medical conditions.

# General Presentations

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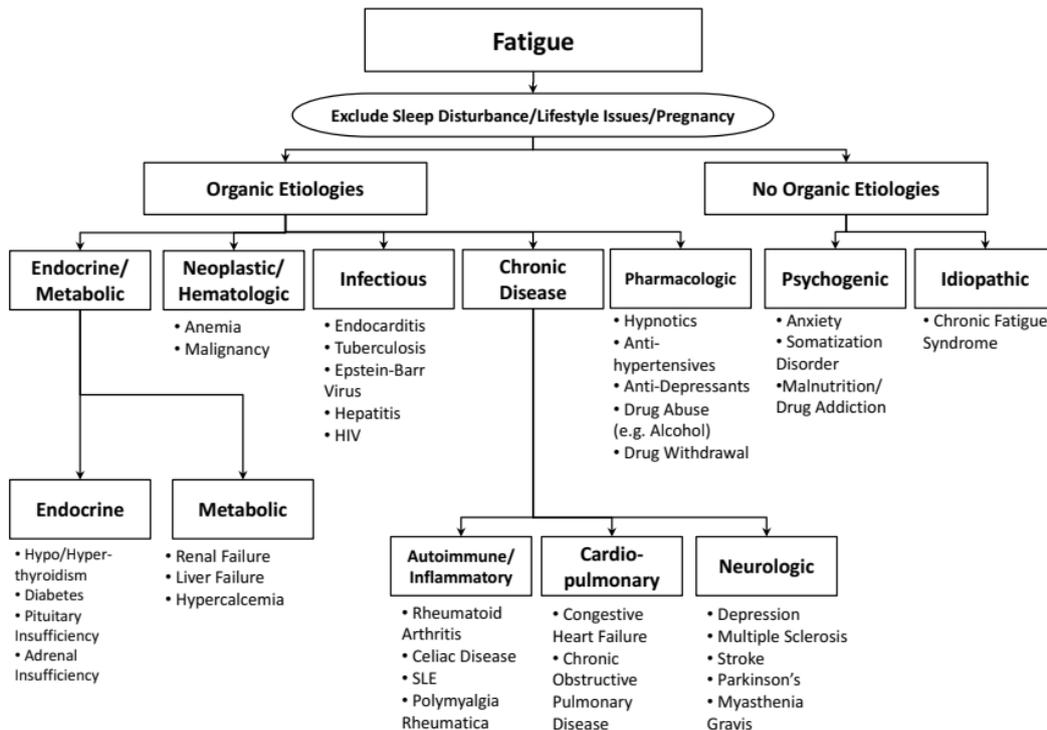
