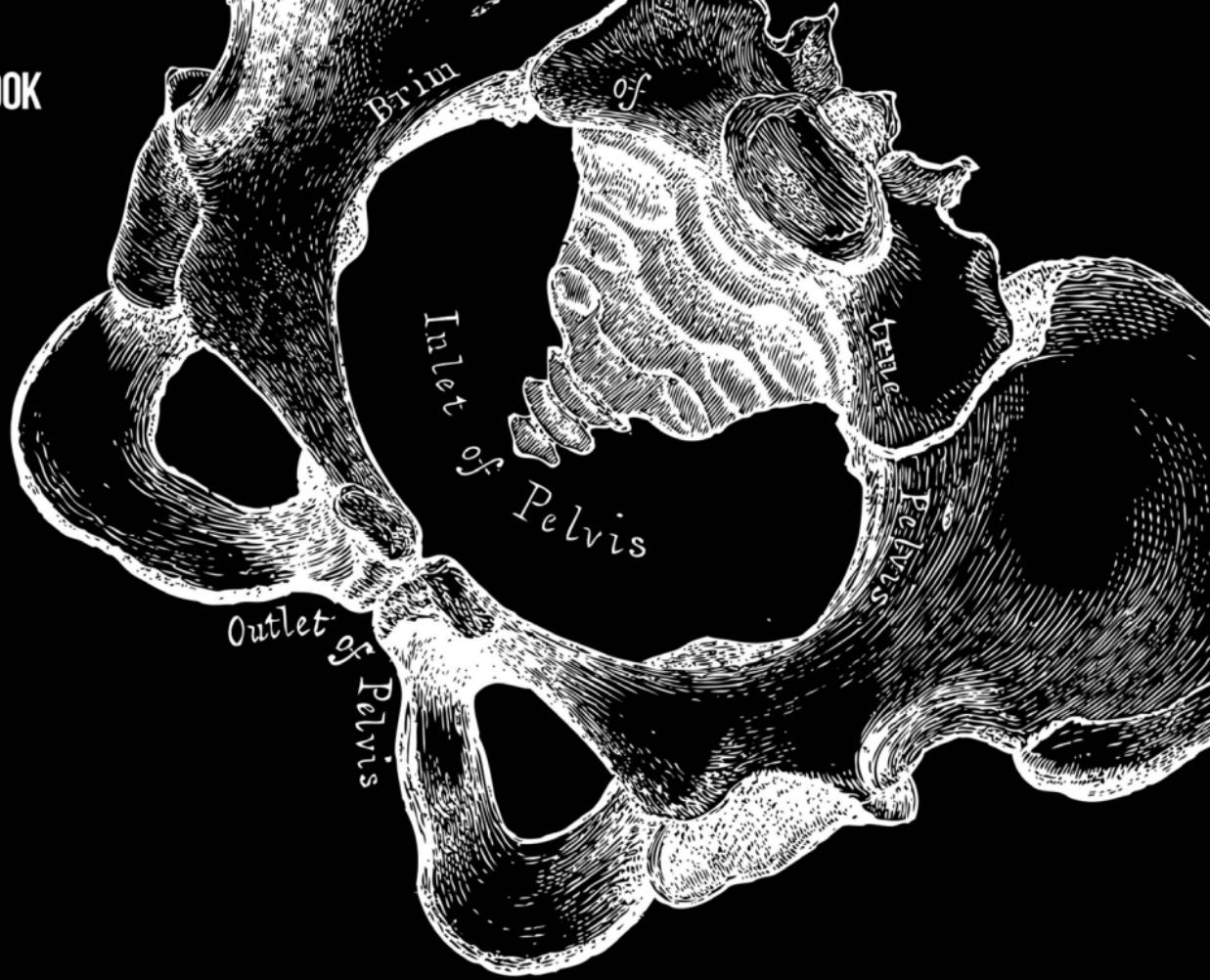


BLACKBOOK



Disclaimer

This material is for **educational purposes only**.

It is not to be used to make medical decisions.

Medical decisions should be made only with the guidance of a licensed medical professional.

While efforts have been made to ensure the accuracy of the content within, the accuracy is not guaranteed.

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

Chief Editors

Rebecca Phillips
Ainna Preet Randhawa
Vaneet Randhawa

Consulting Editors

Kea Archibold
Sunny Fong
Lucas Streith

Incoming Editors

Erin Kelly
Tony Gu

Faculty Editor

Dr. Sylvain Coderre

Editorial Board

Dr. Henry Mandin
Dr. Kevin McLaughlin
Dr. Brett Poulin

Twelfth Edition (2019). First Printing.

Copyright © 2007-2019. Faculty of Medicine, University of Calgary. All Rights Reserved.

First Edition	2007 (Reprint 2008)	Eighth Edition	2015
Second Edition	2009 (Reprints 2009, 2010)	Ninth Edition	2016
Third Edition	2010	Tenth Edition	2017
Fourth Edition	2011	Eleventh Edition	2018
Seventh Edition	2014	Twelfth Edition	2019
ISBN	Pending Assignment		

This material is covered by the following Creative Commons License:

Creative Commons Attribution-NonCommercial 4.0 International License.

This material is for educational purposes only. It is not to be used to make medical decisions. Medical decisions should be made only with the guidance of a licensed medical professional. While efforts have been made to ensure accuracy of the content within, the accuracy is not guaranteed.

The Black Book Project may be contacted at:

Undergraduate Medical Education

Faculty of Medicine

University of Calgary

Health Sciences Centre

3330 Hospital Drive N.W.

Calgary, Alberta, Canada T2N 4H1

blackbk@ucalgary.ca

Design

Michael Cheshire

Illustrations

Gray's Anatomy (Public Domain)

Vecteezy.com

Medical presentation schemes conceived by Henry Mandin.

The Calgary Black Book Project founded by Brett Poulin.

Printed in Calgary, Alberta, Canada.

A Message from the Editors

Welcome to the Twelfth Edition of *Blackbook*! This ongoing project 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.

Blackbook continues to evolve and improve during each edition. In this newest print we have added and modified several schemes, including a new page for interpretation of pulmonary function tests, among numerous smaller edits and spelling corrections. We're working on an open access, online version of *Blackbook* that will link to and integrate our other project, *Calgary Cards* (cards.ucalgary.ca). *Cards* is another study aid that employs student-authored patient scenarios in MCQ format. If students are struggling in a particular area (e.g., acid-base questions), *Cards* is a great way to get some extra practice. *Cards* is free and in constant development - check it out!

As always, we welcome feedback, suggestions, edits, or ideas for new schemes.
Please e-mail us at blackbk@ucalgary.ca.

Thank you and happy learning!

Rebecca Phillips, Ainna Preet Randhawa & Vaneet Randhawa

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

Table of Contents

A Message from the Editors **v**

Introduction to Schemes **vii**

Cardiovascular **1**

Abnormal Rhythm (1).....	3
Abnormal Rhythm (2).....	4
Chest Discomfort Cardiovascular.....	5
Chest Discomfort Pulmonary / Mediastinal.....	6
Chest Discomfort Other	7
Hypertension.....	8
Hypertension in Pregnancy.....	9
Left-Sided Heart Failure	10
Isolated Right-Sided Heart Failure.....	11
Pulse Abnormalities.....	12

Shock **13**

Syncope..... **14**

Systolic Murmur Benign & Stenotic..... **15**

Systolic Murmur Valvular & Other..... **16**

Diastolic Murmur..... **17**

Respiratory **19**

Pulmonary Function Tests Interpretation	21
Acid-Base Disorder Pulmonary	22
Chest Discomfort Cardiovascular	23
Chest Discomfort Pulmonary	24
Chest Discomfort Other	25
Chest Trauma Complications.....	26
Cough Chronic	27
Cough, Dyspnea & Fever	28

Dyspnea Acute.....	29	Anemia with Elevated MCV.....	43
Dyspnea Chronic Cardiac.....	30	Anemia with Normal MCV.....	44
Dyspnea Chronic Pulmonary / Other.....	31	Anemia with Low MCV.....	45
Excessive Daytime Sleepiness.....	32	Approach to Bleeding / Bruising Platelets & Vascular System.....	46
Hemoptysis	33	Approach to Bleeding / Bruising Coagulation Proteins	47
Hypoxemia.....	34	Approach to Prolonged PT (INR), Prolonged PTT	48
Lung Nodule	35	Prolonged PT (INR), Normal PTT	49
Mediastinal Mass.....	36	Prolonged PTT, Normal PT (INR) Bleeding Tendency	50
Pleural Effusion.....	37	Prolonged PTT, Normal PT (INR) No Bleeding Tendency	51
Pulmonary Hypertension.....	38	Approach to Splenomegaly.....	52
Hematologic	39		
Overall Approach to Anemia	41		
Approach to Anemia Mean Corpuscular Volume	42		

Fever in the Immunocompromised Host.....	53	Abdominal Mass.....	72
Lymphadenopathy Diffuse.....	54	Abdominal Pain (Adult) Acute - Diffuse.....	73
Lymphadenopathy Localized.....	55	Abdominal Pain (Adult) Acute - Localized.....	74
Neutrophilia.....	56	Abdominal Pain (Adult) Chronic - Constant.	75
Neutropenia Decreased Neutrophils Only ...	57	Abdominal Pain (Adult) Chronic - Crampy /	
Neutropenia Bicytopenia / Pancytopenia....	58	Fleeting.....	76
Polycythemia	59	Abdominal Pain (Adult) Chronic - Post-	
Suspected Deep Vein Thrombosis (DVT)	60	Prandial.....	77
Suspected Pulmonary Embolism (PE).....	61	Anorectal Pain	78
Thrombocytopenia.....	62	Acute Diarrhea	79
Thrombocytosis	63	Chronic Diarrhea Small Bowel	80
Hemolysis	64	Chronic Diarrhea Steatorrhea & Large Bowel	
Gastrointestinal	65	.....	81
Abdominal Distention	69	Constipation (Adult) Altered Bowel Function	
Abdominal Distention Ascites	70	& Idiopathic	82
Abdominal Distention Other Causes.....	71	Constipation (Adult) Secondary Causes.....	83
		Constipation (Pediatric)	84

Dysphagia.....	85
Elevated Liver Enzymes	86
Hepatomegaly	87
Jaundice.....	88
Liver Mass.....	89
Mouth Disorders (Adult & Elderly)	90
Nausea & Vomiting Gastrointestinal Disease	91
Nausea & Vomiting Other Systemic Disease	92
Stool Incontinence.....	93
Upper Gastronintestinal Bleed (Hematemesis / Melena).....	94
Lower Gastrointestinal Bleed.....	95
Weight Gain.....	96
Weight Loss	97

Renal	99
Acute Kidney Injury.....	101
Chronic Kidney Disease	102
Dysuria	103
Generalized Edema.....	104
Hematuria.....	105
Hyperkalemia Intercellular Shift.....	106
Hyperkalemia Reduced Excretion.....	107
Hypokalemia	108
Hypernatremia	109
Hyponatremia.....	110
Hypertension.....	111
Increased Urinary Frequency	112
Nephrolithiasis	113
Polyuria.....	114
Proteinuria	115

Renal Mass Solid	116	Adrenal Mass Malignant	133
Renal Mass Cystic.....	117	Amenorrhea.....	134
Scrotal Mass.....	118	Breast Discharge	135
Suspected Acid-Base Disturbance	119	Gynecomastia Increased Estrogen & Increased HCG	136
Metabolic Acidosis Elevated Anion Gap.....	120	Gynecomastia Increased LH & Decreased Testosterone	137
Metabolic Acidosis Normal Anion Gap.....	121	Hirsutism.....	138
Metabolic Alkalosis	122	Hirsutism & Virilization Androgen Excess....	139
Urinary Incontinence.....	123	Hirsutism & Virilization Hypertrichosis.....	140
Urinary Tract Obstruction.....	124	Hypercalcemia Low PTH	141
Endocrinology	125	Hypercalcemia Normal / High PTH.....	142
Abnormal Lipid Profile Combined & Decreased HDL	129	Hypocalcemia High Phosphate	143
Abnormal Lipid Profile Increased LDL & Increased Triglycerides.....	130	Hypocalcemia Low Phosphate	144
Abnormal Serum TSH.....	131	Hypocalcemia High / Low PTH.....	145
Adrenal Mass Benign.....	132	Hyperglycemia	146
		Hypoglycemia	147

Hyperphosphatemia.....	148	Back Pain.....	167
Hypophosphatemia	149	Cognitive Impairment.....	168
Hyperthyroidism.....	150	Dysarthria.....	169
Hypothyroidism.....	151	Falls in the Elderly	170
Hyperuricemia.....	152	Gait Disturbance	171
Male Sexual Dysfunction	153	Headache Primary	172
Sellar / Pituitary Mass	154	Headache Secondary, without Red Flag Symptoms.....	173
Sellar / Pituitary Mass Size.....	155	Hemiplegia	174
Short Stature.....	156	Mechanisms of Pain.....	175
Tall Stature	157	Movement Disorder Hyperkinetic	176
Weight Gain / Obesity	158	Movement Disorder Tremor.....	177
Neurologic	159	Movement Disorder Bradykinetic.....	178
Altered Level of Consciousness Approach	163	Peripheral Weakness	179
Altered Level of Consciousness GCS \leq 7	164	Peripheral Weakness Sensory Changes	180
Aphasia Fluent	165	Spell / Seizure Epileptic Seizure	181
Aphasia Non-Fluent.....	166	Spell / Seizure Secondary Organic	182

Obstetrical & Gynecological	191
Intrapartum Abnormal Fetal HR Tracing	
Variability & Decelerations	193
Intrapartum Abnormal Fetal HR Tracing	
Baseline	194
Abnormal Genital Bleeding	195
Acute Pelvic Pain	196
Chronic Pelvic Pain	197
Amenorrhea Primary	198
Amenorrhea Secondary	199
Antenatal Care	200
Bleeding in Pregnancy < 20 Weeks	201
Bleeding in Pregnancy 2nd & 3rd Trimester	
	202
Breast Disorder	203
Growth Discrepancy Small for Gestational Age / Intrauterine Growth Restriction	204
Growth Discrepancy Large for Gestational Age	
	205
Infertility (Female)	206
Infertility (Male)	207
Intrapartum Factors that May Affect Fetal Oxygenation	
	208
Pelvic Mass	209
Ovarian Mass	210
Pelvic Organ Prolapse	211

Post-Partum Fever.....	212	Hair Loss (Alopecia) Localized.....	228
Post-Partum Hemorrhage	213	Morphology of Skin Lesions Primary Skin	
Recurrent Pregnancy Loss.....	214	Lesions	229
Vaginal Discharge.....	215	Morphology of Skin Lesions Secondary Skin	
Dermatologic	217	Lesions	230
Burns	221	Mucous Membrane Disorder Oral Cavity....	231
Dermatoses in Pregnancy Physiologic		Nail Disorders Primary Dermatologic Disease	
Changes	222	.....	232
Dematoses in Pregnancy Specific Skin		Nail Disorders Systemic Disease.....	233
Conditions.....	223	Nail Disorders Systemic Disease - Clubbing	
Disorders of Pigmentations		.....	234
Hyperpigmentation	224	Pruritus No Primary Skin Lesion	235
Disorders of Pigmentations		Pruritus Primary Skin Lesion.....	236
Hypopigmentation	225	Skin Rash Eczematous.....	237
Genital Lesion	226	Skin Rash Papulosquamous.....	238
Hair Loss (Alopecia) Diffuse	227	Skin Rash Pustular.....	239
		Skin Rash Reactive.....	240

Skin Rash Vesiculobullous.....	241	Vascular Joint Pain.....	257
Skin Ulcer by Etiology	242	Pathologic Fractures	258
Skin Ulcer by Location Genitals.....	243	Soft Tissue.....	259
Skin Ulcer by Location Head & Neck.....	244	Fracture Healing	260
Skin Ulcer by Location Lower Legs / Feet	245	Osteoporosis BMD Testing	261
Skin Ulcer by Location Oral Ulcers.....	246	Tumour.....	262
Skin Ulcer by Location Trunk / Sacral Region	247	Myotomes Segmental Innervation of Muscles	263
Vascular Lesions.....	248	Guide to Spinal Cord Injury.....	264

Musculoskeletal	249
Acute Joint Pain Vitamin CD	251
Chronic Joint Pain.....	252
Bone Lesion.....	253
Deformity / Limp	254
Infectious Joint Pain.....	255
Inflammatory Joint Pain.....	256

Psychiatric	265
Anxiety Disorders Associated with Panic....	267
Anxiety Disorders Recurrent Anxious Thoughts	268
Trauma & Stressor Related Disorders	269
Obsessive-Compulsive & Related Disorders	270

Personality Disorder.....	271
Mood Disorders Depressed Mood	272
Mood Disorders Elevated Mood.....	273
Psychotic Disorders	274
Somatoform Disorders.....	275

Otolaryngologic	277
Hearing Loss Conductive	279
Hearing Loss Sensorineural.....	280
Hoarseness Acute	281
Hoarseness Non-Acute.....	282
Neck Mass.....	283
Otalgia.....	284
Smell Dysfunction	285
Tinnitus Objective.....	286
Tinnitus Subjective.....	287

Ophthalmologic	289
Cross Section of the Eye & Acronyms.....	291
Approach to an Eye Exam.....	292
Acute Vision Loss Bilateral.....	293
Acute Vision Loss Unilateral.....	294
Chronic Vision Loss Anatomic.....	295
Amblyopia	296
Diplopia	297
Pupillary Abnormalities Isocoria.....	298
Pupillary Abnormalities Anisocoria.....	299
Red Eye Atraumatic.....	300
Red Eye Traumatic	301
Strabismus Ocular Misalignment.....	302
Neuro-Ophthalmology Visual Field Defects	303

Pediatric

	305
Developmental Delay.....	311
School Difficulties.....	312
Small for Gestational Age.....	313
Large for Gestational Age.....	314
Congenital Anomalies.....	315
Headache.....	316
Failure to Thrive Adequate Calorie Consumption.....	317
Failure to Thrive Inadequate Calorie Consumption.....	318
Hypotonic Infant (Floppy Newborn).....	319
Acute Abdominal Pain.....	320
Chronic Abdominal Pain.....	321
Pediatric Vomiting.....	322
Neonatal Jaundice: Approach to Indirect	
Hyperbilirubinemia.....	323
Neonatal Jaundice: Approach to Indirect	
Hyperbilirubinemia.....	324
Pediatric Diarrhea.....	325
Constipation: Pediatric.....	326
Mouth disorder: Pediatric.....	327
Depressed/Lethargic Newborn.....	328
Cyanosis in the Newborn.....	329
Limp.....	330
Respiratory Distress in the Newborn.....	331
Pediatric Dyspnea.....	332
Noisy Breathing: Pediatric wheezing.....	333

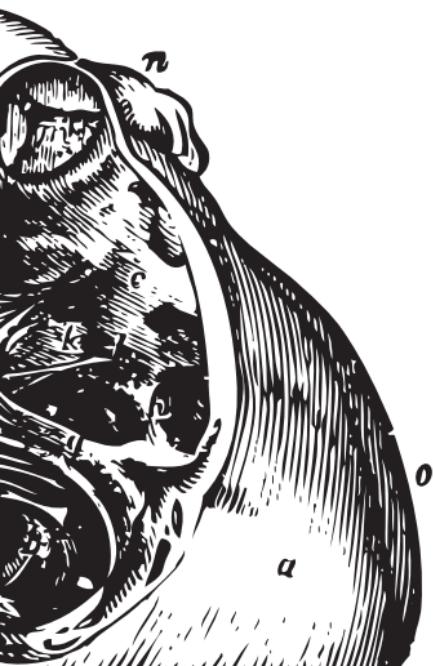
Noisy Breathing: Pediatric Stridor.....	334
Pediatric Cough: Acute.....	335
Pediatric Cough: Chronic.....	336
Respiratory Distress in the Newborn: Tachypnea.....	337
Sudden Unexpected Death in Infancy.....	338
Enuresis.....	339
Apparent Life Threatening Event.....	340
Pediatric Fractures.....	341
Salter Harris Classification.....	342
Sudden Paroxysmal Event.....	343
Non-Epileptic Paroxysmal Event.....	344
Pediatric Epilepsies.....	345
Pediatric Seizures.....	346
Febrile Seizures.....	347
Pediatric Mood and Anxiety Disorders.....	348
Abdominal Mass.....	349
Shock.....	350
Hypoglycemia.....	351
Altered Level of Consciousness.....	352
Bleeding/Bruising.....	353
Thrombocytopenia.....	354
Long PT (INR), Long PTT.....	355
Long PT (INR), Normal PTT.....	356
Normal PT (INR), Long PTT.....	357
Dehydration.....	358
Hyponatremia.....	359

Hypernatremia.....	360	Edema	386
Global Developmental Delay/Intellectual Disability.....	361	Dysuria	387
Fever (Age <1 Month).....	362	Increased Urinary Frequency.....	388
Fever (Age 1-3 Months).....	363	Scrotal Mass.....	389
Fever (Age >3 Months).....	364	Lymphadenopathy	390
Failure to Thrive.....	365	Otalgia (Earache)	391
Short Stature.....	366	Sore Throat/Sore Mouth.....	392
Murmur in the Newborn (<48 Hours).....	367		
Murmur in the Newborn Beyond Neonatal Period.....	368		
Preterm Infant Complications (<34 Weeks).....	369		
Preterm Infant Complications (34-36 Weeks).....	370		
Anemia by Mechanism.....	371	Fatigue.....	395
Anemia by MCV.....	372	Acute Fever	396
Microcytic Anemia.....	373	Fever of Unknown Origin / Chronic Fever.....	397
Paediatric Infectious Skin Rash.....	374	Hypothermia.....	398
Skin Lesion (Primary Skin).....	375	Sore Throat / Rhinorrhea.....	399
Skin Lesion (Secondary Skin).....	376		
Rash (Eczematous).....	377		
Rash (Papulosquamous).....	378		
Rash (Vesiculobullous).....	379		
Rash (Pustular).....	380		
Rash (Reactive).....	381		
Proteinuria.....	382		
Hematuria.....	383		
Acute Renal Failure.....	384		
Chronic Kidney Disease	385		
General Presentations	393		
<i>Historical Executive Student Editors..</i>	401		
<i>Scheme Creators.....</i>	402		
<i>Abbreviations</i>	403		

Cardiovascular

Abnormal Rhythm (1).....	3
Abnormal Rhythm (2).....	4
Chest Discomfort Cardiovascular.....	5
Chest Discomfort Pulmonary / Mediastinal.....	6
Chest Discomfort Other	7
Hypertension.....	8
Hypertension in Pregnancy.....	9
Left-Sided Heart Failure	10
Isolated Right-Sided Heart Failure.....	11
Pulse Abnormalities.....	12
Shock	13
Syncope	14
Systolic Murmur Benign & Stenotic	15
Systolic Murmur Valvular & Other	16
Diastolic Murmur	17





Historical Editors

Katie Lin
Payam Pournazari
Marc Chretien
Tyrone Harrison
Hamza Jalal
Geoff Lampard
Luke Rannelli
Connal Robertson-More
Jeff Shrum
Sarah Surette
Lian Szabo
Kathy Truong
Vishal Varshney

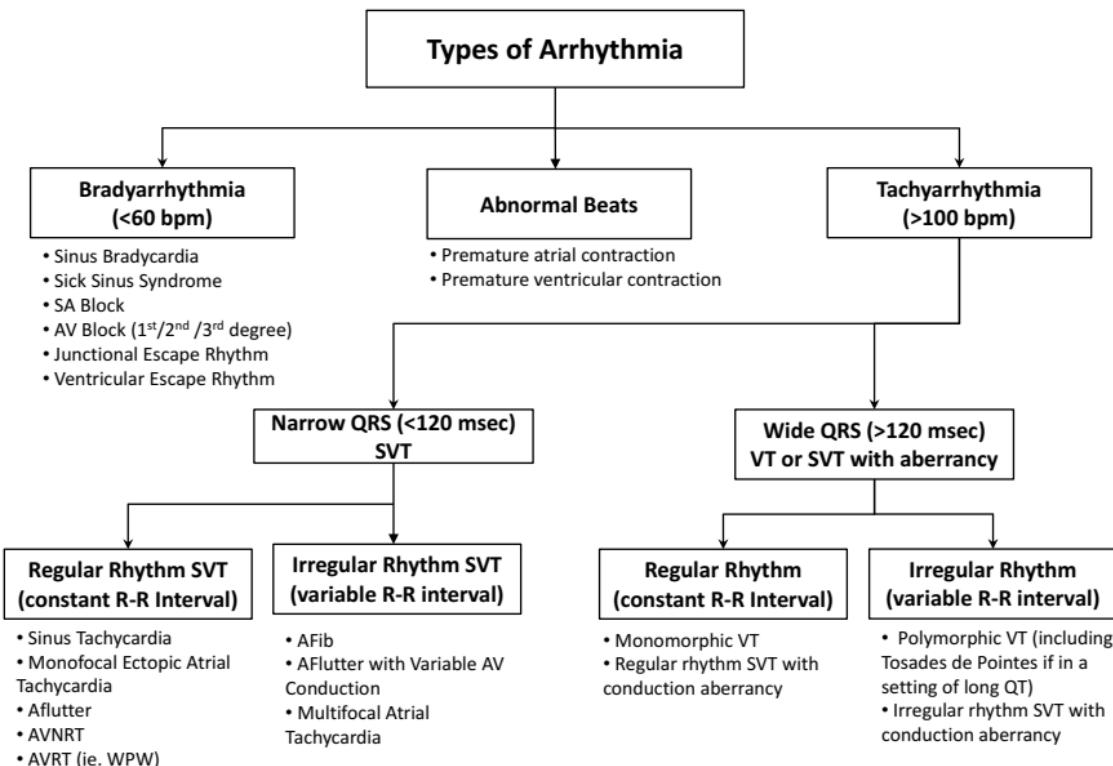
Student Editors

Azy Golian
Harsimranjit Singh
Shaye Lafferty

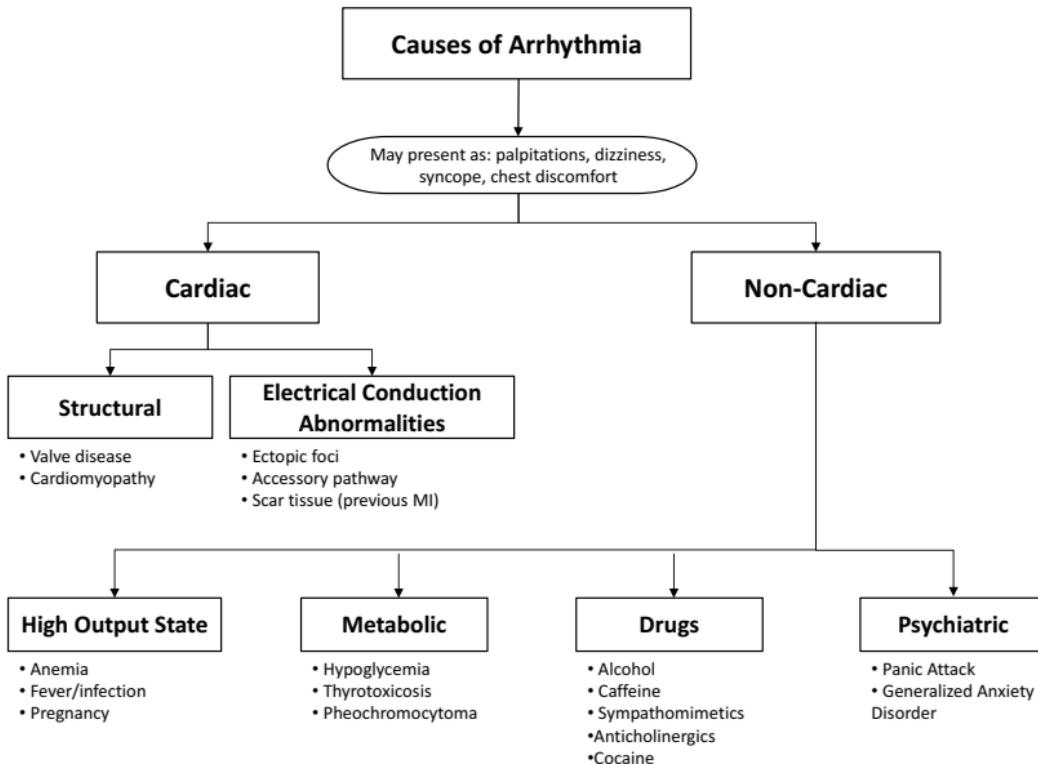
Faculty Editor

Dr. Sarah Weeks

Abnormal Rhythm (1)

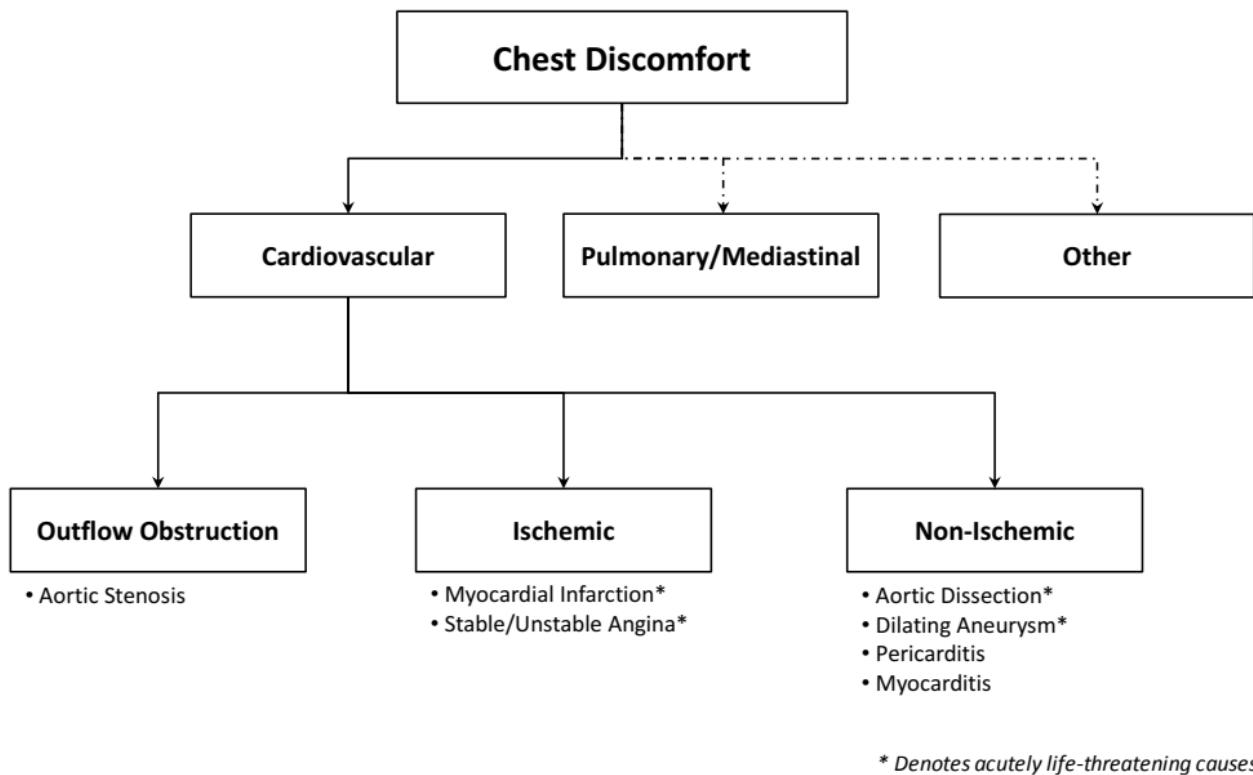


Abnormal Rhythm (2)



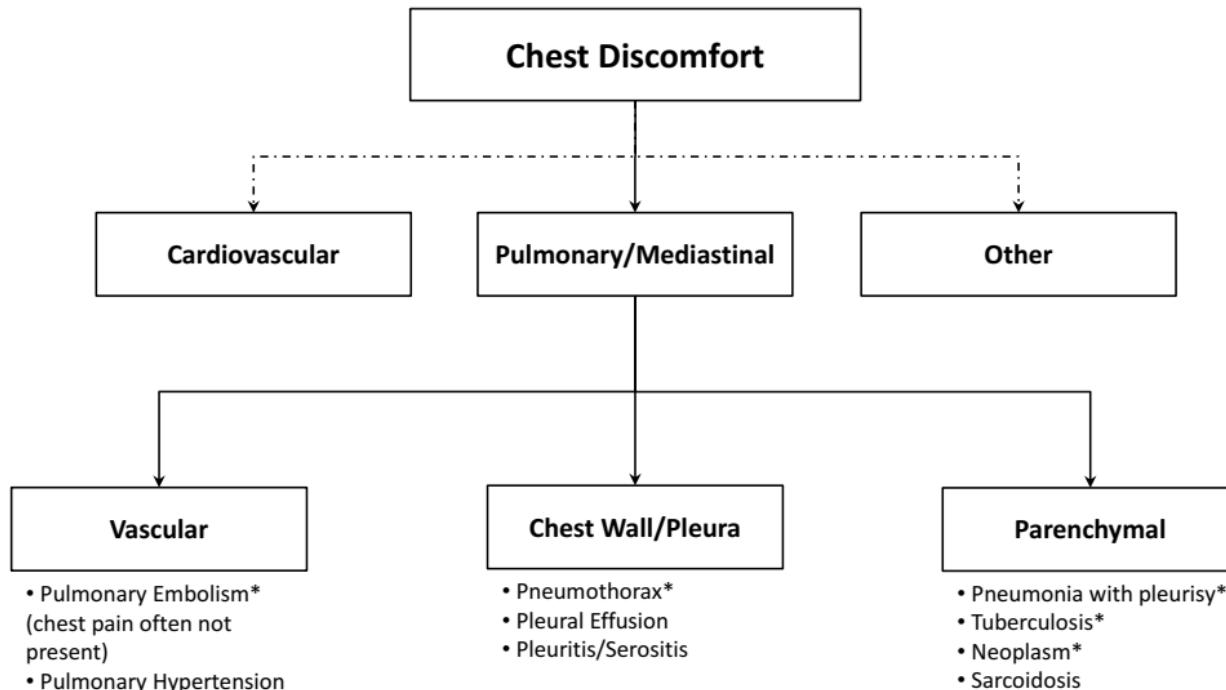
Chest Discomfort

Cardiovascular



Chest Discomfort

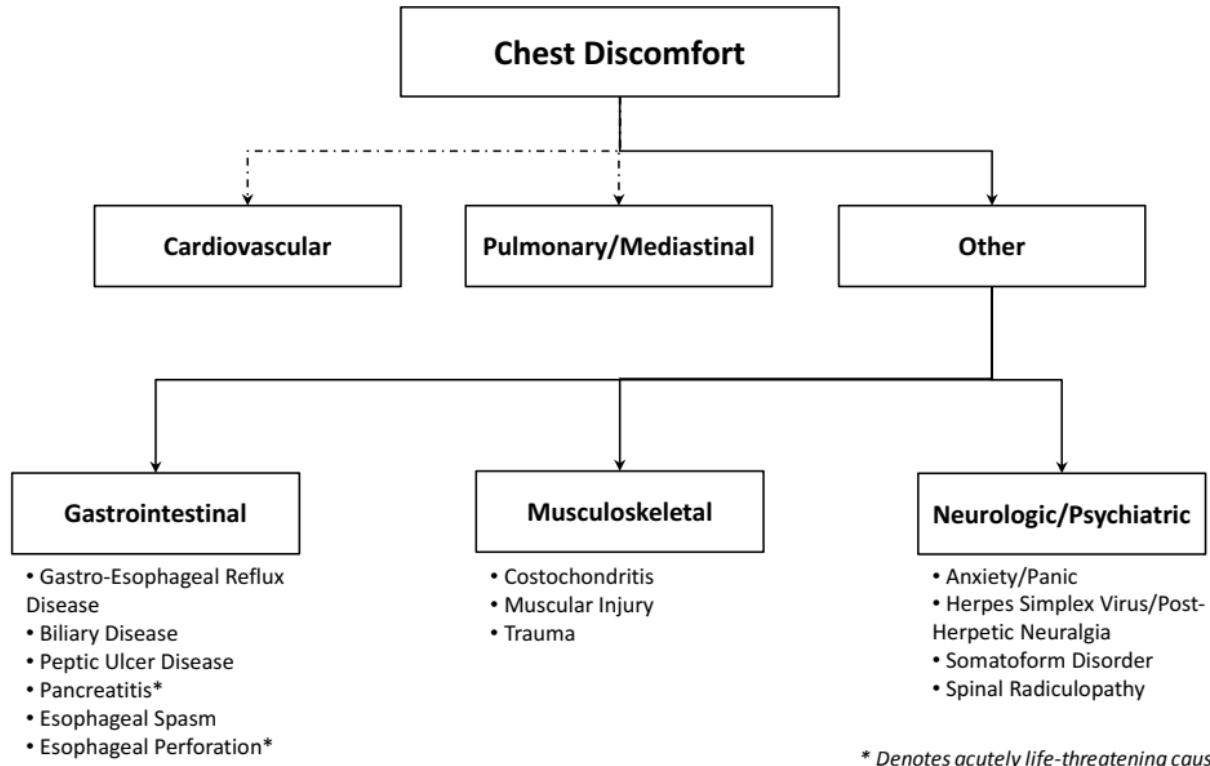
Pulmonary / Mediastinal



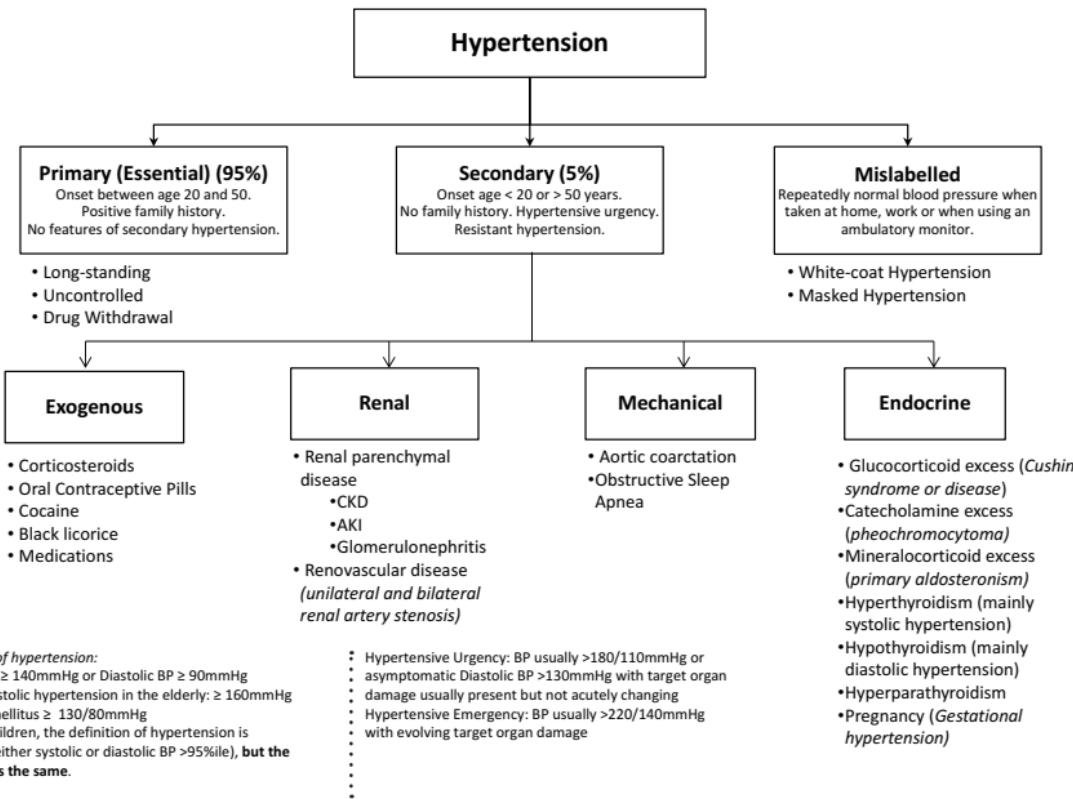
* Denotes acutely life-threatening causes

Chest Discomfort

Other

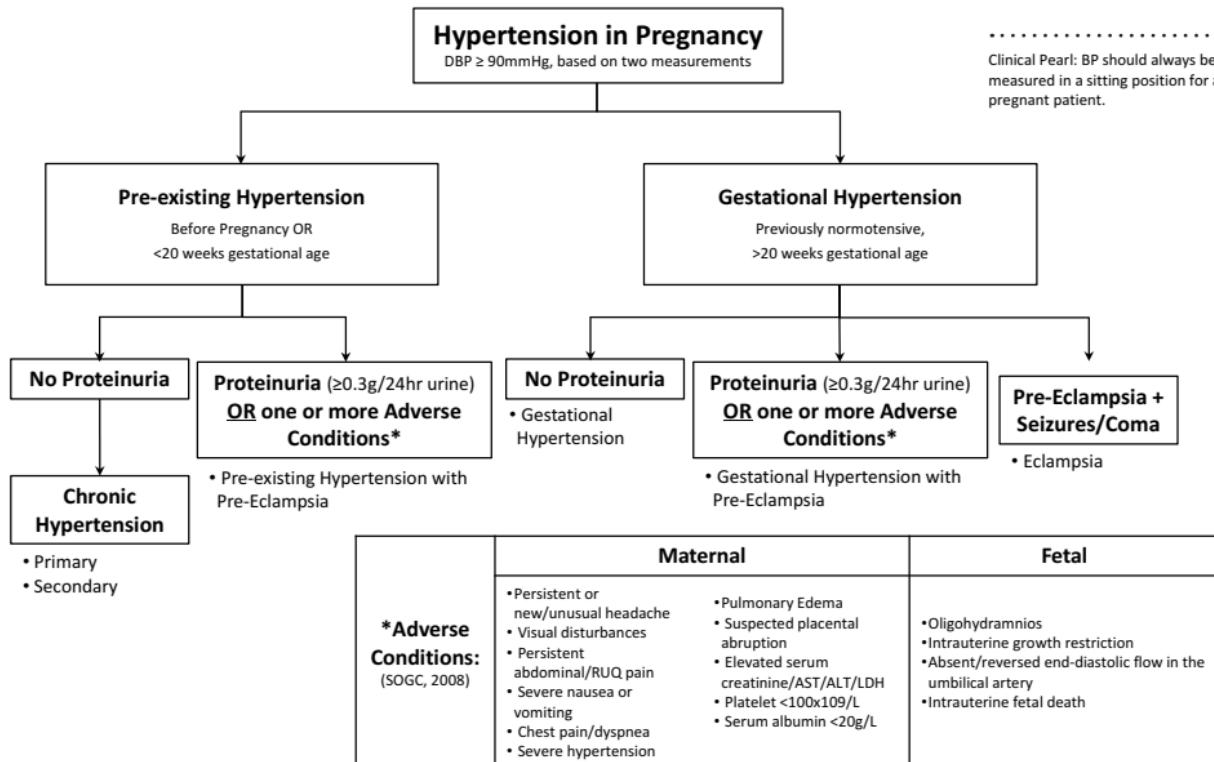


Hypertension

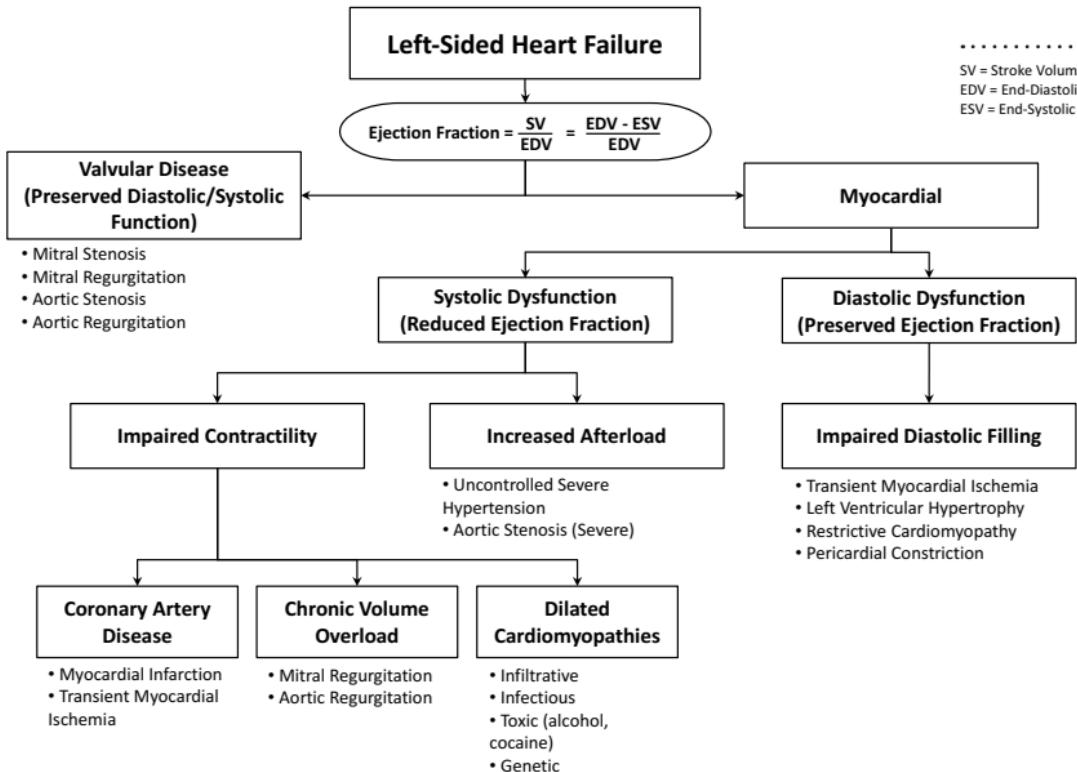


Hypertension in Pregnancy

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

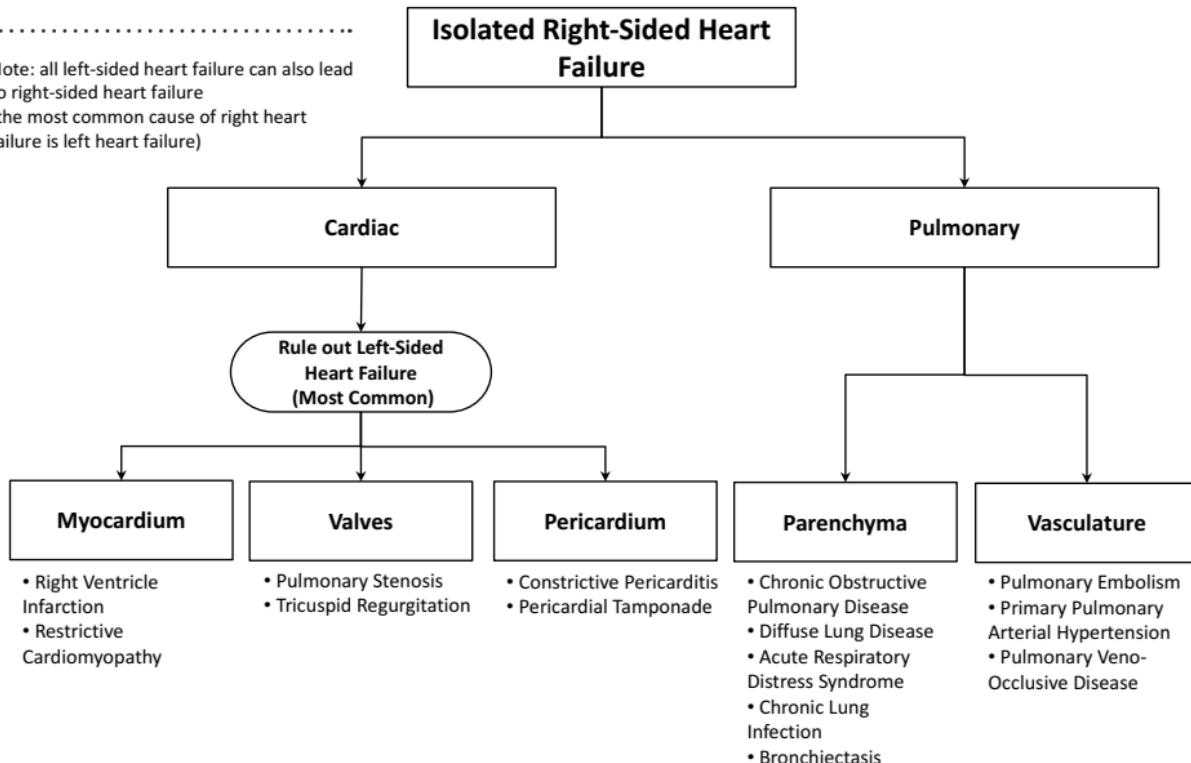


Left-Sided Heart Failure

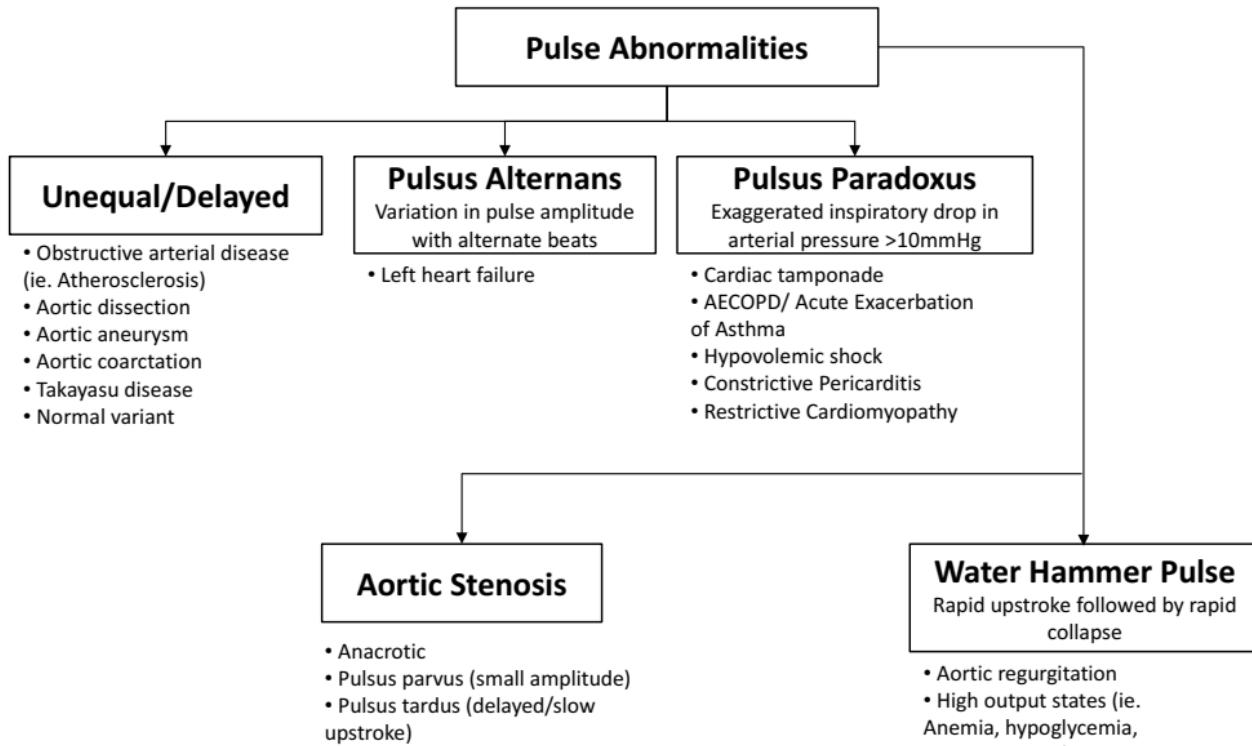


Isolated Right-Sided Heart Failure

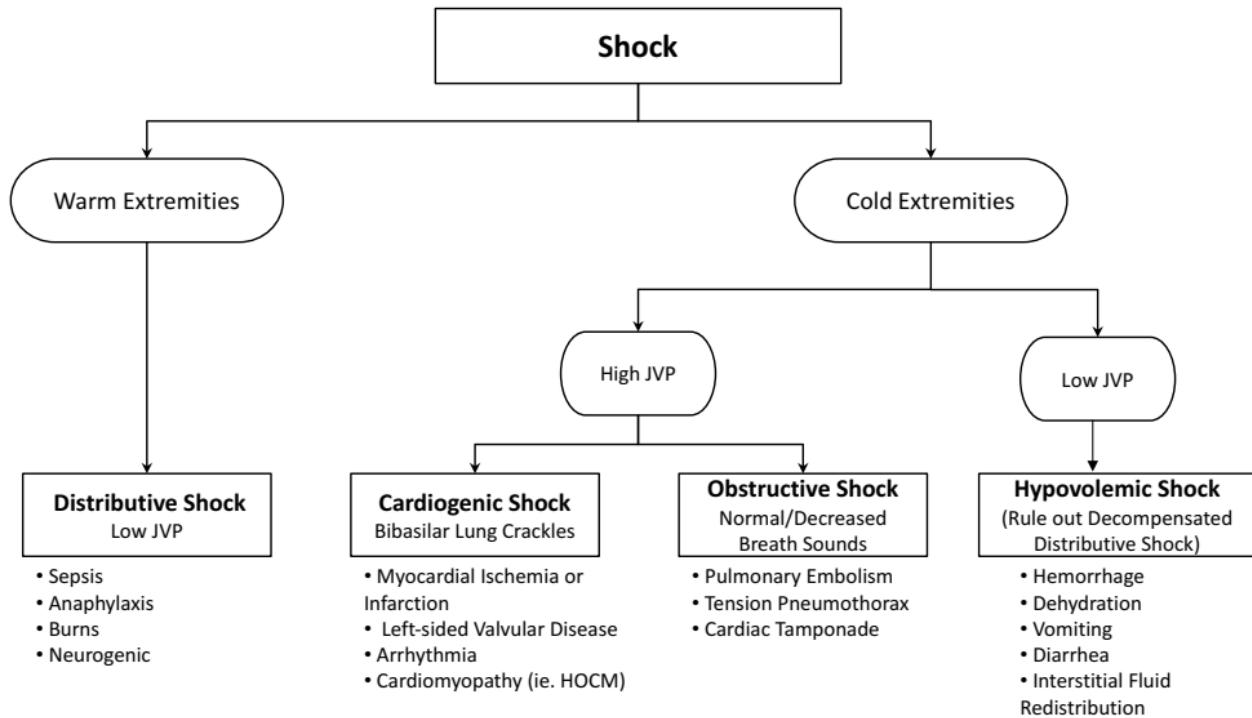
Note: all left-sided heart failure can also lead to right-sided heart failure
(the most common cause of right heart failure is left heart failure)



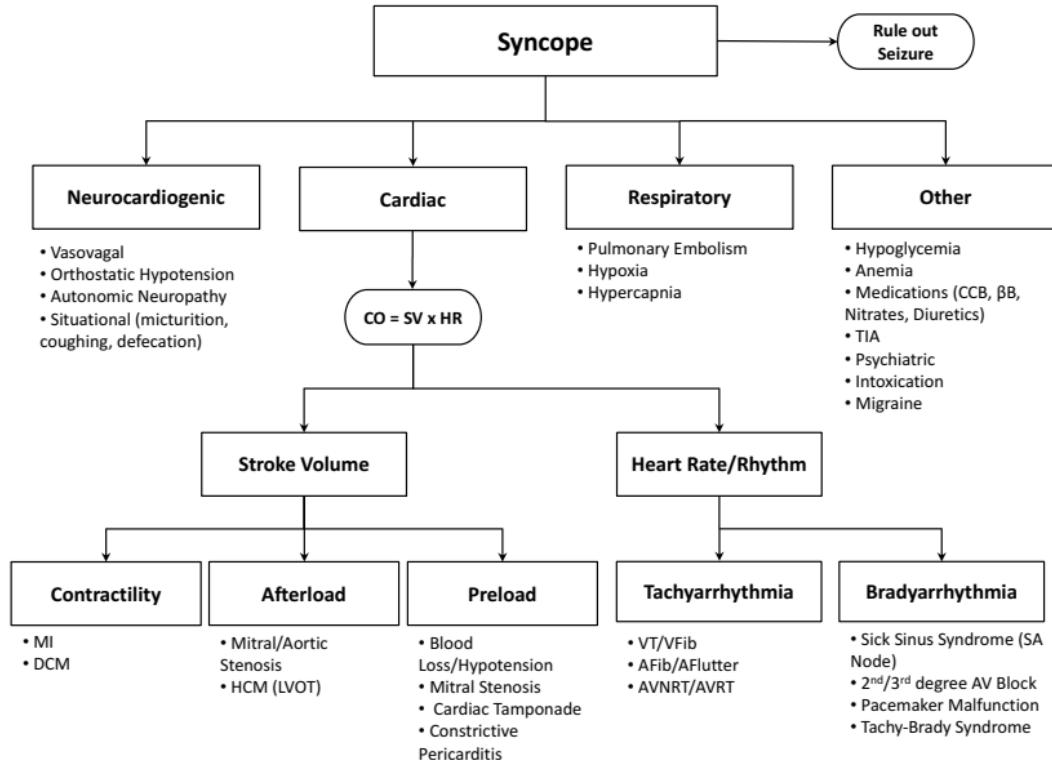
Pulse Abnormalities



Shock

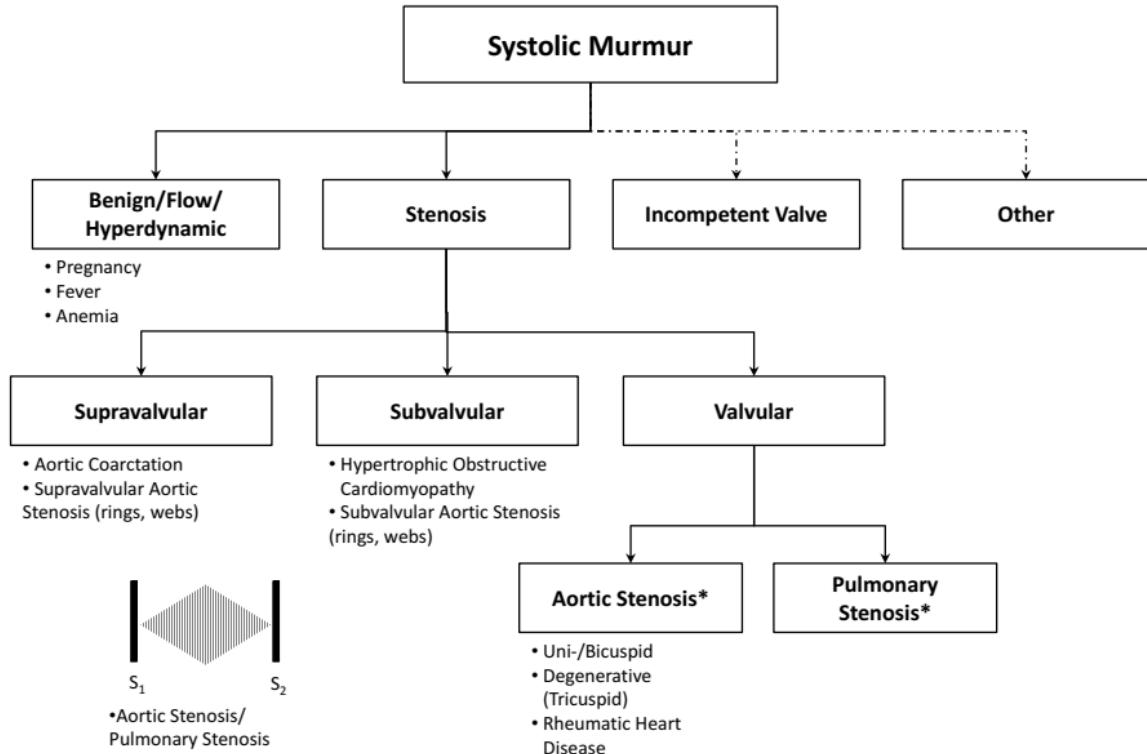


Syncope



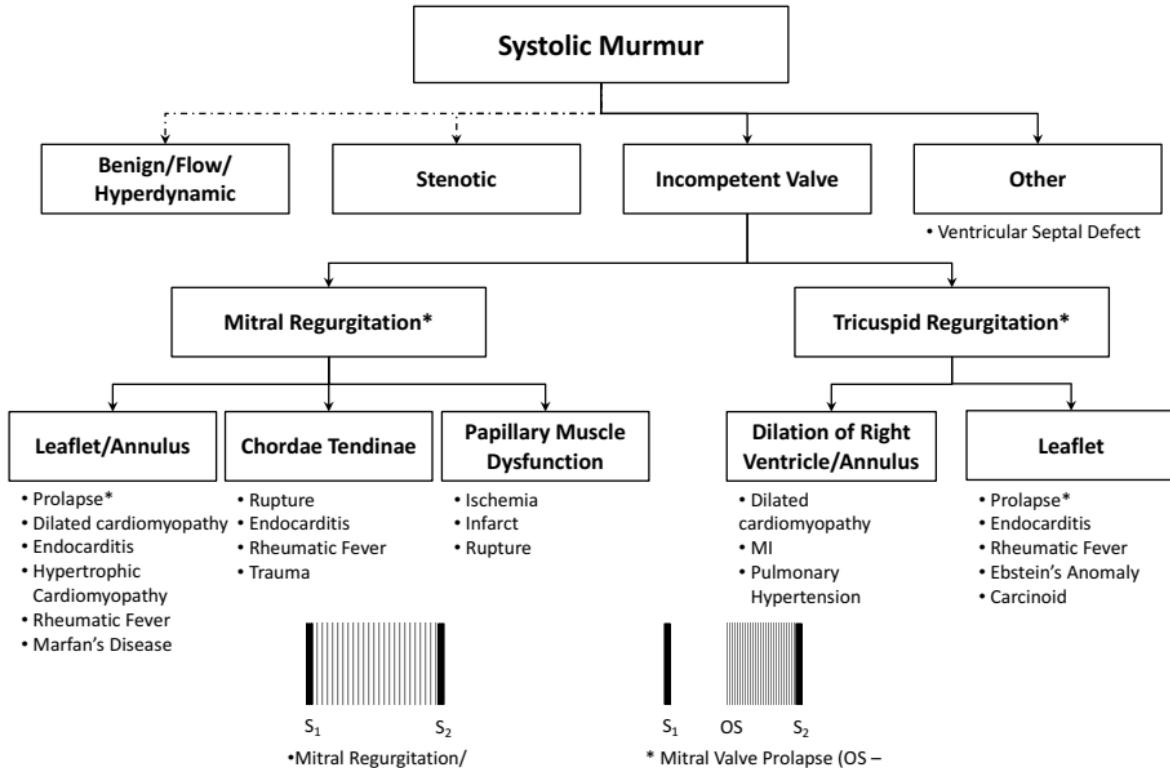
Systolic Murmur

Benign & Stenotic

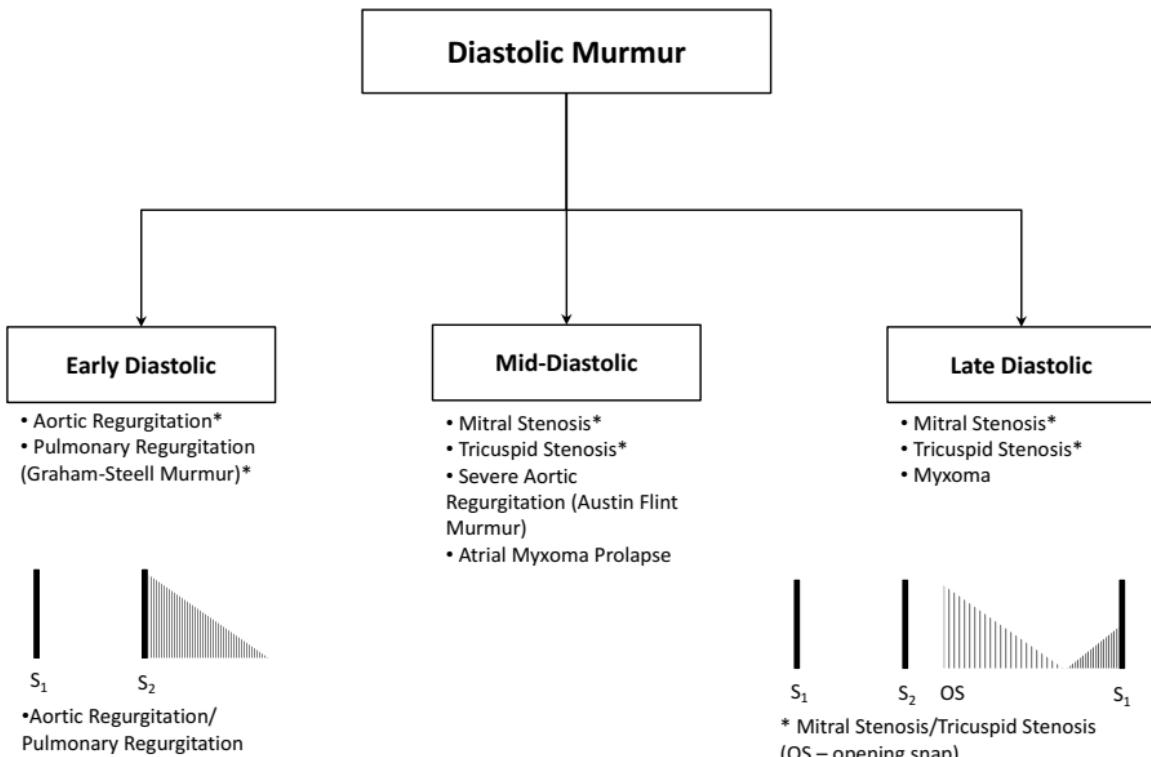


Systolic Murmur

Valvular & Other



Diastolic Murmur

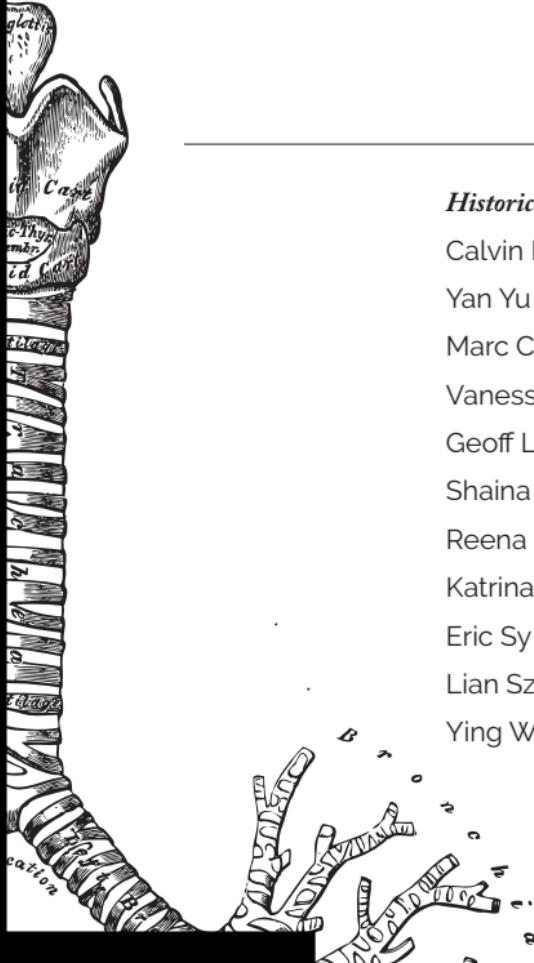


Respiratory

Step
C

Pulmonary Function Tests Interpretation	21	Lung Nodule	35
Acid-Base Disorder Pulmonary	22	Mediastinal Mass.....	36
Chest Discomfort Cardiovascular.....	23	Pleural Effusion.....	37
Chest Discomfort Pulmonary.....	24	Pulmonary Hypertension.....	38
Chest Discomfort Other	25		
Chest Trauma Complications.....	26		
Cough Chronic	27		
Cough, Dyspnea & Fever	28		
Dyspnea Acute.....	29		
Dyspnea Chronic Cardiac.....	30		
Dyspnea Chronic Pulmonary / Other.....	31		
Excessive Daytime Sleepiness.....	32		
Hemoptysis	33		
Hypoxemia.....	34		





Historical Editors

Calvin Loewen
Yan Yu
Marc Chretien
Vanessa Millar
Geoff Lampard
Shaina Lee
Reena Pabari
Katrina Rodrigues
Eric Sy
Lian Szabo
Ying Wang

Student Editors

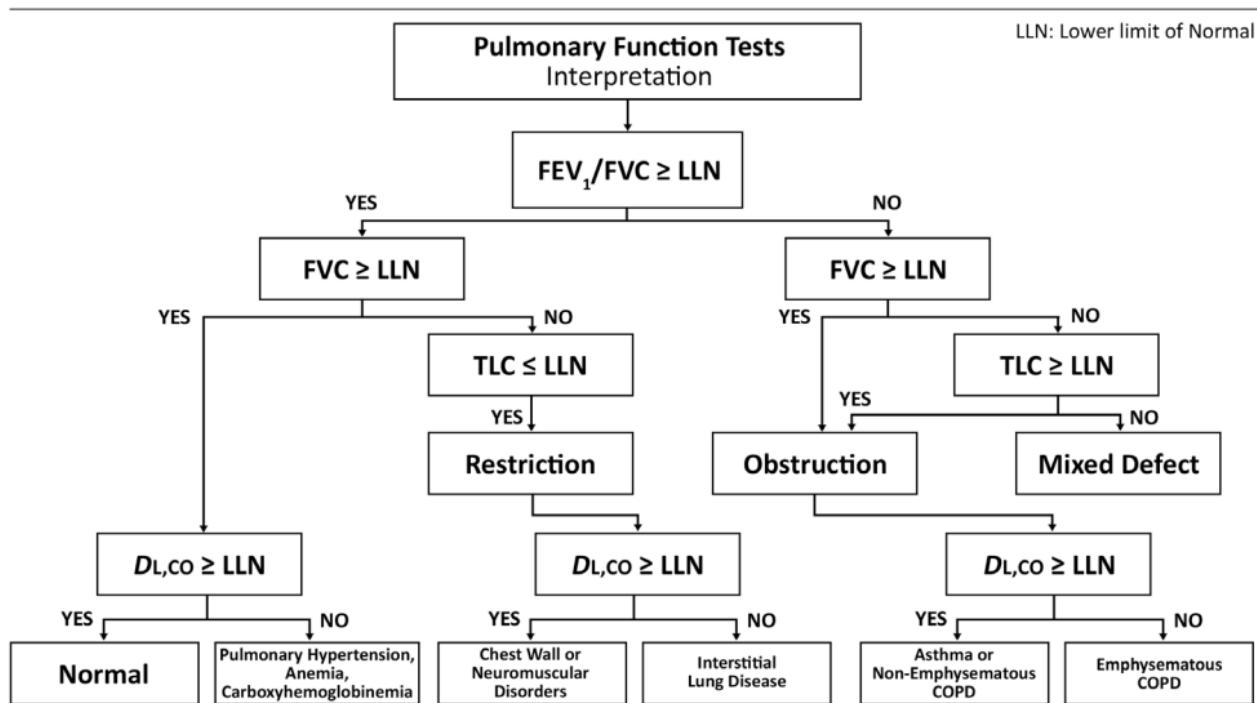
Amanda Comeau
Shaye Lafferty

Faculty Editor

Dr. Naushad Hirani
Dr. Daniel Miller

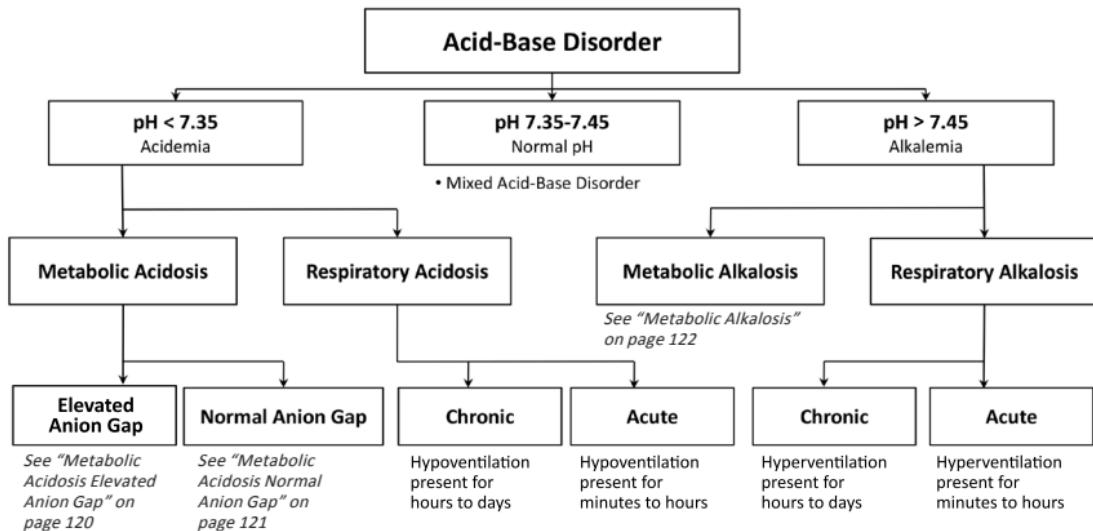
Pulmonary Function Tests

Interpretation



Acid-Base Disorder

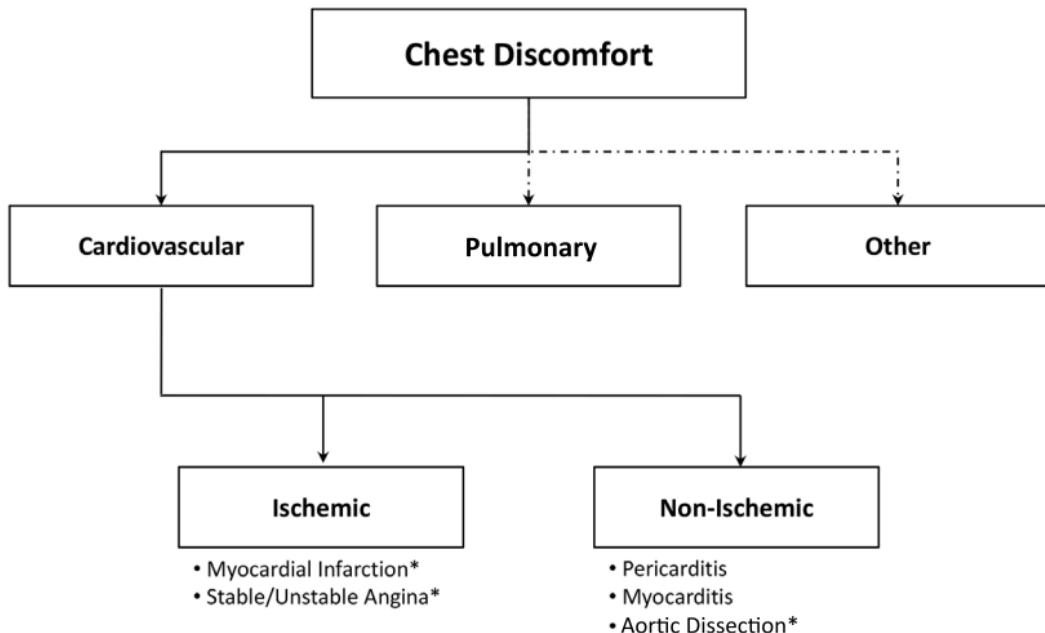
Pulmonary



<u>Appropriate Compensation:</u>	Ratio ($\text{CO}_2:\text{HCO}_3^-$)
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

Chest Discomfort

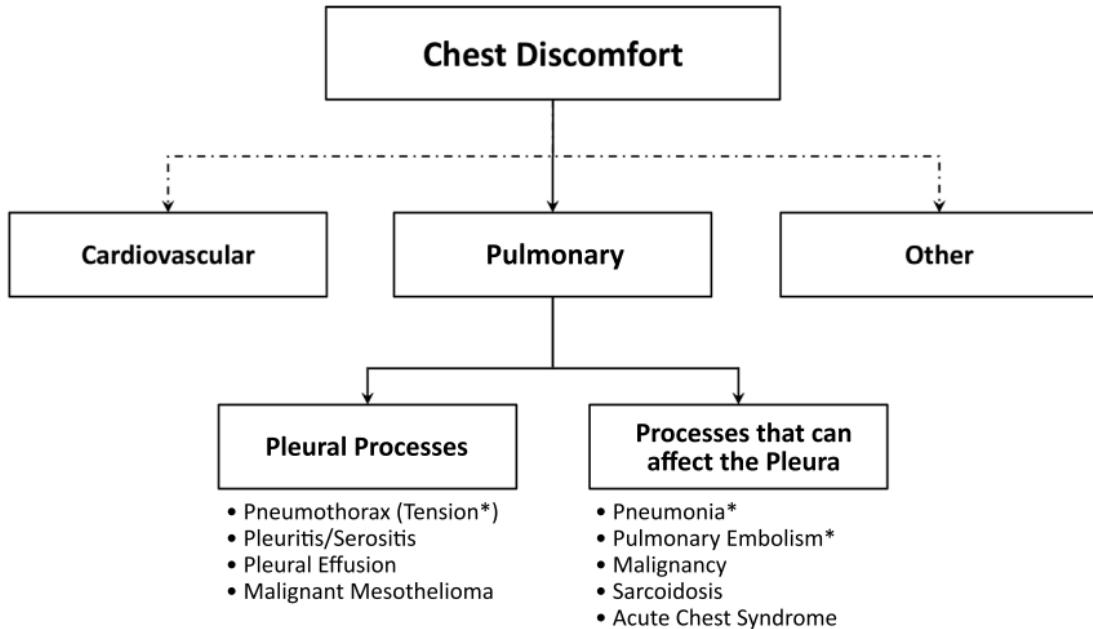
Cardiovascular



Respiratory

Chest Discomfort

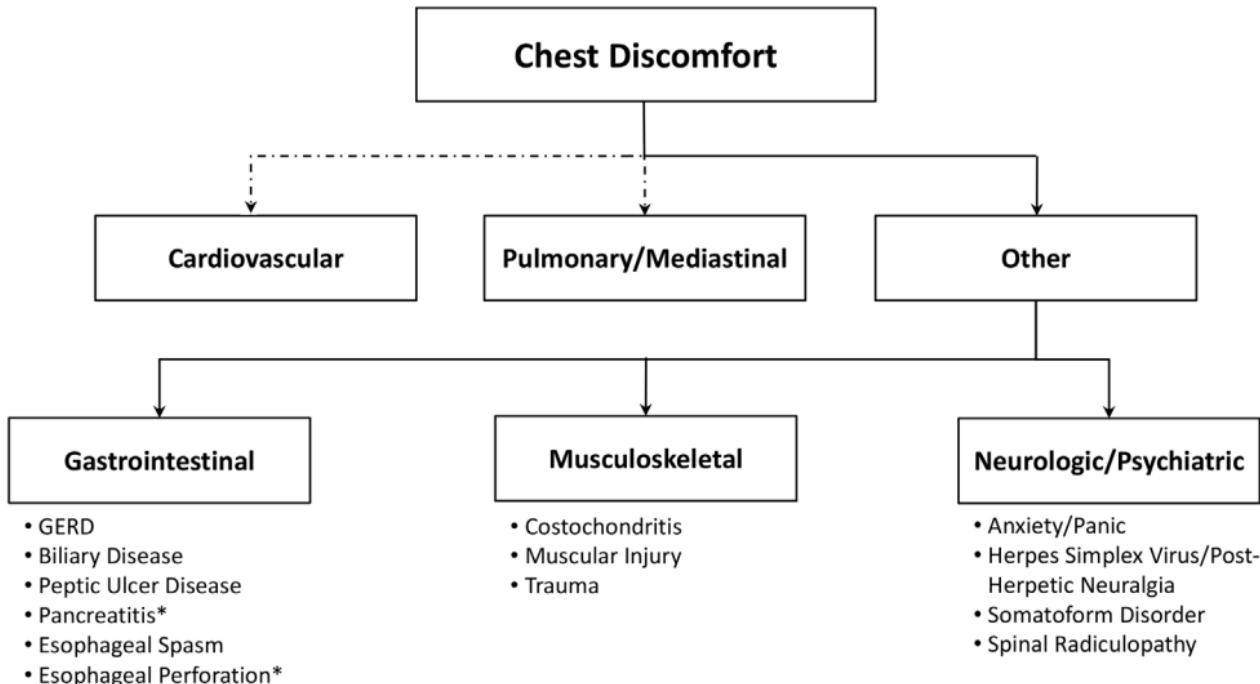
Pulmonary



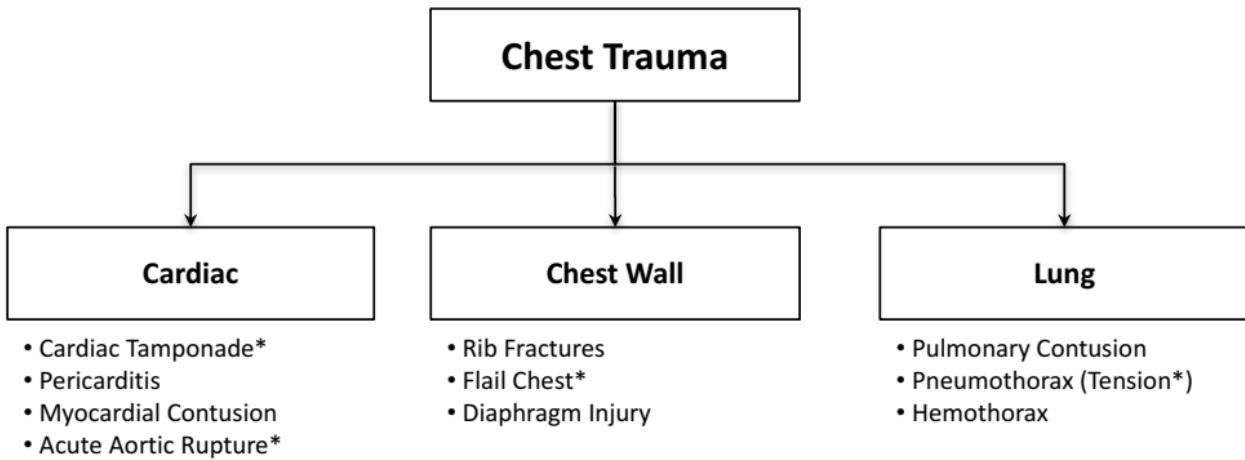
* Potentially acutely life-threatening

Chest Discomfort

Other



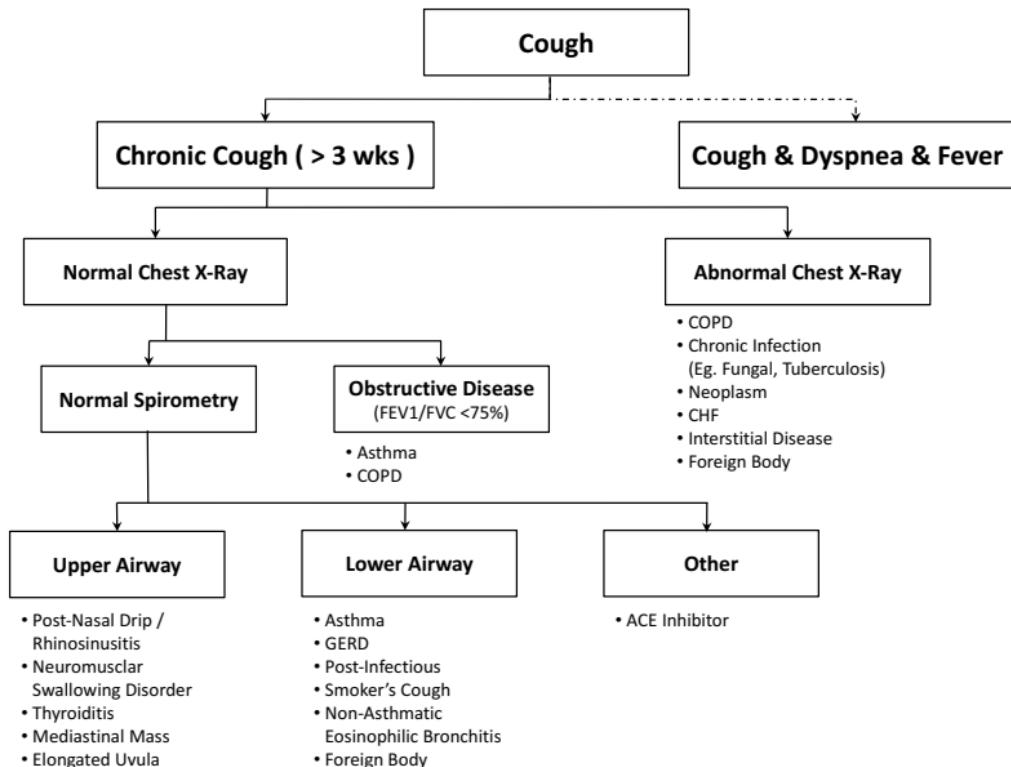
Chest Trauma Complications



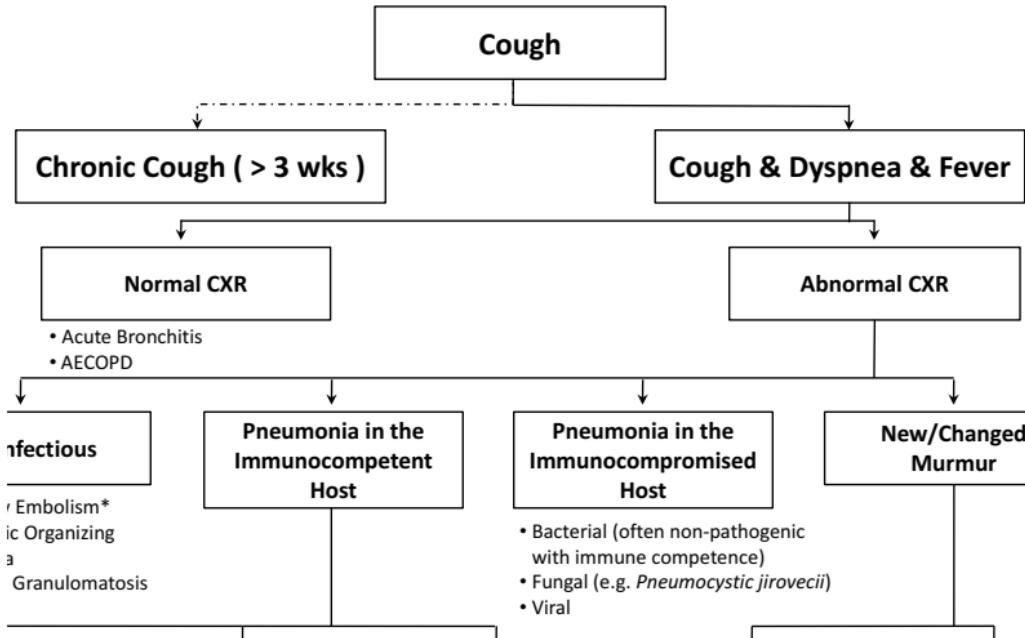
* Potentially acutely life-threatening

Cough

Chronic



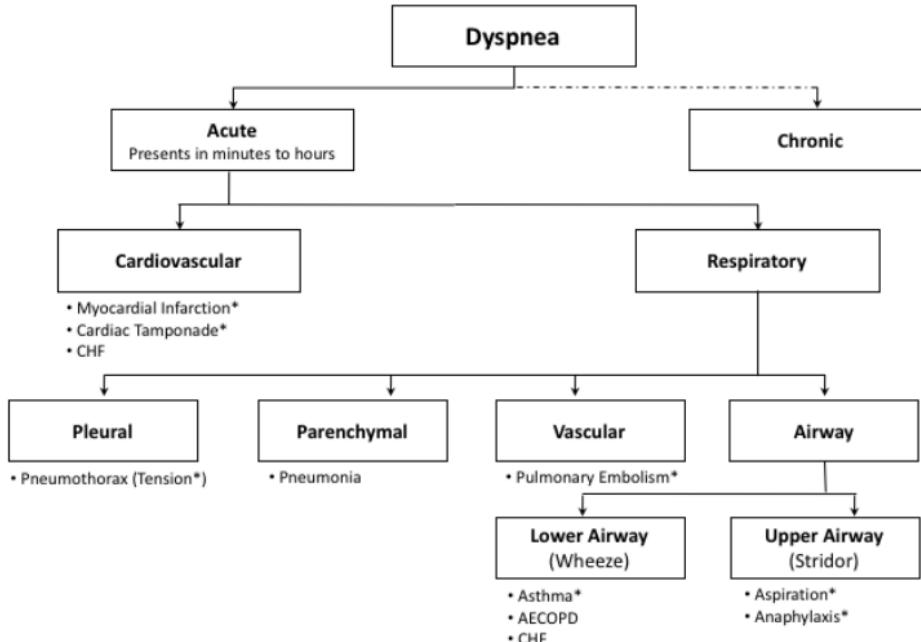
Cough, Dyspnea & Fever



* Potentially acutely life-threatening

Dyspnea

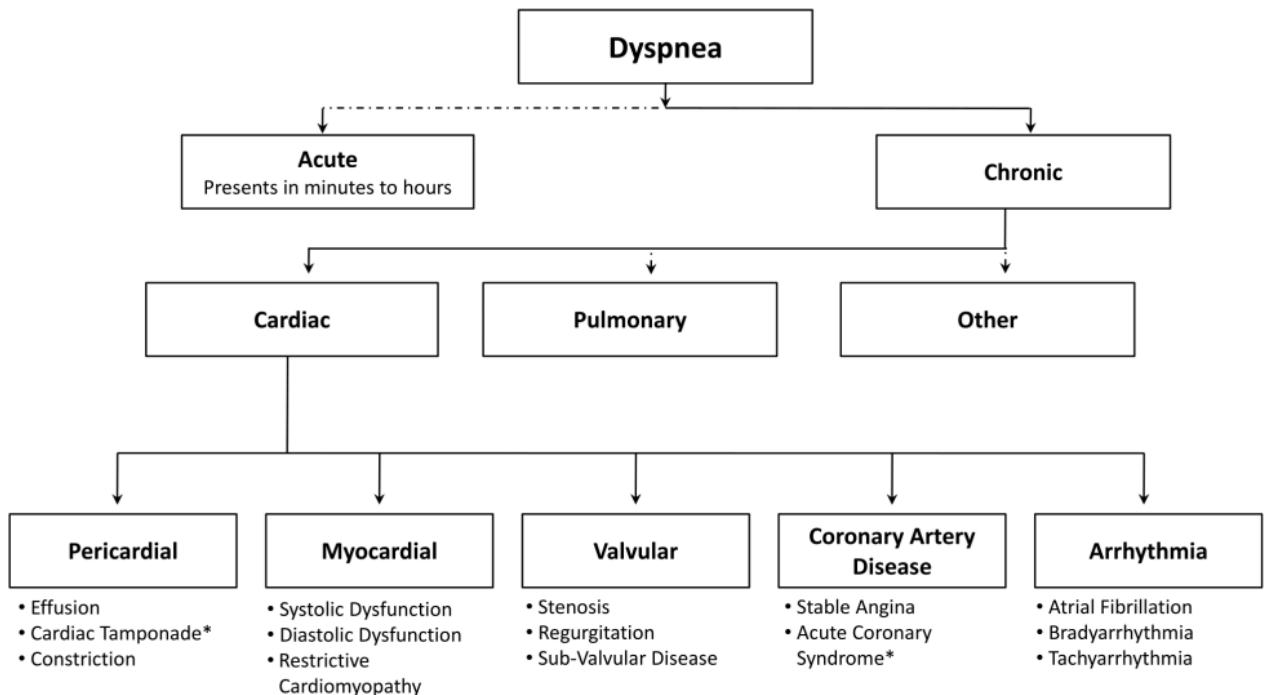
Acute



* Denotes acutely life-threatening causes

Dyspnea Chronic

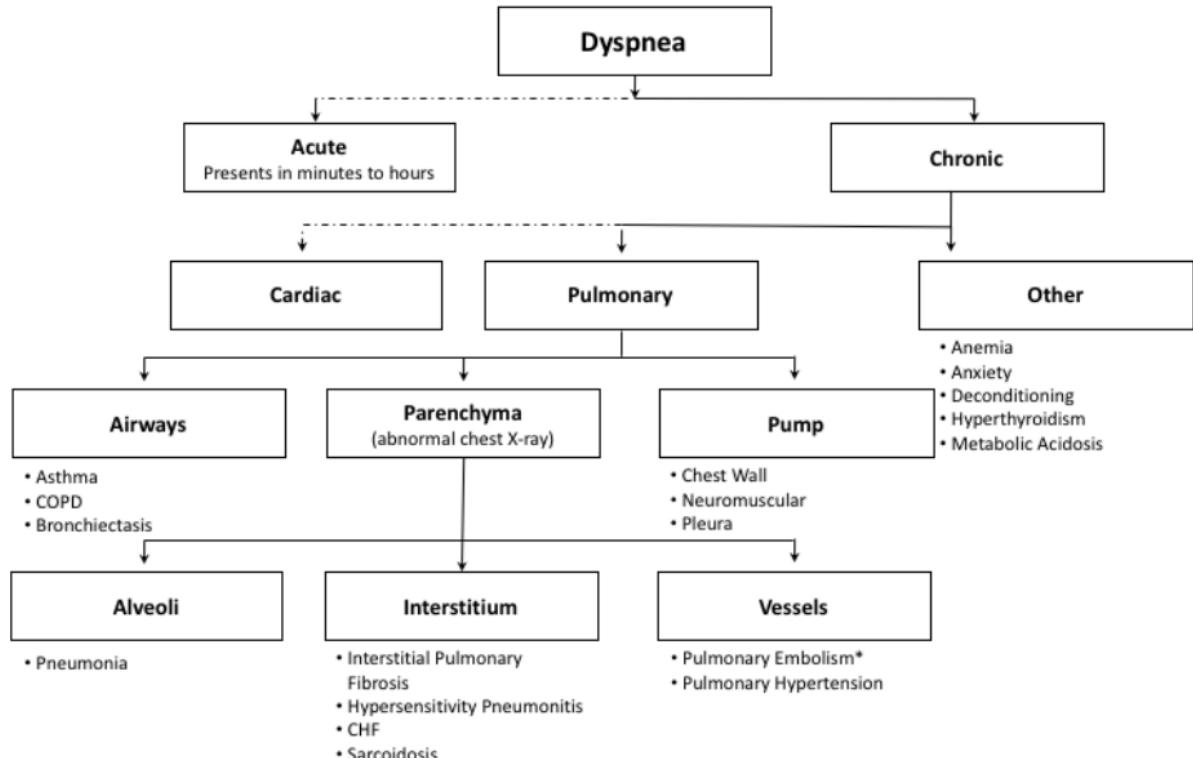
Cardiac



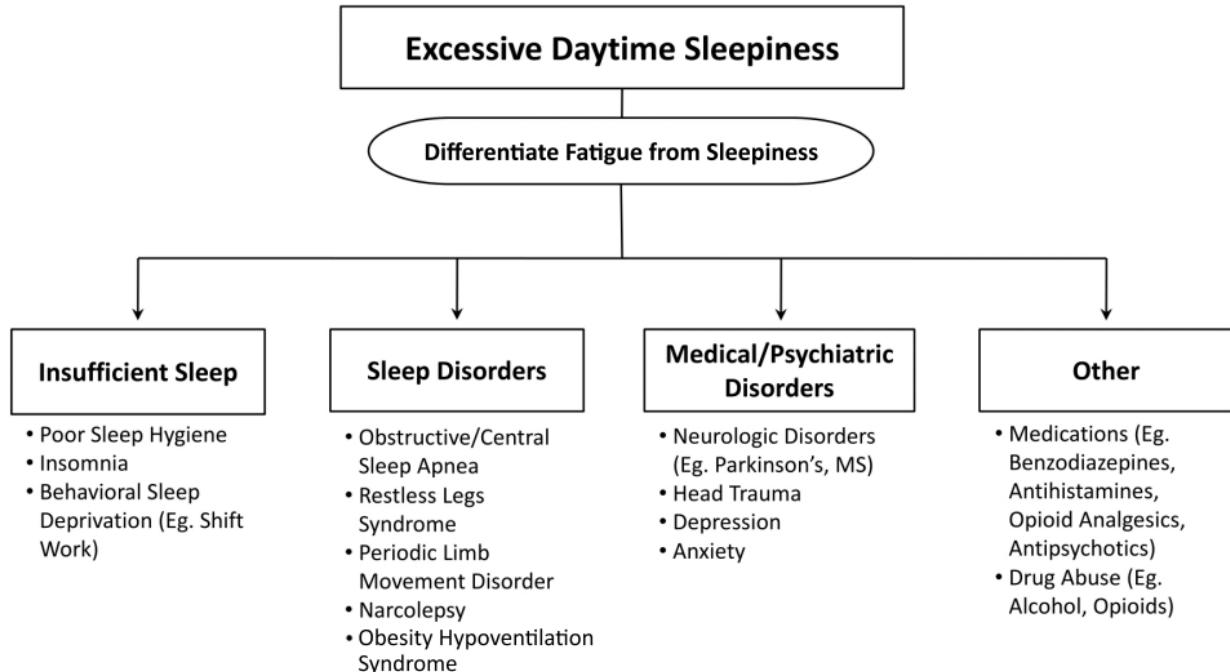
* Potentially acutely life-threatening

Dyspnea Chronic

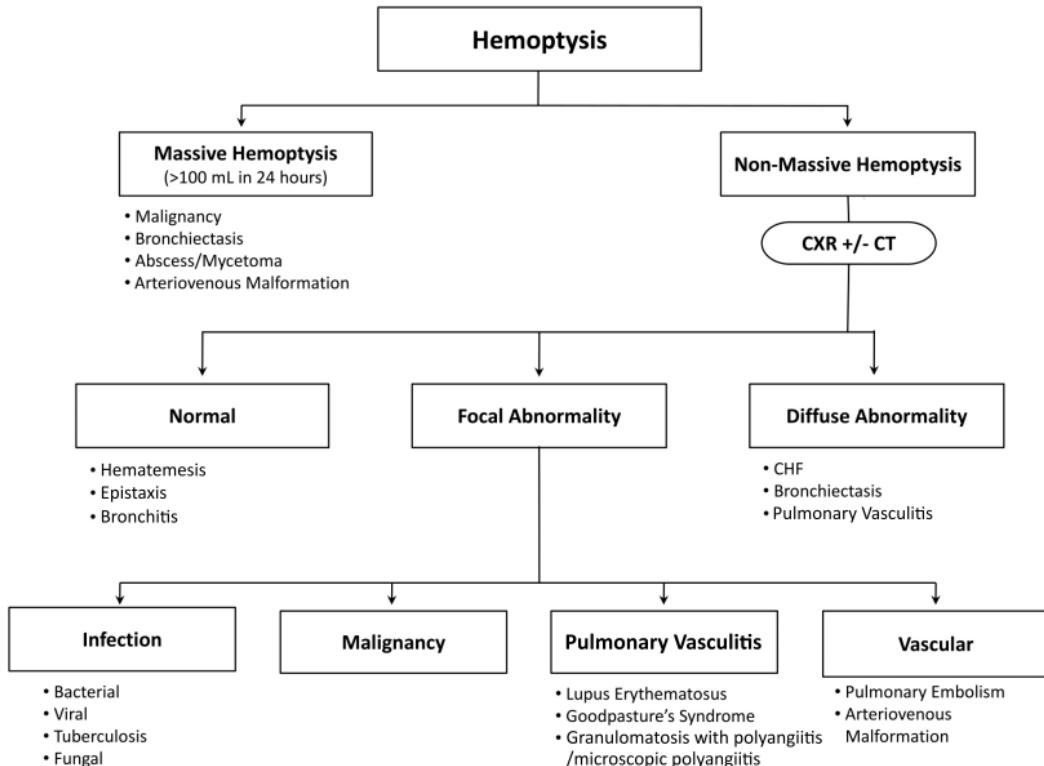
Pulmonary / Other



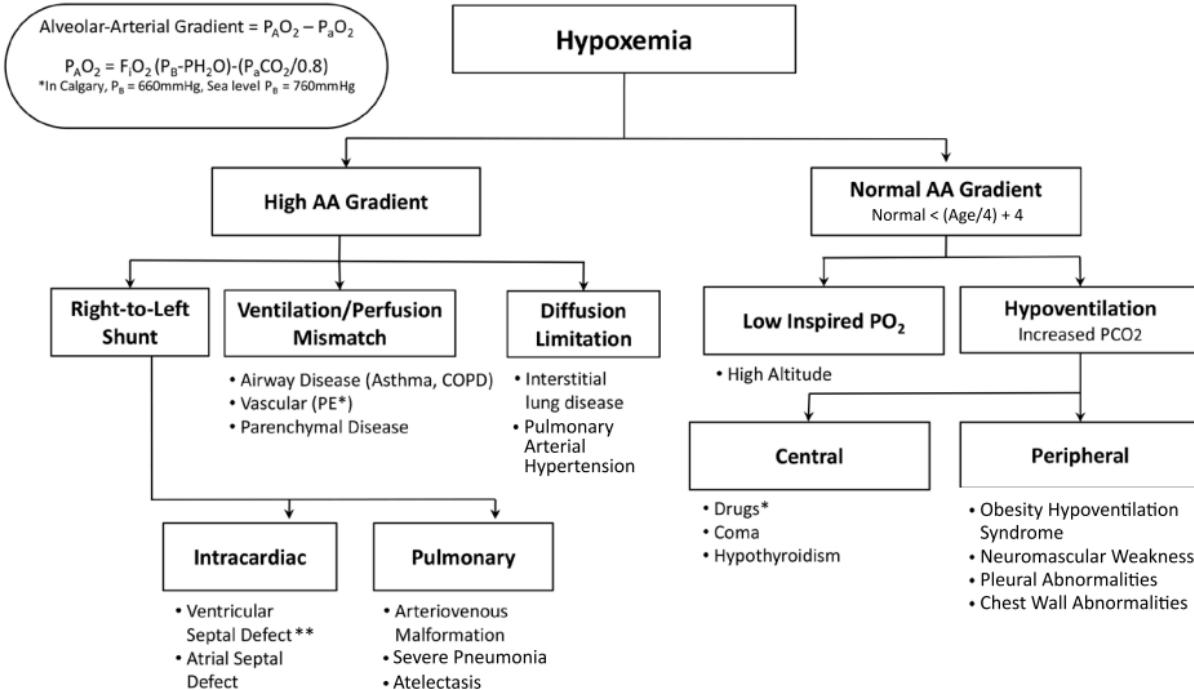
Excessive Daytime Sleepiness



Hemoptysis



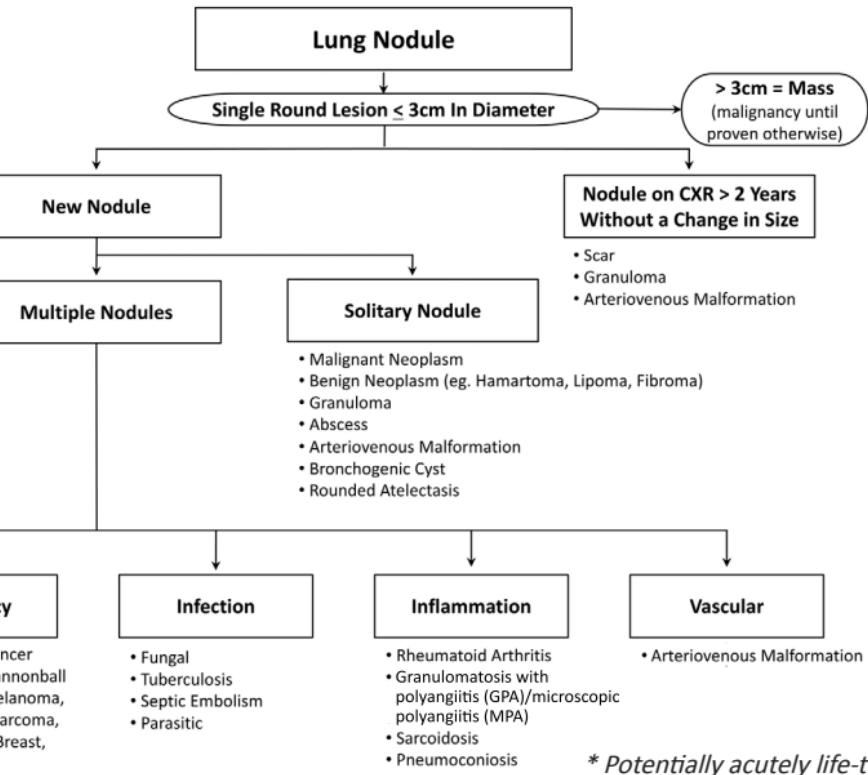
Hypoxemia



* Potentially acutely life-threatening.

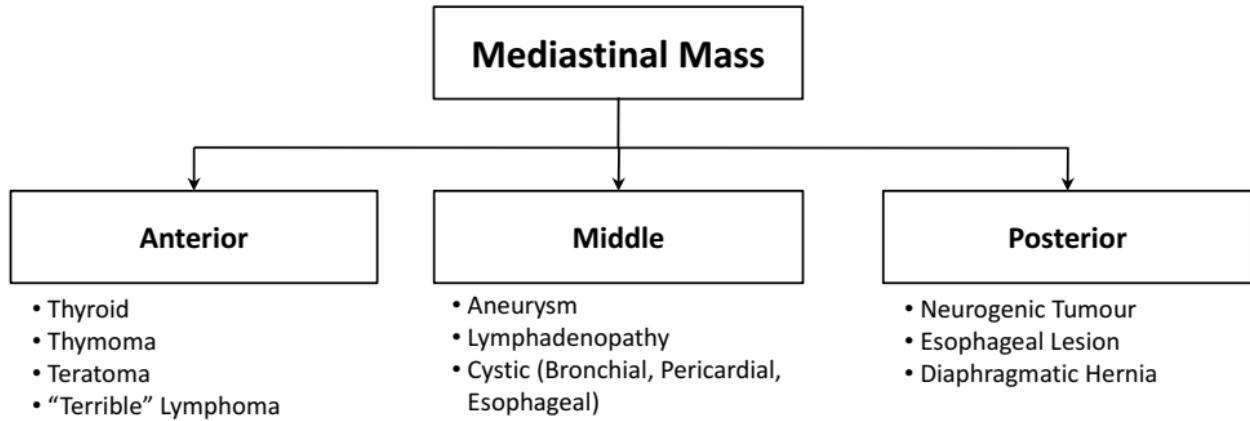
** SDS will be a Right-to-left shunt in infancy, become a Left-to-Right shunt in childhood to adulthood, and revert back to a right-to-left shunt when the left ventricle fails in severe disease, contributing to Eisenmenger's Syndrome.

Lung Nodule

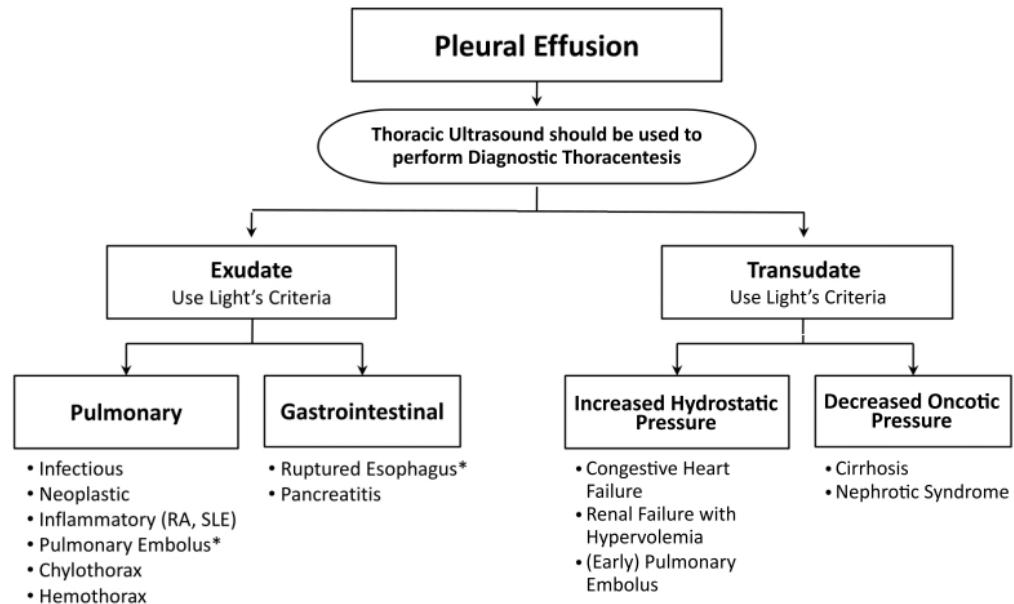


* Potentially acutely life-threatening

Mediastinal Mass



Pleural Effusion



Light's Criteria

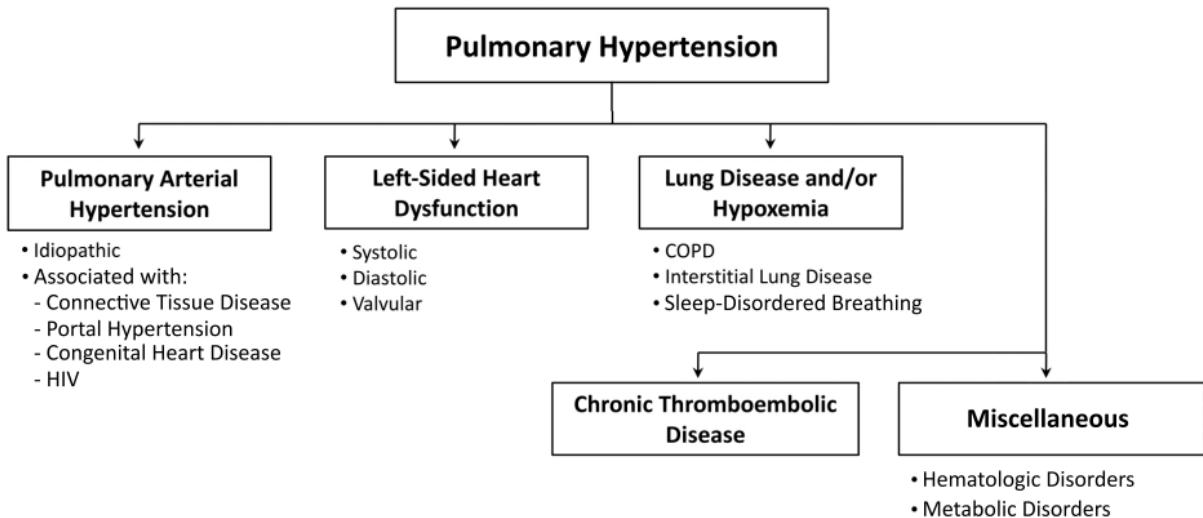
Pleural Fluid Protein/Serum Protein > 0.5

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

Overall Approach to Anemia	41
Approach to Anemia Mean Corpuscular Volume	42
Anemia with Elevated MCV.....	43
Anemia with Normal MCV.....	44
Anemia with Low MCV.....	45
Approach to Bleeding / Bruising Platelets & Vascular System.....	46
Approach to Bleeding / Bruising Coagulation Proteins	47
Approach to Prolonged PT (INR), Prolonged PTT	48
Prolonged PT (INR), Normal PTT	49
Prolonged PTT, Normal PT (INR) Bleeding Tendency	50

Prolonged PTT, Normal PT (INR) No Bleeding Tendency	51
Approach to Splenomegaly.....	52
Fever in the Immunocompromised Host.....	53
Lymphadenopathy Diffuse.....	54
Lymphadenopathy Localized.....	55
Neutrophilia.....	56
Neutropenia Decreased Neutrophils Only ...	57
Neutropenia Bicytopenia / Pancytopenia....	58
Polycythemia	59
Suspected Deep Vein Thrombosis (DVT)	60
Suspected Pulmonary Embolism (PE).....	61
Thrombocytopenia	62
Thrombocytosis	63
Hemolysis	64



Historical Editors

Soreya Dhanji
Jen Corrigan
Jennifer Mikhayel
Yang (Steven) Liu
Megan Barber
Lorie Kwong
Khaled Ahmed
Aravind Ganesh
Jesse Heyland
Tyrone Harrison
Nancy Nixon
Nahbeel Premji
Connal Robertson-More

Lian Szabo

Evan Woldrum

Ying Wang

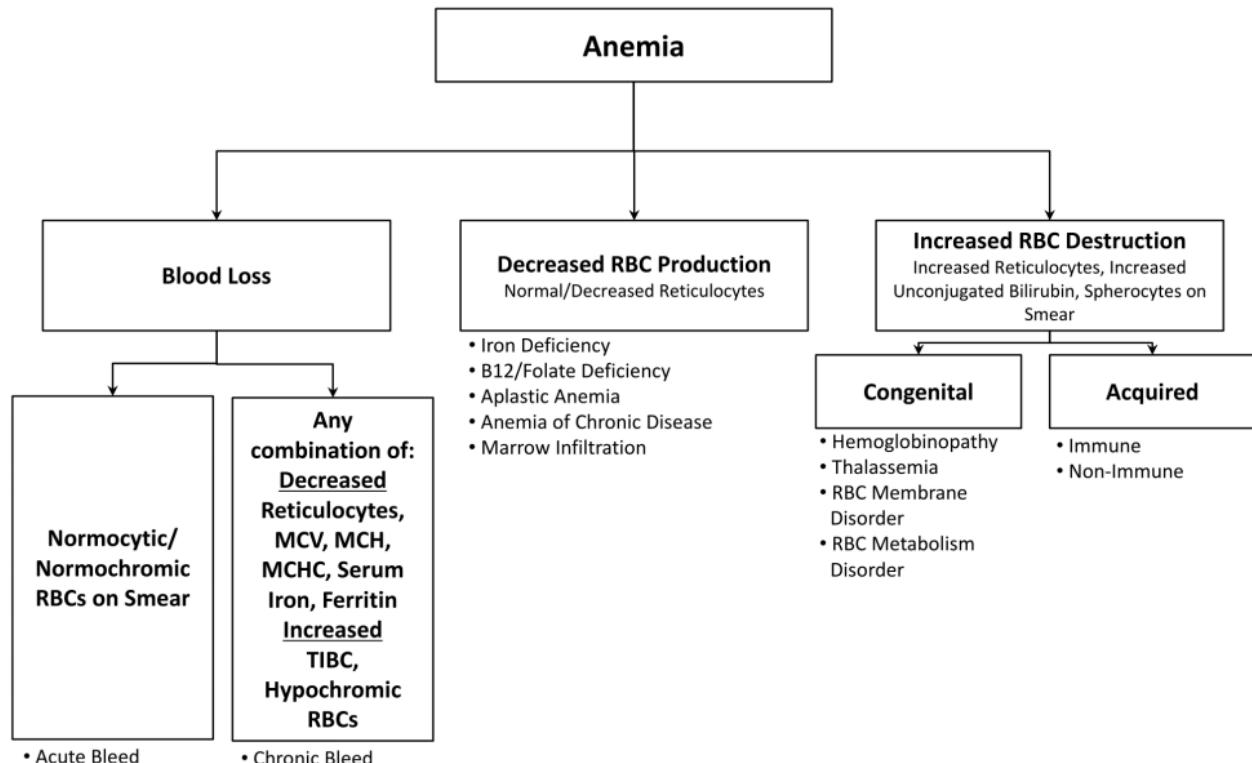
Student Editors

Andrea Letourneau
Victoria David

Faculty Editor

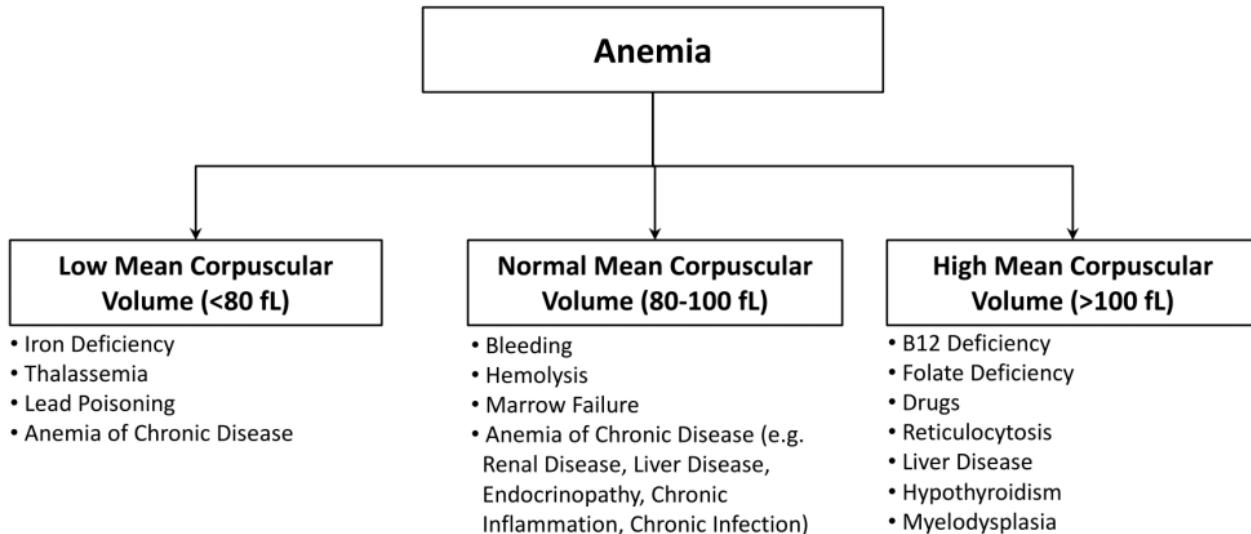
Dr. Lynn Savoie

Overall Approach to Anemia

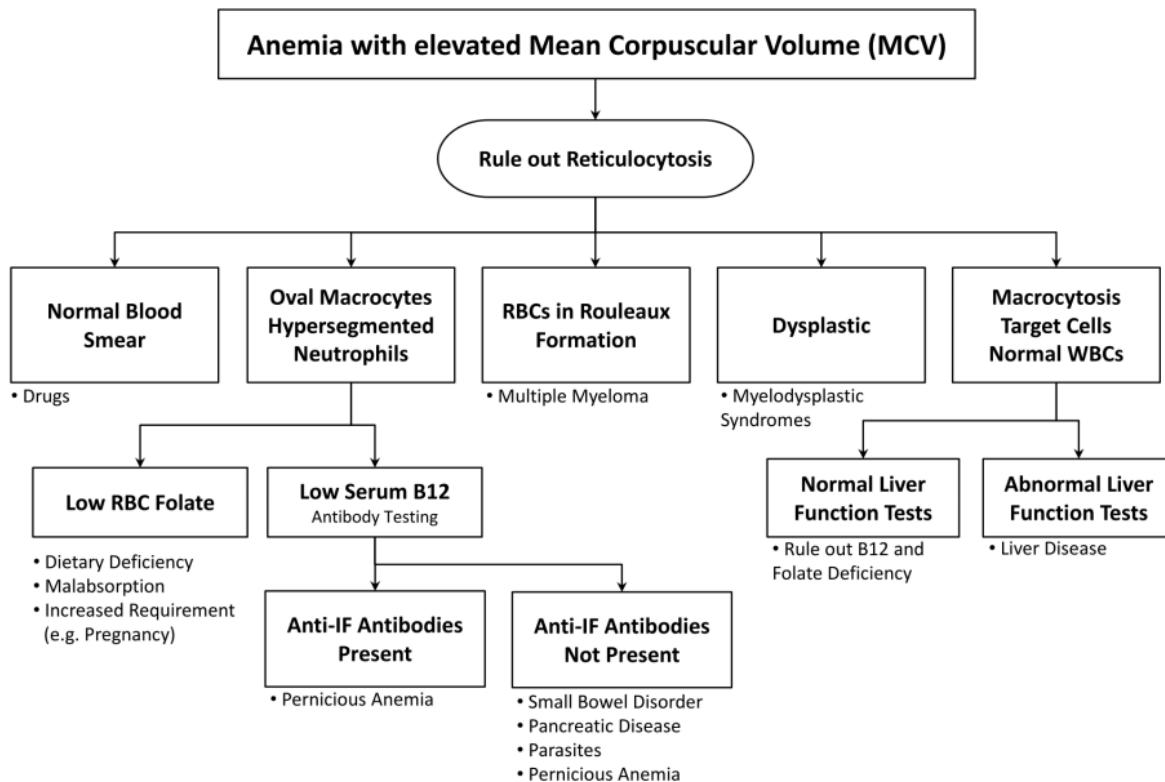


Approach to Anemia

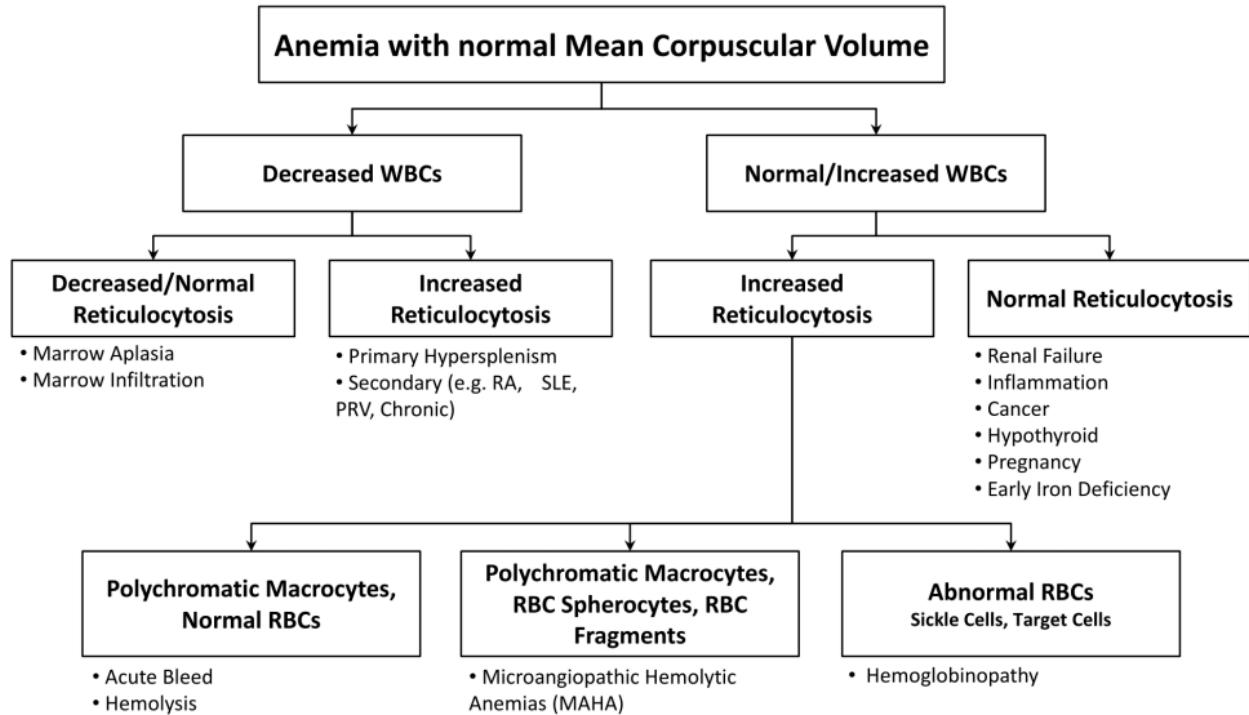
Mean Corpuscular Volume



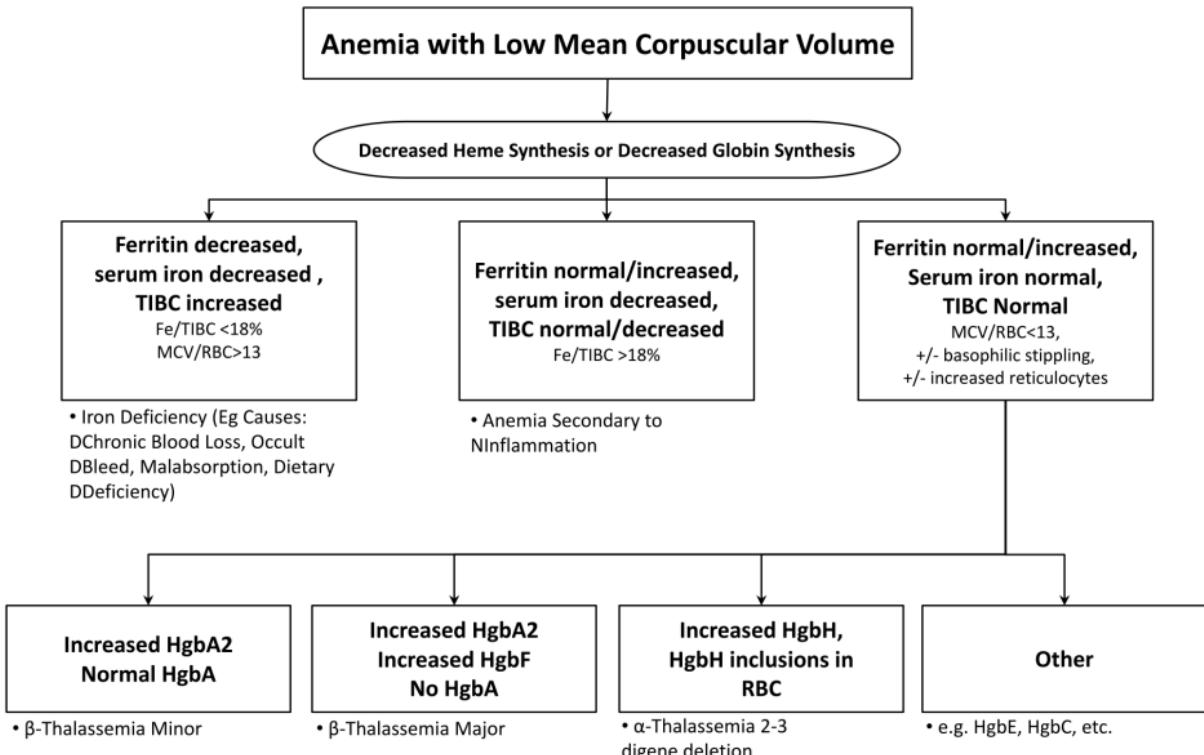
Anemia with Elevated MCV



Anemia with Normal MCV

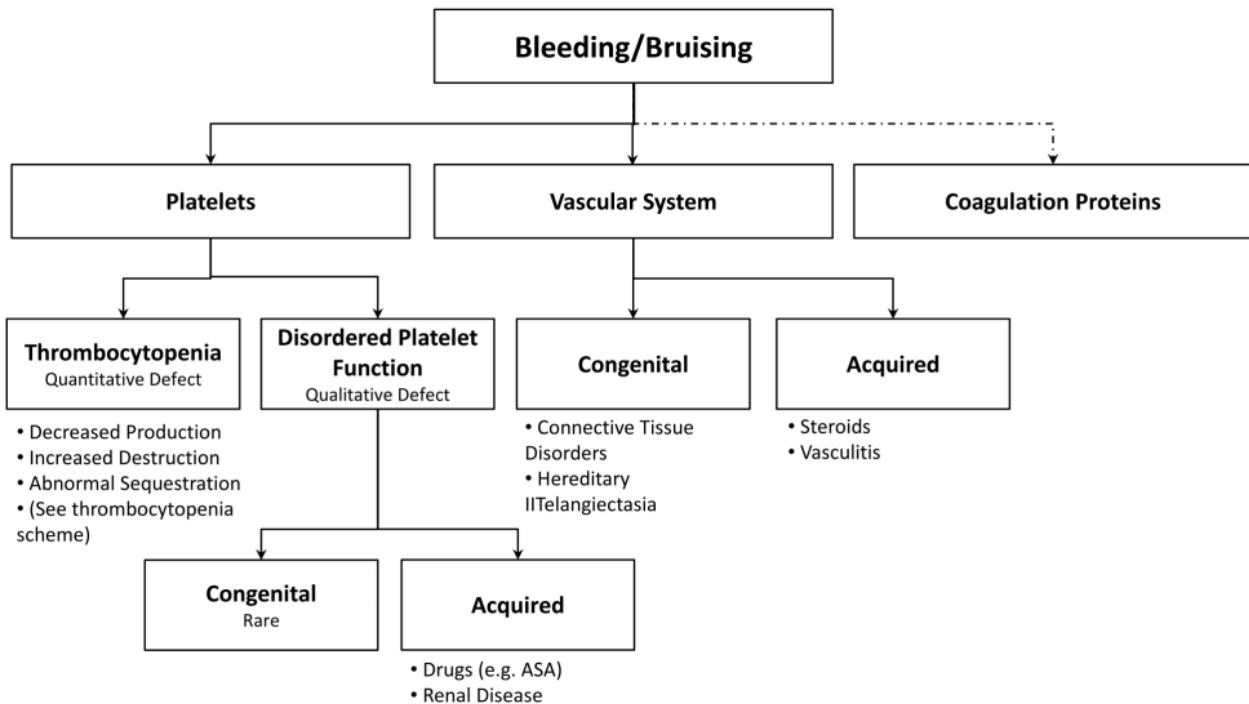


Anemia with Low MCV



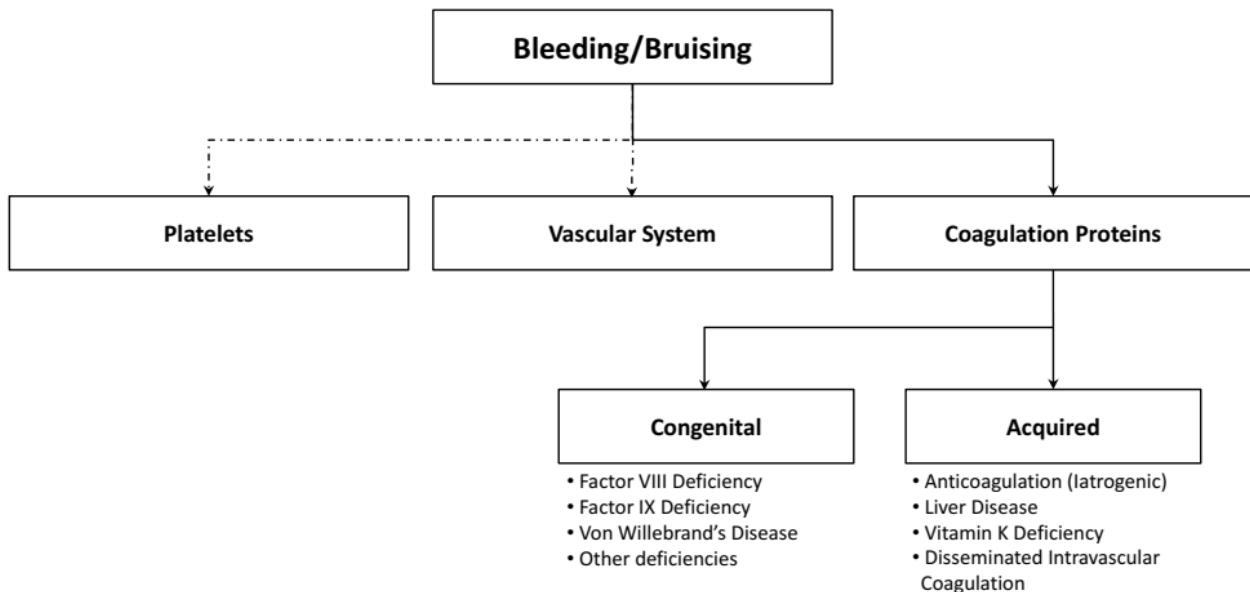
Approach to Bleeding / Bruising

Platelets & Vascular System

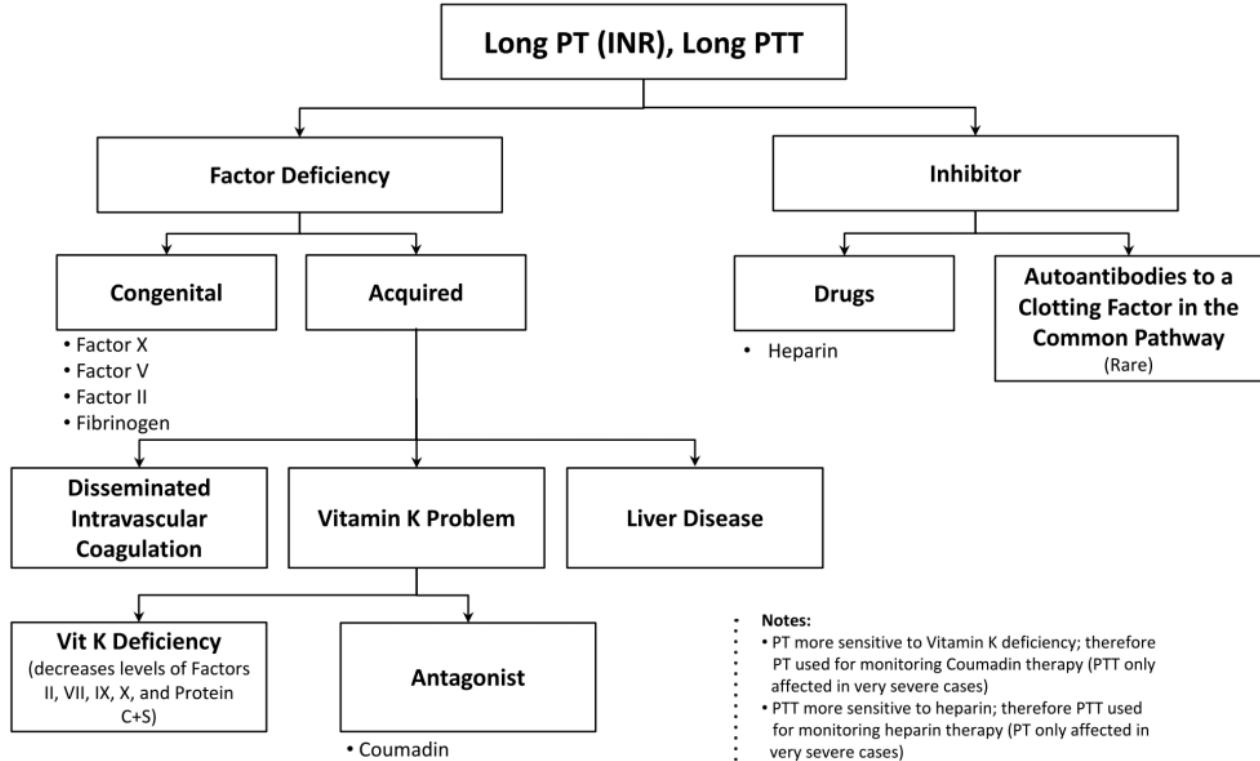


Approach to Bleeding / Bruising

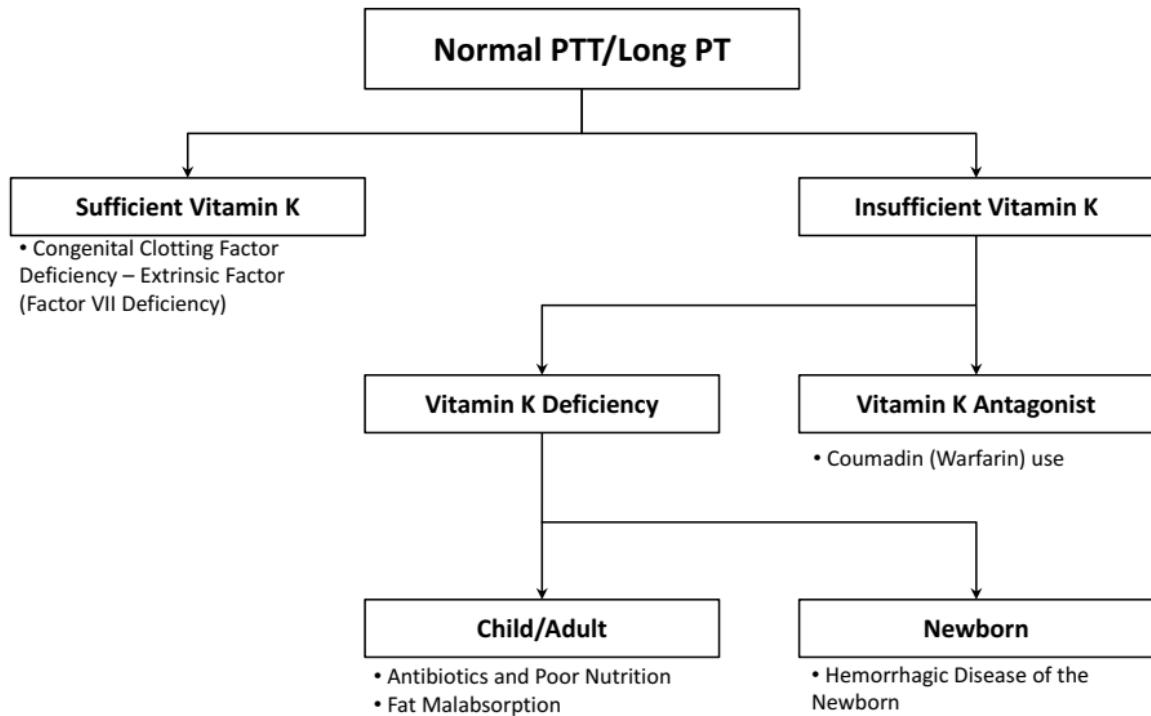
Coagulation Proteins



Approach to Prolonged PT (INR), Prolonged PTT

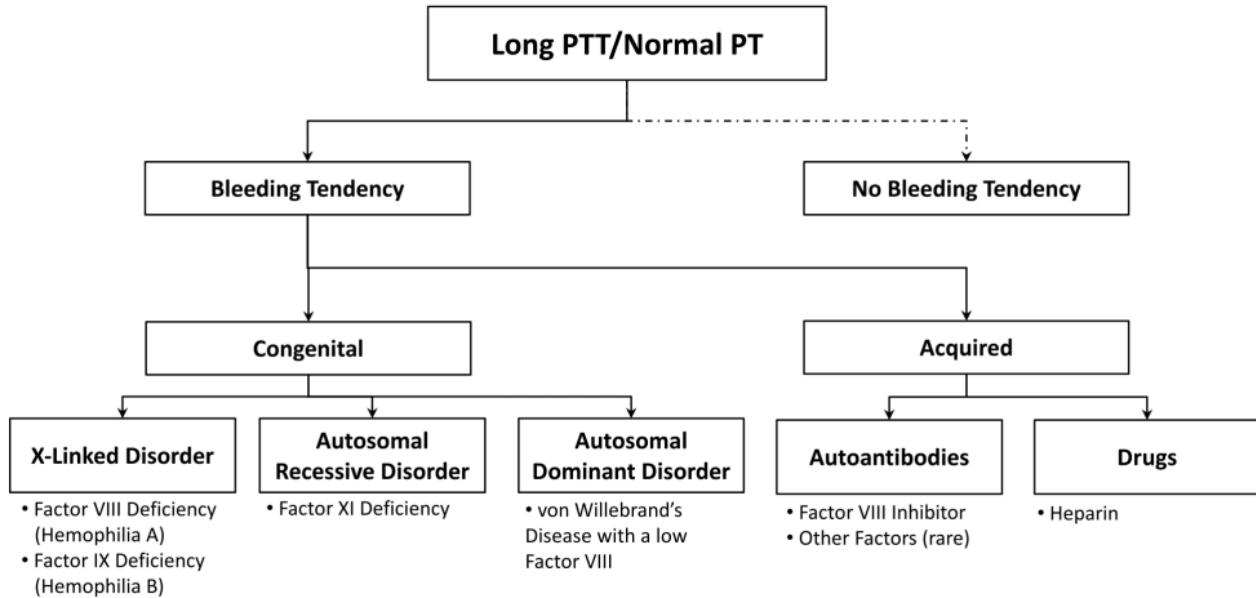


Prolonged PT (INR), Normal PTT



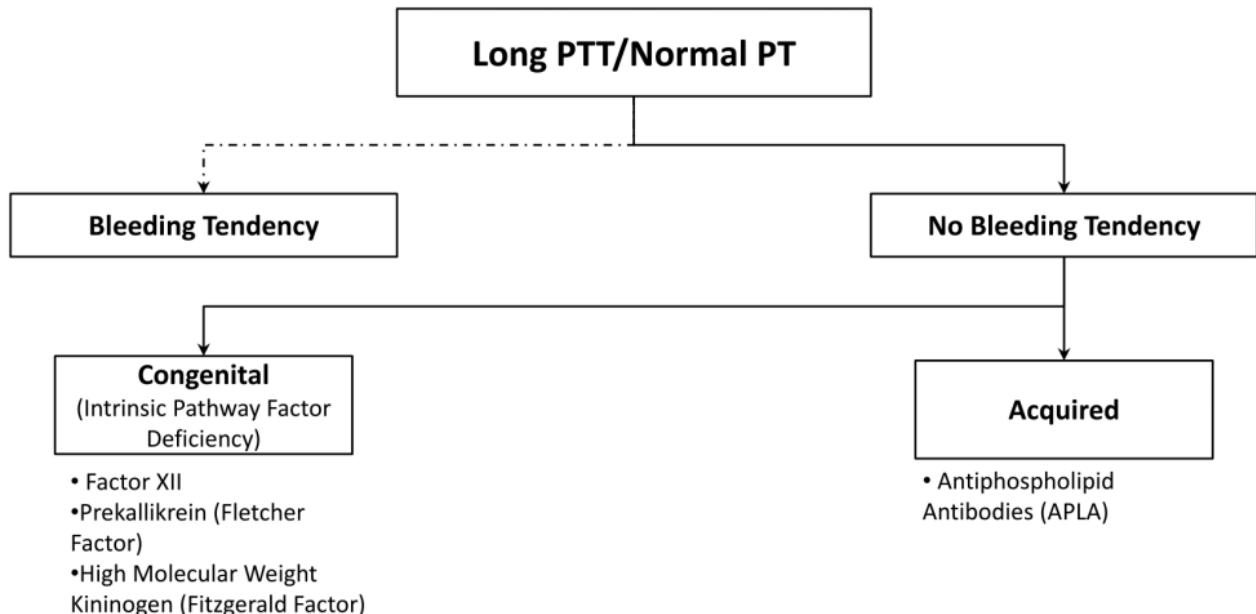
Prolonged PTT, Normal PT (INR)

Bleeding Tendency

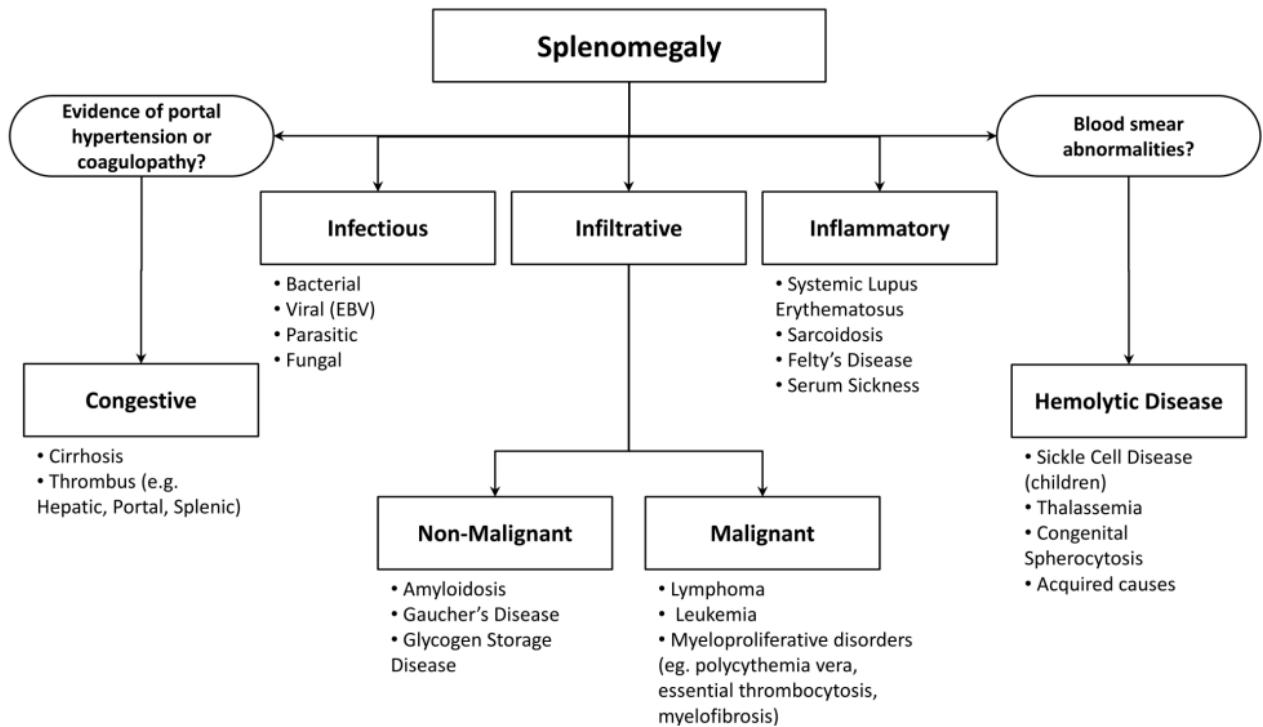


Prolonged PTT, Normal PT (INR)

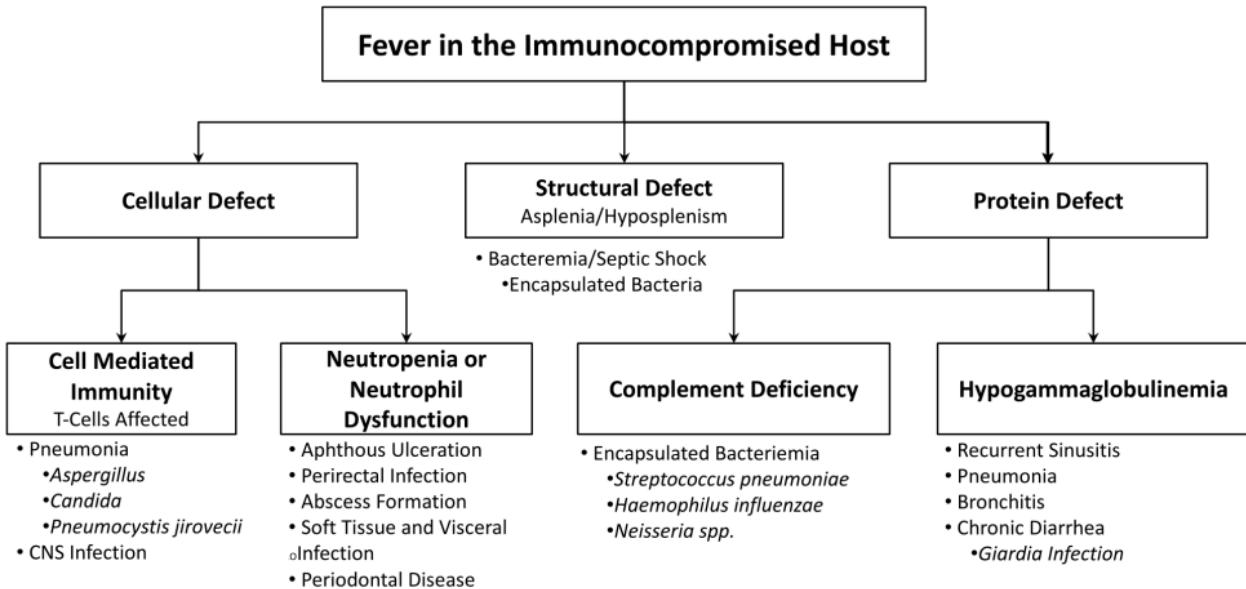
No Bleeding Tendency



Approach to Splenomegaly

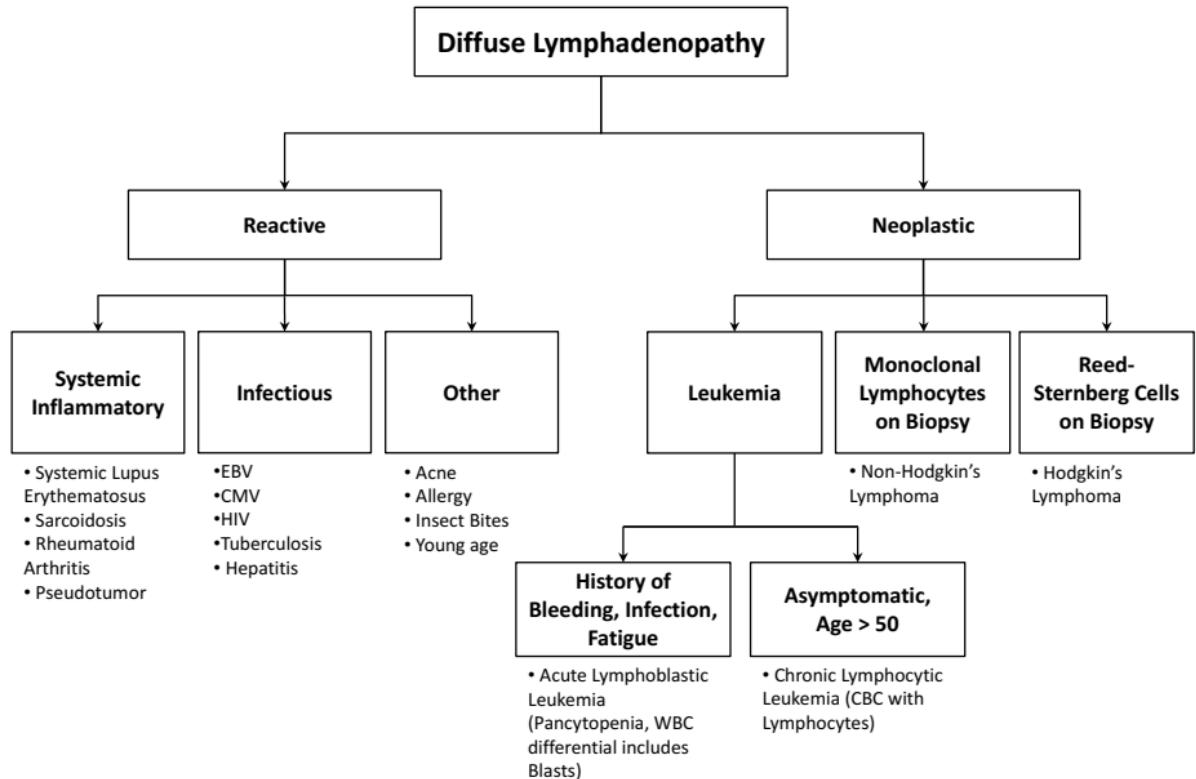


Fever in the Immunocompromised Host



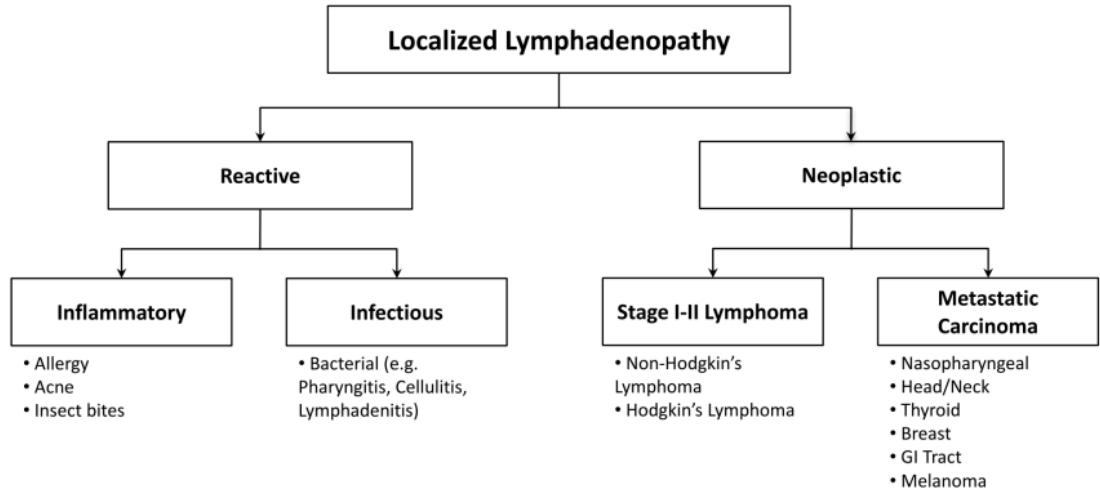
Lymphadenopathy

Diffuse



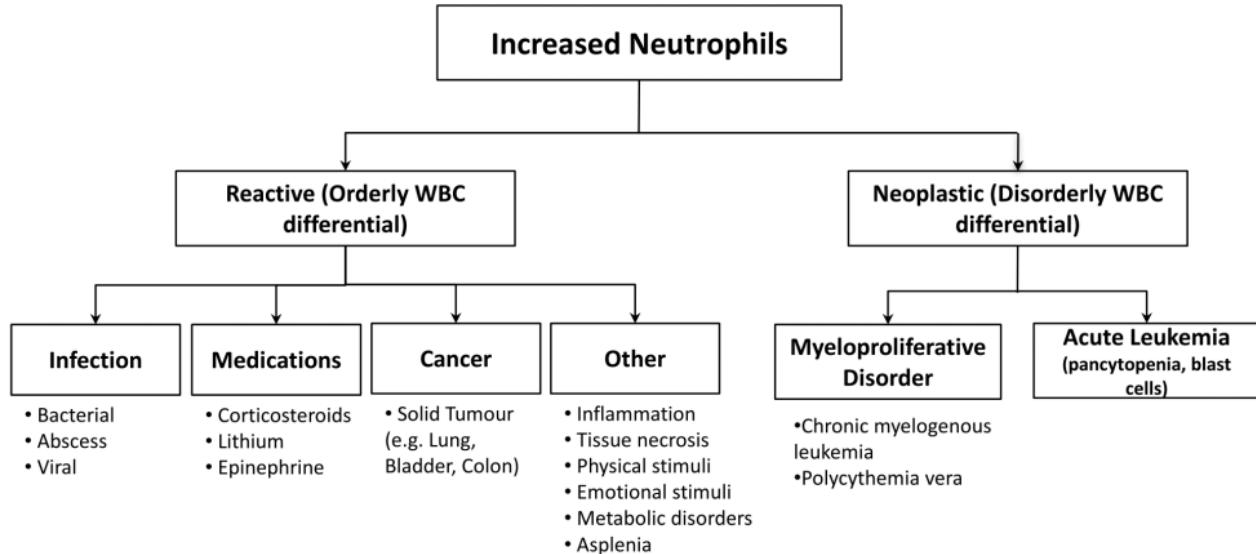
Lymphadenopathy

Localized



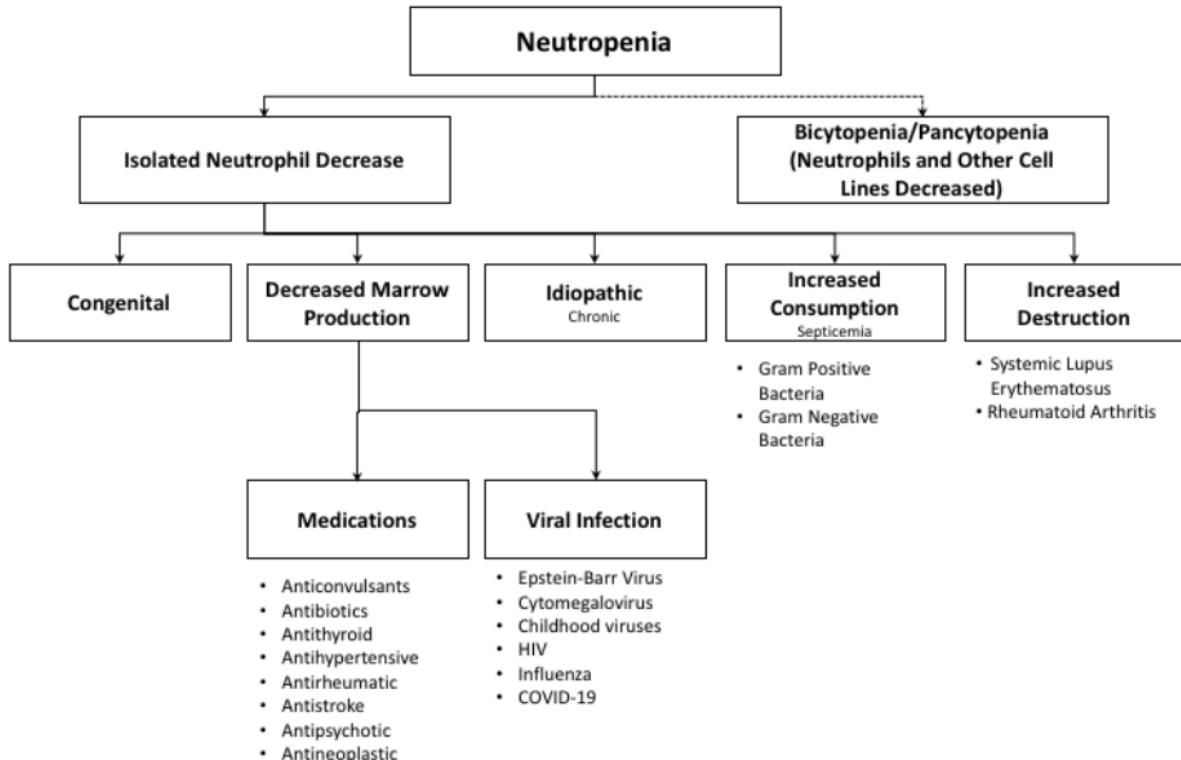
Cervical	SuprACLAVICULAR	Axillary	EPIROCHLEAR (Always pathologic)	Inguinal
Anterior <ul style="list-style-type: none">Infection (e.g. Mononucleosis, Toxoplasmosis) Posterior <ul style="list-style-type: none">TBLymphomaKikuchi DiseaseHead/Neck Malignancy	<ul style="list-style-type: none">Thoracic Malignancy (Breast, Mediastinum, Lungs, Esophagus)Abdominal Malignancy (Virchow's Node)	<ul style="list-style-type: none">Infection (Arm, Thoracic Wall, Breast)Cancer (In absence of infection in upper extremity)	<ul style="list-style-type: none">Infection (Forearm/Hand)LymphomaSarcoidosisTularemiaSecondary Syphilis	<ul style="list-style-type: none">Leg InfectionSexually Transmitted InfectionCancer

Neutrophilia



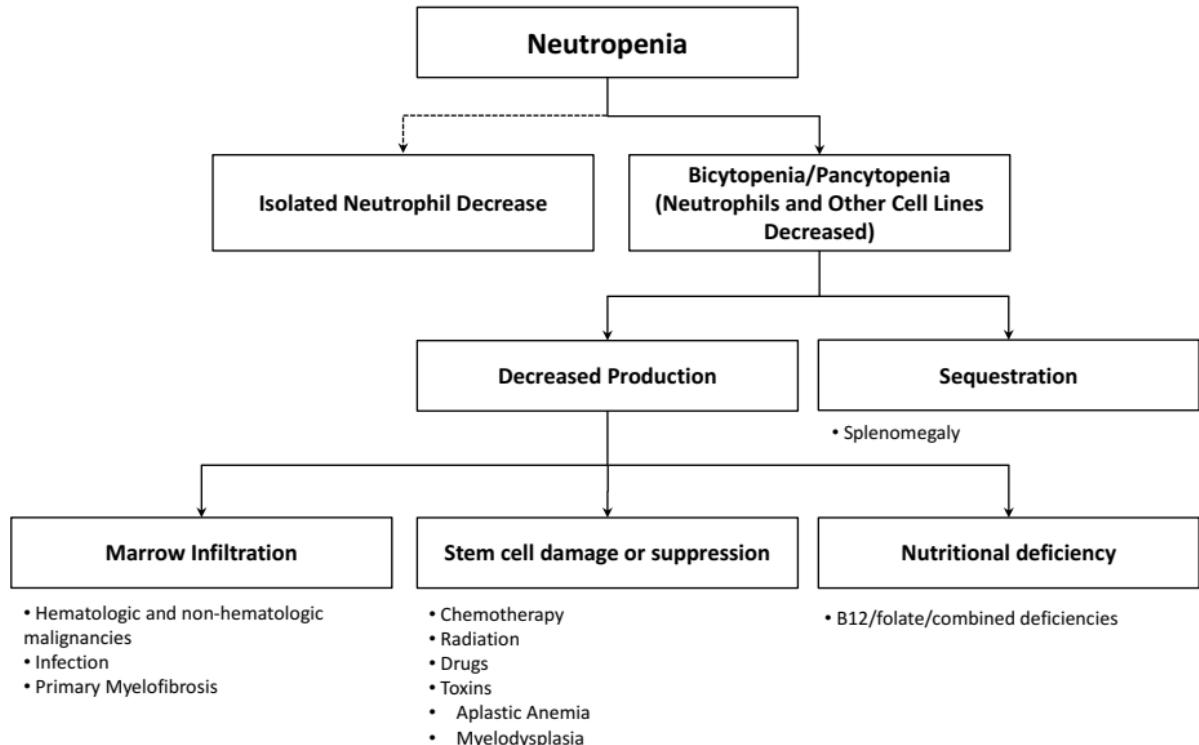
Neutropenia

Decreased Neutrophils Only

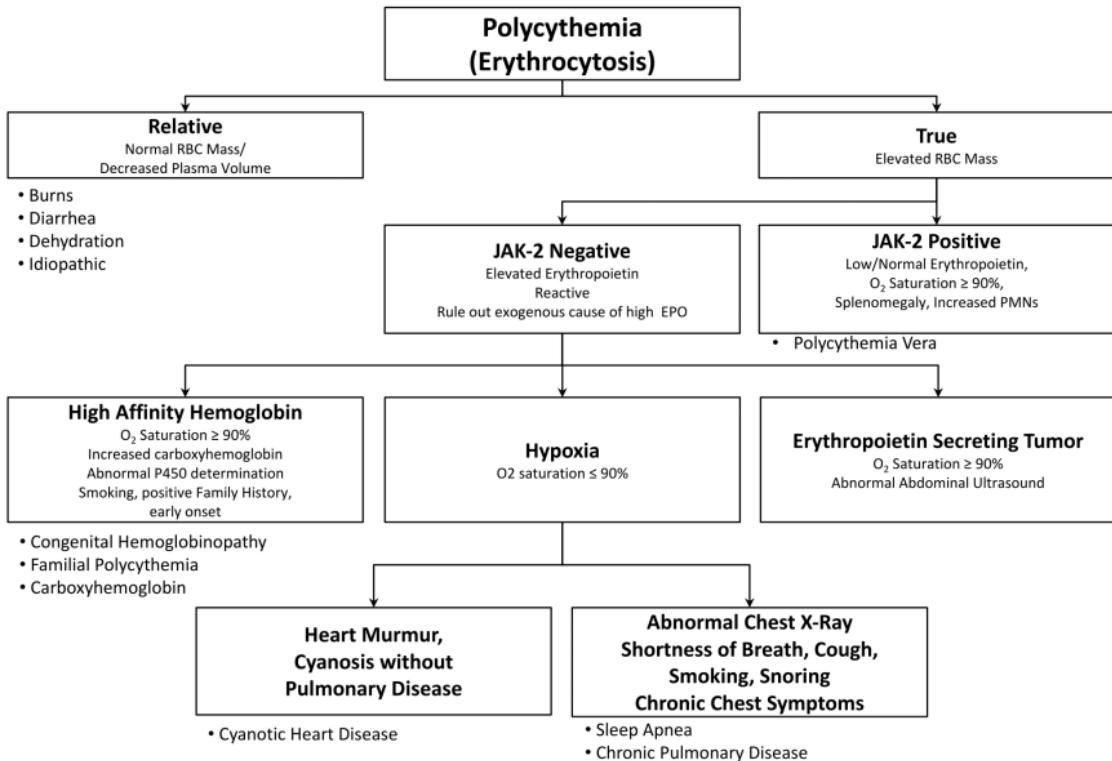


Neutropenia

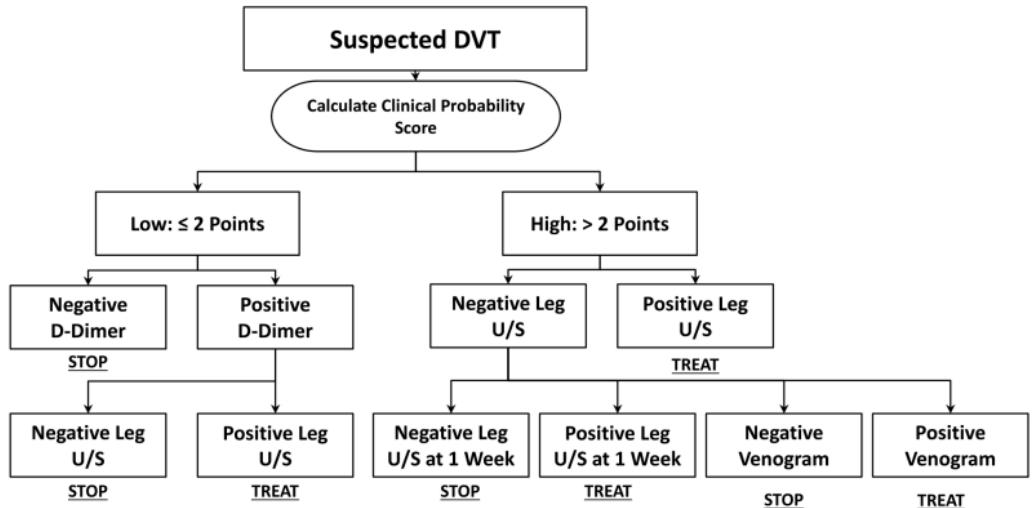
Bicytopenia / Pancytopenia



Polycythemia



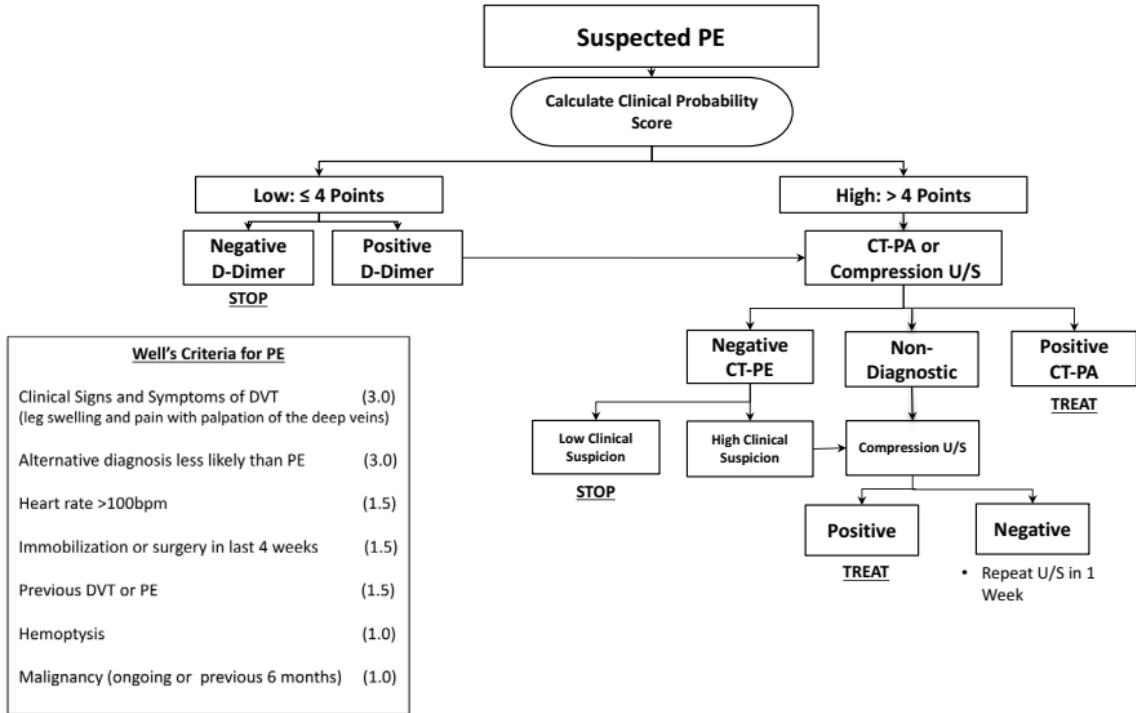
Suspected Deep Vein Thrombosis (DVT)



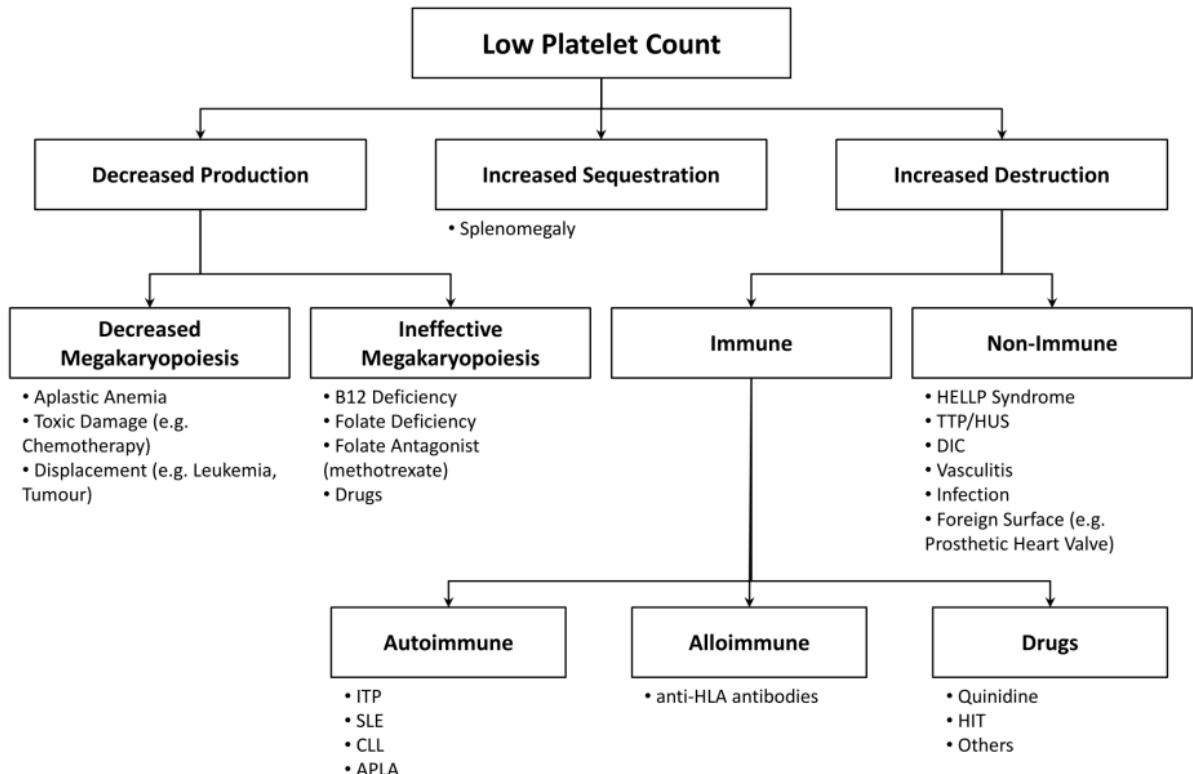
Well's Criteria for DVT

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)

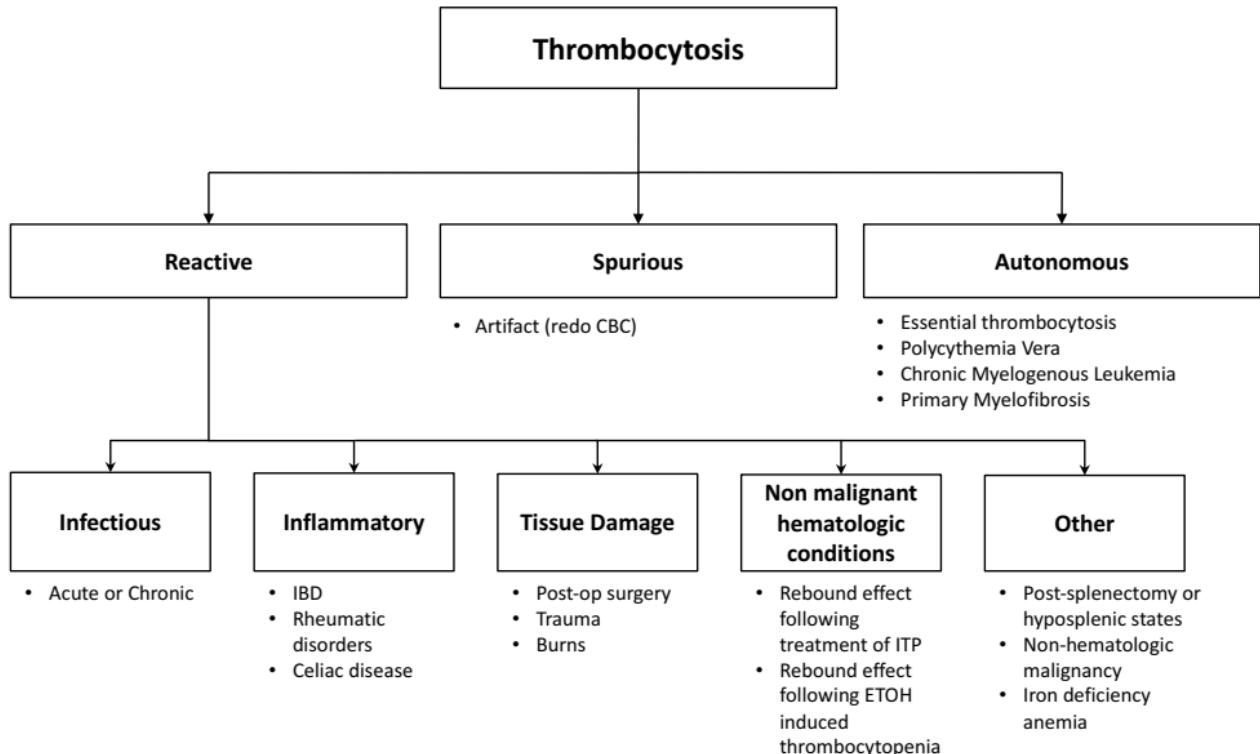
Suspected Pulmonary Embolism (PE)



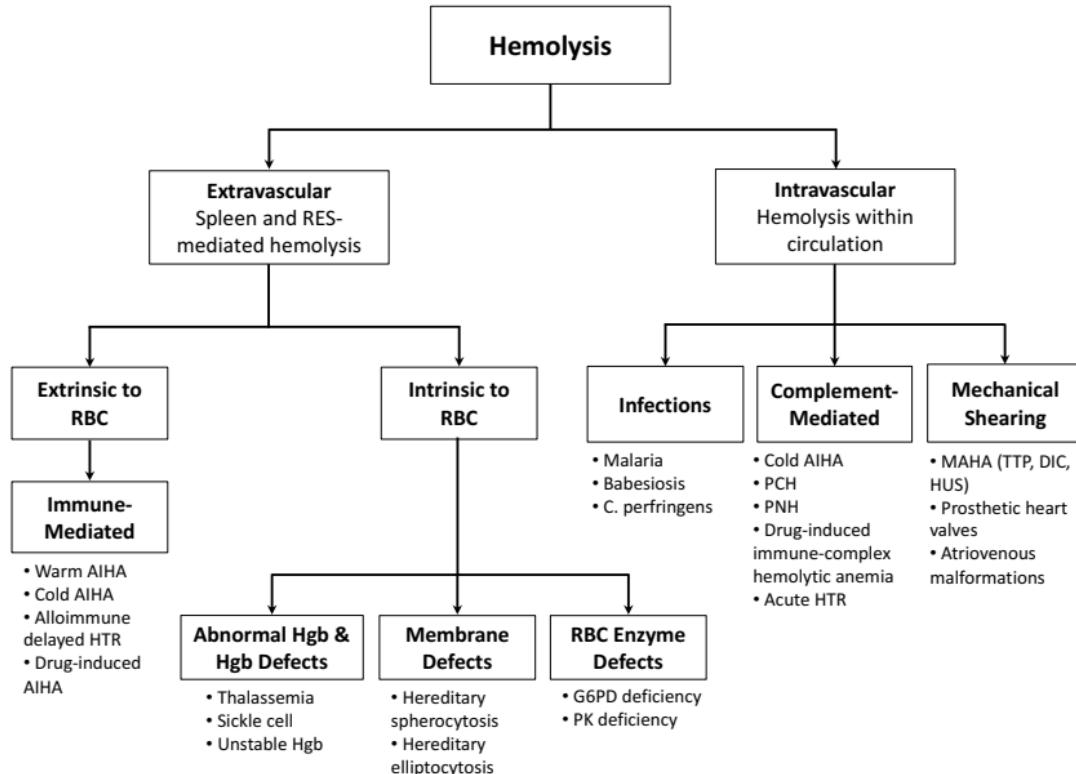
Thrombocytopenia



Thrombocytosis



Hemolysis

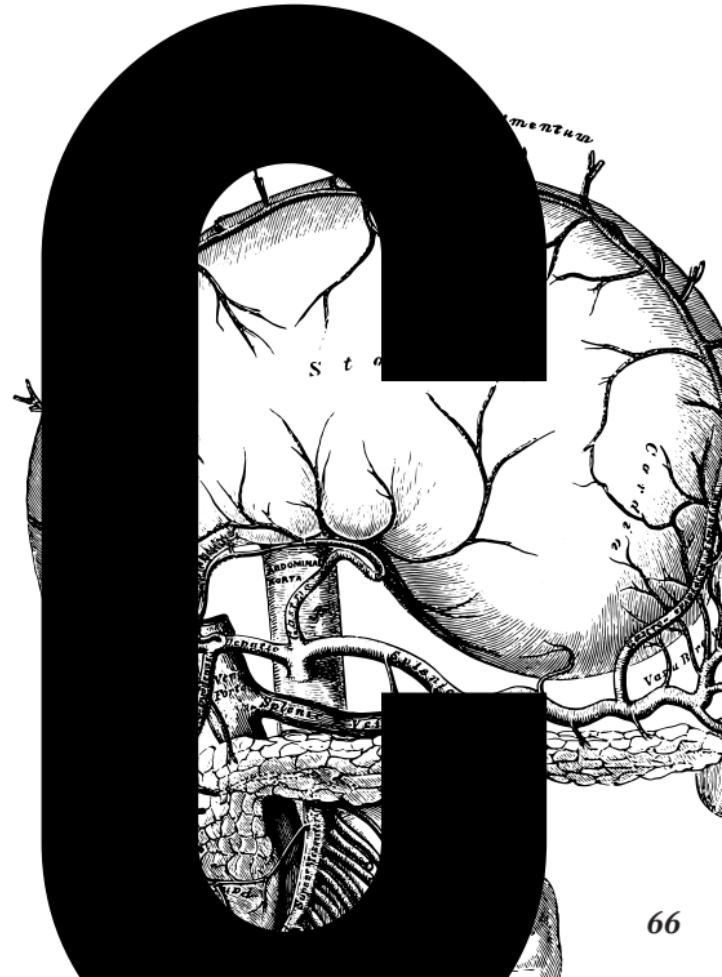


Gastrointestinal

Abdominal Distention	69	Chronic Diarrhea Steatorrhea & Large Bowel	
Abdominal Distention Ascites	70	.....	81
Abdominal Distention Other Causes.....	71	Constipation (Adult) Altered Bowel Function	
Abdominal Mass.....	72	& Idiopathic	82
Abdominal Pain (Adult) Acute - Diffuse.....	73	Constipation (Adult) Secondary Causes.....	83
Abdominal Pain (Adult) Acute - Localized....	74	Constipation (Pediatric)	84
Abdominal Pain (Adult) Chronic - Constant.	75	Dysphagia.....	85
Abdominal Pain (Adult) Chronic - Crampy /		Elevated Liver Enzymes	86
Fleeting.....	76	Hepatomegaly	87
Abdominal Pain (Adult) Chronic - Post-		Jaundice.....	88
Prandial.....	77	Liver Mass.....	89
Anorectal Pain	78	Mouth Disorders (Adult & Elderly)	90
Acute Diarrhea	79	Nausea & Vomiting Gastrointestinal Disease	
Chronic Diarrhea Small Bowel.....	80	.....	91

Nausea & Vomiting Other Systemic

Disease.....	92
Stool Incontinence	93
Upper Gastrointestinal Bleed (Hematemesis / Melena)	94
Lower Gastrointestinal Bleed.....	95
Weight Gain.....	96
Weight Loss	97



Historical Editors

Dr. Chris Andrews

Khaled Ahmed

Jennifer Amyotte

Stacy Cormack

Beata Komierowski

James Lee

Shaina Lee

Matt Linton

Michael Prystajecky

Daniel Shafran

Robbie Sidhu

Mia Steiner

Shabaz Syed

Ying Wang

Student Editors

Scott Assen

Jonathan Seto

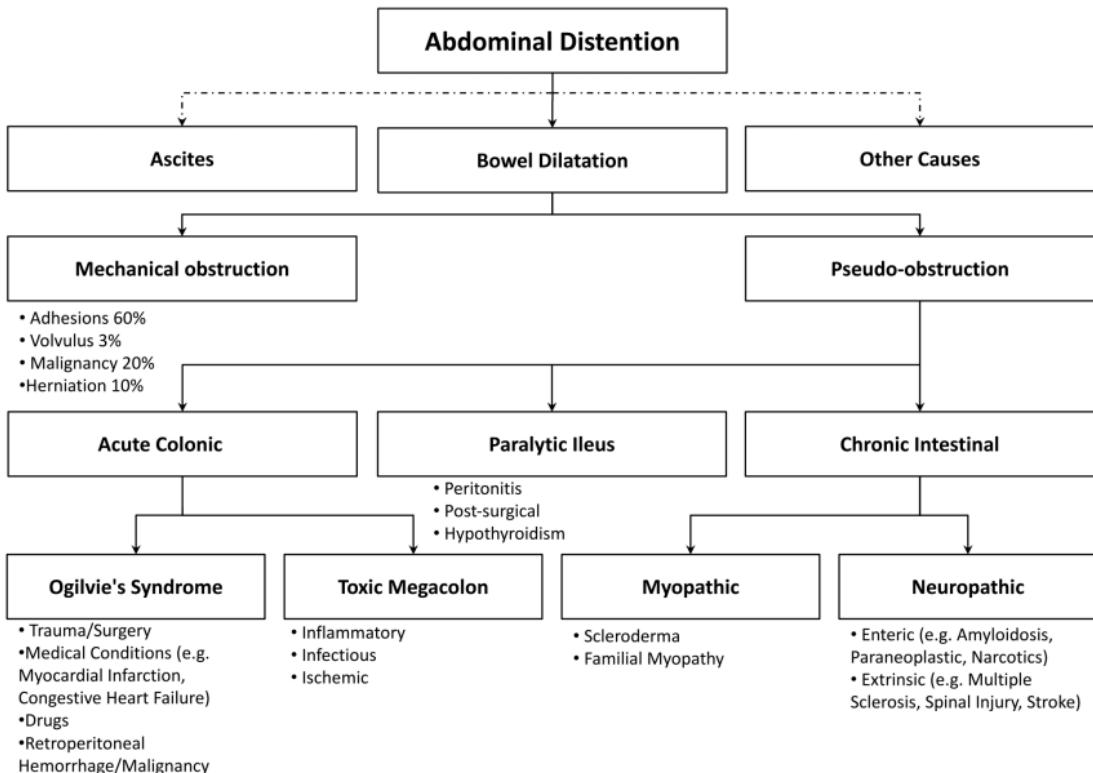
Jacob Charette

Faculty Editor

Dr. Sylvain Coderre

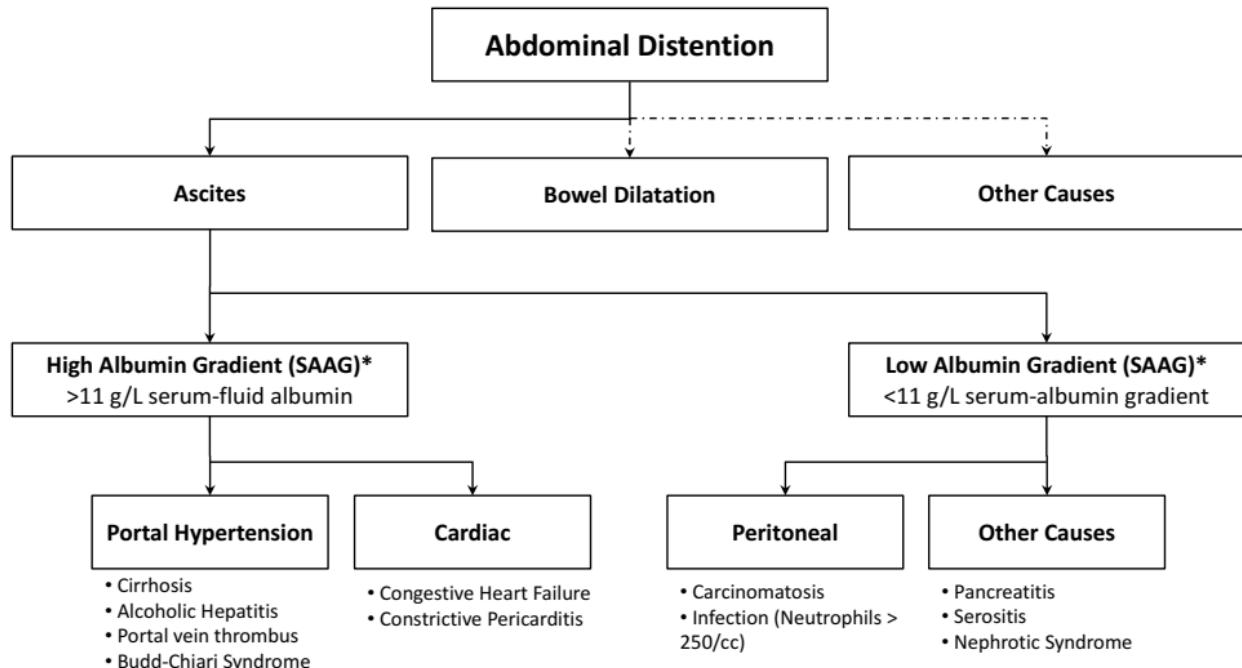
Dr. Kelly Burak

Abdominal Distention



Abdominal Distention

Ascites

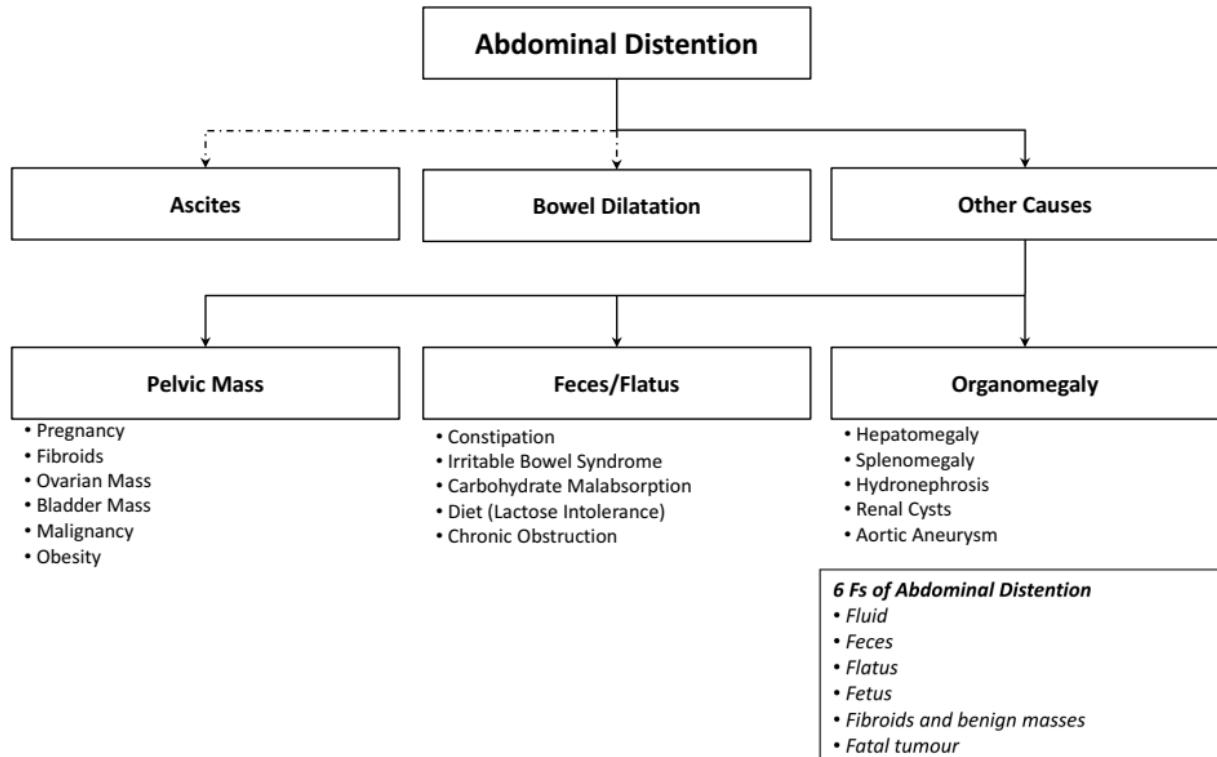


Clinical pearl: "rule of 97": SAAG 97% accurate. If high SAAG, 97% of time it is cirrhosis/portal hypertension. If low SAAG, 97% time carcinomatosis (and cytology 97% sensitive)

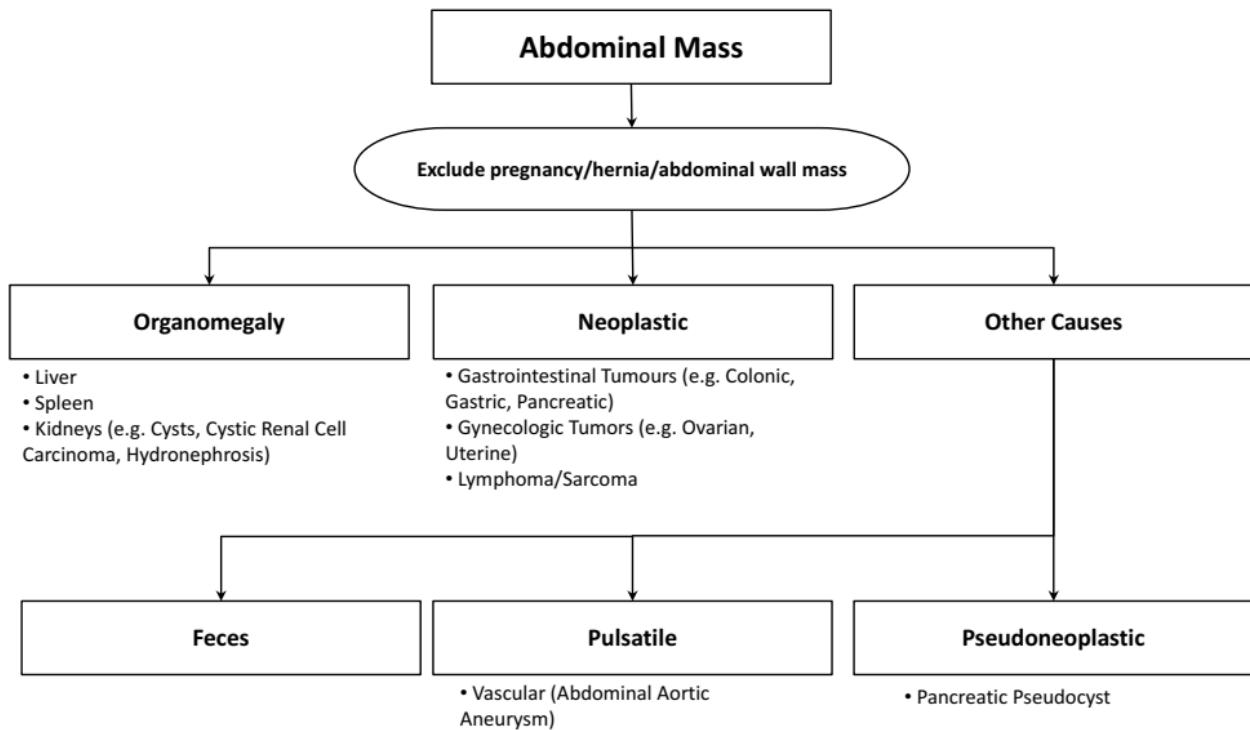
*Serum Ascites Albumin Gradient (SAAG) = [Serum albumin] – [Peritoneal fluid albumin]

Abdominal Distention

Other Causes

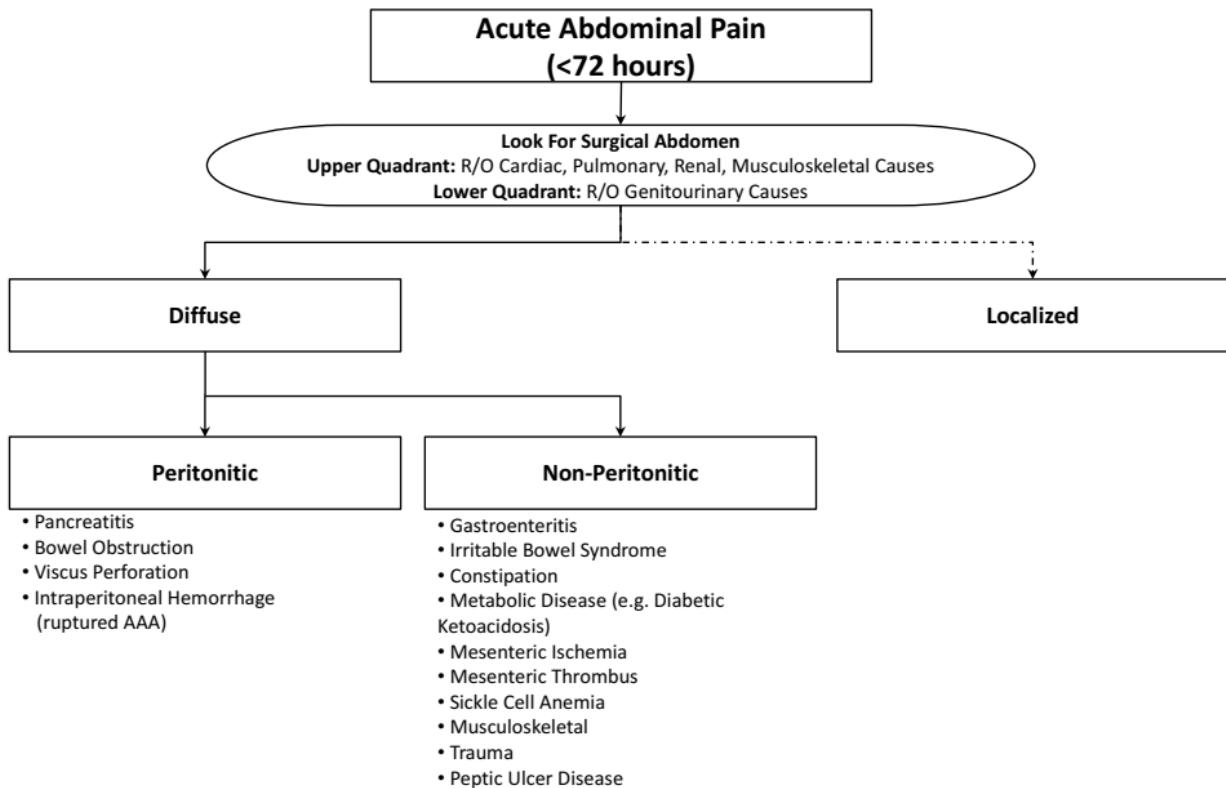


Abdominal Mass



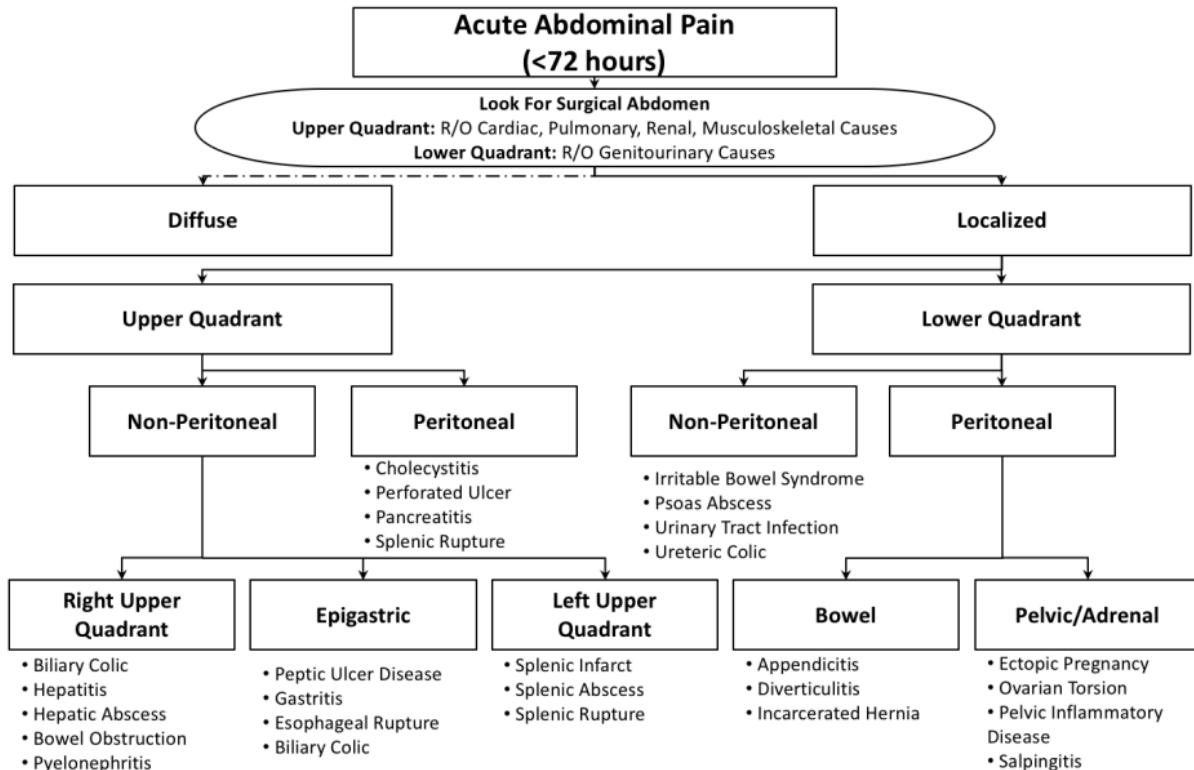
Abdominal Pain (Adult)

Acute - Diffuse



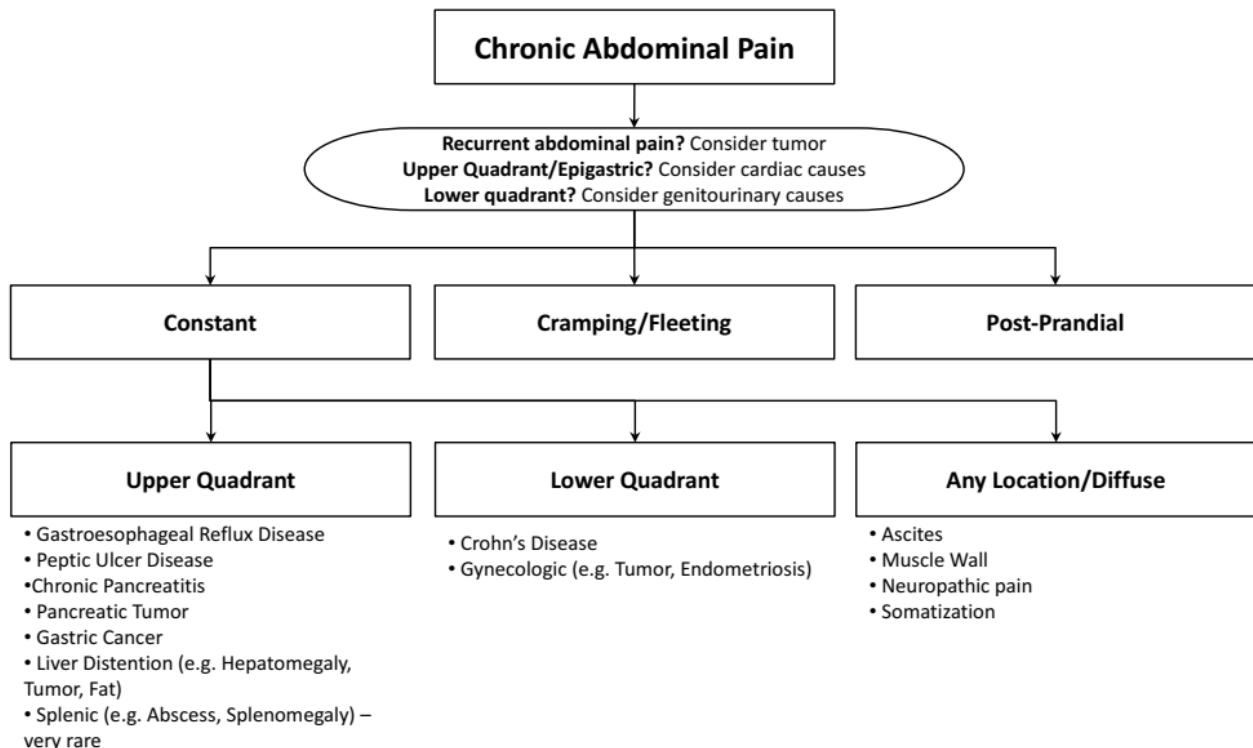
Abdominal Pain (Adult)

Acute - Localized



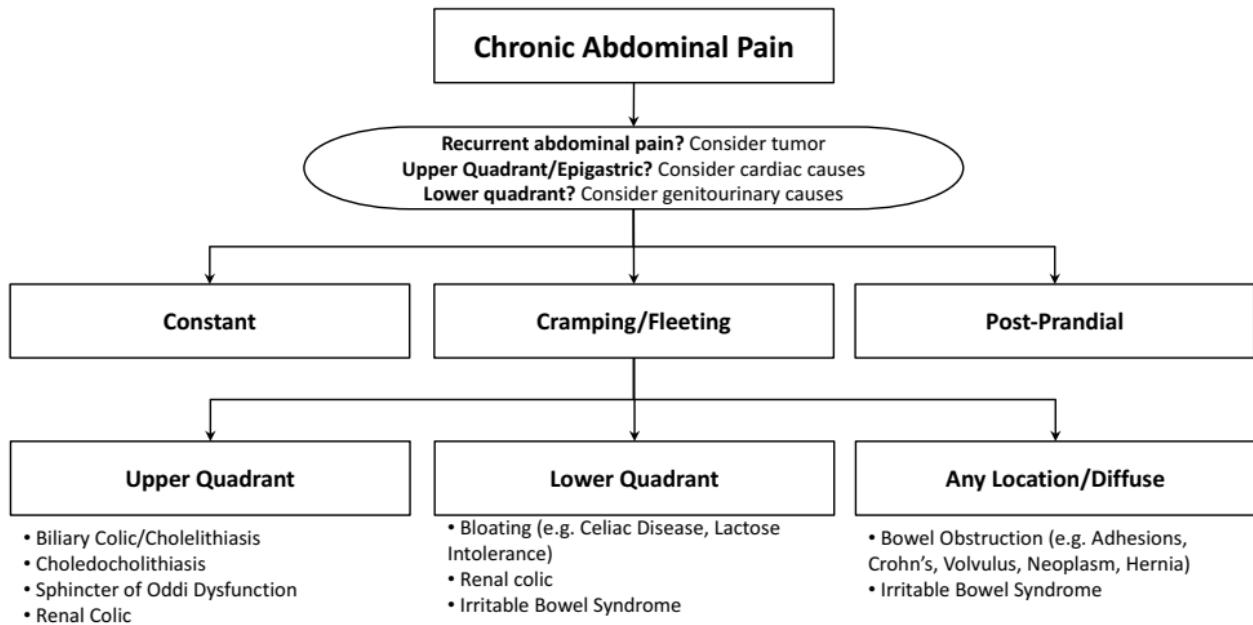
Abdominal Pain (Adult)

Chronic - Constant



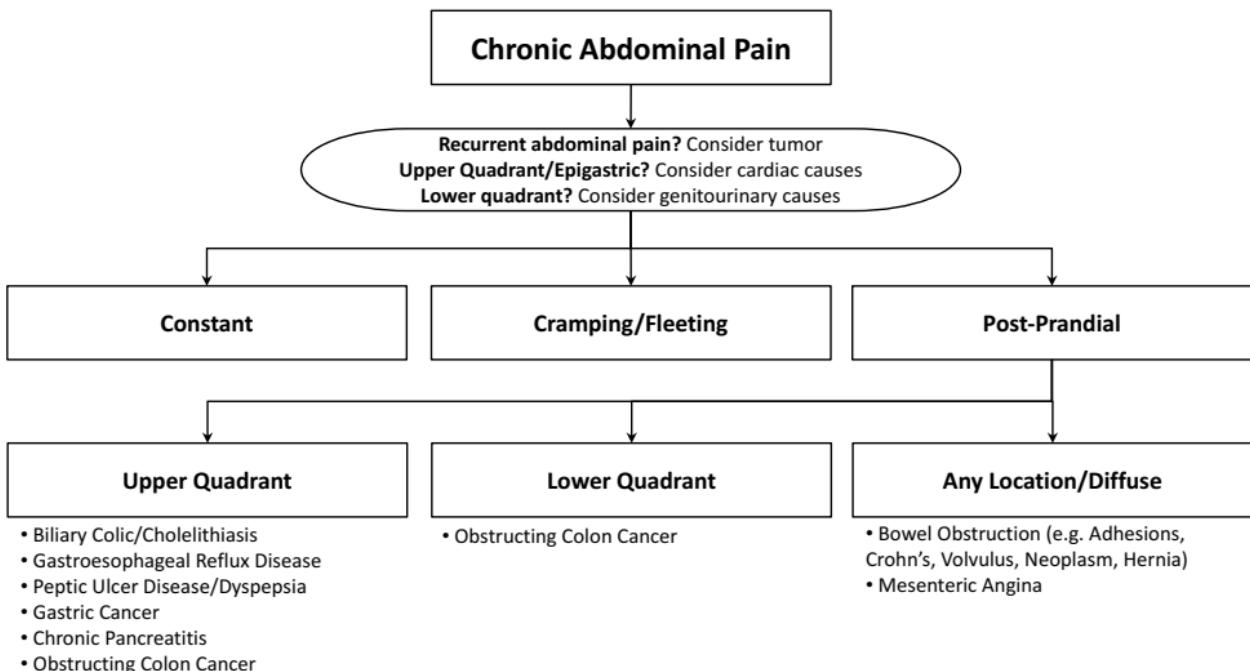
Abdominal Pain (Adult)

Chronic - Crampy / Fleeting

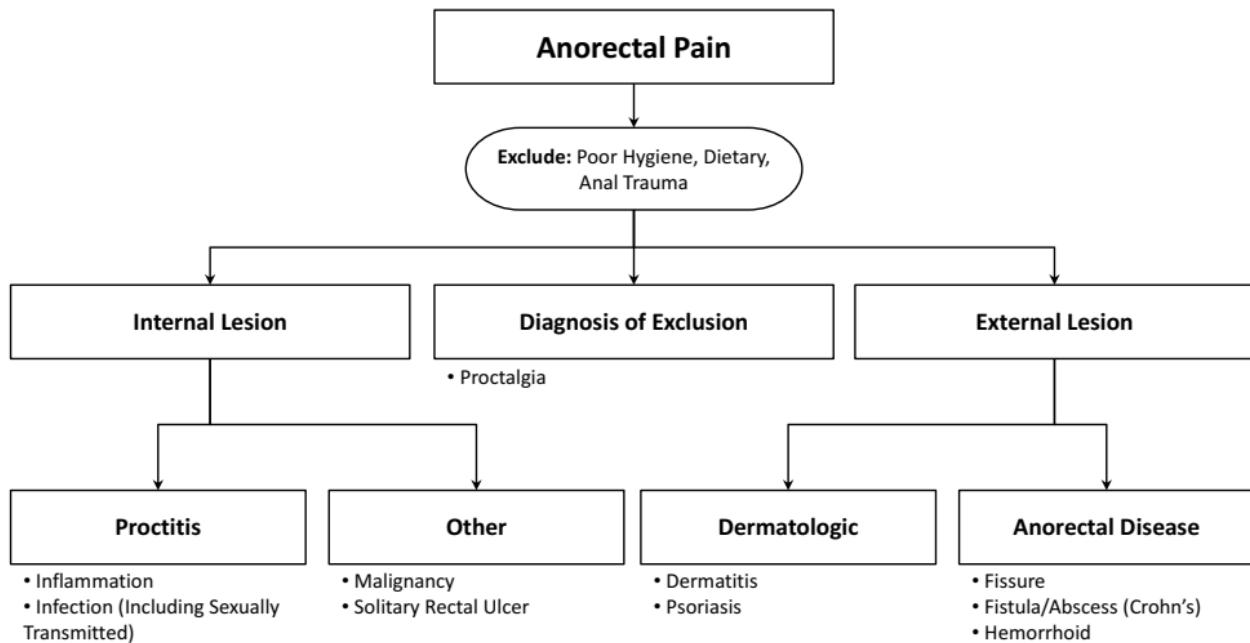


Abdominal Pain (Adult)

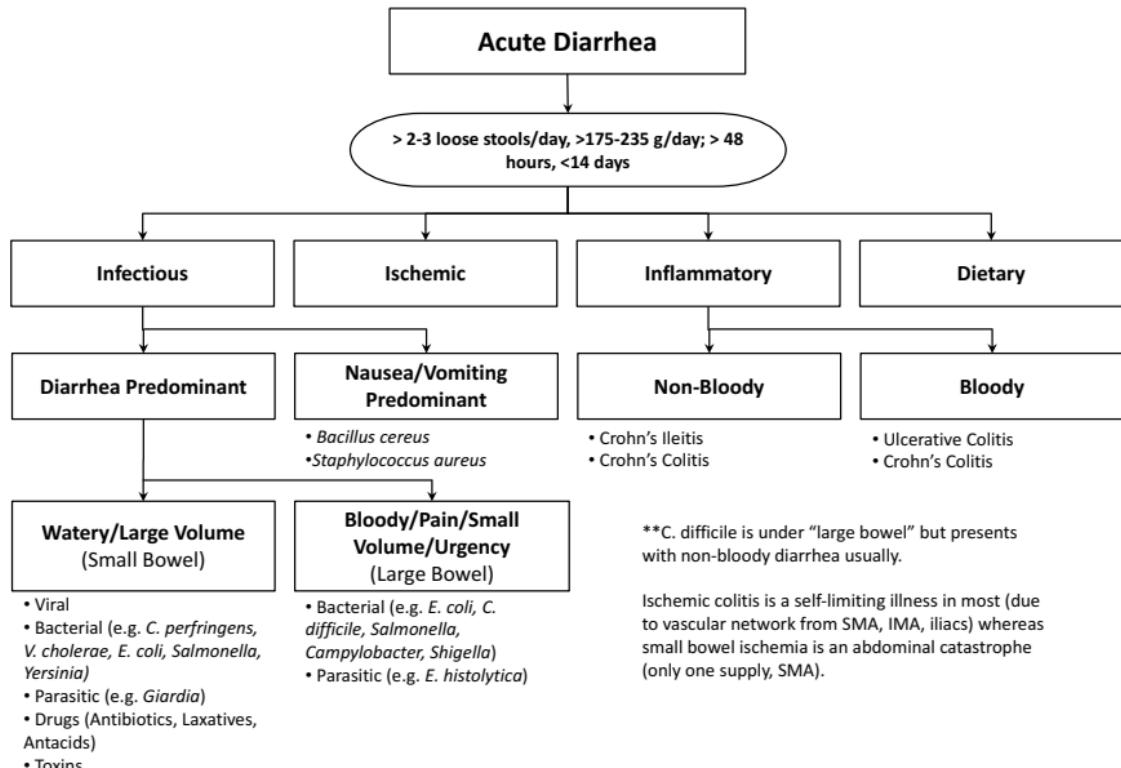
Chronic - Post-Prandial



Anorectal Pain

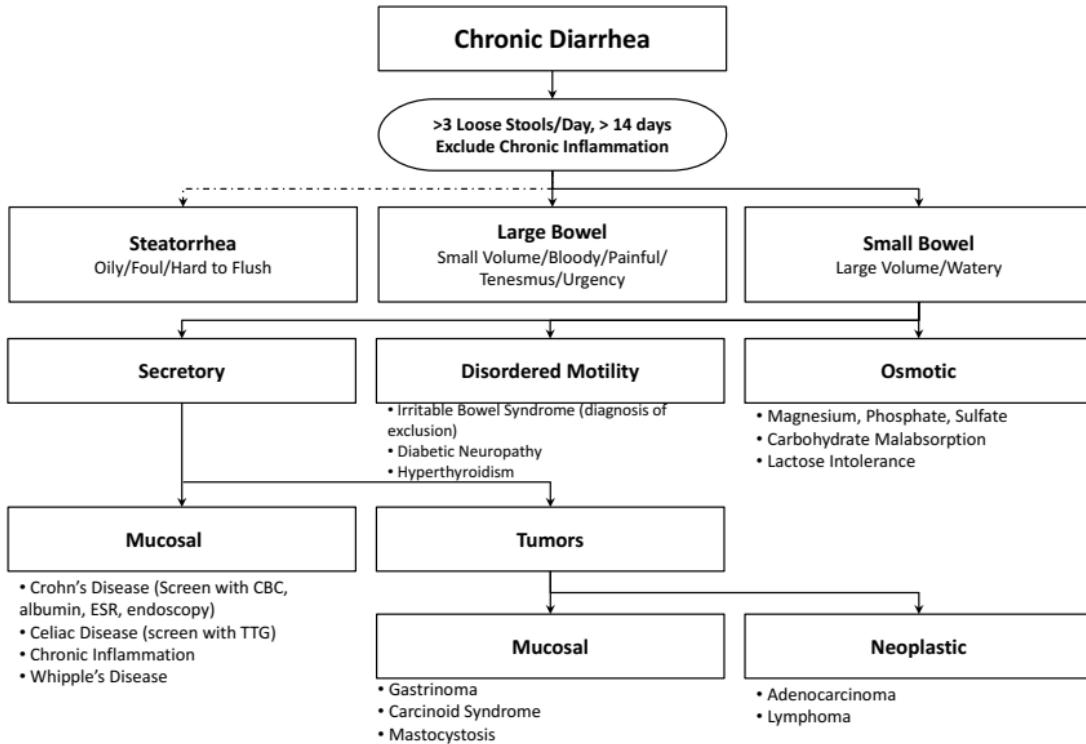


Acute Diarrhea



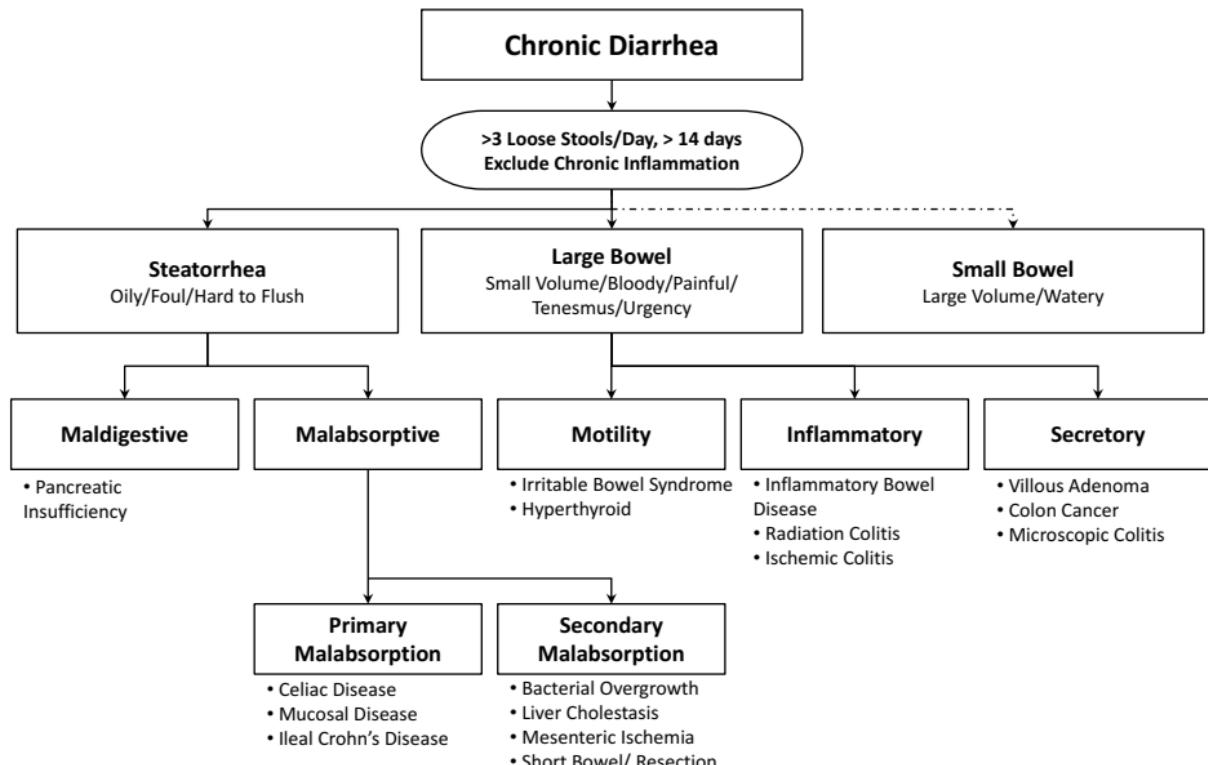
Chronic Diarrhea

Small Bowel



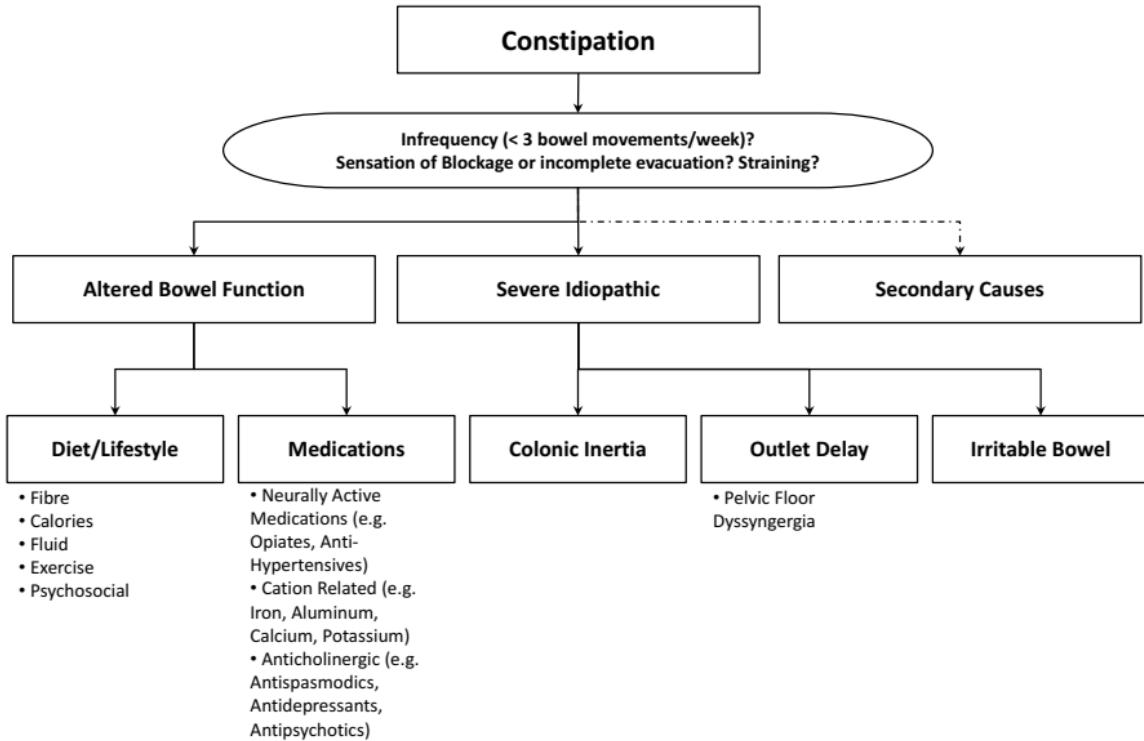
Chronic Diarrhea

Steatorrhea & Large Bowel



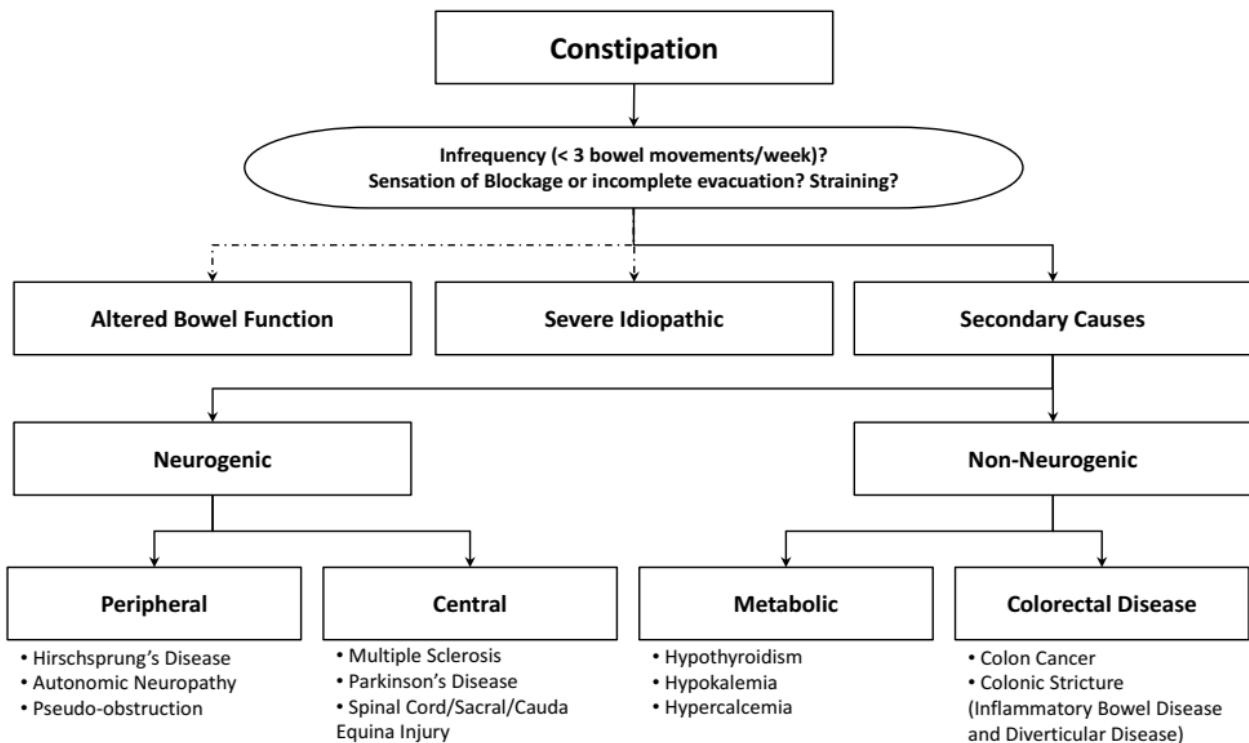
Constipation (Adult)