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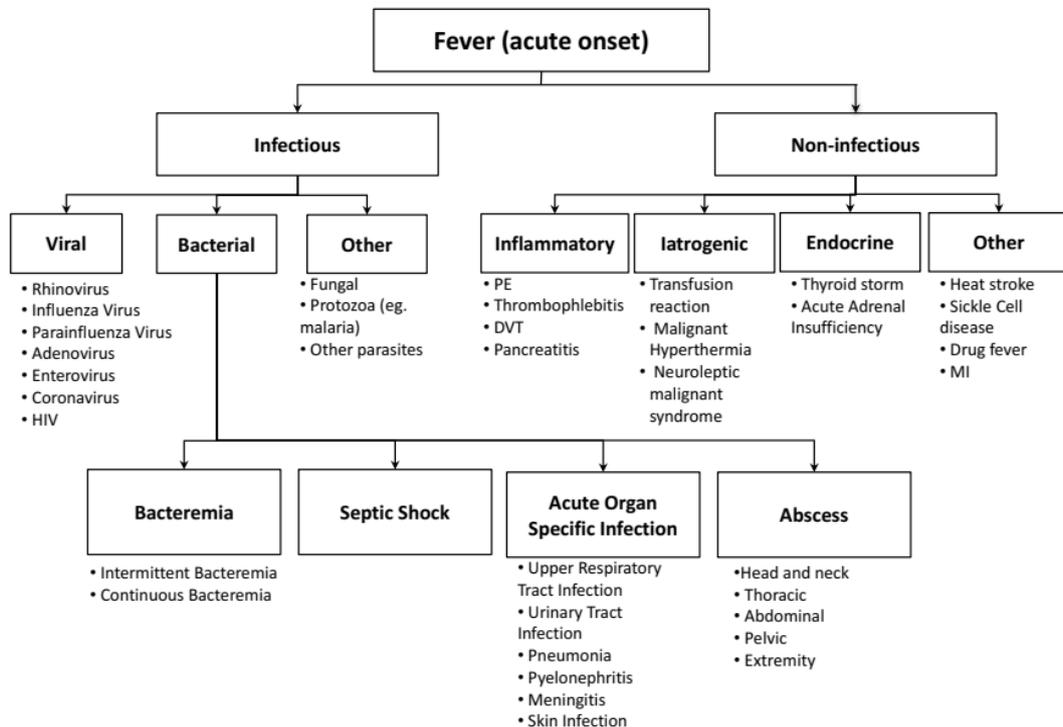
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