Altered Bowel Function & Idiopathic

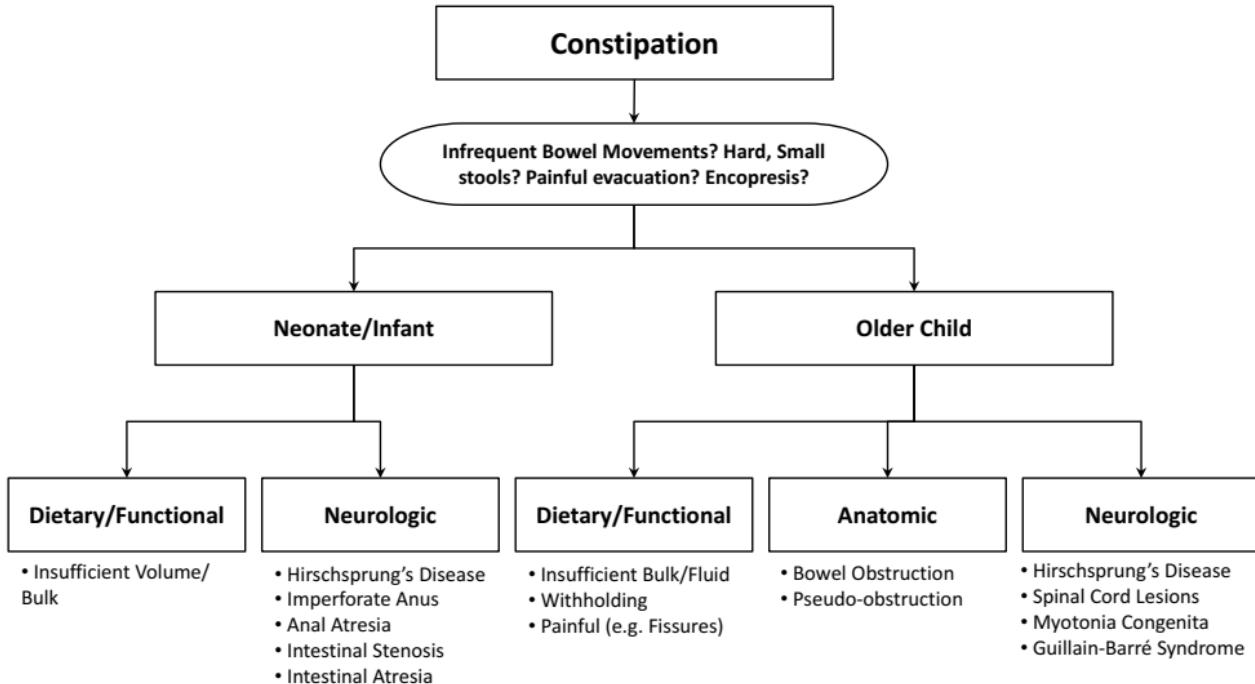


Constipation (Adult)

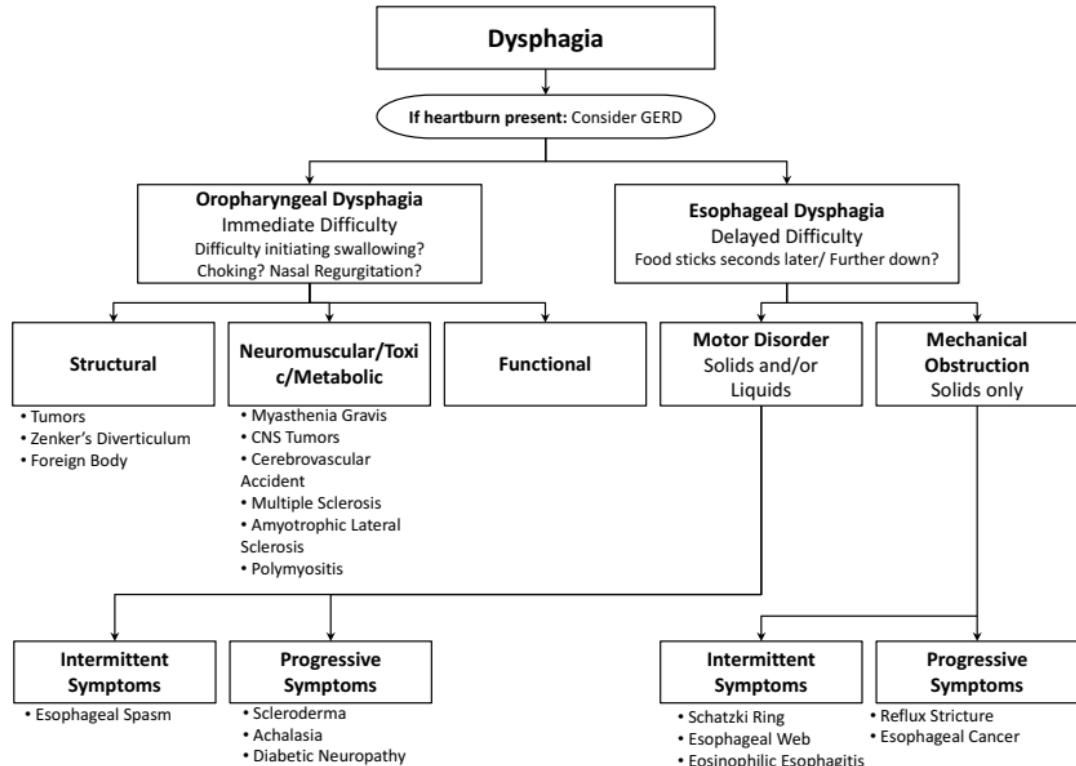
Secondary Causes



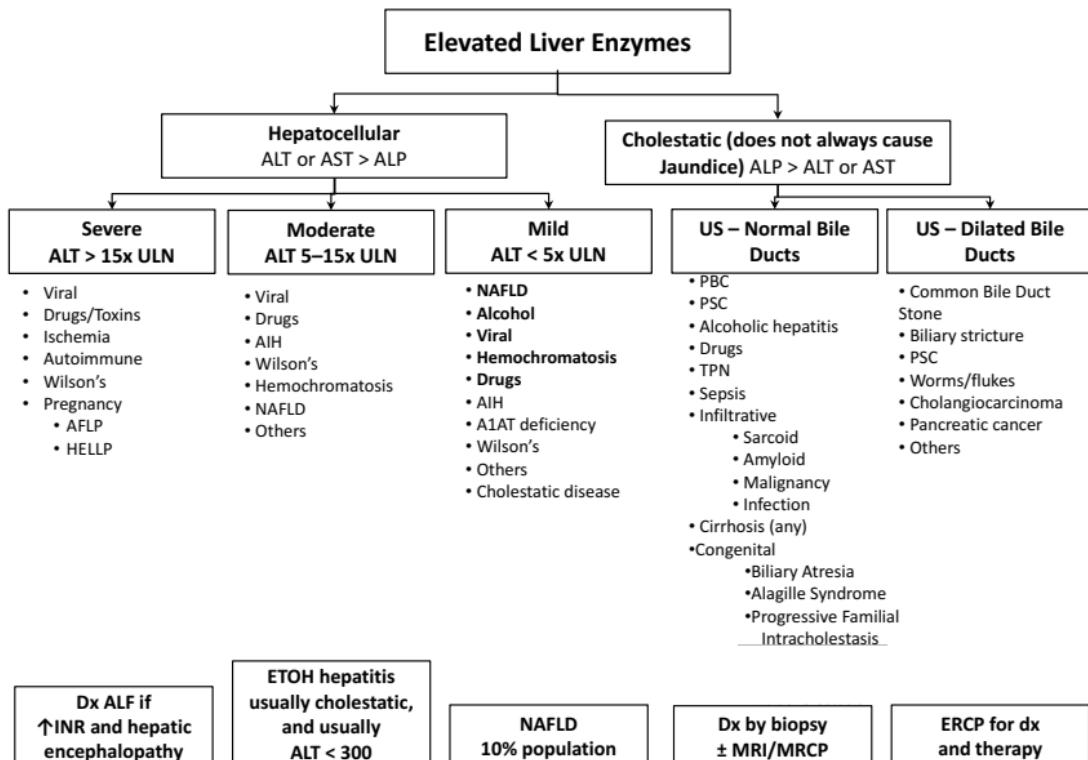
Constipation (Pediatric)



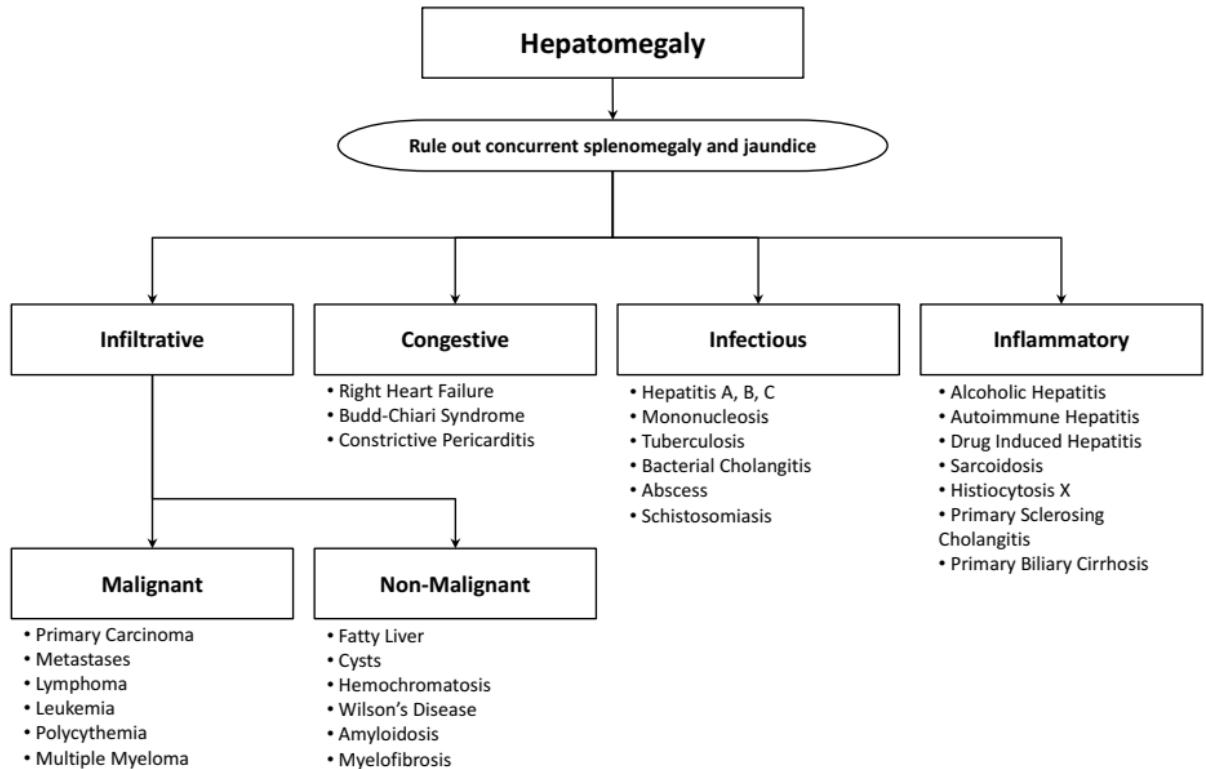
Dysphagia



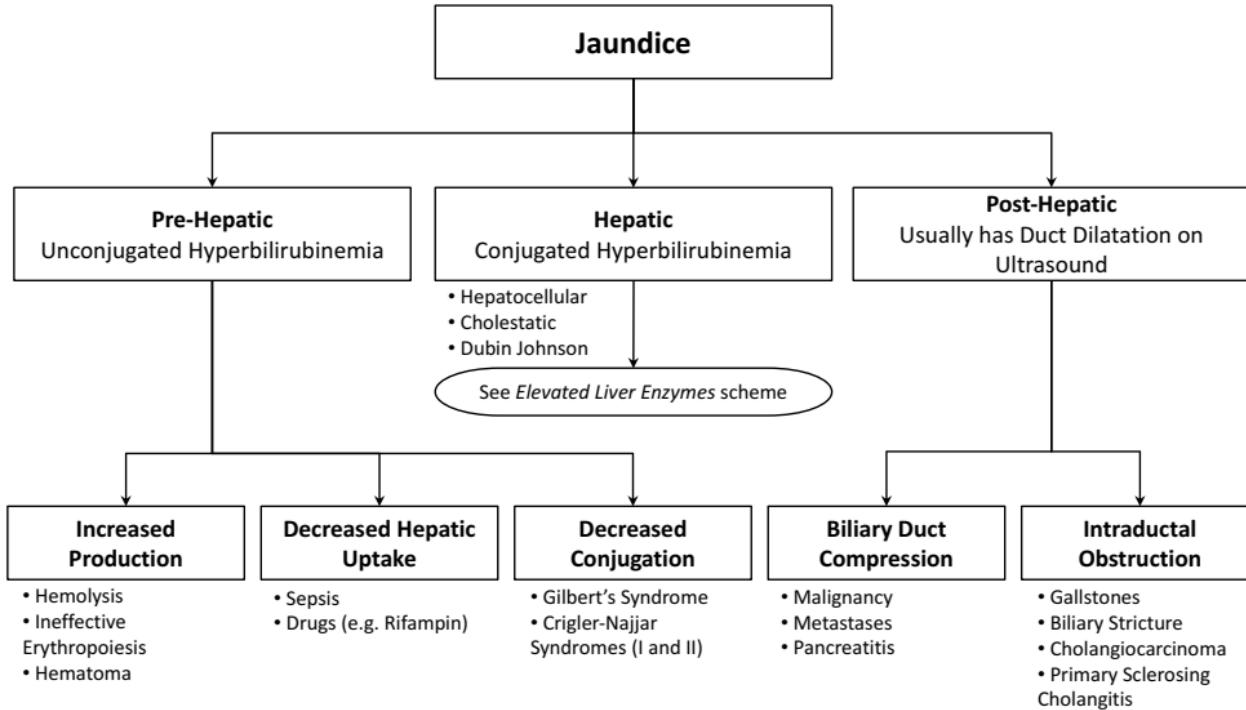
Elevated Liver Enzymes



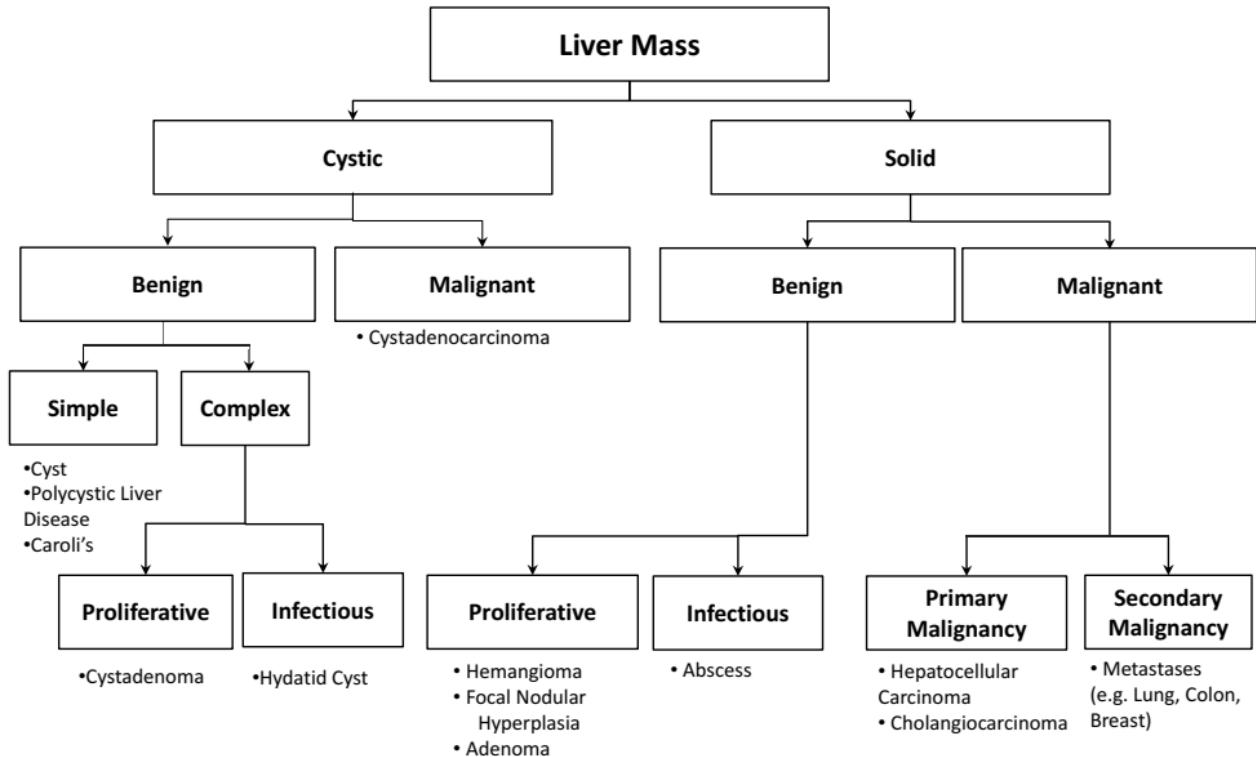
Hepatomegaly



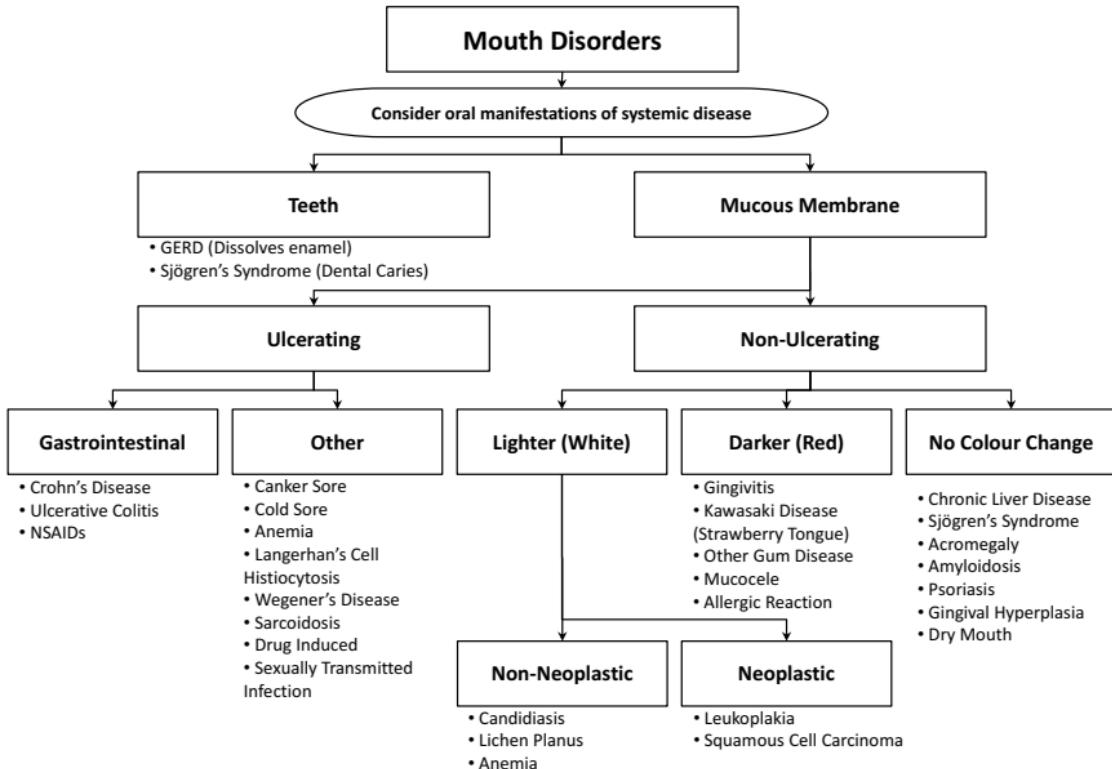
Jaundice



Liver Mass

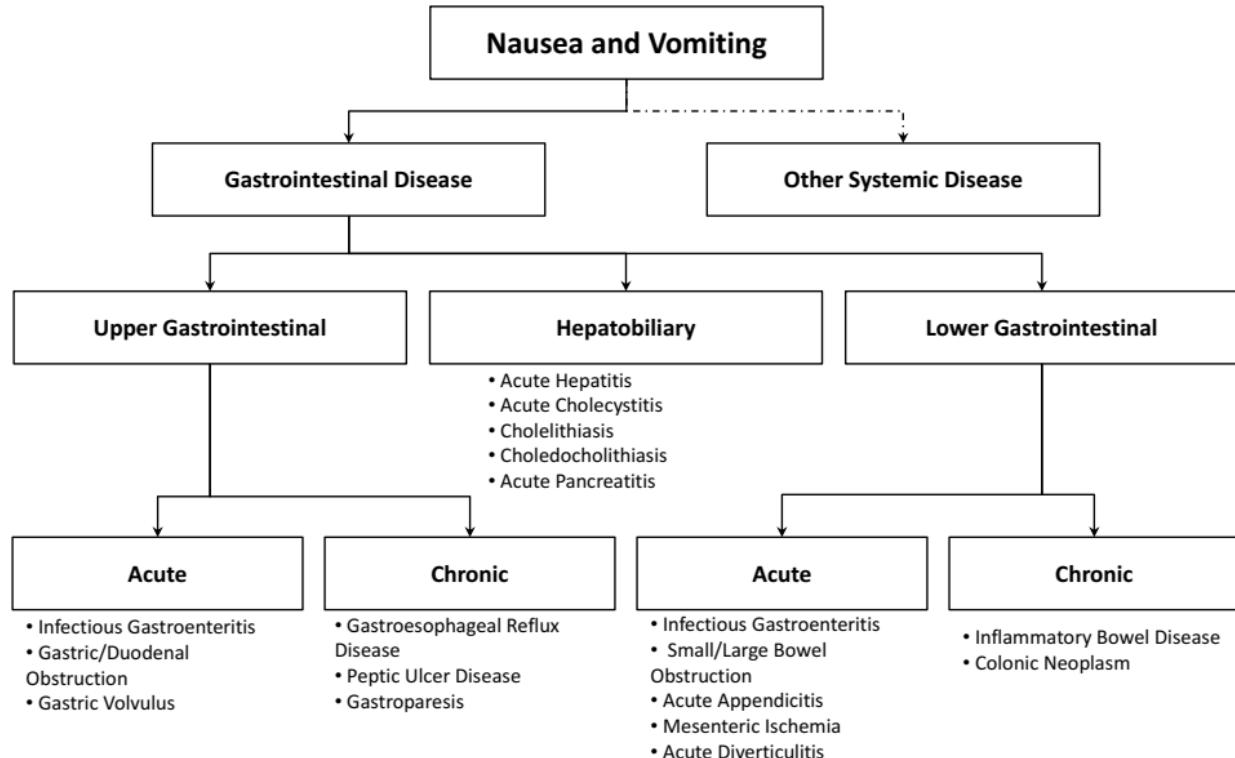


Mouth Disorders (Adult & Elderly)



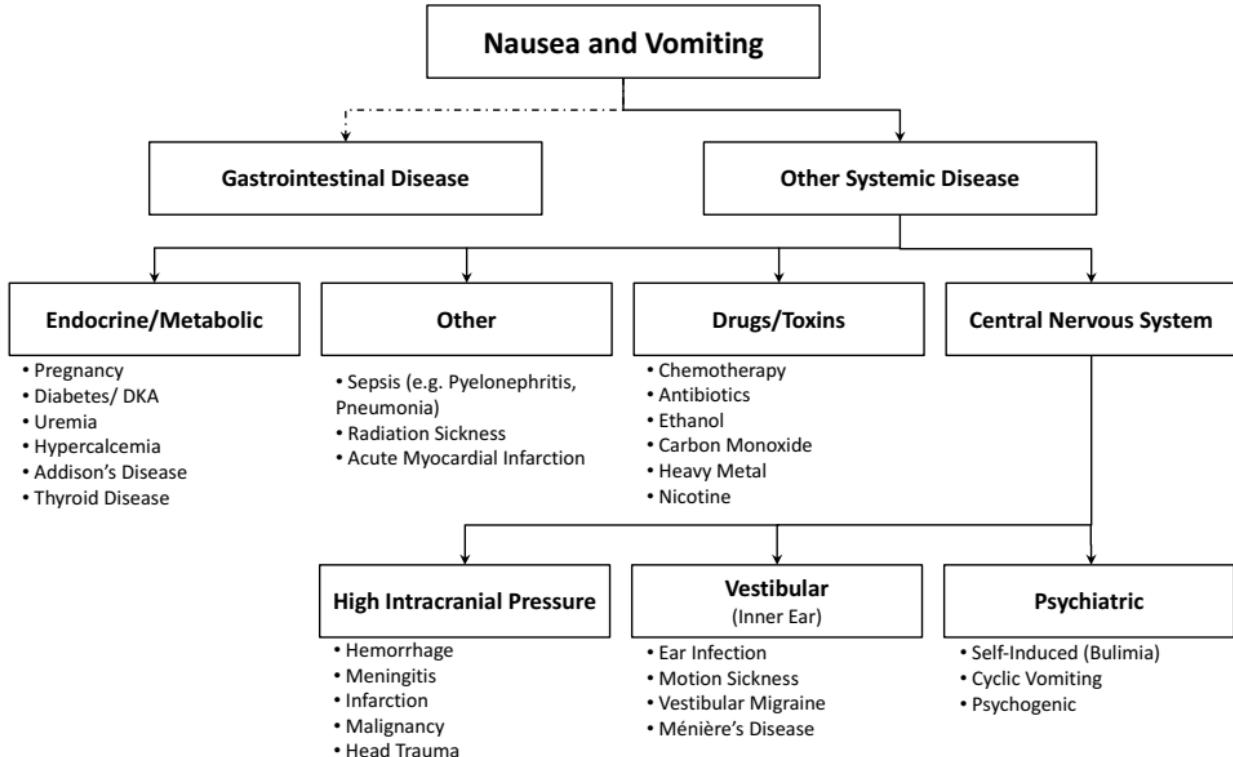
Nausea & Vomiting

Gastrointestinal Disease

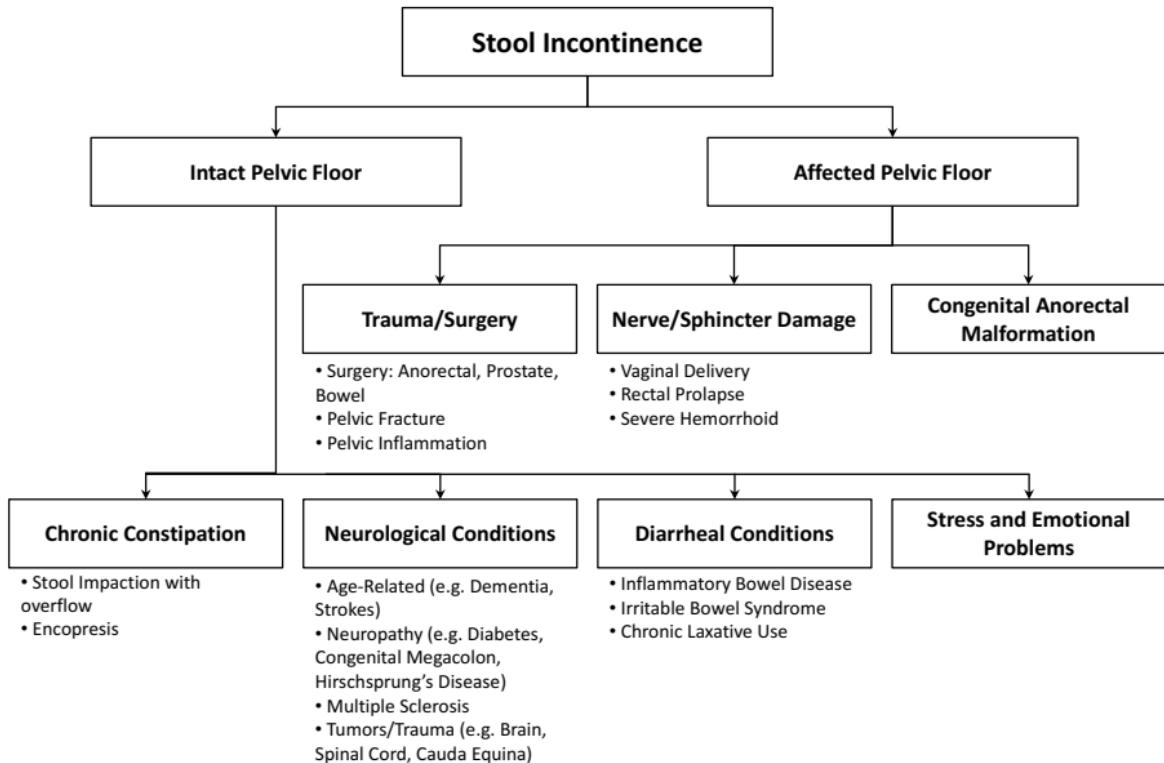


Nausea & Vomiting

Other Systemic Disease

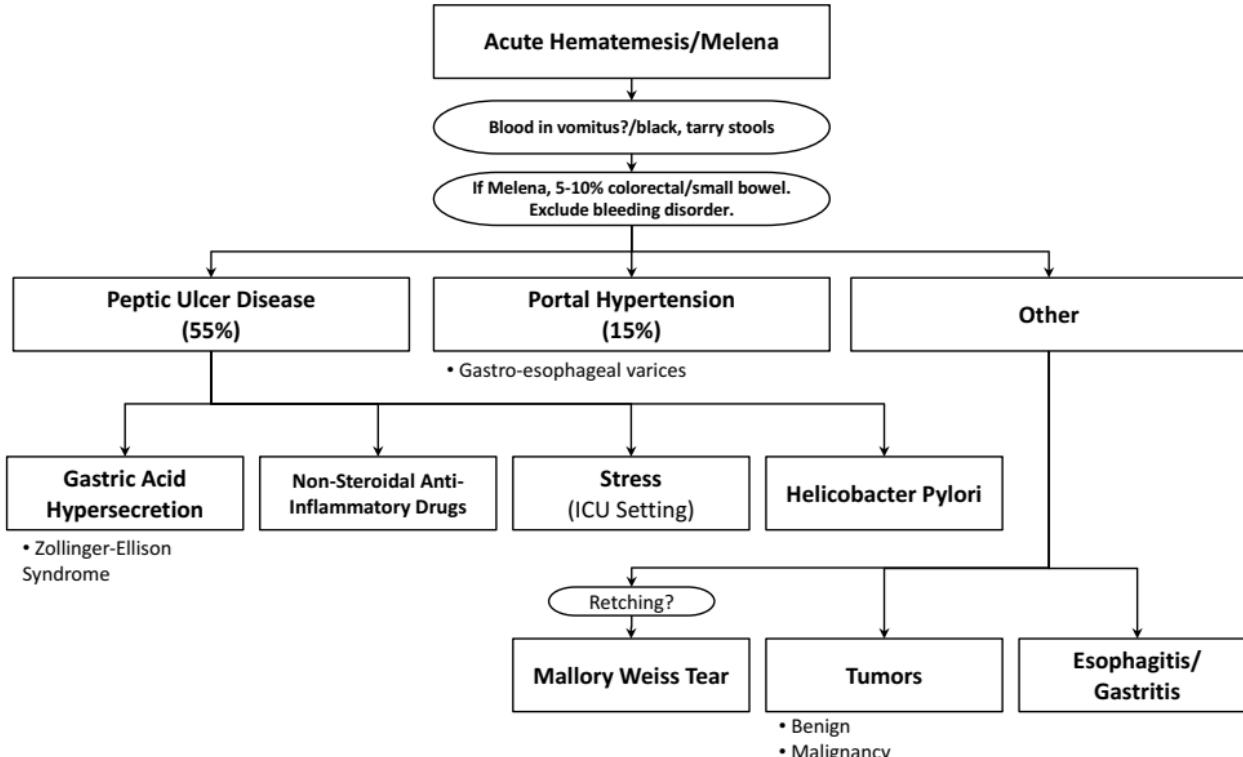


Stool Incontinence

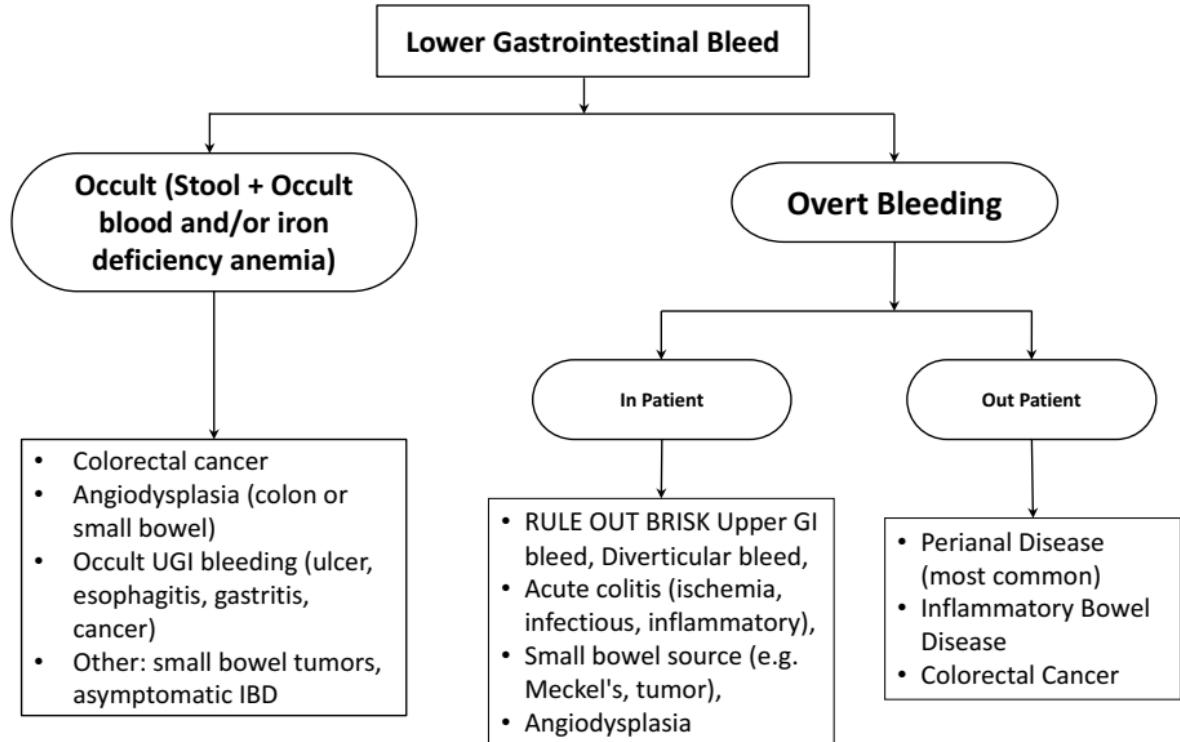


Upper Gastronintestinal Bleed

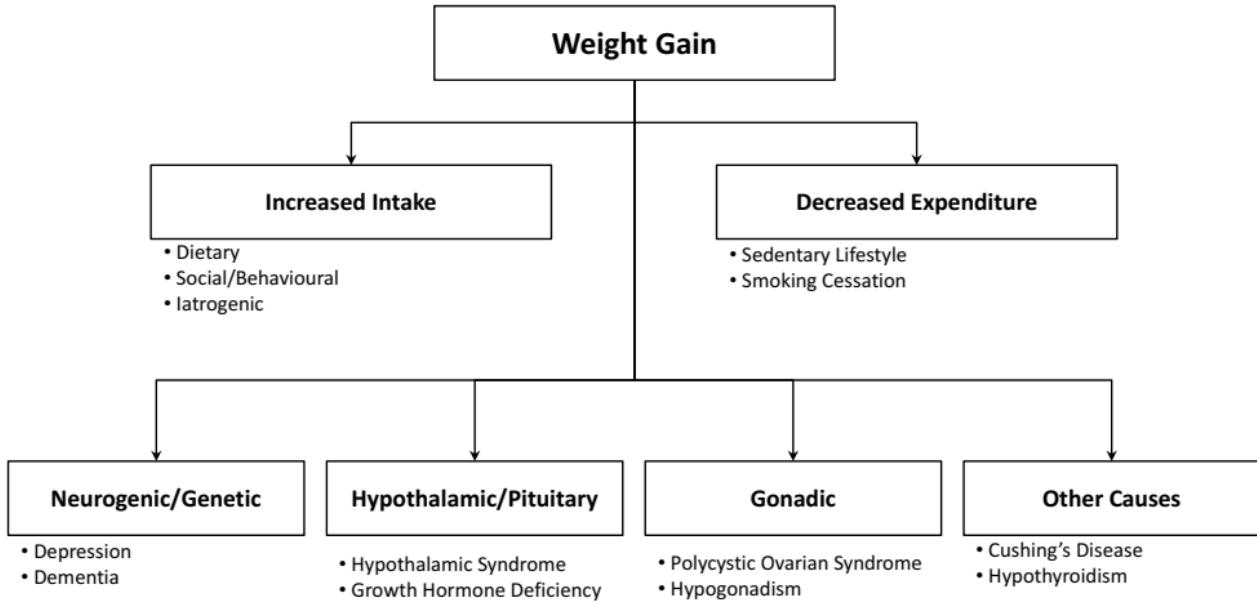
(Hematemesis / Melena)



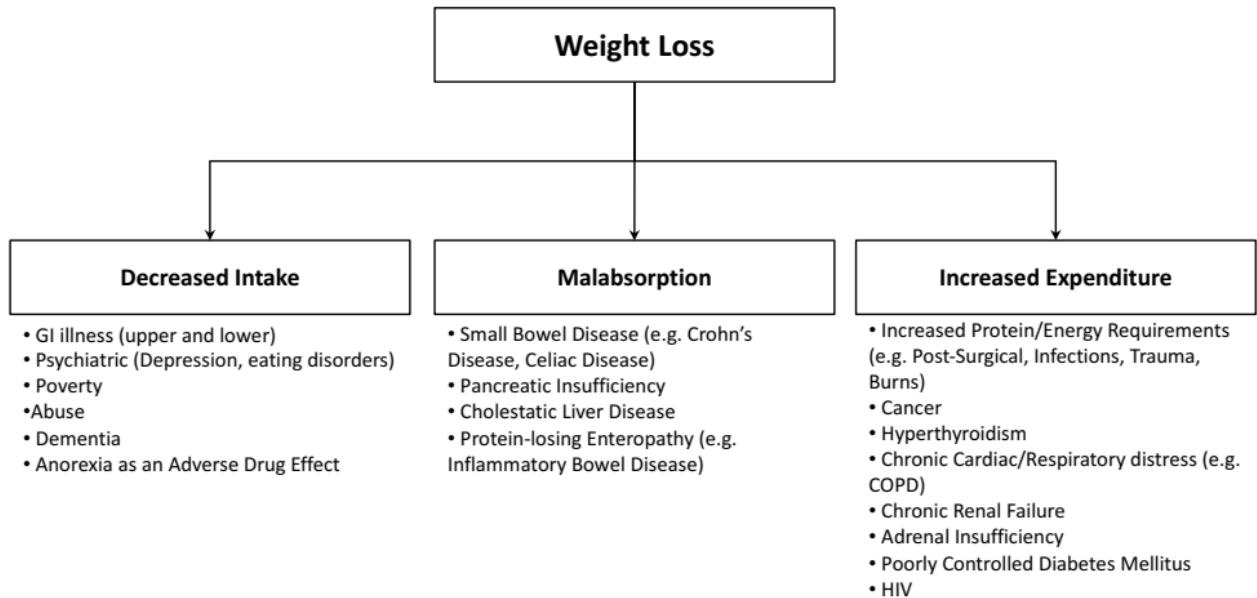
Lower Gastrointestinal Bleed



Weight Gain



Weight Loss



Renal

Acute Kidney Injury.....	101	Proteinuria	115
Chronic Kidney Disease	102	Renal Mass Solid.....	116
Dysuria	103	Renal Mass Cystic.....	117
Generalized Edema.....	104	Scrotal Mass.....	118
Hematuria.....	105	Suspected Acid-Base Disturbance	119
Hyperkalemia Intercellular Shift.....	106	Metabolic Acidosis Elevated Anion Gap.....	120
Hyperkalemia Reduced Excretion.....	107	Metabolic Acidosis Normal Anion Gap.....	121
Hypokalemia	108	Metabolic Alkalosis	122
Hypernatremia	109	Urinary Incontinence	123
Hyponatremia.....	110	Urinary Tract Obstruction.....	124
Hypertension.....	111		
Increased Urinary Frequency	112		
Nephrolithiasis	113		
Polyuria.....	114		



Historical Editors

Dr. Andrew Wade
Dr. Sophia Chou
Dave Campbell
Derrick Chan
Marc Chretien
Mollie Ferris
Kody Johnson
Becky Kennedy
Vera Krejcik
Keith Lawson
Vanessa Millar
Eric Sy
Maria Wu

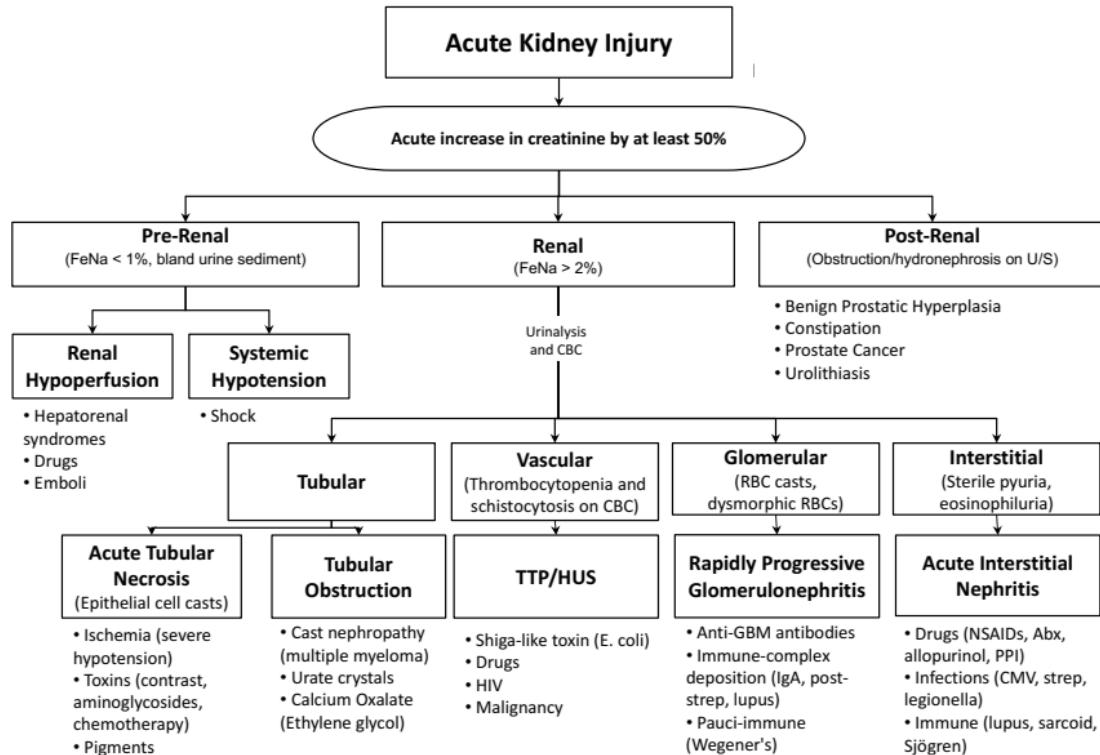
Student Editors

Colin Roscher (*Co-editor*)
Mark Elliot (*Co-editor*)

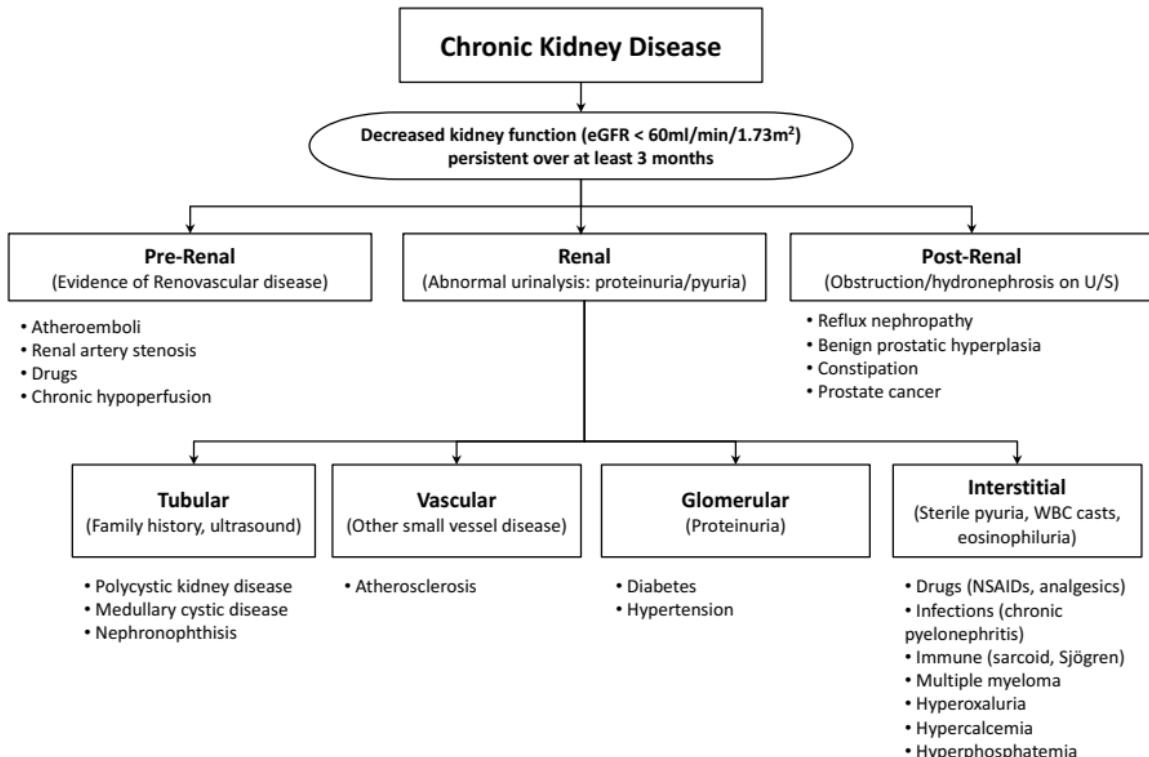
Faculty Editor

Dr. Kevin McLaughlin

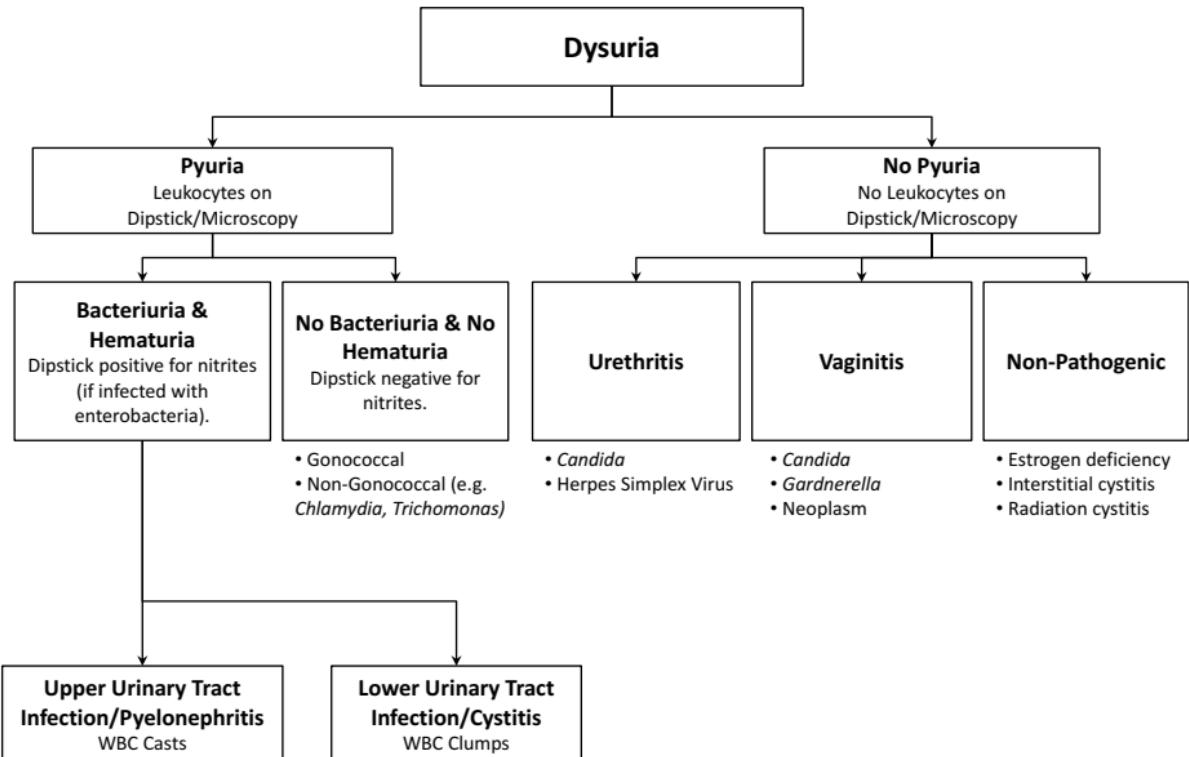
Acute Kidney Injury



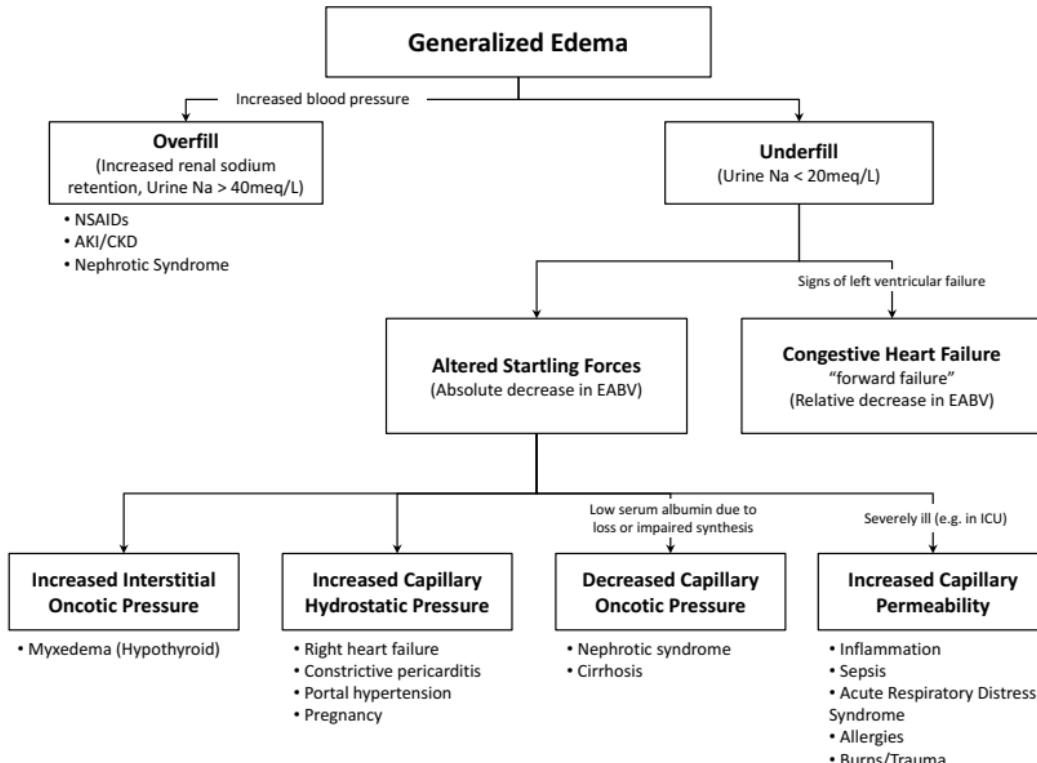
Chronic Kidney Disease



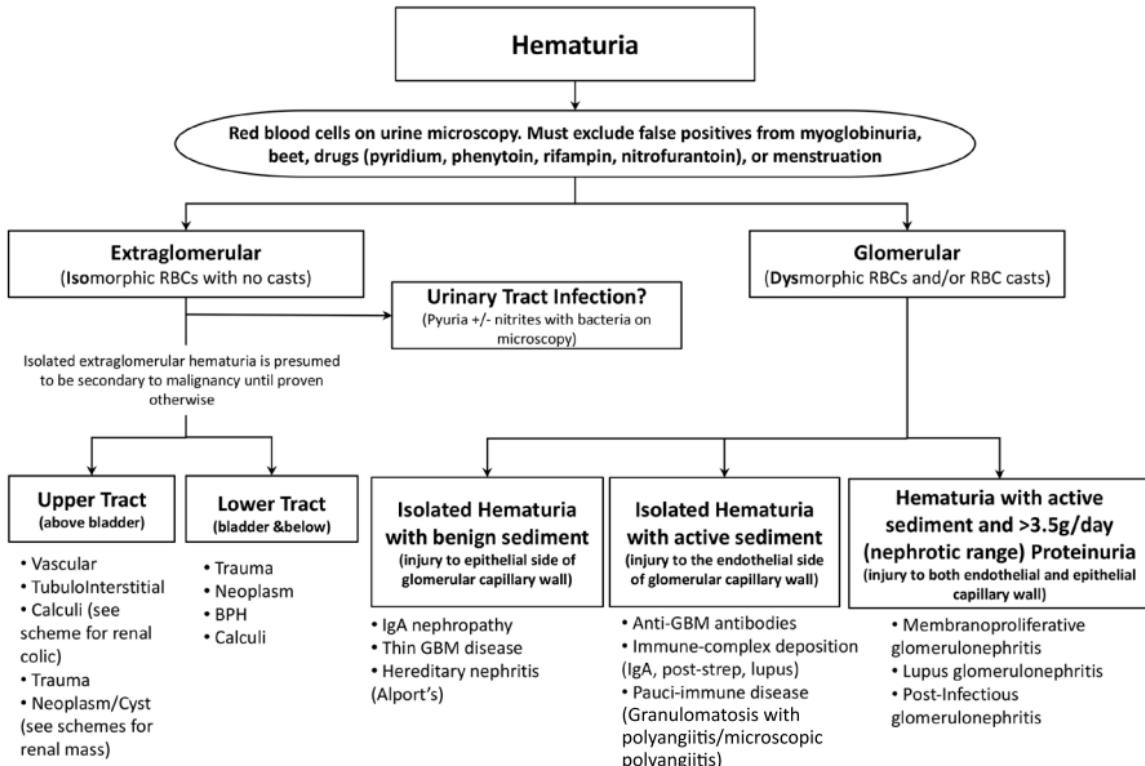
Dysuria



Generalized Edema

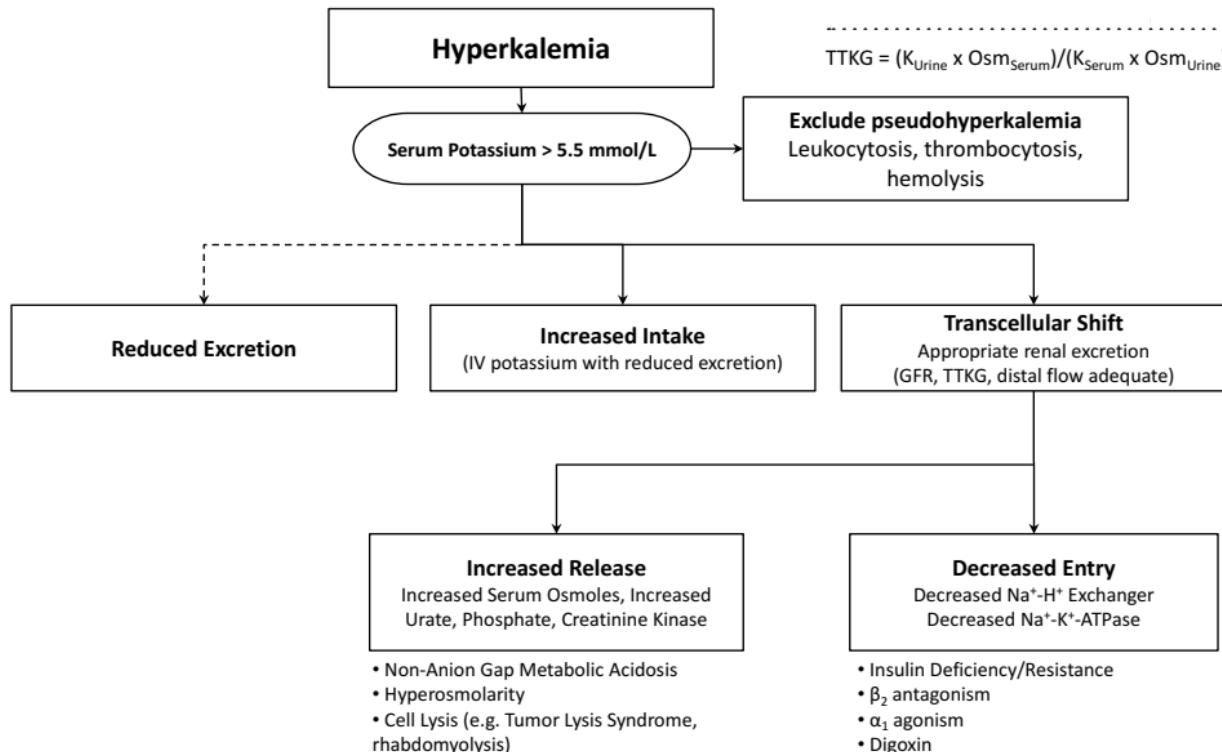


Hematuria



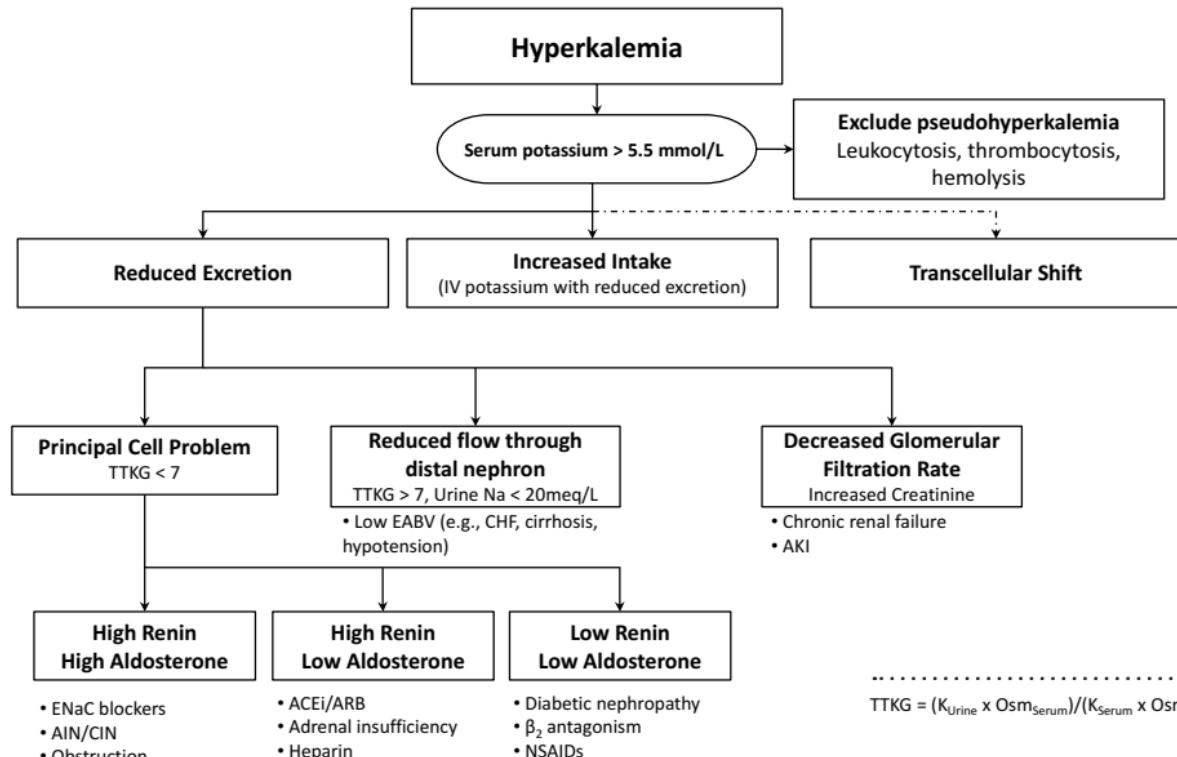
Hyperkalemia

Intercellular Shift

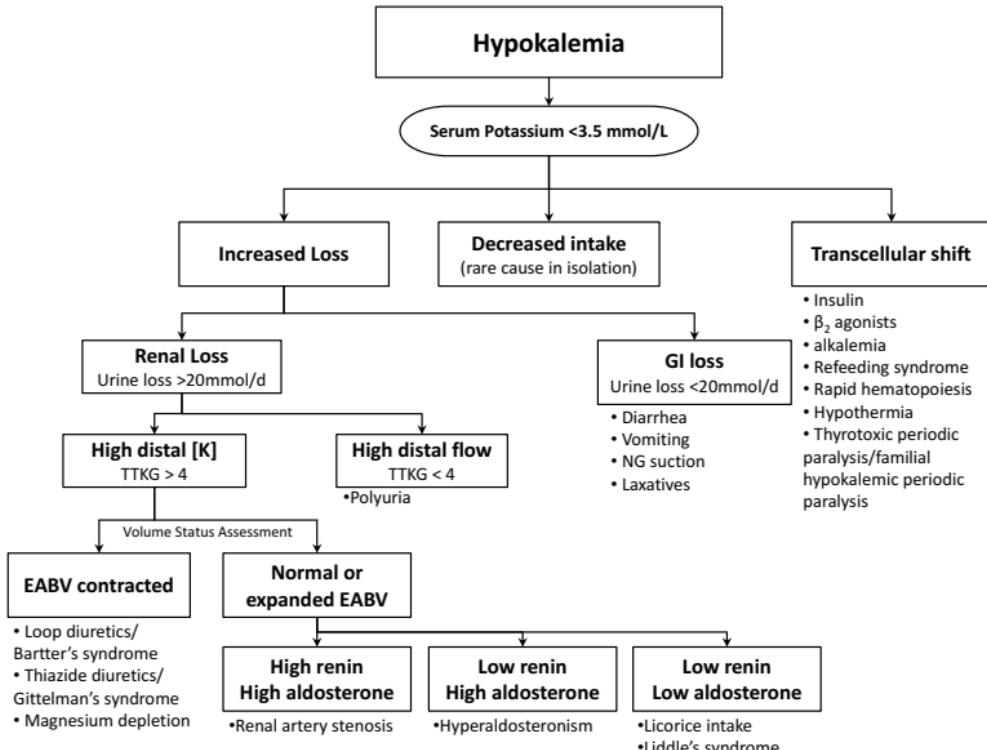


Hyperkalemia

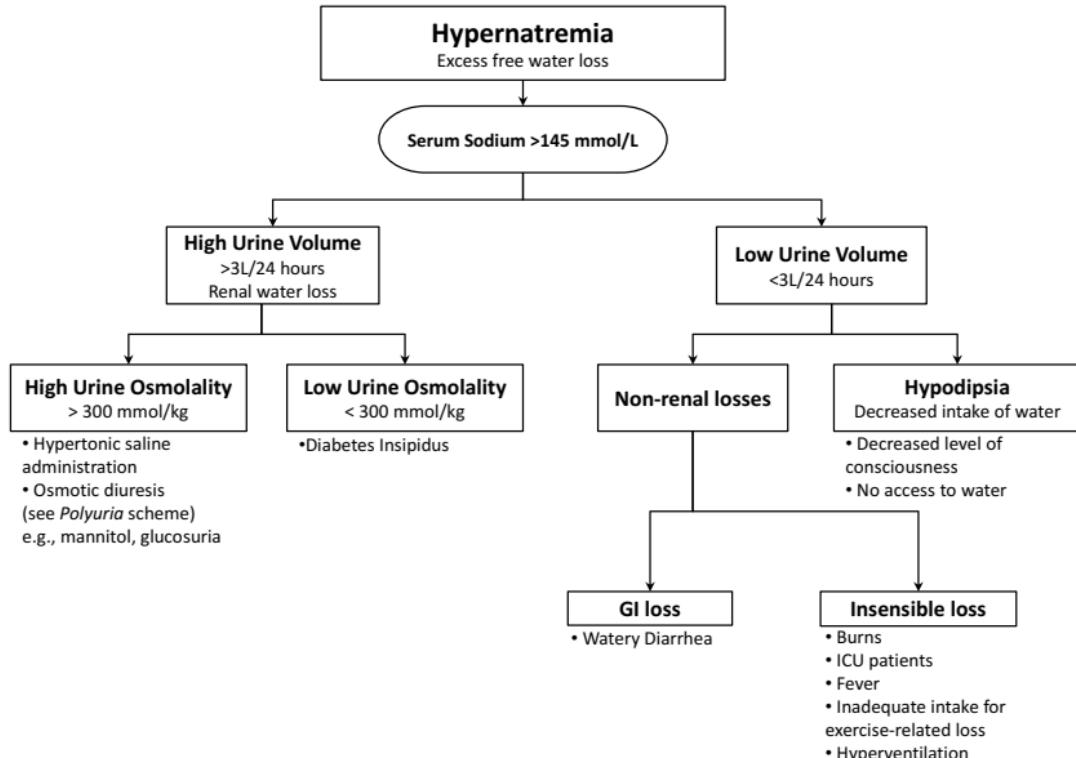
Reduced Excretion



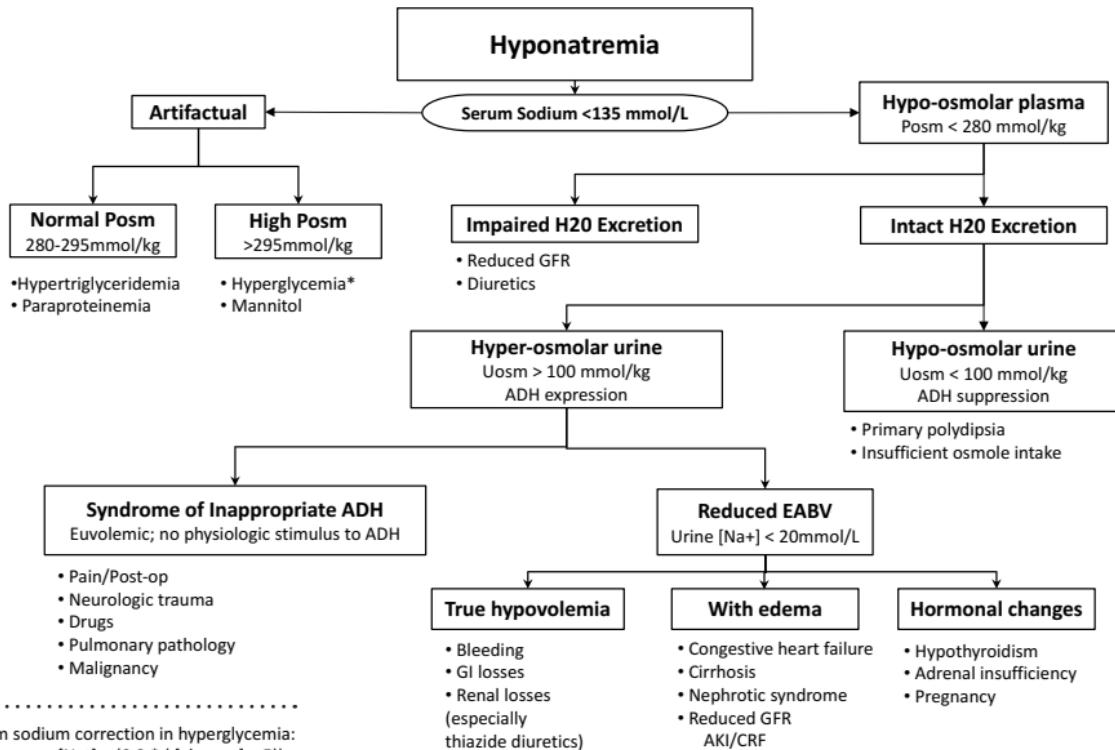
Hypokalemia



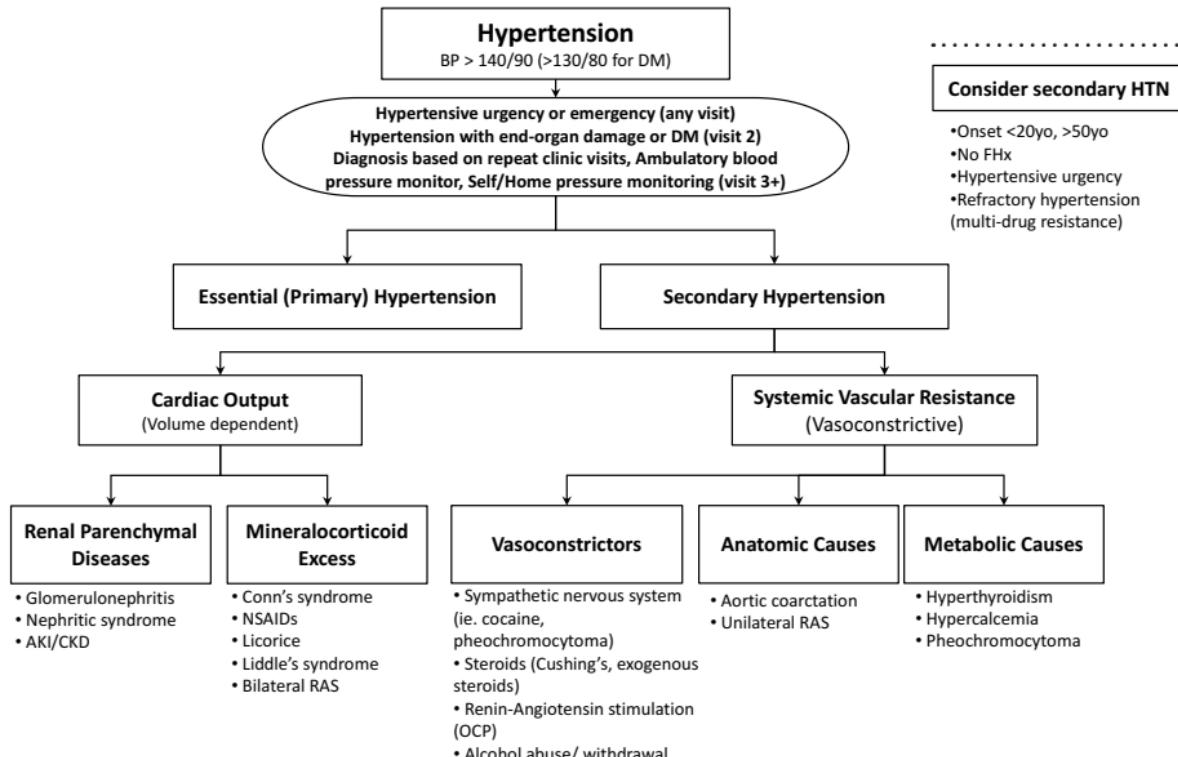
Hypernatremia



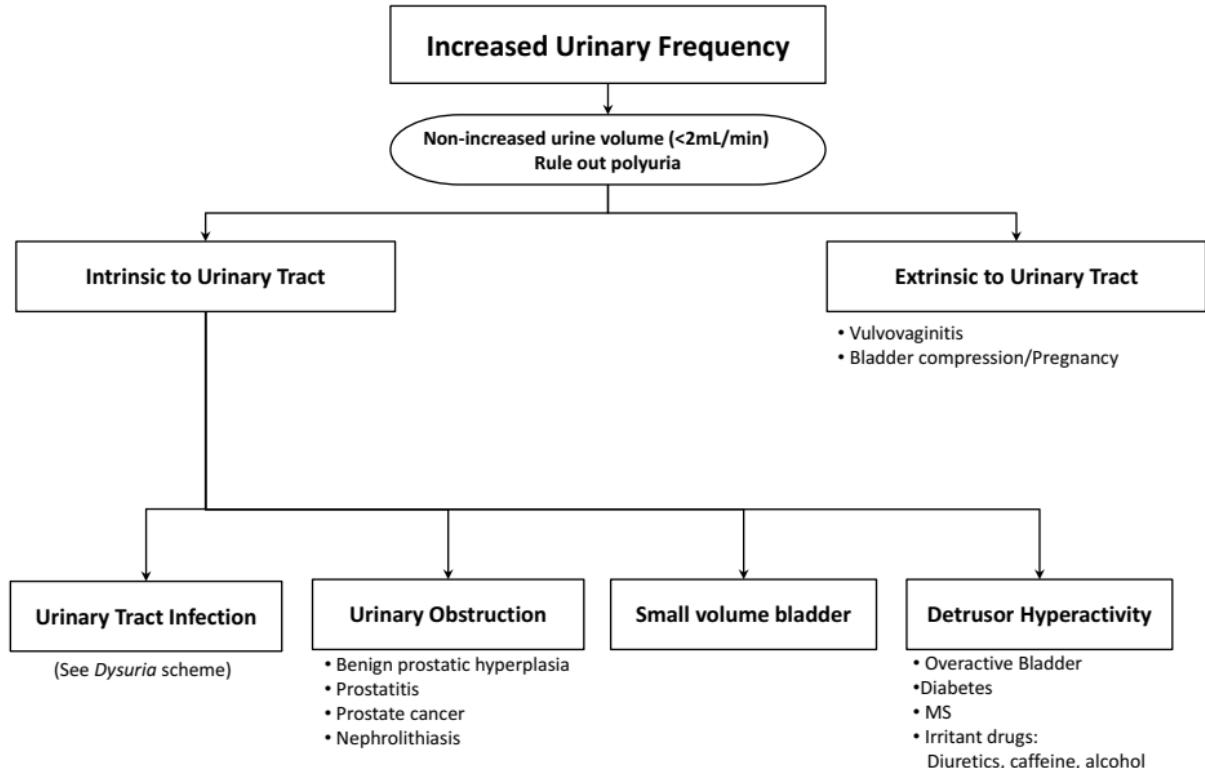
Hyponatremia



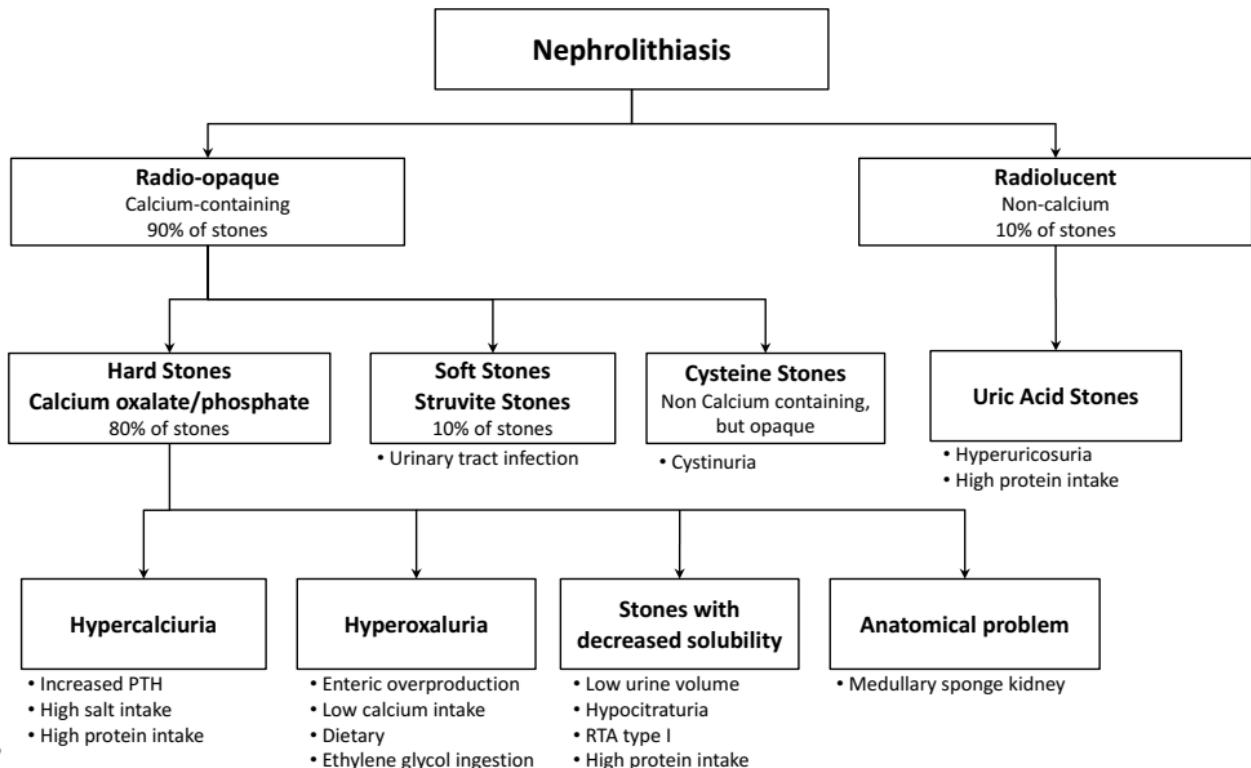
Hypertension



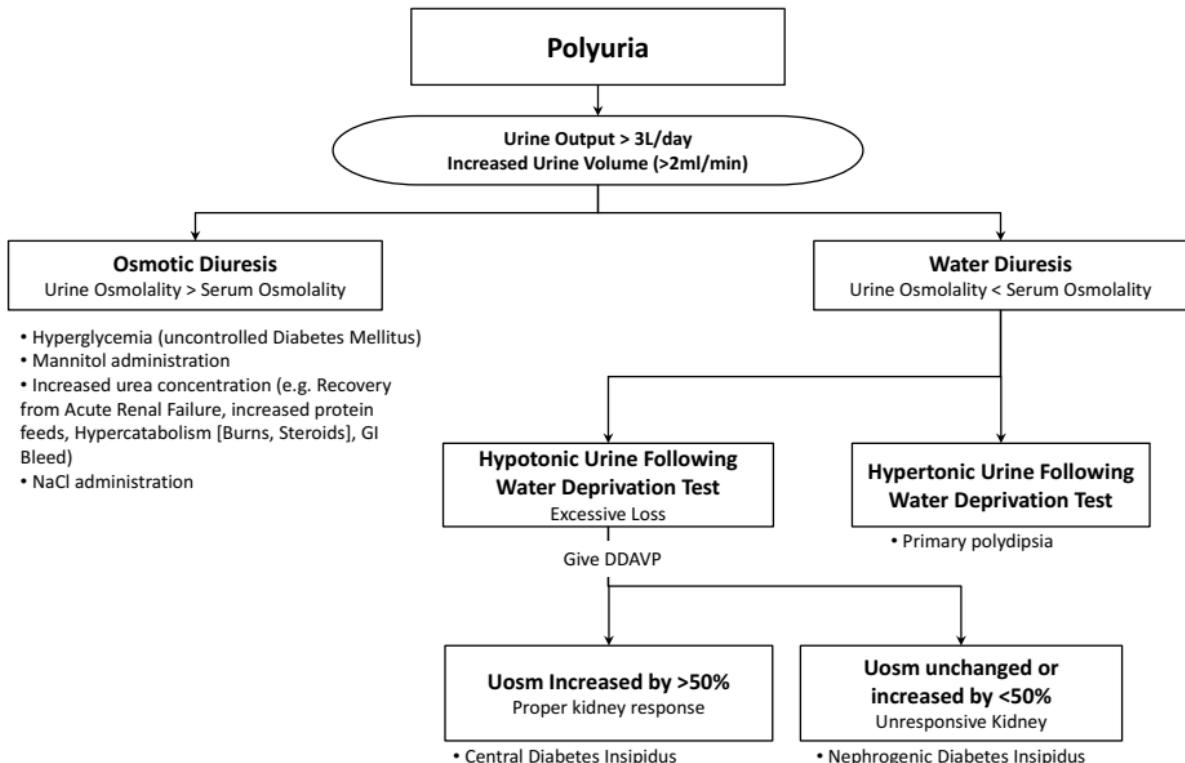
Increased Urinary Frequency



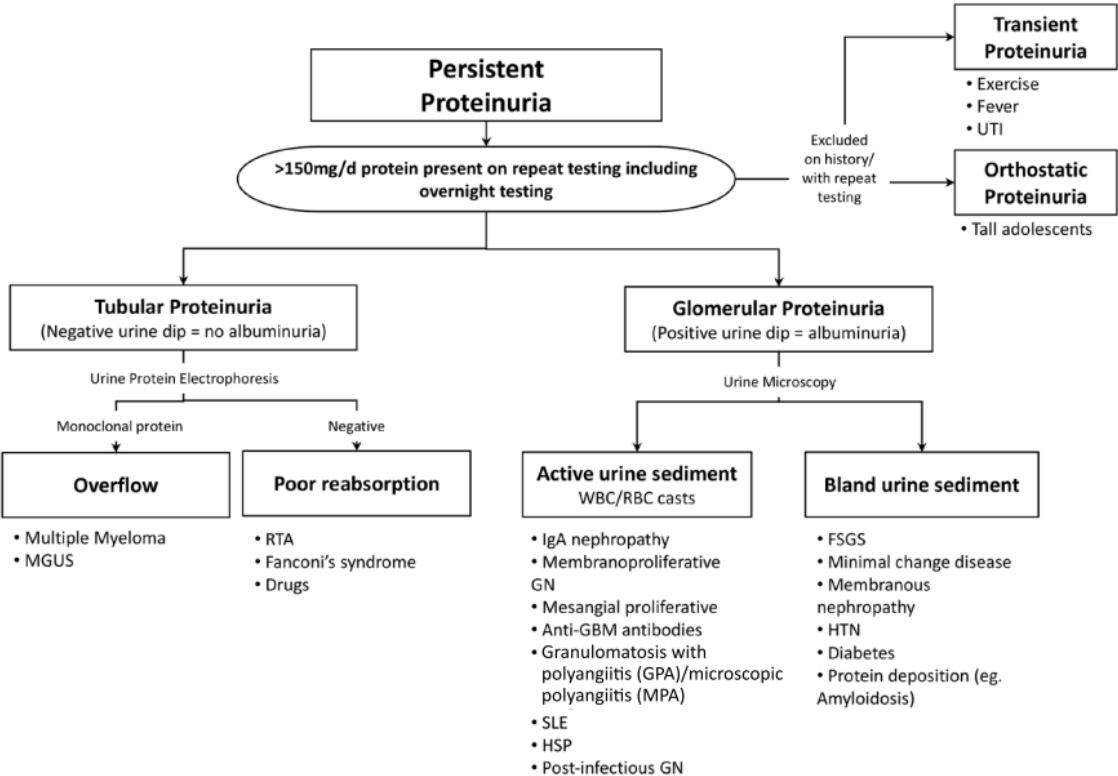
Nephrolithiasis



Polyuria

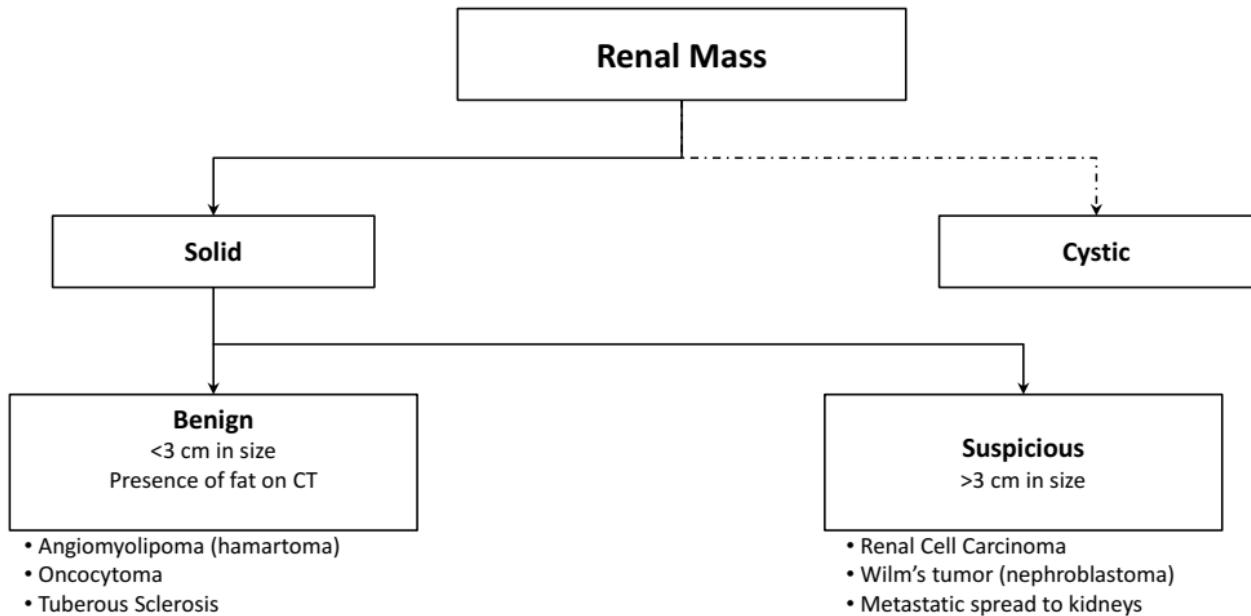


Proteinuria



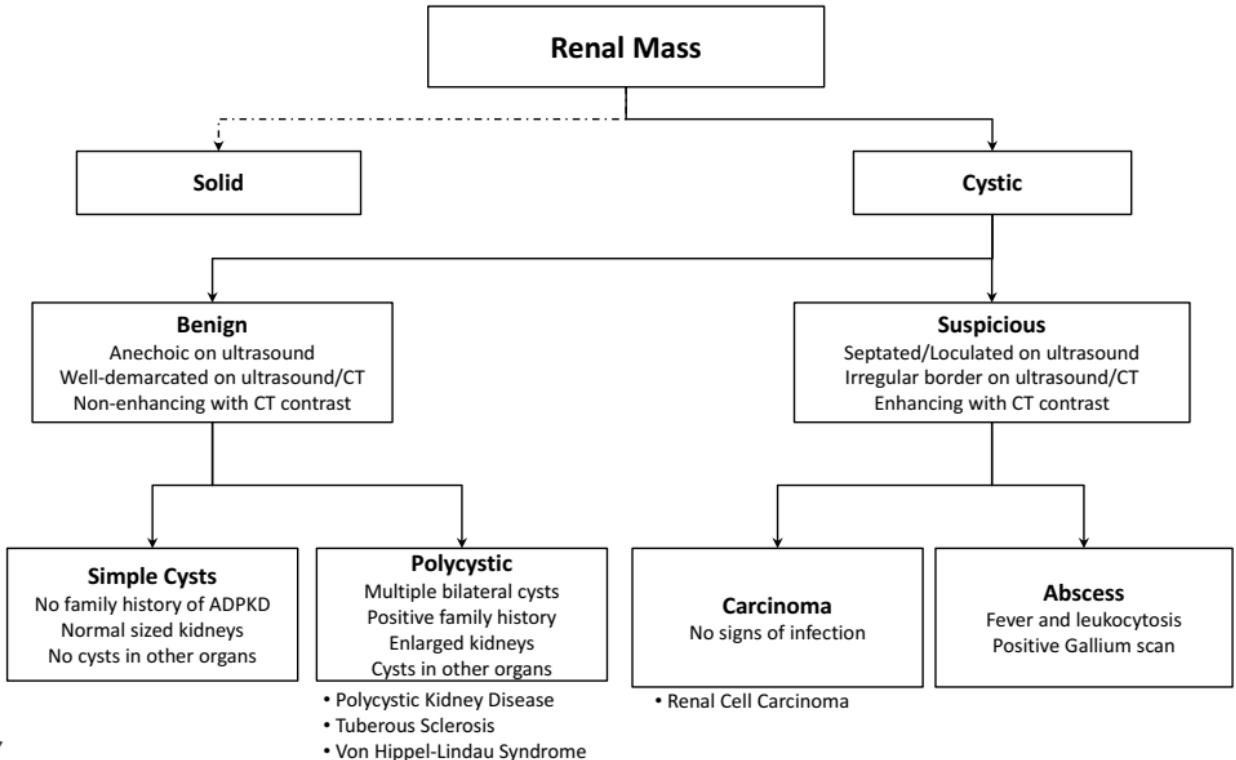
Renal Mass

Solid

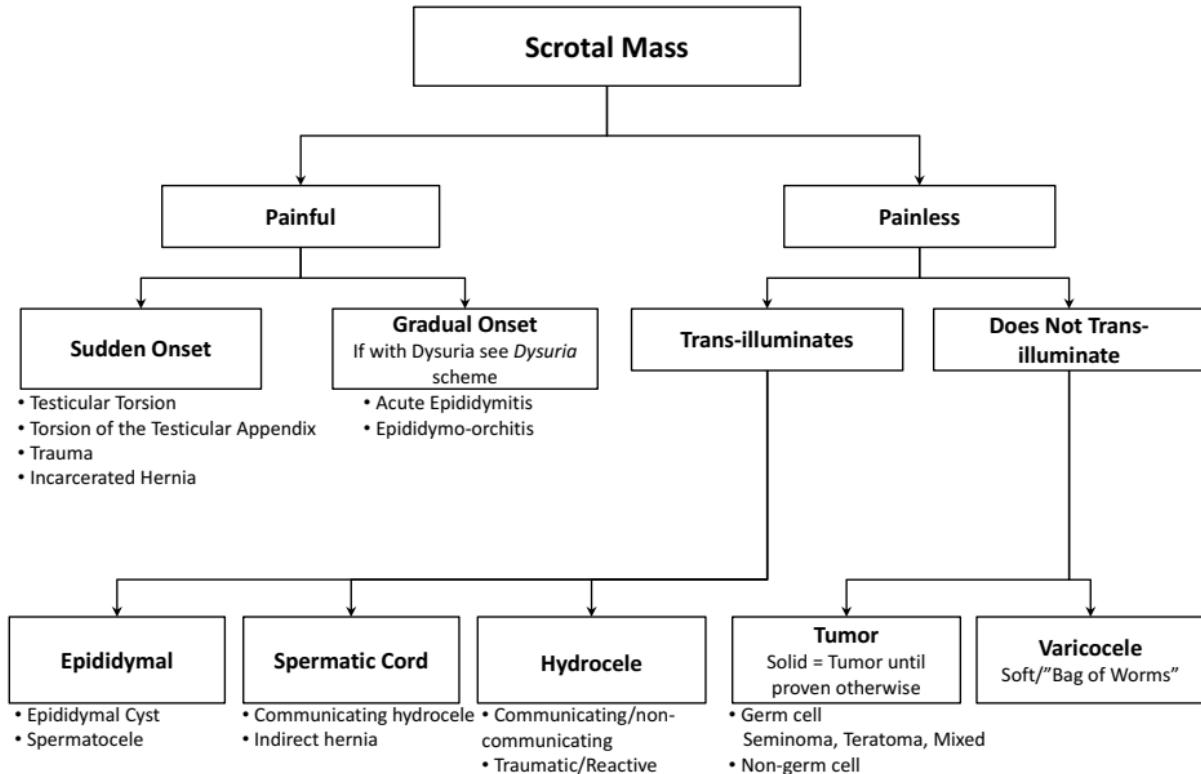


Renal Mass

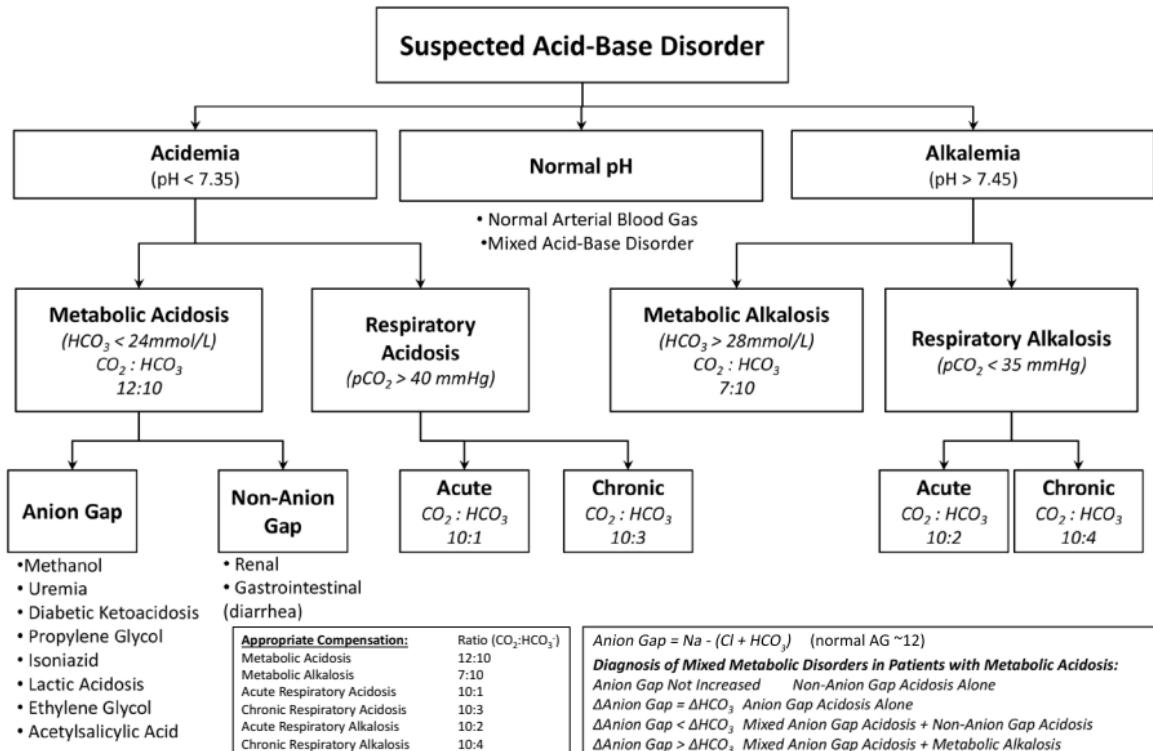
Cystic



Scrotal Mass



Suspected Acid-Base Disturbance



Metabolic Acidosis

Elevated Anion Gap

$$\text{Anion Gap} = \text{Na} - (\text{Cl} + \text{HCO}_3^-) \quad (\text{normal AG } \sim 12)$$

Diagnosis of Mixed Metabolic Disorders in Patients with Metabolic Acidosis:
Anion Gap Not Increased Non-Anion Gap Acidosis Alone
 $\Delta\text{Anion Gap} = \Delta\text{HCO}_3^-$, Anion Gap Acidosis Alone
 $\Delta\text{Anion Gap} < \Delta\text{HCO}_3^-$, Mixed Anion Gap Acidosis + Non-Anion Gap Acidosis
 $\Delta\text{Anion Gap} > \Delta\text{HCO}_3^-$, 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^+)

Normal Anion Gap (≤ 12)
(Loss of HCO_3^-)

Excess acid addition

Decreased NH_4^+ production and anion secretion

• AKI/CKD

Positive serum salicylate level

Salicylate poisoning

Elevated serum lactate

Lactic acidosis

Positive serum ketones

Ketosis

Elevated osmolar gap

Toxic alcohol ingestion

Other ingestion

- Shock
- Drugs
- Inborn errors

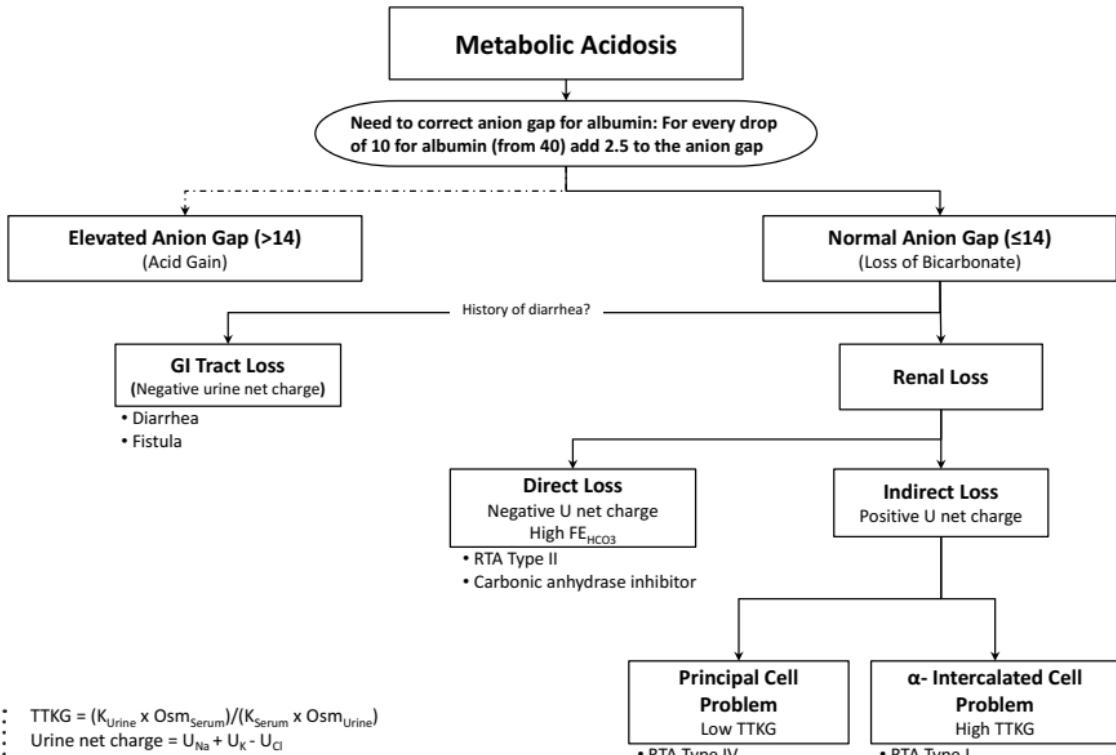
- Diabetic ketoacidosis
- Starvation/alcoholic ketosis

- Ethylene/Propylene glycol
- Methanol

- Paraldehyde, Iron, Isoniazid, Toluene, Cyanide

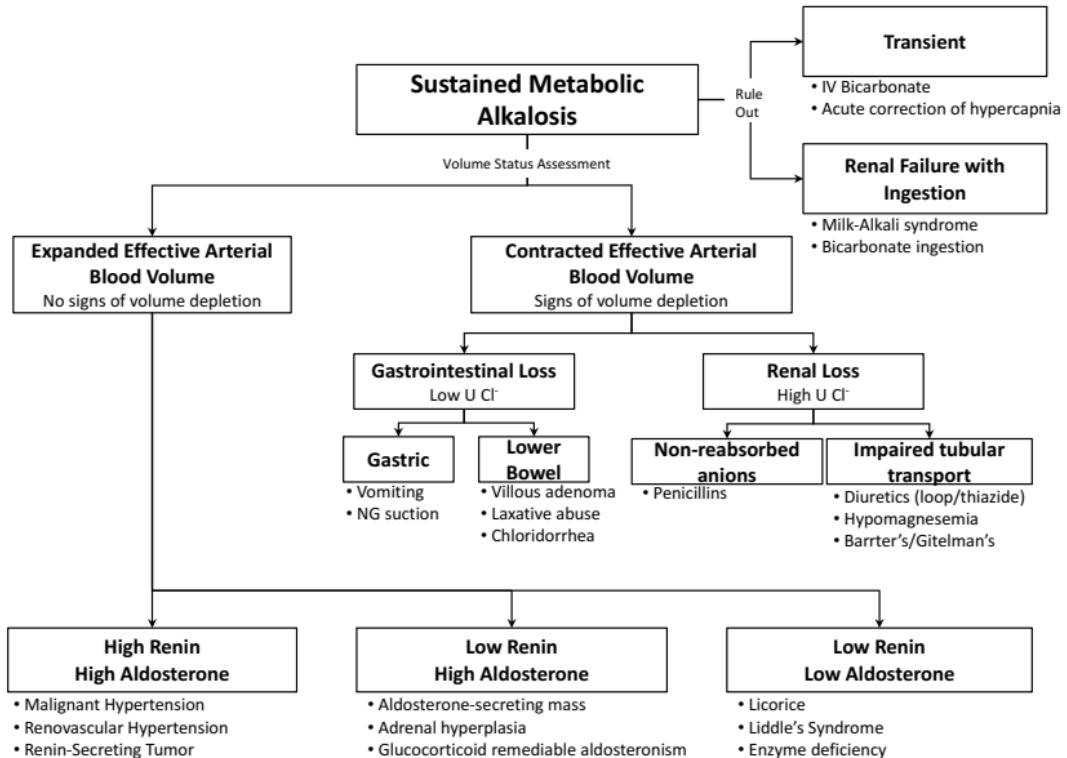
Metabolic Acidosis

Normal Anion Gap

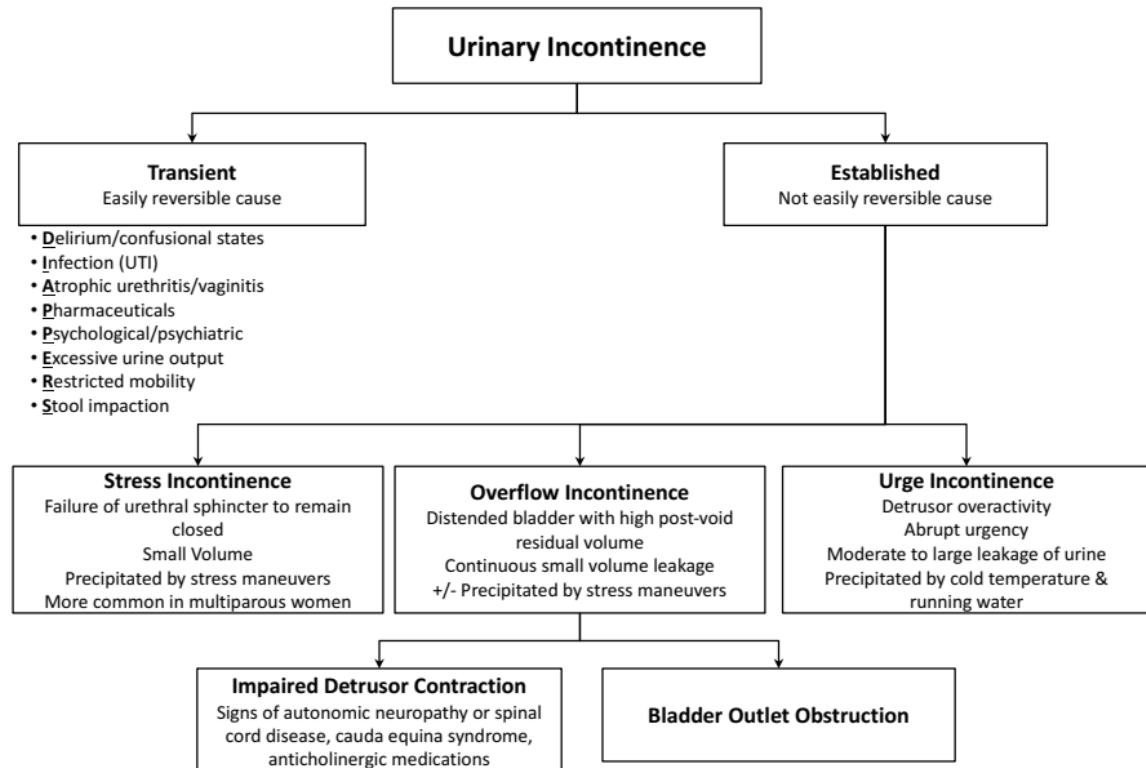


$$TTKG = (\text{K}_{\text{Urine}} \times \text{Osm}_{\text{Serum}}) / (\text{K}_{\text{Serum}} \times \text{Osm}_{\text{Urine}})$$
$$\text{Urine net charge} = \text{U}_\text{Na} + \text{U}_\text{K} - \text{U}_\text{Cl}$$

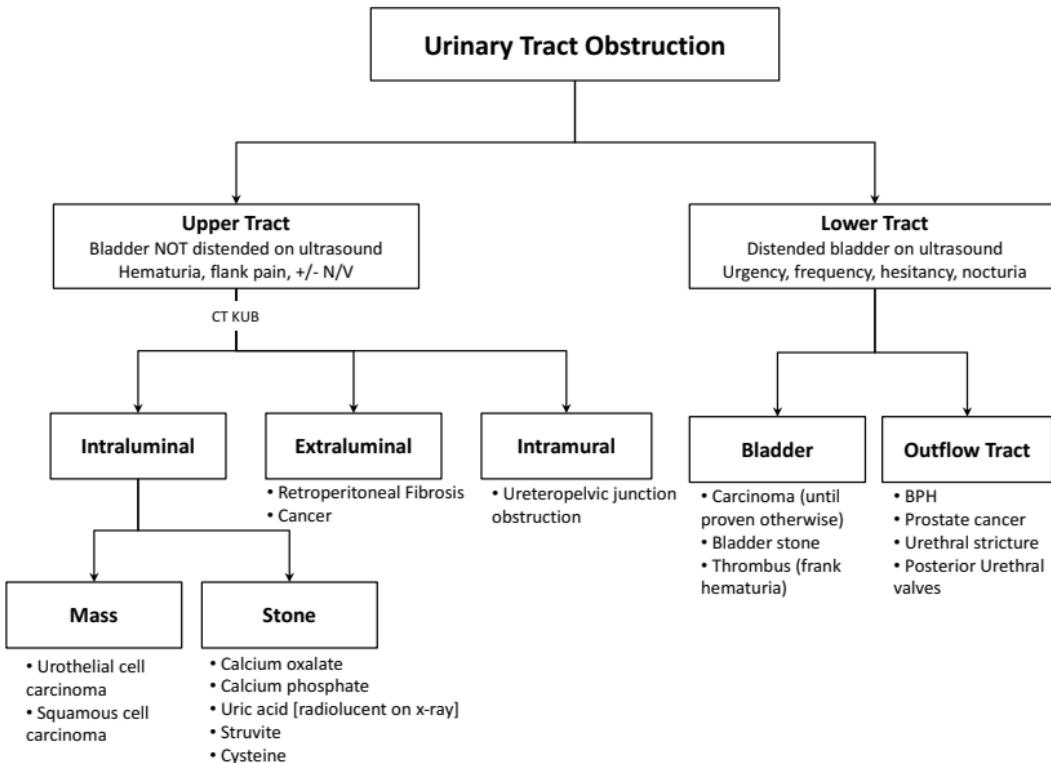
Metabolic Alkalosis



Urinary Incontinence



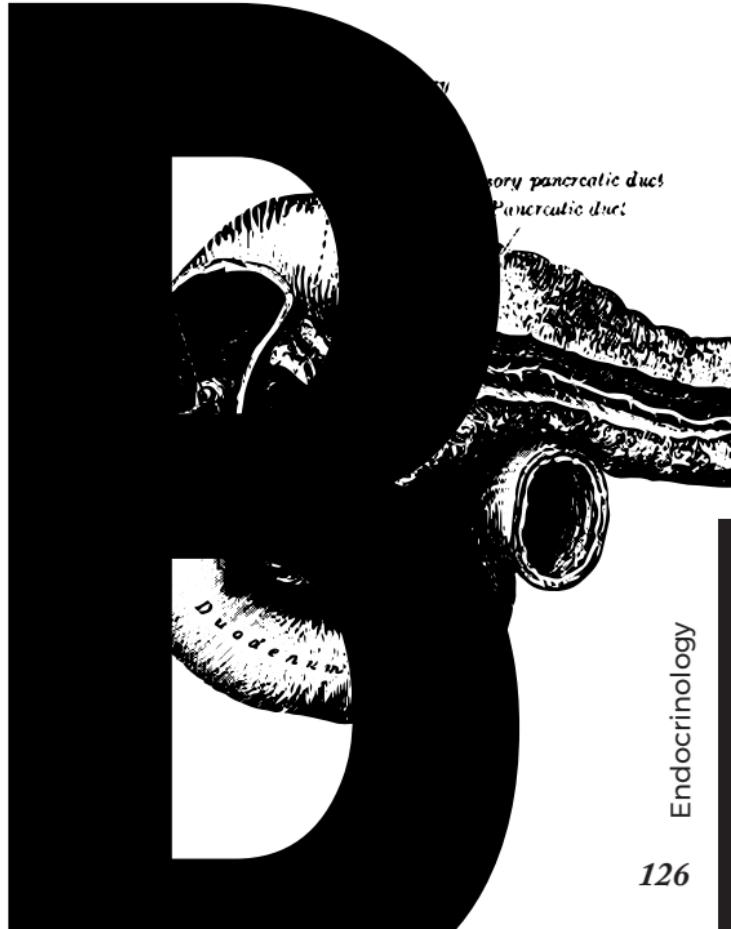
Urinary Tract Obstruction



Endocrinology

Abnormal Lipid Profile Combined & Decreased HDL	129	Hirsutism & Virilization Androgen Excess....	139
Abnormal Lipid Profile Increased LDL & Increased Triglycerides.....	130	Hirsutism & Virilization Hypertrichosis.....	140
Abnormal Serum TSH.....	131	Hypercalcemia Low PTH	141
Adrenal Mass Benign	132	Hypercalcemia Normal / High PTH.....	142
Adrenal Mass Malignant	133	Hypocalcemia High Phosphate	143
Amenorrhea.....	134	Hypocalcemia Low Phosphate	144
Breast Discharge	135	Hypocalcemia High / Low PTH.....	145
Gynecomastia Increased Estrogen & Increased HCG	136	Hyperglycemia	146
Gynecomastia Increased LH & Decreased Testosterone	137	Hypoglycemia	147
Hirsutism.....	138	Hyperphosphatemia.....	148
		Hypophosphatemia	149
		Hyperthyroidism.....	150
		Hypothyroidism.....	151
		Hyperuricemia.....	152

Male Sexual Dysfunction	153
Sellar / Pituitary Mass	154
Sellar / Pituitary Mass Size	155
Short Stature	156
Tall Stature	157
Weight Gain / Obesity	158



Historical Editors

Dr. Andrew Wade

Dr. Sophia Chou

Dave Campbell

Derrick Chan

Marc Chretien

Mollie Ferris

Kody Johnson

Becky Kennedy

Vera Krejcir

Keith Lawson

Vanessa Millar

Eric Sy

Maria Wu

Student Editors

Parul Khanna (*Co-editor*)

Patricia Wong (*Co-editor*)

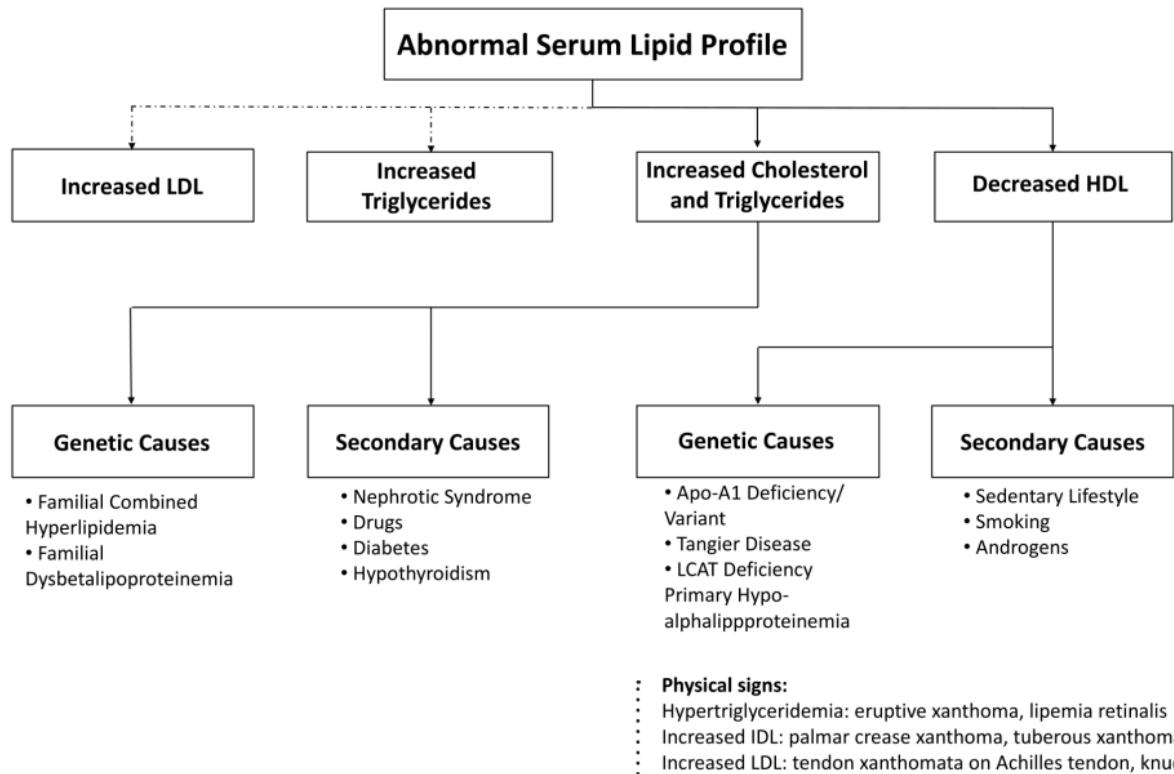
Soreya Dhanji

Faculty Editor

Dr. Kevin McLaughlin

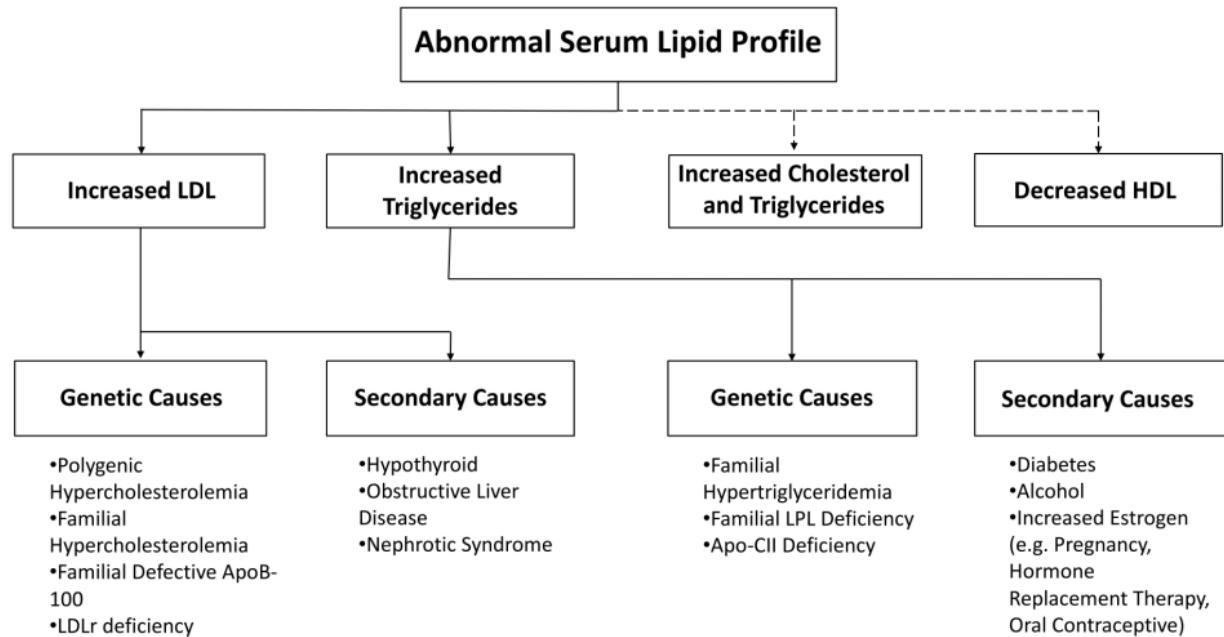
Abnormal Lipid Profile

Combined & Decreased HDL



Abnormal Lipid Profile

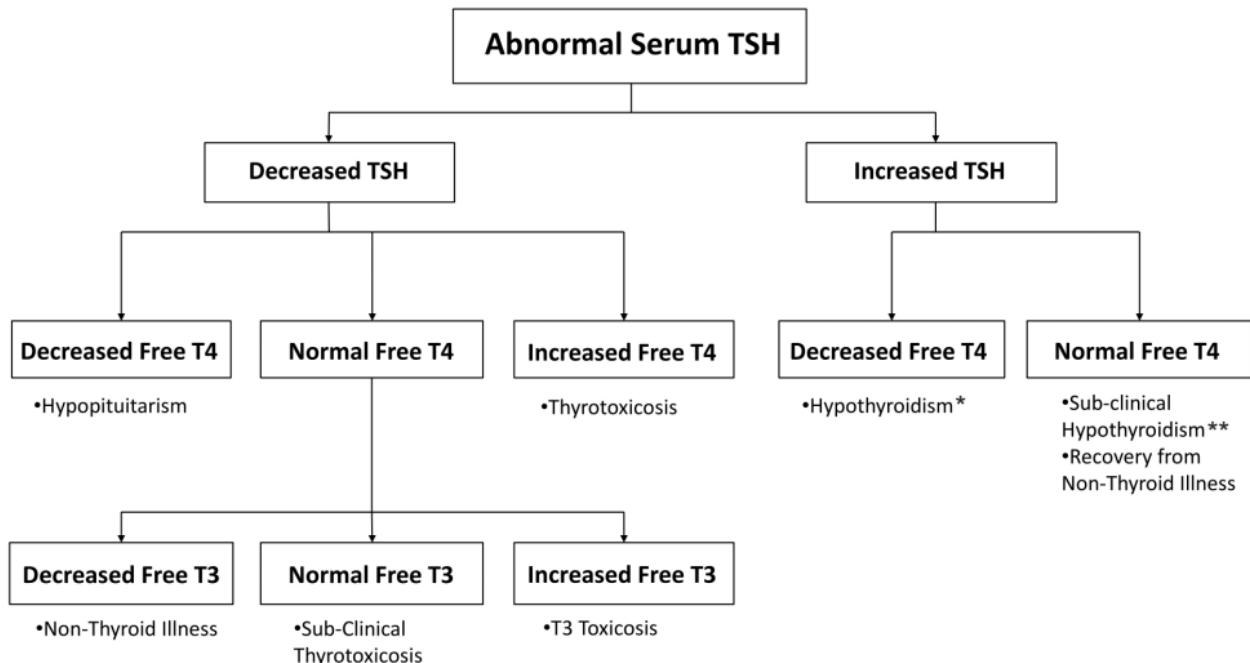
Increased LDL & Increased Triglycerides



Physical signs:

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

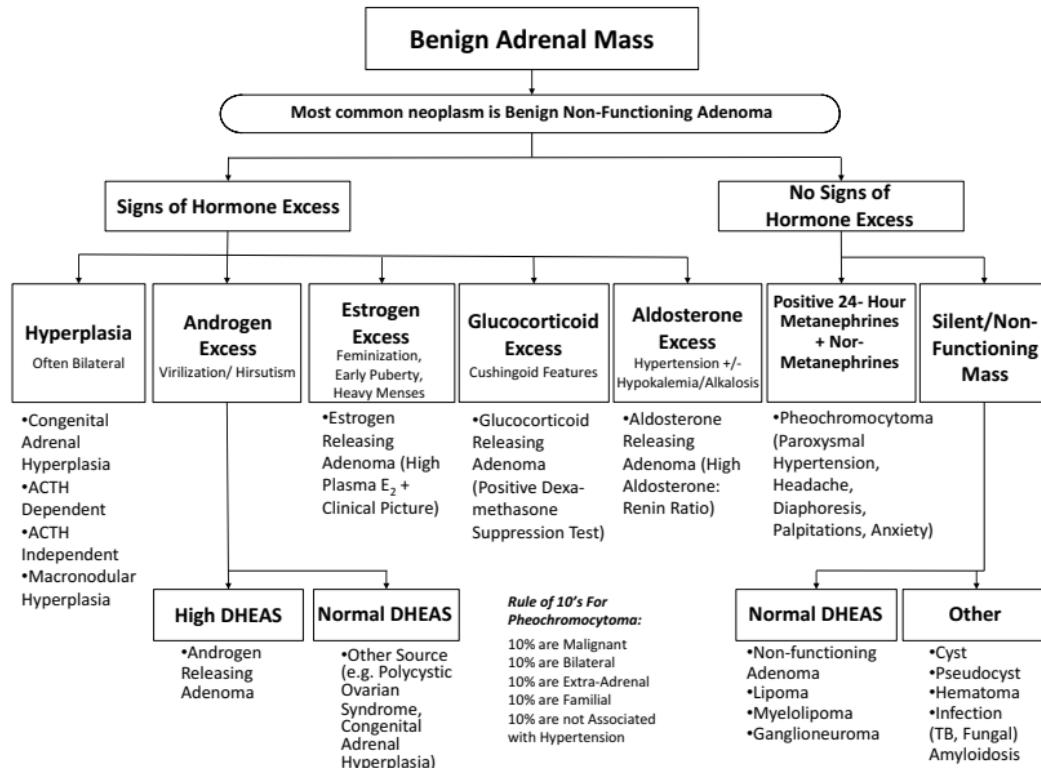
Abnormal Serum TSH



... *Refer to Hyperthyroidism (1) on page 150
... **Refer to Hyperthyroidism (2) on page 151

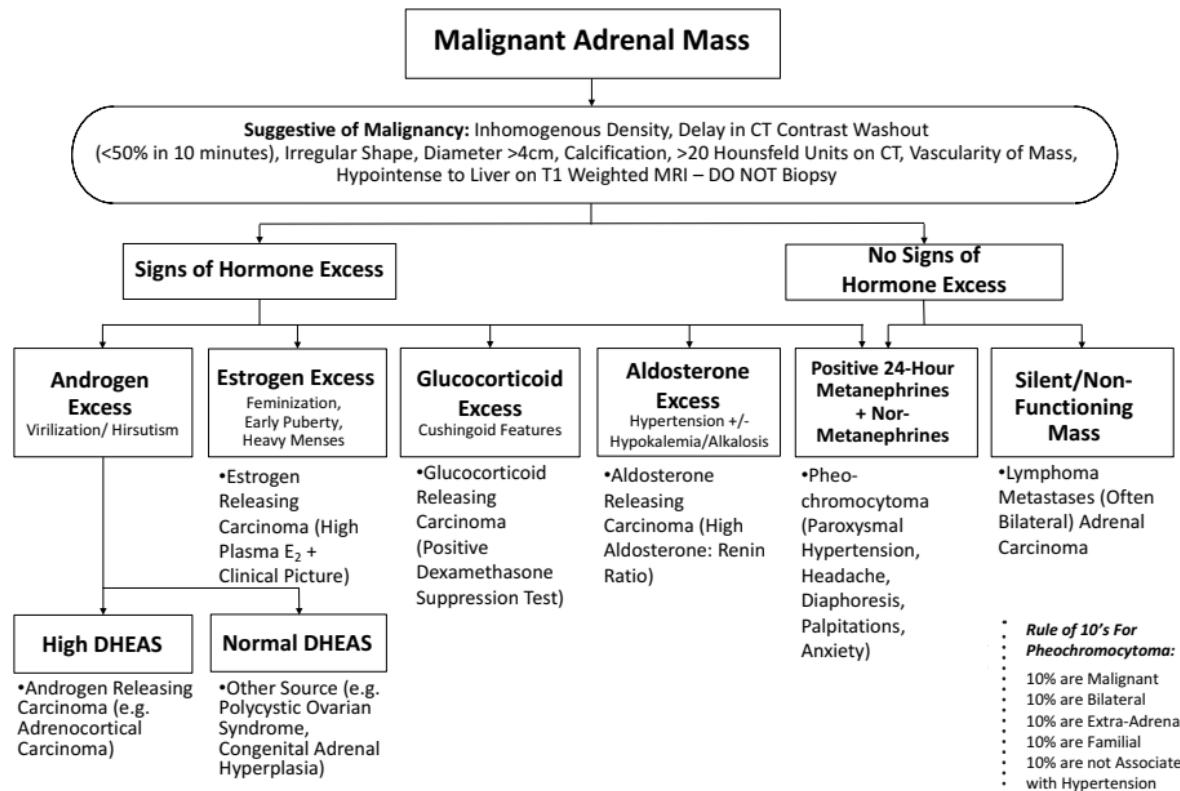
Adrenal Mass

Benign

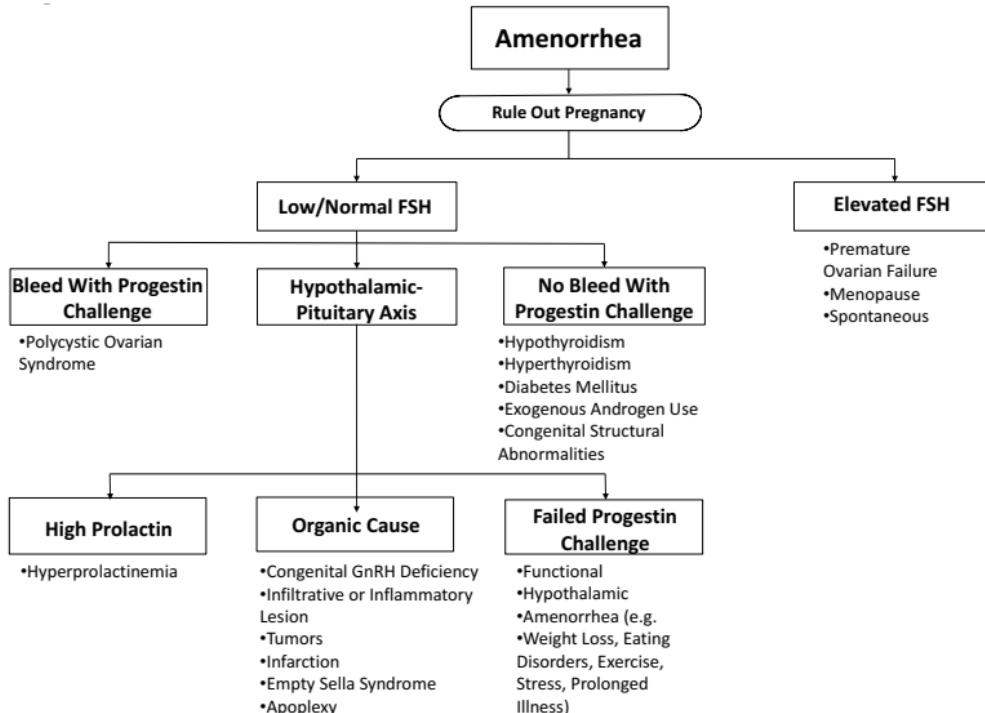


Adrenal Mass

Malignant



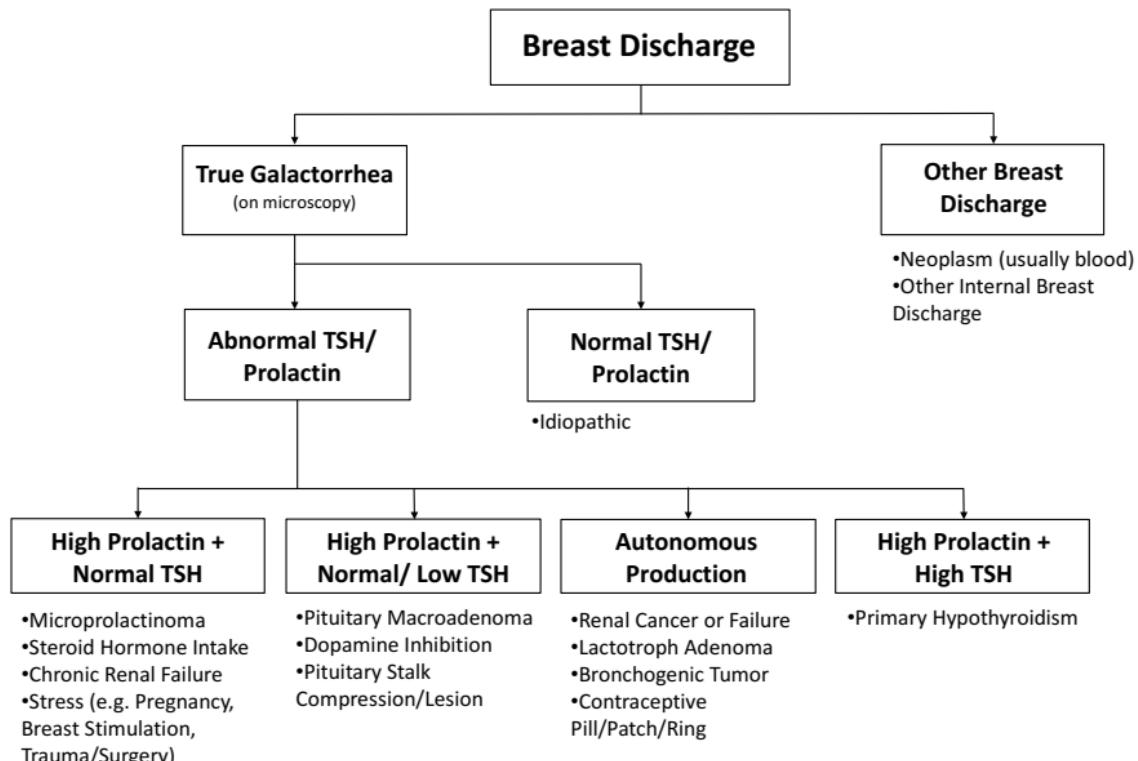
Amenorrhea



If bleed with progestin challenge = estrogenized

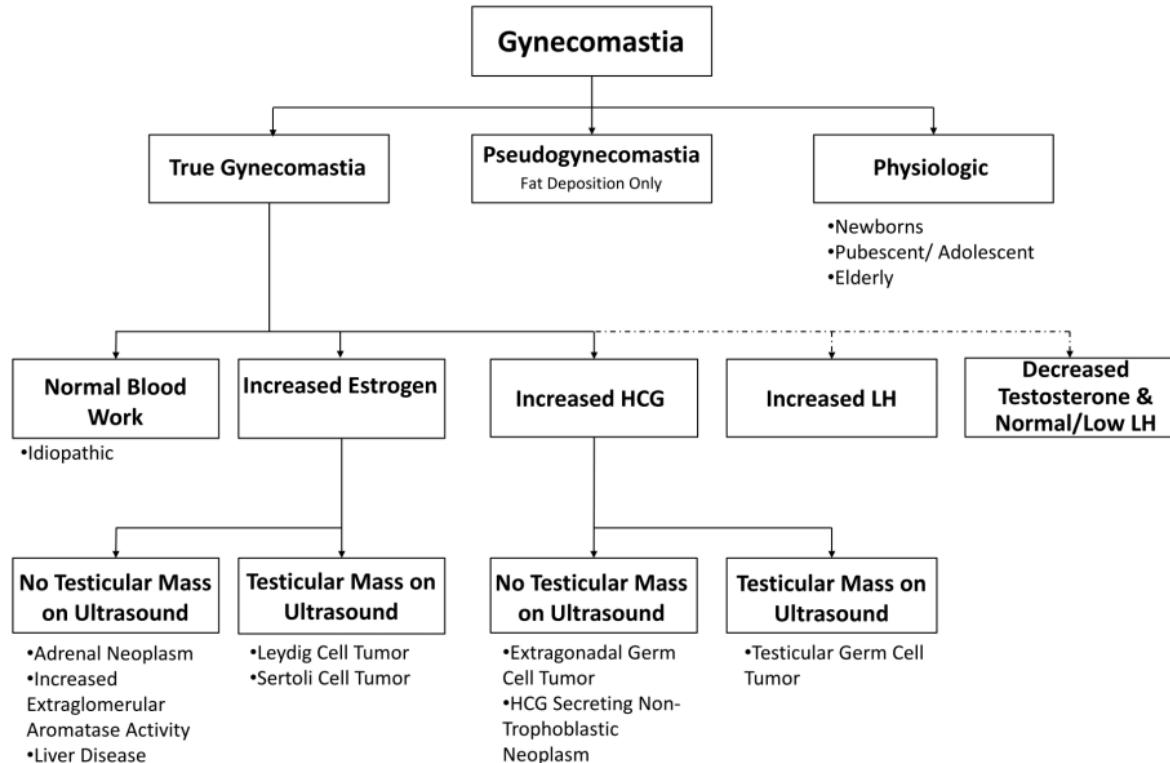
If no bleed with progestin challenge = non-estrogenized

Breast Discharge



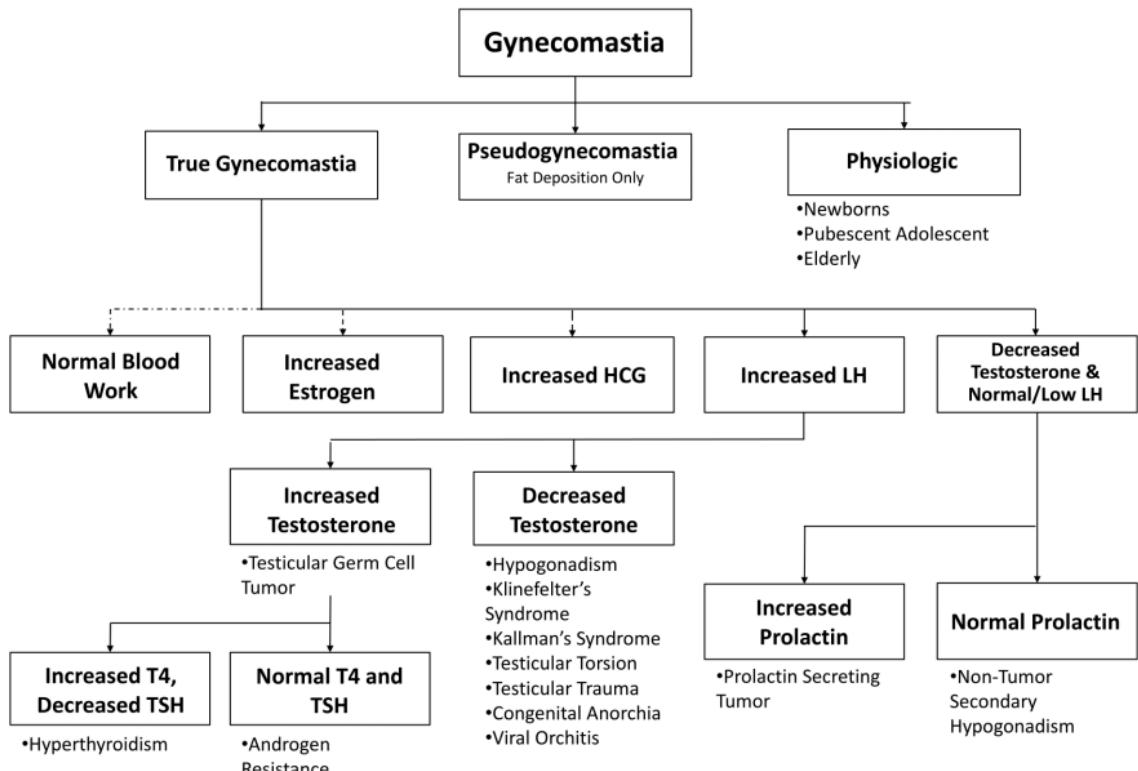
Gynecomastia

Increased Estrogen & Increased HCG

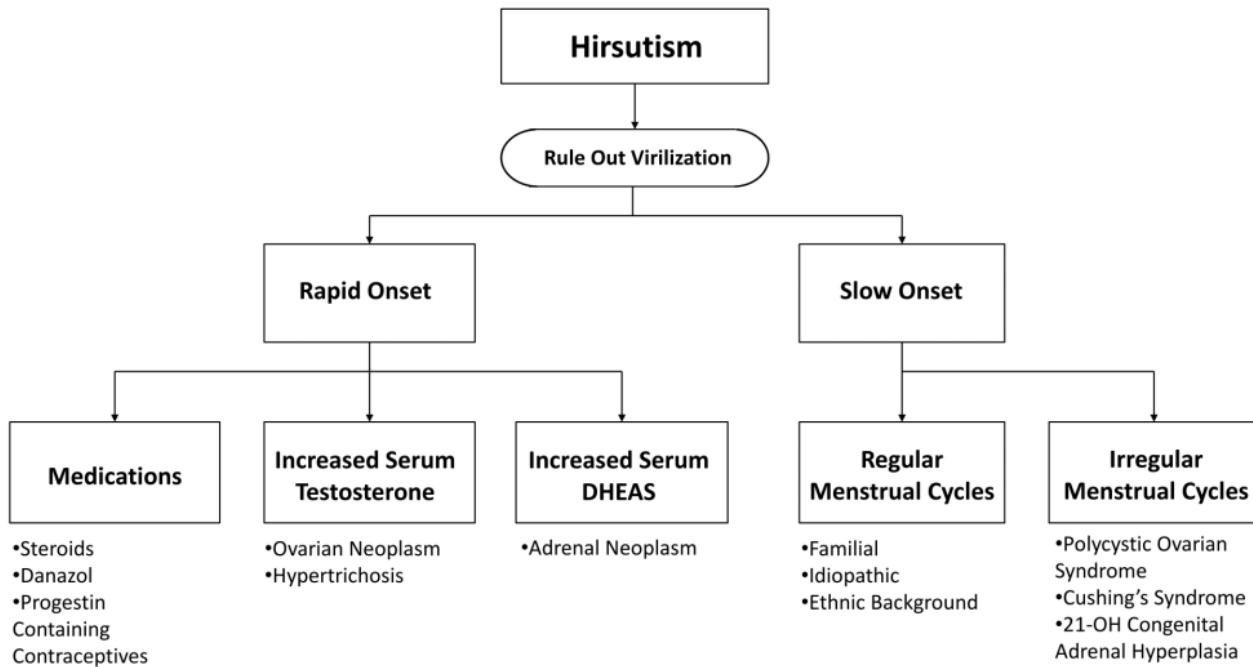


Gynecomastia

Increased LH & Decreased Testosterone

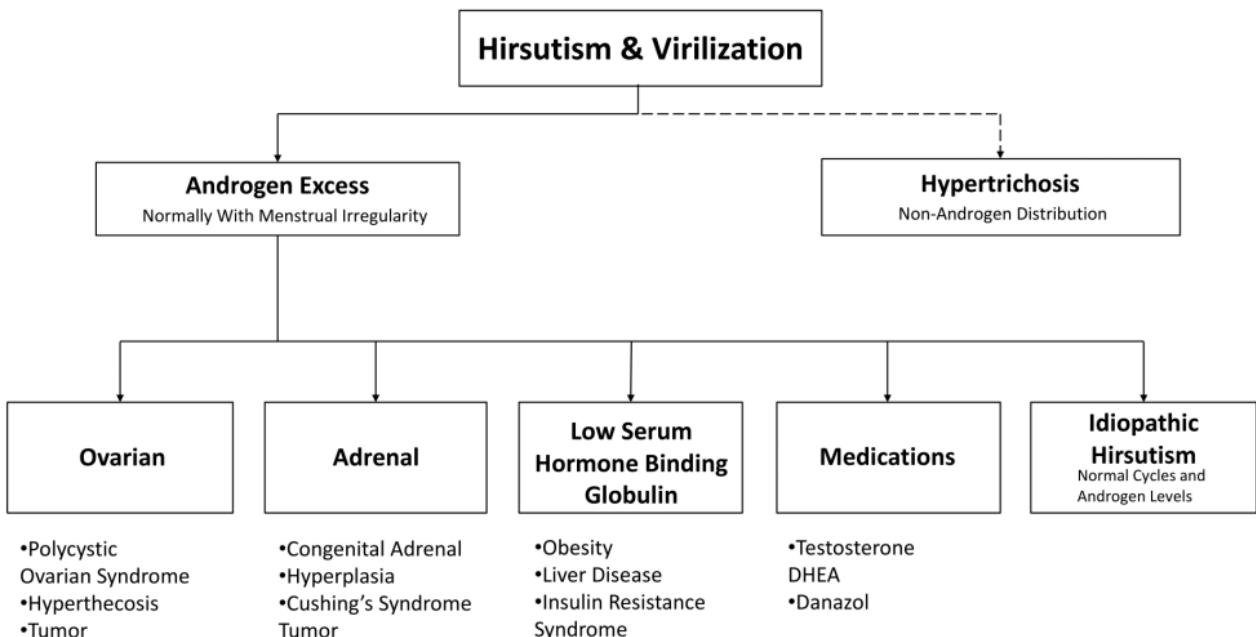


Hirsutism



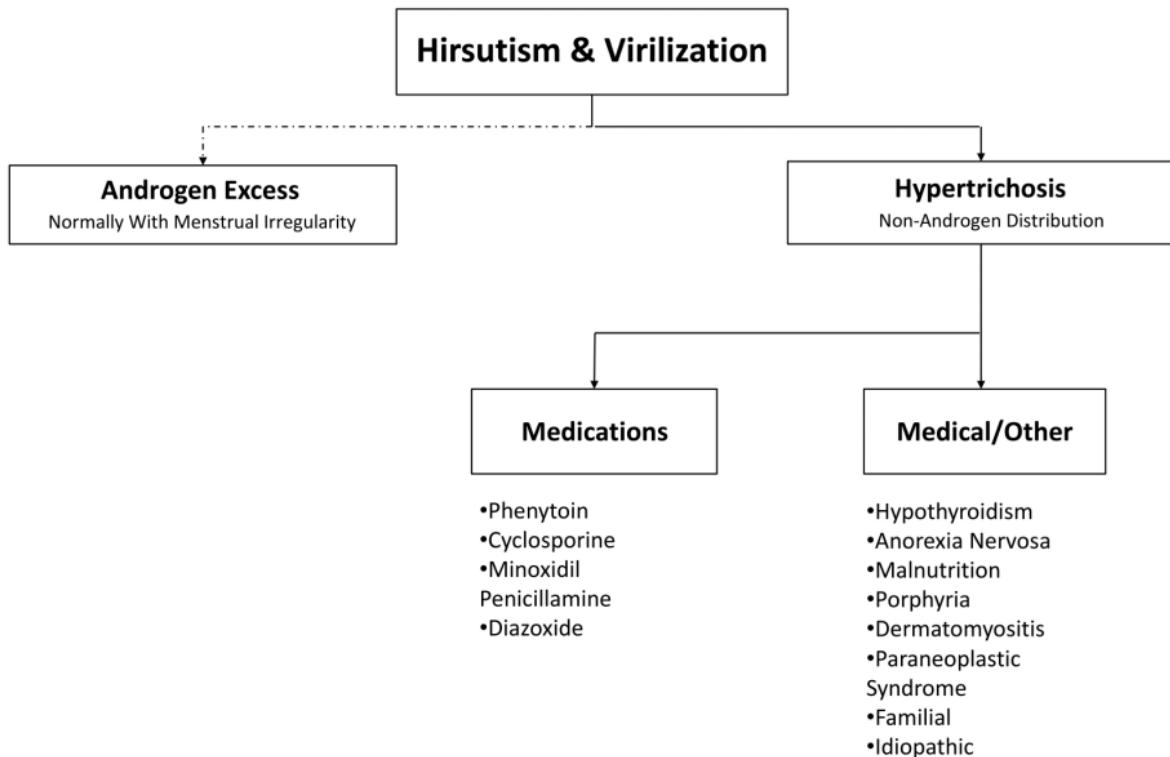
Hirsutism & Virilization

Androgen Excess



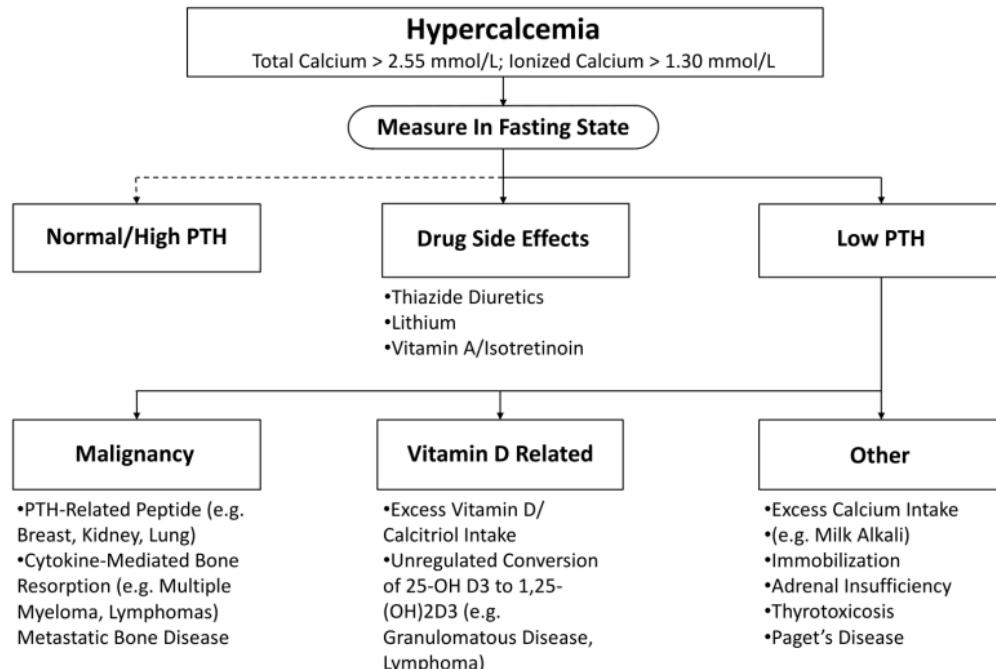
Hirsutism & Virilization

Hypertrichosis



Hypercalcemia

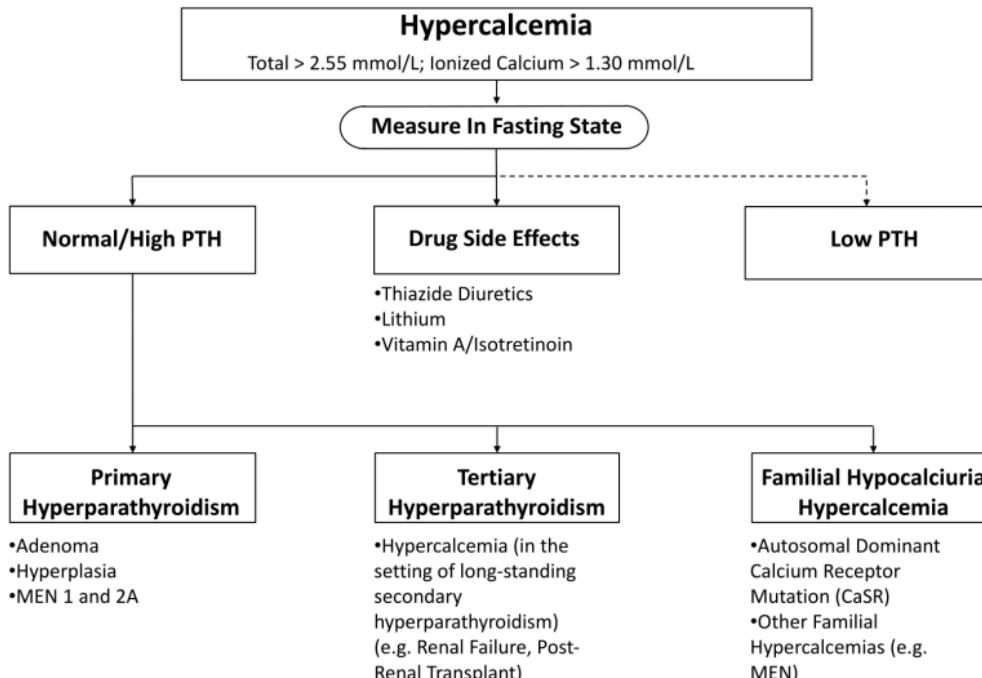
Low PTH



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

Hypercalcemia

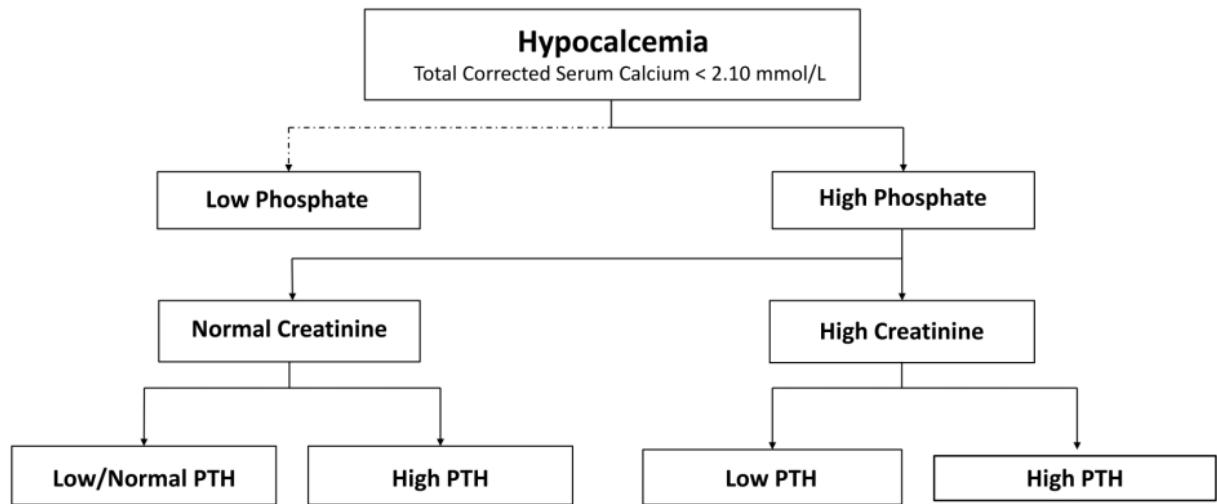
Normal / High PTH



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

Hypocalcemia

High Phosphate



- Hypoparathyroidism (e.g. Acquired, Autoimmune, Idiopathic, Congenital, Infiltrative)
- Activating Mutation in Calcium Sensing Receptor (CaSR)
- Hypomagnesemia

- PTH Resistance (Pseudo-hypoparathyroidism)
- Calcium Complexing
- (Citrate Infusion, Pancreatitis)

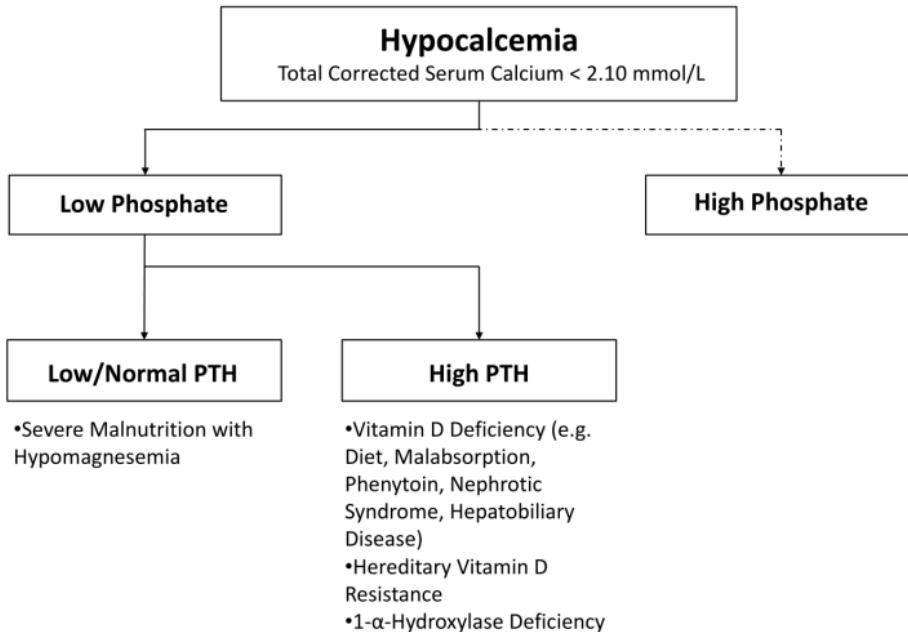
- Hypoparathyroidism with Chronic Kidney Disease

- Secondary Hyperparathyroidism
- Rhabdomyolysis
- Phosphate Poisoning

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

Hypocalcemia

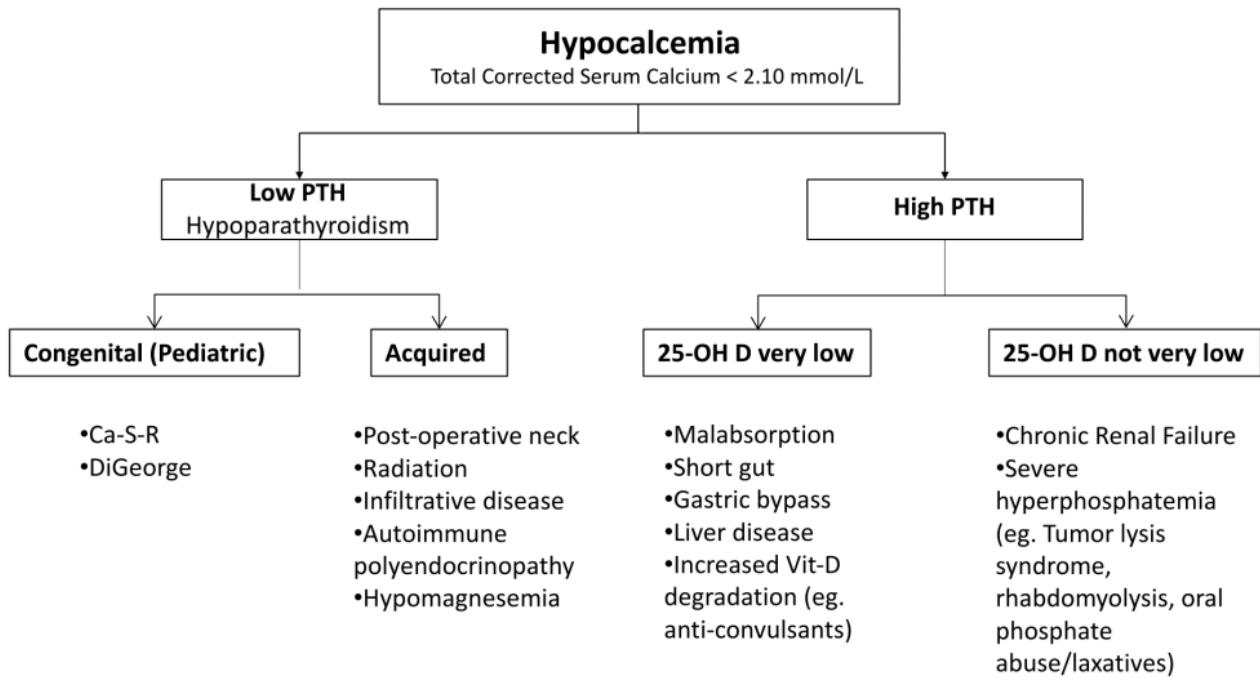
Low Phosphate



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

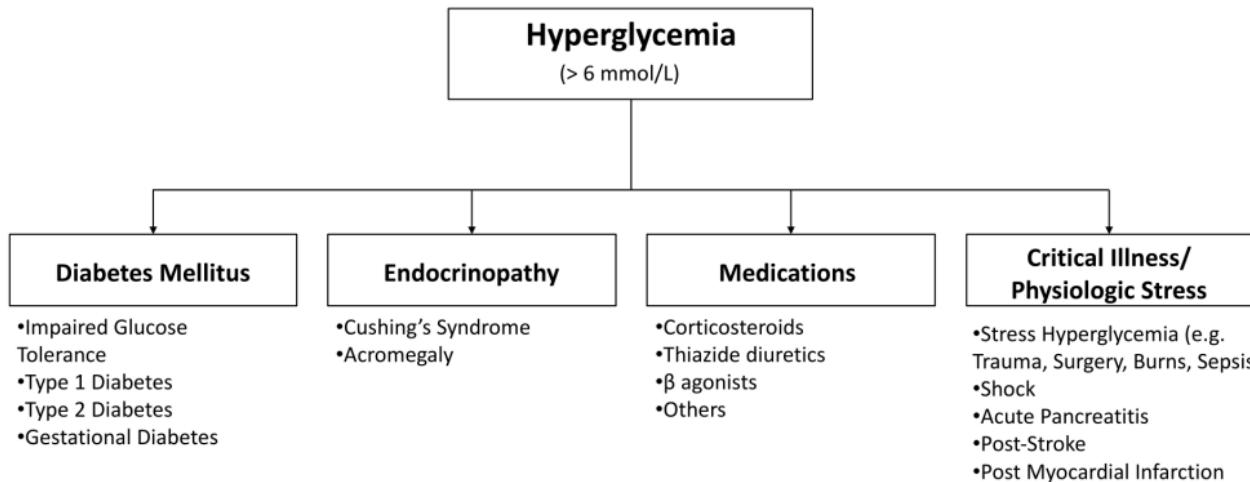
Hypocalcemia

High / Low PTH



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

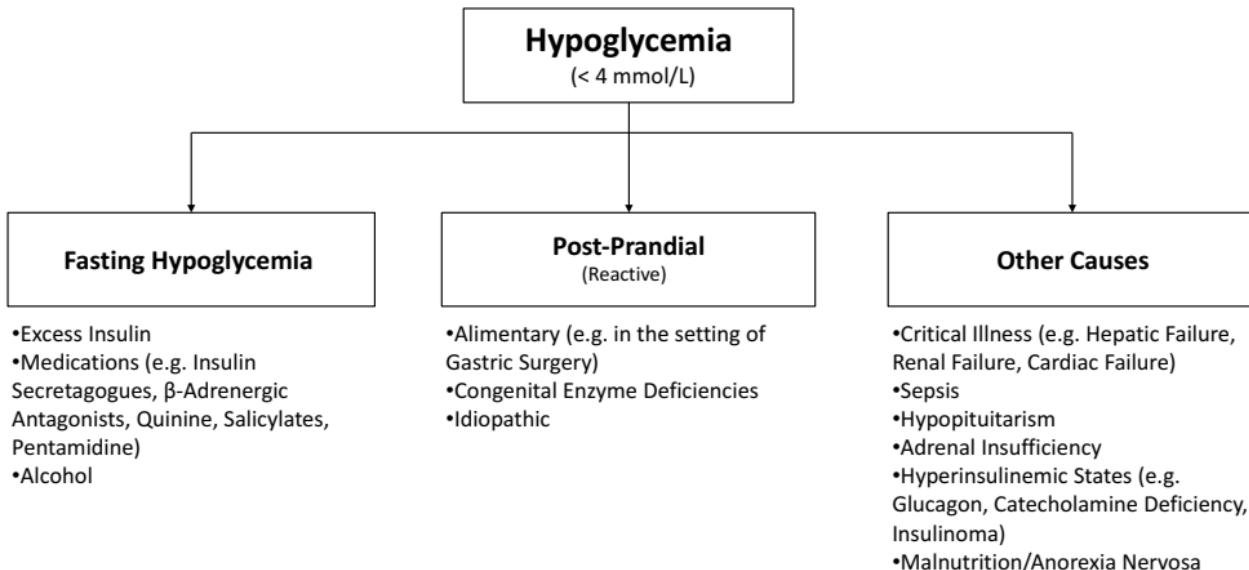
Hyperglycemia



Signs/Symptoms of Hyperglycemia:

Polyphagia, polydipsia, polyuria, blurred vision, fatigue and weight loss

Hypoglycemia

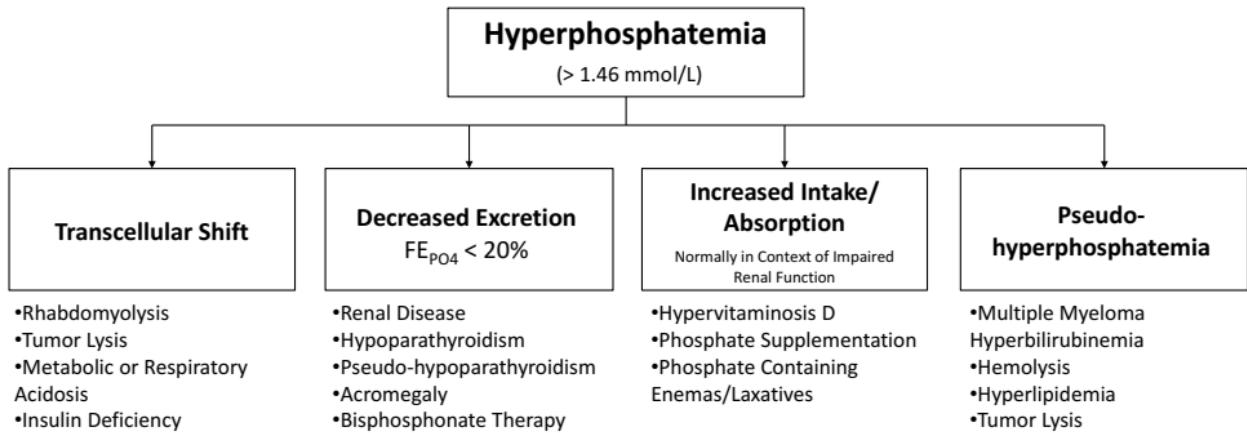


Signs/Symptoms of Hypoglycemia:

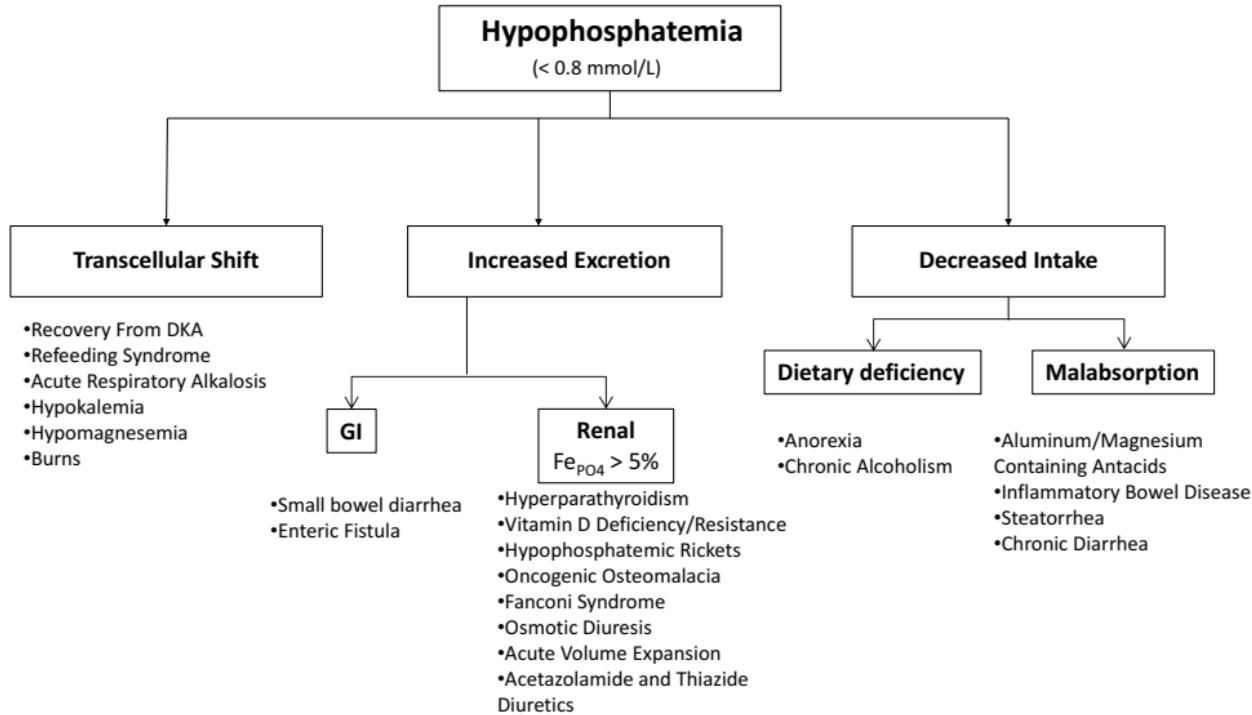
Neurogenic: irritability, tremor, anxiety, palpitations, tachycardia, sweating, pallor, paresthesias

Neuroglycopenia: confusion, lethargy, abnormal behaviour, amnesia, weakness, blurred vision, seizures

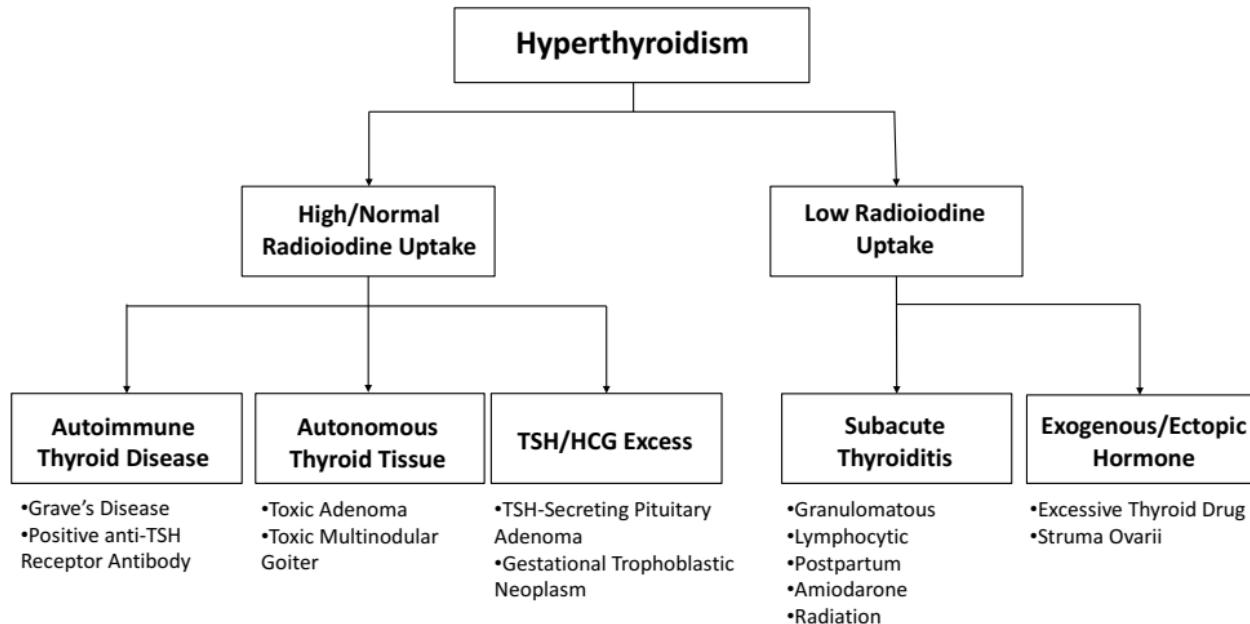
Hyperphosphatemia



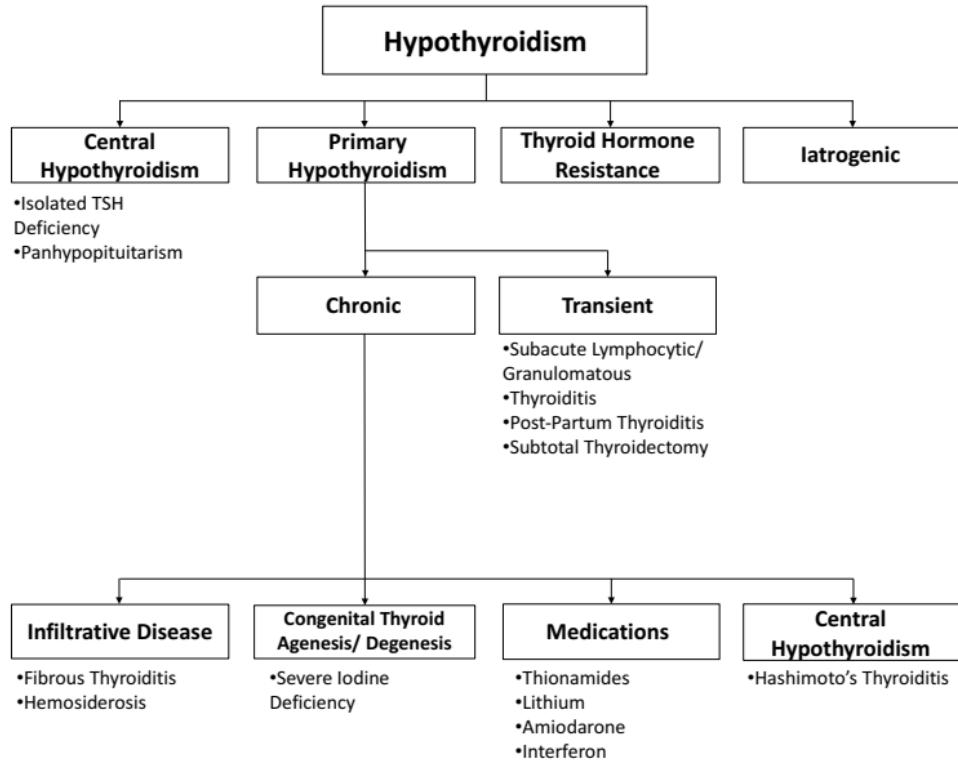
Hypophosphatemia



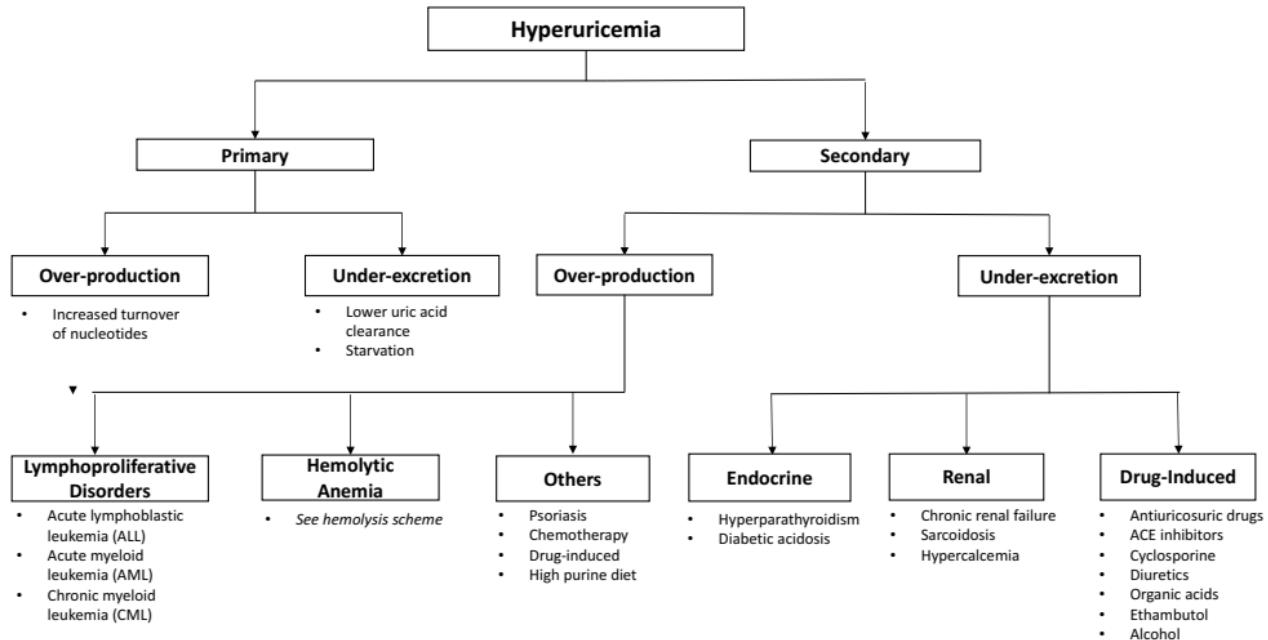
Hyperthyroidism



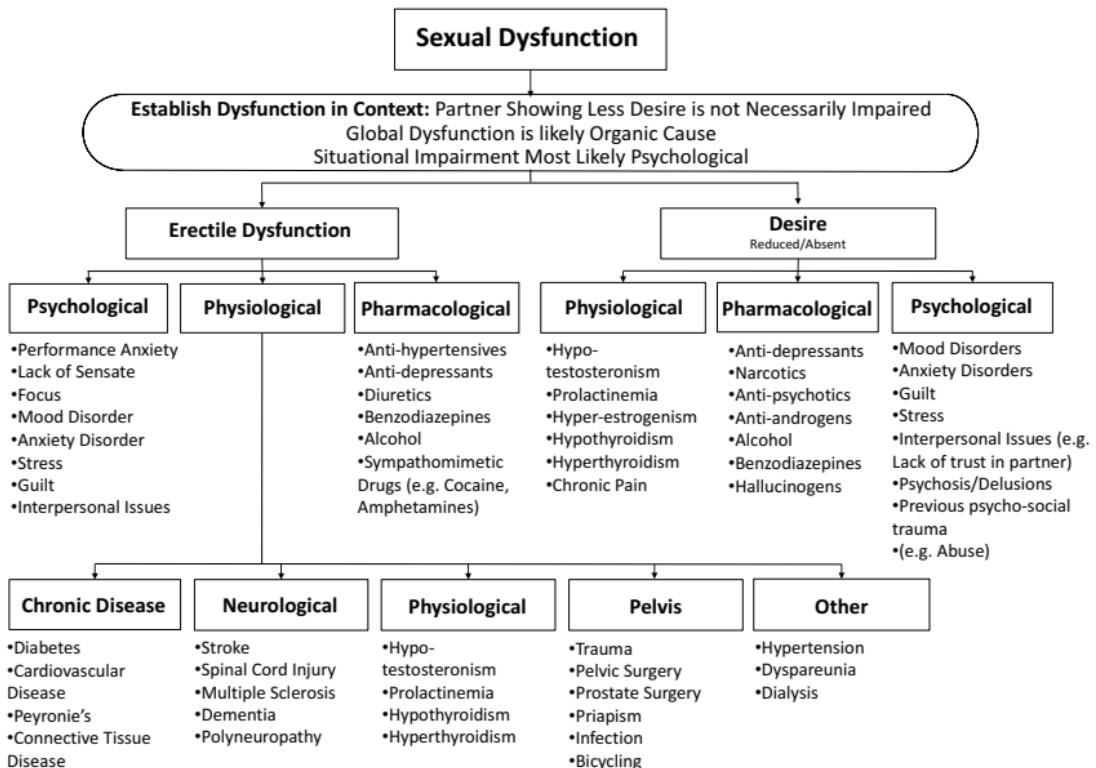
Hypothyroidism



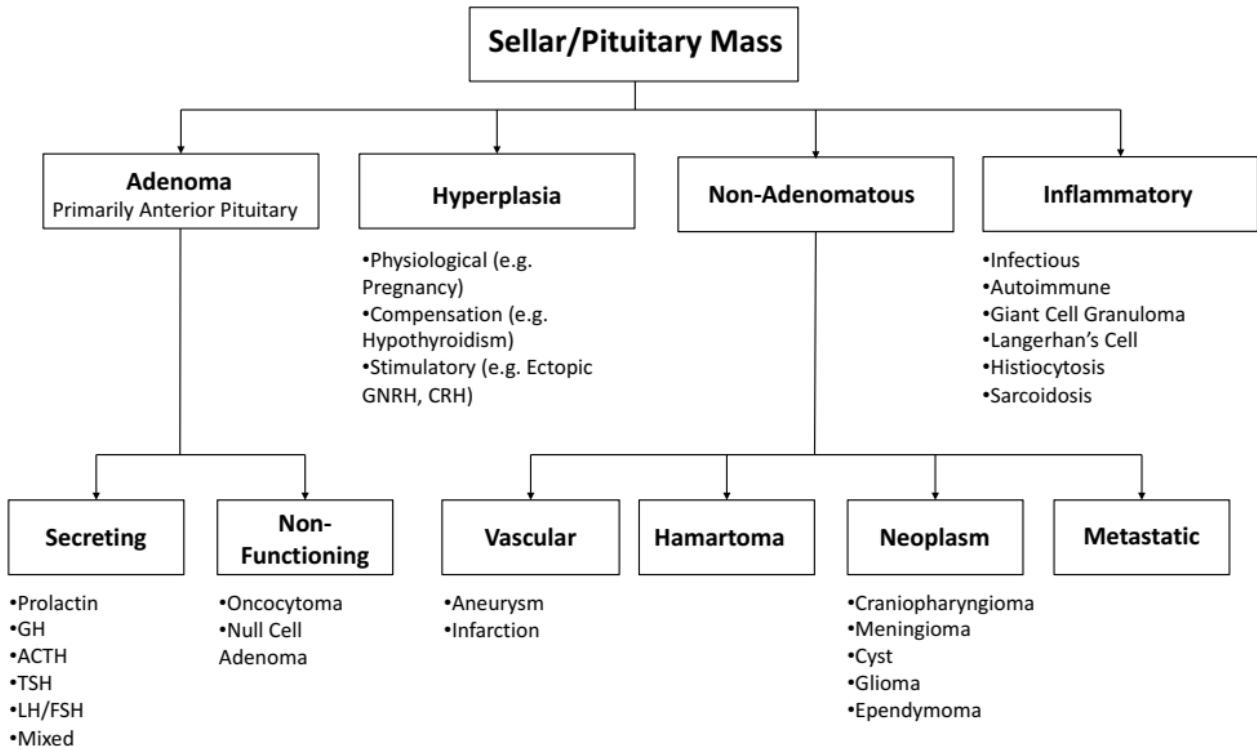
Hyperuricemia



Male Sexual Dysfunction

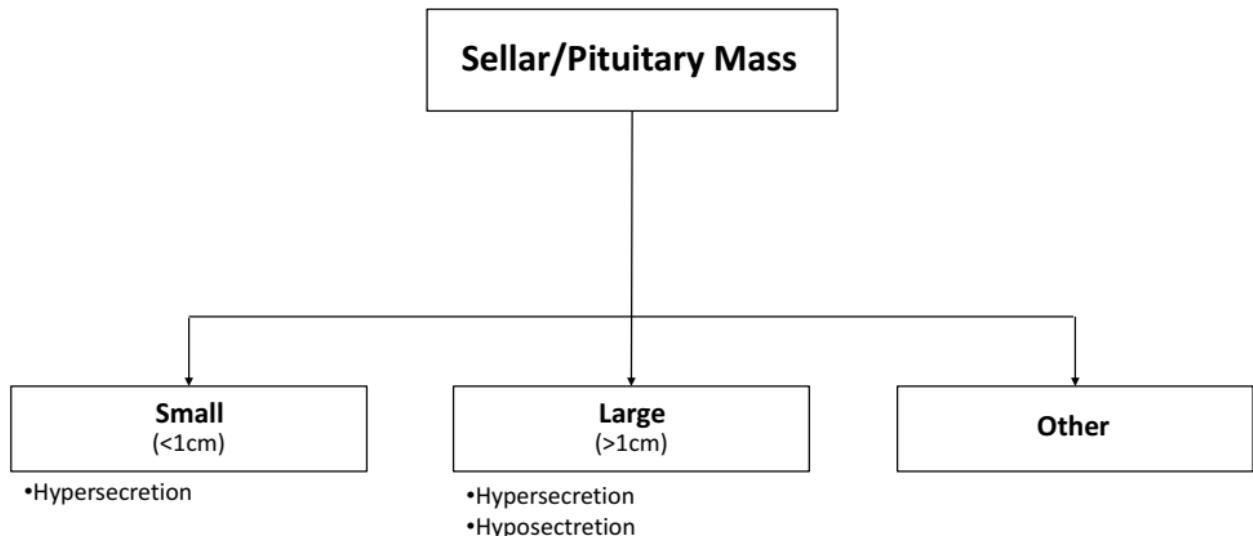


Sellar / Pituitary Mass

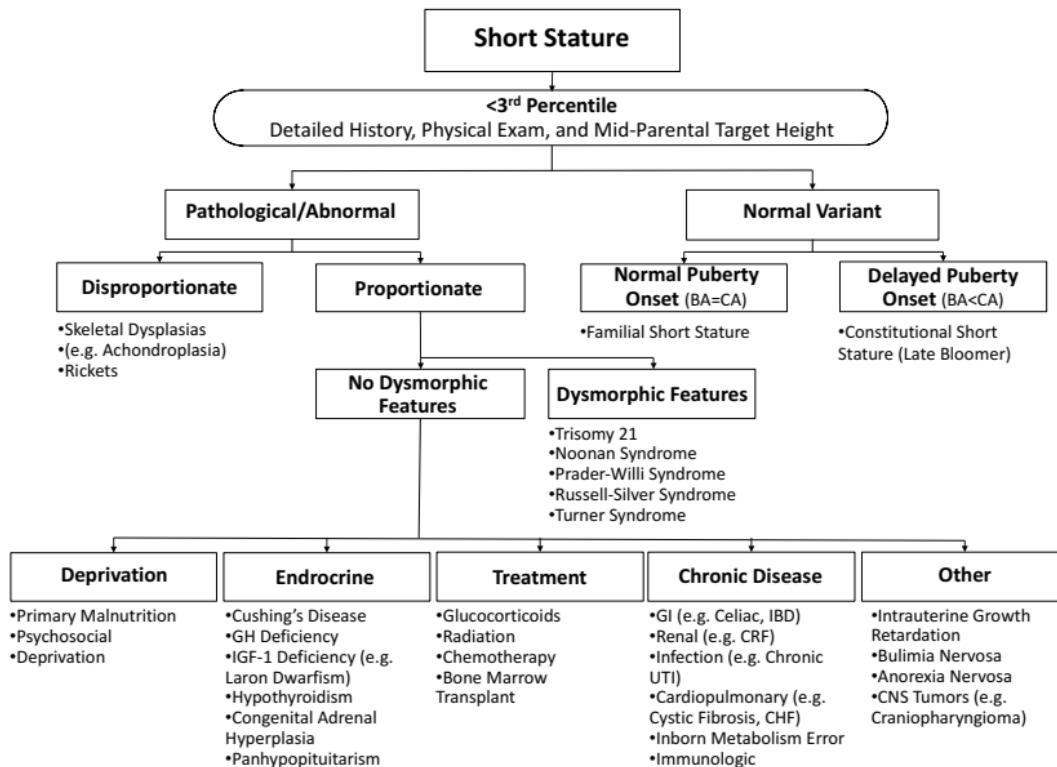


Sellar / Pituitary Mass

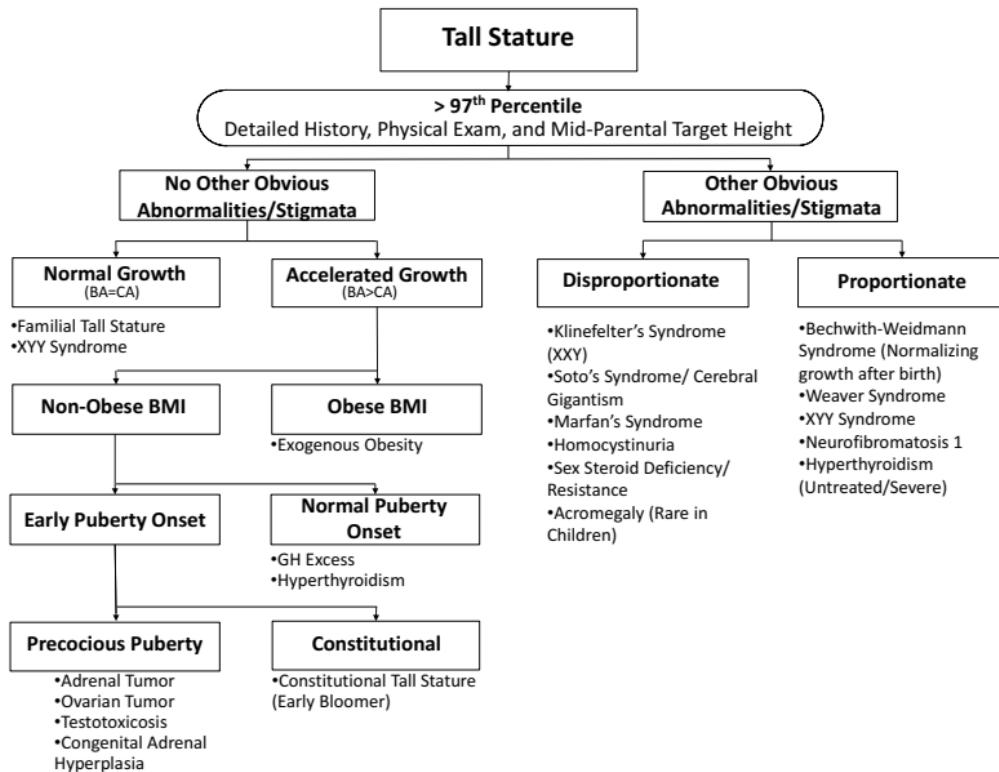
Size



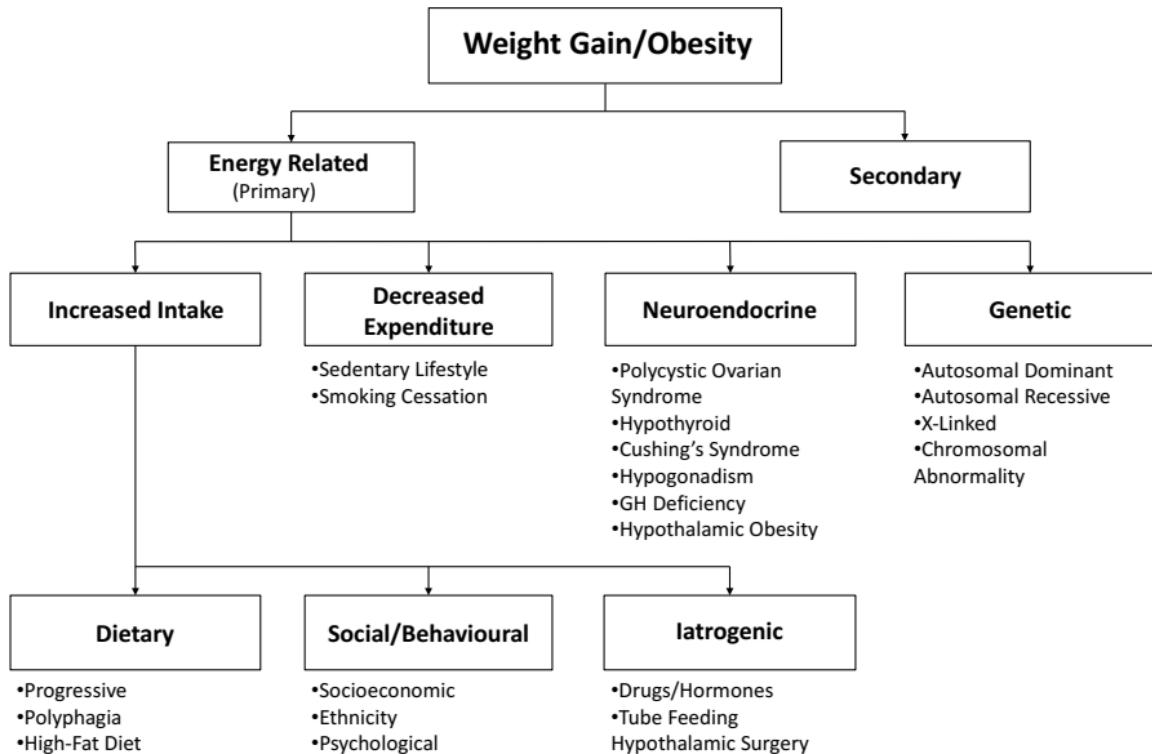
Short Stature



Tall Stature

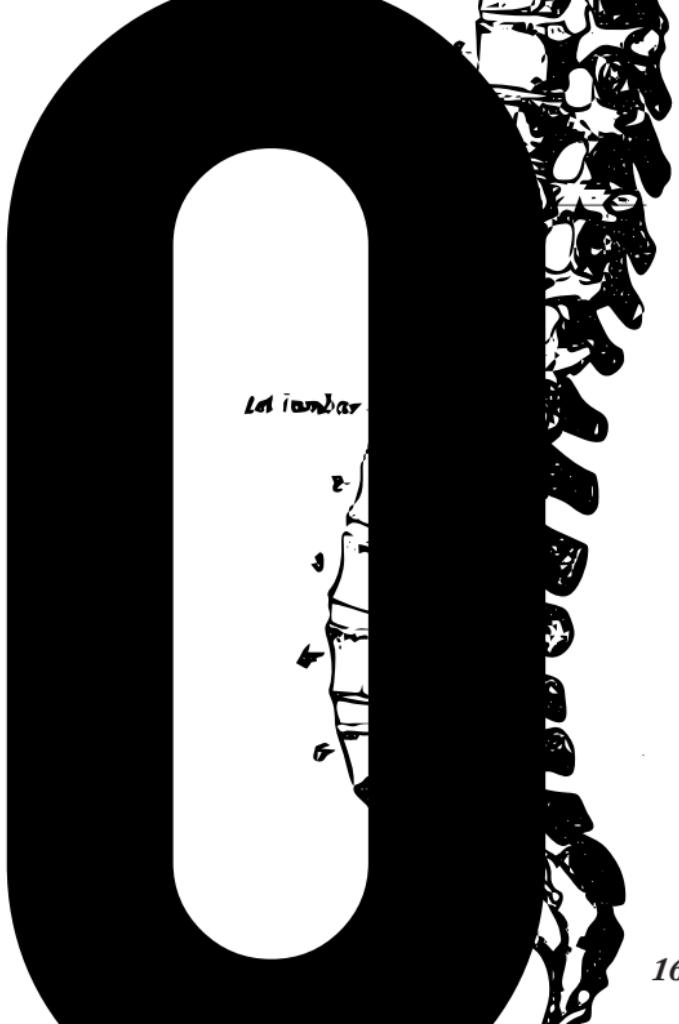


Weight Gain / Obesity



Neurologic

Altered Level of Consciousness Approach	163
Altered Level of Consciousness GCS ≤ 7	164
Aphasia Fluent	165
Aphasia Non-Fluent	166
Back Pain	167
Cognitive Impairment	168
Dysarthria	169
Falls in the Elderly	170
Gait Disturbance	171
Headache Primary	172
Headache Secondary, without Red Flag Symptoms	173
Hemiplegia	174
Mechanisms of Pain	175
Movement Disorder Hyperkinetic	176
Movement Disorder Tremor	177
Movement Disorder Bradykinetic	178
Peripheral Weakness	179
Peripheral Weakness Sensory Changes	180
Spell / Seizure Epileptic Seizure	181
Spell / Seizure Secondary Organic	182
Spell / Seizure Other	183
Stroke Intracerebral Hemorrhage	184
Stroke Ischemia	185
Stroke Subarachnoid Hemorrhage	186
Syncope	187
Dizziness	188
Vertigo	189