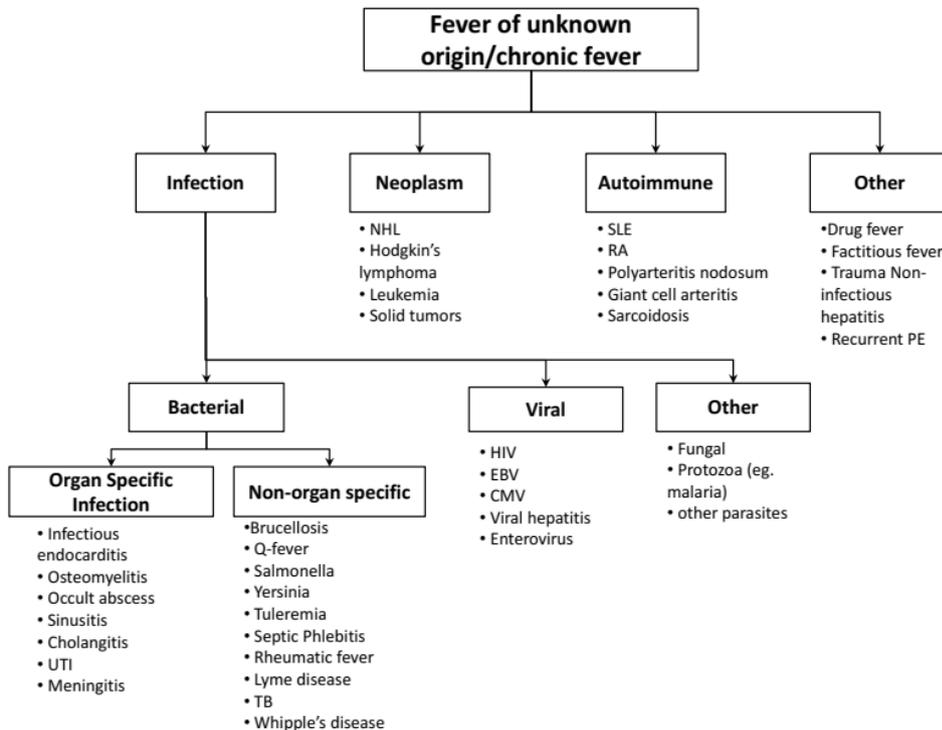
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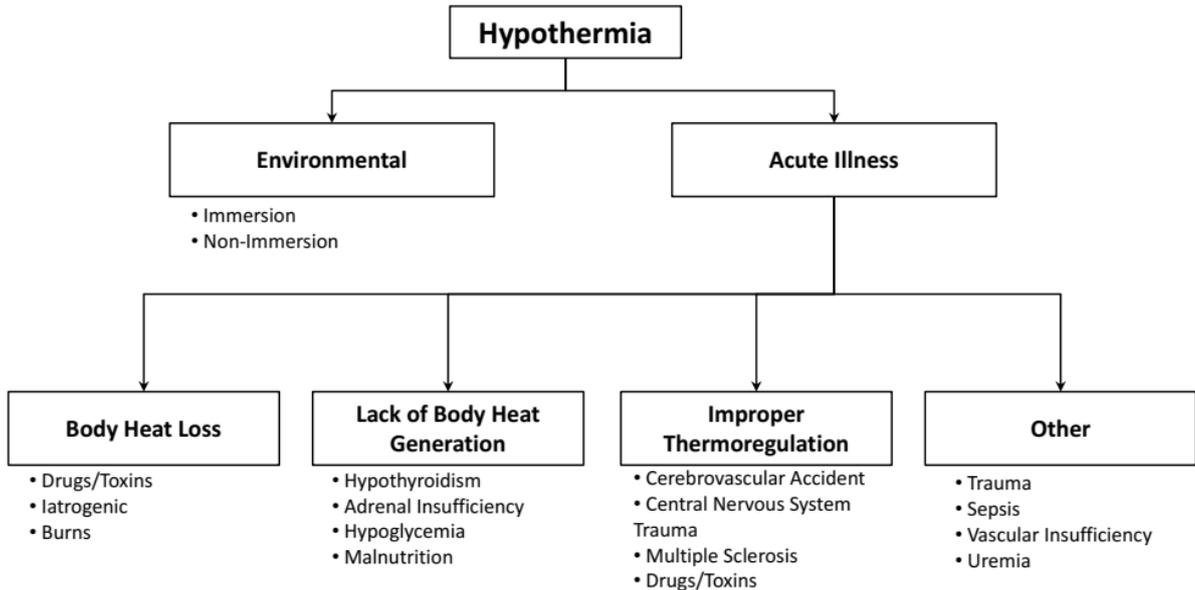
# Fatigue