Historical Editors

Dr. Darren Burback

Dr. Brian Klassen

Dr. Gary Klein

Dr. Dawn Pearson

Dr. Oksana Suchowersky

Erin Butler

Aaron Wong

Sophie Flor-Henry

Ted Hoyda

Andrew Jun

Khaled Ahmed

Anastasia Aristarkhova

John Booth

Kaitlin Chivers-Wilson

Lindsay Connolly

Nichelle Desilets

Jonathan Dykeman

Vikram Lekhi

Chris Ma

Sandeep Saran

Jeff Shrum

Siddhartha Srivastava

Stephanie Yang

Student Editors

Jared McCormick

Dilip Koshy

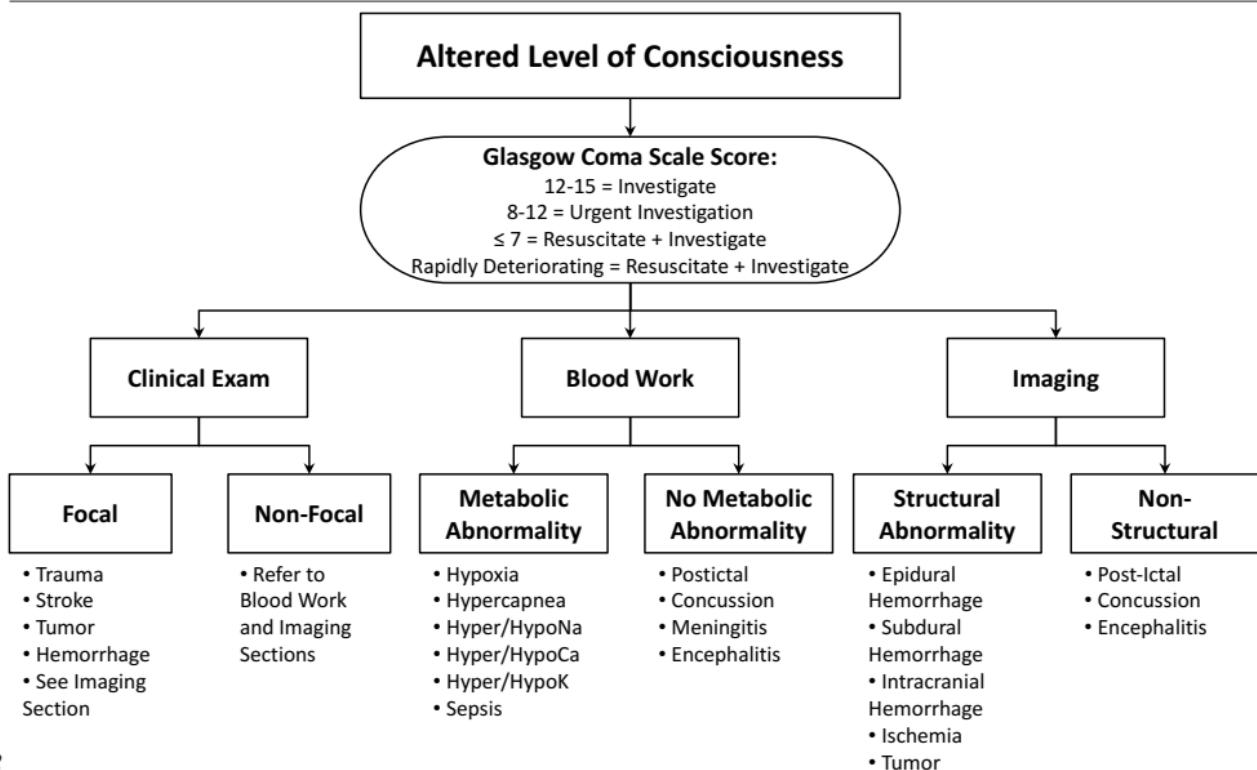
Aleksandra Ivanovic

Faculty Editor

Dr. Kevin Busche

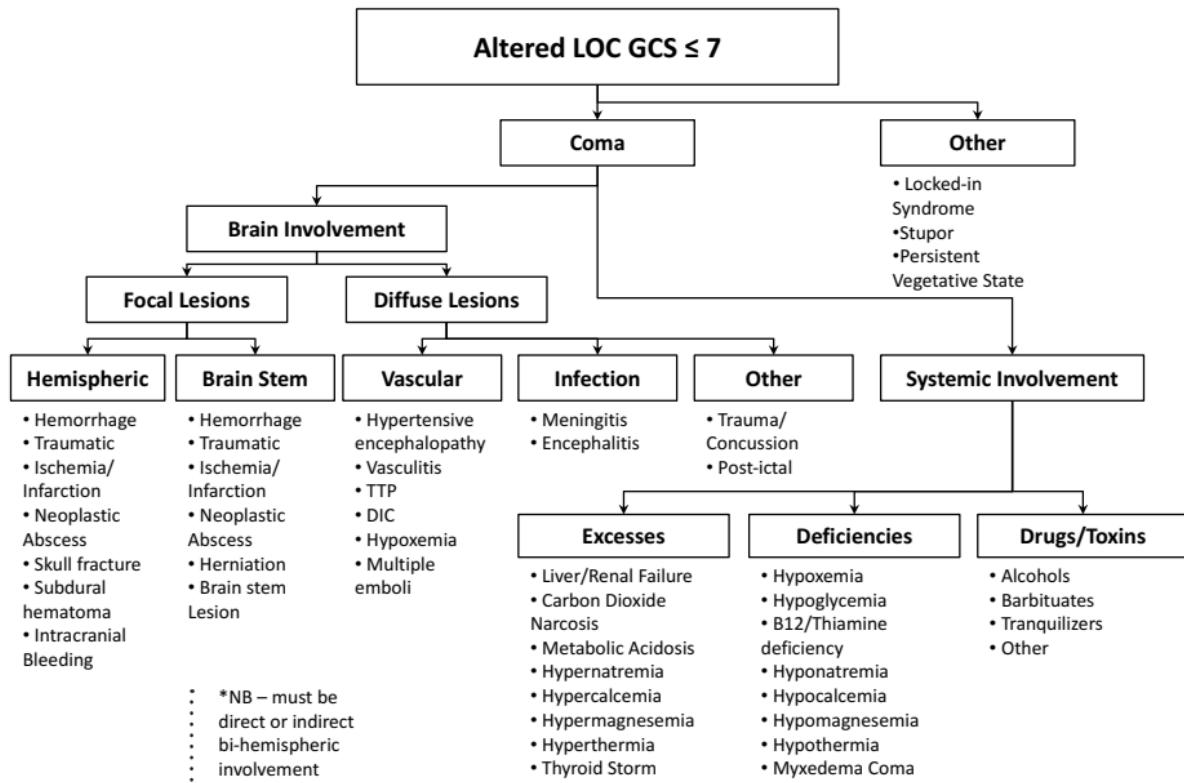
Altered Level of Consciousness

Approach



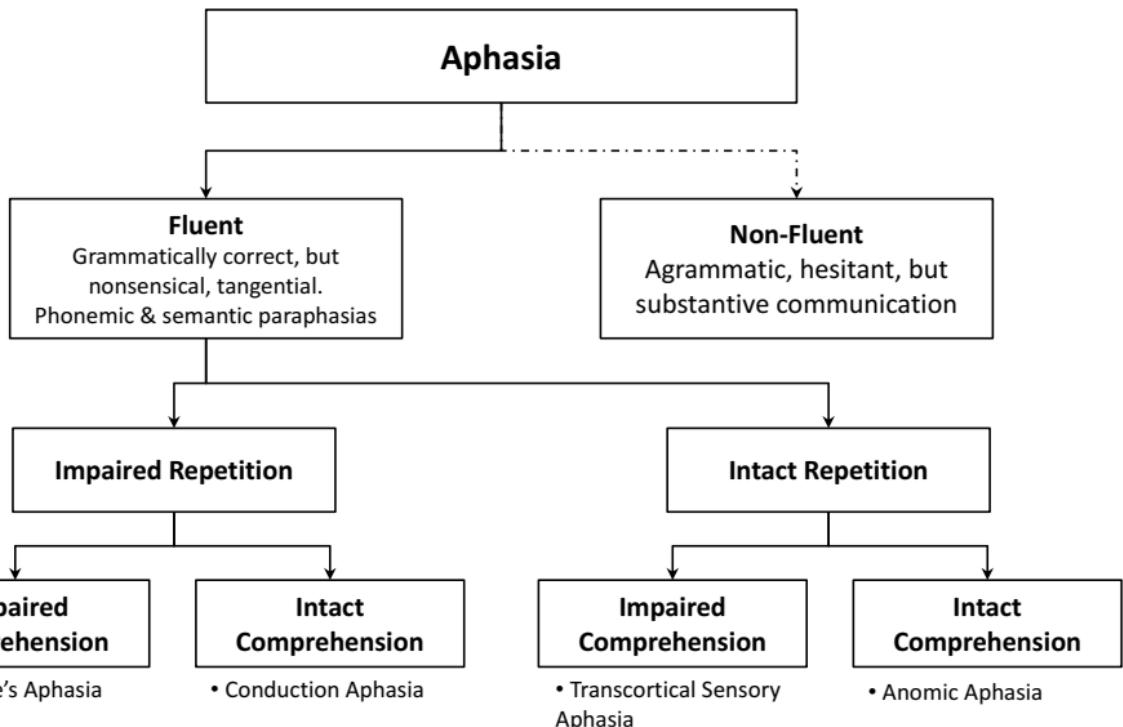
Altered Level of Consciousness

GCS ≤ 7



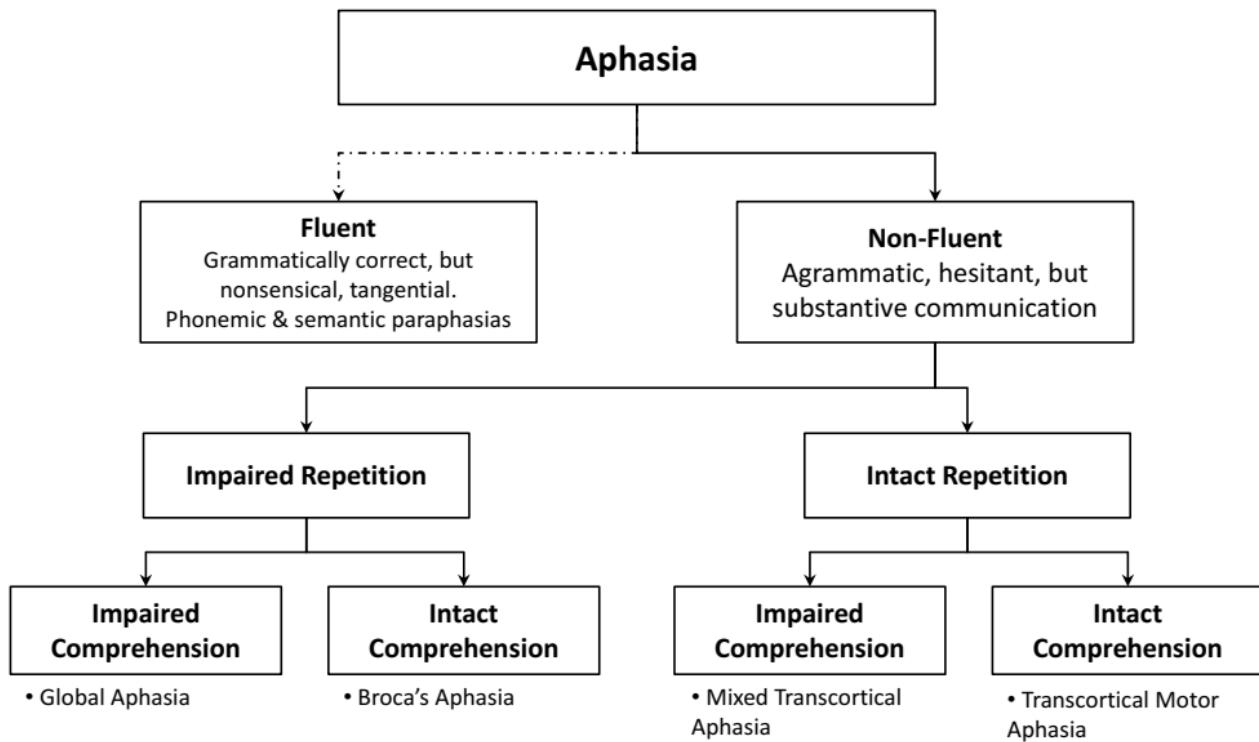
Aphasia

Fluent

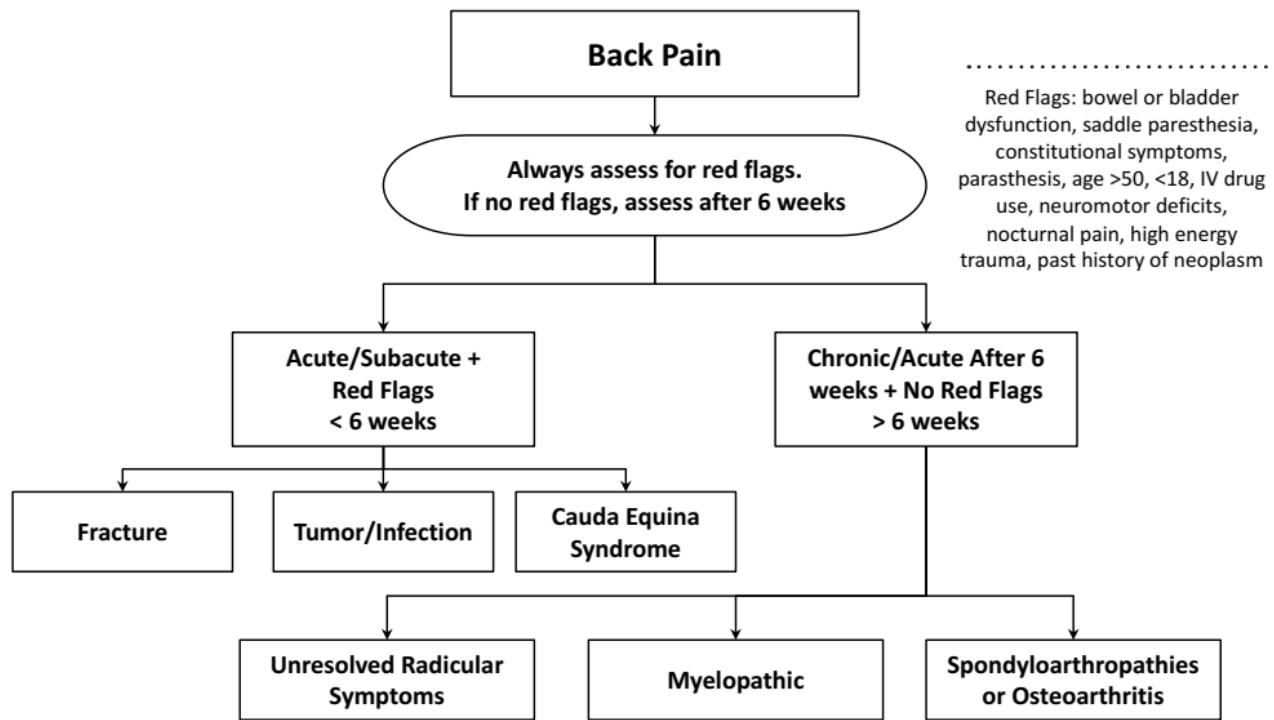


Aphasia

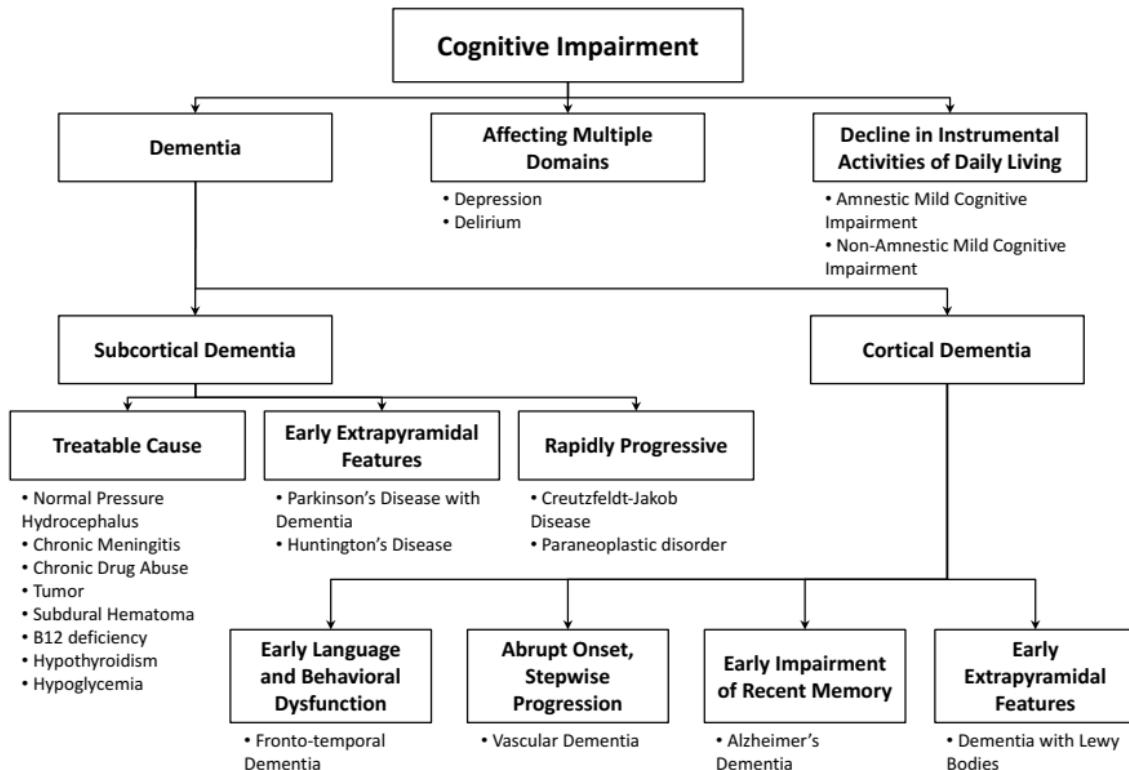
Non-Fluent



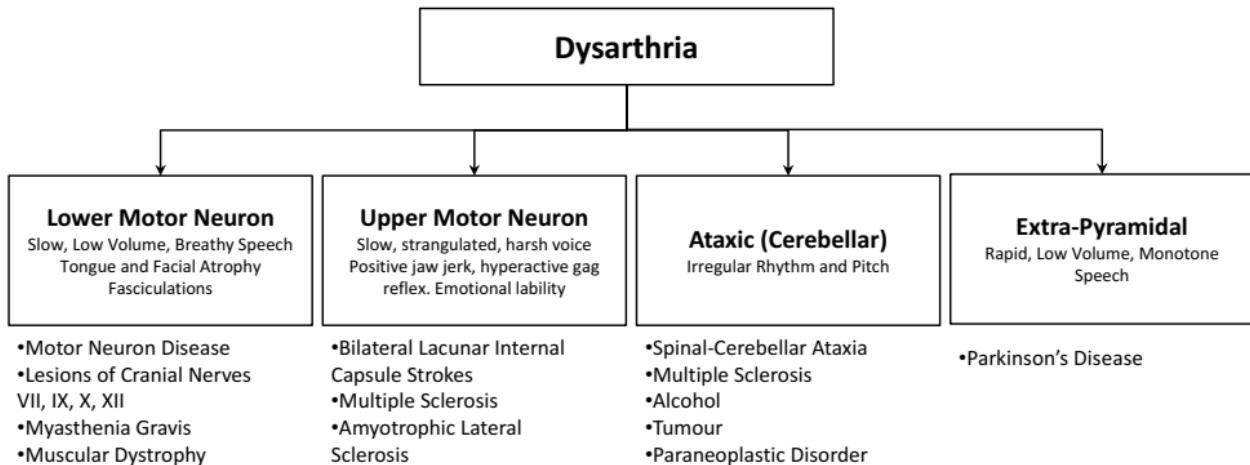
Back Pain



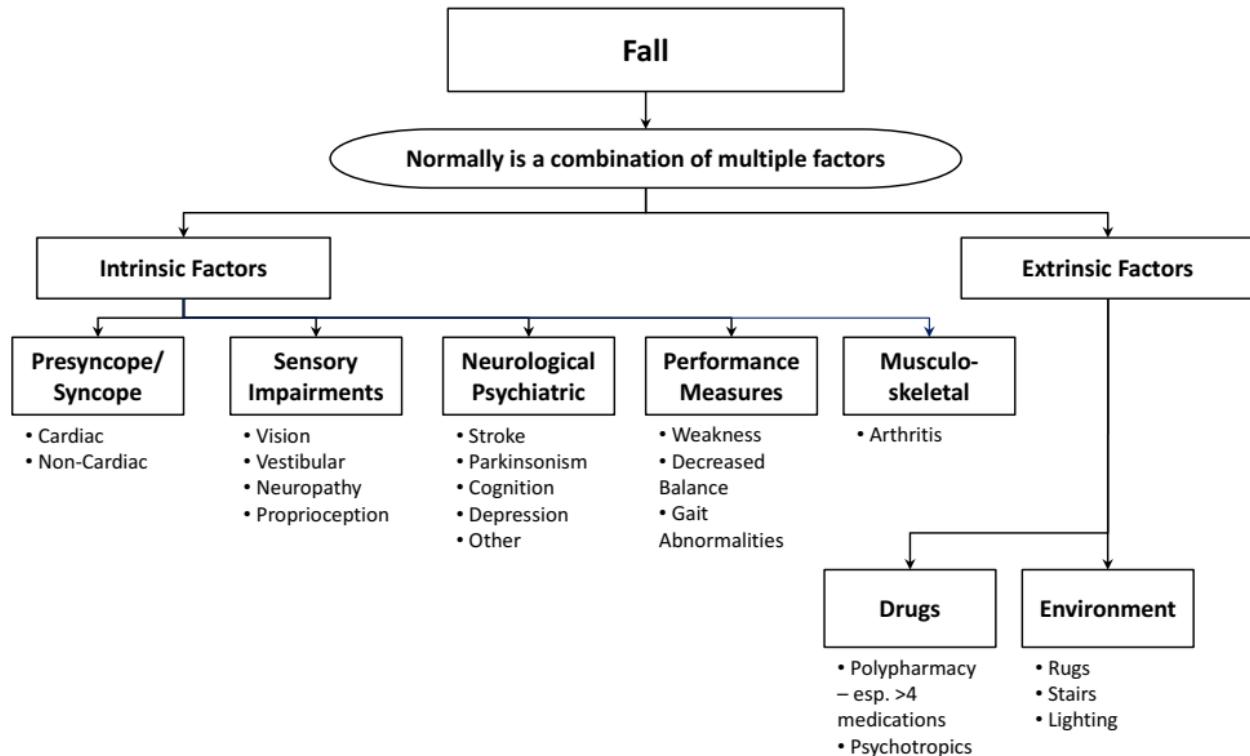
Cognitive Impairment



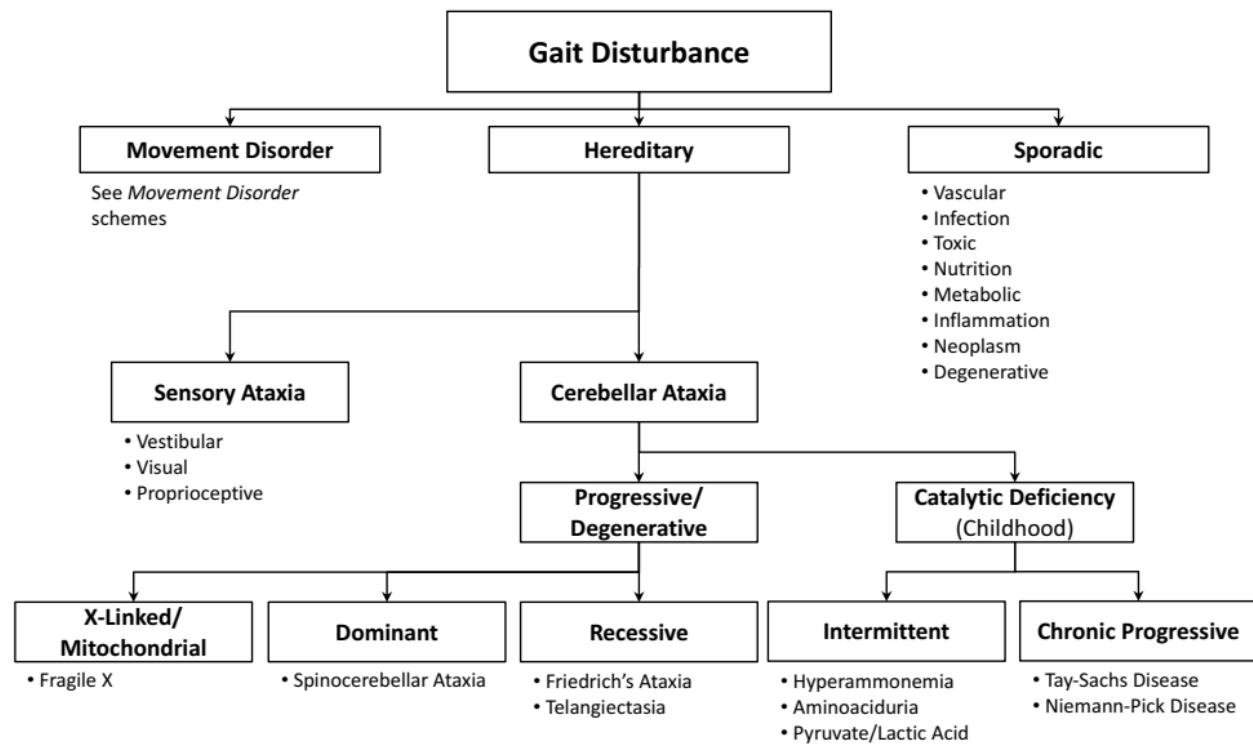
Dysarthria



Falls in the Elderly

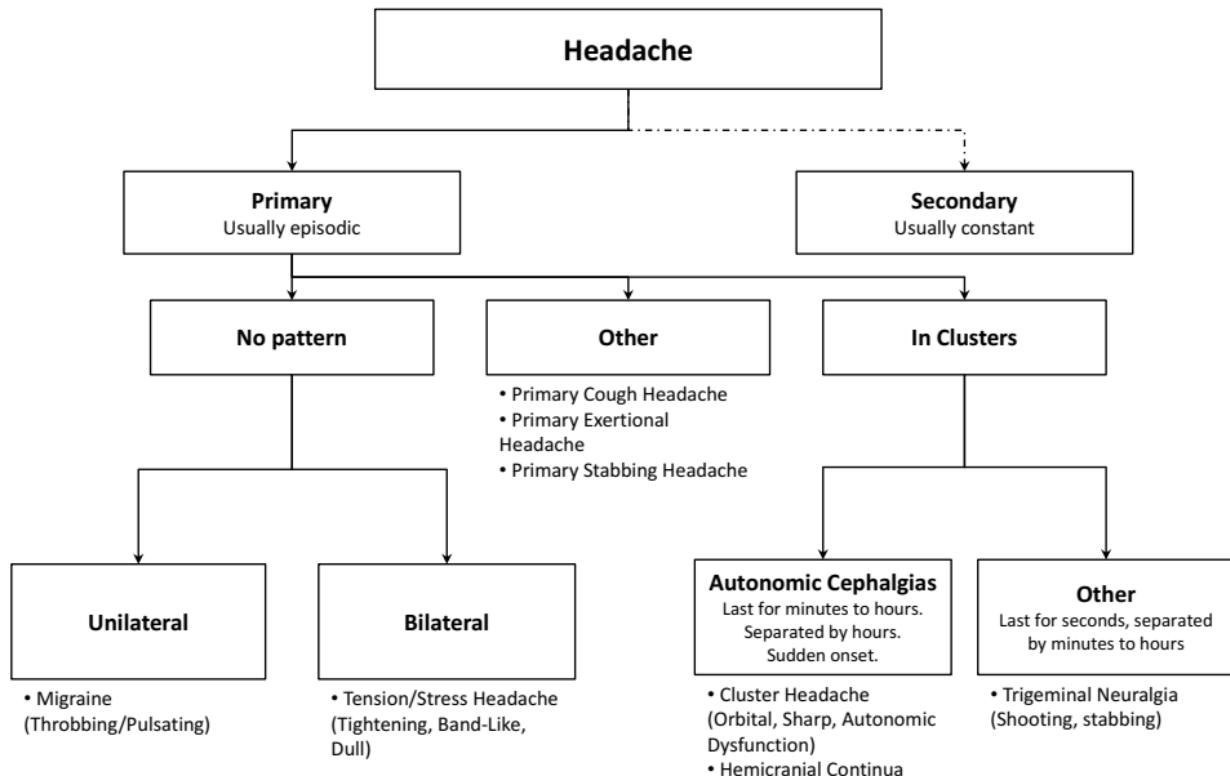


Gait Disturbance



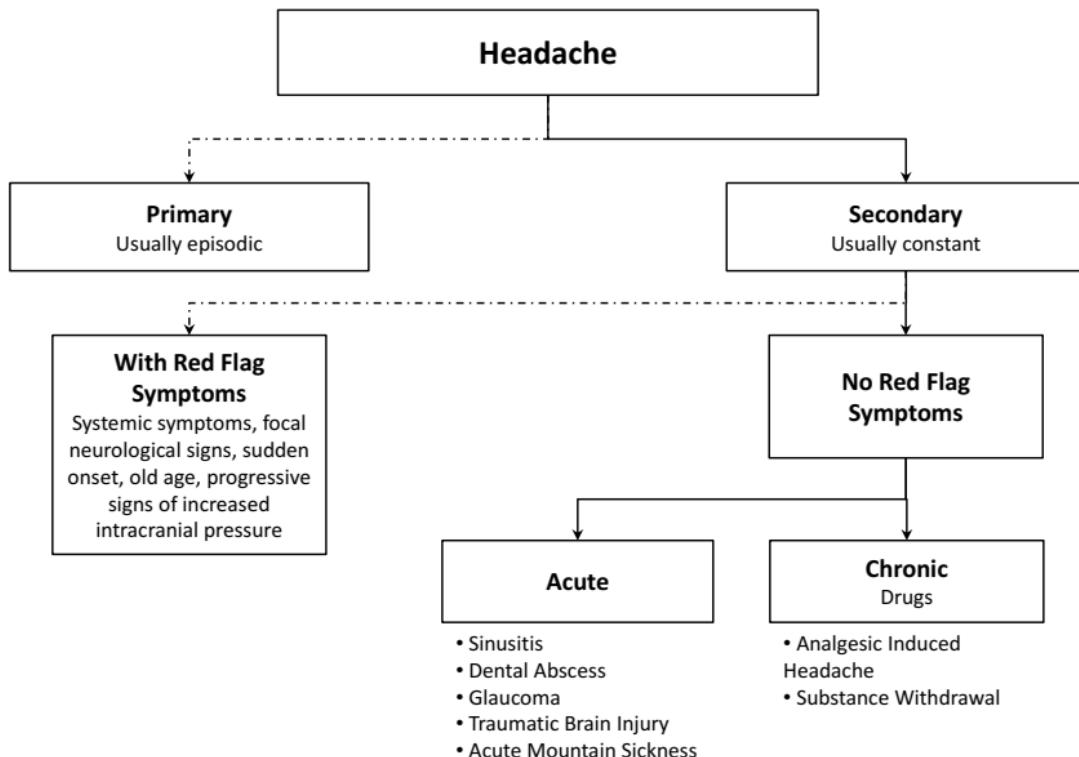
Headache

Primary

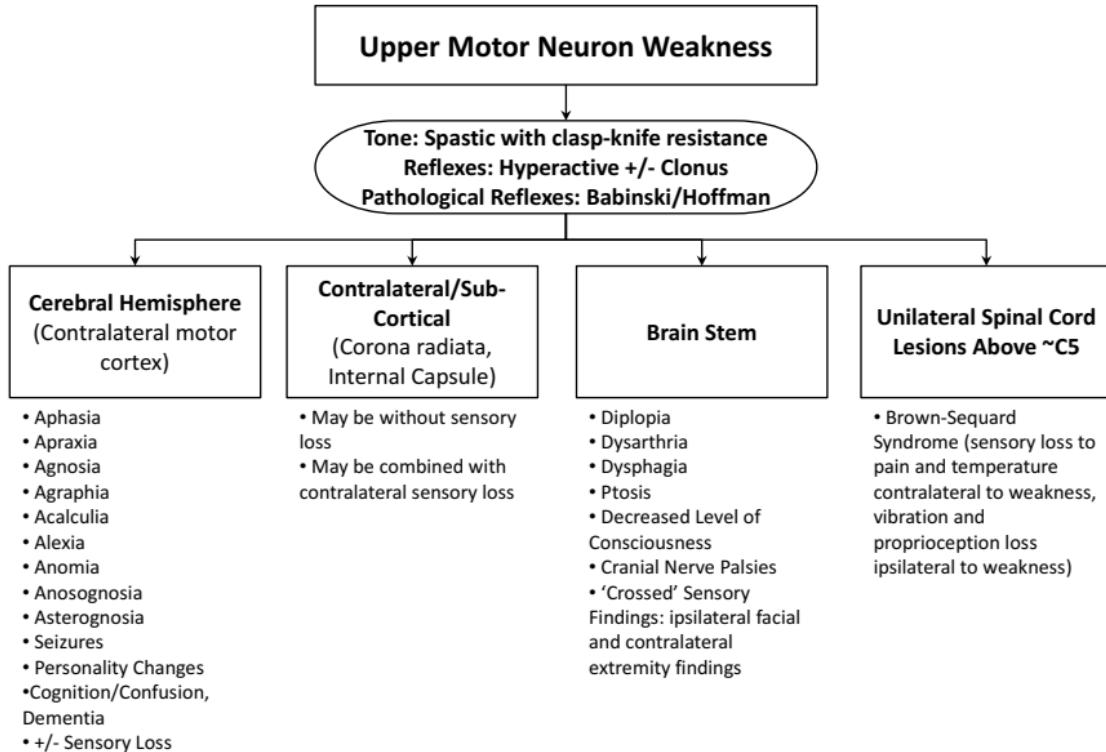


Headache

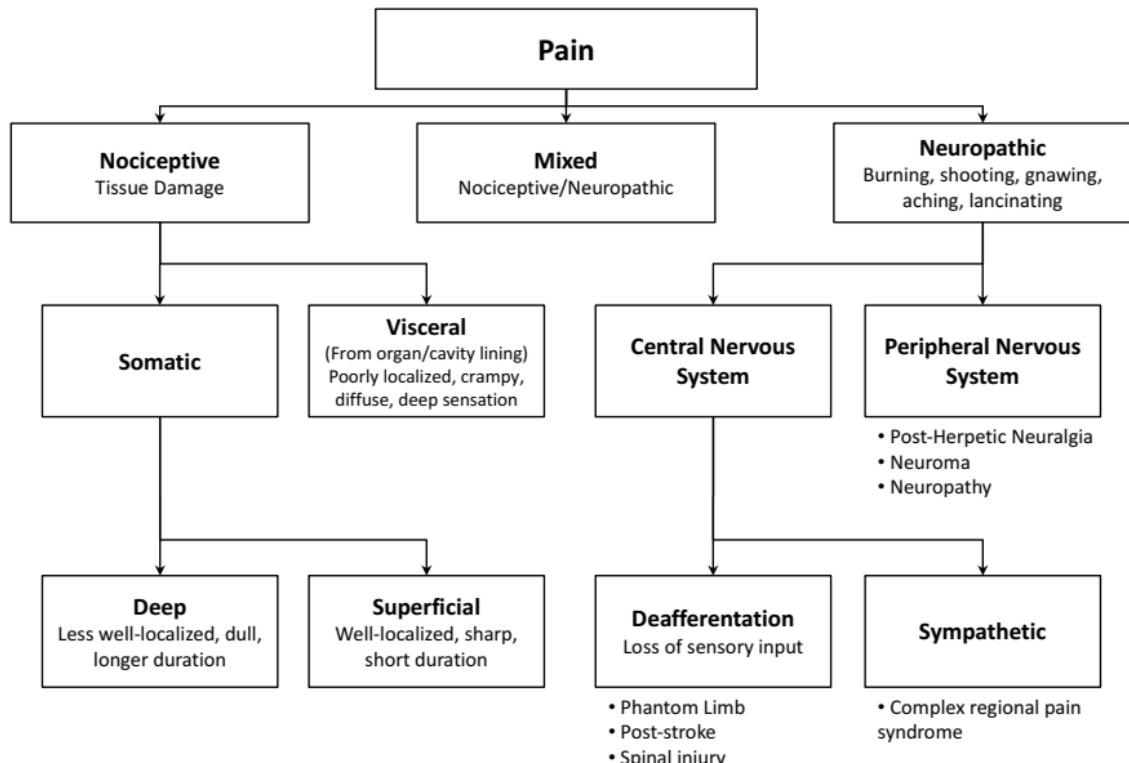
Secondary, without Red Flag Symptoms



Hemiplegia

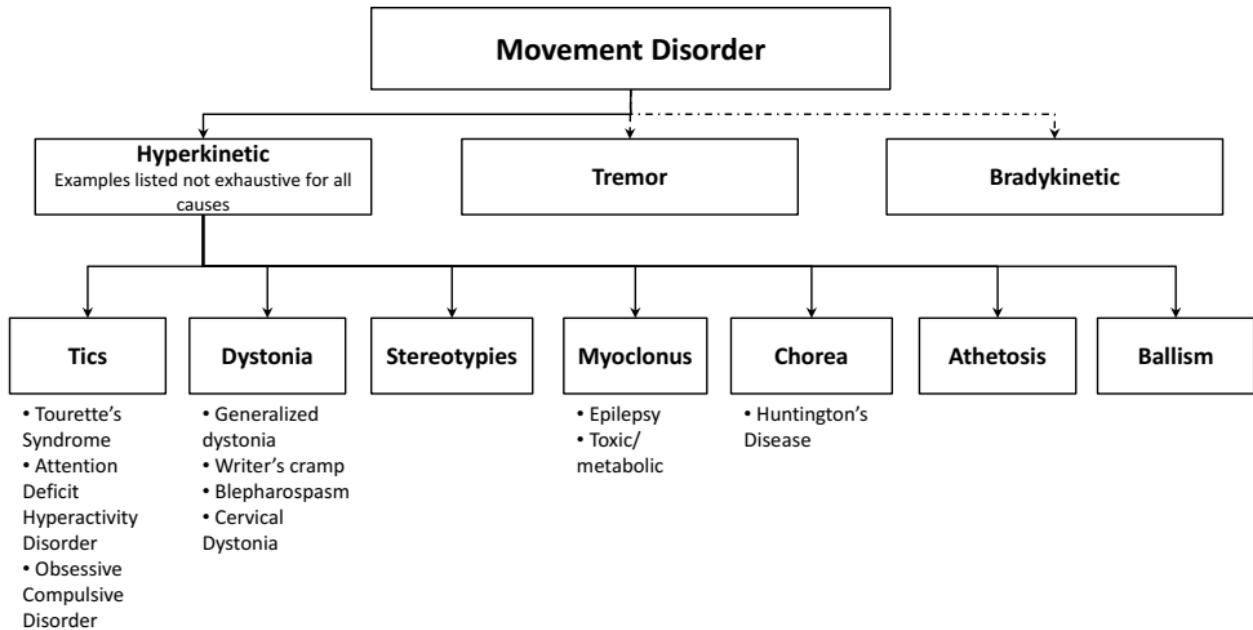


Mechanisms of Pain



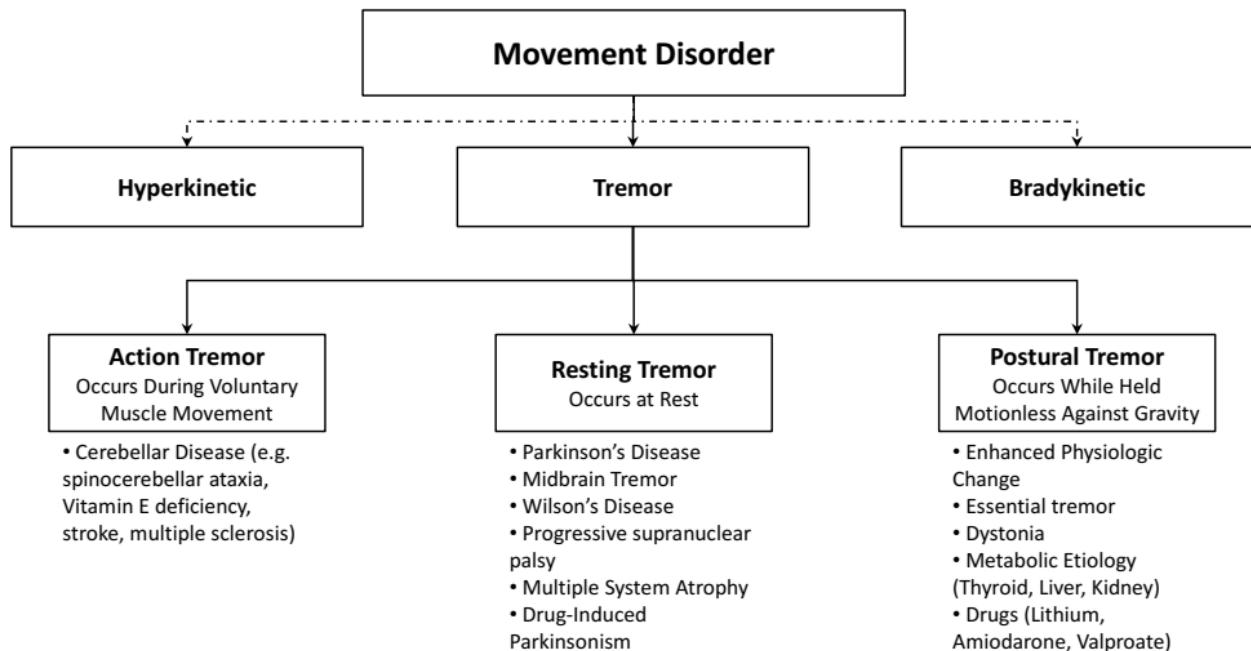
Movement Disorder

Hyperkinetic



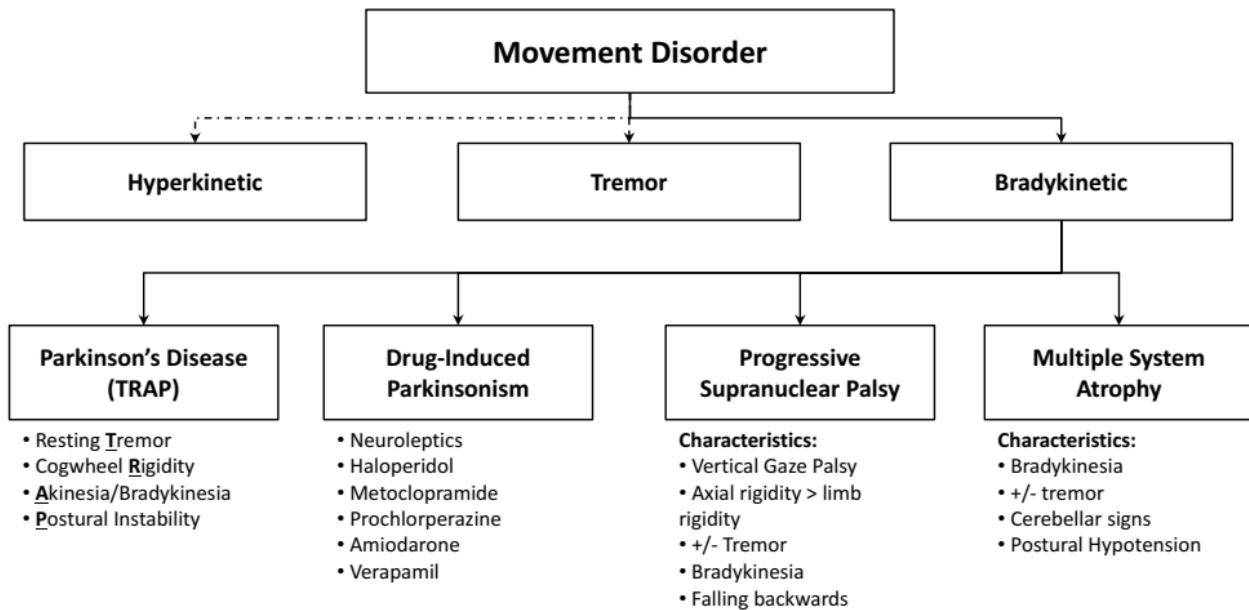
Movement Disorder

Tremor

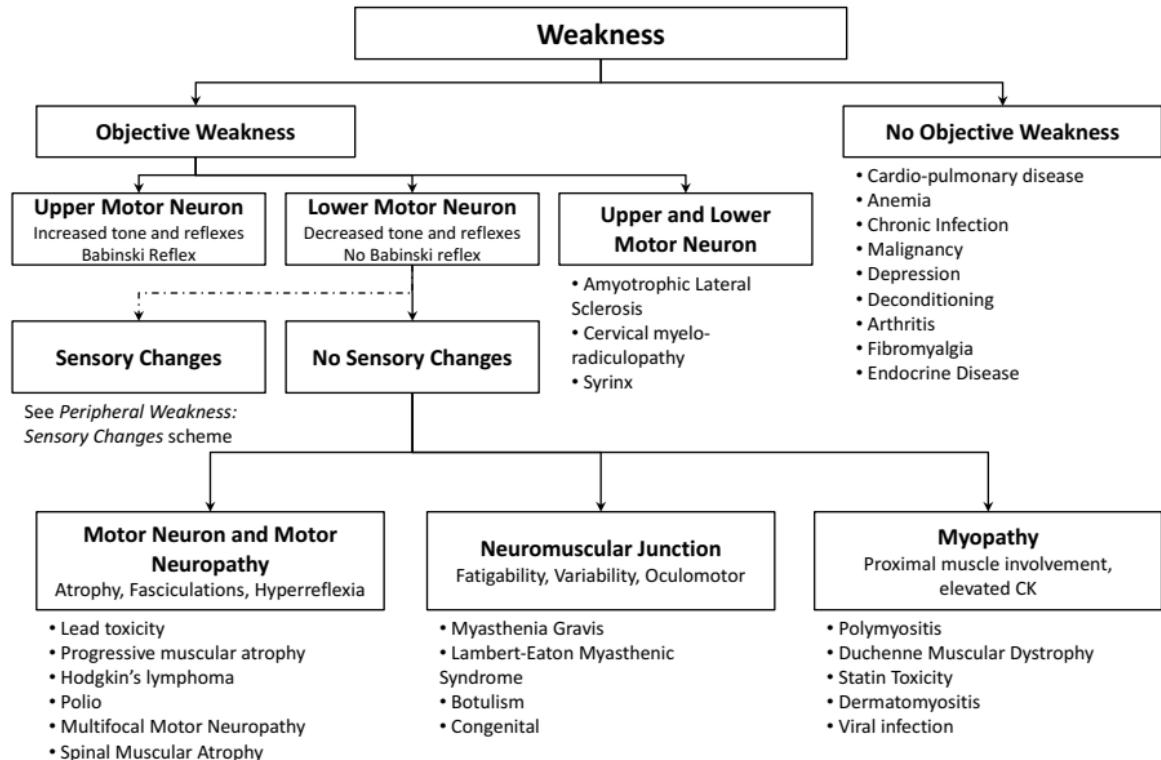


Movement Disorder

Bradykinetic

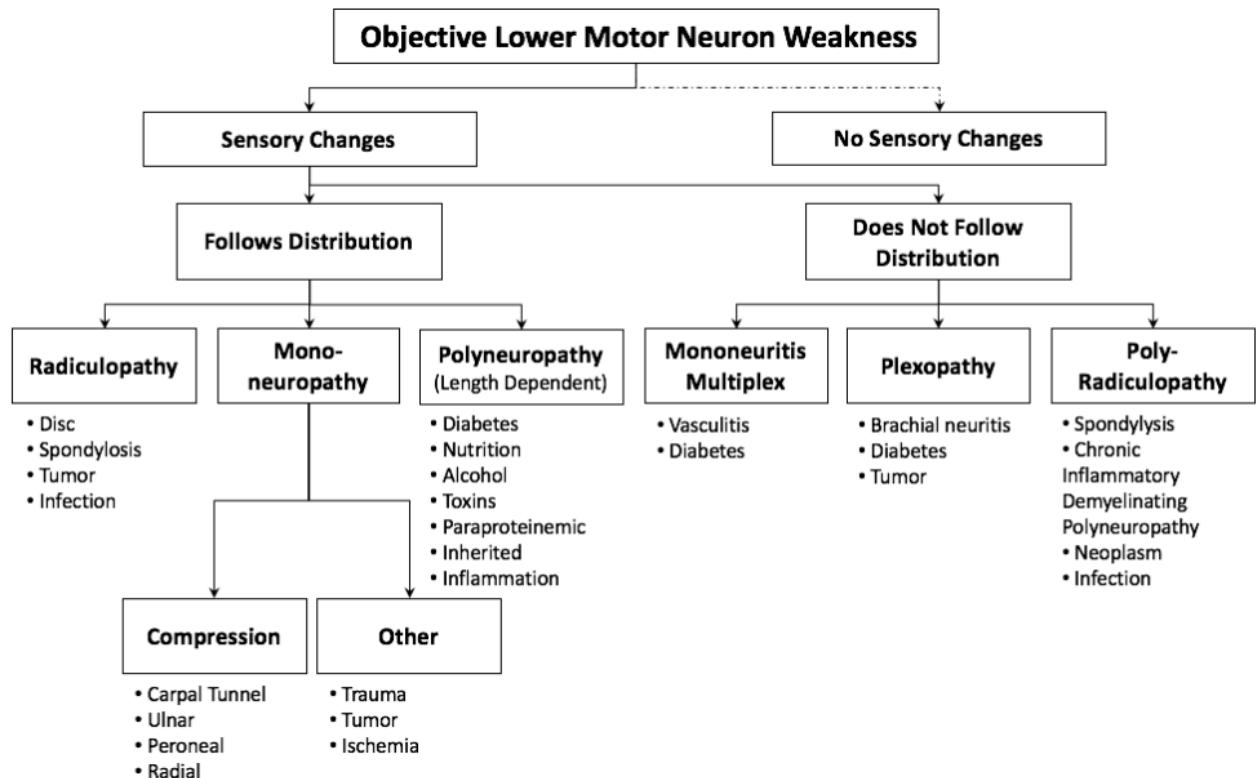


Peripheral Weakness



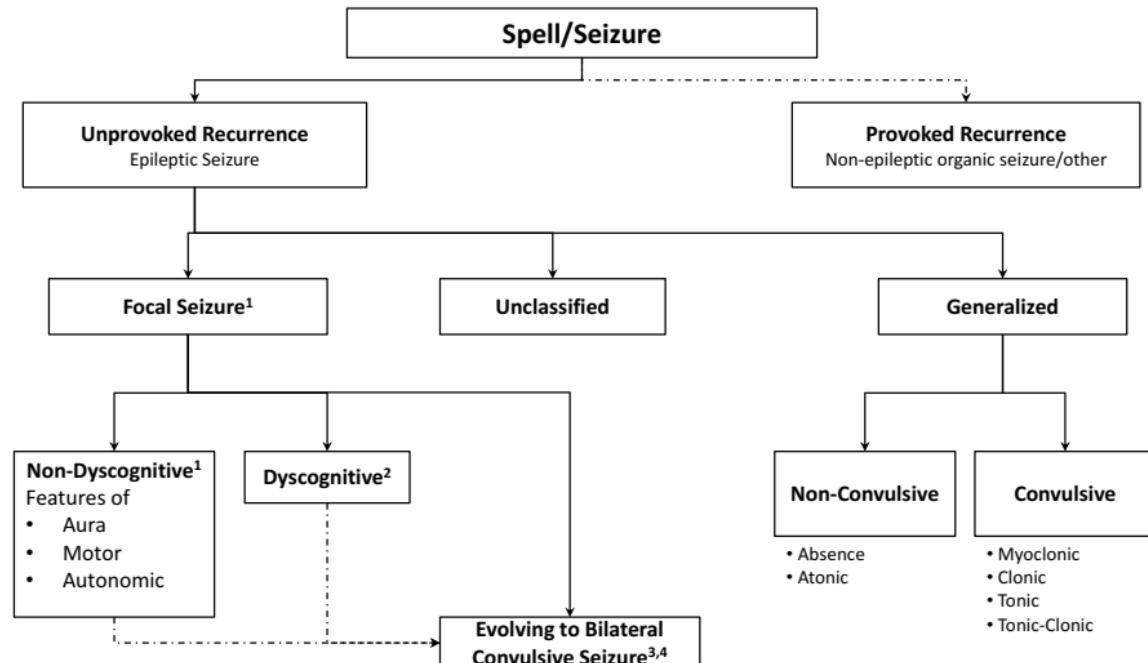
Peripheral Weakness

Sensory Changes



Spell / Seizure

Epileptic Seizure



1 Previously named Simple Partial Seizure

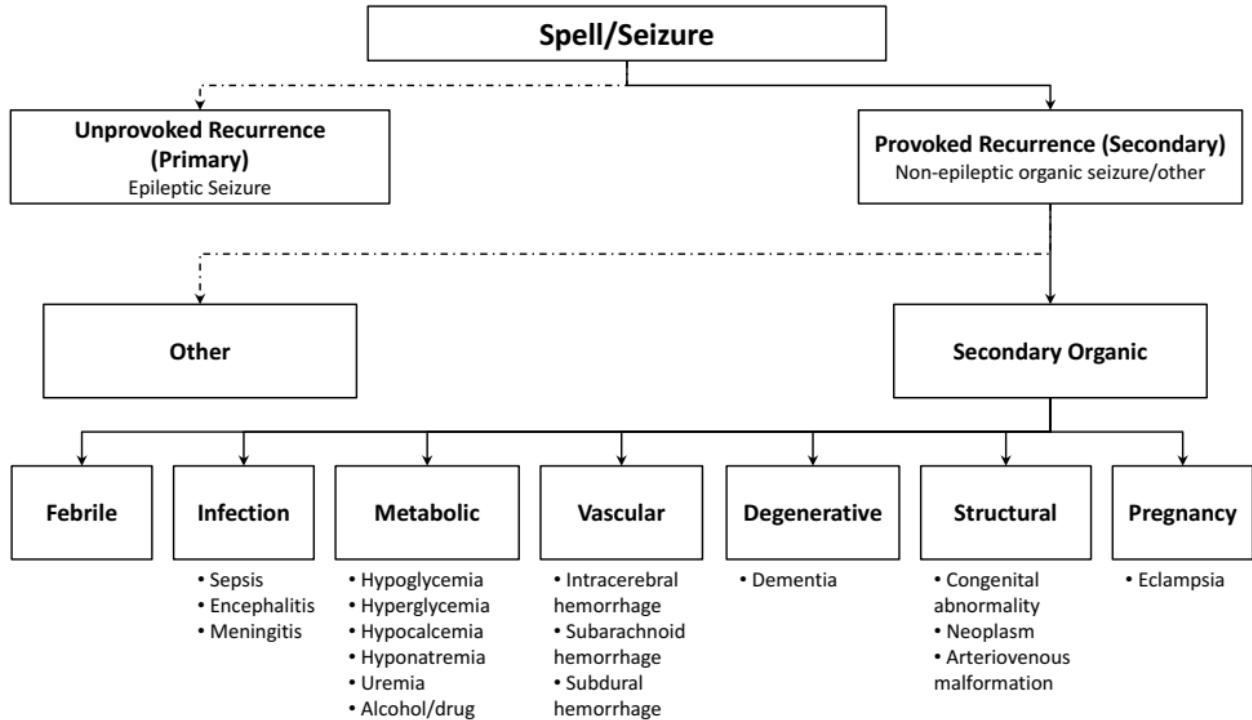
2 Previously named Complex Partial Seizure

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.

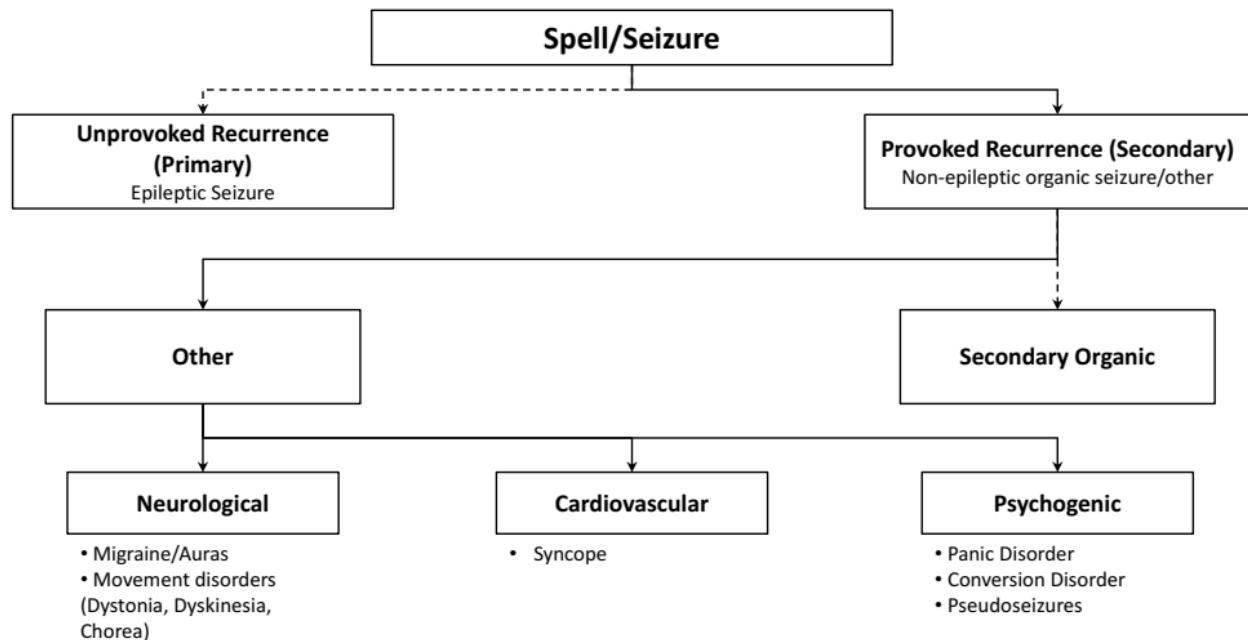
Spell / Seizure

Secondary Organic



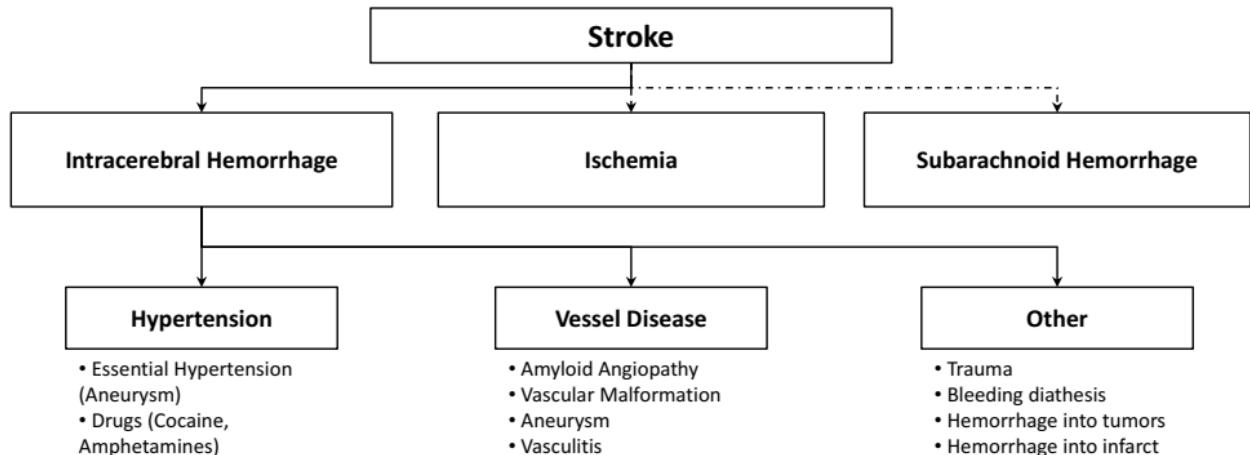
Spell / Seizure

Other



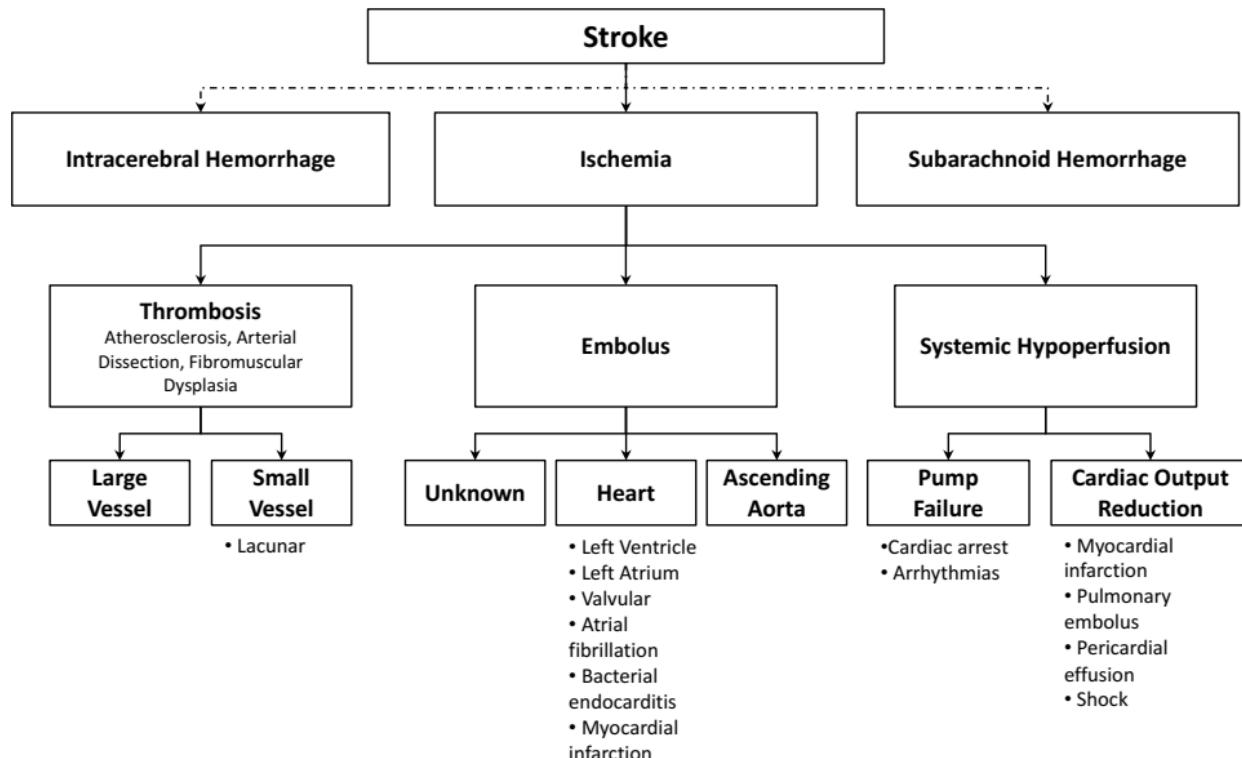
Stroke

Intracerebral Hemorrhage



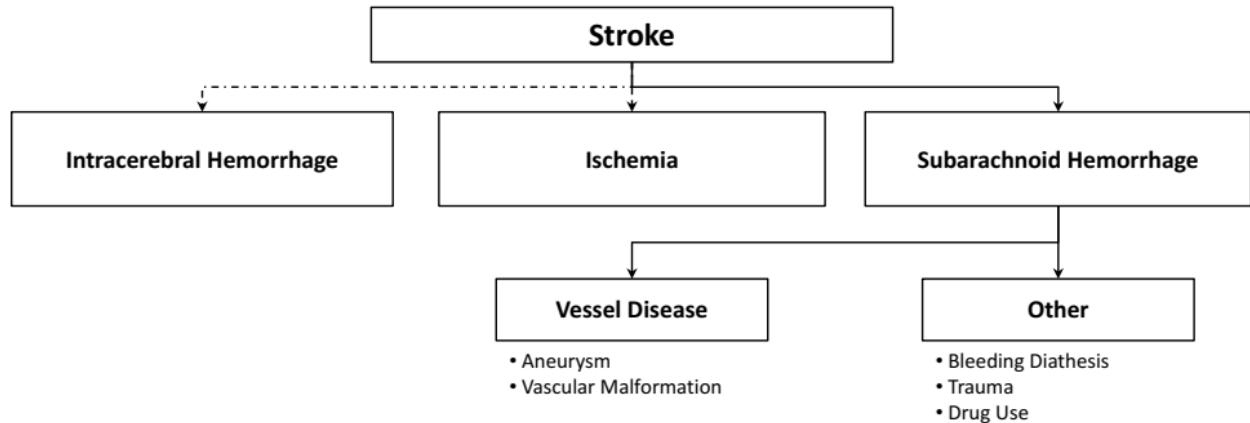
Stroke

Ischemia

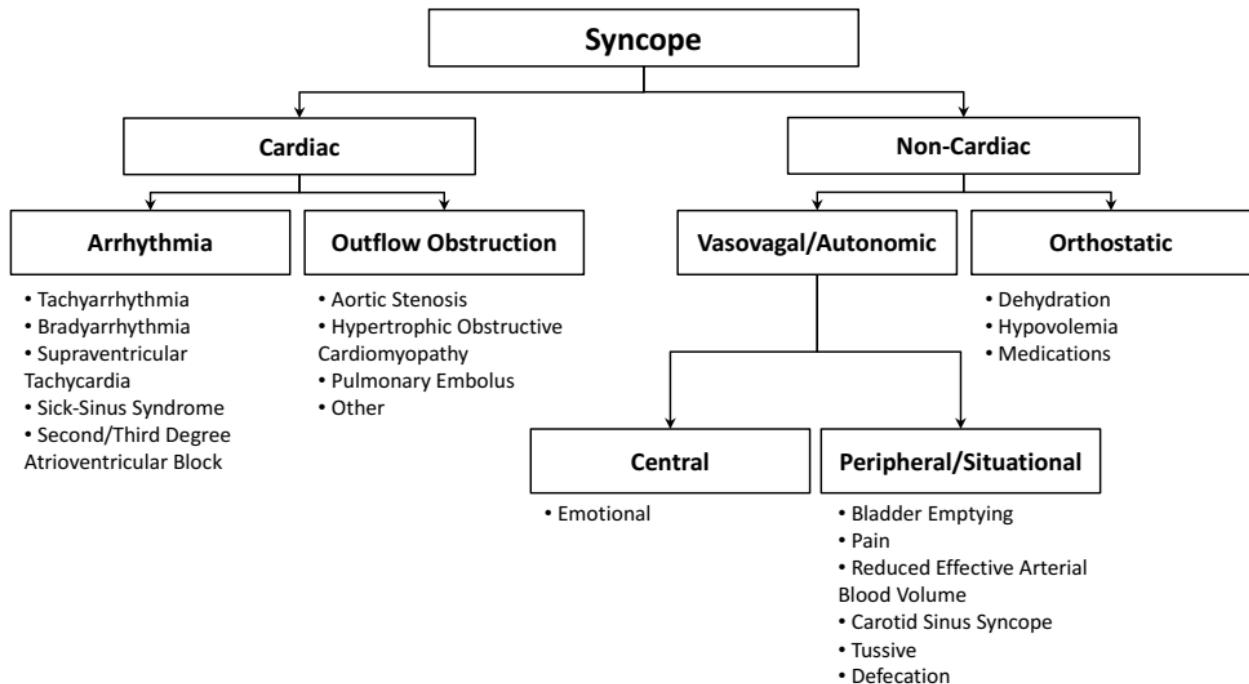


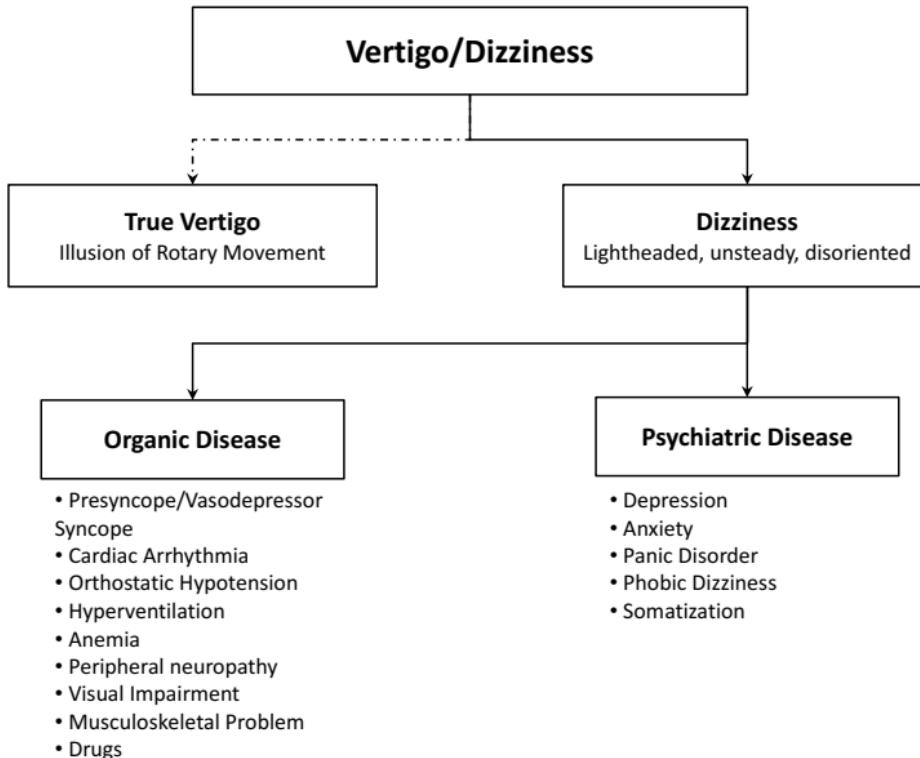
Stroke

Subarachnoid Hemorrhage

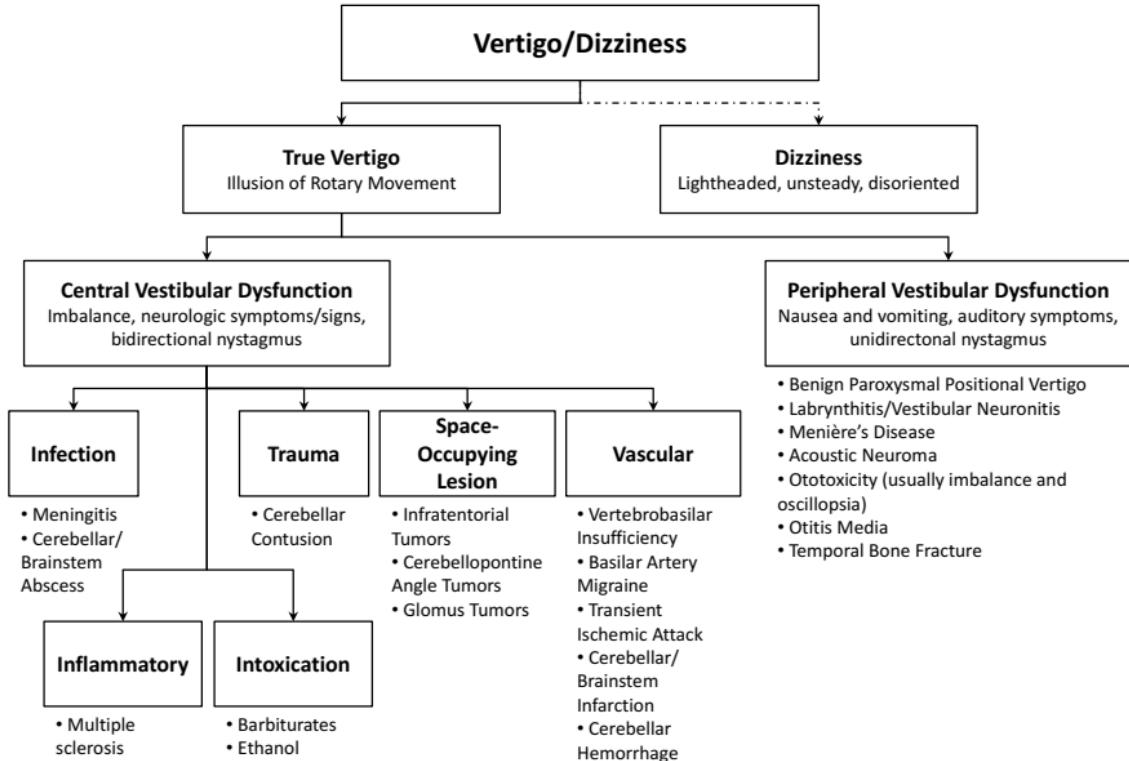


Syncope





Vertigo



Obstetrical & Gynecological

Wall of w

Intrapartum Abnormal Fetal HR Tracing Variability & Decelerations	193	Growth Discrepancy Small for Gestational Age / Intrauterine Growth Restriction....	204
Intrapartum Abnormal Fetal HR Tracing Baseline	194	Growth Discrepancy Large for Gestational Age	205
Abnormal Genital Bleeding.....	195	Infertility (Female).....	206
Acute Pelvic Pain.....	196	Infertility (Male)	207
Chronic Pelvic Pain.....	197	Intrapartum Factors that May Affect Fetal Oxygenation.....	208
Amenorrhea Primary.....	198	Pelvic Mass.....	209
Amenorrhea Secondary	199	Ovarian Mass	210
Antenatal Care.....	200	Pelvic Organ Prolapse.....	211
Bleeding in Pregnancy < 20 Weeks	201	Post-Partum Fever.....	212
Bleeding in Pregnancy 2nd & 3rd Trimester	202	Post-Partum Hemorrhage	213
Breast Disorder.....	203	Recurrent Pregnancy Loss.....	214
		Vaginal Discharge.....	215



Historical Editors

Dr. Heather Baxter
Dr. Dorothy Igras
Dr. Clinton Chow
Dr. Calvin Greene
Dr. Magali Robert
Dr. Maire Duggan
Dr. Barbara Walley
Vera Krejcik
Shaina Lee
Mia Steiner
Maria Wu
Danny Chao
Neha Sarna

Student Editors

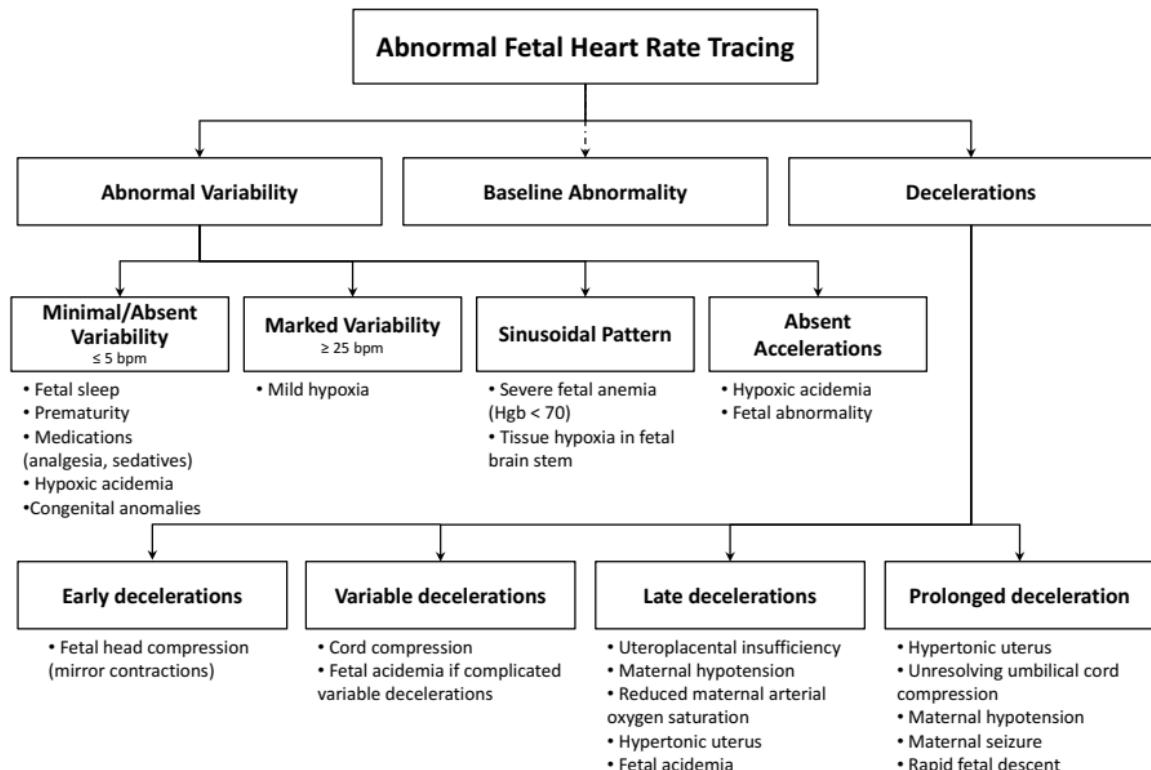
Neha Chadha (*Co-editor*)
Angela Deane (*Co-editor*)

Faculty Editor

Dr. Ronald Cusano

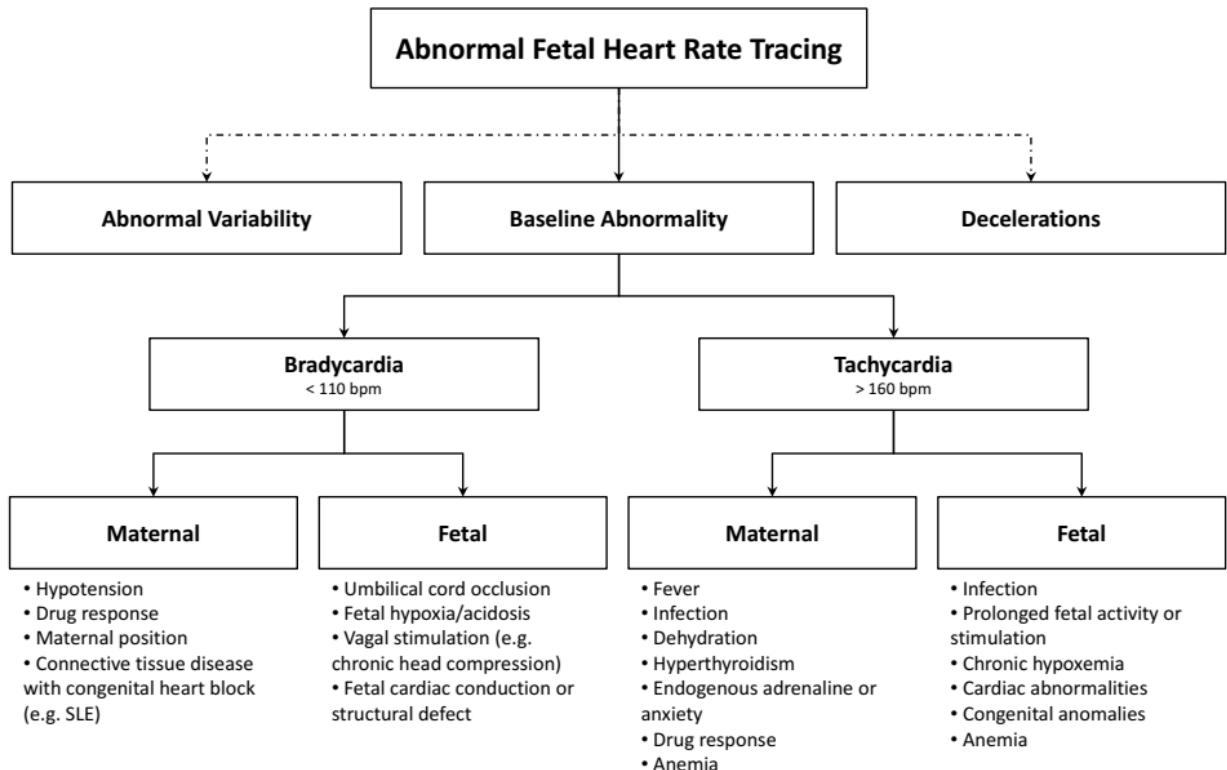
Intrapartum Abnormal Fetal HR Tracing

Variability & Decelerations

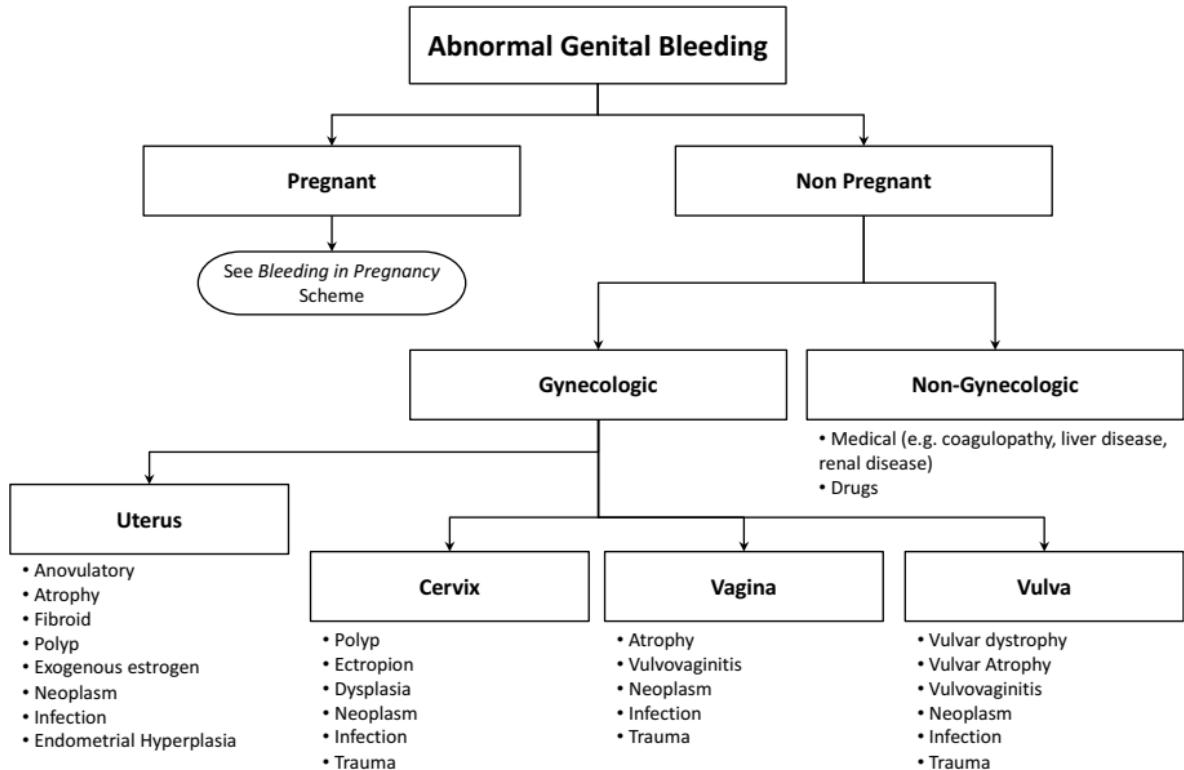


Intrapartum Abnormal Fetal HR Tracing

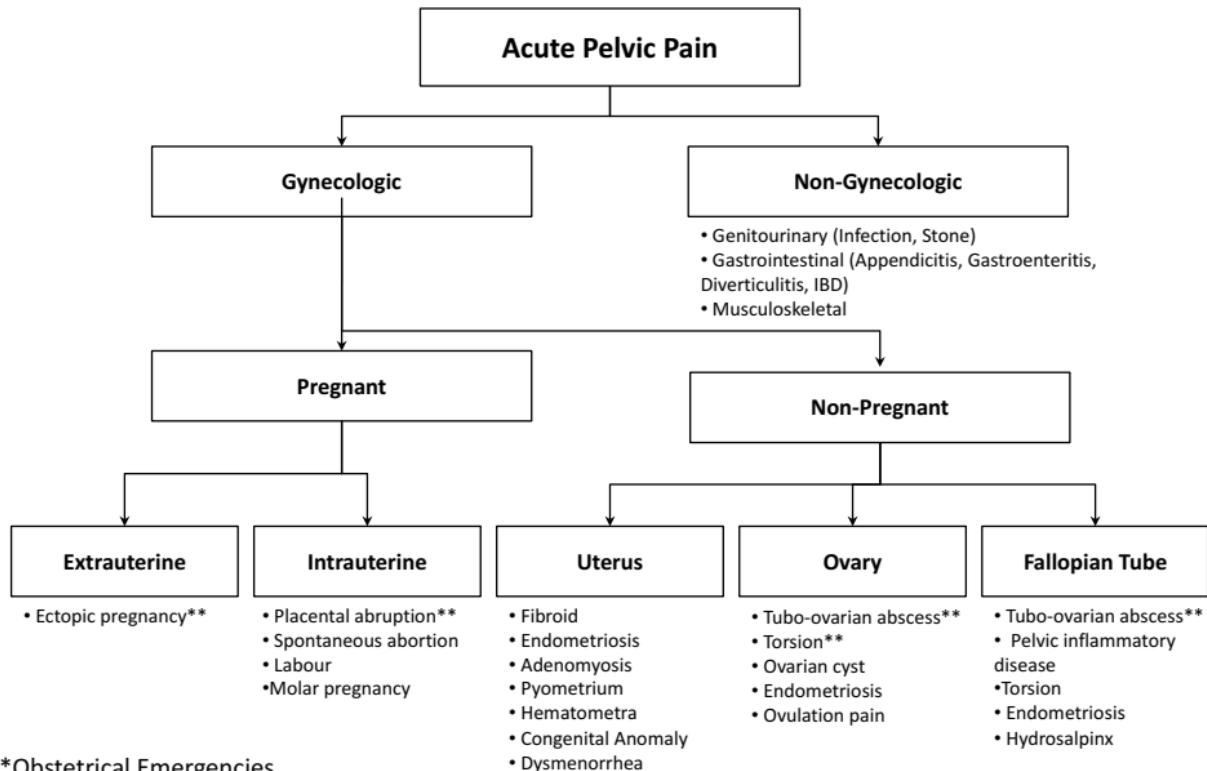
Baseline



Abnormal Genital Bleeding

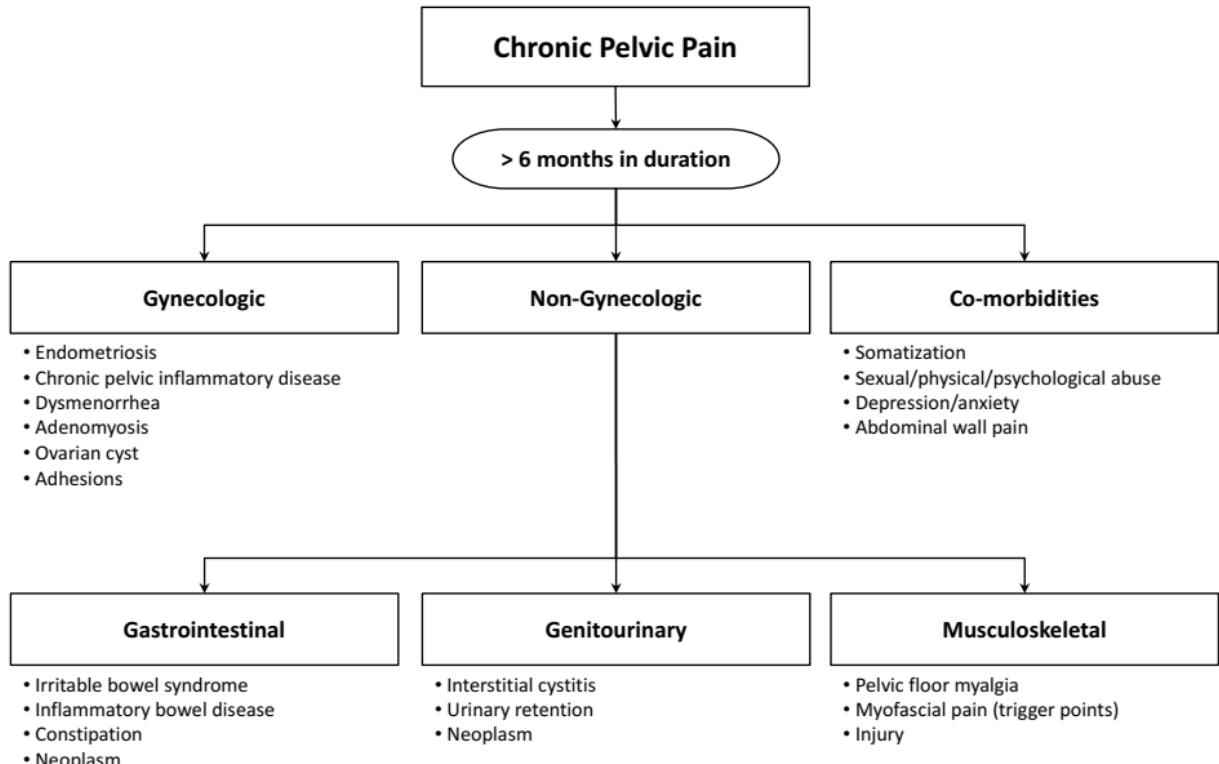


Acute Pelvic Pain



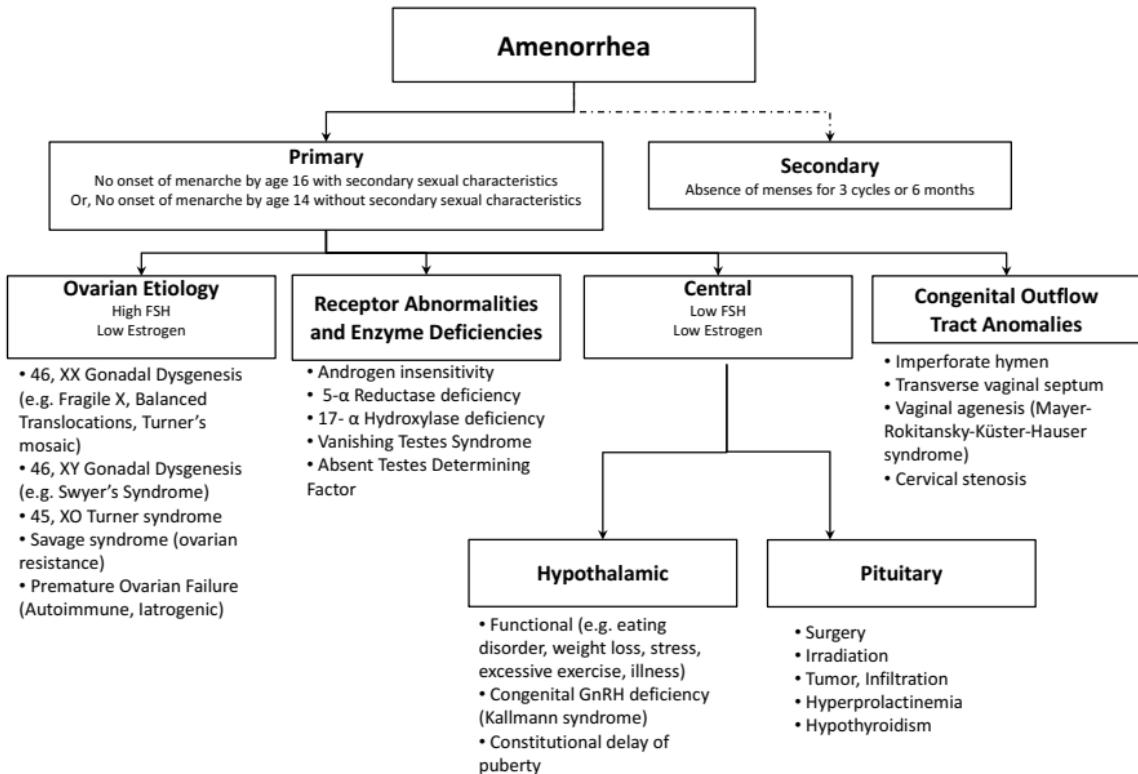
**Obstetrical Emergencies

Chronic Pelvic Pain



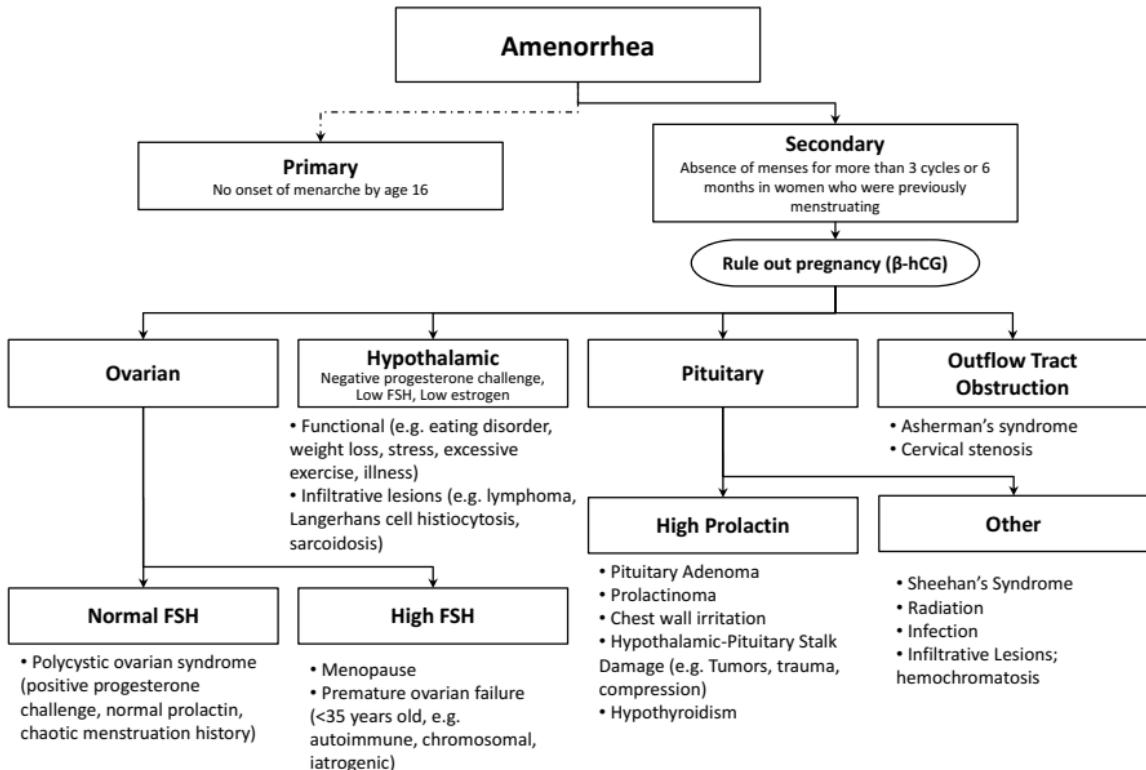
Amenorrhea

Primary

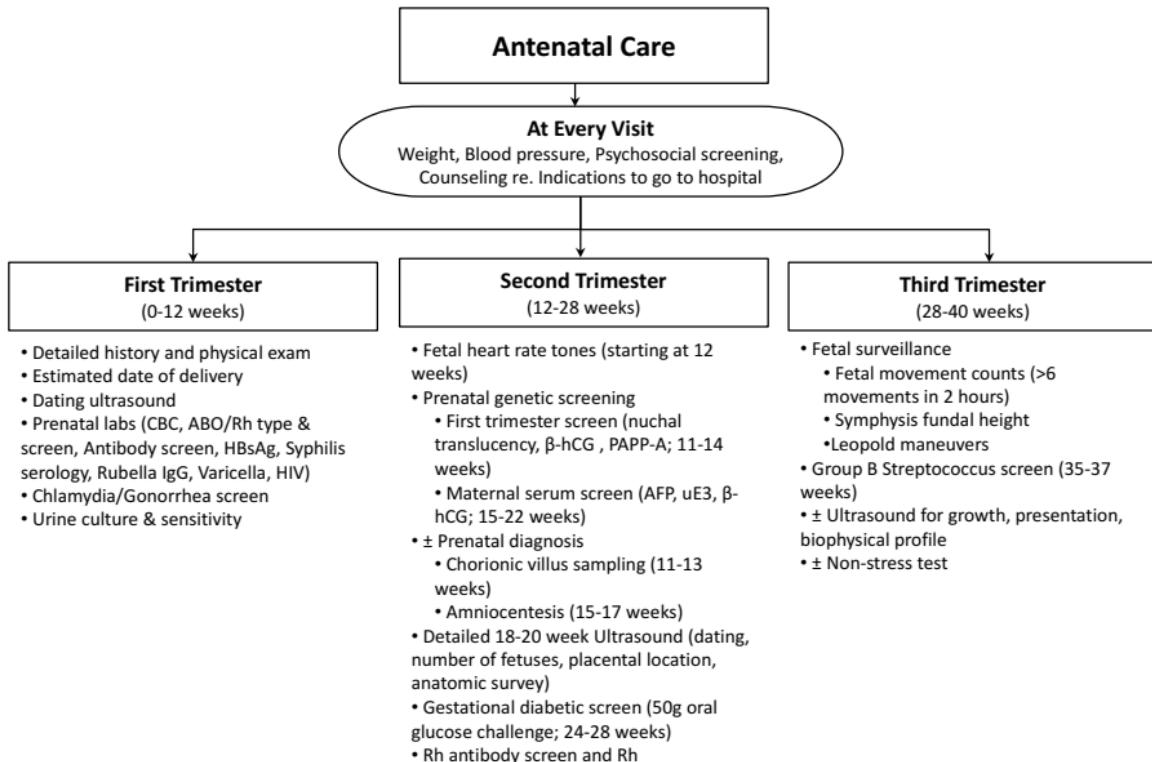


Amenorrhea

Secondary

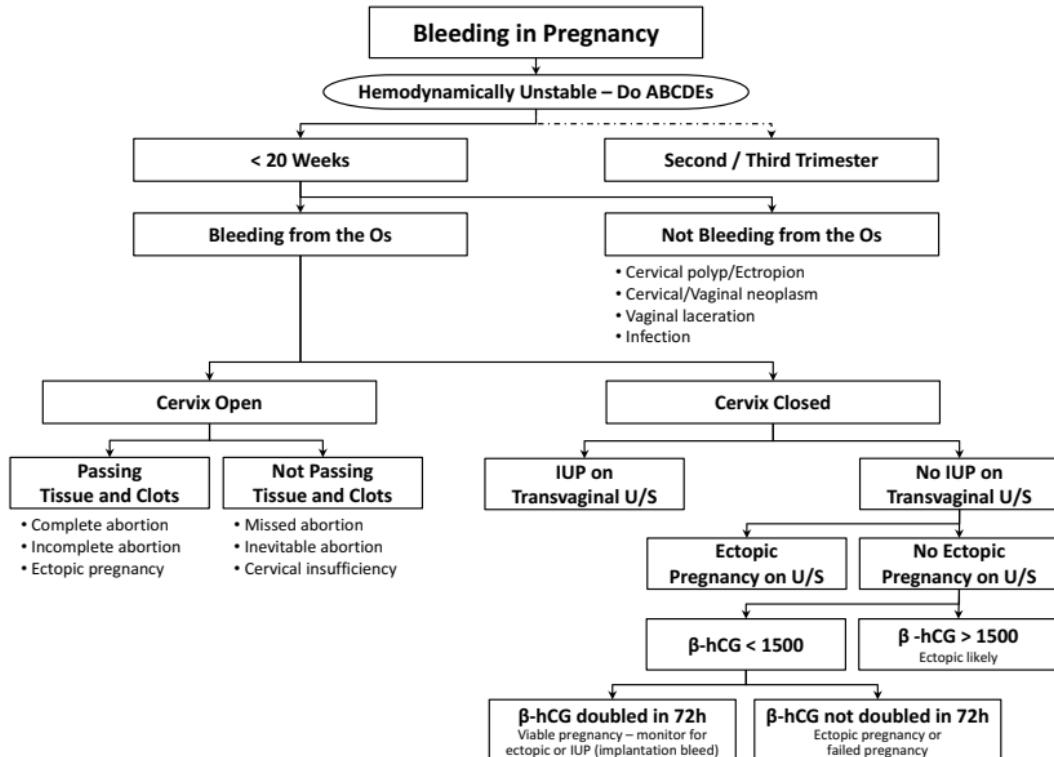


Antenatal Care



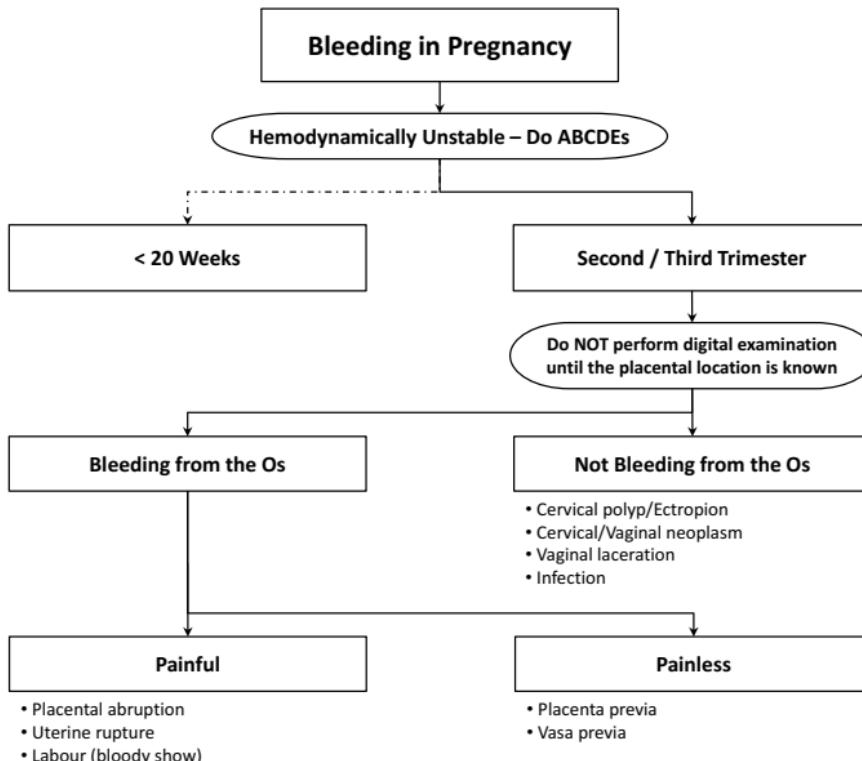
Bleeding in Pregnancy

< 20 Weeks

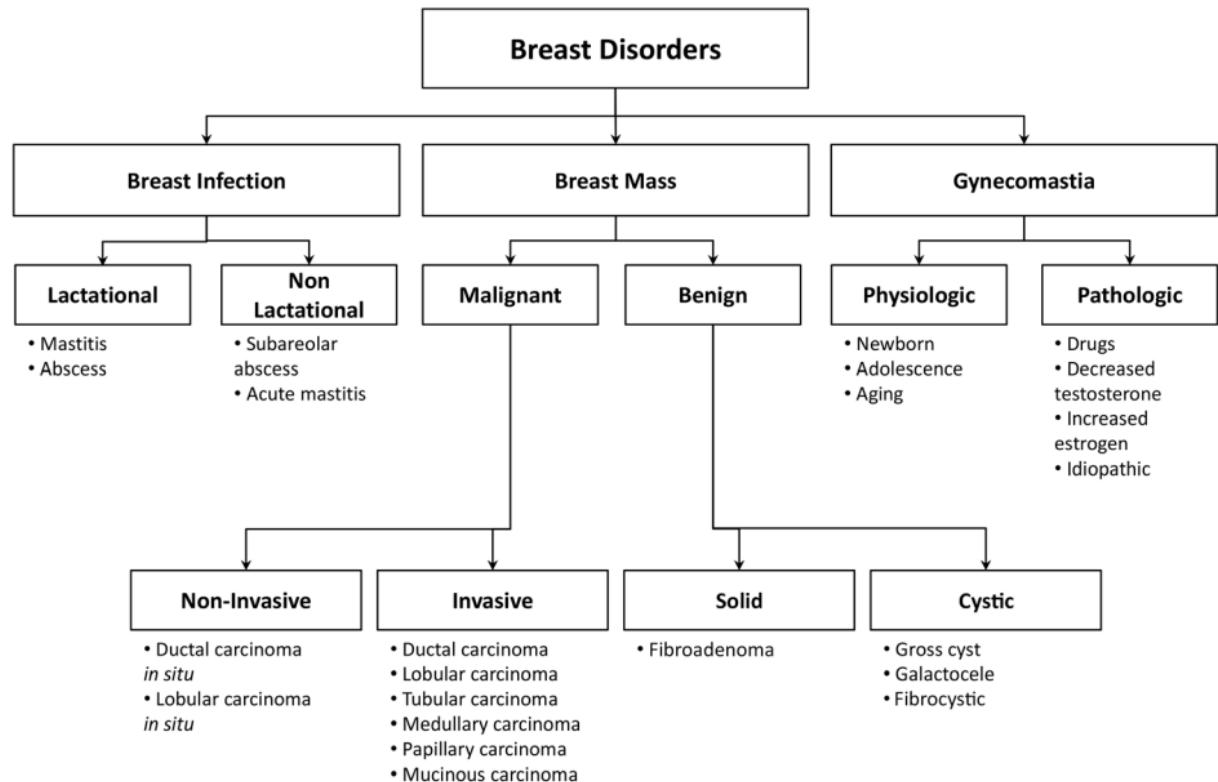


Bleeding in Pregnancy

2nd & 3rd Trimester

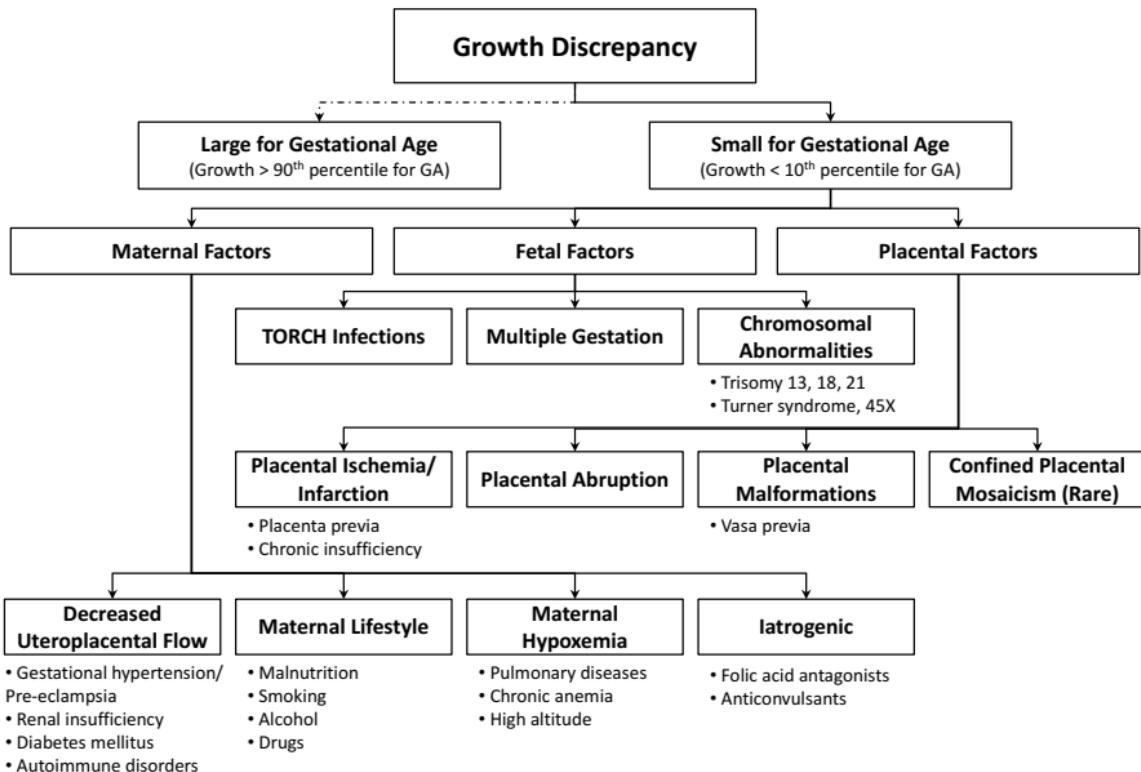


Breast Disorder



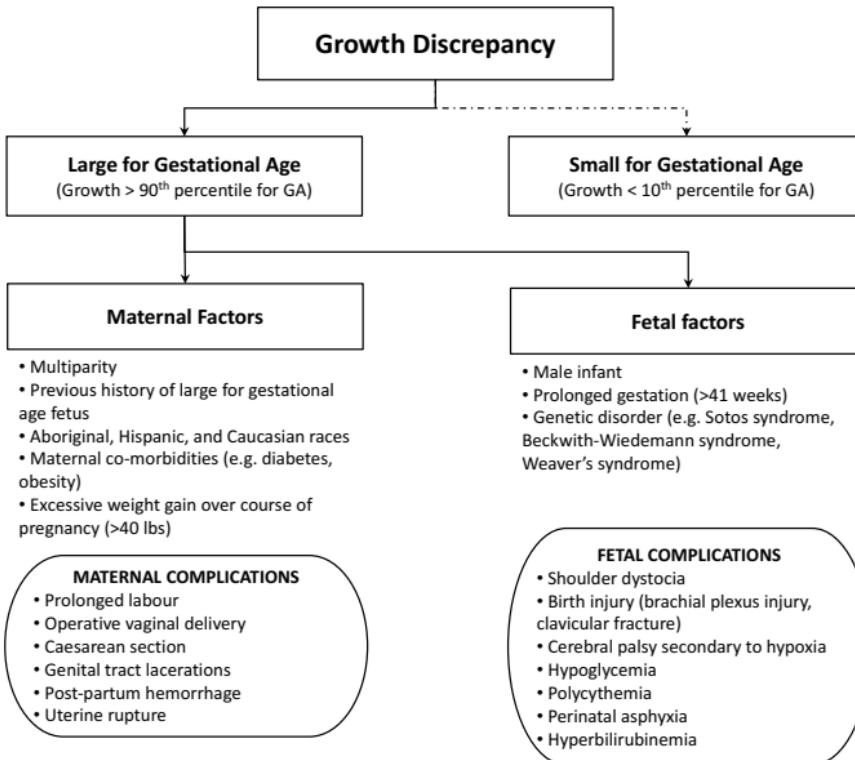
Growth Discrepancy

Small for Gestational Age / Intrauterine Growth Restriction

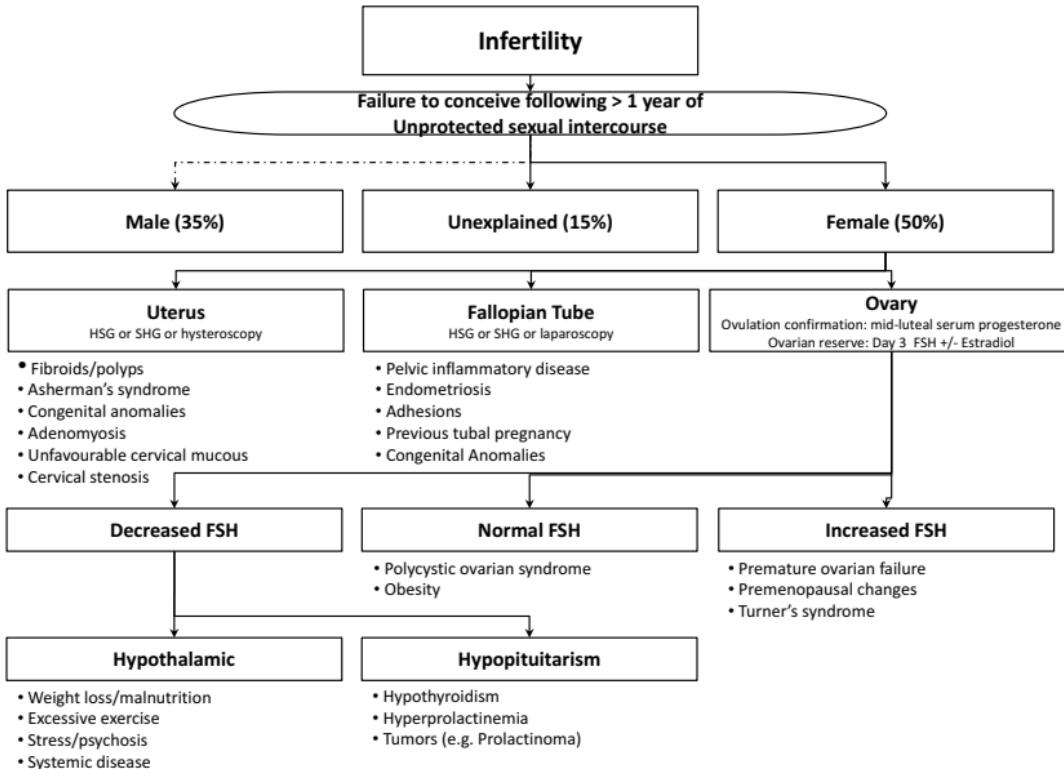


Growth Discrepancy

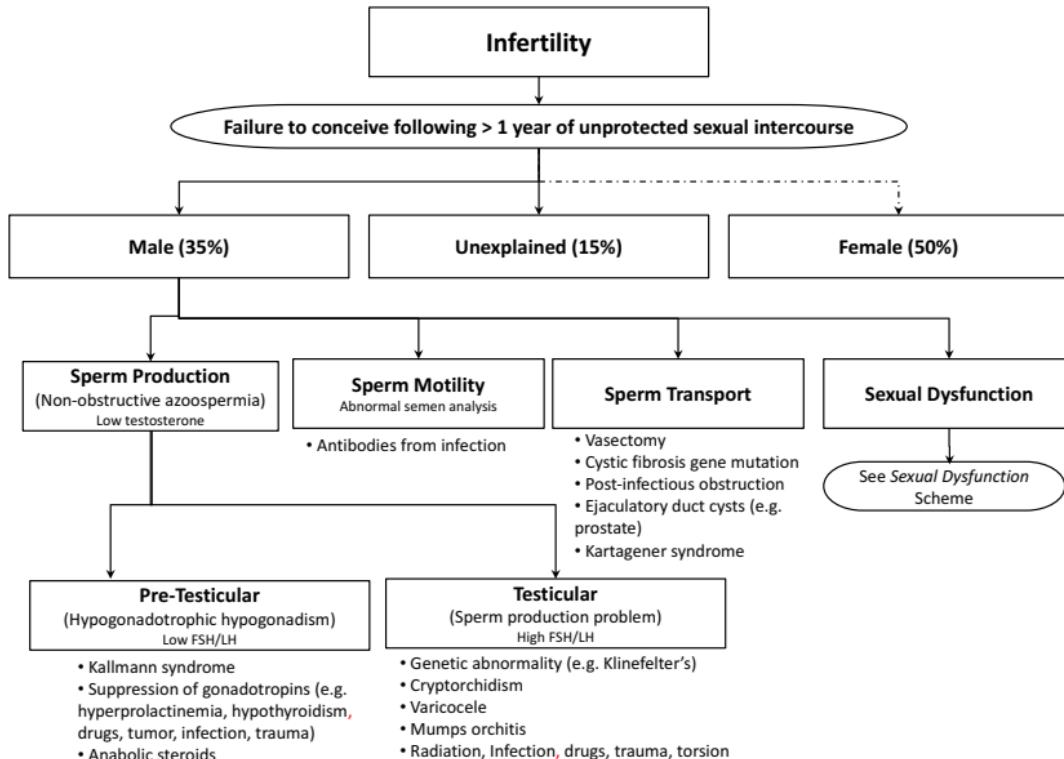
Large for Gestational Age



Infertility (Female)

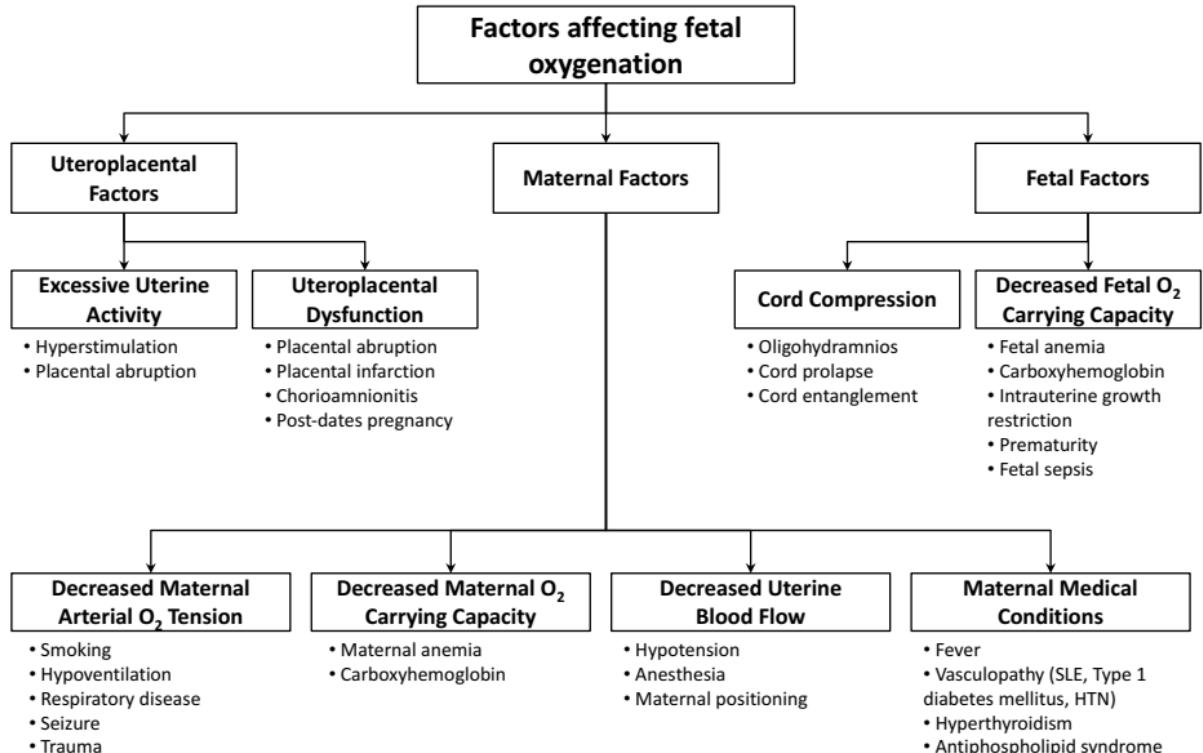


Infertility (Male)

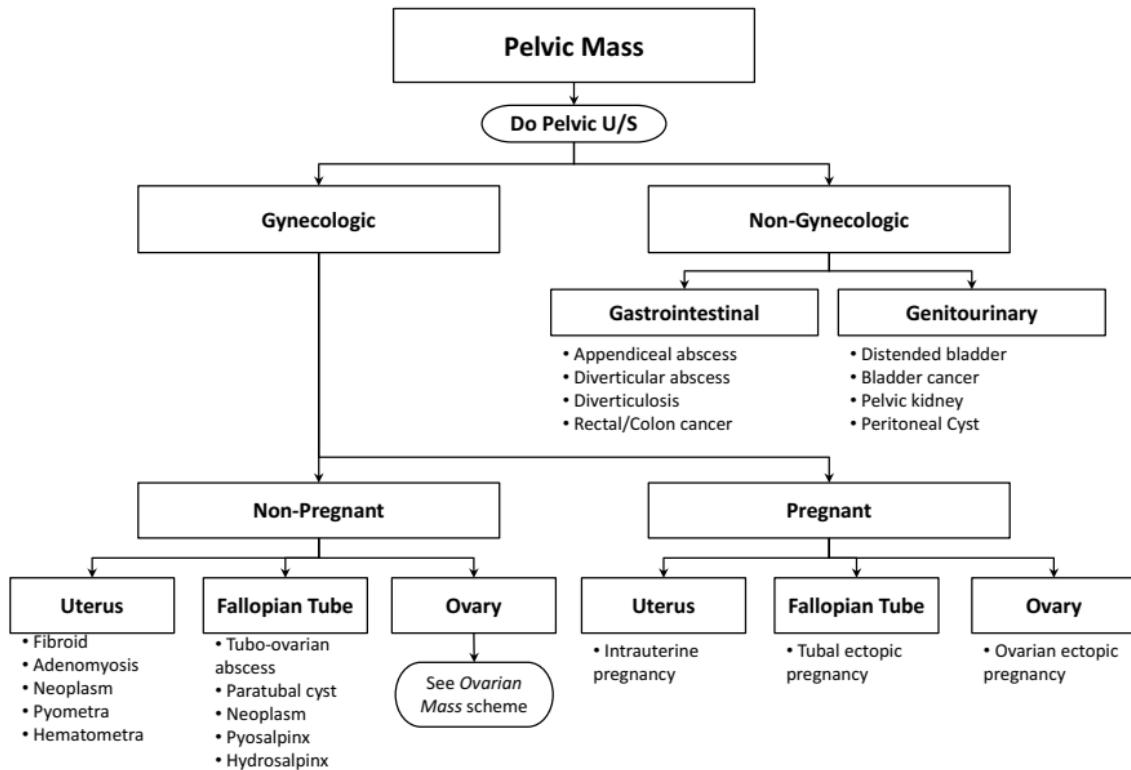


Intrapartum

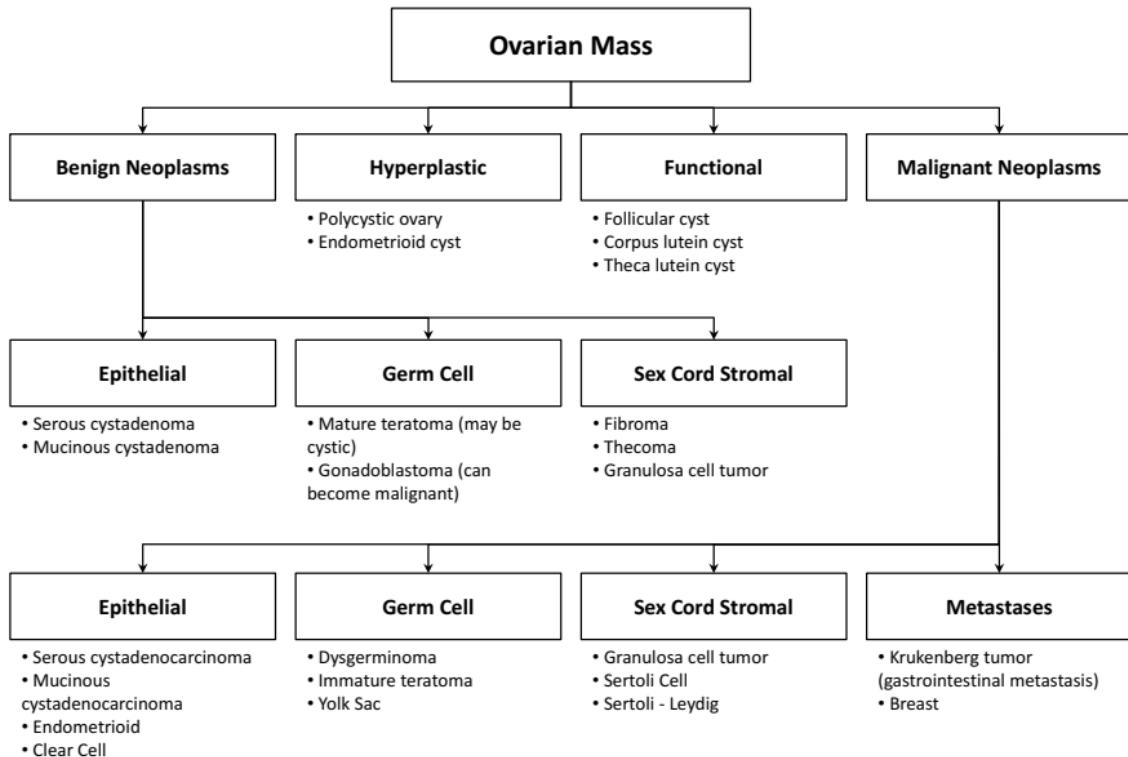
Factors that May Affect Fetal Oxygenation



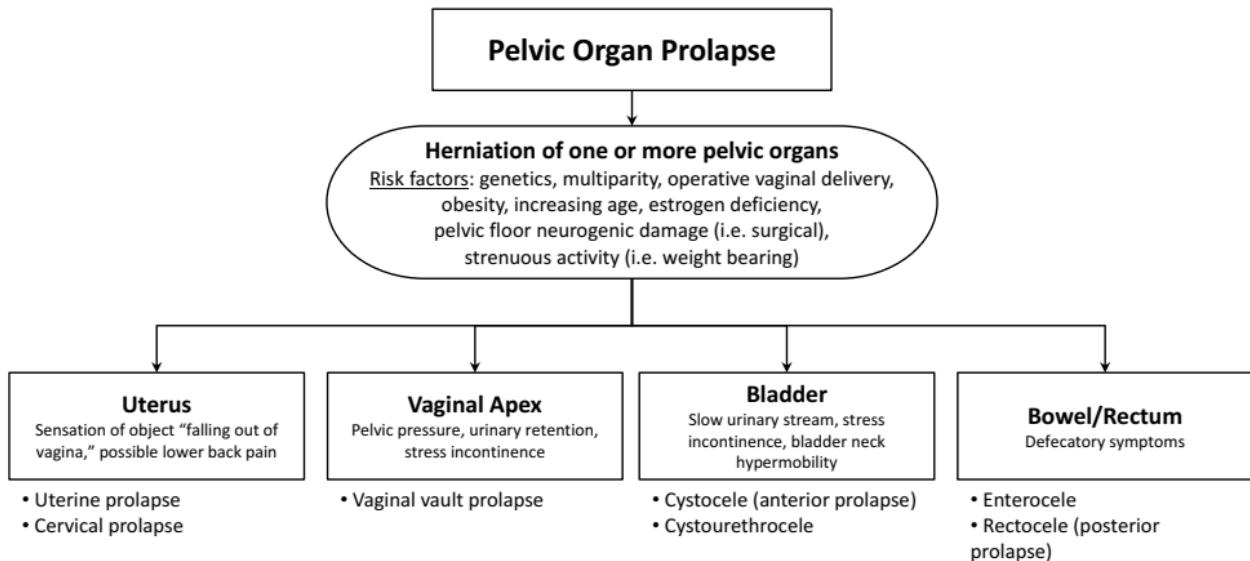
Pelvic Mass



Ovarian Mass



Pelvic Organ Prolapse



Post-Partum Fever

6 W's for causes of PPF

Wind: pneumonia, atelectasis

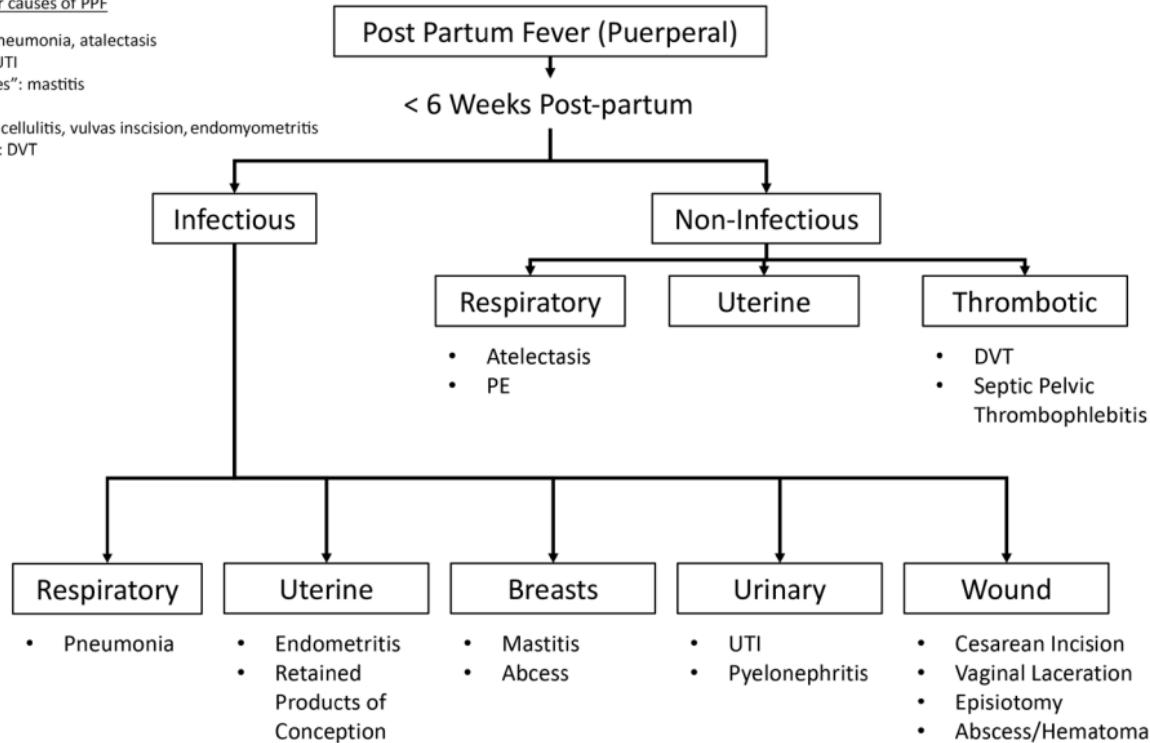
Water: UTI

"Woobies": mastitis

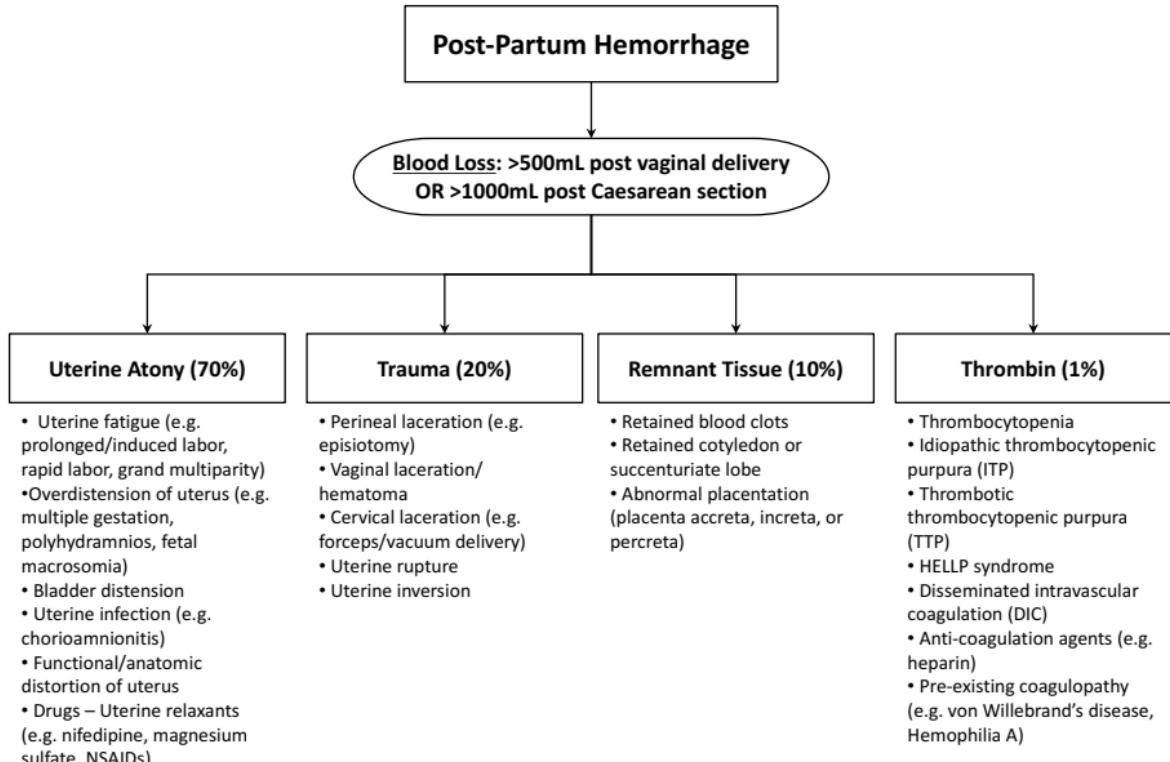
Womb

Wound: cellulitis, vulvas incision, endomyometritis

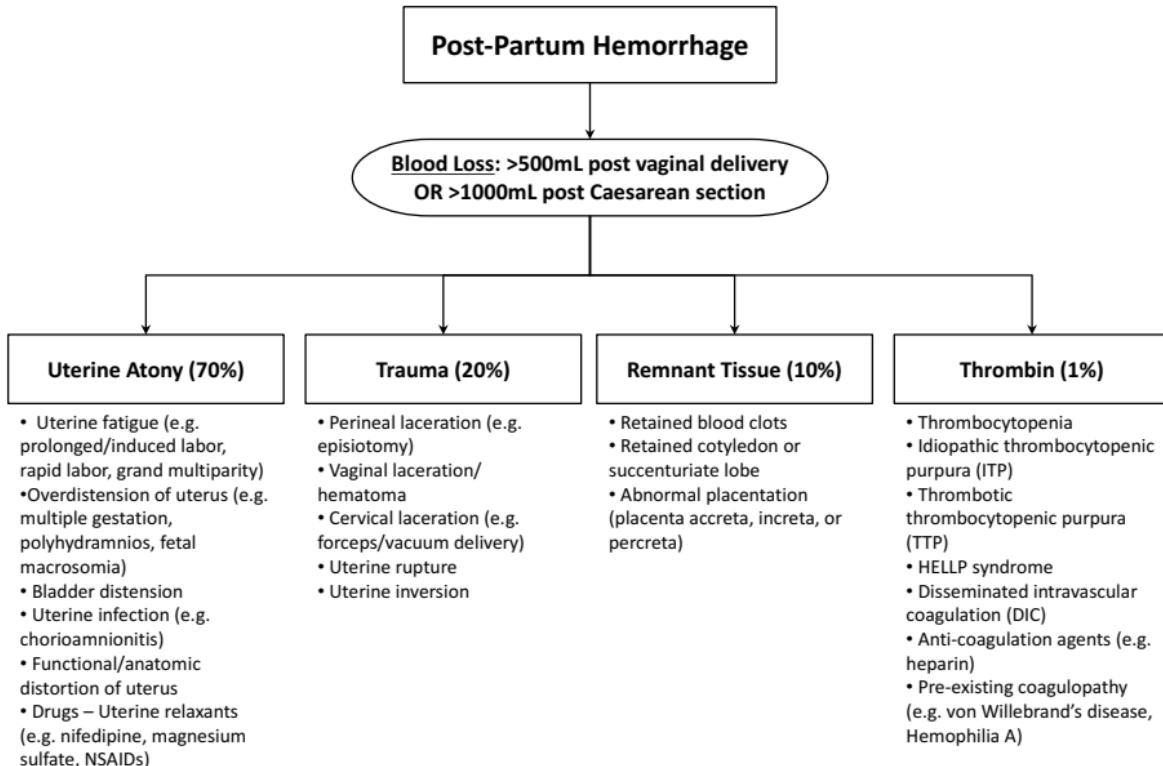
Walking: DVT



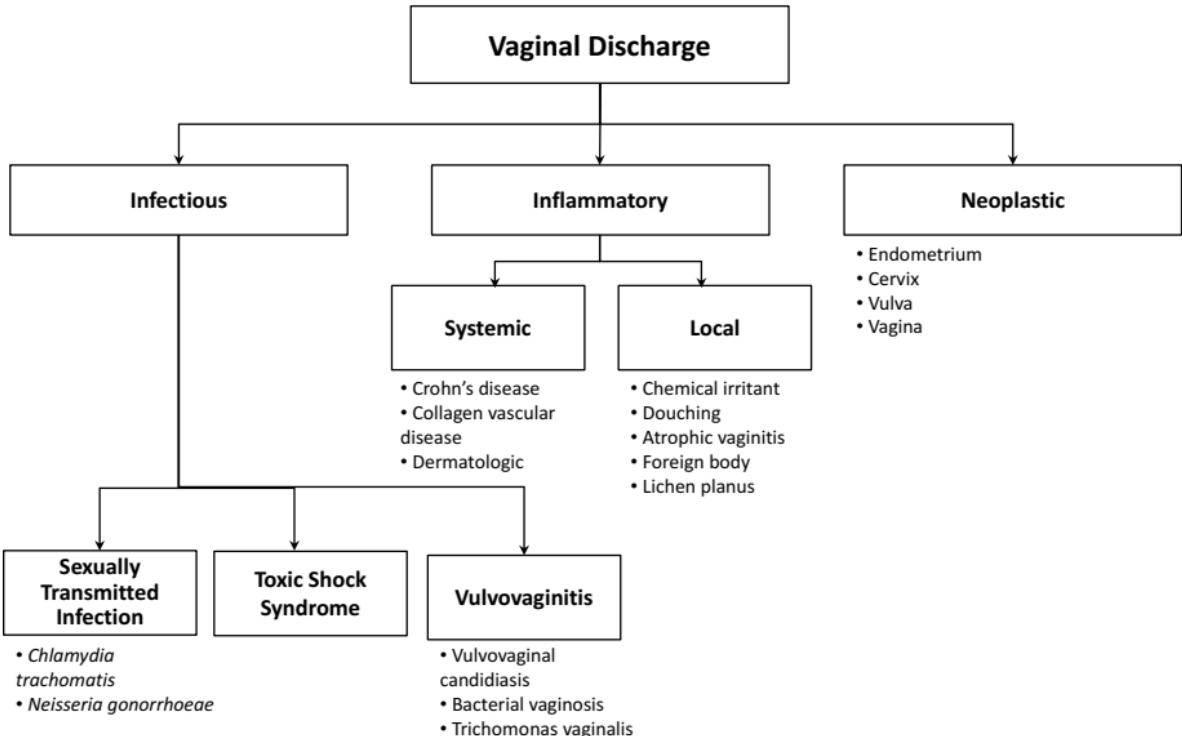
Post-Partum Hemorrhage



Recurrent Pregnancy Loss



Vaginal Discharge



Dermatologic

Burns	221
Dermatoses in Pregnancy Physiologic Changes	222
Dermatoses in Pregnancy Specific Skin Conditions	223
Disorders of Pigmentations Hyperpigmentation	224
Disorders of Pigmentations Hypopigmentation	225
Genital Lesion	226
Hair Loss (Alopecia) Diffuse	227
Hair Loss (Alopecia) Localized	228
Morphology of Skin Lesions Primary Skin Lesions	229
Morphology of Skin Lesions Secondary Skin Lesions	230
Mucous Membrane Disorder Oral Cavity....	231
Nail Disorders Primary Dermatologic Disease	232
Nail Disorders Systemic Disease.....	233
Nail Disorders Systemic Disease - Clubbing	234
Pruritus No Primary Skin Lesion	235
Pruritus Primary Skin Lesion.....	236
Skin Rash Eczematous.....	237
Skin Rash Papulosquamous.....	238
Skin Rash Pustular.....	239
Skin Rash Reactive.....	240