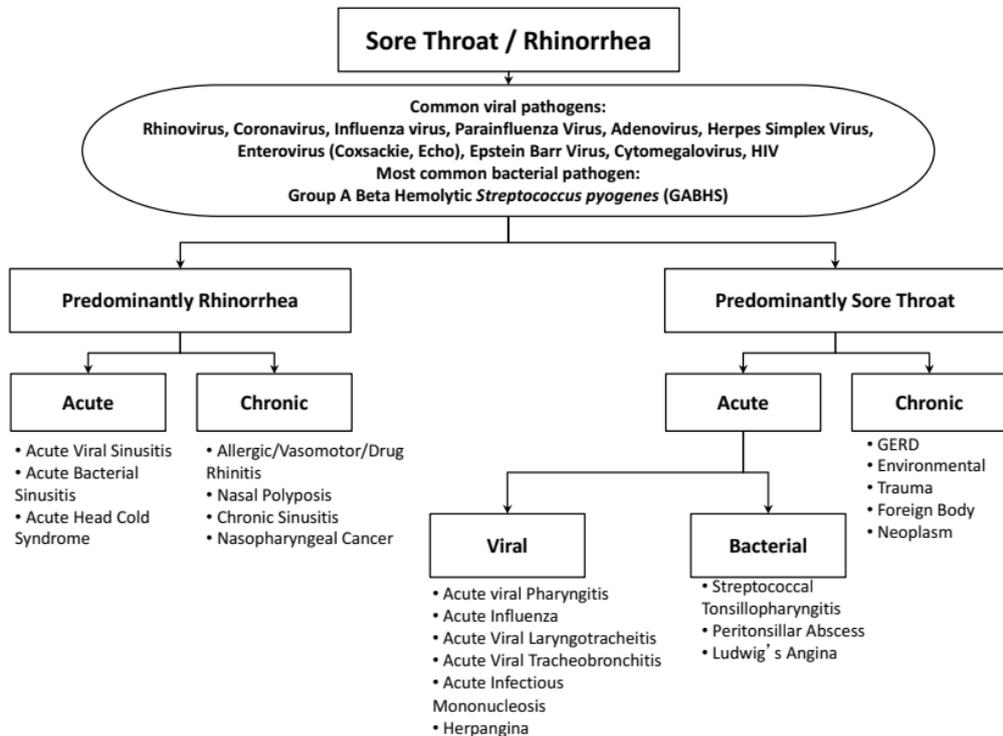


# Fever of Unknown Origin / Chronic Fever





# Sore Throat / Rhinorrhea





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# Abbreviations

<b>AAA</b>	Abdominal Aortic Aneurysm	<b>DKA</b>	Diabetic Ketoacidosis
<b>ACE</b>	Angiotensin-Converting Enzyme	<b>DRE</b>	Digital Rectal Exam
<b>ACTH</b>	Adrenocorticotrophic Hormone	<b>DVT</b>	Deep Vein Thrombosis
<b>ADPKD</b>	Autosomal Dominant Polycystic Kidney Disease	<b>EABV</b>	Effective Arterial Blood Volume
<b>ADH</b>	Antidiuretic Hormone	<b>ECF</b>	Extracellular Fluid
<b>AIN</b>	Acute Interstitial Nephritis	<b>ENaC</b>	Epithelial Sodium Channel
<b>ALS</b>	Amyotrophic Lateral Sclerosis	<b>FEV<sub>1</sub></b>	Forced Expiratory Volume in One Second
<b>ARB</b>	Angiotensin Receptor Blocker	<b>FJN</b>	Familial Juvenile Nephronophthisis
<b>ARF</b>	Acute Renal Failure	<b>FSGS</b>	Focal Segmental Glomerulosclerosis
<b>ARPKD</b>	Autosomal Recessive Polycystic Kidney Disease	<b>FSH</b>	Follicle Stimulating Hormone
<b>BPH</b>	Benign Prostatic Hypertrophy	<b>FVC</b>	Forced Vital Capacity
<b>CCD</b>	Cortical Collecting Duct	<b>GBM</b>	Glomerular Basement Membrane
<b>CHF</b>	Congestive Heart Failure	<b>GERD</b>	Gastrointestinal Esophageal Reflux Disease
<b>CIN</b>	Chronic Interstitial Nephritis	<b>GFR</b>	Glomerular Filtration Rate
<b>CLL</b>	Chronic Lymphocytic Leukemia	<b>GHRH</b>	Growth Hormone Releasing Hormone
<b>CNS</b>	Central Nervous System	<b>GH</b>	Growth Hormone
<b>COPD</b>	Chronic Obstructive Pulmonary Disease	<b>GI</b>	Gastrointestinal
<b>CRF</b>	Chronic Renal Failure	<b>GN</b>	Glomerulonephritis
<b>CRH</b>	Corticotrophic Releasing Hormone	<b>GnRH</b>	Gonadotropin Releasing Hormone
<b>CT</b>	Computed Tomography	<b>GPA</b>	Granulomatosis with Polyangiitis
<b>DCIS</b>	Ductal Carcinoma In Situ	<b>GRA</b>	Glucocorticoid
<b>DHEA</b>	Dehydroepiandrosterone	<b>GTN</b>	Gestational Trophoblastic Neoplasm
<b>DHEA-S</b>	Dehydroepiandrosterone Sulfate	<b>H<sup>+</sup></b>	Hydrogen
<b>DIC</b>	Disseminated Intravascular Coagulation	<b>HCG</b>	Human Chorionic Gonadotropin