Skin Rash Vesiculobullous.....	241
Skin Ulcer by Etiology	242
Skin Ulcer by Location Genitals.....	243
Skin Ulcer by Location Head & Neck....	244
Skin Ulcer by Location Lower Legs / Feet.....	245
Skin Ulcer by Location Oral Ulcers.....	246
Skin Ulcer by Location Trunk / Sacral Region.....	247
Vascular Lesions.....	248

Subm

T
C



Historical Editors

Danny Guo
Rachel Lim
Dave Campbell
Joanna Debosz
Safiya Karim
Beata Komierowski
Natalia Liston
Arjun Rash
Jennifer Rodrigues
Sarah Surette
Yang Zhan

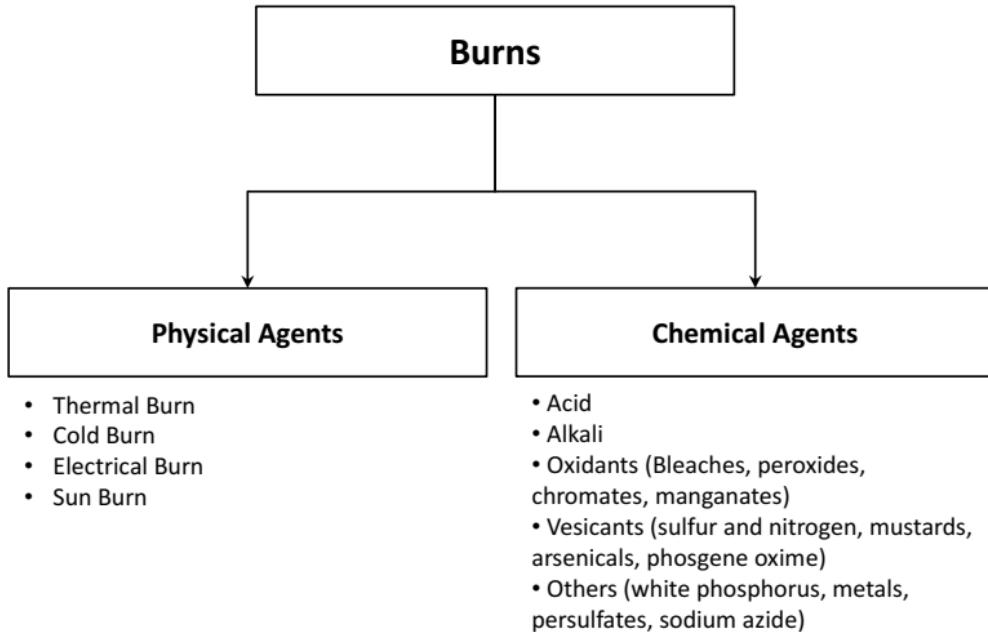
Student Editors

Noelle Wong (Co-editor)
Heena Singh (Co-editor)

Faculty Editor

Dr. Laurie Parsons

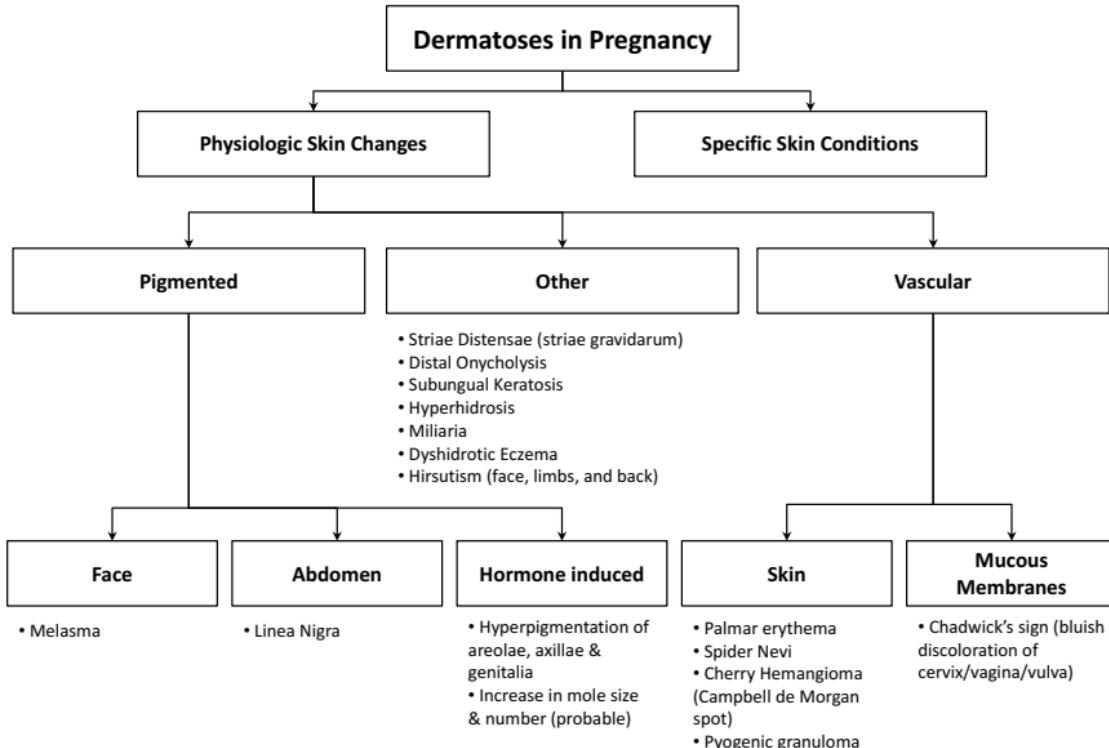
Burns



Parkland formula for fluid resuscitation:
4cc x Weight (kg) x %TBSA burn

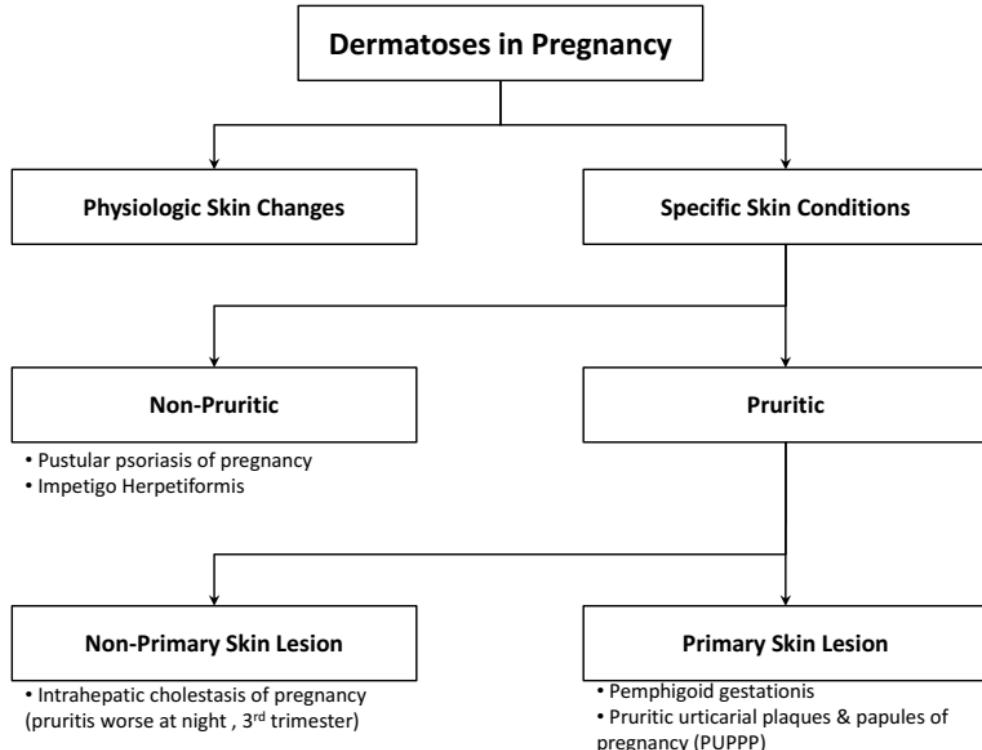
Dermatoses in Pregnancy

Physiologic Changes



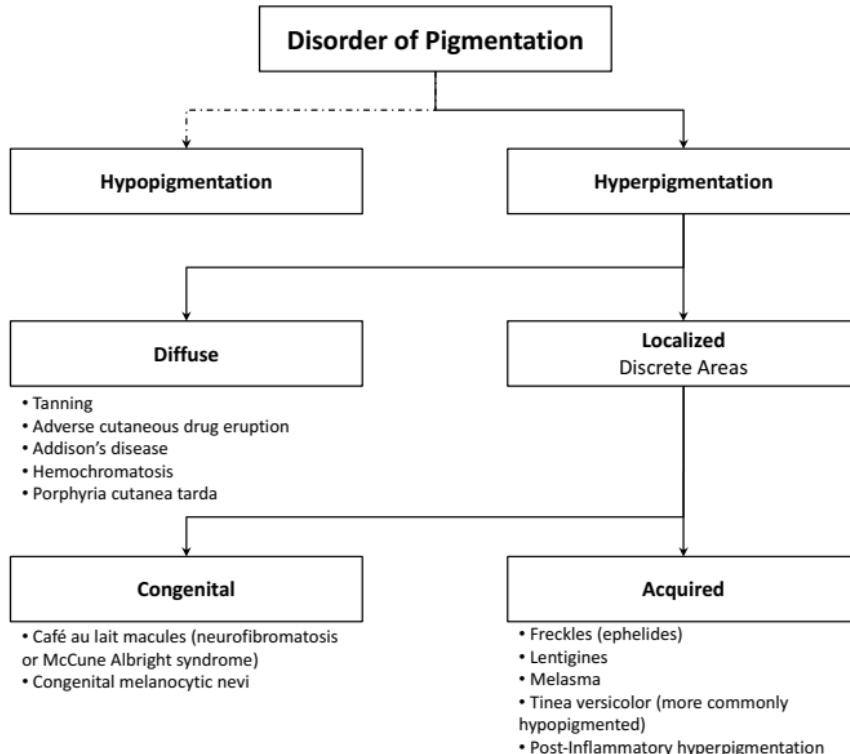
Dermatoses in Pregnancy

Specific Skin Conditions



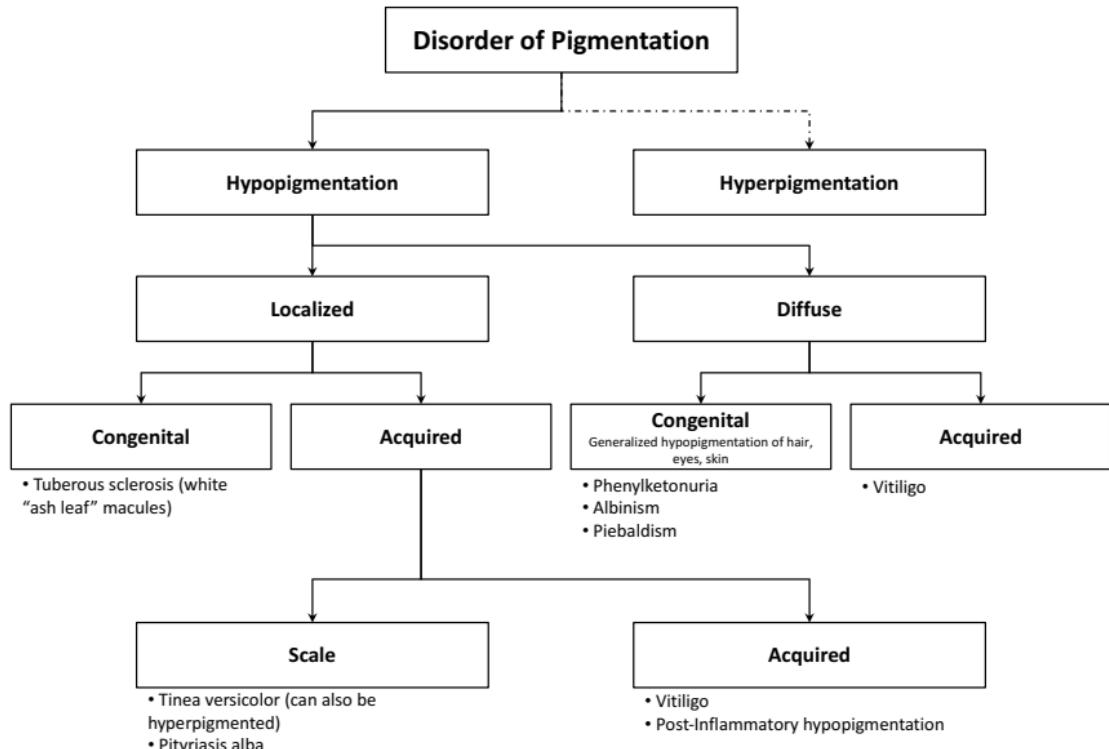
Disorders of Pigmentations

Hyperpigmentation

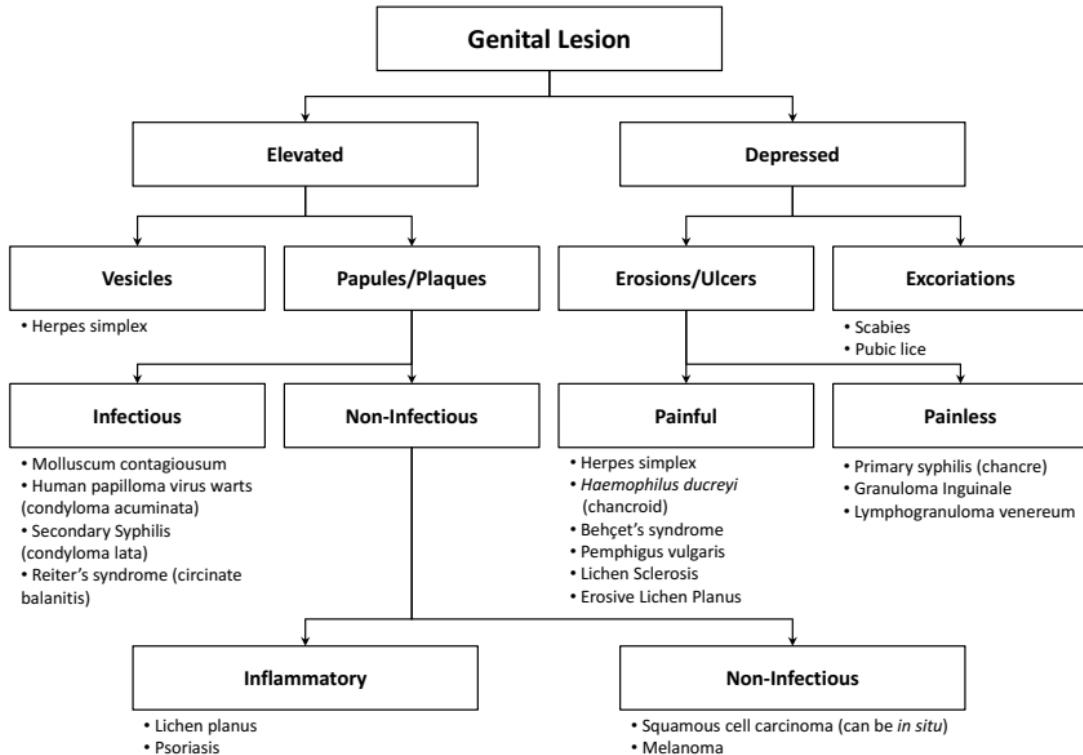


Disorders of Pigmentations

Hypopigmentation

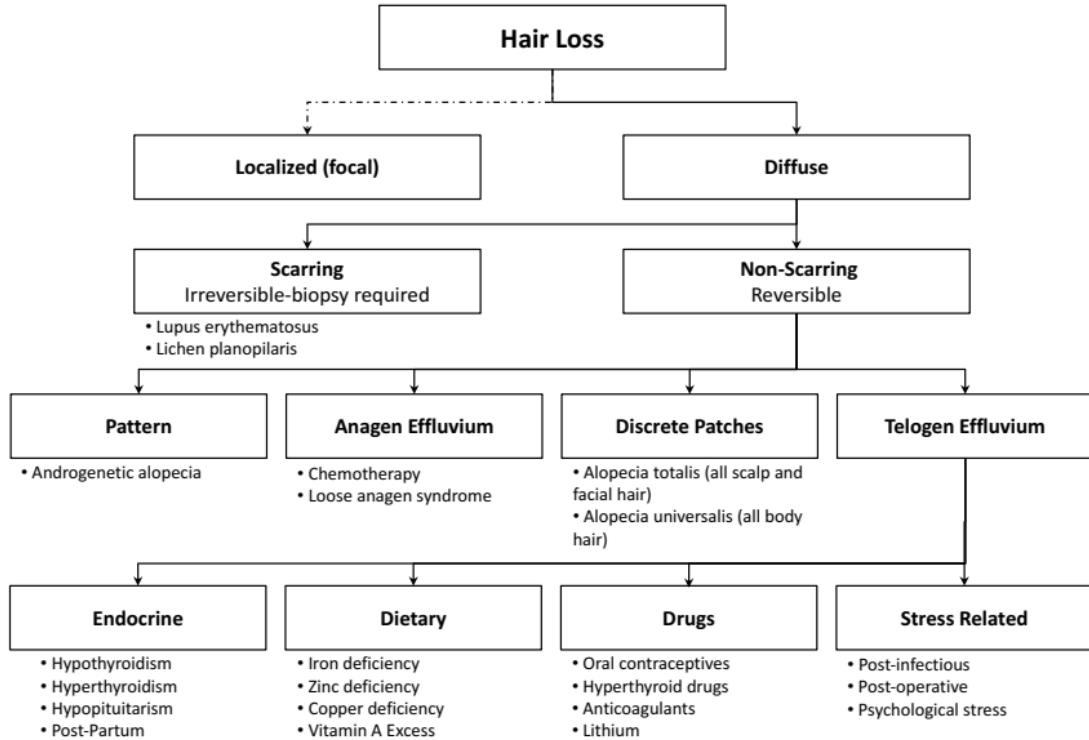


Genital Lesion



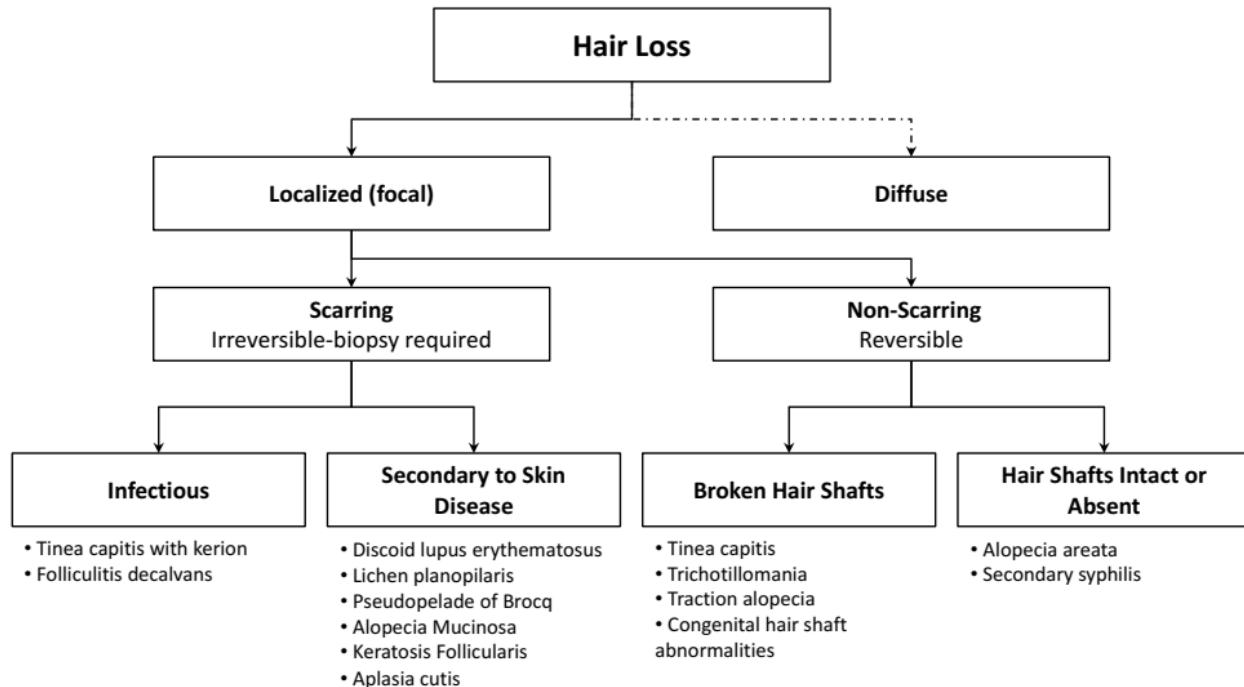
Hair Loss (Alopecia)

Diffuse



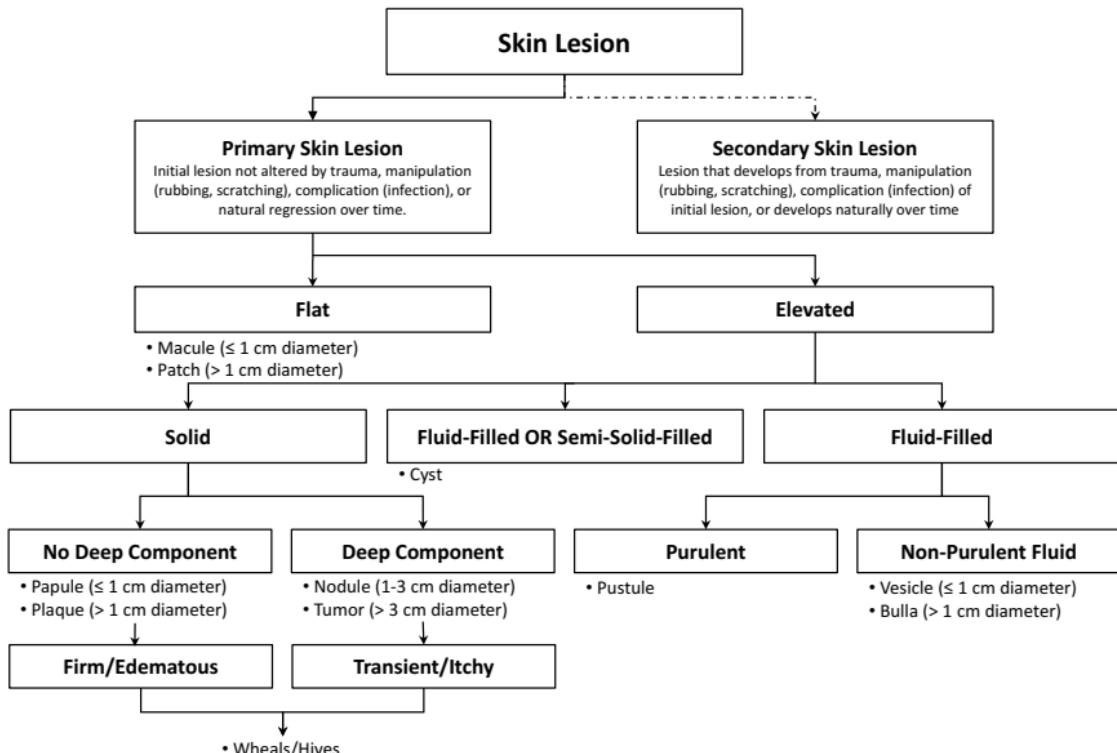
Hair Loss (Alopecia)

Localized



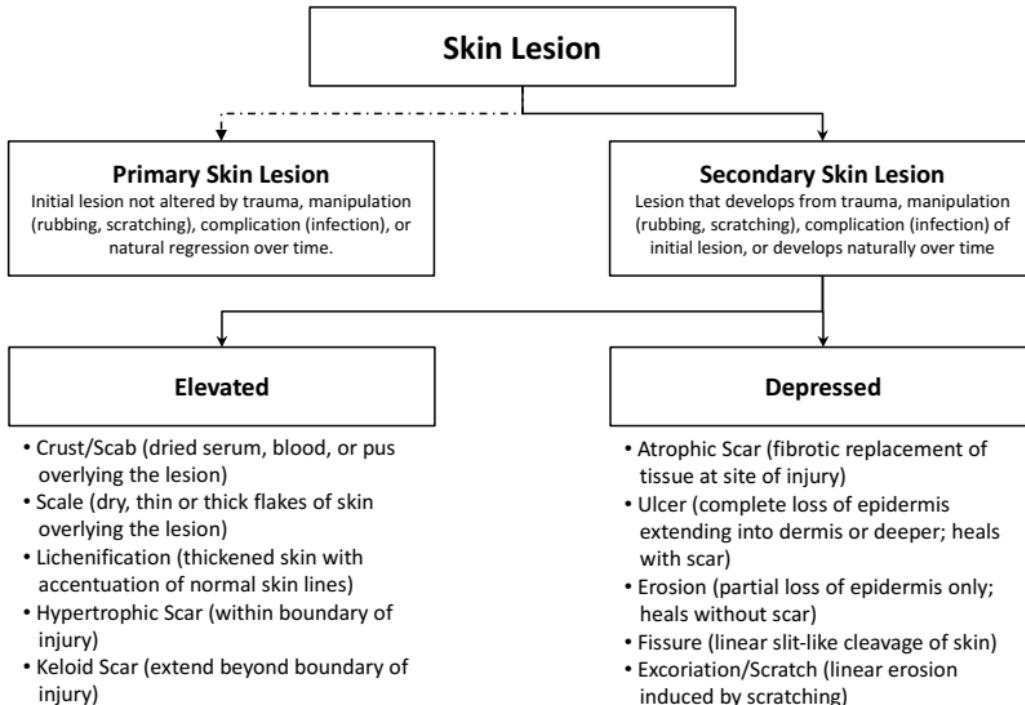
Morphology of Skin Lesions

Primary Skin Lesions



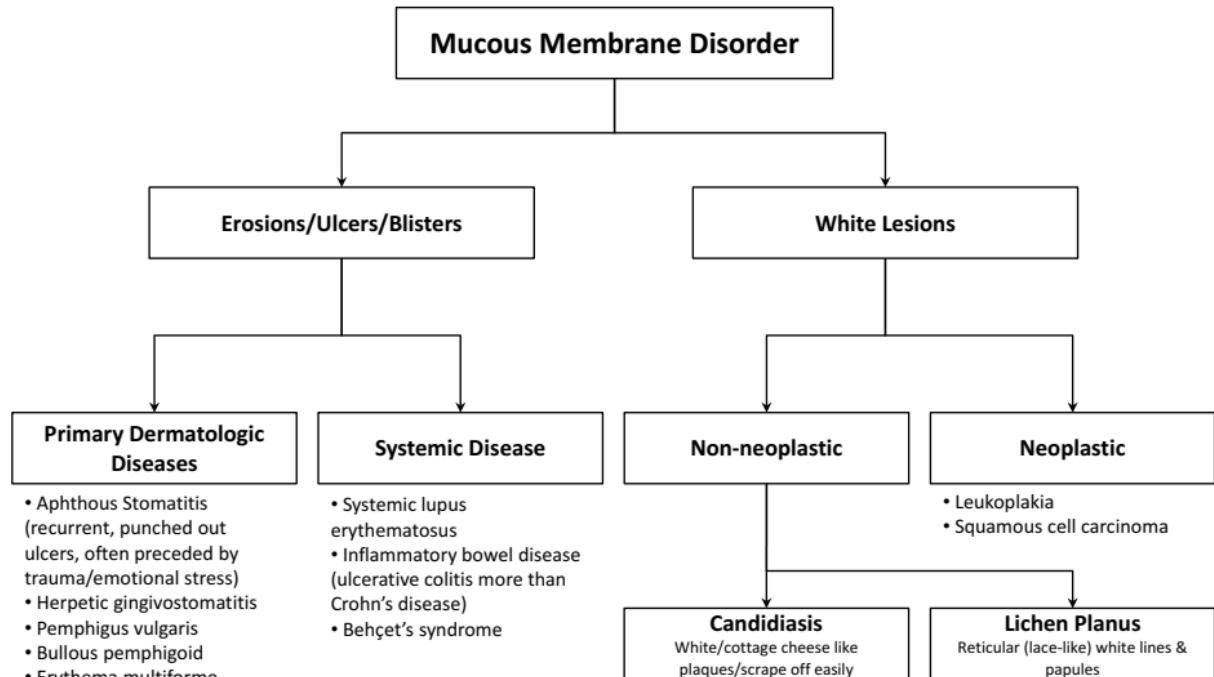
Morphology of Skin Lesions

Secondary Skin Lesions



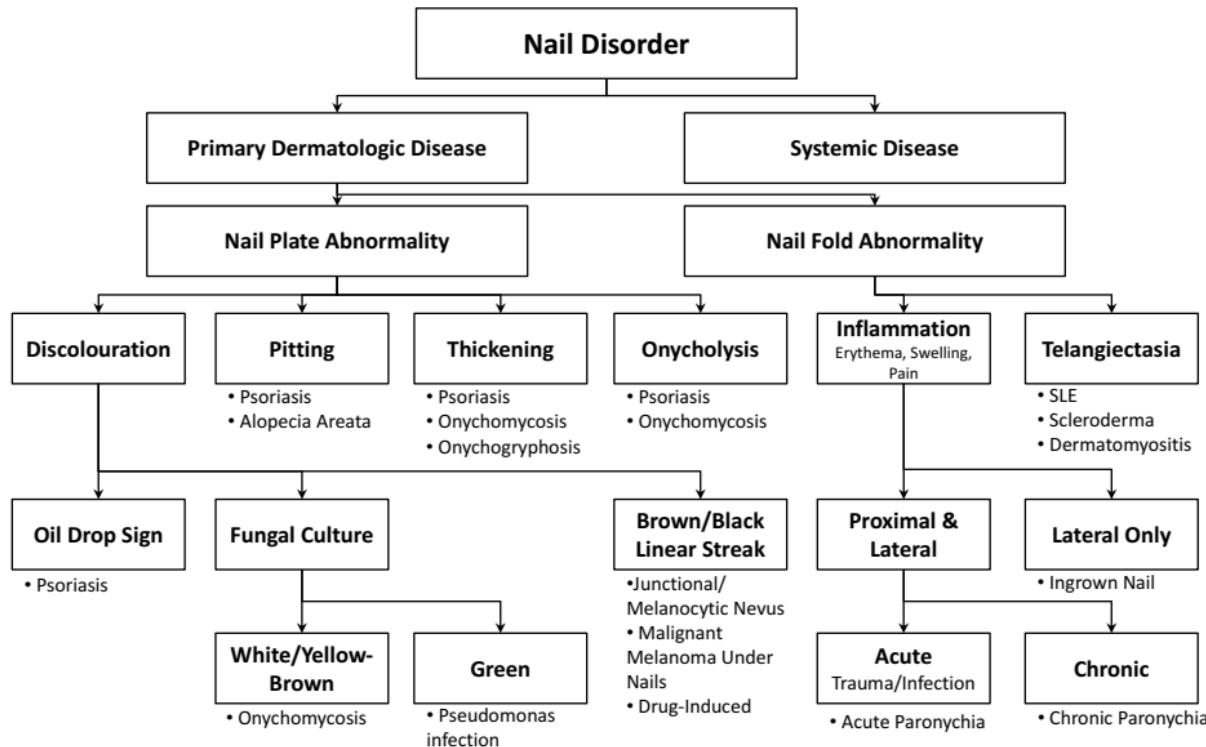
Mucous Membrane Disorder

Oral Cavity



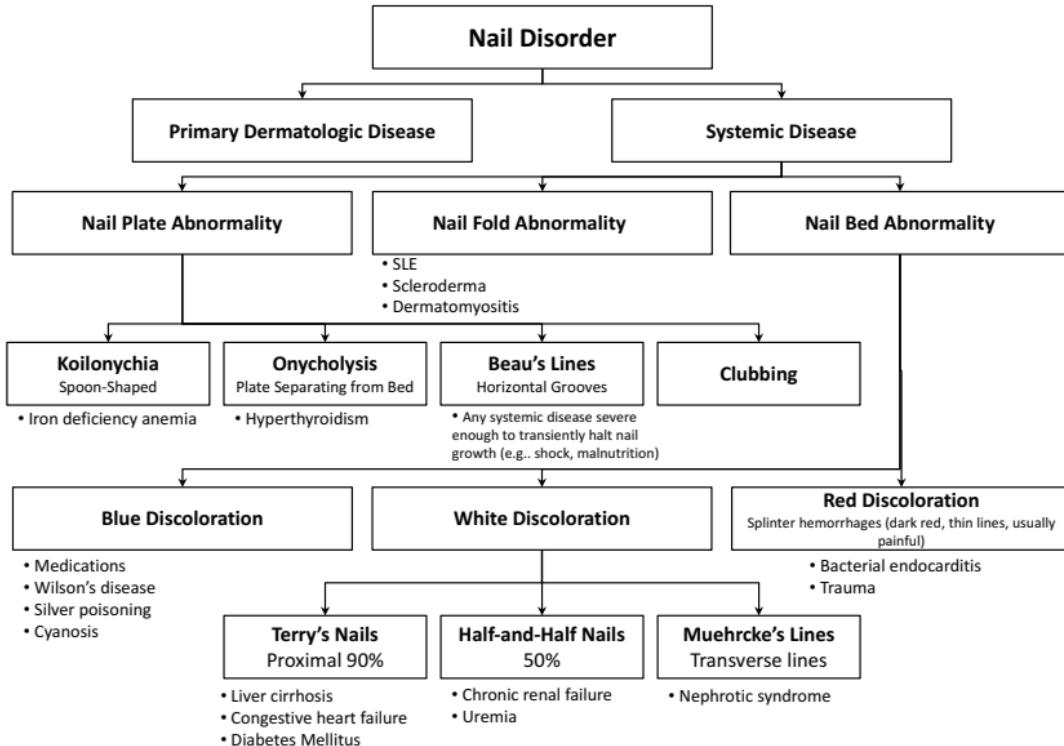
Nail Disorders

Primary Dermatologic Disease



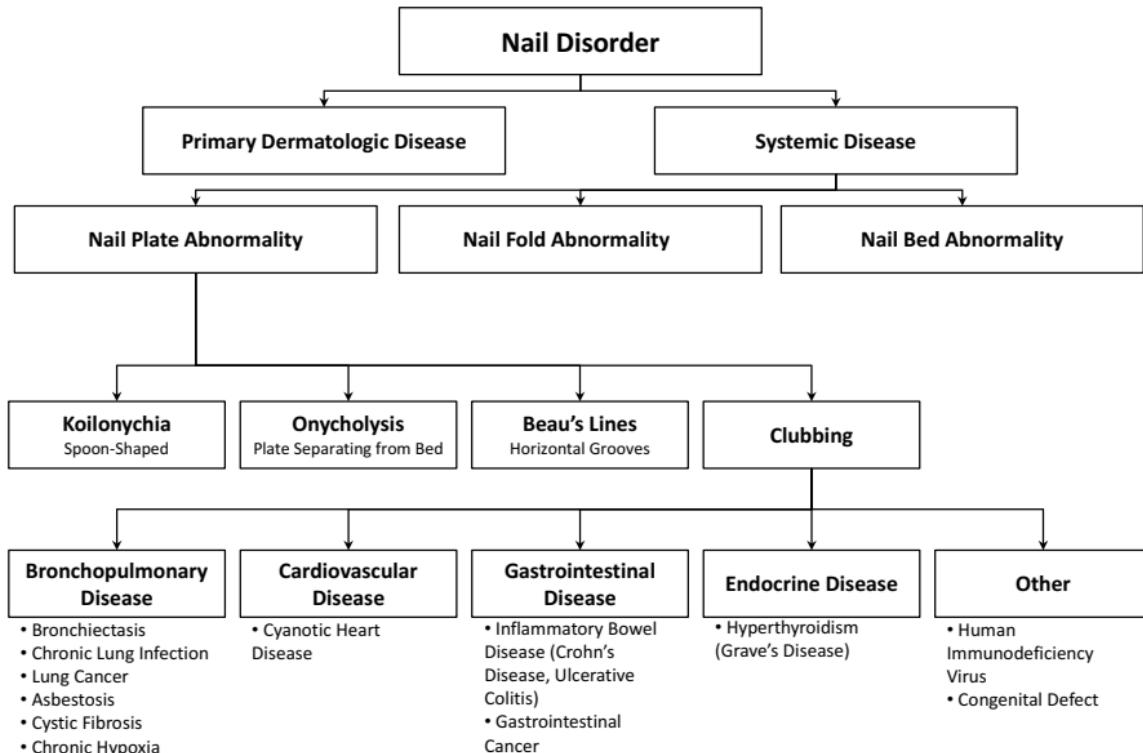
Nail Disorders

Systemic Disease



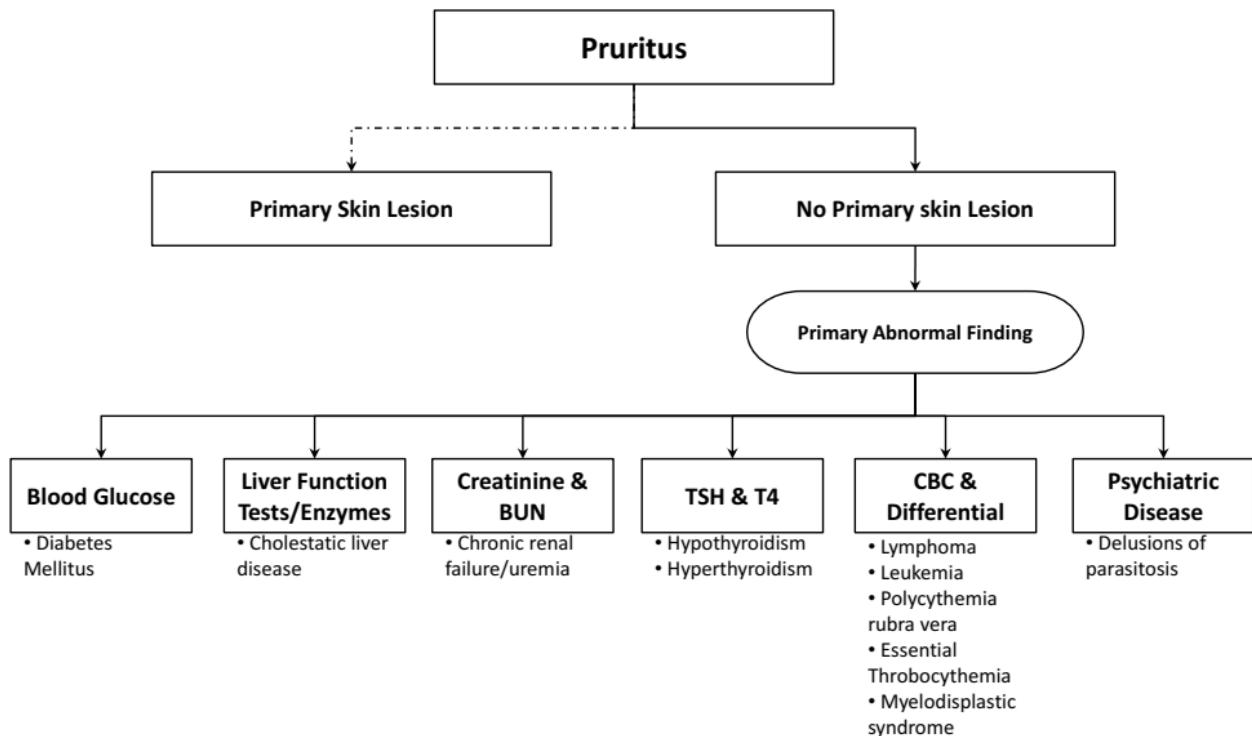
Nail Disorders

Systemic Disease - Clubbing



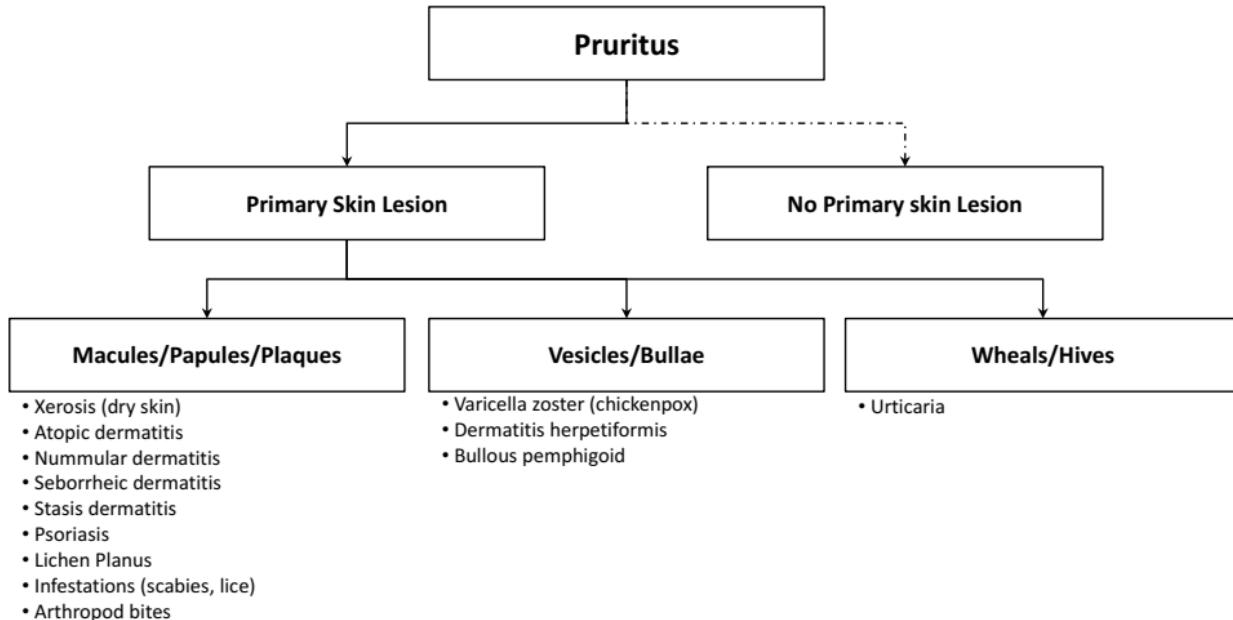
Pruritus

No Primary Skin Lesion



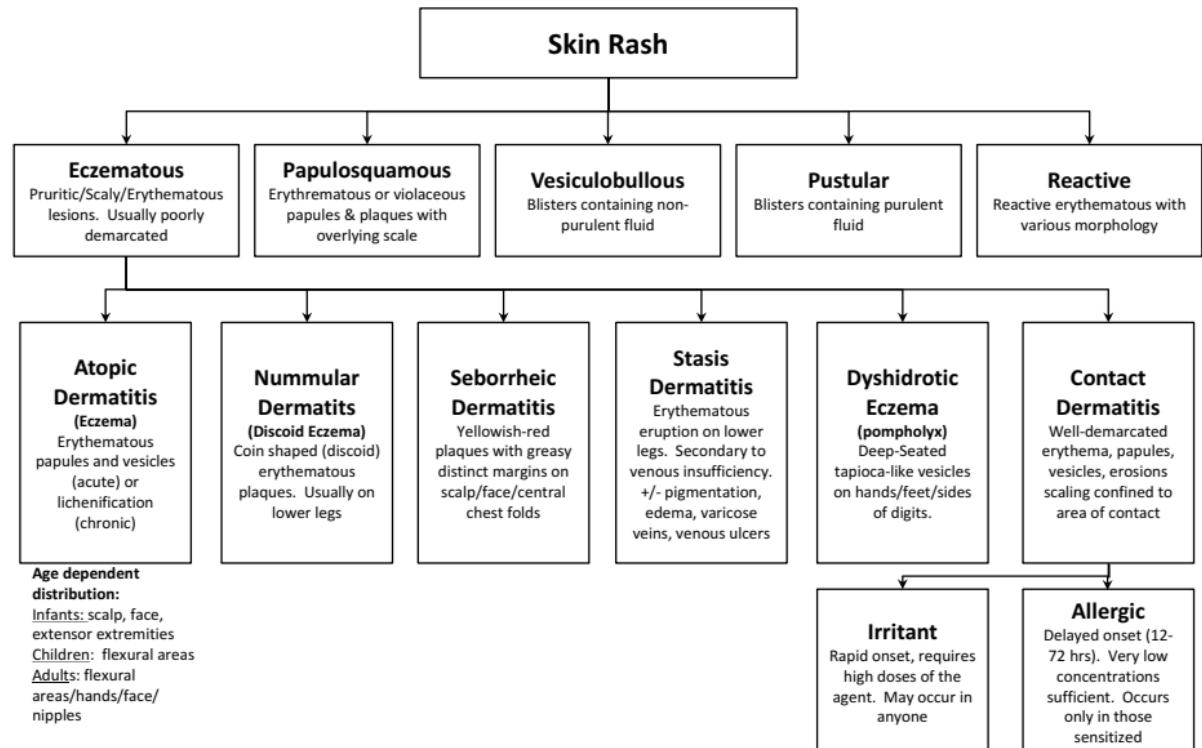
Pruritus

Primary Skin Lesion



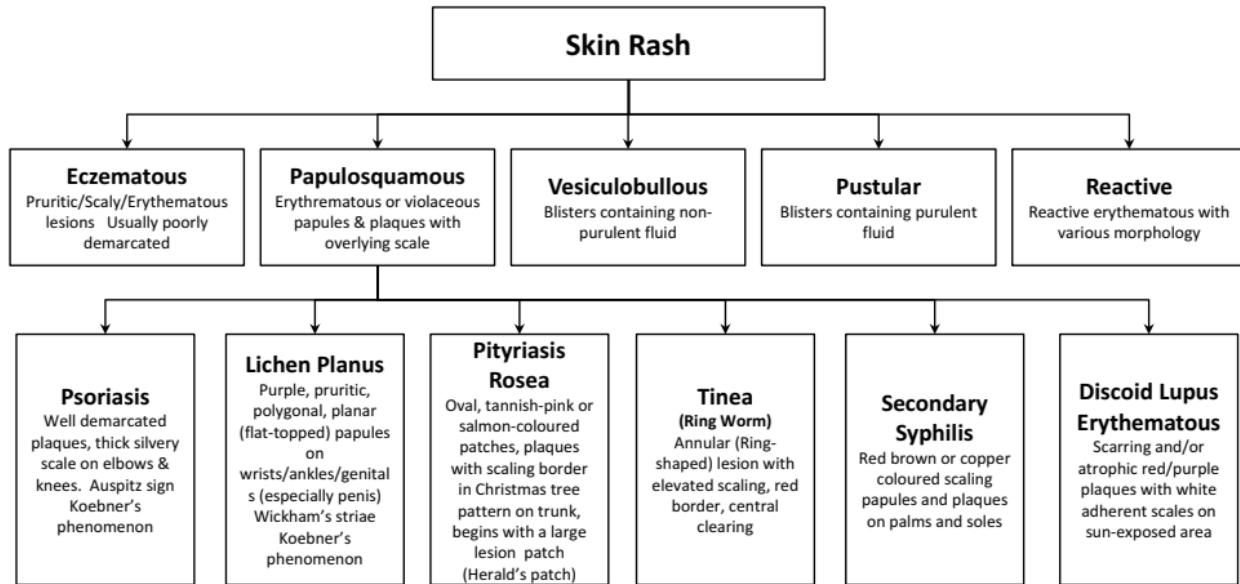
Skin Rash

Eczematous



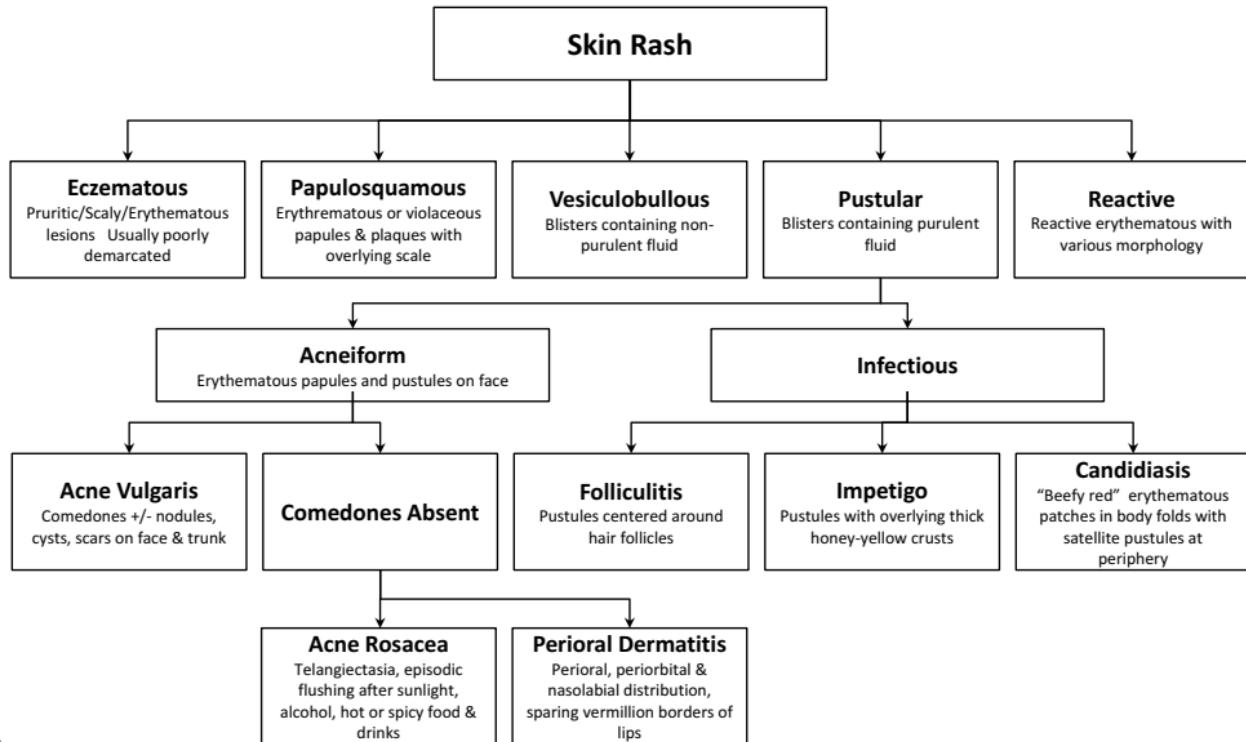
Skin Rash

Papulosquamous



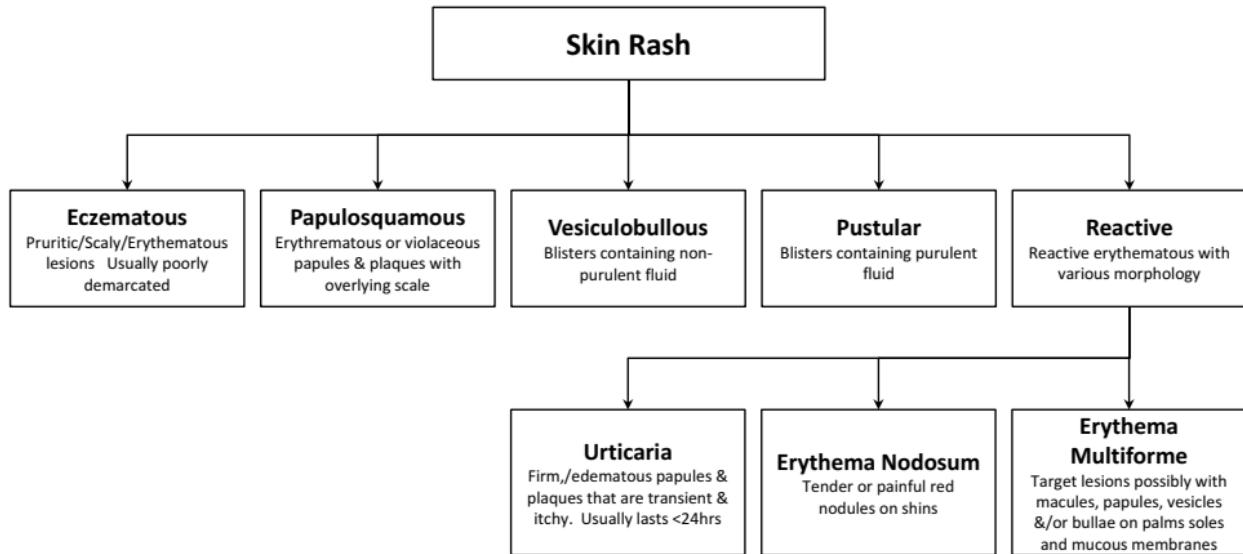
Skin Rash

Pustular



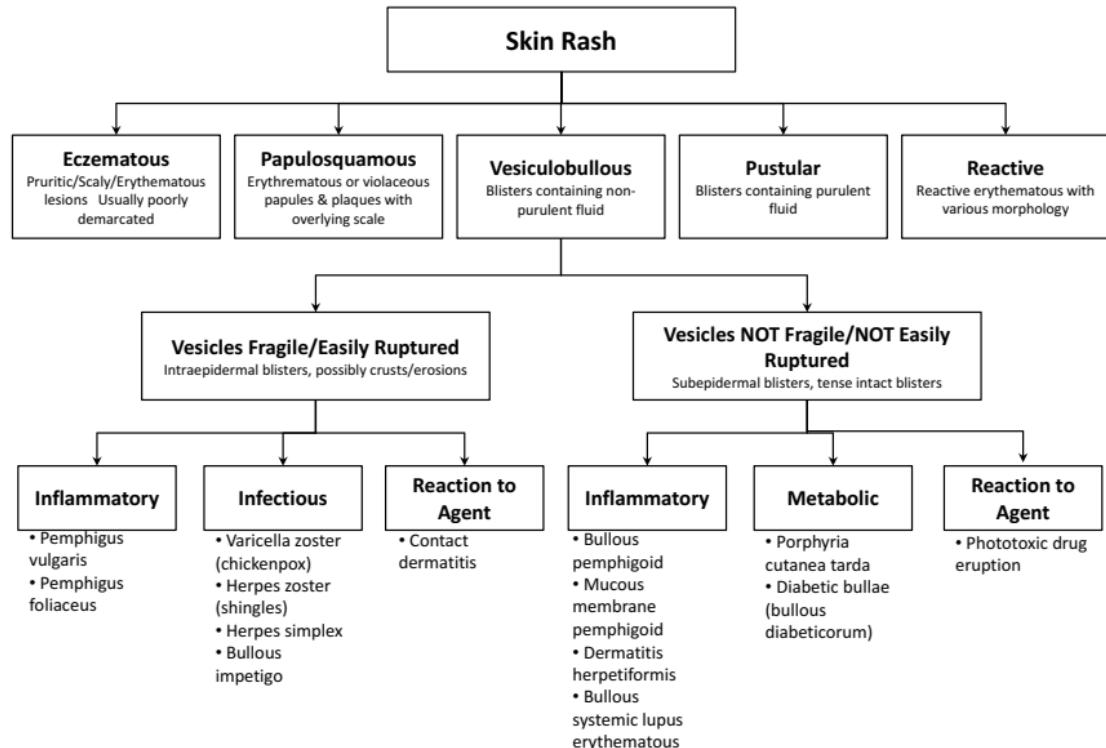
Skin Rash

Reactive

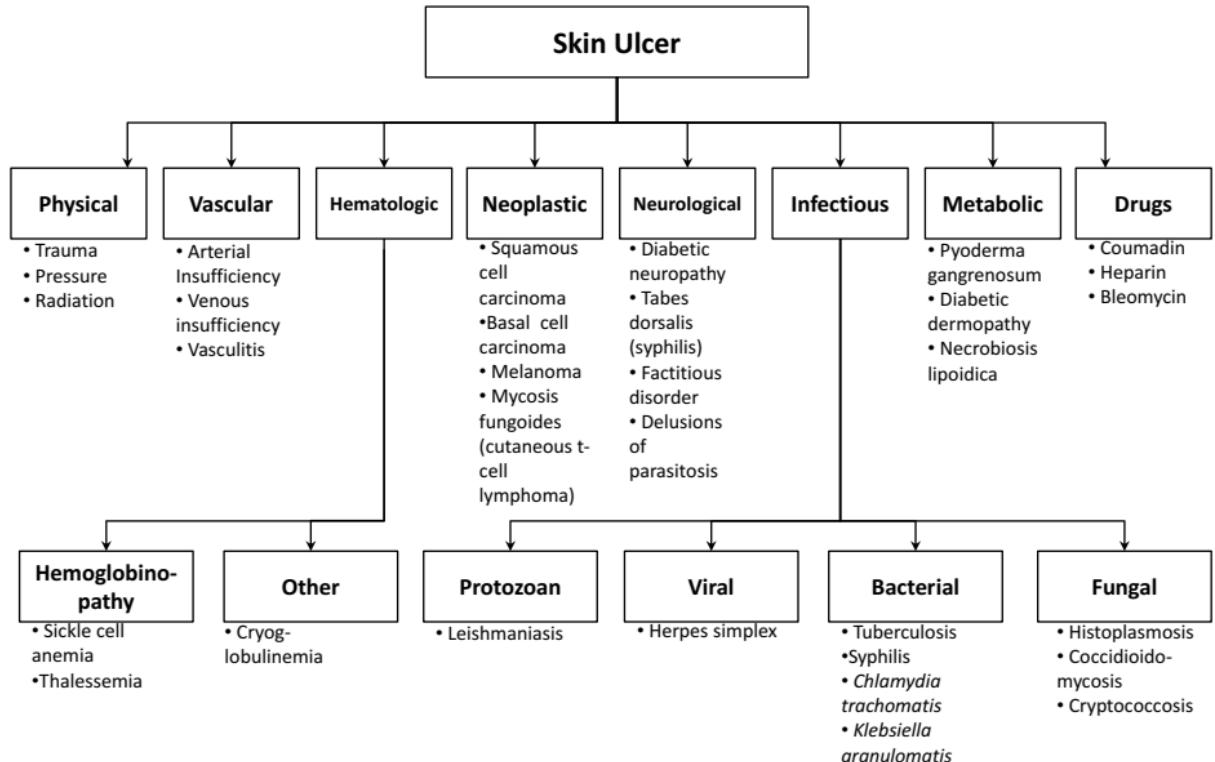


Skin Rash

Vesiculobullous

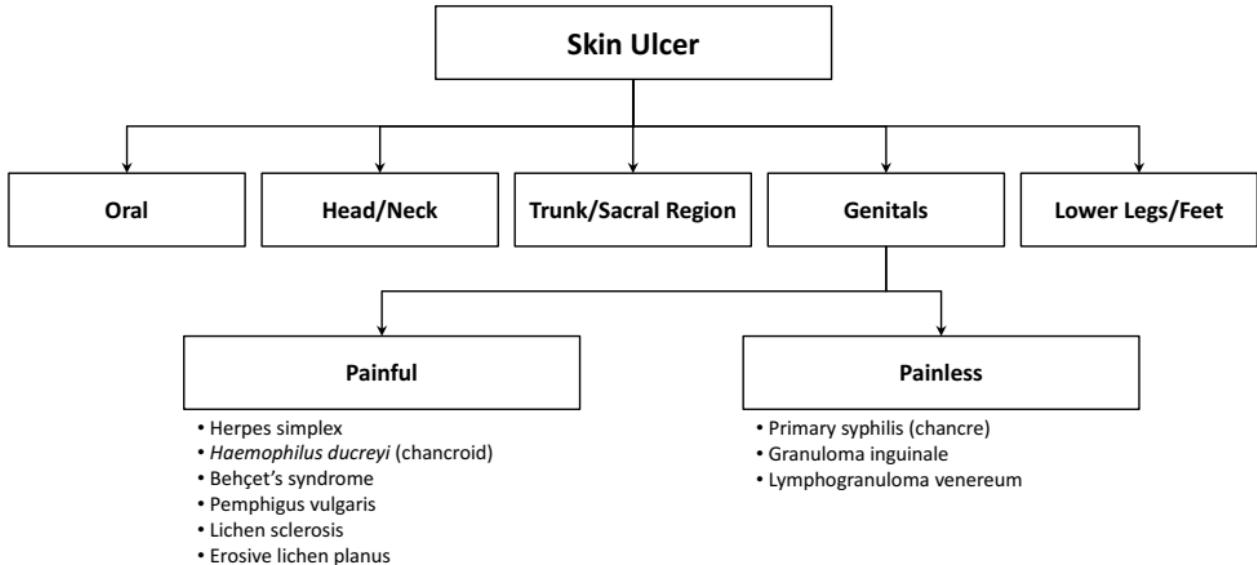


Skin Ulcer by Etiology



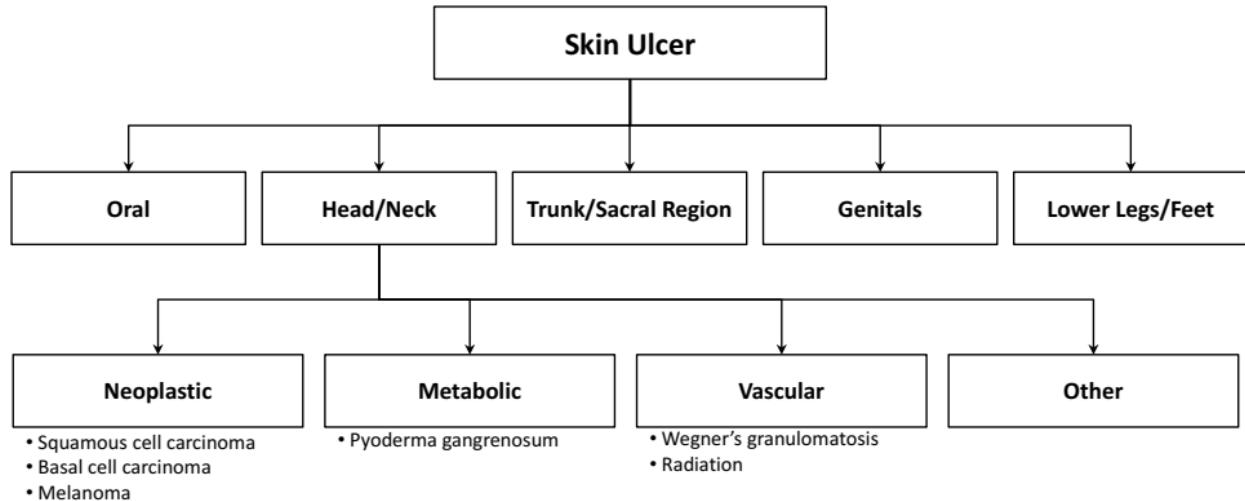
Skin Ulcer by Location

Genitals



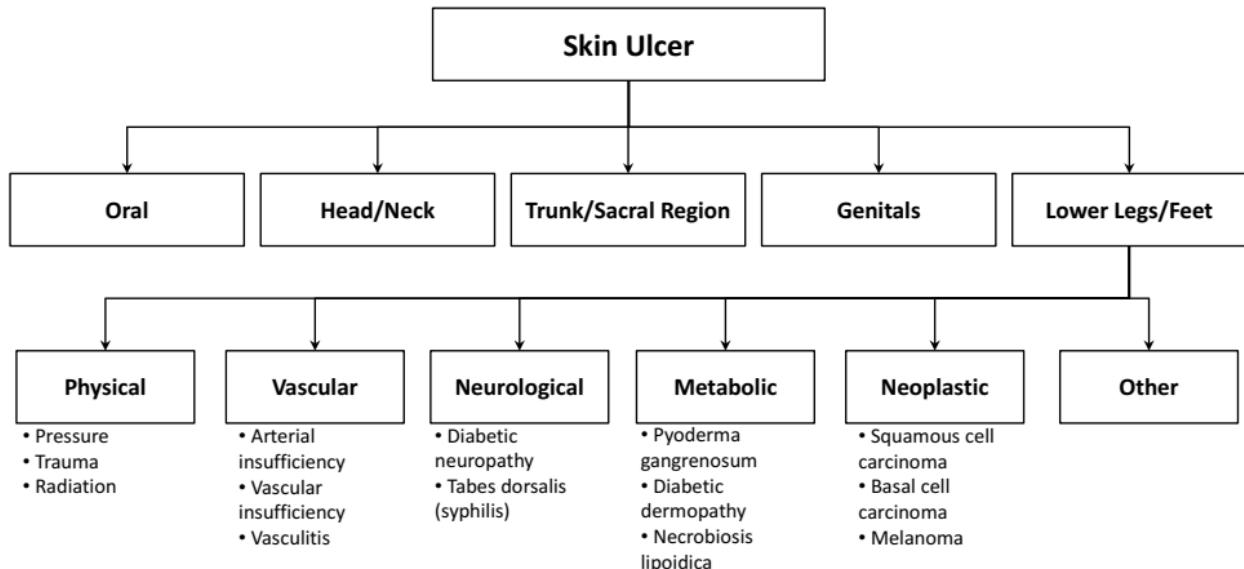
Skin Ulcer by Location

Head & Neck



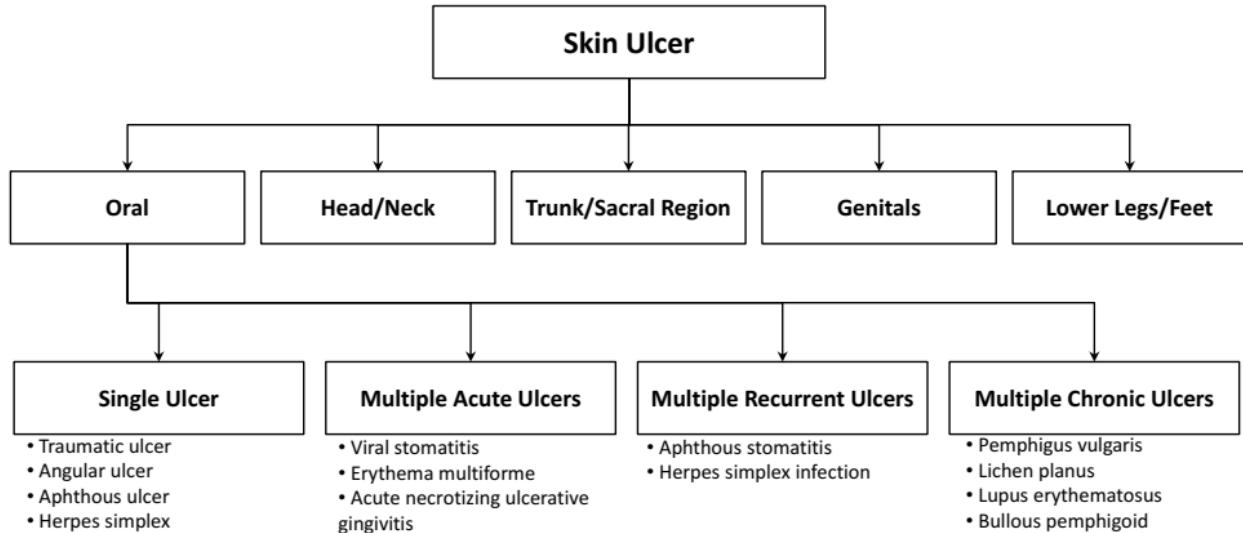
Skin Ulcer by Location

Lower Legs / Feet



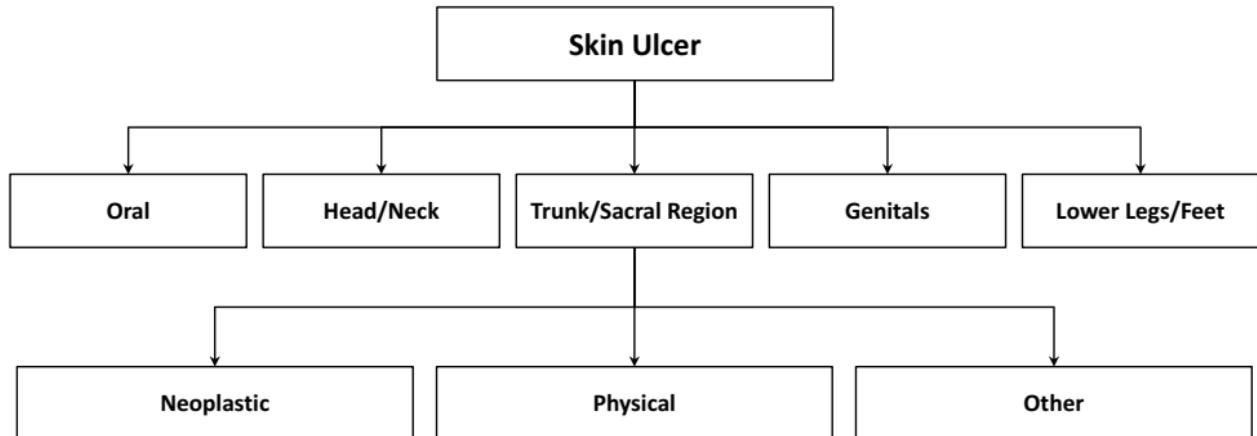
Skin Ulcer by Location

Oral Ulcers



Skin Ulcer by Location

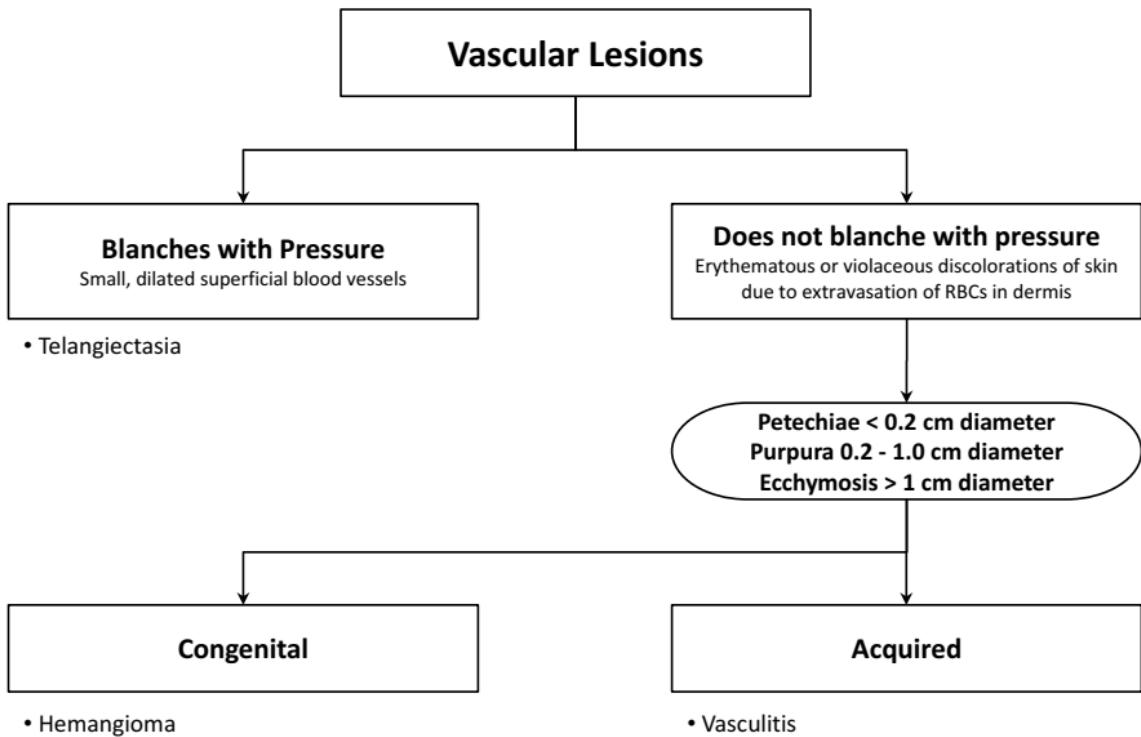
Trunk / Sacral Region



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

- Physical
- Trauma
- Radiation

Vascular Lesions



Musculoskeletal

Acute Joint Pain Vitamin CD	251
Chronic Joint Pain.....	252
Bone Lesion.....	253
Deformity / Limp	254
Infectious Joint Pain.....	255
Inflammatory Joint Pain.....	256
Vascular Joint Pain.....	257
Pathologic Fractures	258
Soft Tissue.....	259
Fracture Healing	260
Osteoporosis BMD Testing	261
Tumour.....	262
Myotomes Segmental Innervation of Muscles	263
Guide to Spinal Cord Injury.....	264





Historical Editors

Dr. Marcia Clark
Dr. Sylvain Coderre
Dr. Mort Doran
Dr. Henry Mandin
Graeme Matthewson
Katy Anderson
Tara Daley
Jonathan Dykeman
Kate Elzinga
Bikram Sidhu

Student Editors

Angie Karlos (*Co-editor*)
Ryan Iverach (*Co-editor*)

Faculty Editor

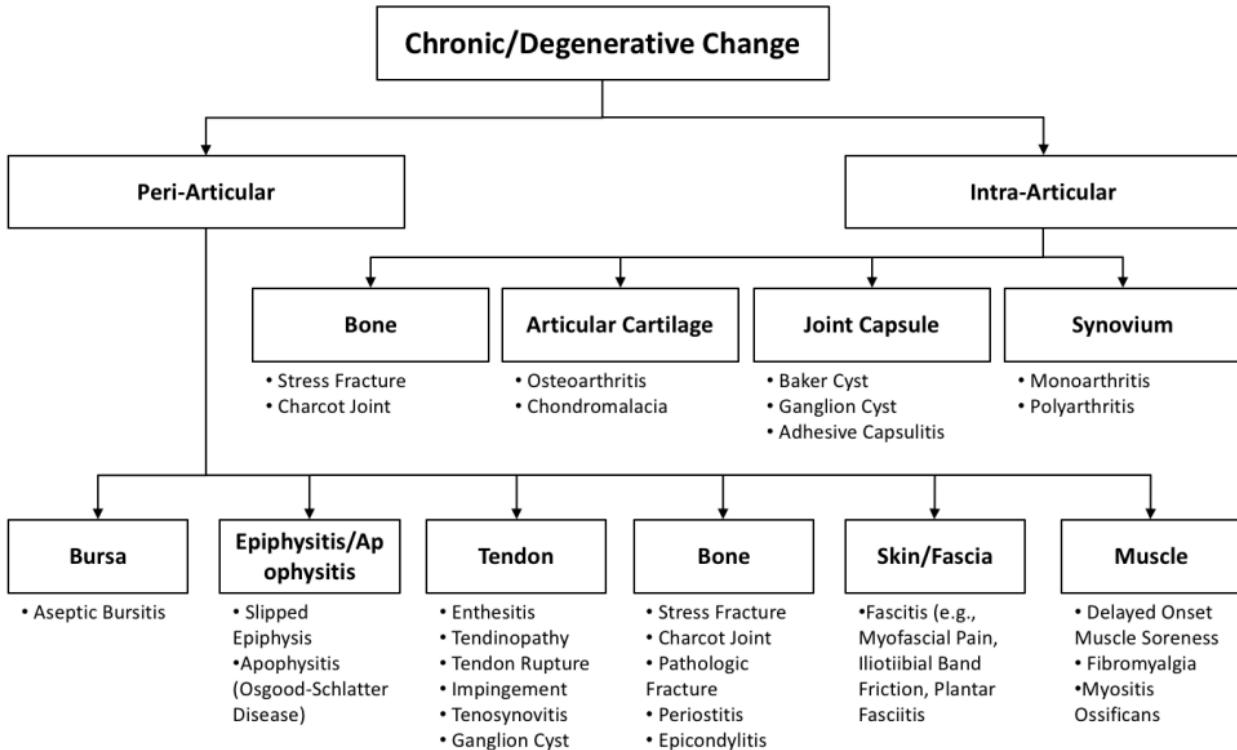
Dr. Carol Hutchison

Acute Joint Pain

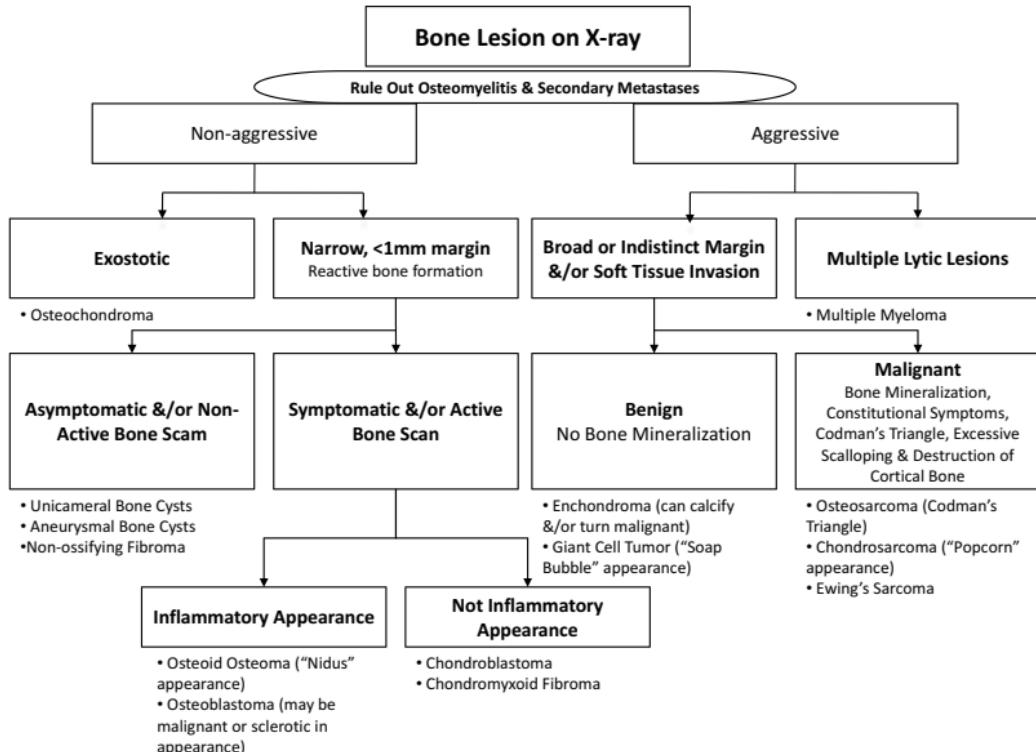
Vitamin CD

Vascular	- See <i>vascular joint pain</i>
Infectious	- See <i>infectious joint pain</i>
Trauma	- Multiple injury sites, Open Fracture, Infectious joint pain
Autoimmune	- See <i>inflammatory joint pain</i>
Metabolic	- See <i>pathologic fractures</i>
Iatrogenic	- Hx of prior surgery
Neoplastic	- See <i>Tumour</i>
Congenital	- Scoliosis, Talipes Equinovarus, Meta tarsus adductus, Bow leg, Knock-Knee'd
Degenerative	- Degenerative Disc Disease, Osteoarthritis, Osteoporosis

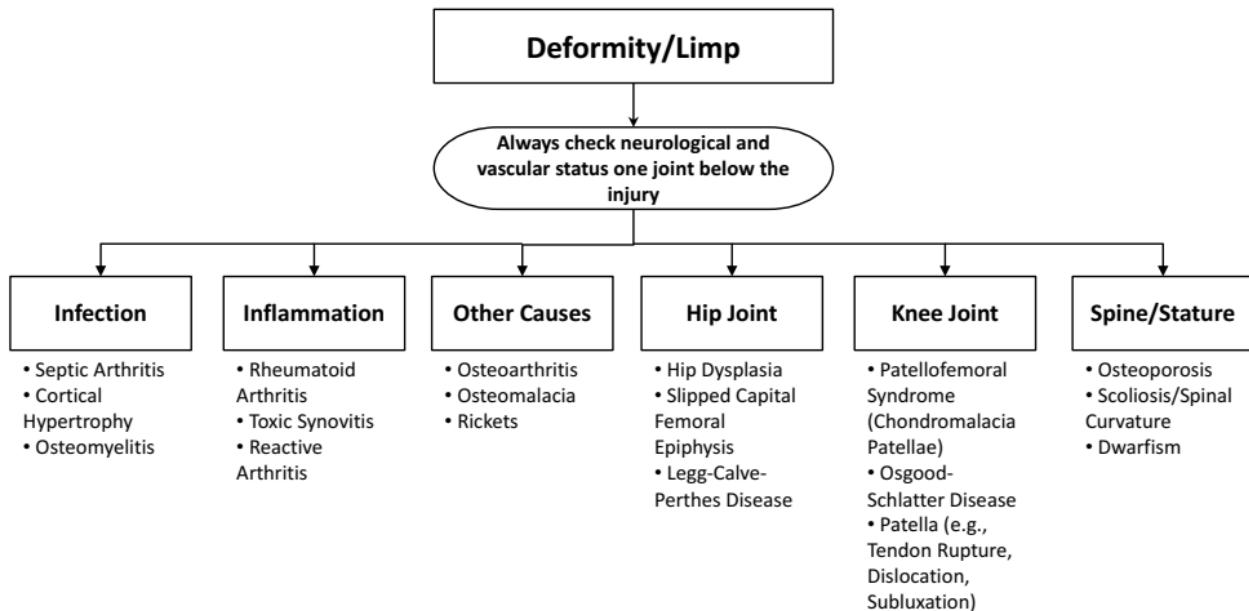
Chronic Joint Pain



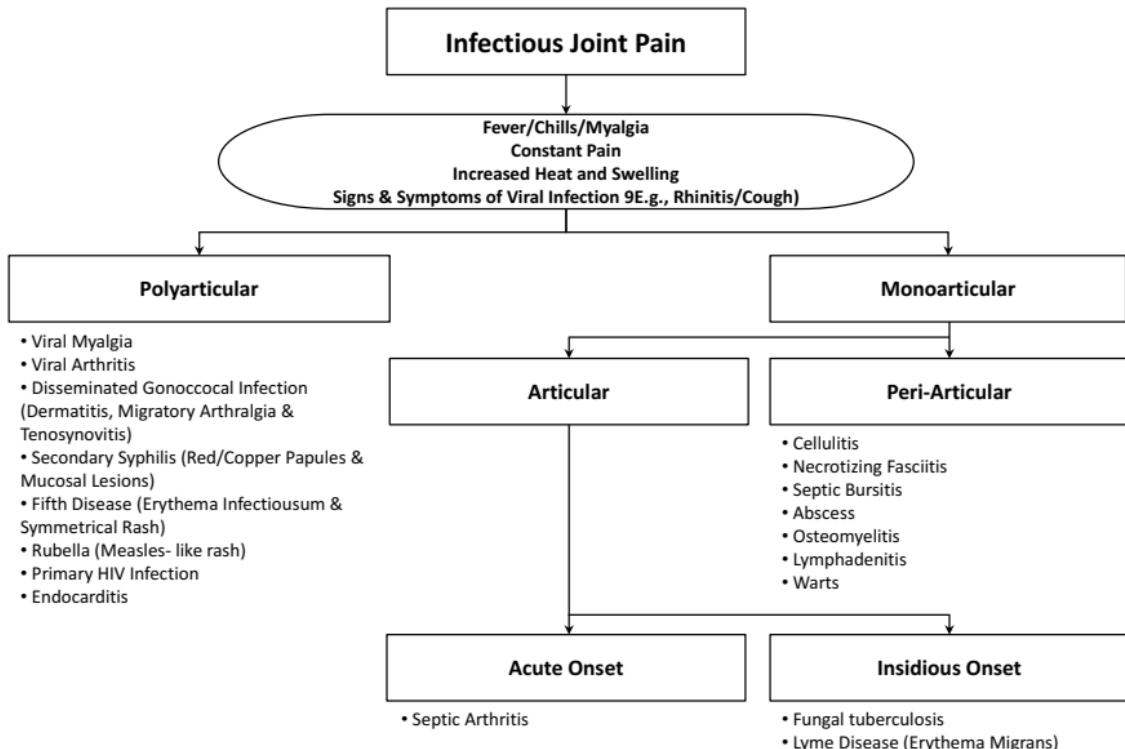
Bone Lesion



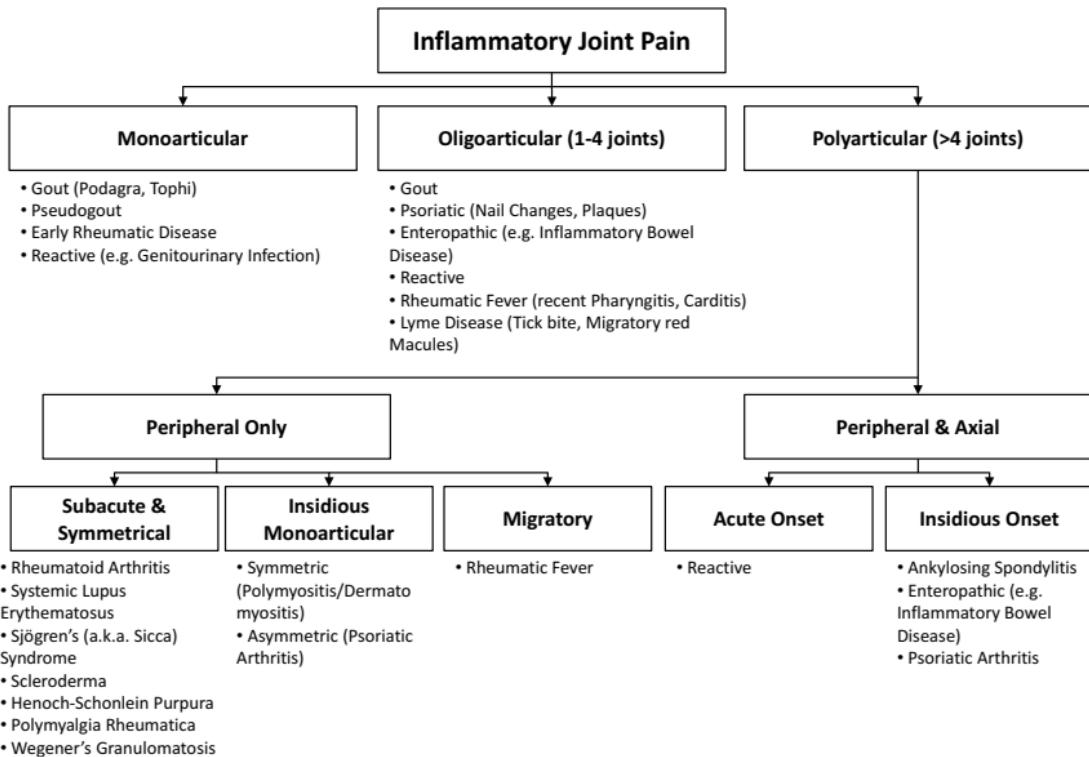
Deformity / Limp



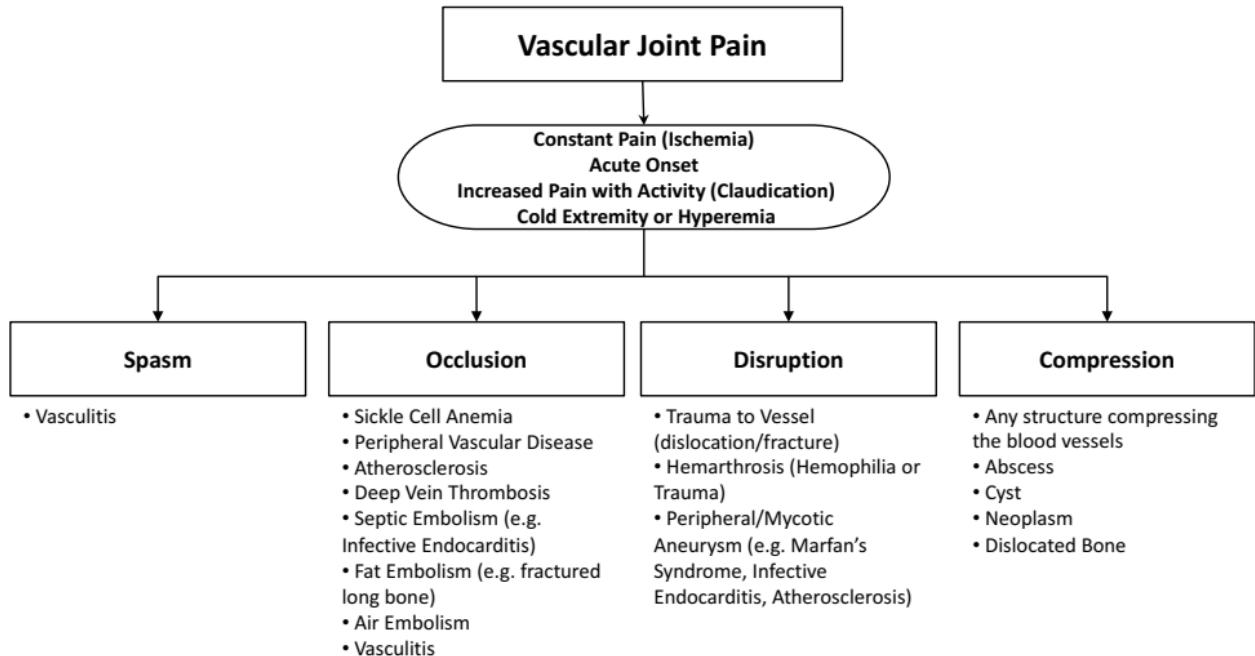
Infectious Joint Pain



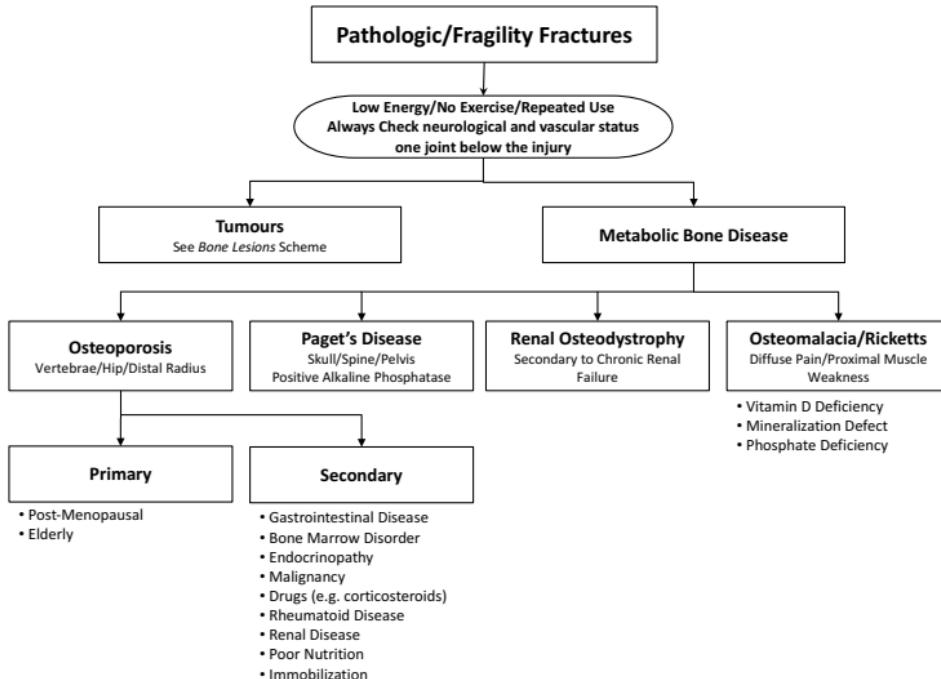
Inflammatory Joint Pain



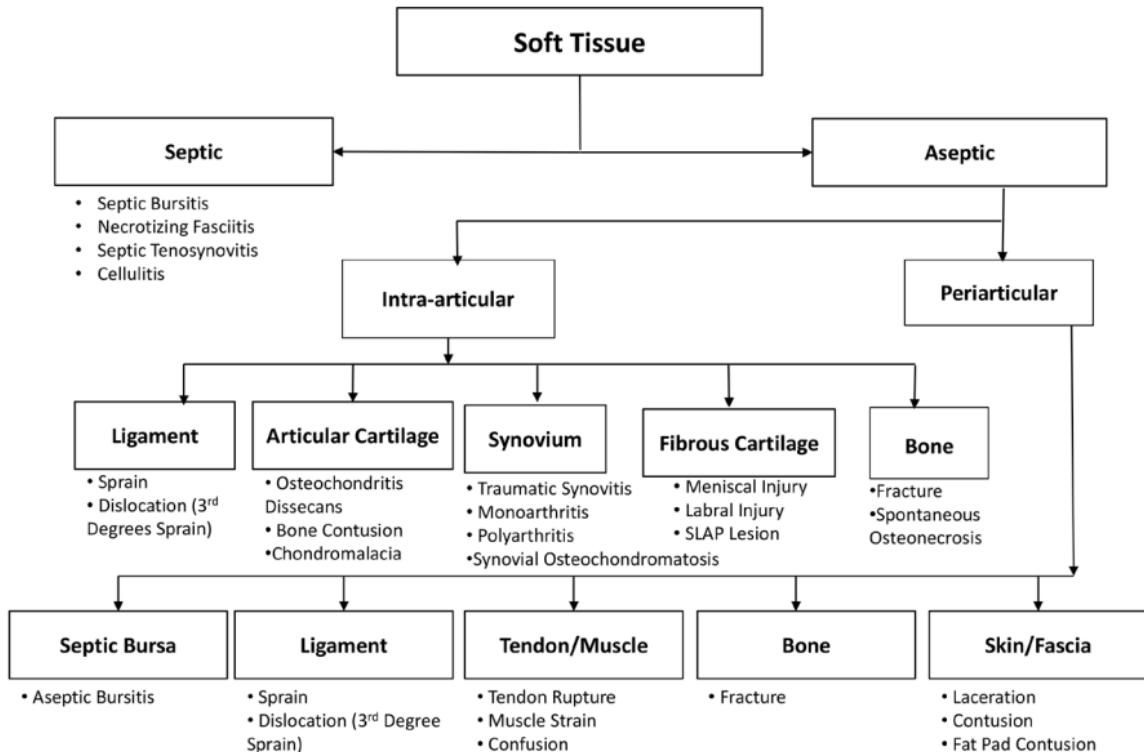
Vascular Joint Pain



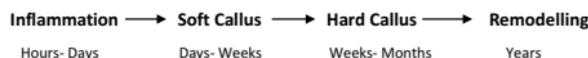
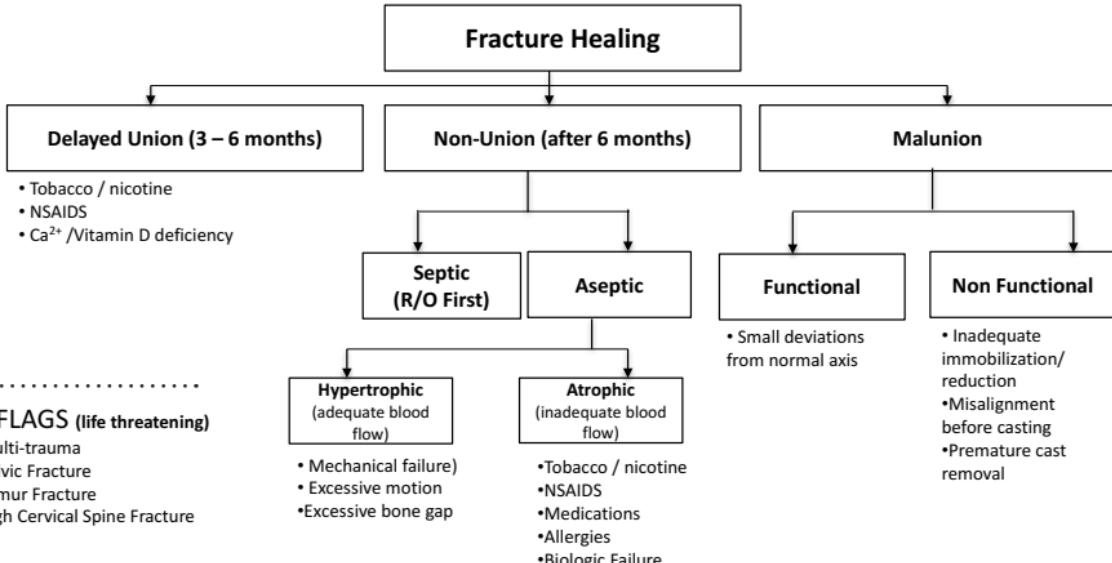
Pathologic Fractures



Soft Tissue

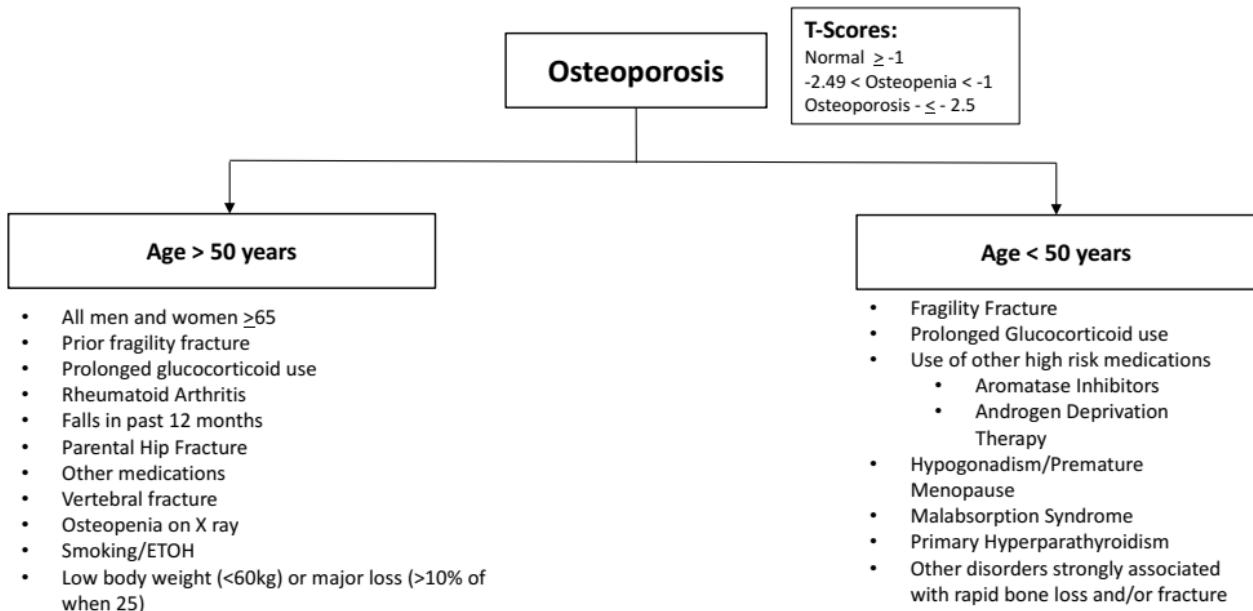


Fracture Healing

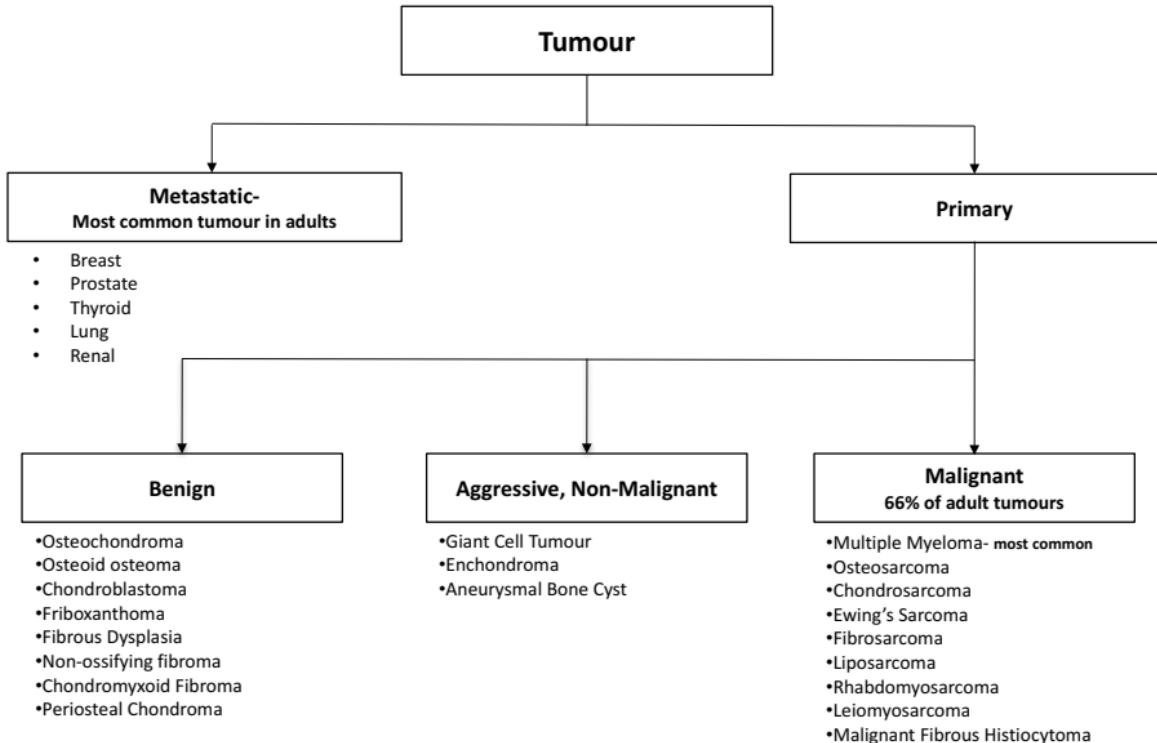


Osteoporosis

BMD Testing



Tumour



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
Knee	Abduction	L5	Superior Gluteal Nerve
	Flexion	L5	Tibial Nerve
Ankle	Extension	L3	Femoral Nerve
	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 st /2 nd 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

Anxiety Disorders Associated with Panic....	267
Anxiety Disorders Recurrent Anxious Thoughts	268
Trauma & Stressor Related Disorders	269
Obsessive-Compulsive & Related Disorders	270
Personality Disorder.....	271
Mood Disorders Depressed Mood	272
Mood Disorders Elevated Mood.....	273
Psychotic Disorders	274
Somatoform Disorders.....	275





Historical Editors

Dr. Jason Taggart
Dr. Lauren Zanussi
Dr. Lara Nixon
Haley Abrams
Daniel Bai
Kaitlin Chivers-Wilson
Carmen Fong
Leanne Foust
Aravind Ganesh
Leena Desai
Qasim Hirani

Student Editors

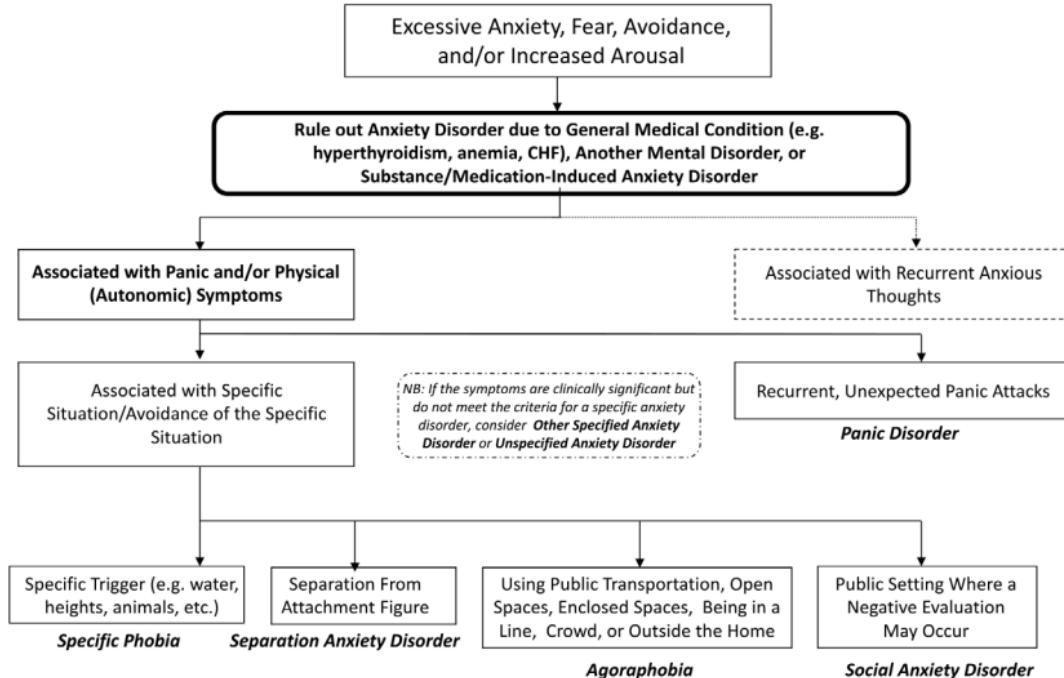
Lundy Day (*Co-editor*)
Michael Martyna (*Co-editor*)
Emily Donaldson

Faculty Editor

Dr. Aaron Mackie

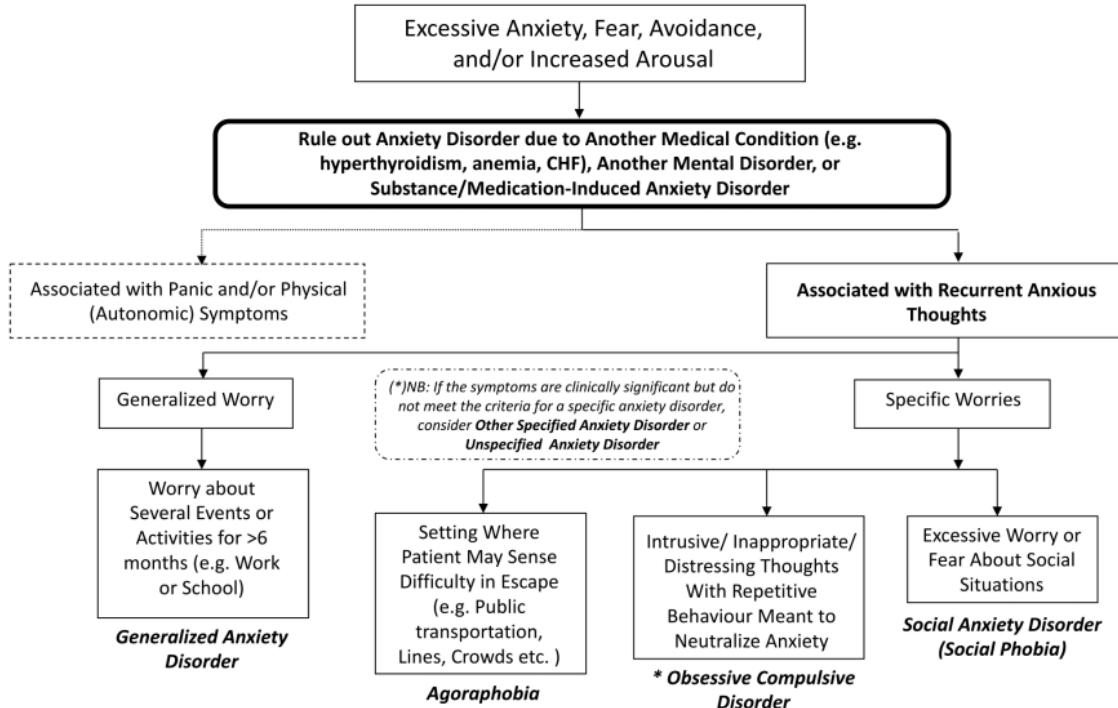
Anxiety Disorders

Associated with Panic



Anxiety Disorders

Recurrent Anxious Thoughts

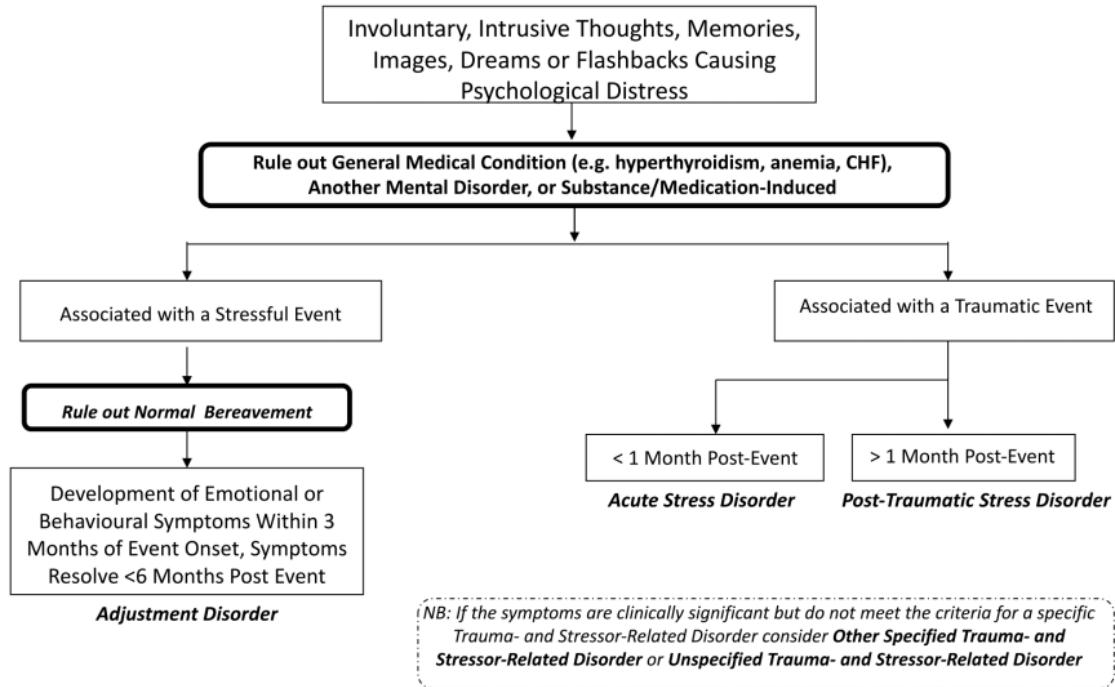


* Not considered an anxiety disorder according to DSM-V

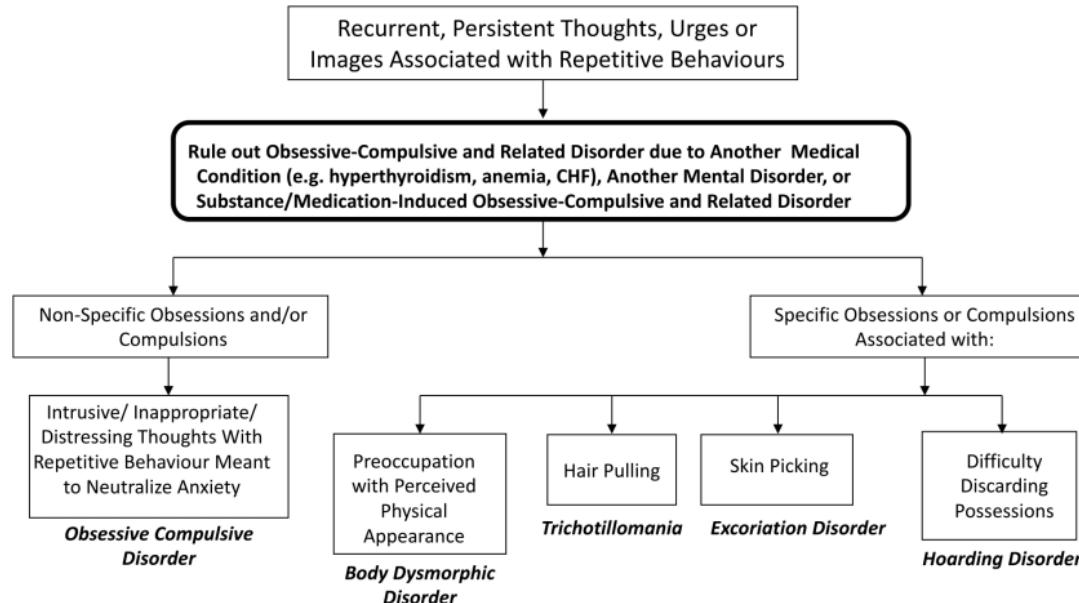
American Psychiatric Association (2013). Diagnostic and Statistical Manual of Mental Disorders (5th ed. DSM-V).

Trauma & Stressor

Related Disorders

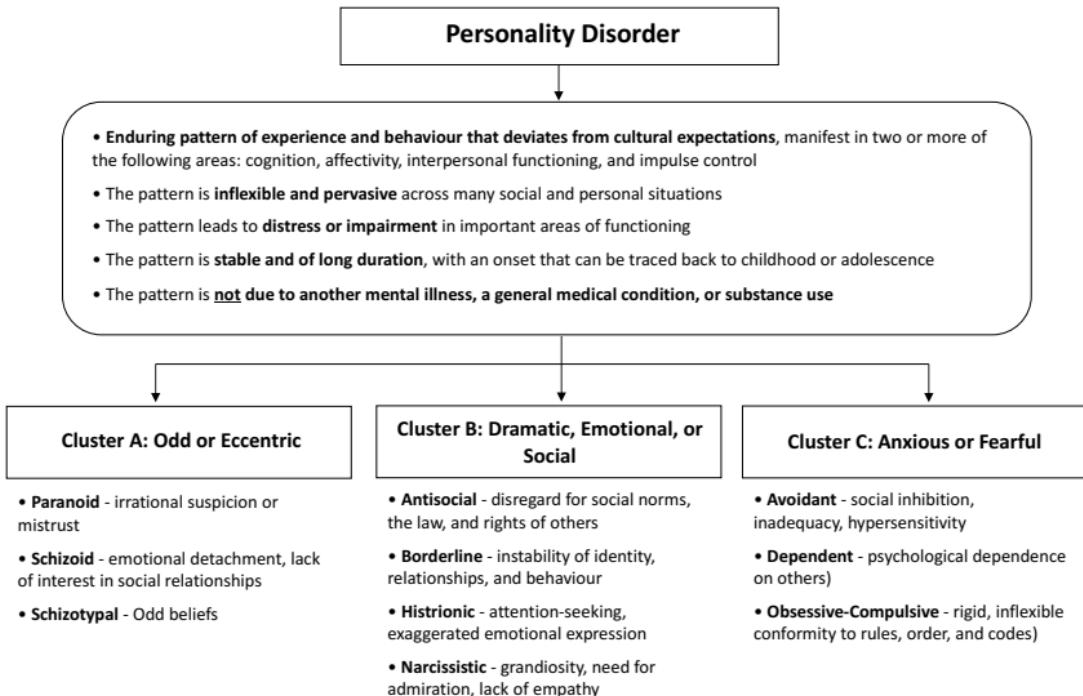


Obsessive-Compulsive & Related Disorders



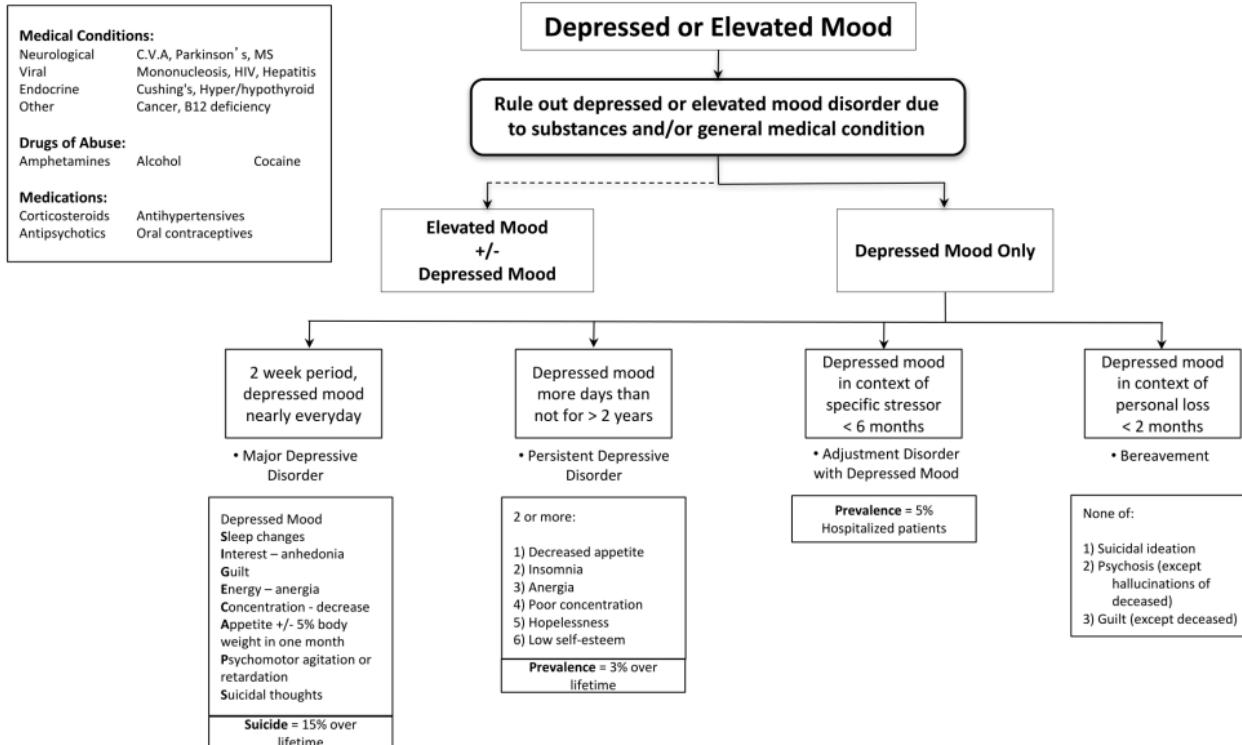
NB: If the symptoms are clinically significant but do not meet the criteria for a specific Obsessive-Compulsive or Related Disorder consider Other Specified Obsessive-Compulsive or Related Disorder or Unspecified Obsessive-Compulsive or Related Disorder

Personality Disorder



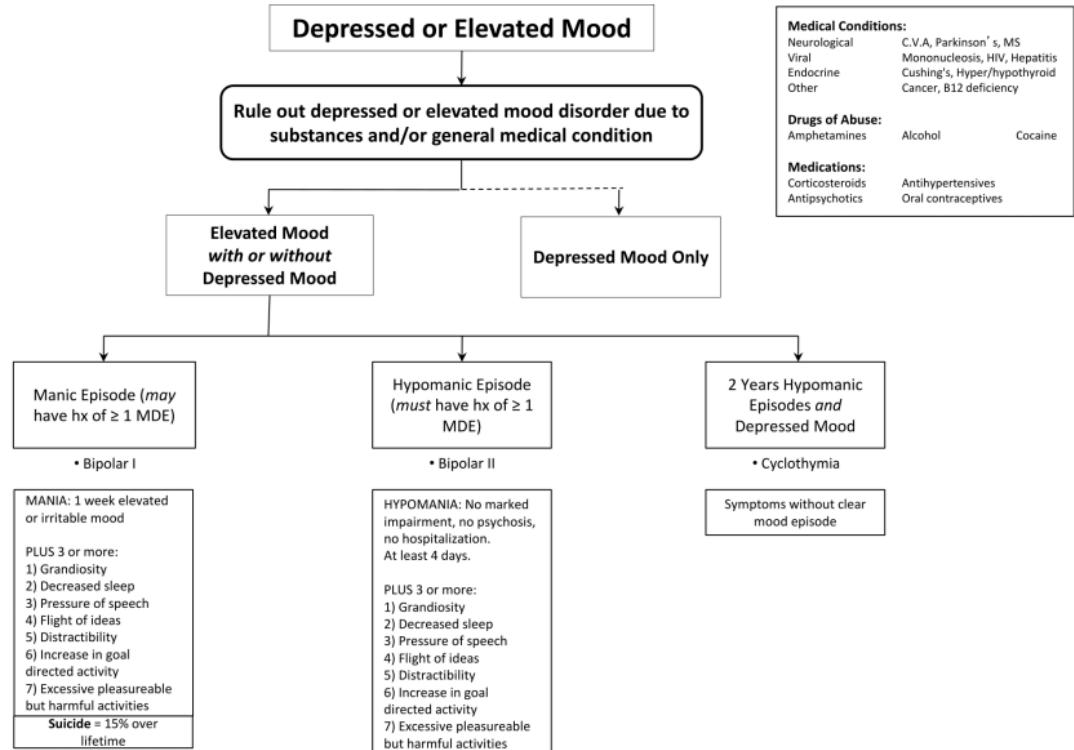
Mood Disorders

Depressed Mood



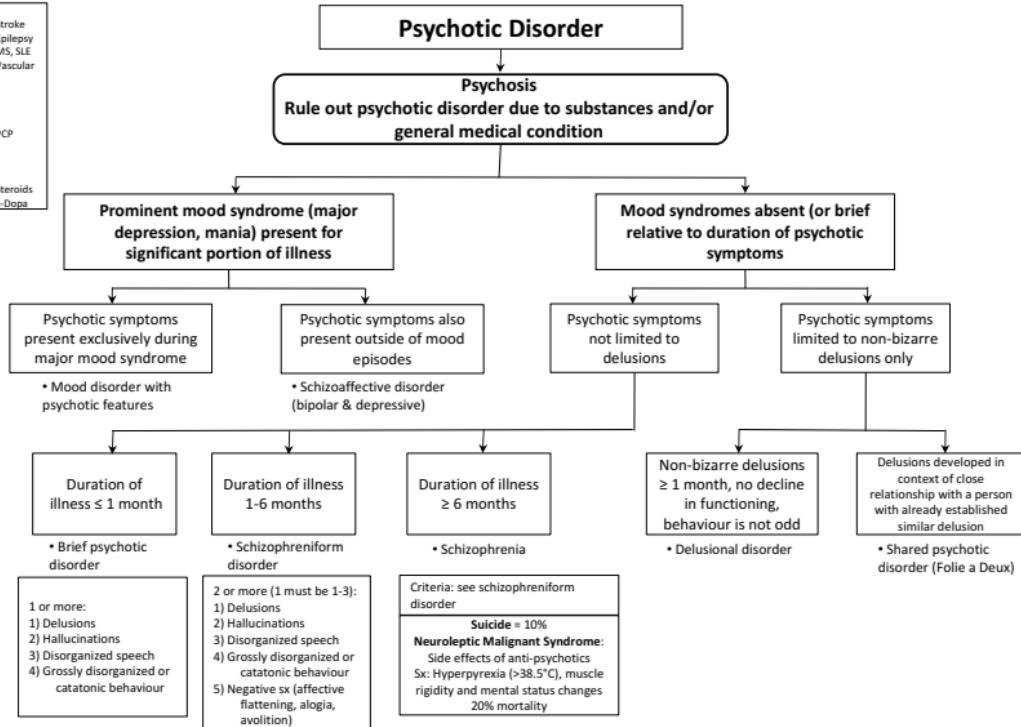
Mood Disorders

Elevated Mood

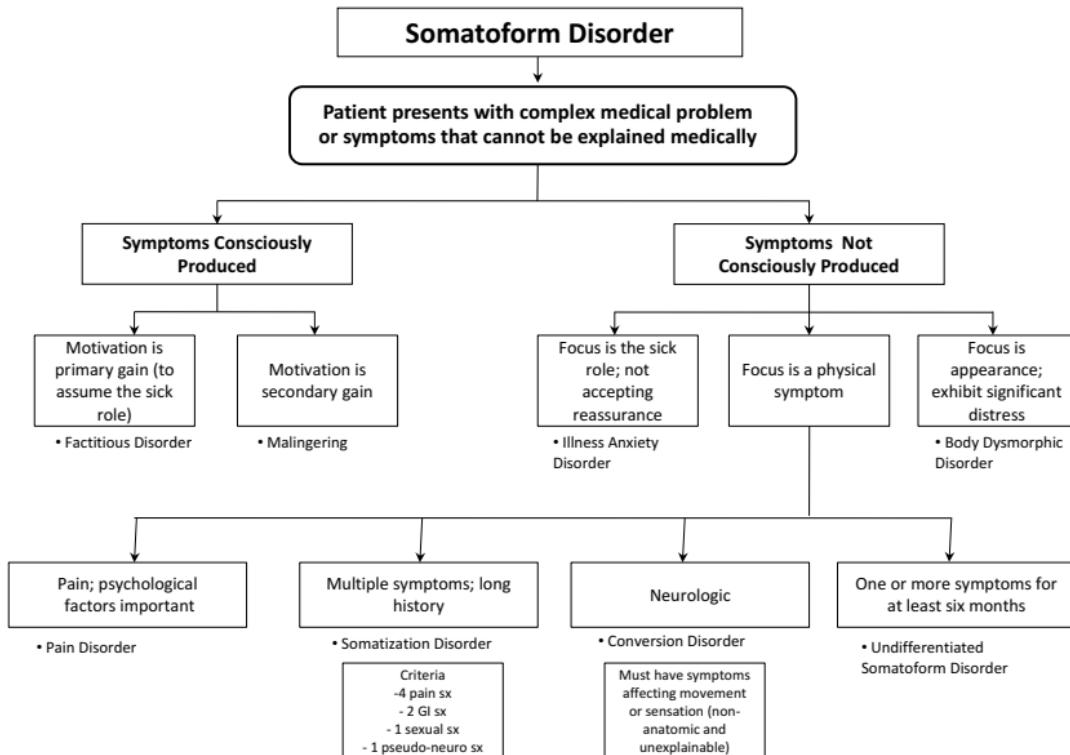


Psychotic Disorders

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

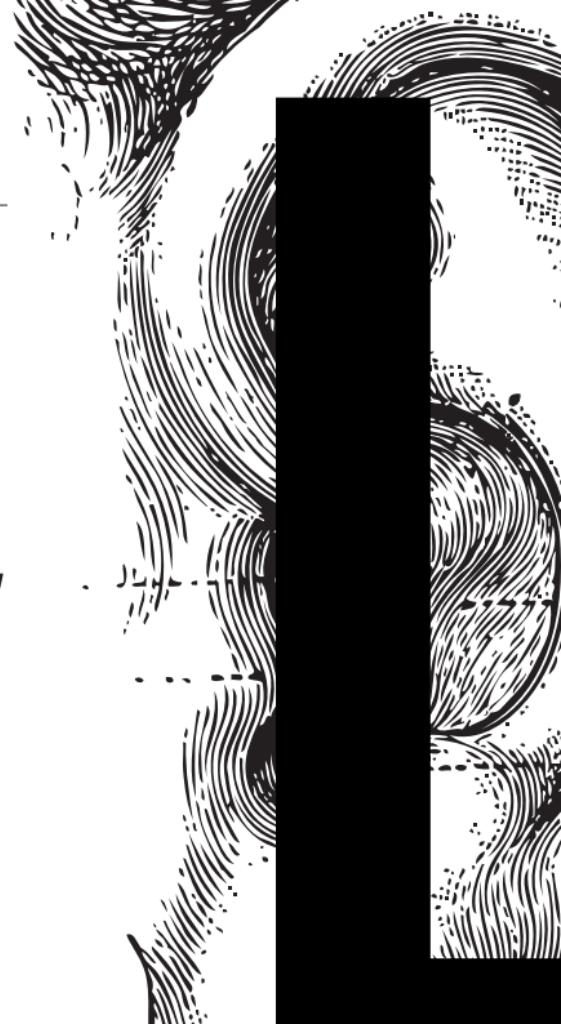


Somatoform Disorders



Otolaryngologic

Hearing Loss Conductive	279
Hearing Loss Sensorineural.....	280
Hoarseness Acute.....	281
Hoarseness Non-Acute.....	282
Neck Mass.....	283
Otalgia.....	284
Smell Dysfunction.....	285
Tinnitus Objective.....	286
Tinnitus Subjective	287





Historical Editors

Justin Lui
Andrew Jun
Dave Campbell
Joanna Debosz
Sarah Hajjar

Student Editors

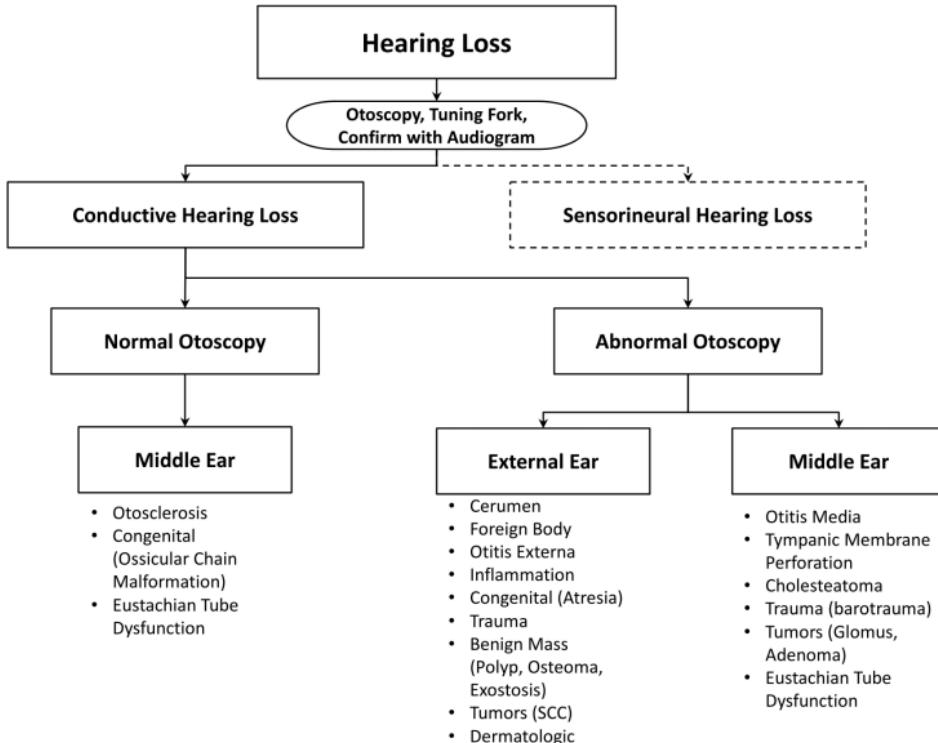
Dilip V. Koshy
Wesley Chan

Faculty Editors

Dr. Doug Bosch
Dr. James Brookes
Dr. Justin Chau

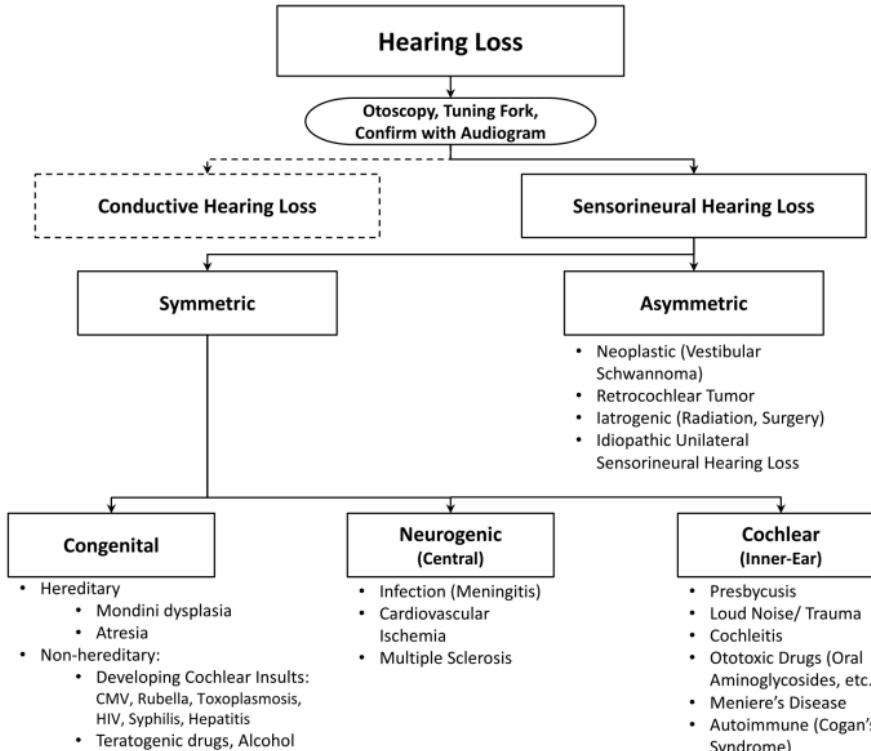
Hearing Loss

Conductive



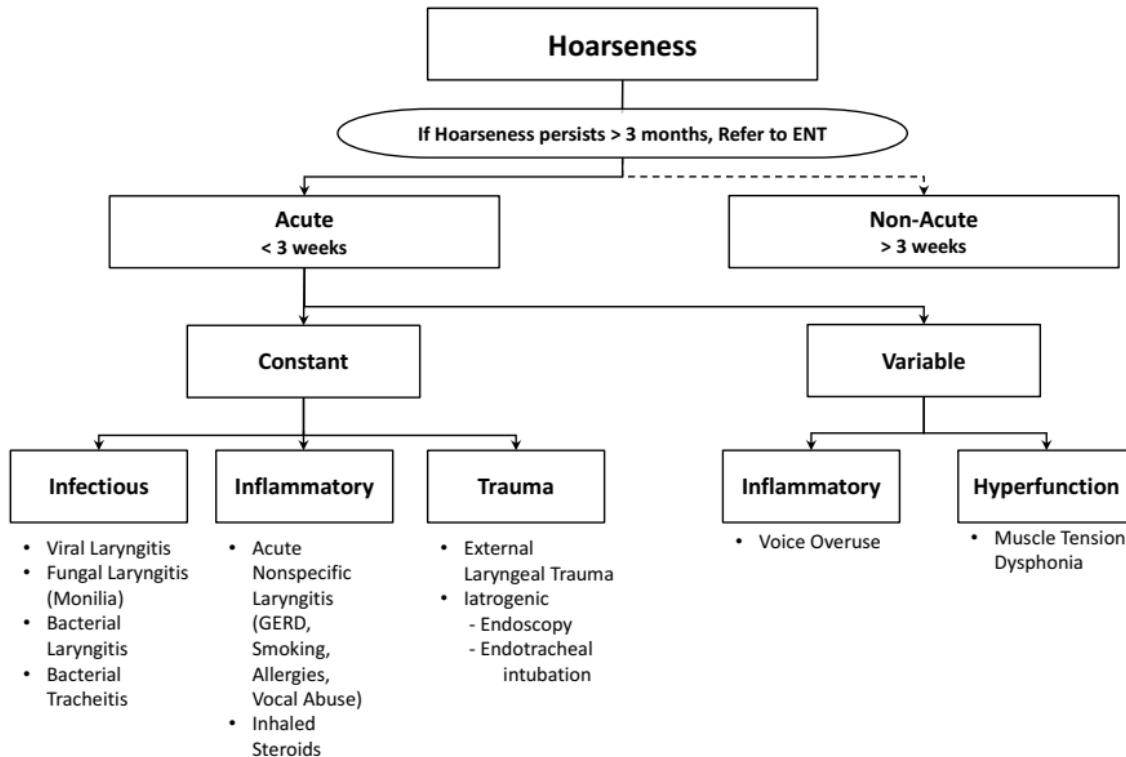
Hearing Loss

Sensorineural



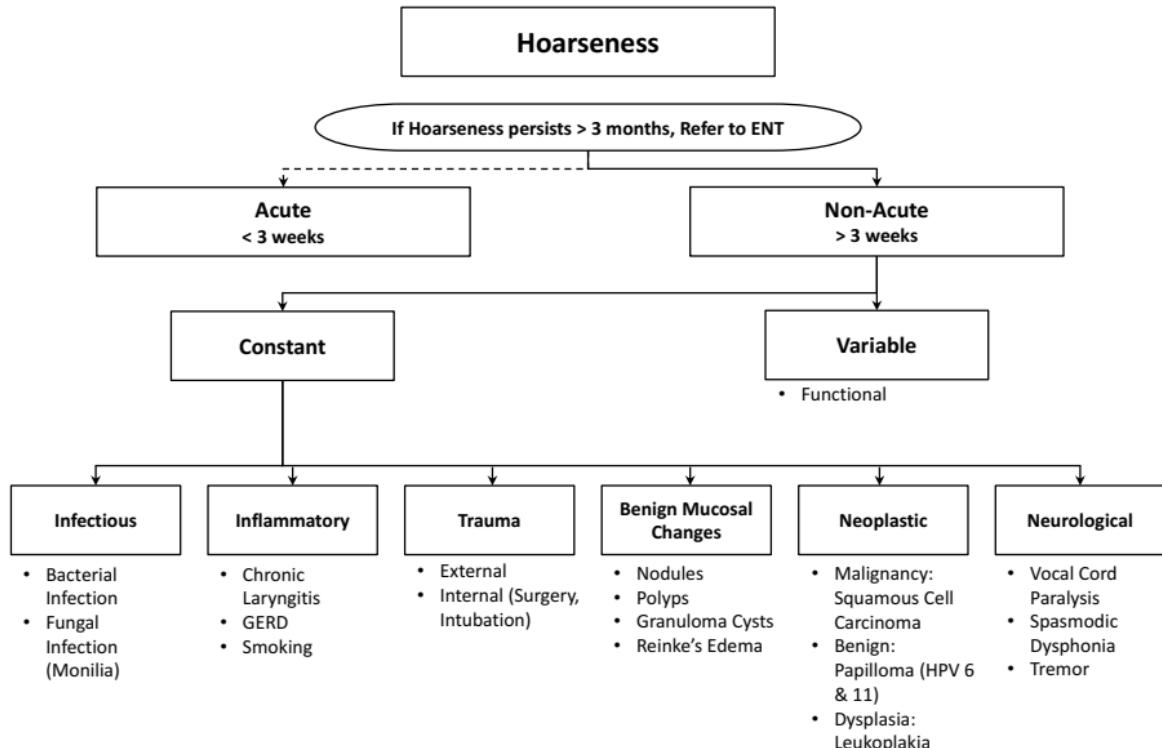
Hoarseness

Acute

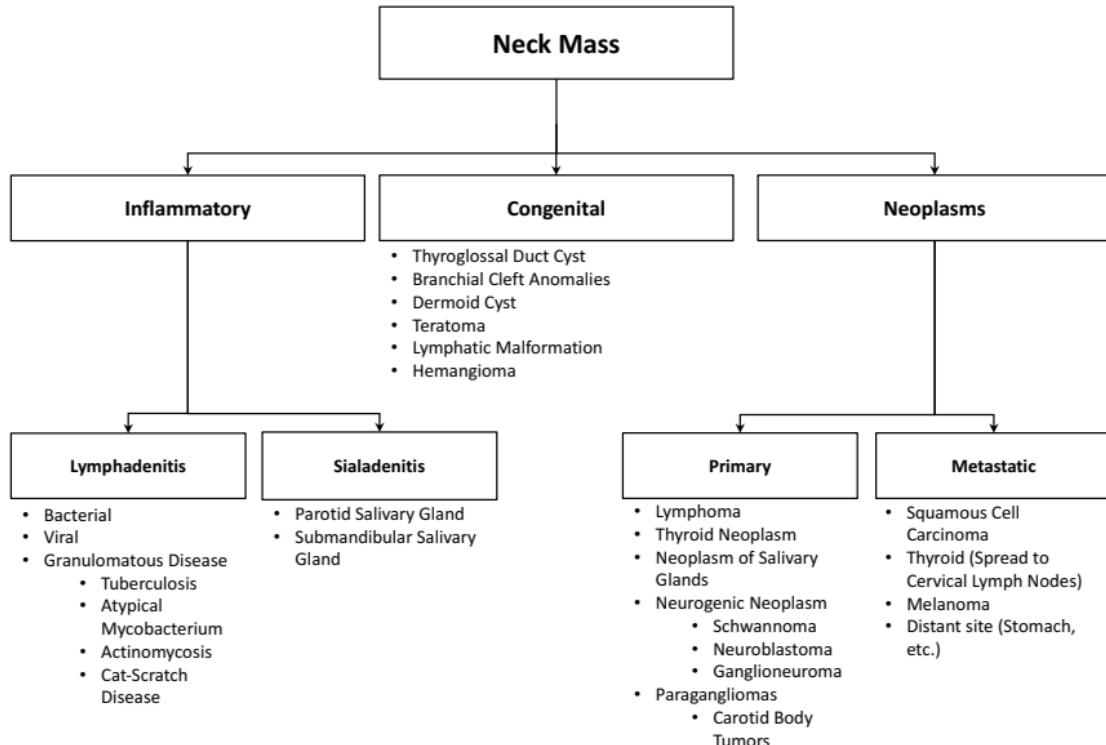


Hoarseness

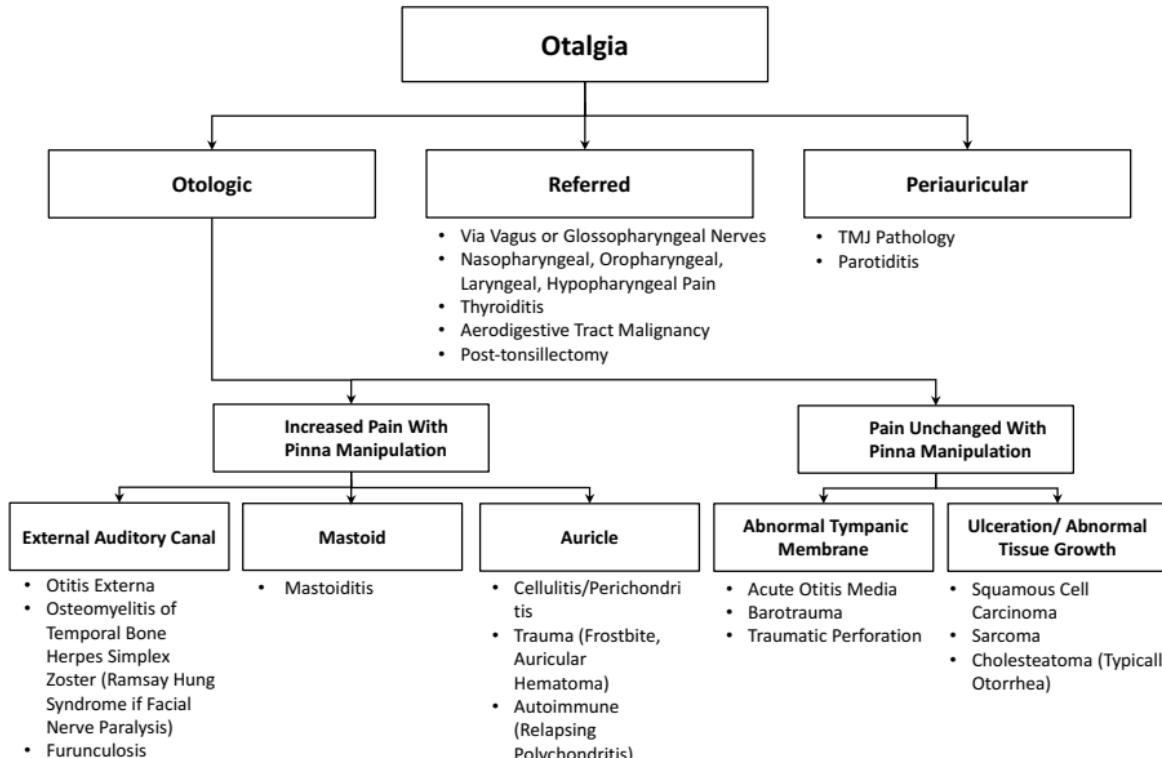
Non-Acute



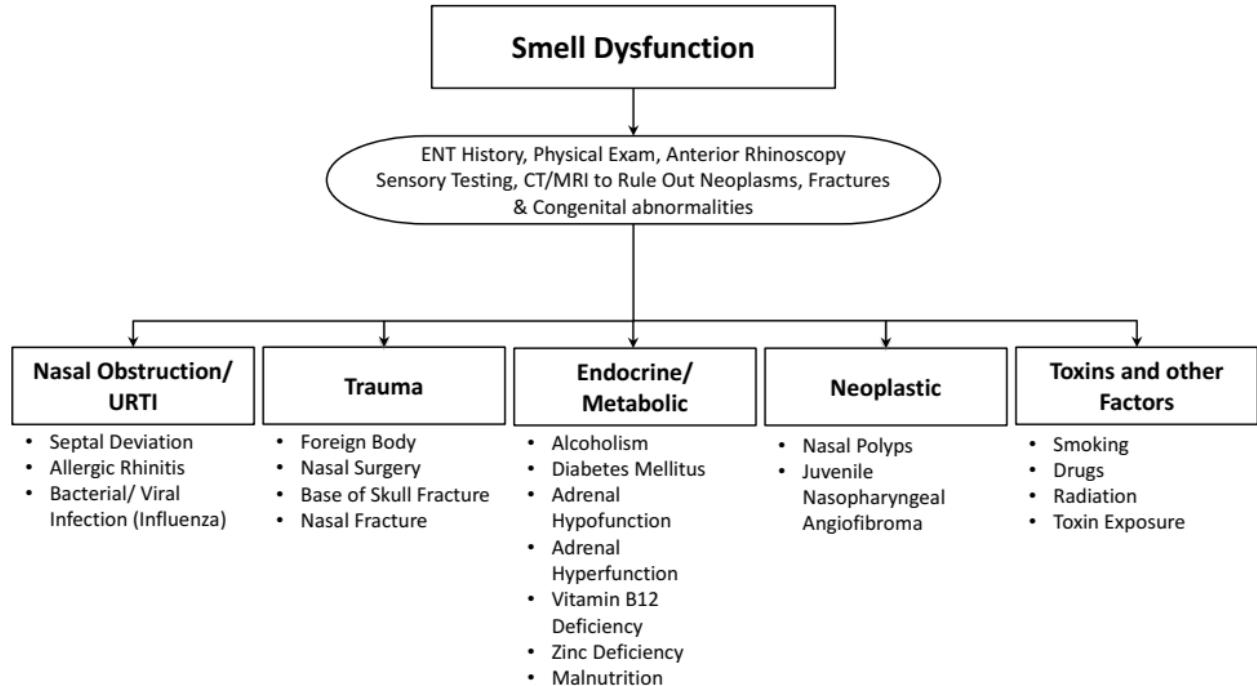
Neck Mass



Otaligia

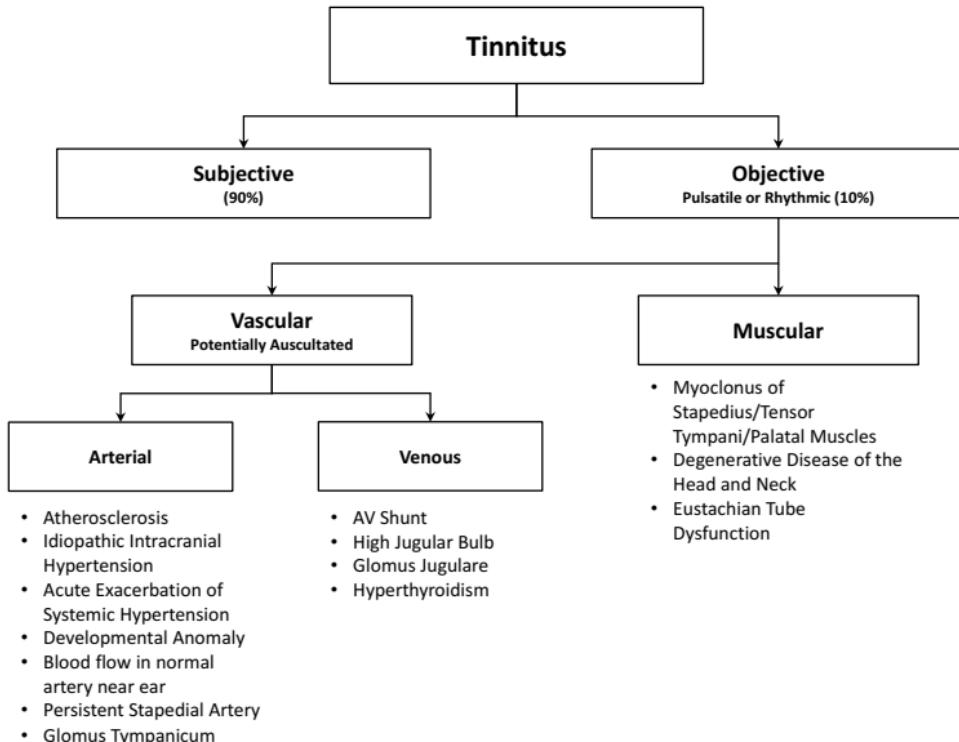


Smell Dysfunction



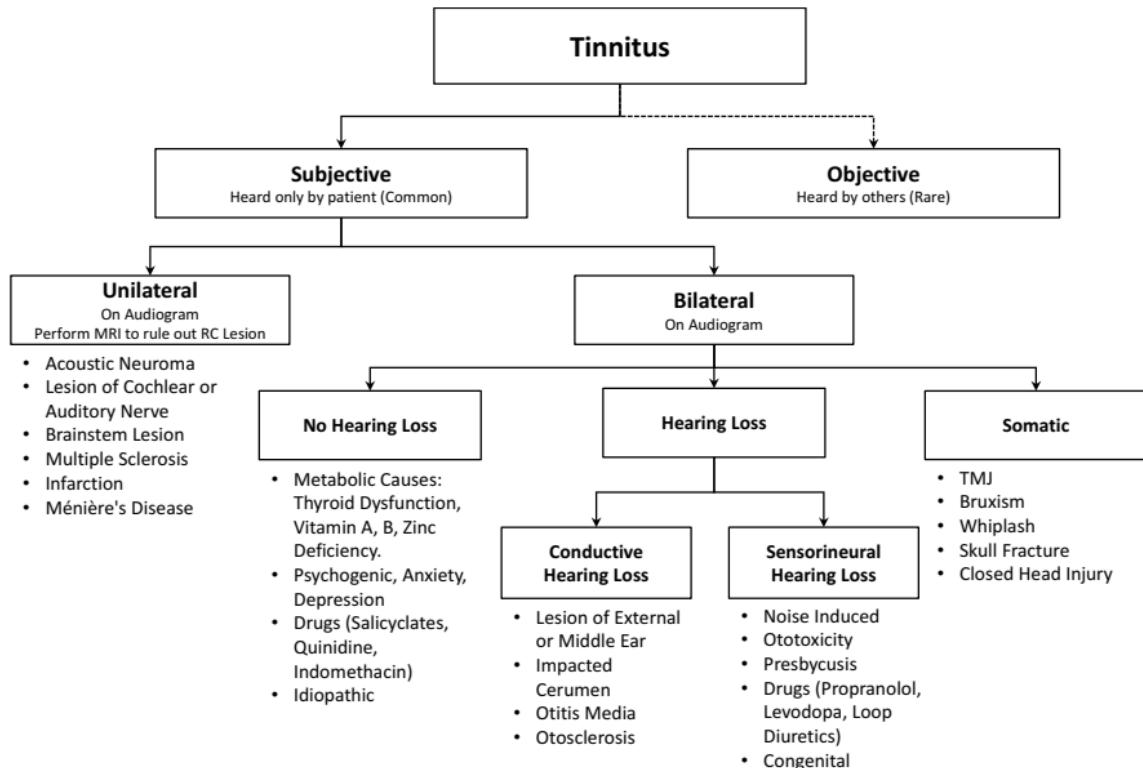
Tinnitus

Objective



Tinnitus

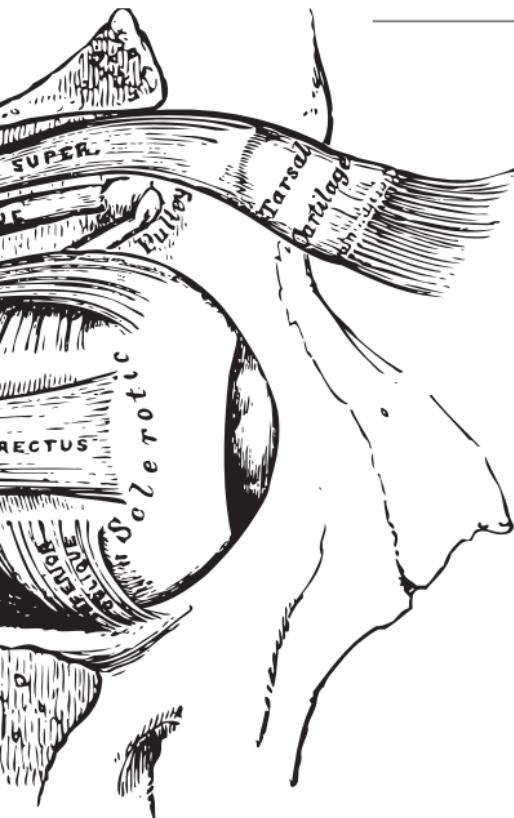
Subjective



Ophthalmologic

Cross Section of the Eye & Acronyms.....	291
Approach to an Eye Exam.....	292
Acute Vision Loss Bilateral.....	293
Acute Vision Loss Unilateral.....	294
Chronic Vision Loss Anatomic.....	295
Amblyopia	296
Diplopia	297
Pupillary Abnormalities Isocoria	298
Pupillary Abnormalities Anisocoria	299
Red Eye Atraumatic.....	300
Red Eye Traumatic	301
Strabismus Ocular Misalignment.....	302
Neuro-Ophthalmology Visual Field Defects	303





Historical Editors

Dr. John Huang
Dr. Ying Lu
Anastasia Aristakhova
Jagdeep Doulla
Kathleen Moncrieff
Micah Luong
Nazia Panjwani
Stephanie Yang
Vikram Lekhi

Student Editors

Prima Moinul
Jessica Ruzicki

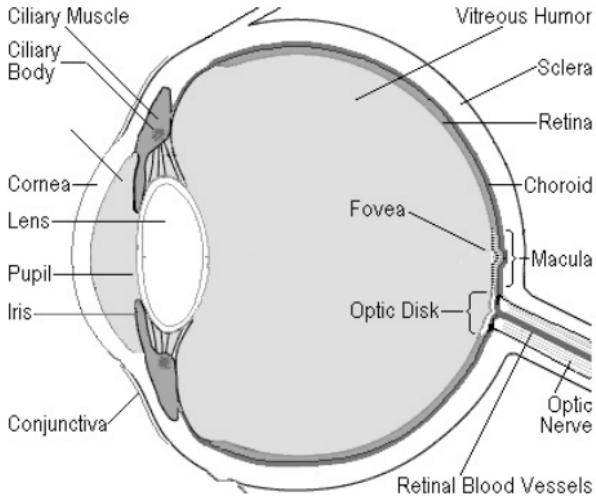
Senior Editor

Dr. Monique Munro

Faculty Editor

Dr. Patrick Mitchell

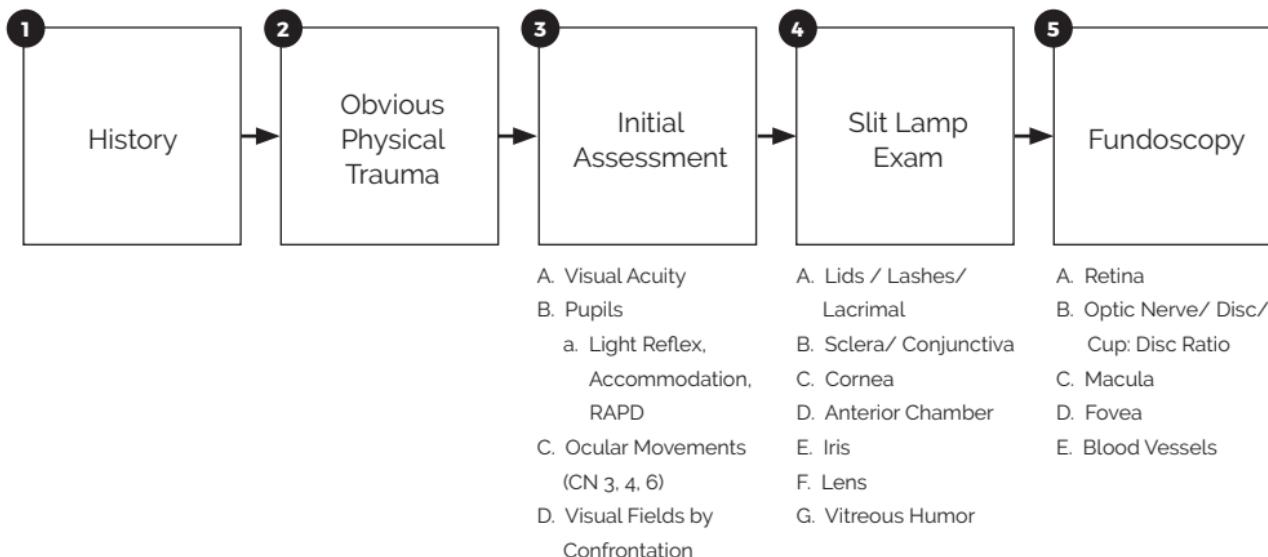
Cross Section of the Eye & Acronyms



Ophthalmology Acronyms

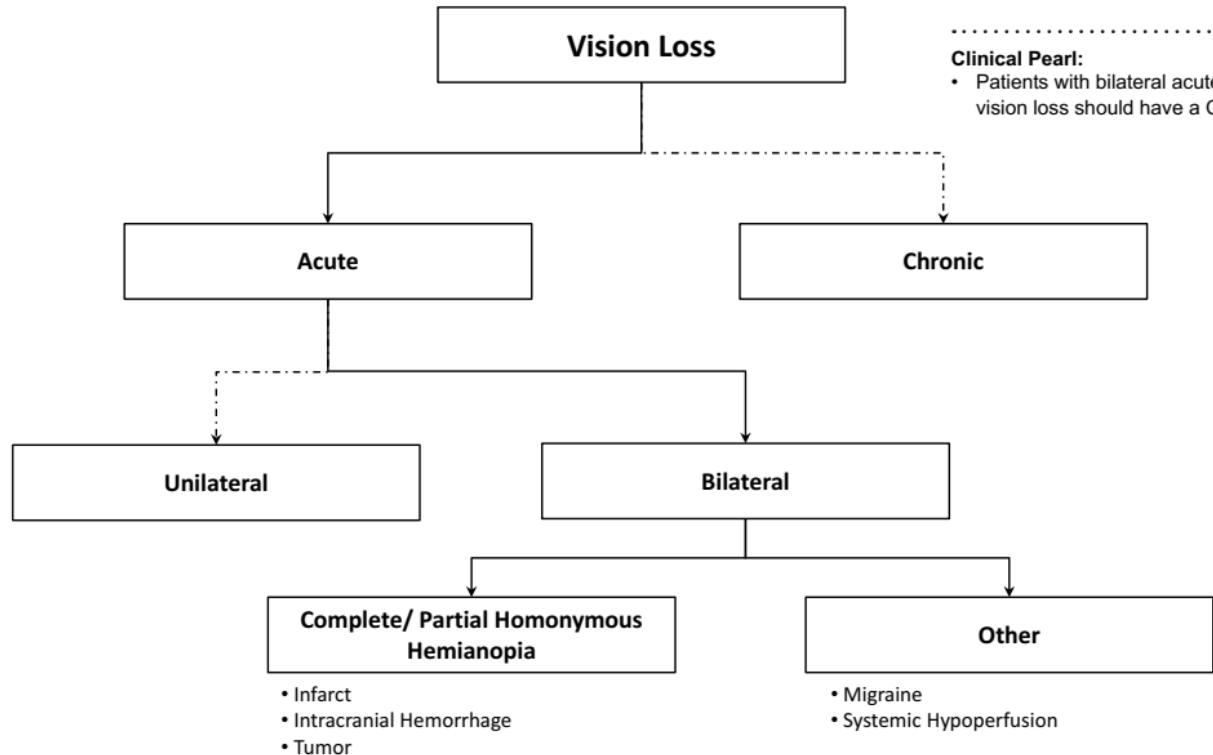
EOM	Extra ocular movements
IOL	Intraocular Lens
IOP	Intraocular Pressure
OD	Oculus Dexter (right eye)
OS	Oculus Sinister (left eye)
OU	Oculus Utterque (both eyes)
PERRLA	Pupils Equal, Round, Reactive to Light & Accommodation
RAPD	Relative Afferent pupillary defect
SLE	Slit Lamp Exam
VA	Visual Acuity

Approach to an Eye Exam



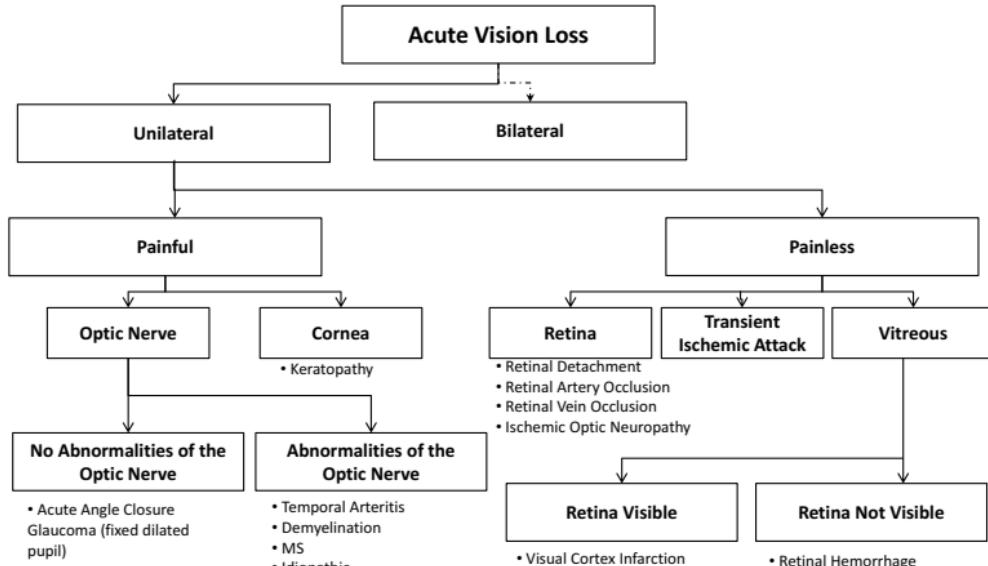
Acute Vision Loss

Bilateral



Acute Vision Loss

Unilateral

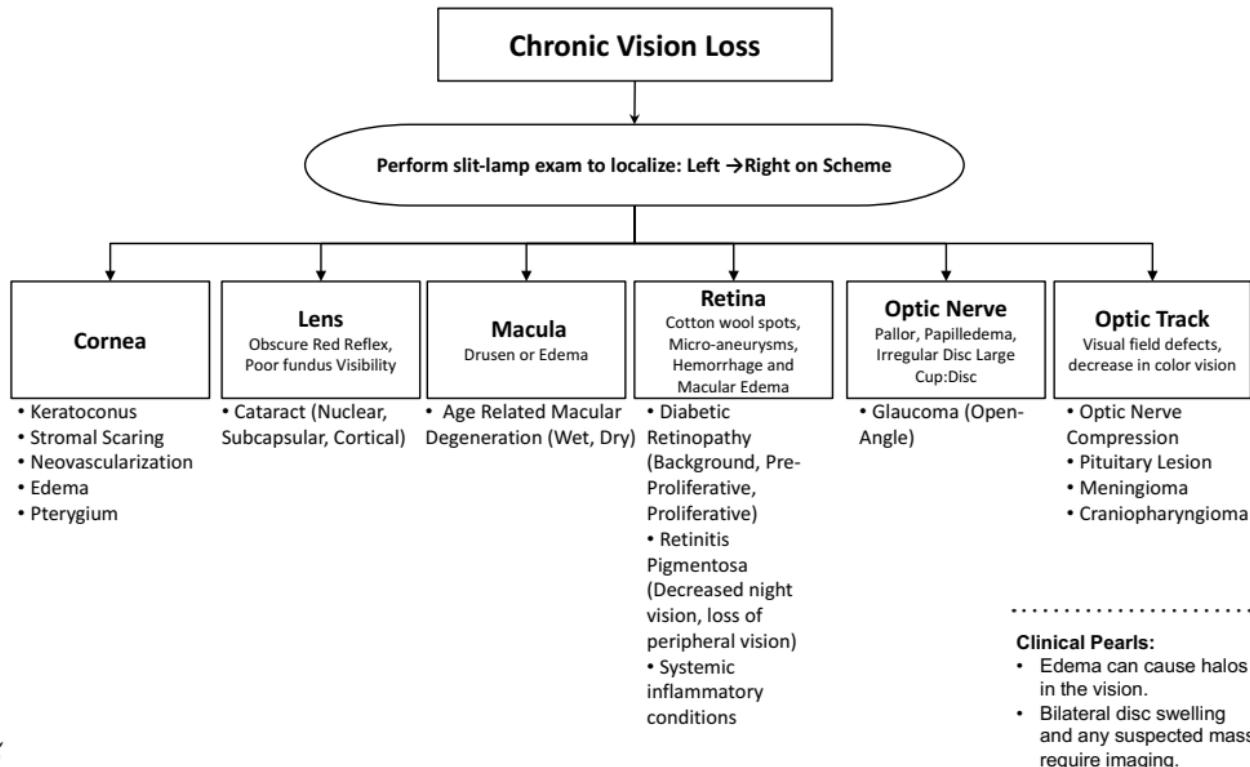


Clinical Pearls:

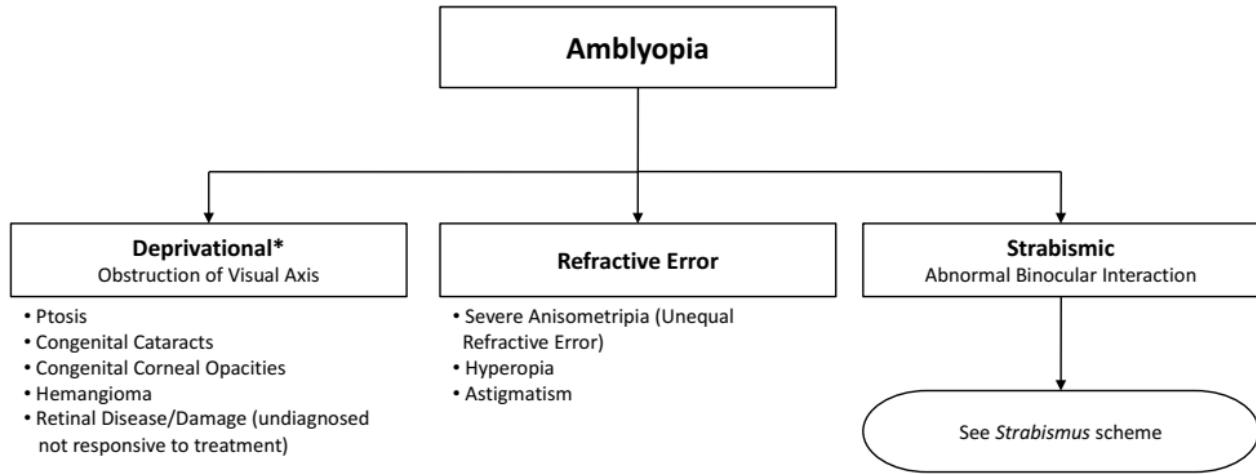
- Optic neuritis causes pain with EOM
- Temporal arteritis causes temporalis pain and pain with mastication
- Acute angle closure glaucoma causes high intraocular pressure, unilateral eye pain, mid-dilated pupil and n/v
- Retinal detachment can present as a veil over the vision and with flashes and floaters.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

Chronic Vision Loss

Anatomic



Amblyopia

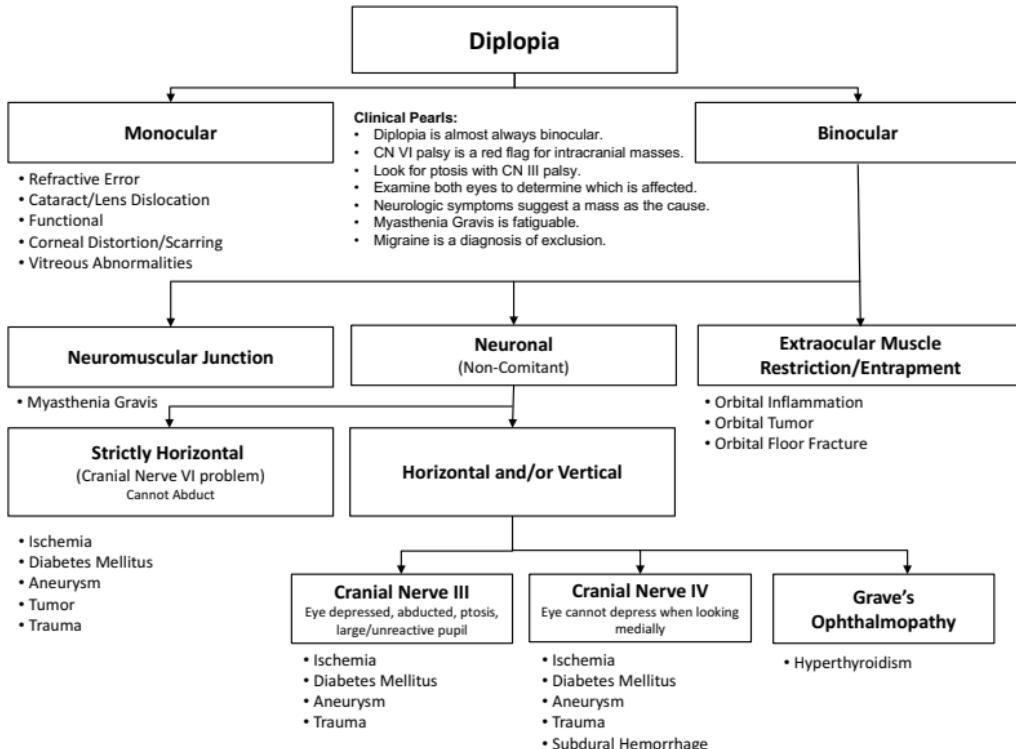


Clinical Pearl:

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

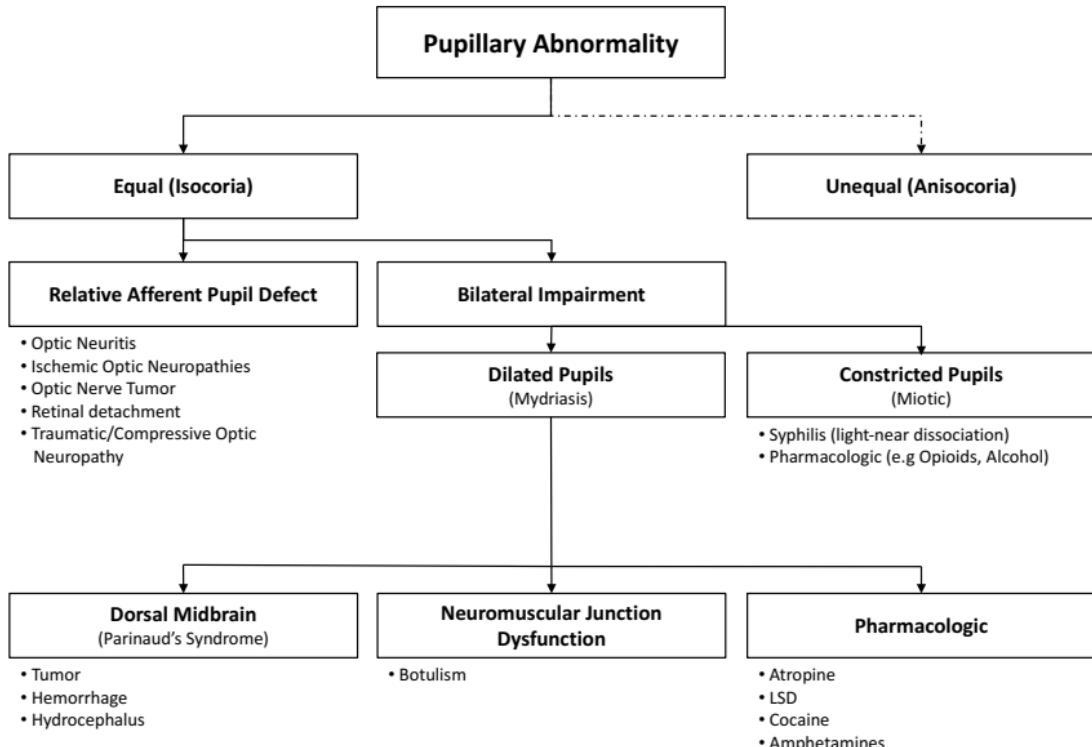
* Can cause permanent visual impairment if not treated urgently in infancy

Diplopia



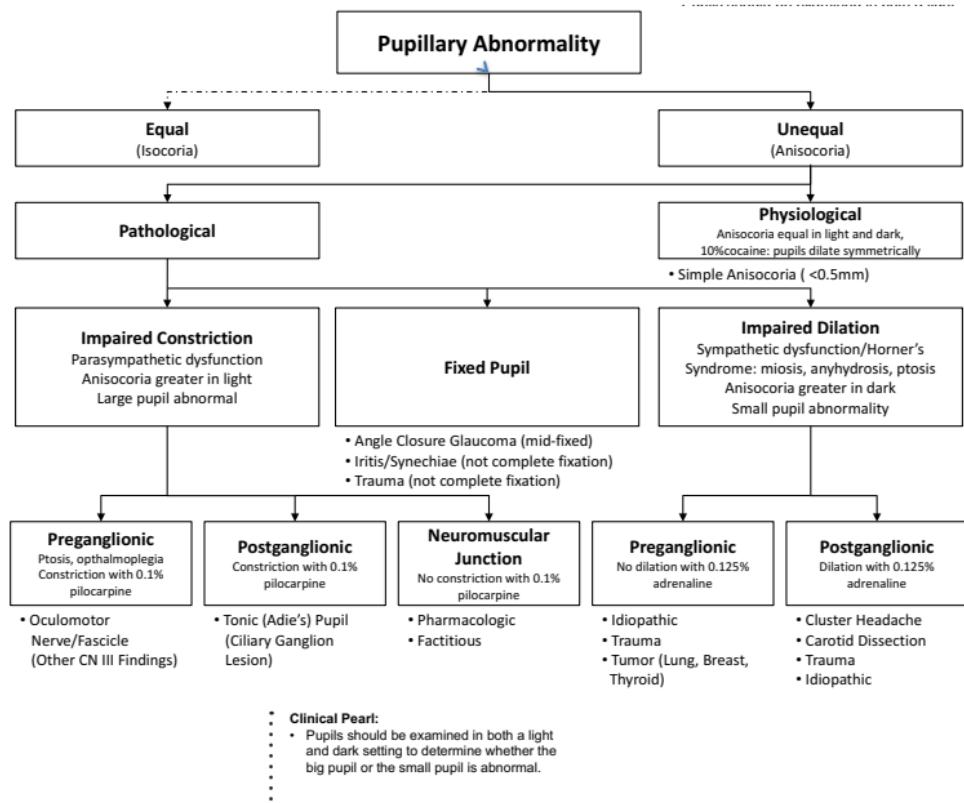
Pupillary Abnormalities

Isocoria



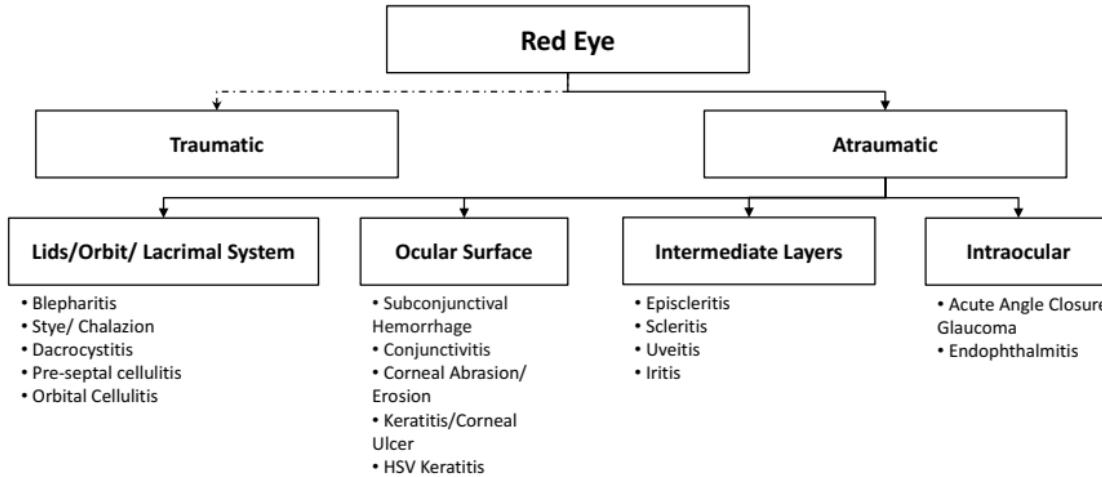
Pupillary Abnormalities

Anisocoria



Red Eye

Atraumatic

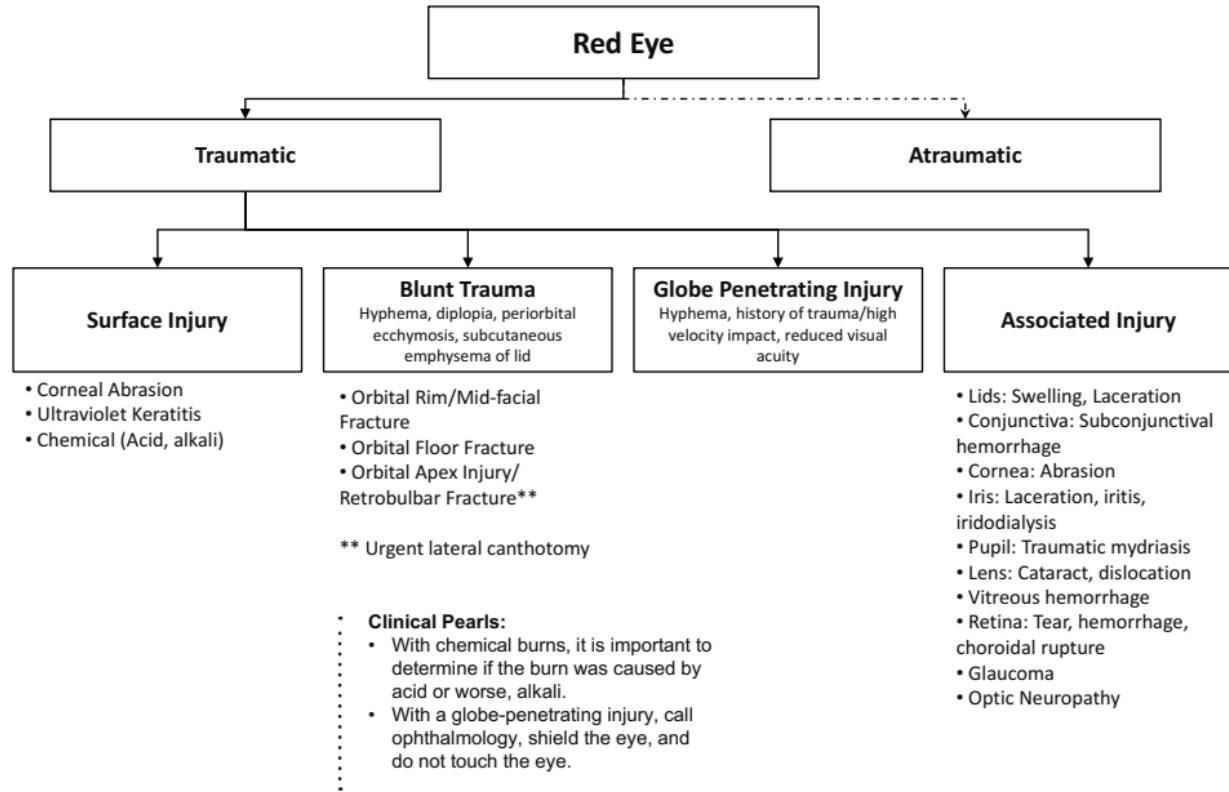


Clinical Pearl:

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

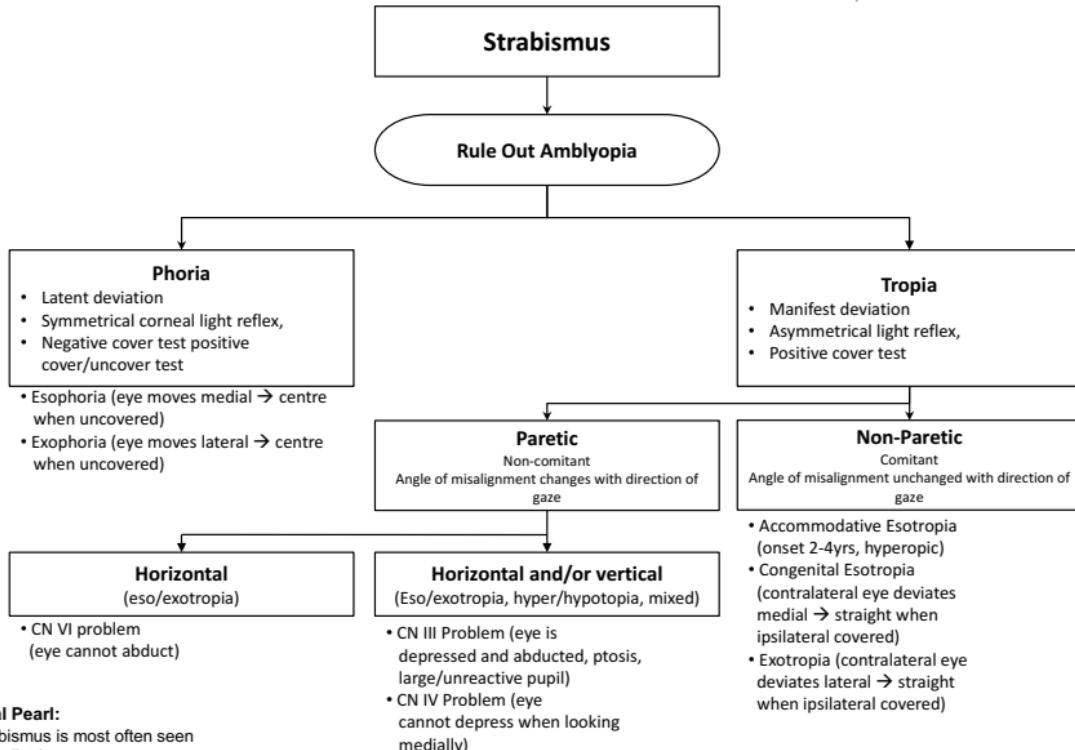
Red Eye

Traumatic



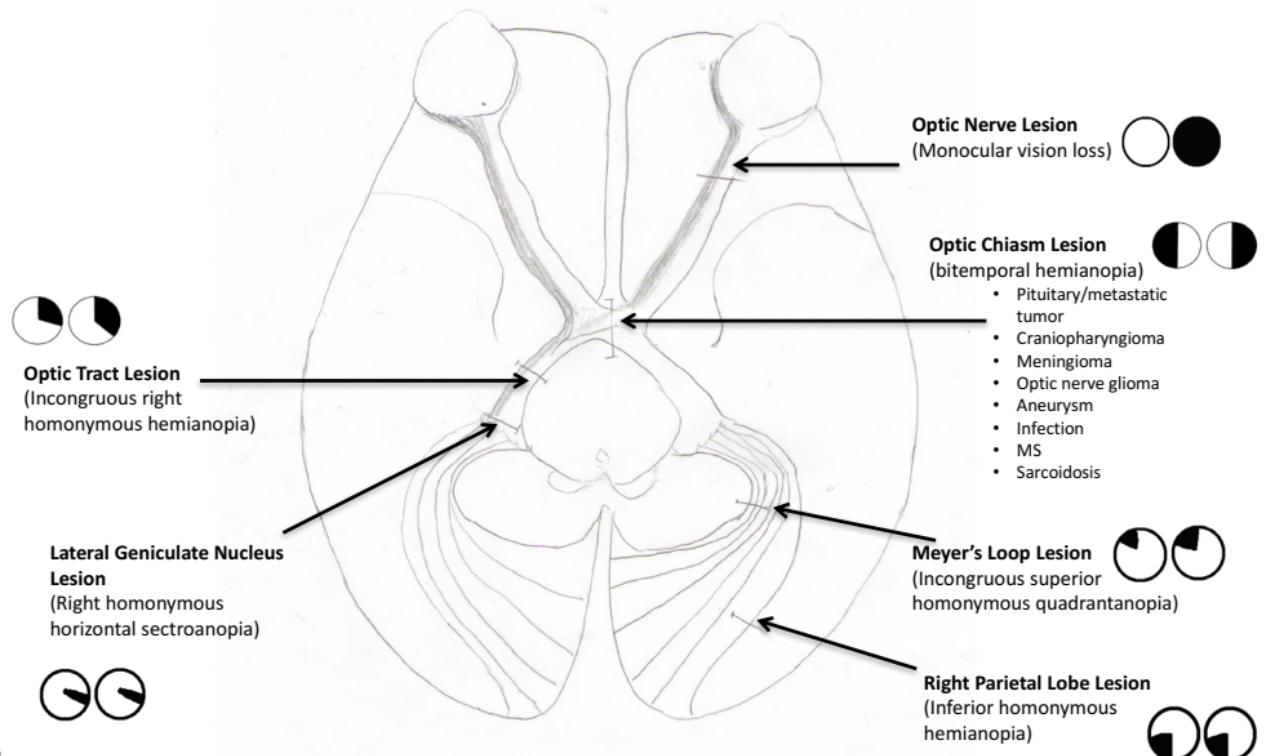
Strabismus

Ocular Misalignment



Neuro-Ophthalmology

Visual Field Defects



Pediatric

Developmental Delay.....	311
School Difficulties.....	312
Small for Gestational Age	313
Large for Gestational Age.....	314
Congenital Anomalies	315
Headache.....	316
Failure to Thrive Adequate Calorie Consumption.....	317
Failure to Thrive Inadequate Calorie Consumption.....	318
Hypotonic Infant (Floppy Newborn).....	319
Acute Abdominal Pain.....	320
Chronic Abdominal Pain.....	321
Pediatric Vomiting.....	322
Neonatal Jaundice: Approach to Indirect Hyperbilirubinemia.....	323
Neonatal Jaundice: Approach to Indirect Hyperbilirubinemia.....	324
Pediatric Diarrhea.....	325
Constipation: Pediatric.....	326
Mouth disorder: Pediatric.....	327
Depressed/Lethargic Newborn.....	328
Cyanosis in the Newborn.....	329
Limp.....	330
Respiratory Distress in the Newborn.....	331
Pediatric Dyspnea.....	332
Noisy Breathing: Pediatric wheezing.....	333
Noisy Breathing: Pediatric Stridor.....	334

Pediatric Cough: Acute.....	335
Pediatric Cough: Chronic.....	336
Respiratory Distress in the Newborn:	
Tachypnea.....	337
Sudden Unexpected Death in	
Infancy.....	338
Enuresis.....	339
Apparent Life Threatening Event.....	340
Pediatric Fractures.....	341
Salter Harris Classification.....	342
Sudden Paroxysmal Event.....	343
Non-Epileptic Paroxysmal Event.....	344
Pediatric Epilepsies.....	345
Pediatric Seizures.....	346



Pediatric

Febrile Seizures.....	347
Pediatric Mood and Anxiety Disorders.....	348
Abdominal Mass.....	349
Shock.....	350
Hypoglycemia.....	351
Altered Level of Consciousness.....	352
Bleeding/Bruising.....	353
Thrombocytopenia.....	354
Long PT (INR), Long PTT.....	355
Long PT (INR), Normal PTT.....	356
Normal PT (INR), Long PTT.....	357
Dehydration.....	358
Hyponatremia.....	359
Hypernatremia.....	360
Global Developmental Delay/Intellectual Disability.....	361
Fever (Age <1 Month).....	362
Fever (Age 1-3 Months).....	363
Fever (Age >3 Months).....	364
Failure to Thrive.....	365
Short Stature.....	366
Murmur in the Newborn (<48 Hours).....	367
Murmur in the Newborn Beyond Neonatal Period.....	368
Preterm Infant Complications (<34 Weeks).....	369
Preterm Infant Complications (34-36 Weeks).....	370

Anemia by Mechanism.....	371
Anemia by MCV.....	372
Microcytic Anemia.....	373
Paediatric Infectious Skin Rash.....	374
Skin Lesion (Primary Skin).....	375
Skin Lesion (Secondary Skin).....	376
Rash (Eczematous).....	377
Rash (Papulosquamous).....	378
Rash (Vesiculobullous).....	379
Rash (Pustular).....	380
Rash (Reactive).....	381
Proteinuria.....	382
Hematuria.....	383
Acute Renal Failure.....	384
Chronic Kidney Disease	385
Edema	386
Dysuria	387
Increased Urinary Frequency.....	388
Scrotal Mass.	389
Lymphadenopathy	390
Otalgia (Earache)	391
Sore Throat/Sore Mouth.....	392

Historical Editors

Dr. Pamela Veale
Dr. Susan Bannister
Dr. Kelly Millar
Dr. Mary Ann Thomas
Dr. Andrei Harabor
Dr. Jean Mah
Dr. Henry Mandin
Dr. Leanna McKenzie
Dr. Ian Mitchell
Dr. Katherine Smart
Dr. Sylvain Coderre
Jaskaran Singh
Christopher Skappak

Debanjana Das
Cody Flexhaug
Carmen Fong
Carly Hagel
Rebekah Jobling
Beata Komierowski
Anuradha Surendra
Shahbaz Syed
Gilbert Yuen

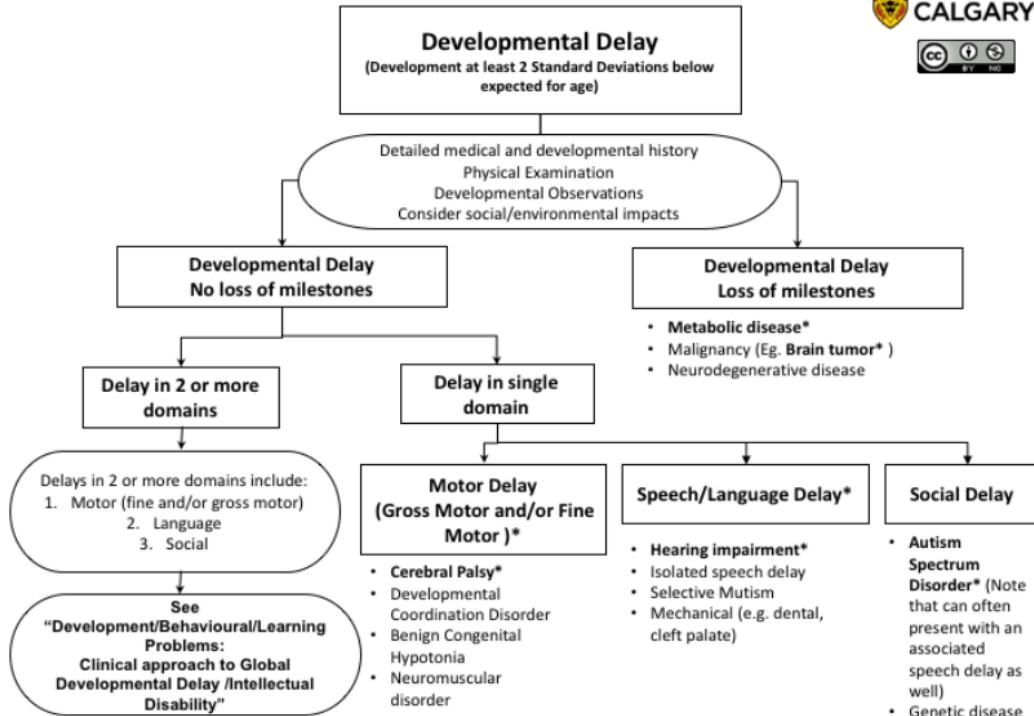
Student Editors

Elbert Jeffrey Manalo
David Cook

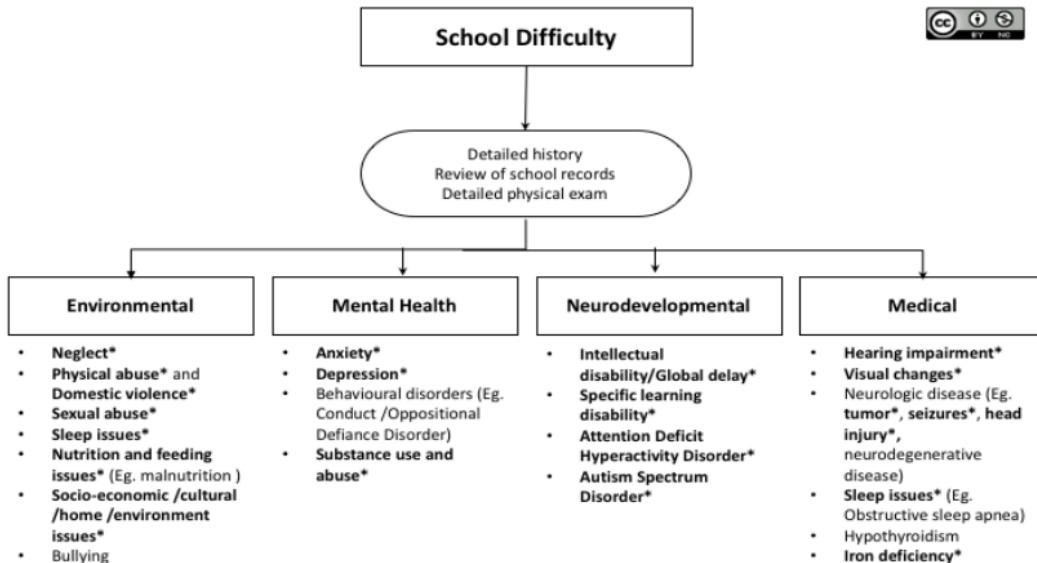
Faculty Editor

Dr. Marielena Dibartolo

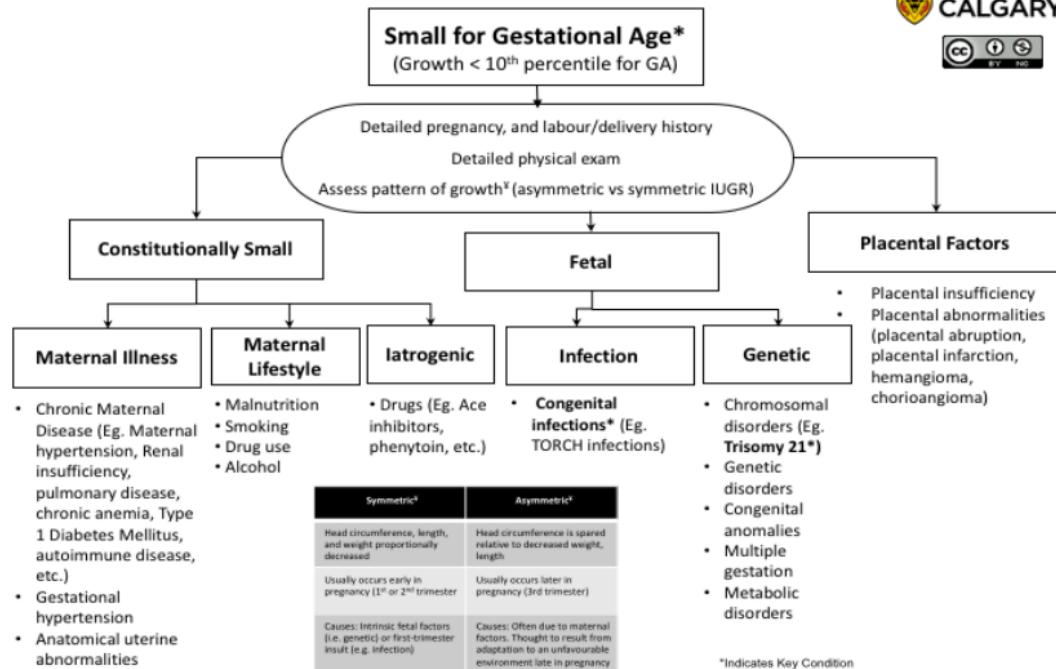
Developmental Delay



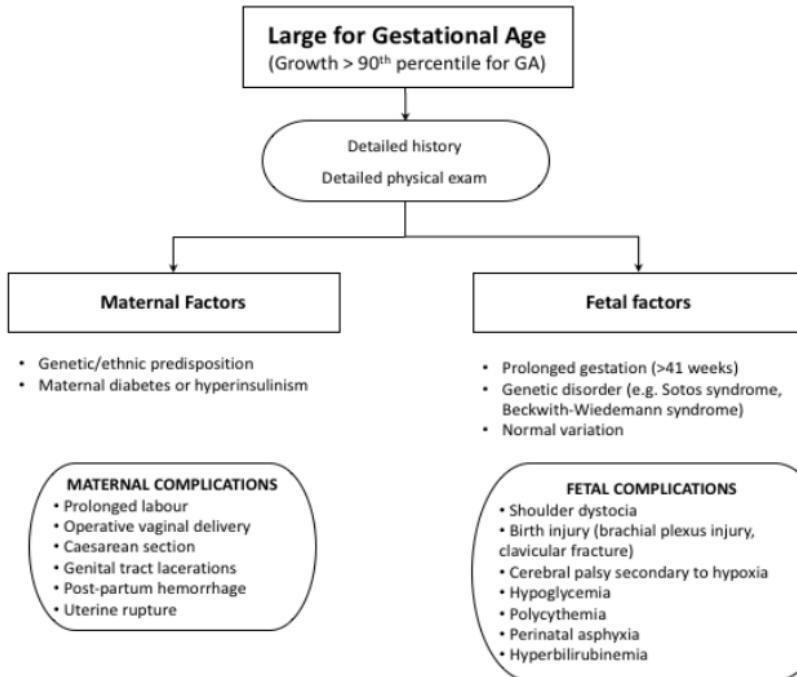
School Difficulties



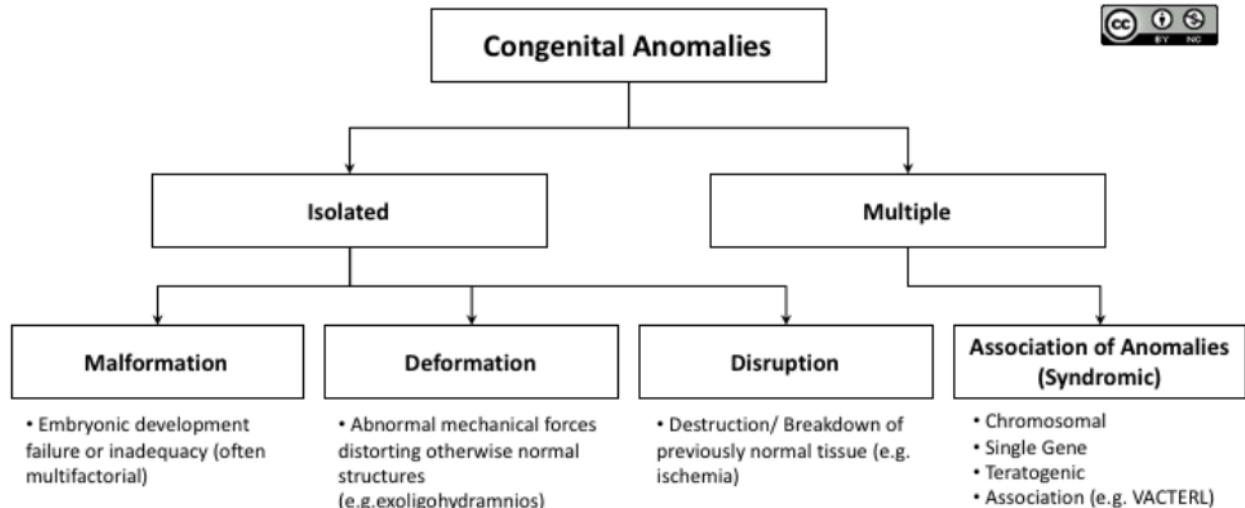
Small for Gestational Age



Large for Gestational Age

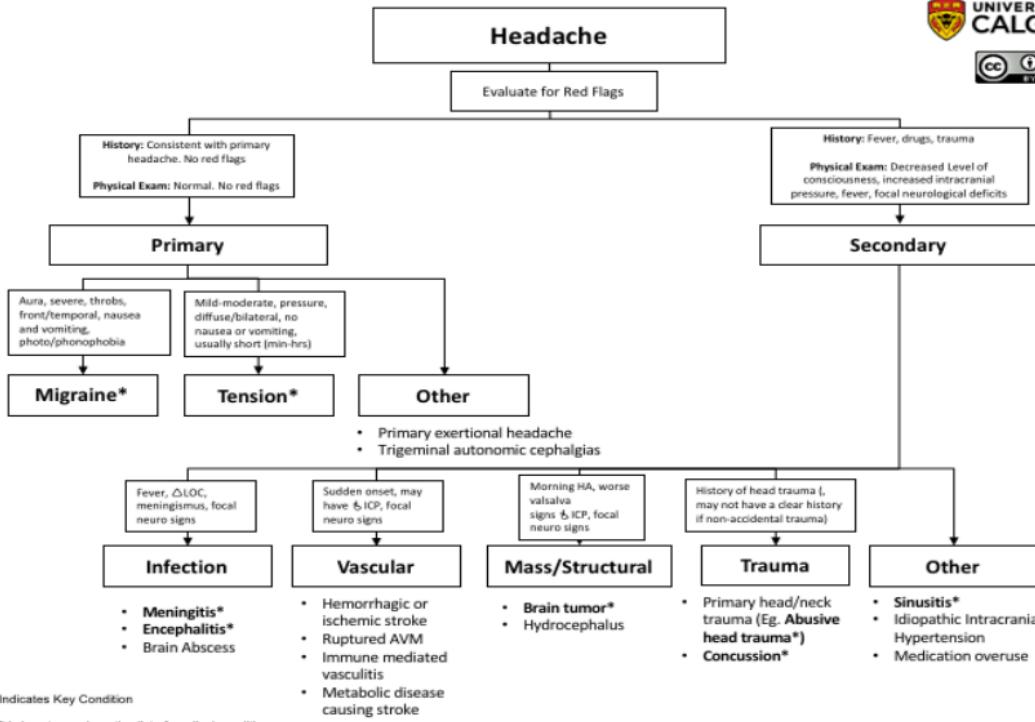


Congenital Anomalies



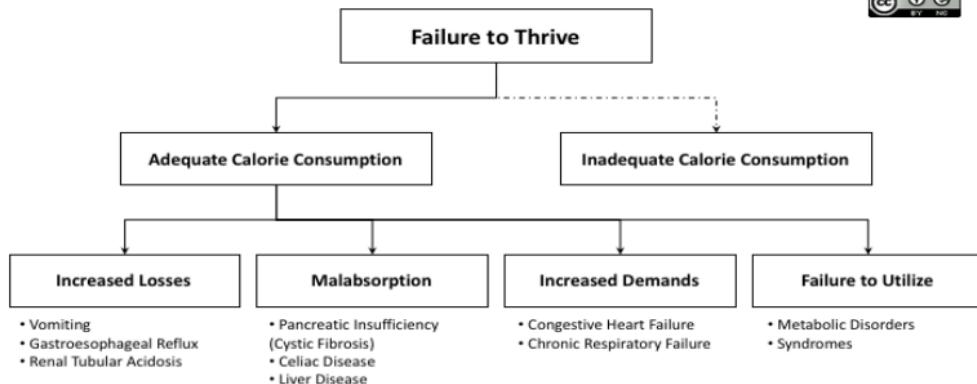
- : **Things to Consider:**
- History** – Prenatal: maternal health, exposures, screening, ultrasounds; delivery; neonatal
 - Family History** – Three Generations: prior malformations, stillbirths, recurrent miscarriages, consanguinity
 - Physical Exam** – Variants, minor anomalies, major malformation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

Headache



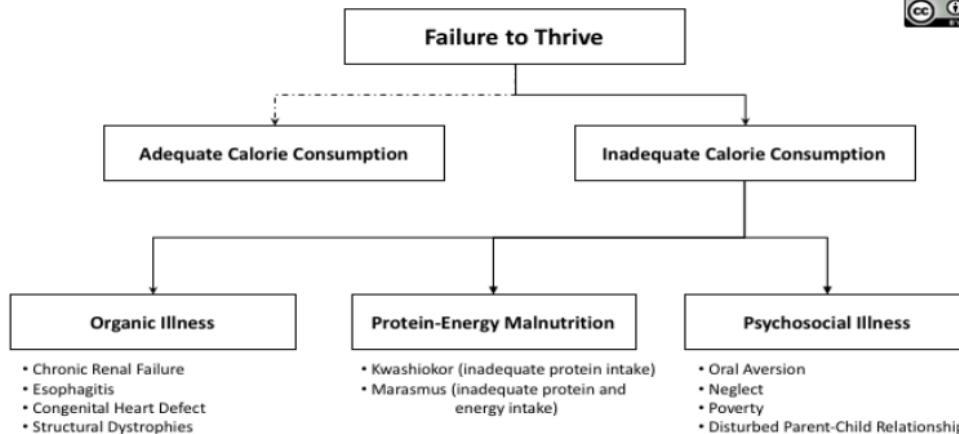
Failure to Thrive

Adequate Calorie Consumption

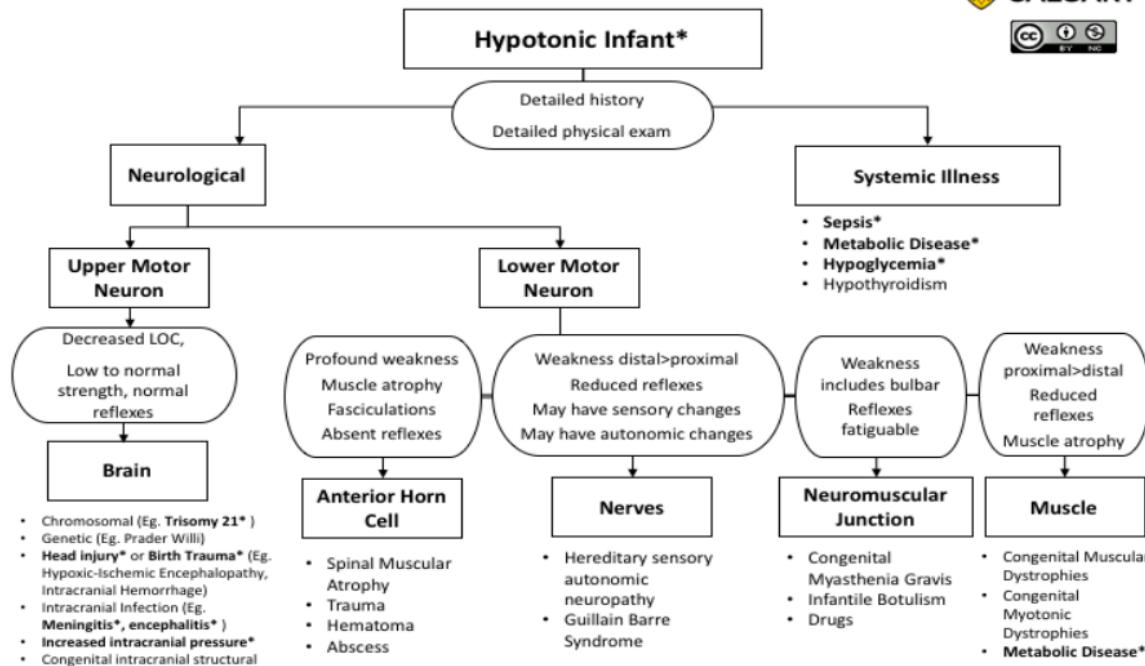


Failure to Thrive

Inadequate Calorie Consumption



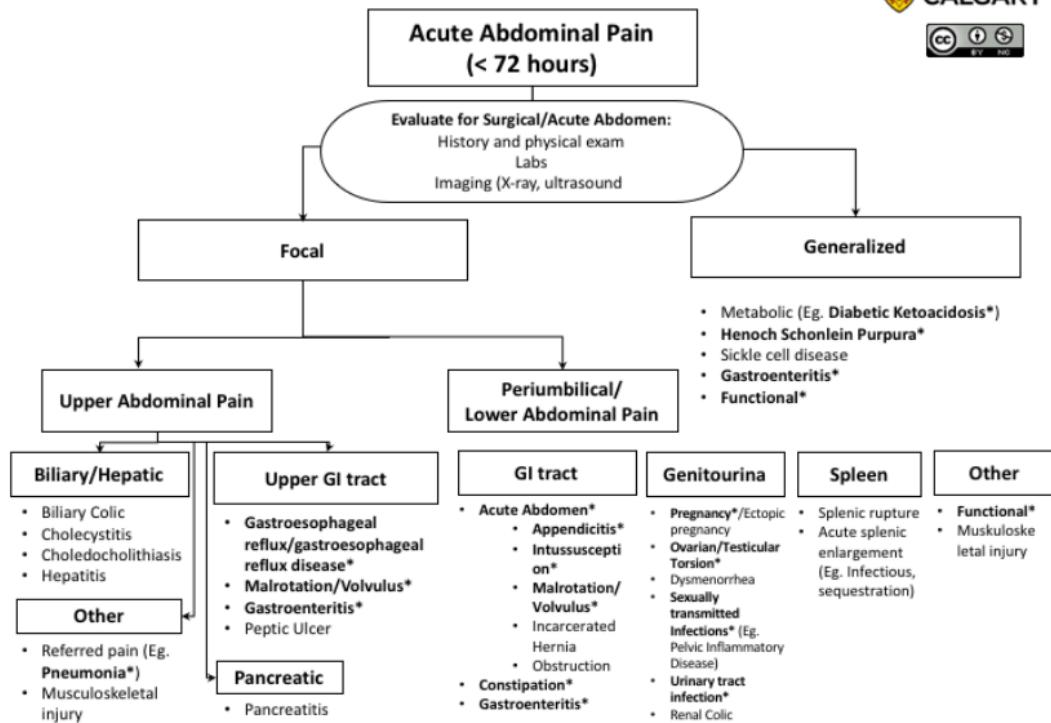
Hypotonic Infant (Floppy Newborn)



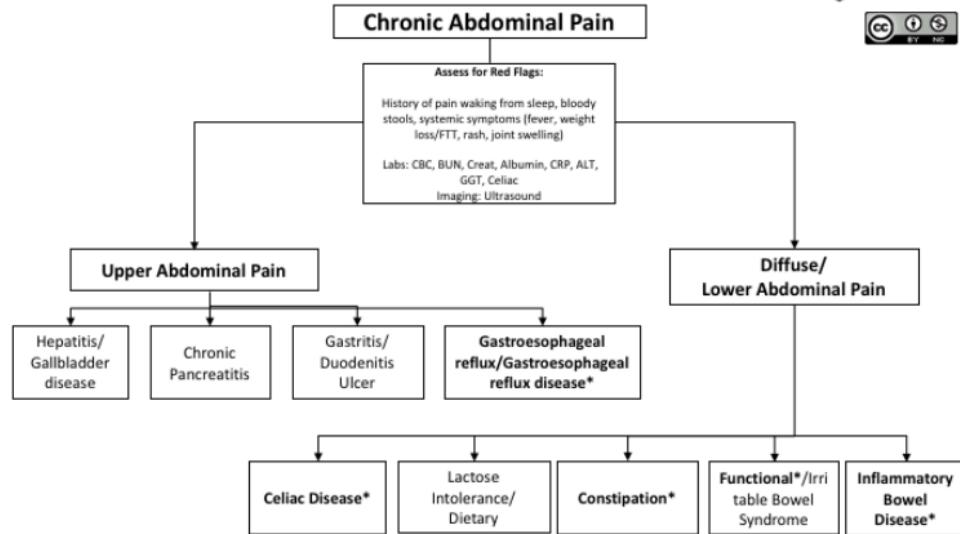
*Indicates Key Condition

This is not an exhaustive list of medical conditions.