<b>HDL</b>	High Density Lipoprotein	<b>LPL</b>	Lipoprotein Lipase
<b>HELLP</b>	Hemolysis, Elevated Liver Enzymes, Low Platelets	<b>MCD</b>	Minimal Change Disease
<b>HIV</b>	Human Immunodeficiency Virus	<b>MCH</b>	Mean Corpuscular Hemoglobin
<b>HPL-1a</b>	Human Peripheral Lung Epithelial Cell Line 1a	<b>MCHC</b>	Mean Corpuscular Hemoglobin Concentration
<b>HRT</b>	Hormone Replacement Therapy	<b>MCV</b>	Mean Corpuscular Volume
<b>HSP</b>	Henoch-Schönlein Purpura	<b>MEN</b>	Multiple Endocrine Neoplasia
<b>HSV</b>	Herpes Simplex Virus	<b>MI</b>	Myocardial Infarction
<b>HUS</b>	Hemolytic-Uremic Syndrome	<b>MPA</b>	Microscopic Polyangiitis
<b>IBD</b>	Irritable Bowel Disease	<b>MPGN</b>	Membranoproliferative Glomerulonephritis
<b>IBS</b>	Irritable Bowel Syndrome	<b>MS</b>	Multiple Sclerosis
<b>ICP</b>	Increased Intracranial Pressure	<b>MSK</b>	Musculoskeletal
<b>ICU</b>	Intensive Care Unit	<b>Na<sup>+</sup></b>	Sodium
<b>IGF</b>	Insulin-like Growth Factor	<b>NSAIDs</b>	Non-Steroidal Anti-Inflammatories
<b>INR</b>	International Normalized Ratio	<b>OCP</b>	Oral Contraceptive Pill
<b>ITP</b>	Idiopathic Thrombocytopenic Purpura	<b>OSM</b>	Osmolality
<b>IUGR</b>	Intrauterine Growth Restriction	<b>PE</b>	Pulmonary Embolism
<b>IV</b>	Intravenous	<b>PID</b>	Pelvic Inflammatory Disease
<b>IVP</b>	Intravenous Pyelogram	<b>PMN</b>	Polymorphic Neutrophils
<b>JVP</b>	Jugular Venous Pyelogram	<b>POSM</b>	Plasma Osmolality
<b>K<sup>+</sup></b>	Potassium	<b>PPROM</b>	Preterm Premature Rupture of Membranes
<b>KUB</b>	Kidney, Ureter, Bladder	<b>PROM</b>	Premature Rupture of Membranes
<b>LCIS</b>	Lobular Carcinoma In Situ	<b>PT</b>	Prothrombin Time
<b>LDL</b>	Low Density Lipoprotein	<b>PTH</b>	Parathyroid Hormone
<b>LGA</b>	Large for Gestational Age	<b>PTT</b>	Partial Thromboplastin Time
<b>LH</b>	Luteinizing Hormone	<b>PUD</b>	Peptic Ulcer Disease
<b>LLN</b>	Lower Limit of Normal	<b>PUJ</b>	Pelviureteric Junction
<b>LOC</b>	Level of Consciousness	<b>RAPD</b>	Right Afferent Pupillary Defect

<b>RAS</b>	Renal Artery Stenosis
<b>RBC</b>	Red Blood Cell
<b>RTA</b>	Renal Tubular Acidosis
<b>SGA</b>	Small for Gestational Age
<b>SLE</b>	Systemic Lupus Erythematosus
<b>TORCH</b>	Toxoplasmosis, Other (Hepatitis B, Syphilis, Varicella-Zoster virus, HIV, Parvovirus B19), Rubella, Cytomegalovirus, Herpes Simplex Virus
<b>TSH</b>	Thyroid Stimulating Hormone
<b>TSHR</b>	Thyroid Stimulating Hormone Receptor
<b>TTKG</b>	Transtubular Potassium Gradient
<b>TTP</b>	Thrombotic Thrombocytopenic Purpura
<b>UTI</b>	Urinary Tract Infection
<b>US</b>	Ultrasound
<b>VACTERL</b>	Vertebral Anomalies, Anal Atresia, Cardiovascular Anomalies, Tracheoesophageal Fistula, Esophageal Atresia, Renal Anomalies, Limb Anomalies
<b>VSD</b>	Ventricular Septal Defect
<b>VUJ</b>	Vesicoureteral Junction

# Notes









Superficially resembling flowcharts, schemes are a way to ease the memorization of differential diagnoses by breaking large lists into sets of smaller, conceptually-intuitive information packets. using the Medical Council of Canada's Clinical Presentation List, *Blackbook* organizes the most common medical presentations of patients into diagnostic schemes. As a tool for medical students, residents, allied health trainees, and health care educators, medical presentation schemes will ease the learning of the volume of medical diagnoses, and will facilitate recall when needed.

Based on the medical presentation schemes used in the University of Calgary Medical curriculum, *Blackbook* is a joint production of the students and the Cumming School of Medicine at the University of Calgary.

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