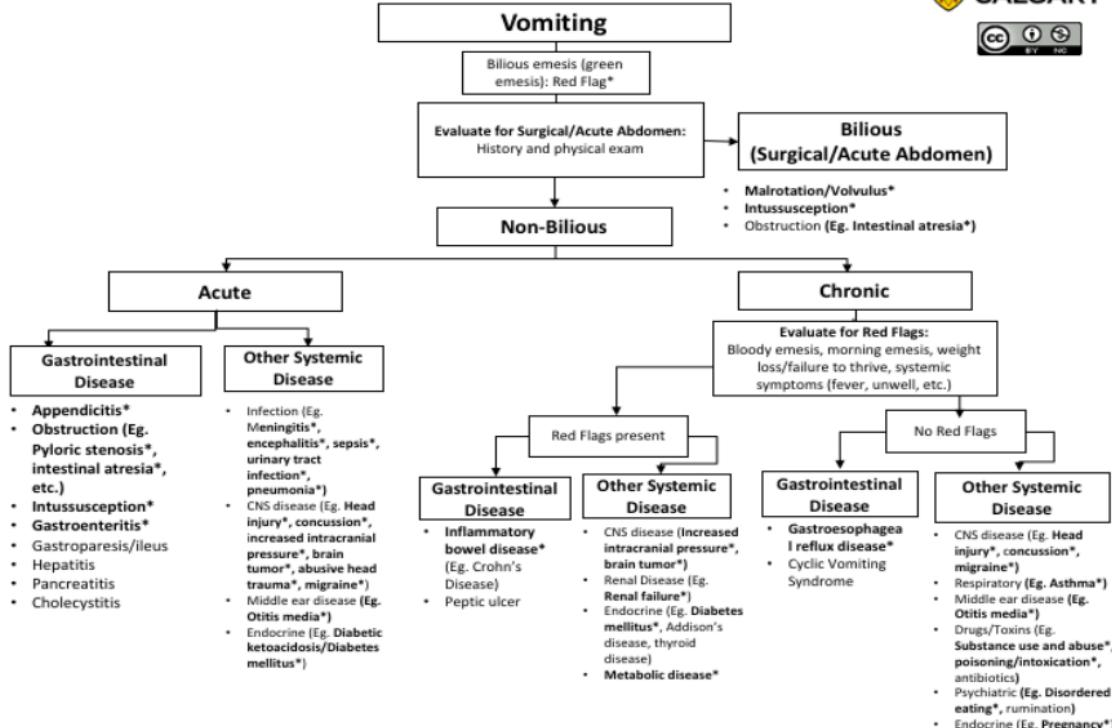
Acute Abdominal Pain



Chronic Abdominal Pain

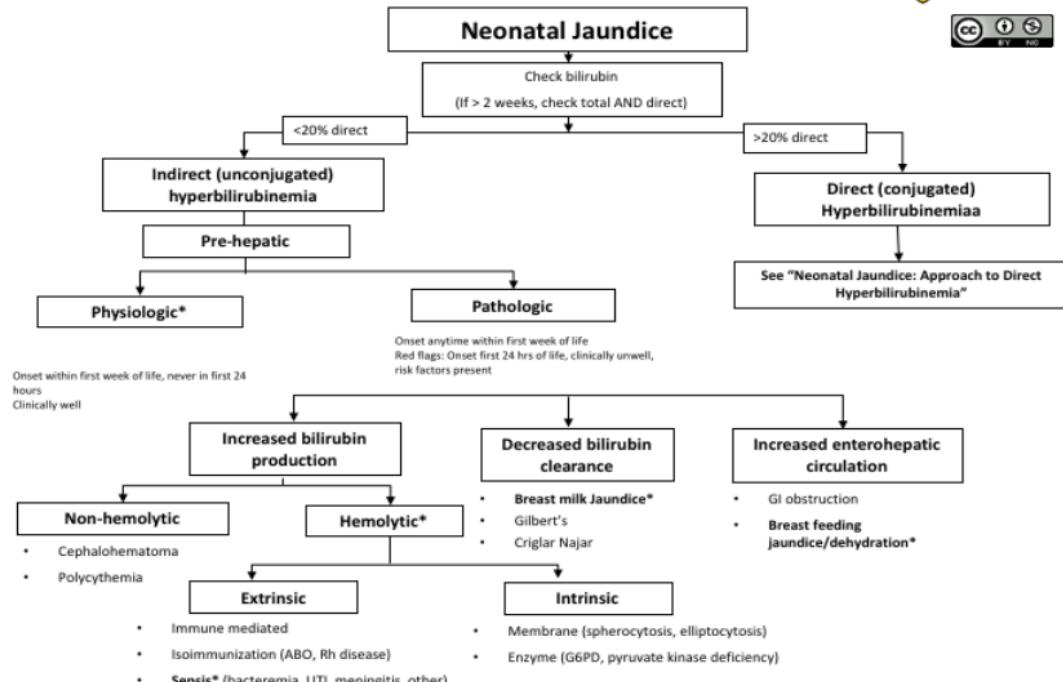


Pediatric Vomiting



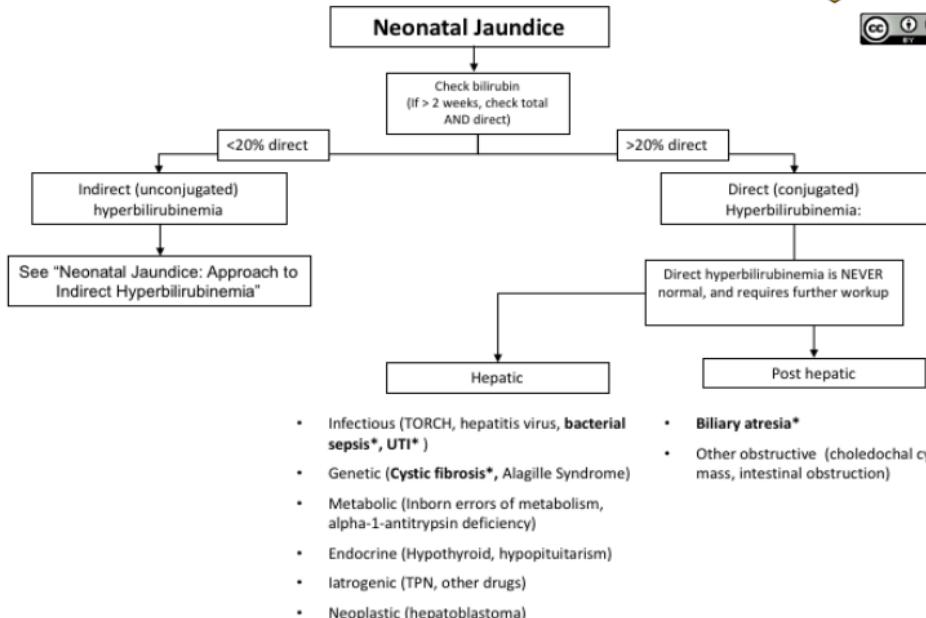
Neonatal Jaundice

Approach To Indirect Hyperbilirubinemia

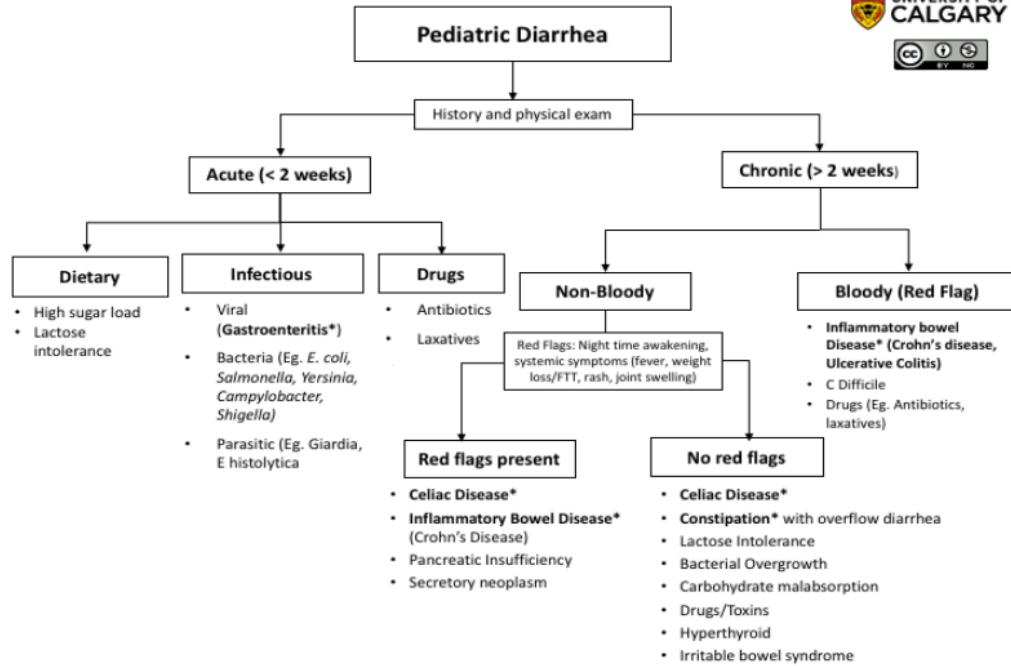


Neonatal Jaundice

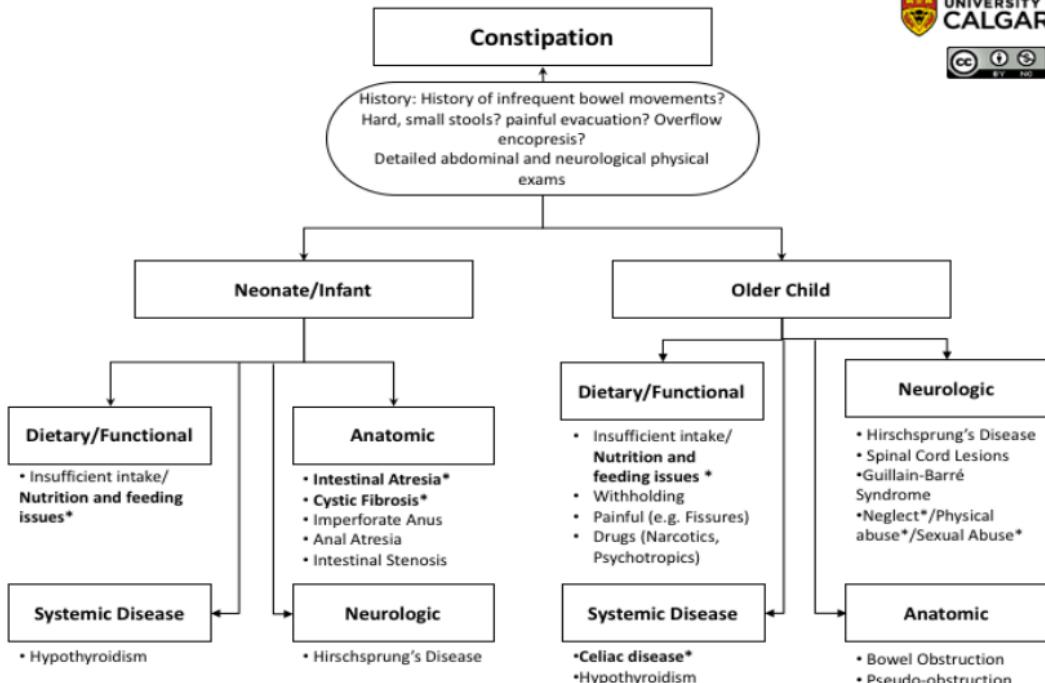
Approach To Direct Hyperbilirubinemia



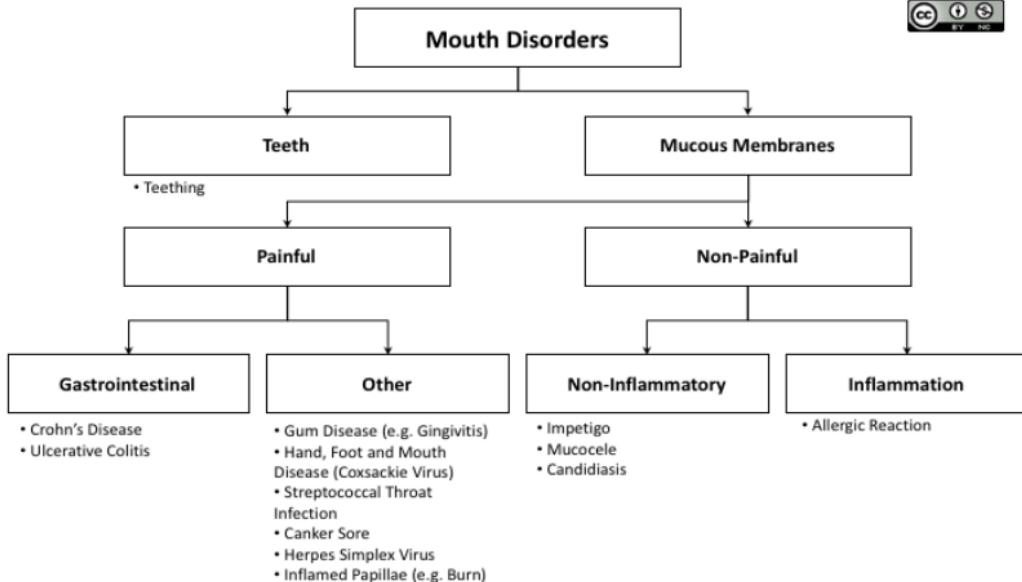
Diarrhea (Pediatric)



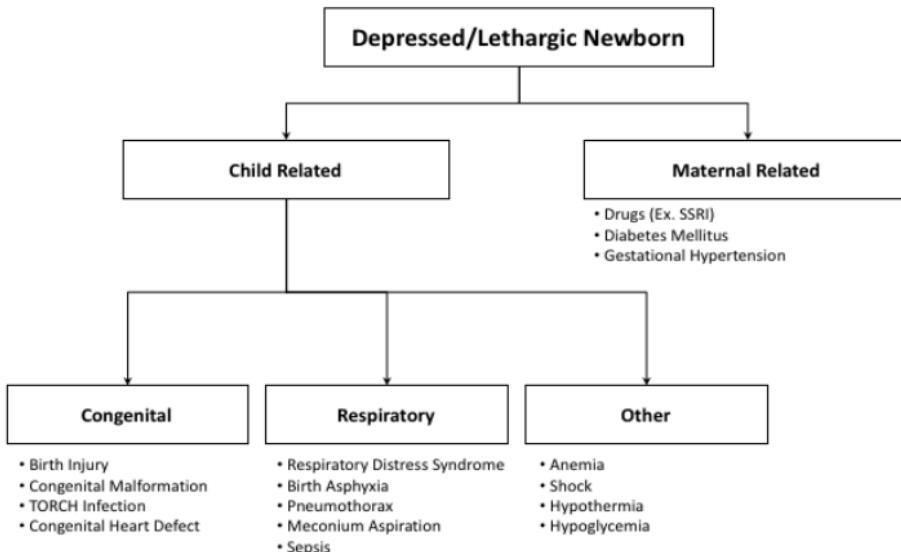
Constipation (Pediatric)



Mouth Disorders (Pediatric)



Depressed /Lethargic Newborn

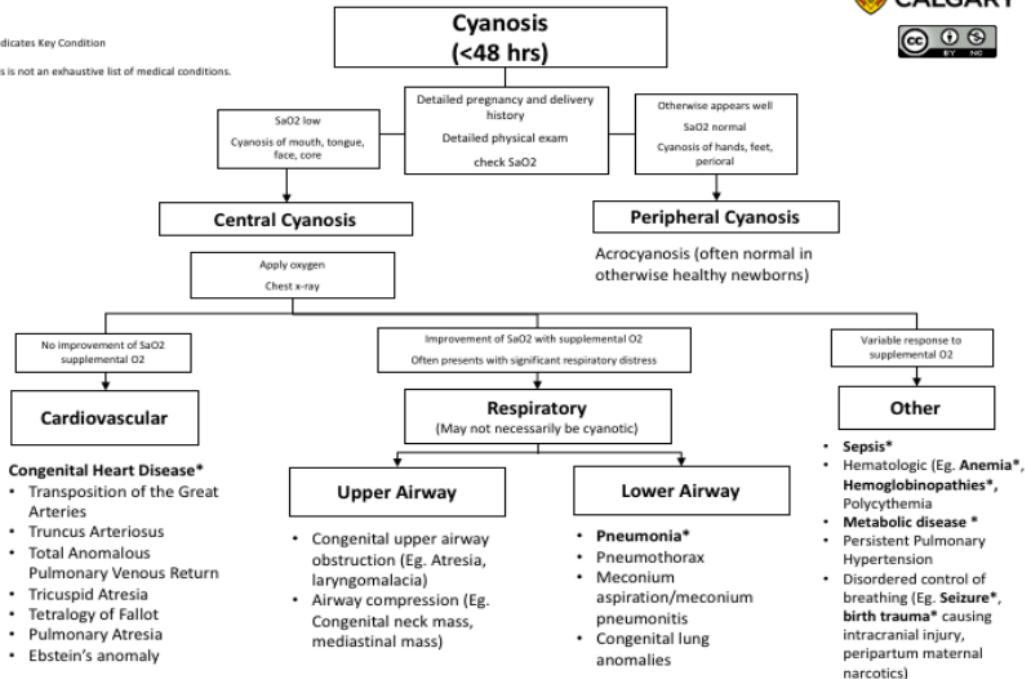


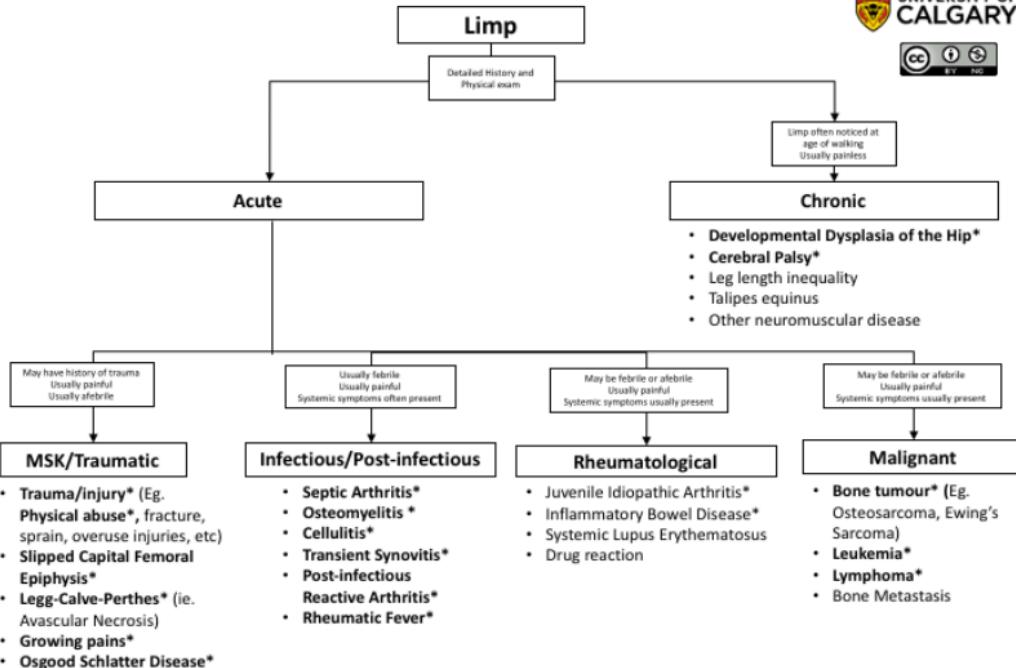
Cyanosis in the Newborn



*Indicates Key Condition

This is not an exhaustive list of medical conditions.





*Indicates Key Condition

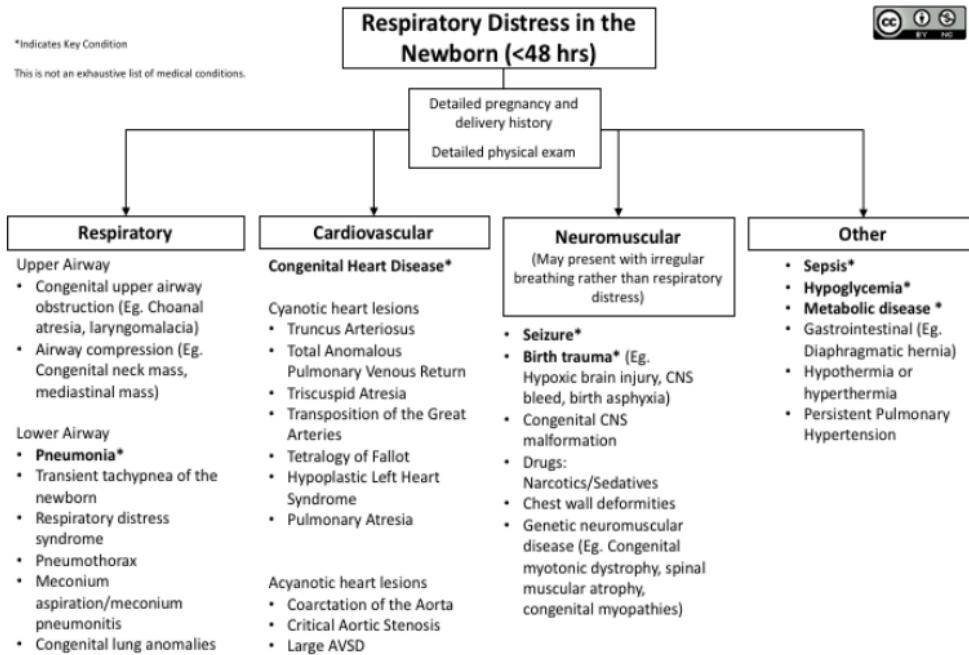
This is not an exhaustive list of medical conditions.

Respiratory Distress In The Newborn

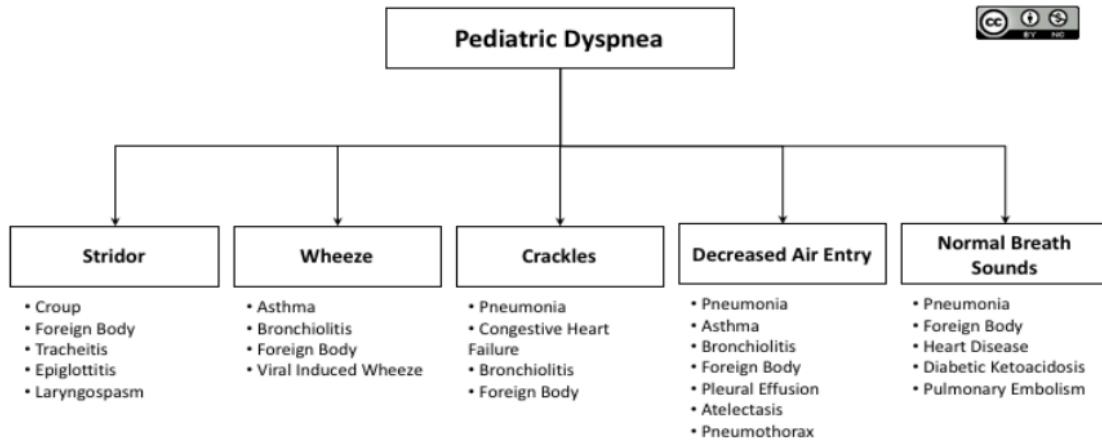


*Indicates Key Condition

This is not an exhaustive list of medical conditions.

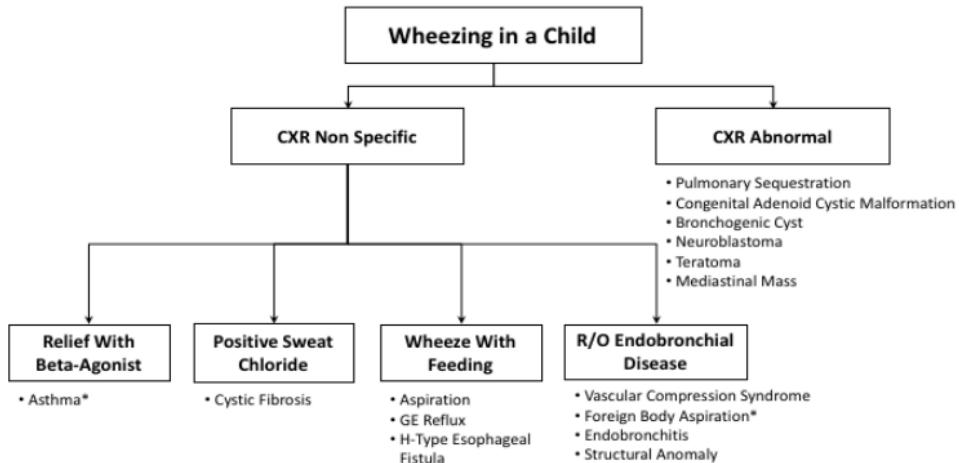


Pediatric Dyspnea



Noisy Breathing

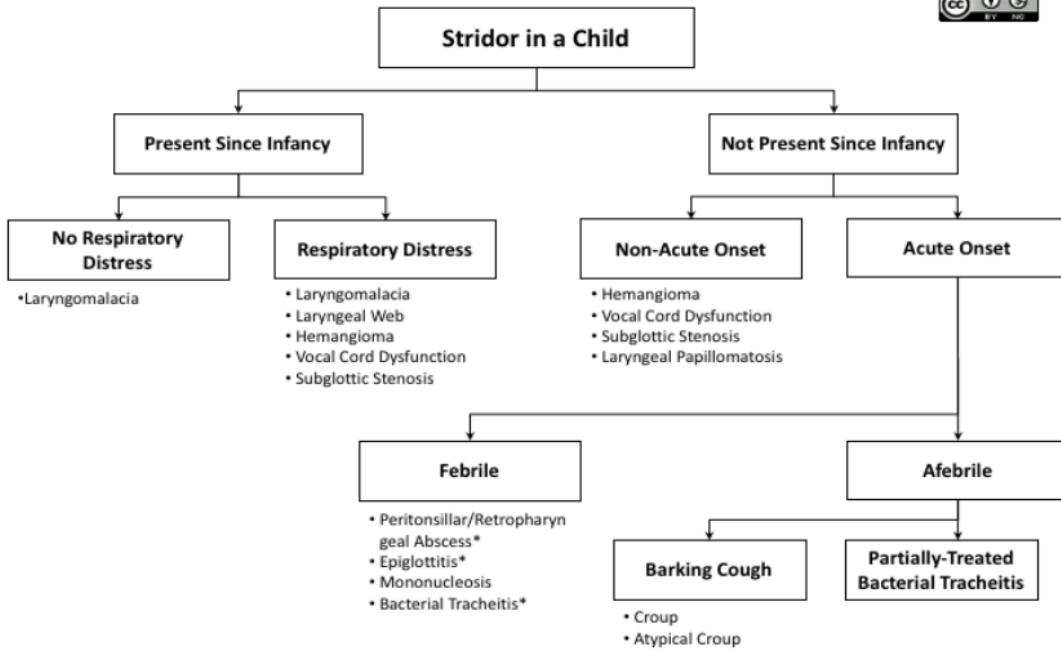
Pediatric Wheezing



* Denotes acutely life-threatening causes

Noisy Breathing

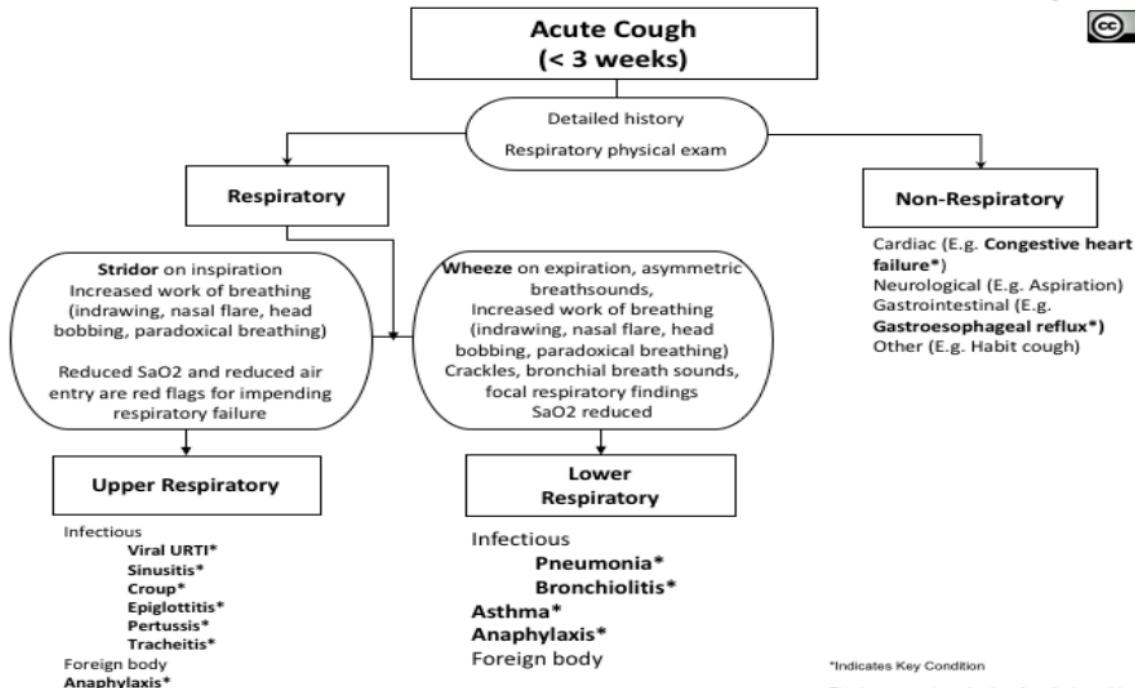
Pediatric Stridor



* Denotes acutely life-threatening causes

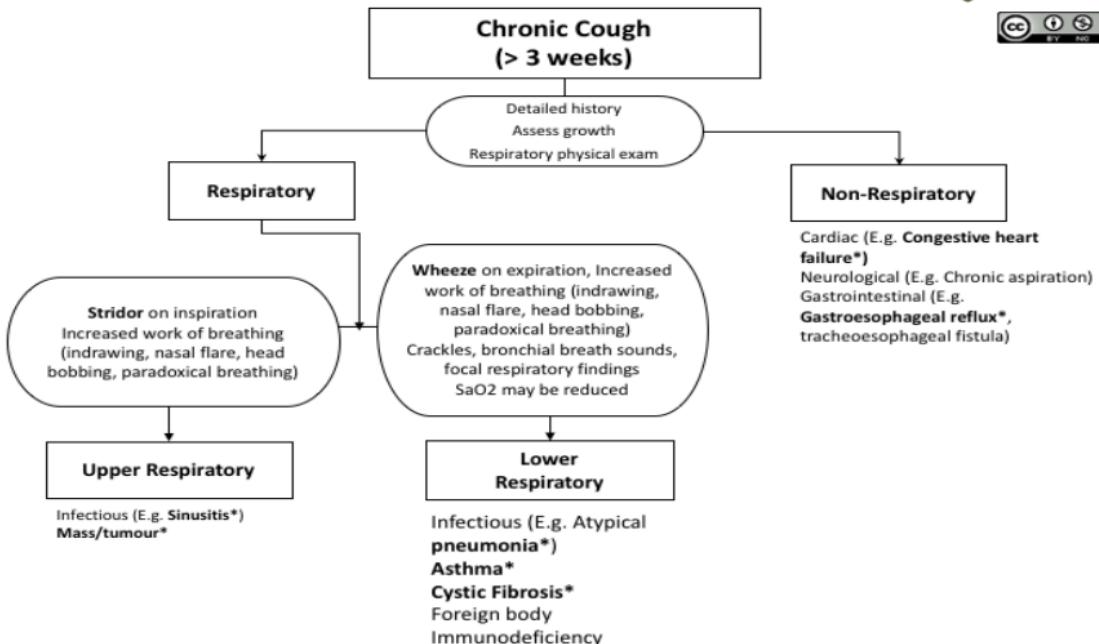
Pediatric Cough

Acute



Pediatric Cough

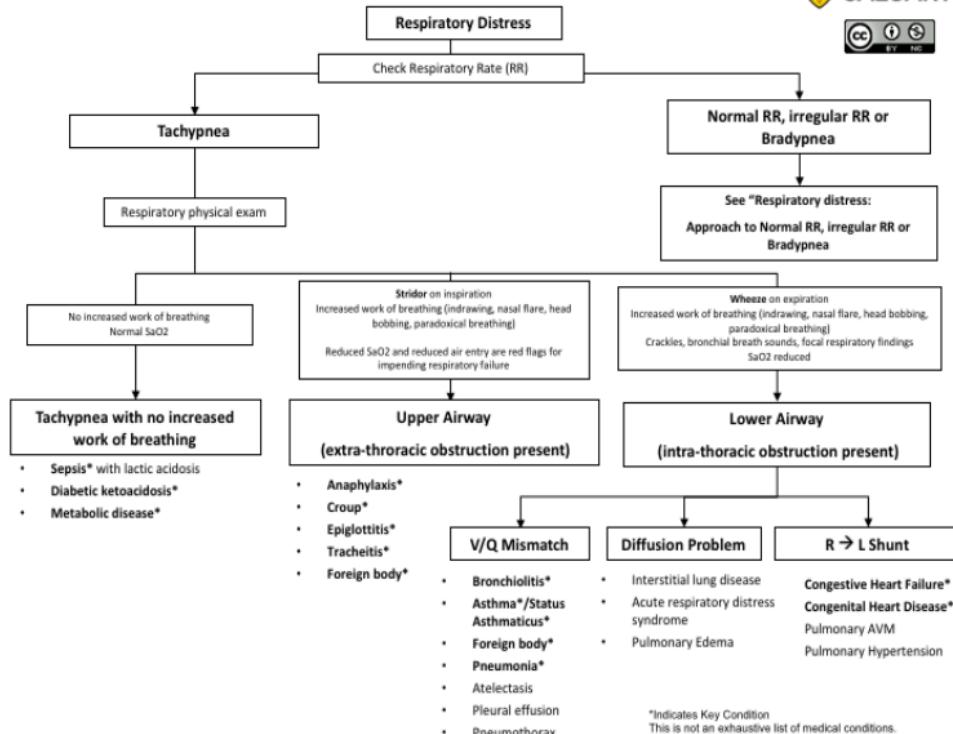
Chronic



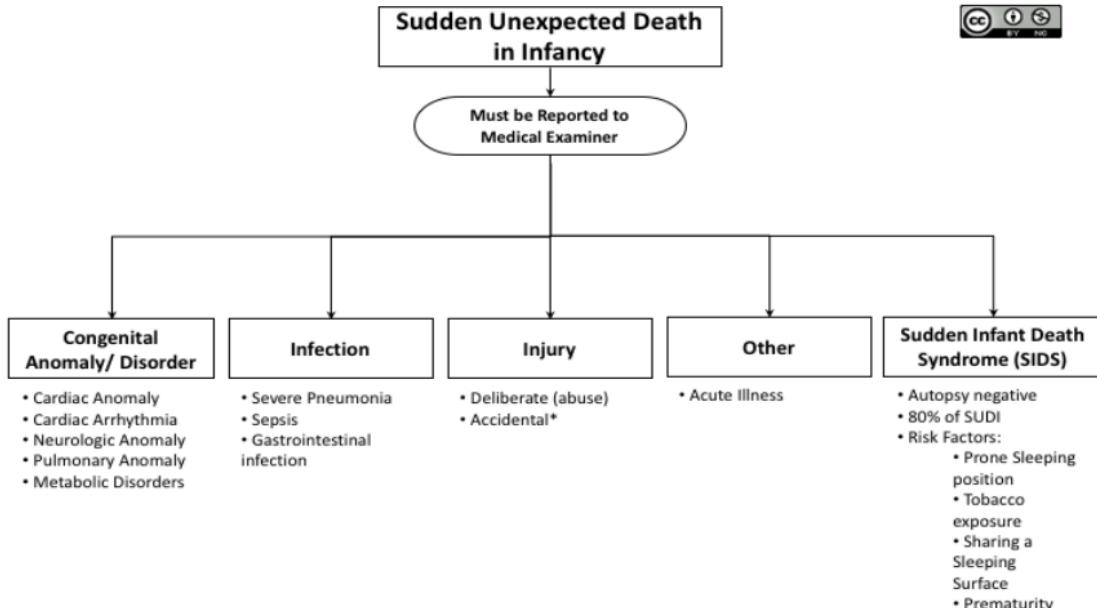
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Respiratory Distress In The Newborn

Tachypnea



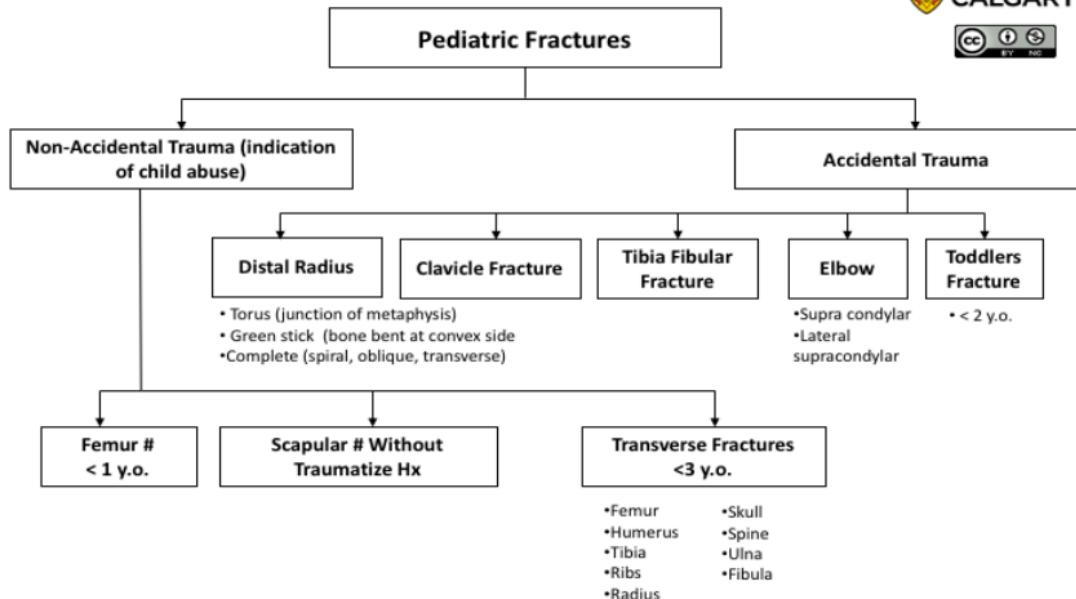
Sudden Unexpected Death In Infancy (SUDI)



* 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



Salter Harris Physeal Injury Classification

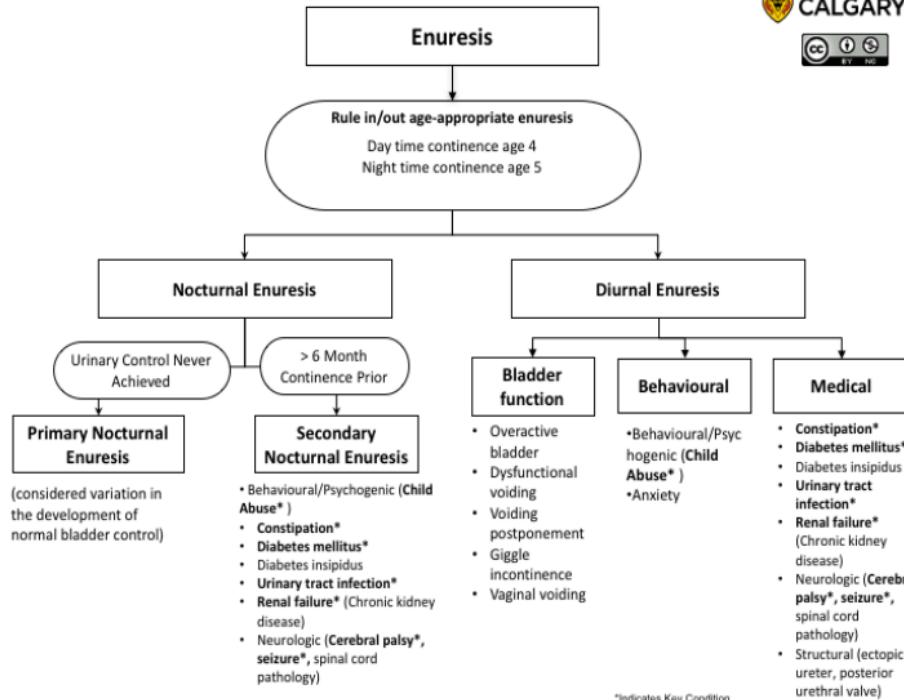


Type	Population	Features
I	Younger Children	Separation through the physis
II	Older Children (75%)	Fracture through a portion of the physis that extends through the metaphyses

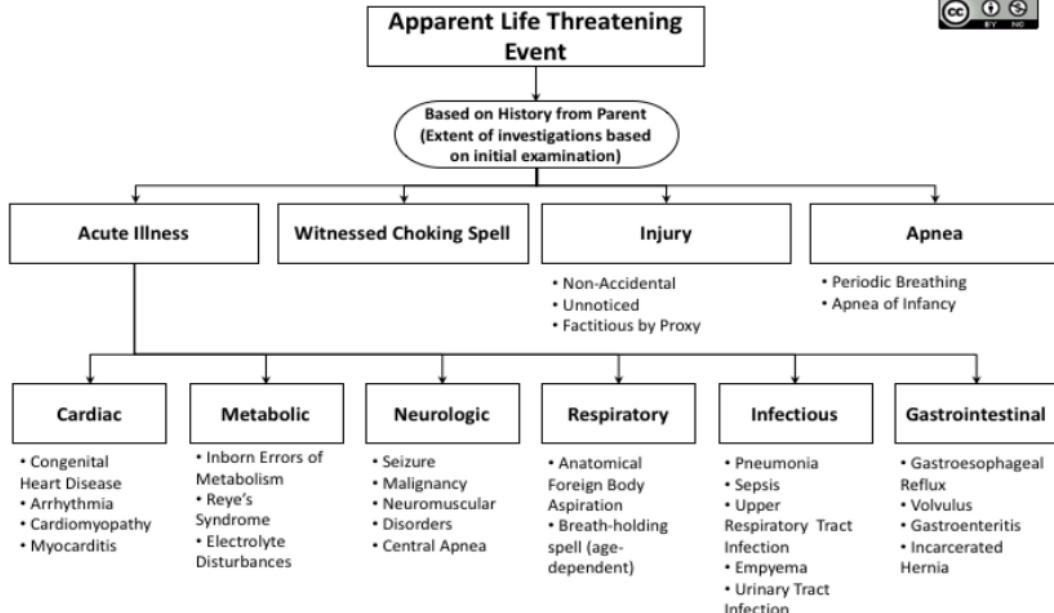
S	Straight through
A	Above
L	Lower

The line goes below the physis through the epiphysis, and into the joint

Enuresis

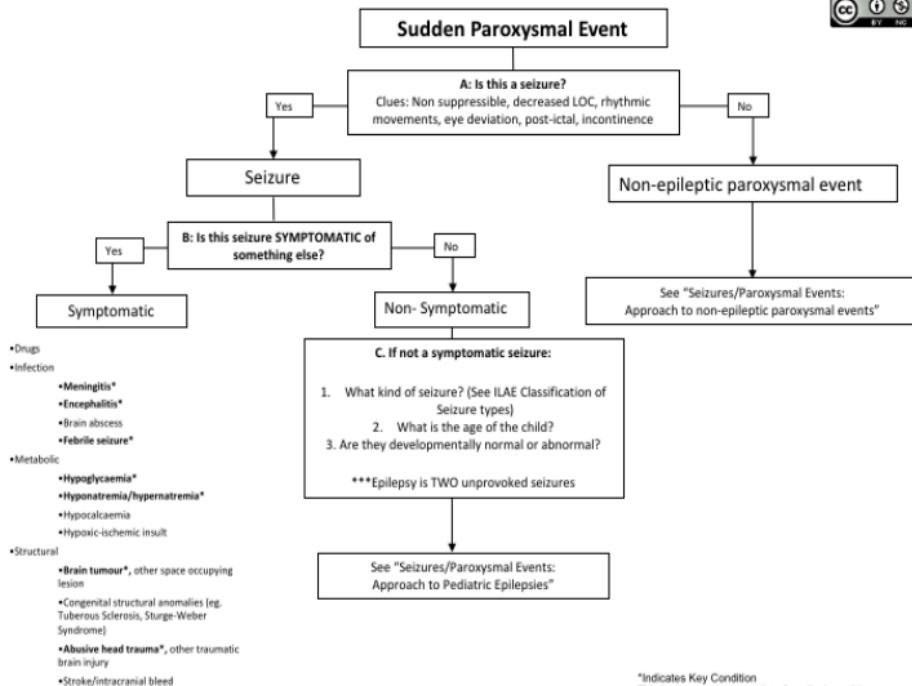


Apparent Life Threatening Event



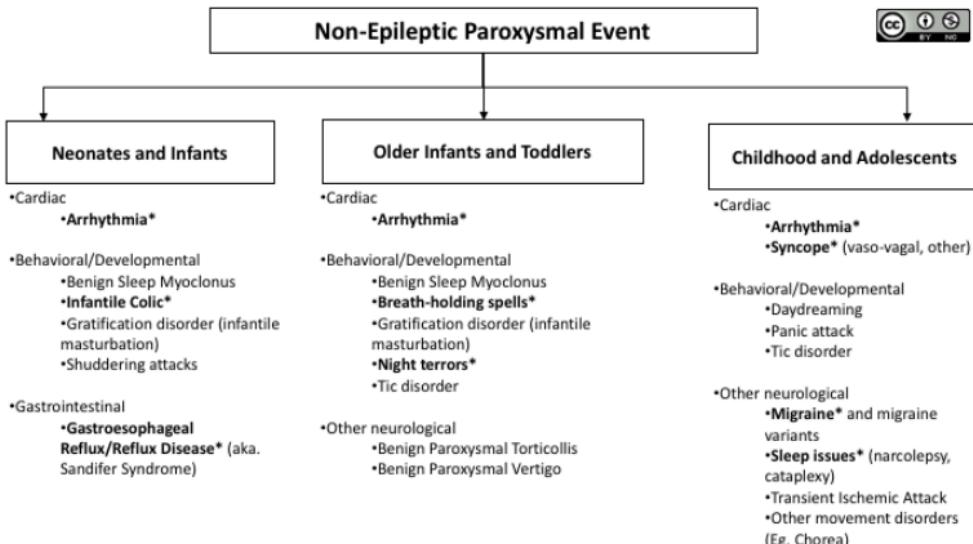
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Sudden Paroxysmal Event



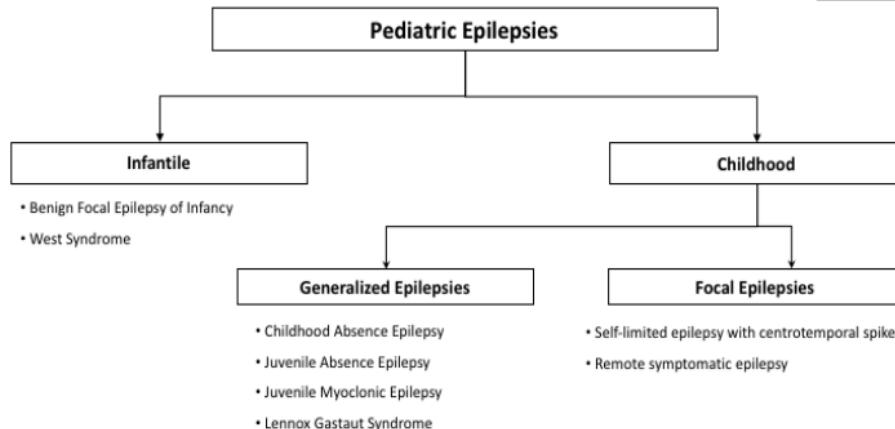
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Non-Epileptic Paroxysmal Event

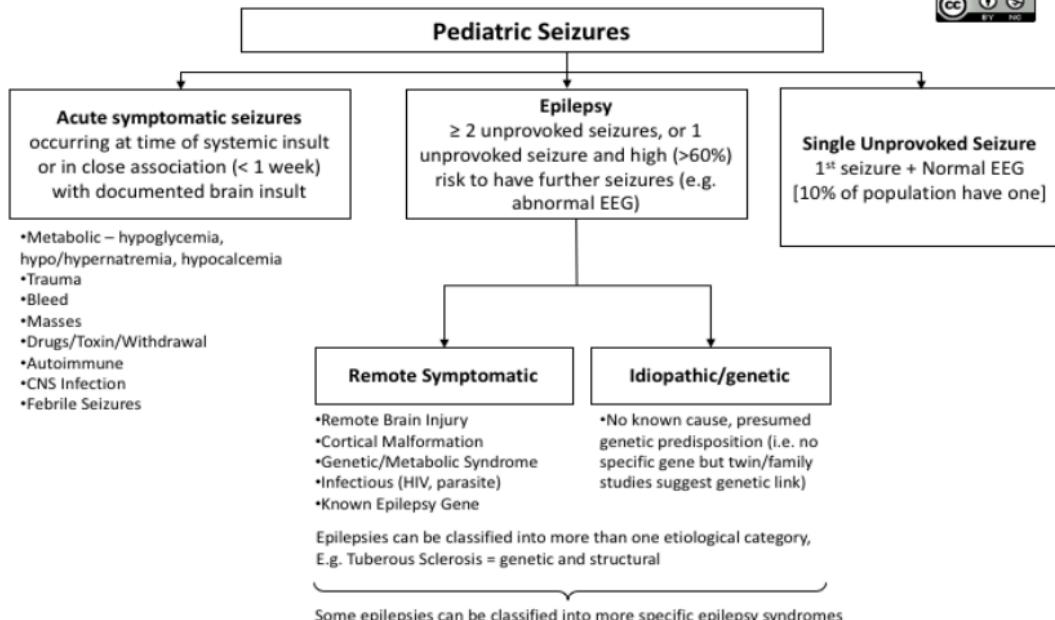


*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Pediatric Epilepsies

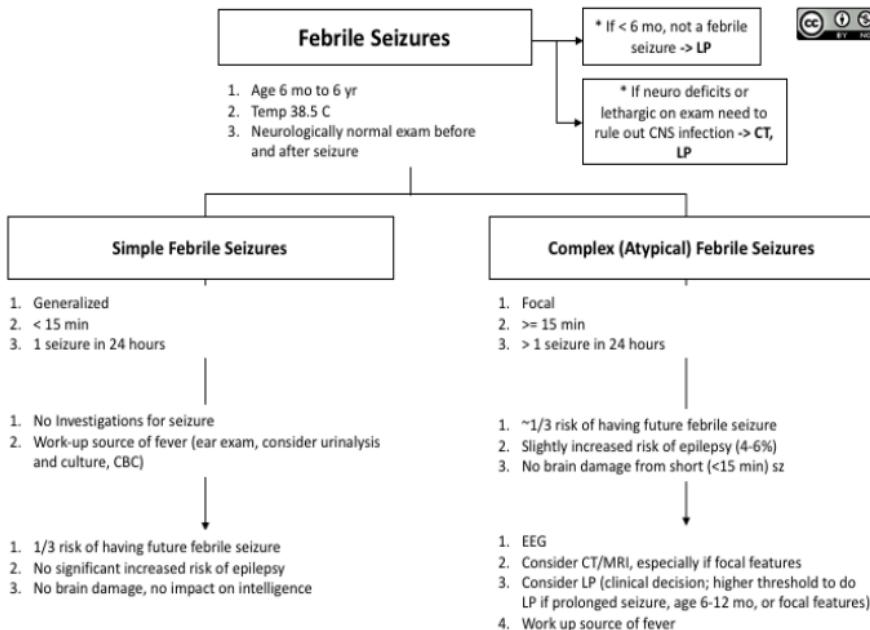


Pediatric Seizures



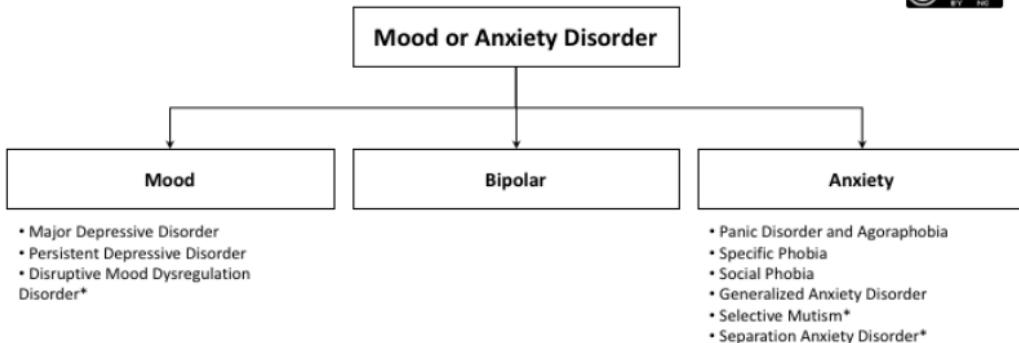
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Febrile Seizures



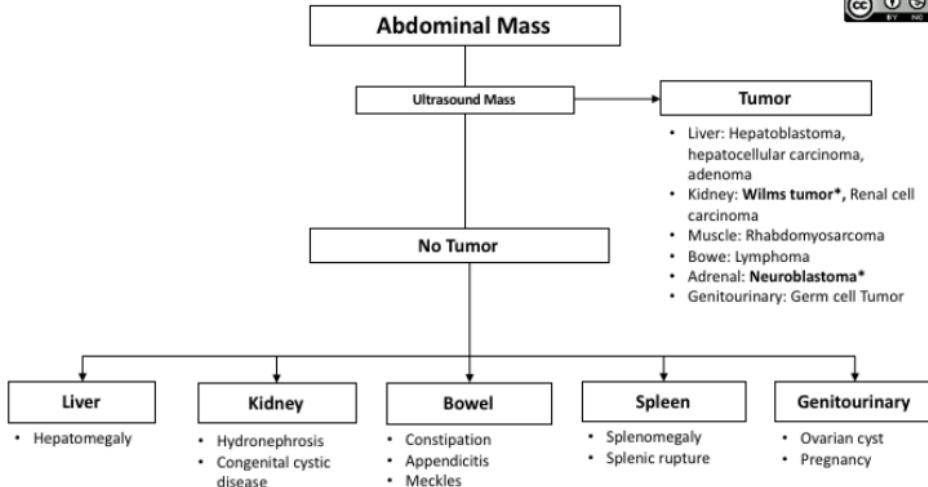
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Pediatric Mood And Anxiety Disorders



*More commonly or exclusively found in pediatric populations

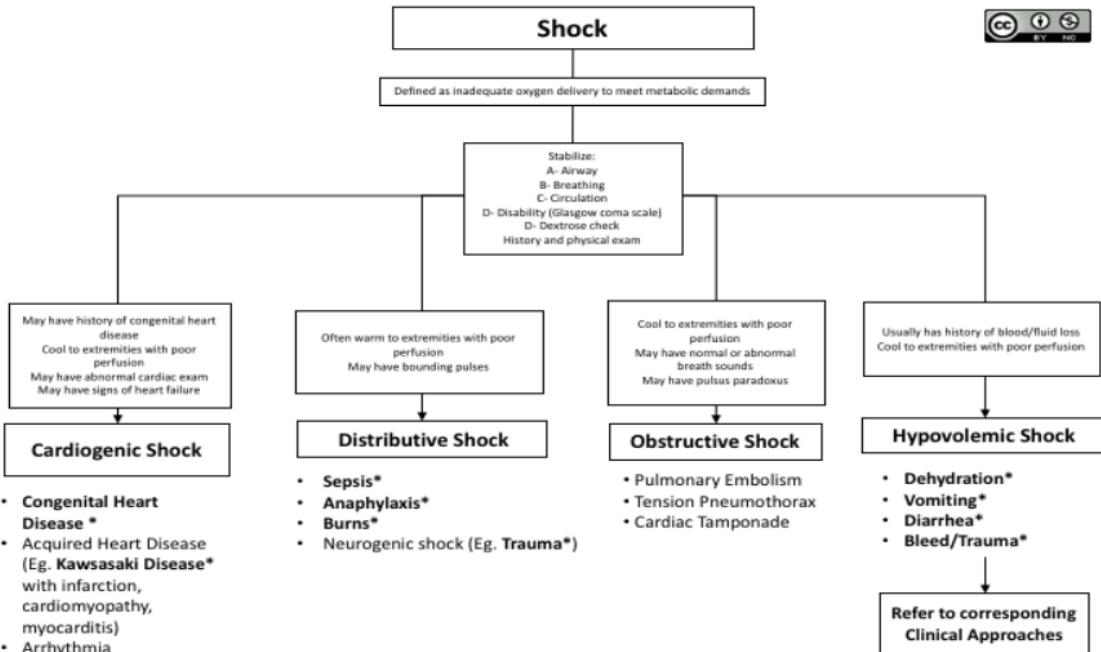
Abdominal Mass



*Indicates Key Condition

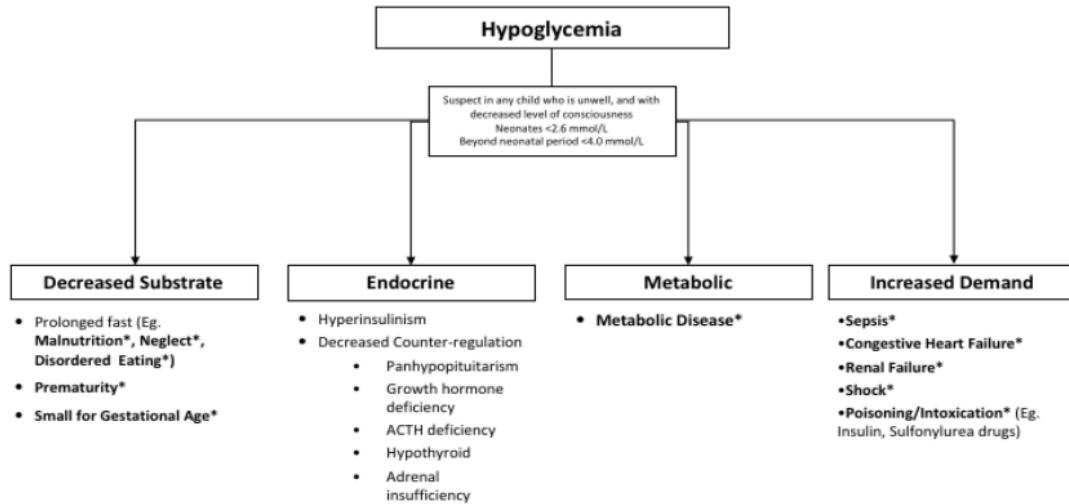
This is not an exhaustive list of medical conditions.

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



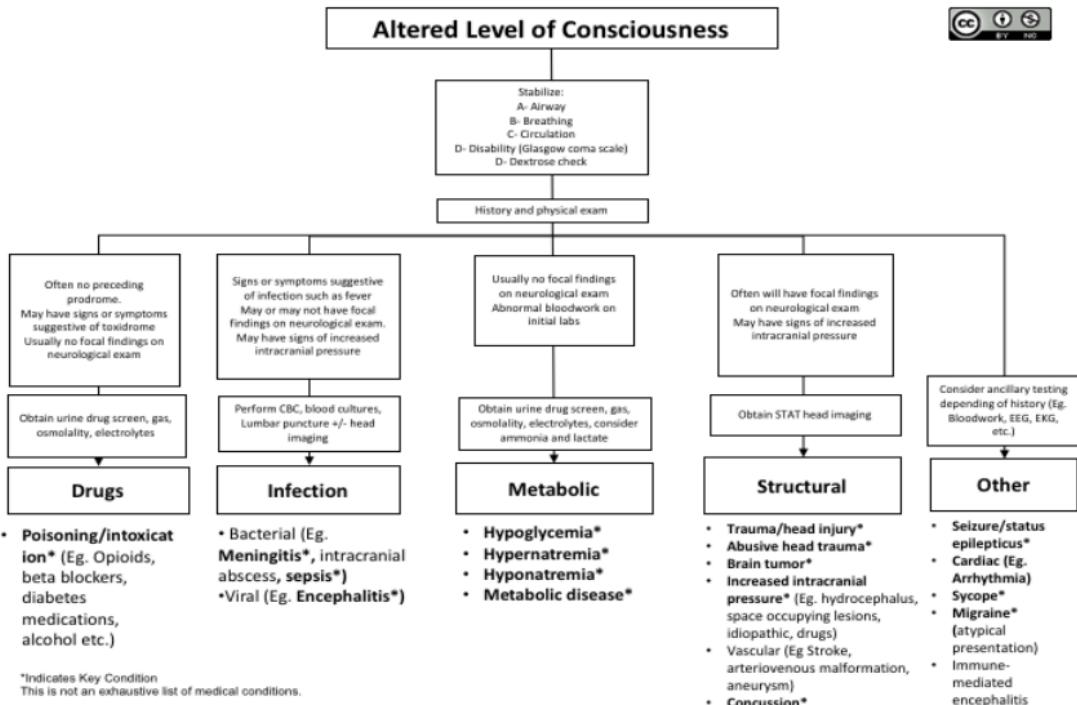
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Hypoglycemia

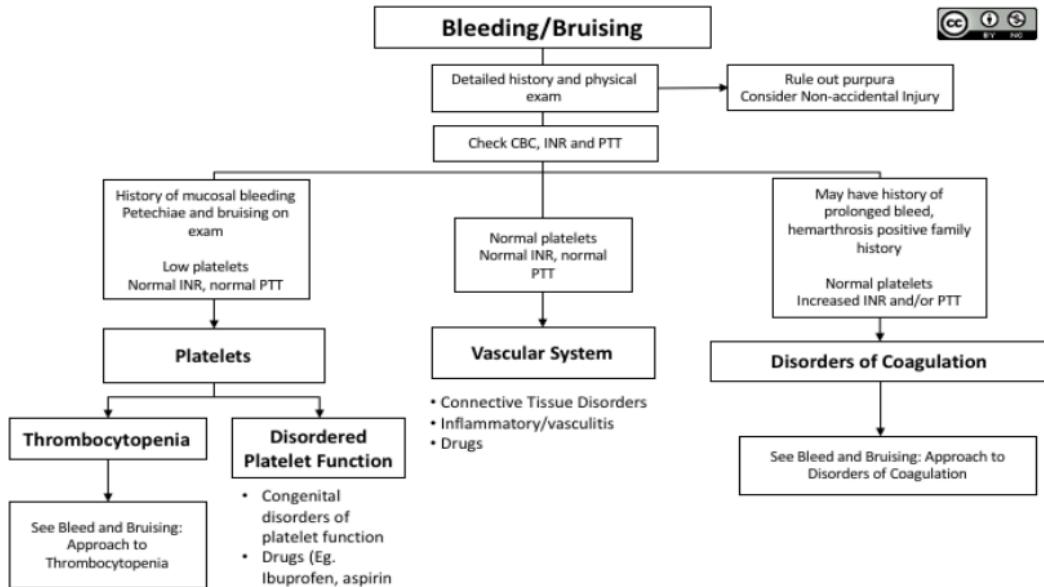


*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Altered Level Of Consciousness

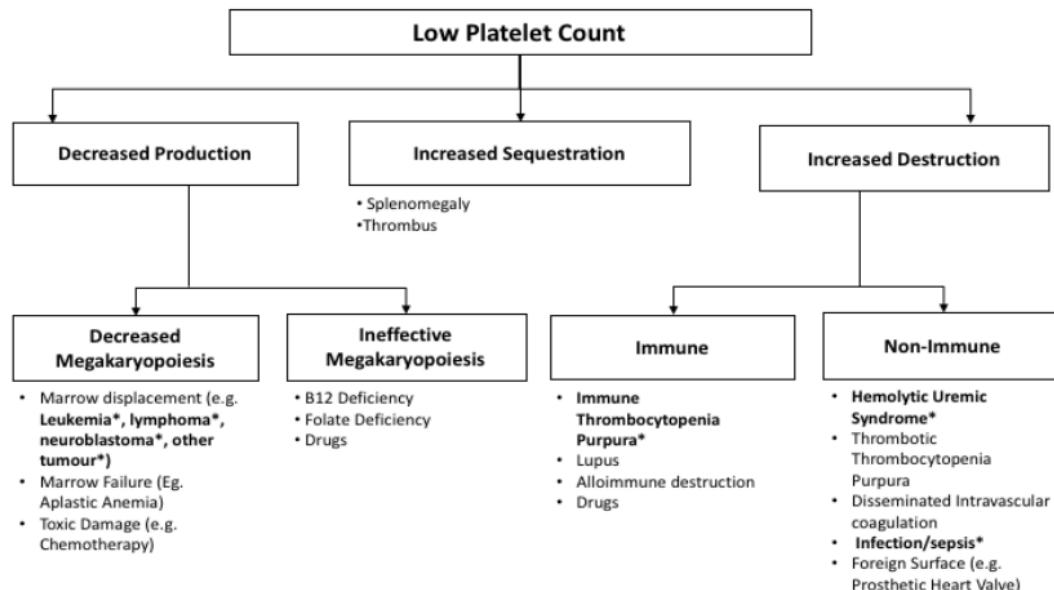


Bleeding/Bruising



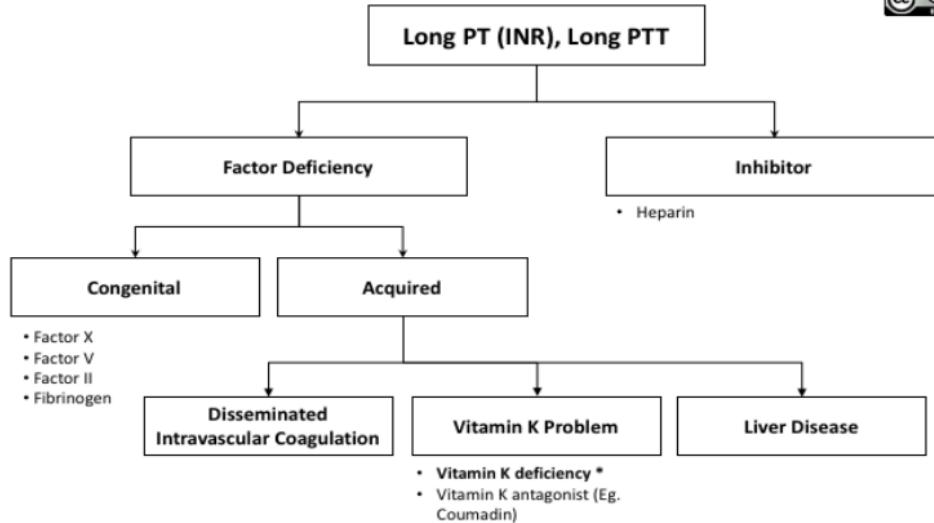
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Thrombocytopenia



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

Long PT (INR), Long PTT



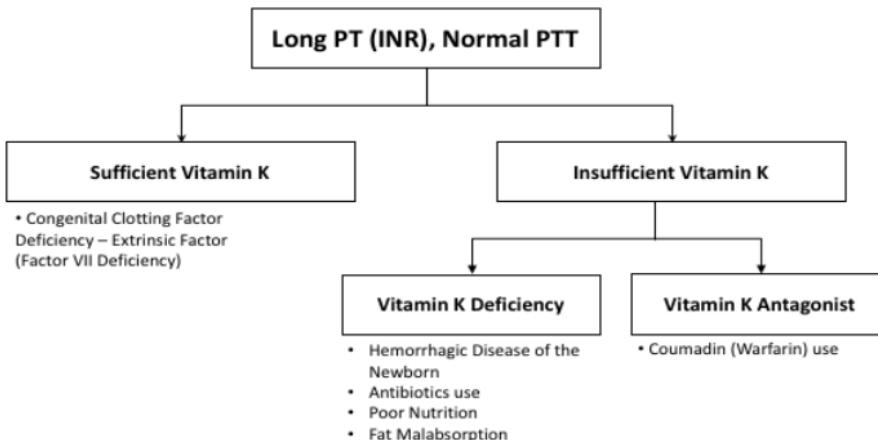
Notes:

- 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)

- Vitamin K deficiency *
- Vitamin K antagonist (Eg. Coumadin)

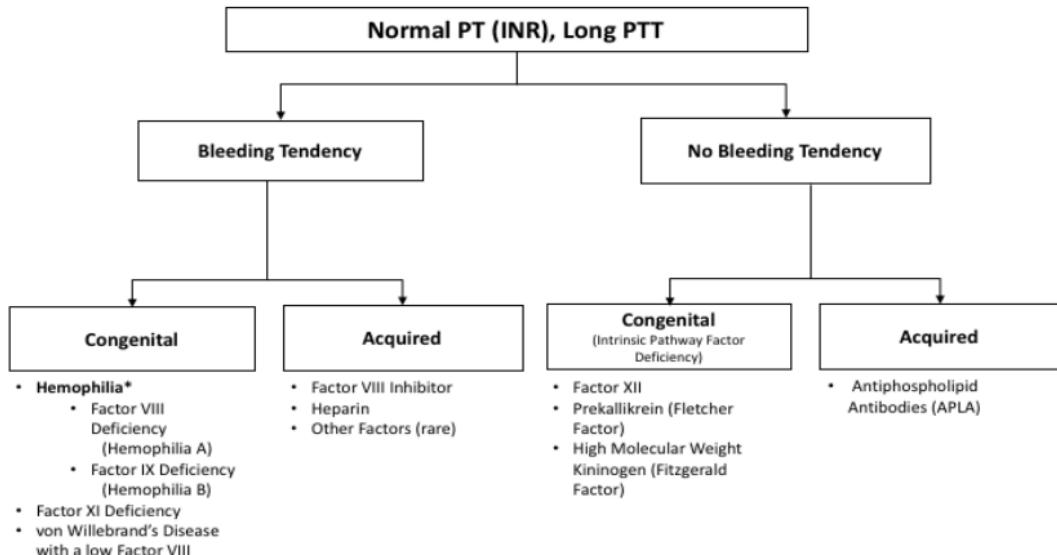
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Long PT (INR), Normal PTT



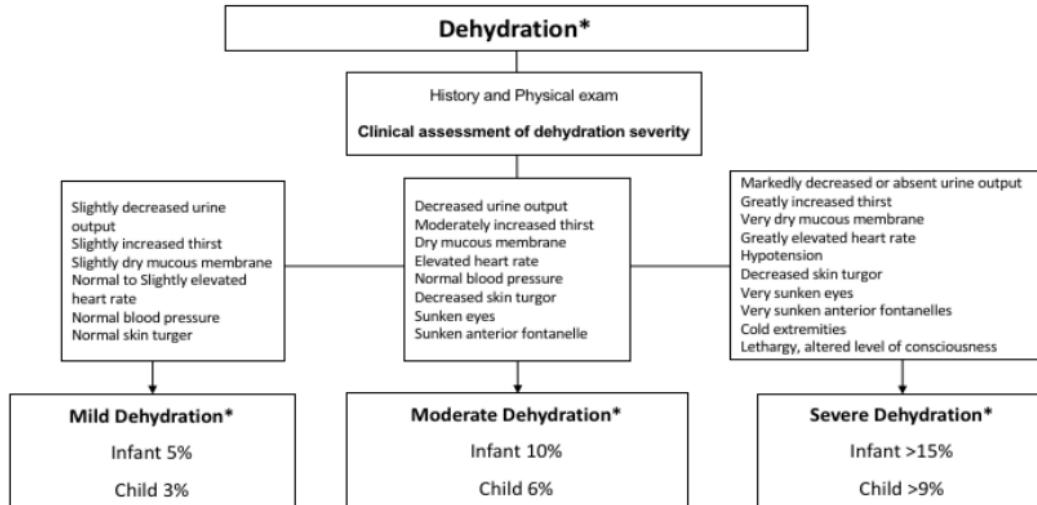
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Normal PT (INR), Long PTT



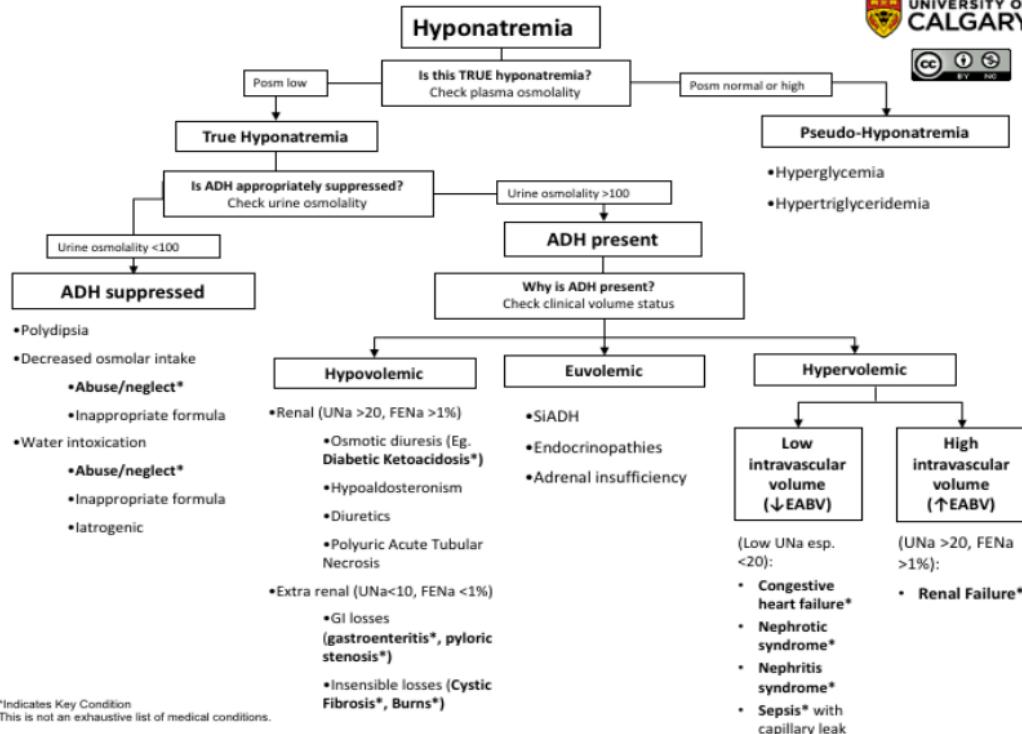
*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Dehydration

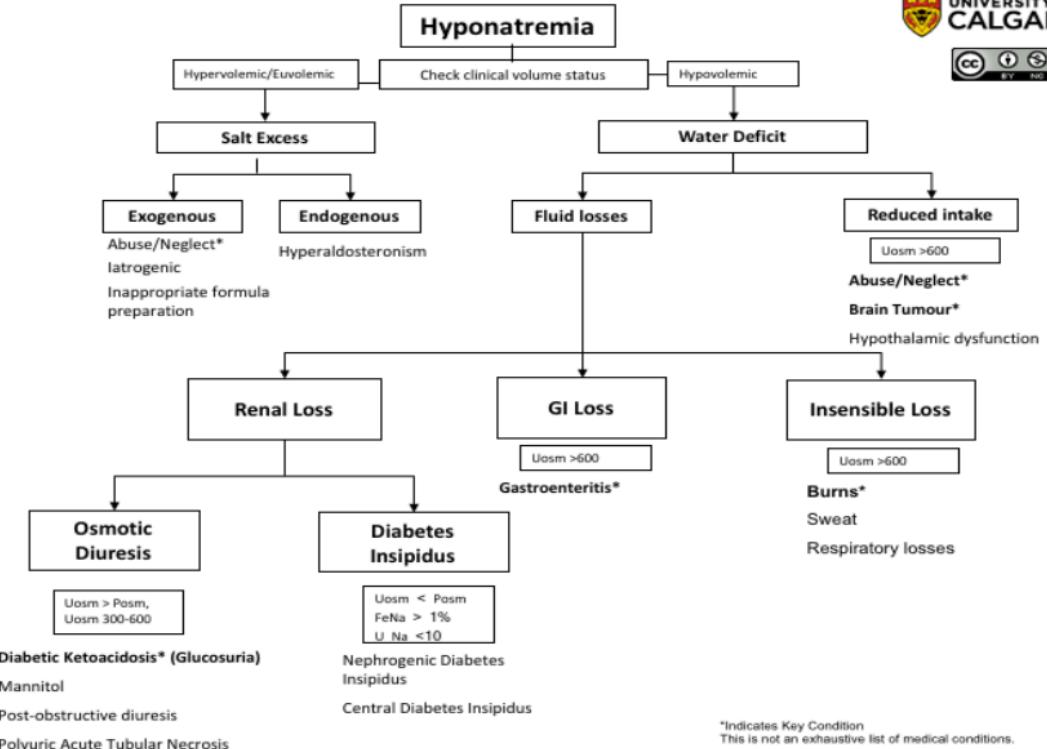


*Indicates Key Condition
This is not an exhaustive list of medical conditions.

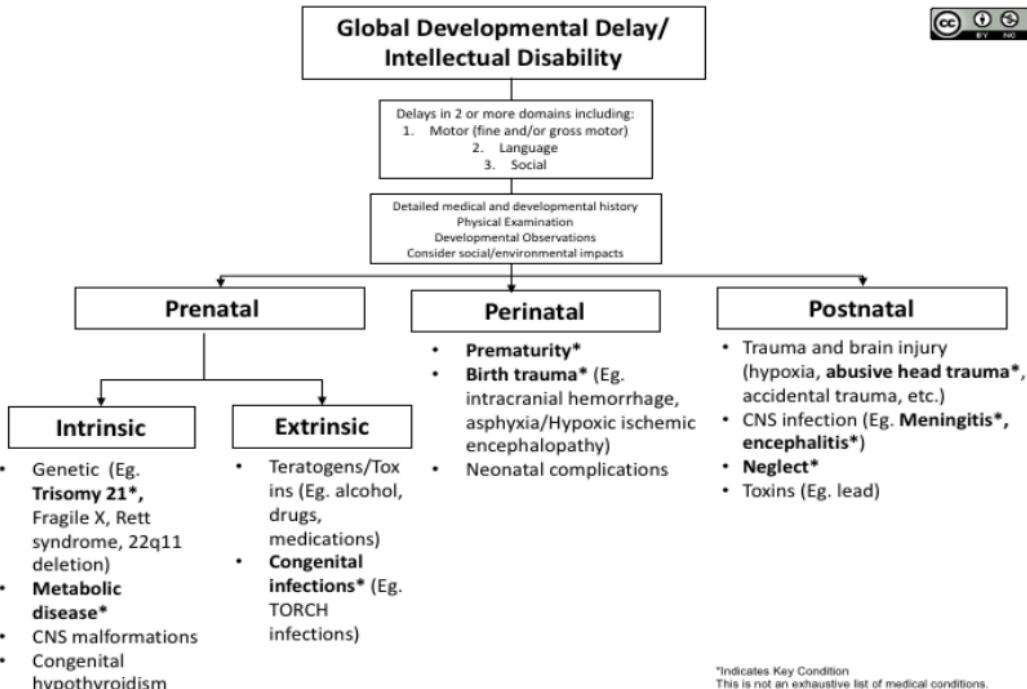
Hyponatremia



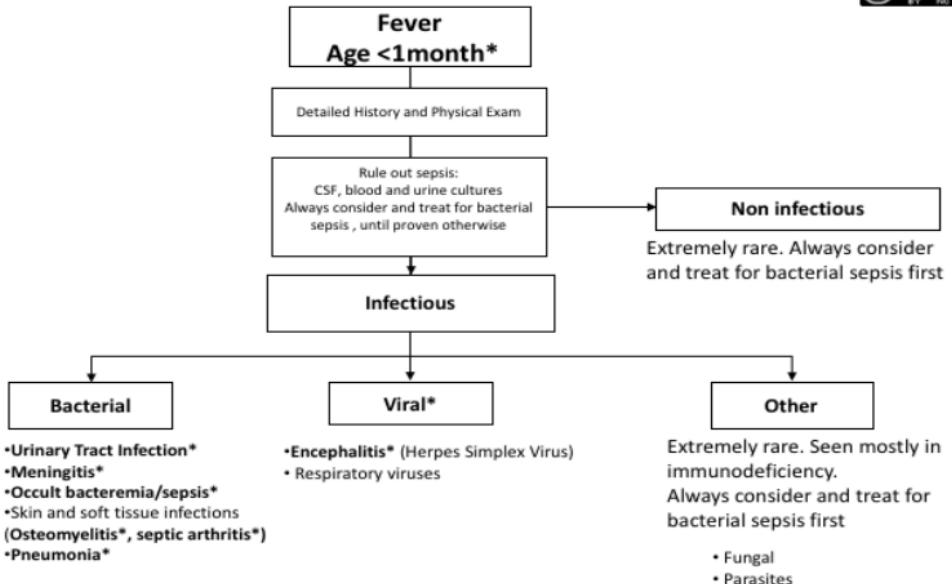
Hyponatremia



Global Developmental Delay/Intellectual Disability

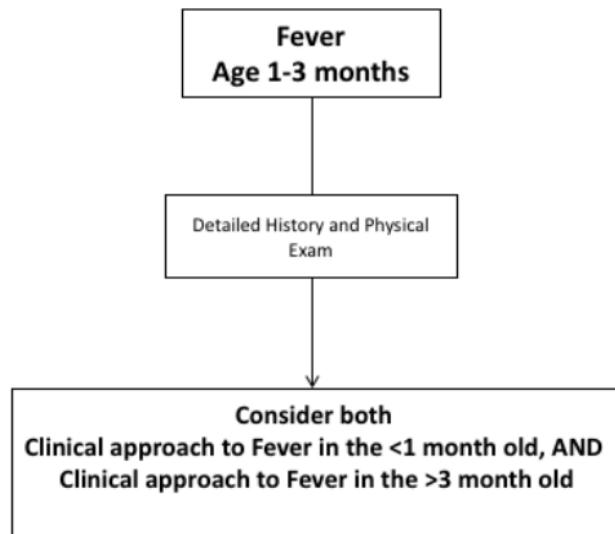


Fever (Age <1 Month)

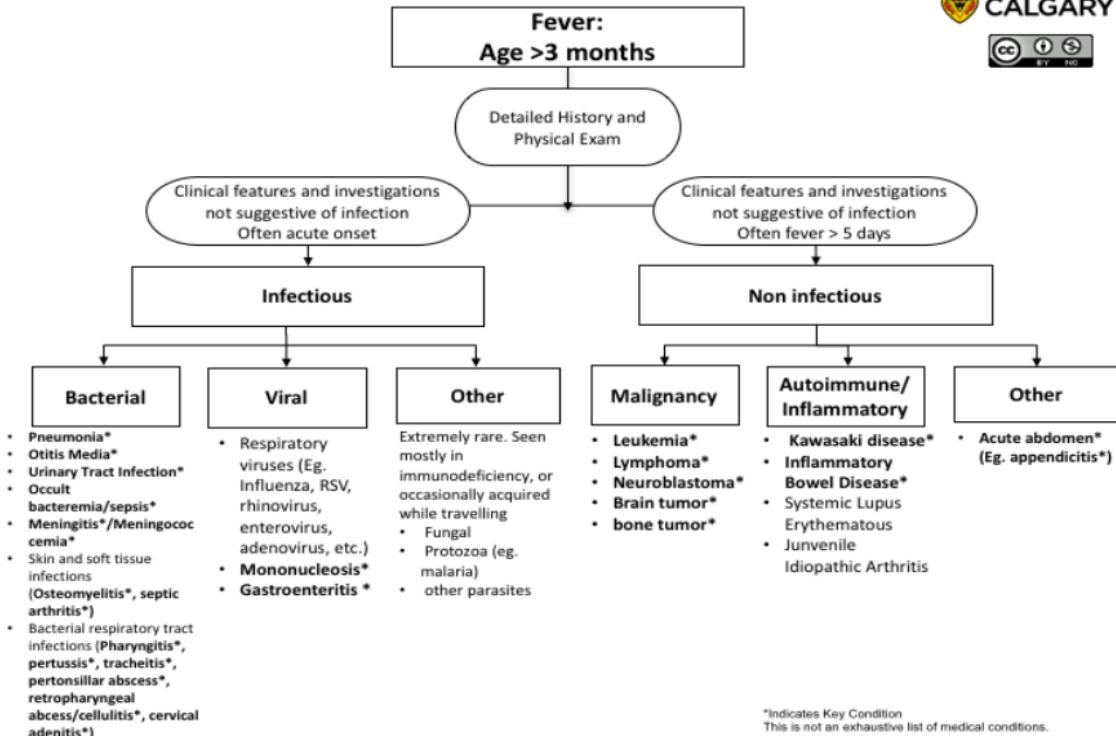


*Indicates Key Condition
This is not an exhaustive list of medical conditions.

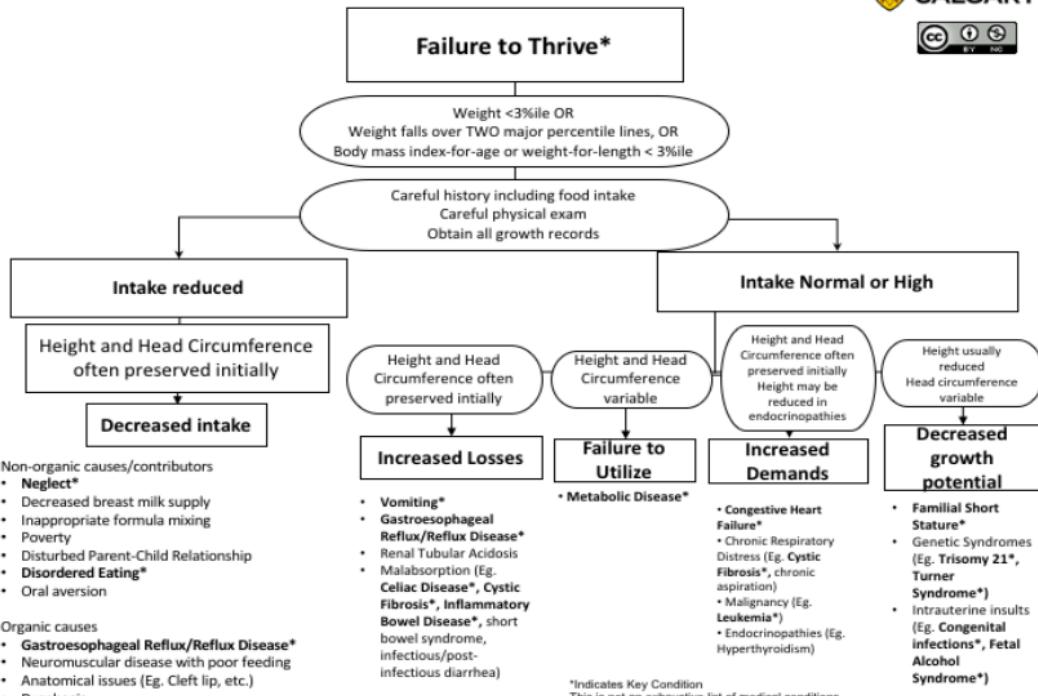
Fever (Age 1-3 Months)



Fever (Age >3 Months)



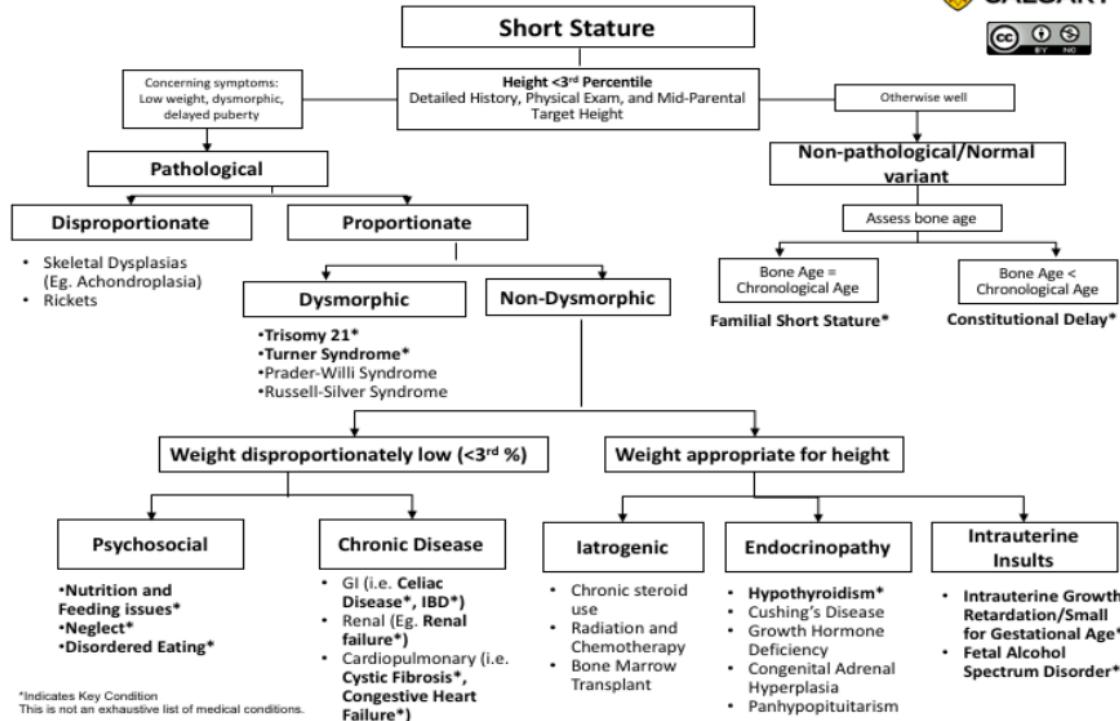
Failure To Thrive



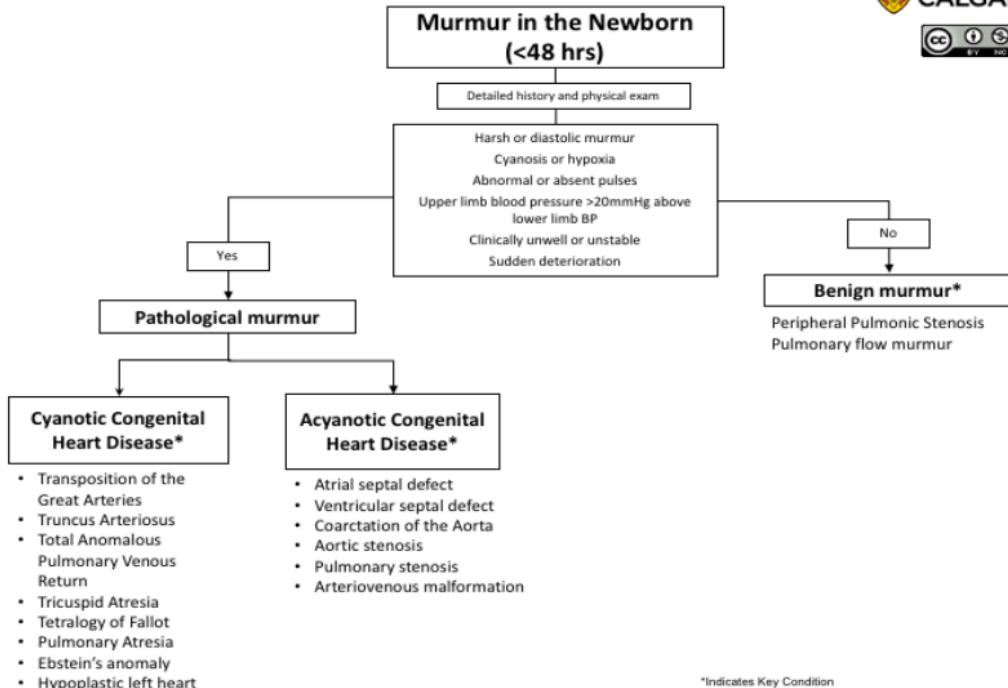
Short Stature



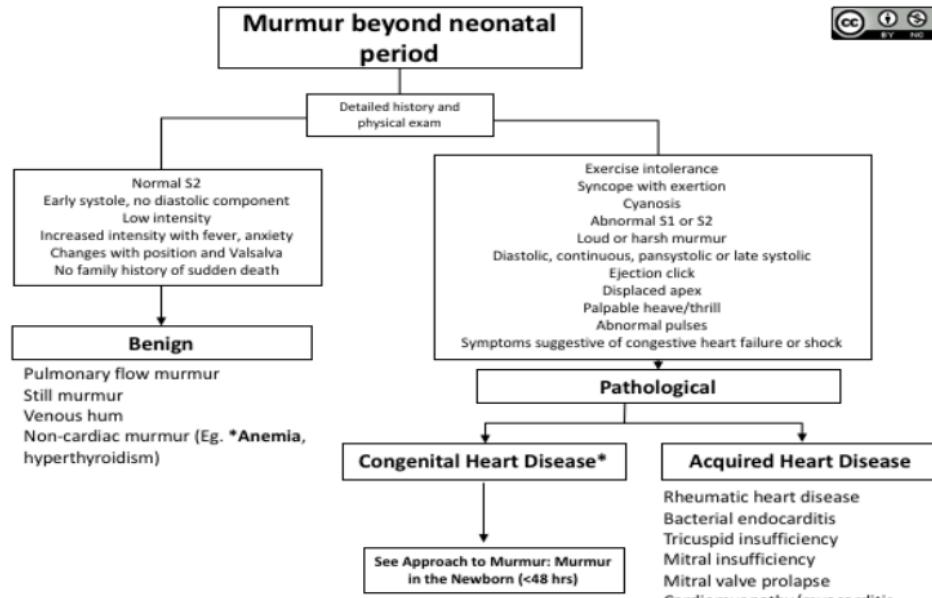
CC BY NC



Murmur In The Newborn (<48 Hours)

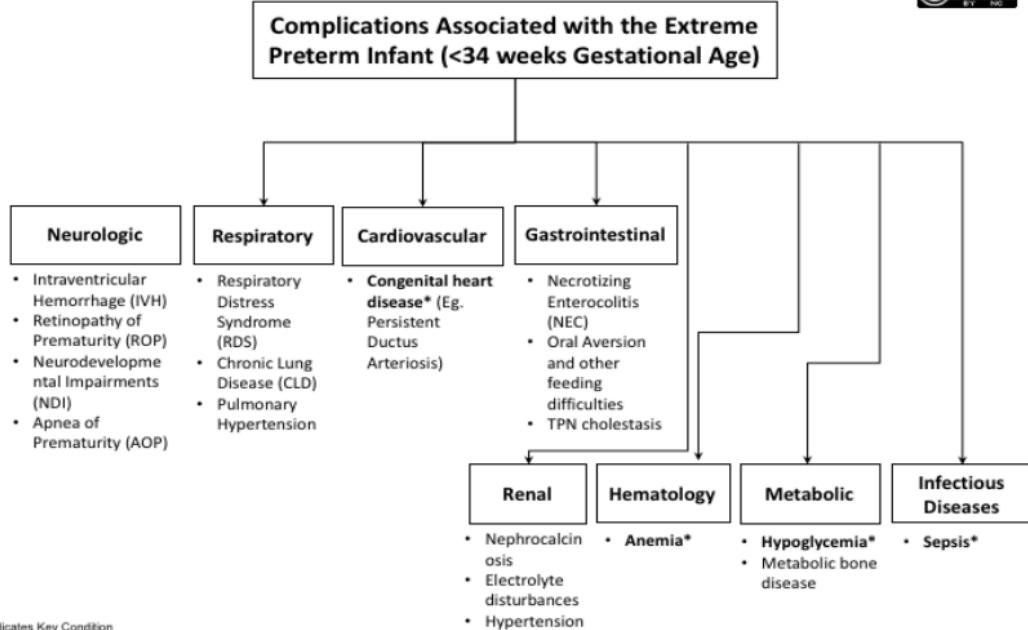


Murmur In The Newborn Beyond Neonatal Period

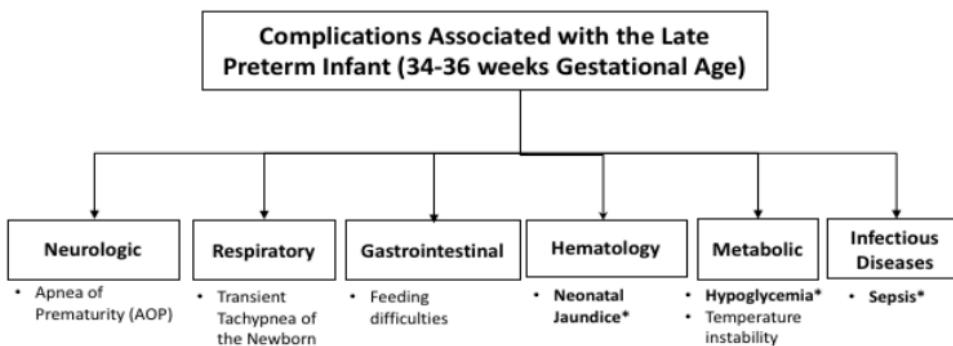


*Indicates Key Condition
This is not an exhaustive list of medical conditions.

Preterm Infant Complications (<34 Weeks)



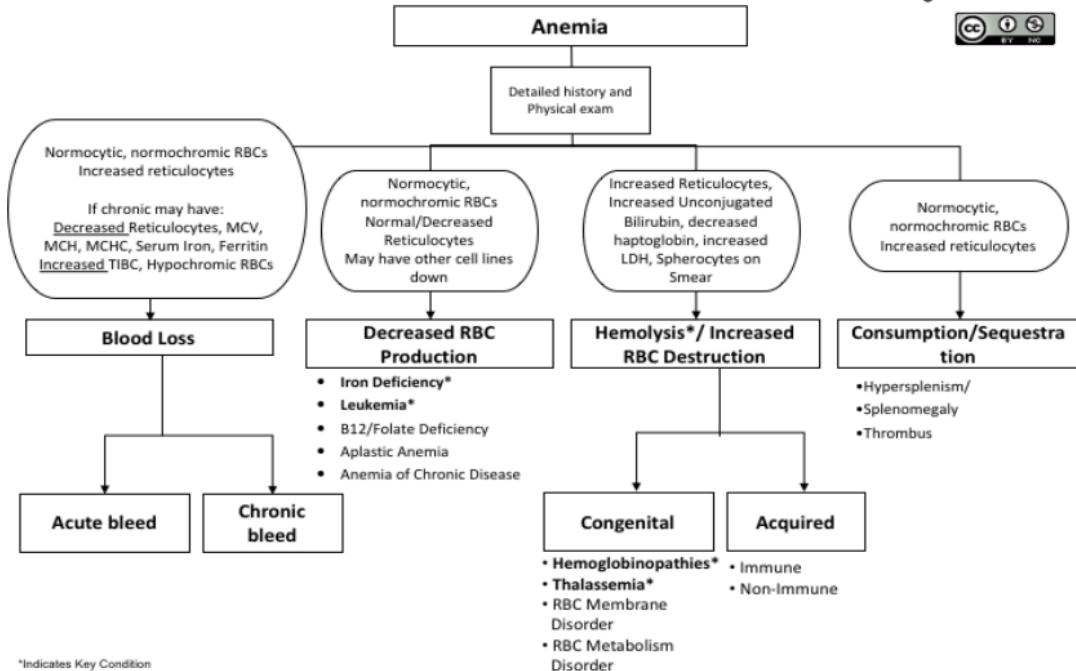
Preterm Infant Complications (34-36 Weeks)



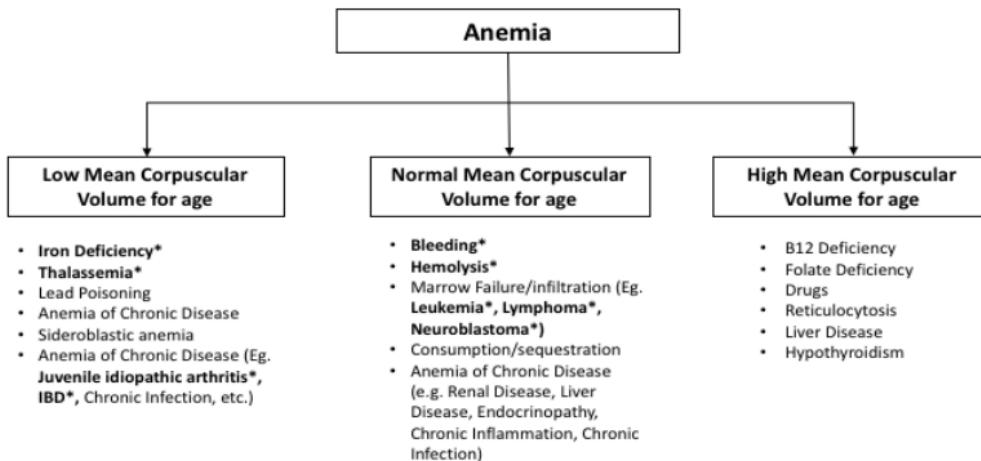
*Indicates Key Condition

This is not an exhaustive list of medical conditions.

Anemia By Mechanism



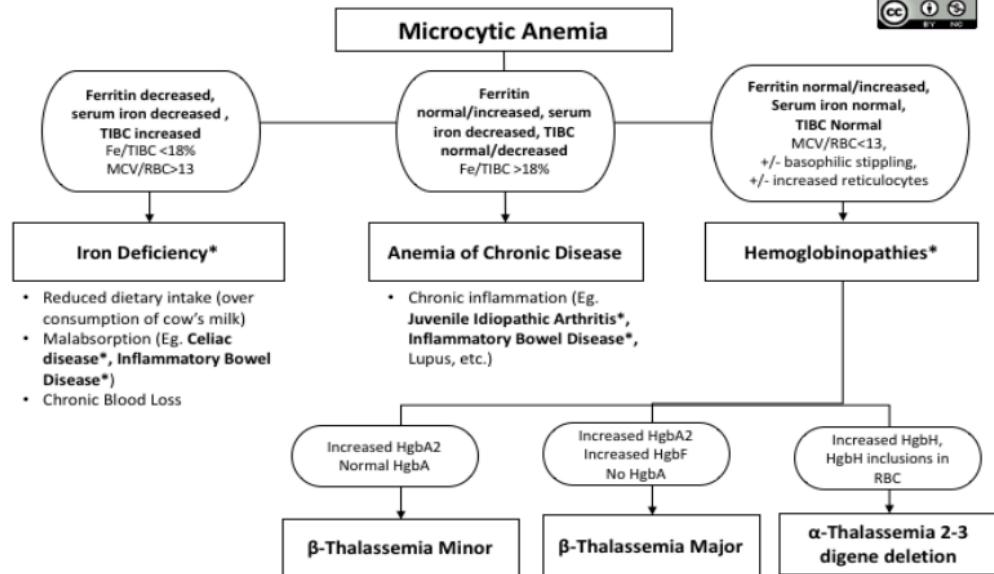
Anemia By MCV



*Indicates Key Condition

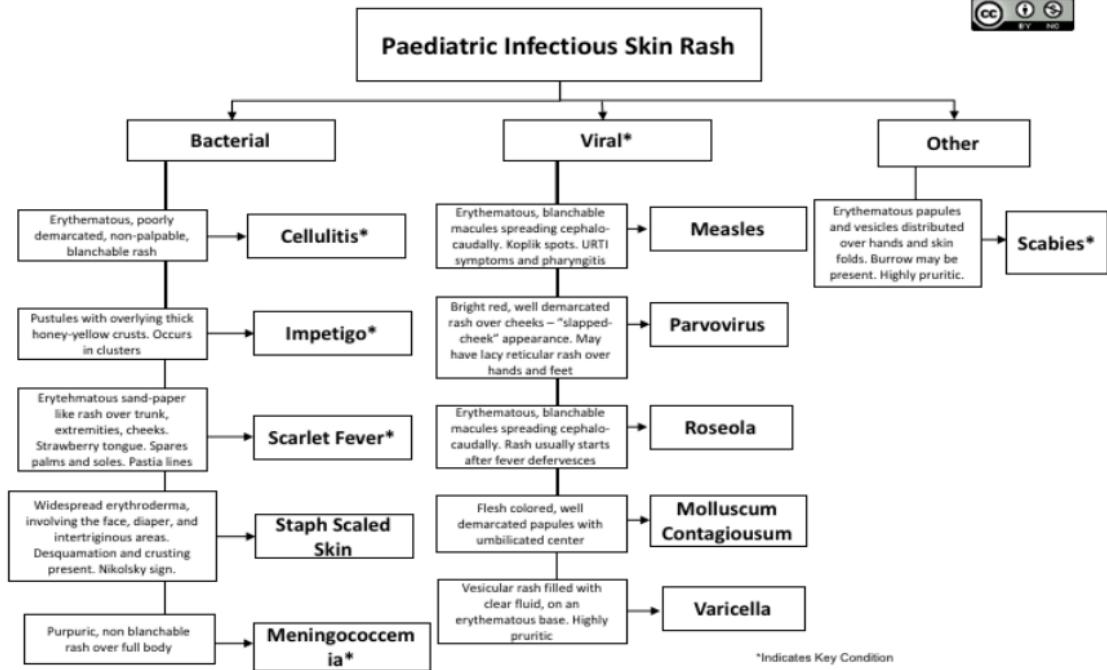
This is not an exhaustive list of medical conditions.

Microcytic Anemia



This is not an exhaustive list of medical conditions.

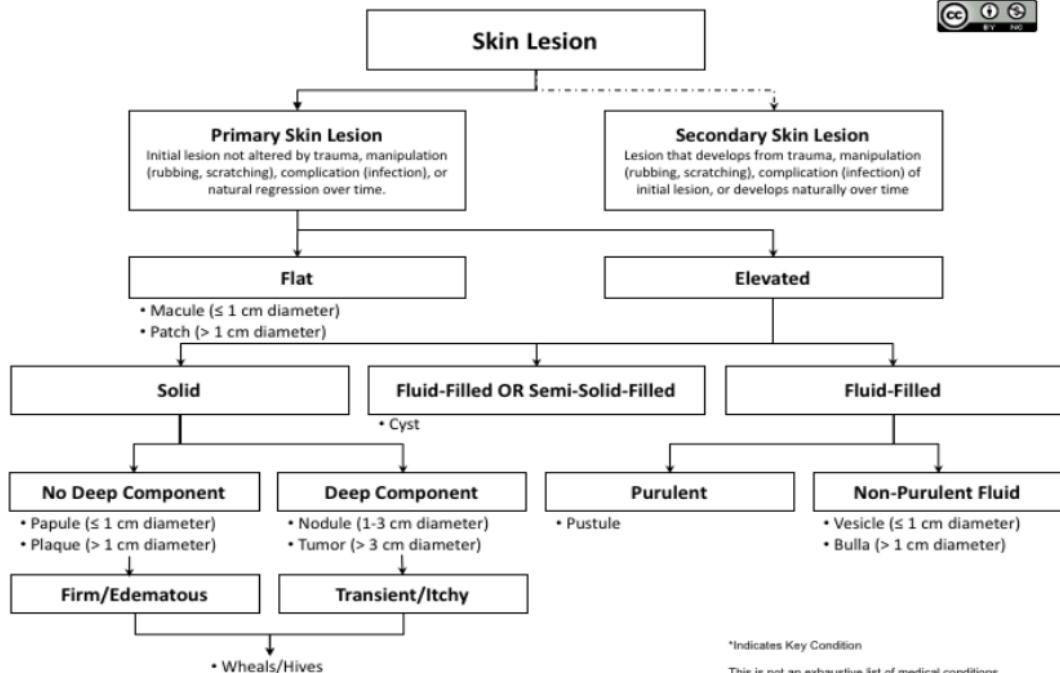
Paediatric Infectious Skin Rash



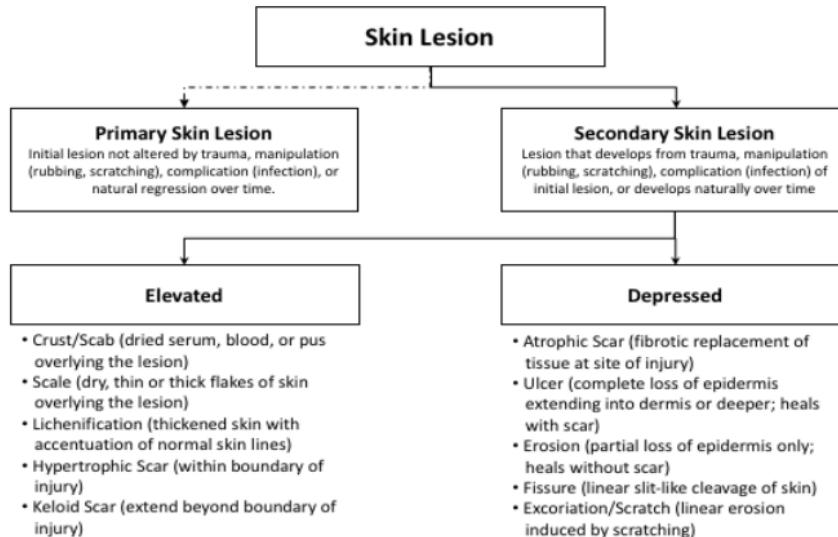
*Indicates Key Condition

This is not an exhaustive list of medical conditions.

Skin Lesion (Primary Skin)



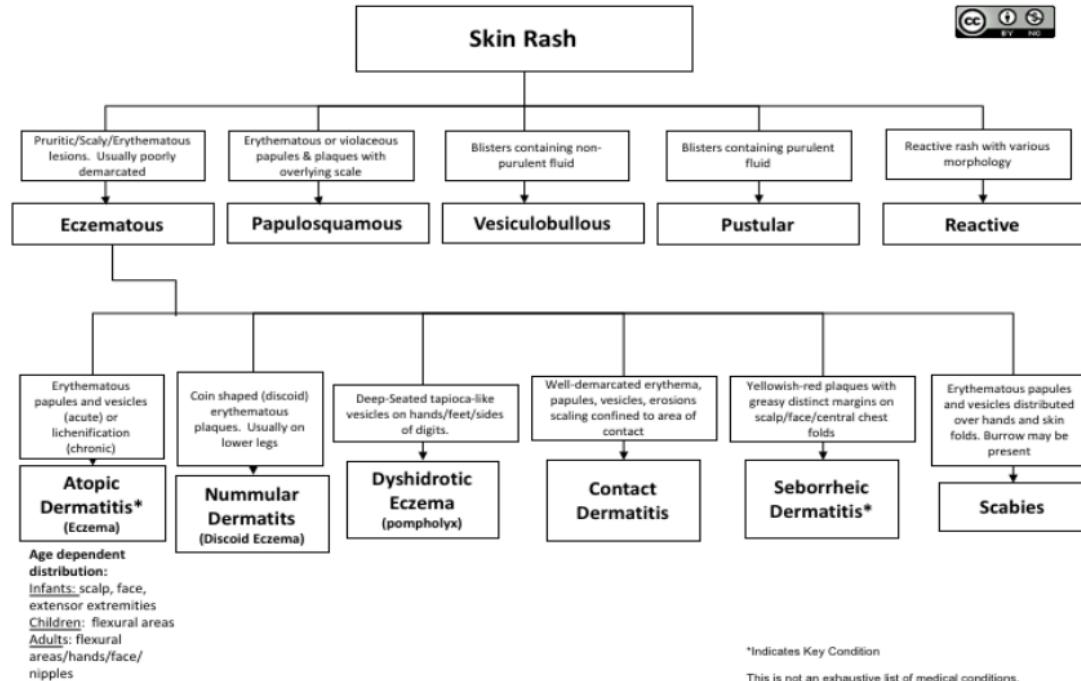
Skin Lesion (Secondary Skin)



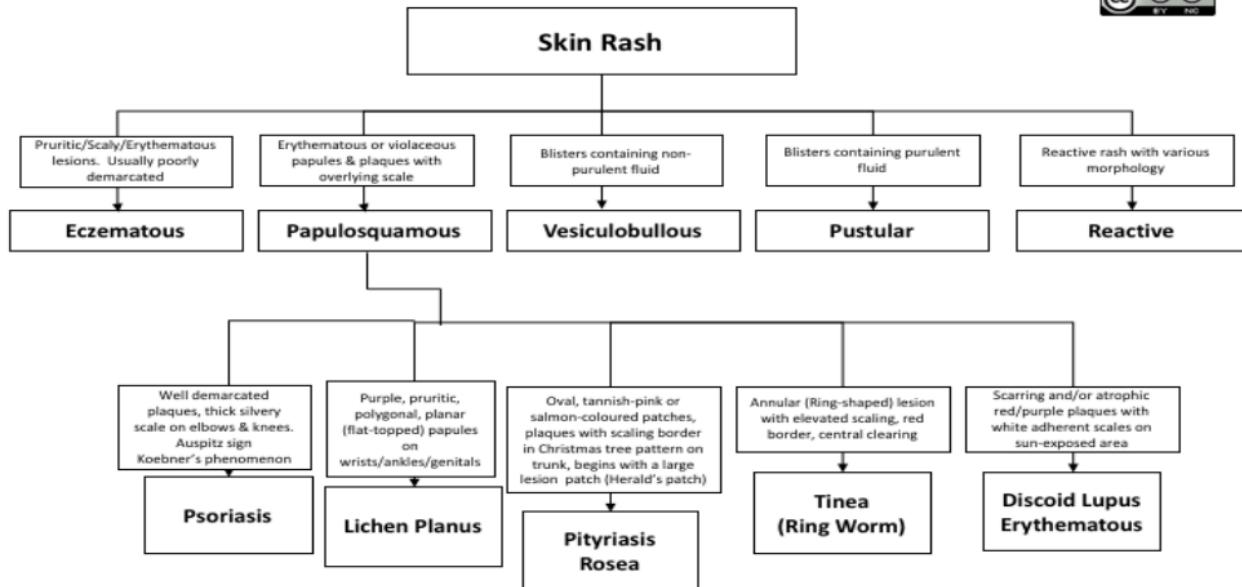
*Indicates Key Condition

This is not an exhaustive list of medical conditions.

Rash (Eczematous)



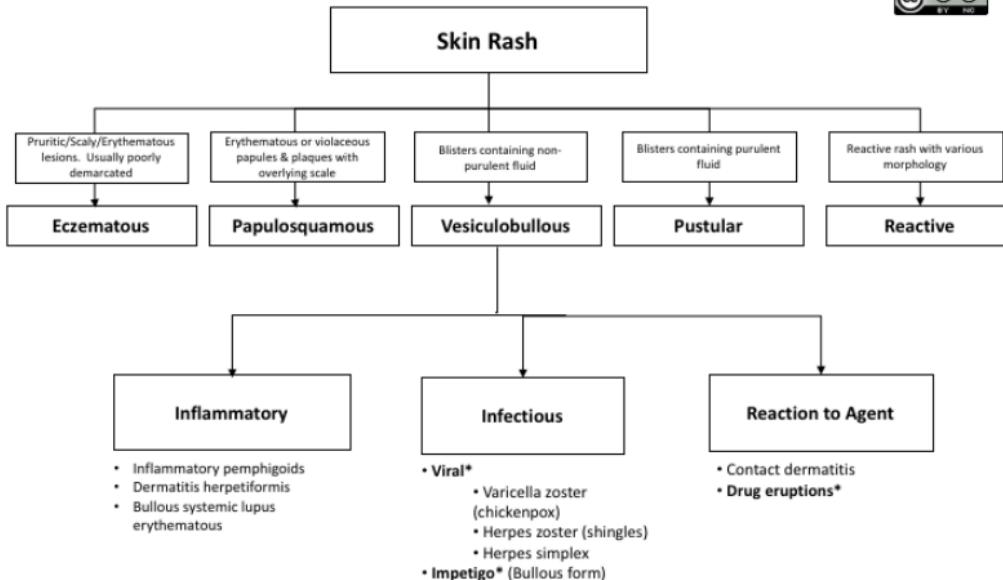
Rash (Papulosquamous)



*Indicates Key Condition

This is not an exhaustive list of medical conditions.

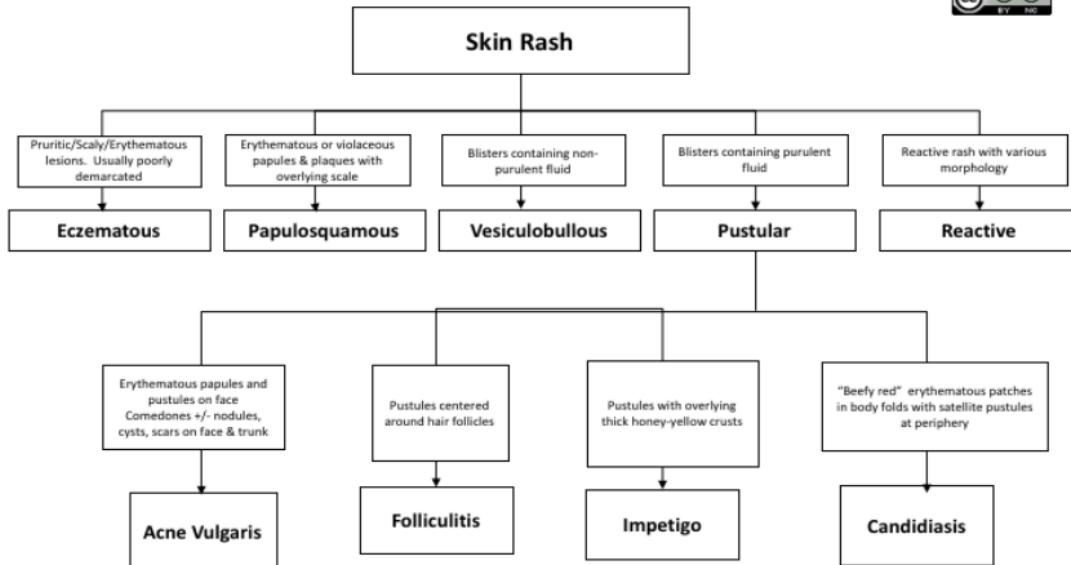
Rash (Vesiculobullous)



*Indicates Key Condition

This is not an exhaustive list of medical conditions.

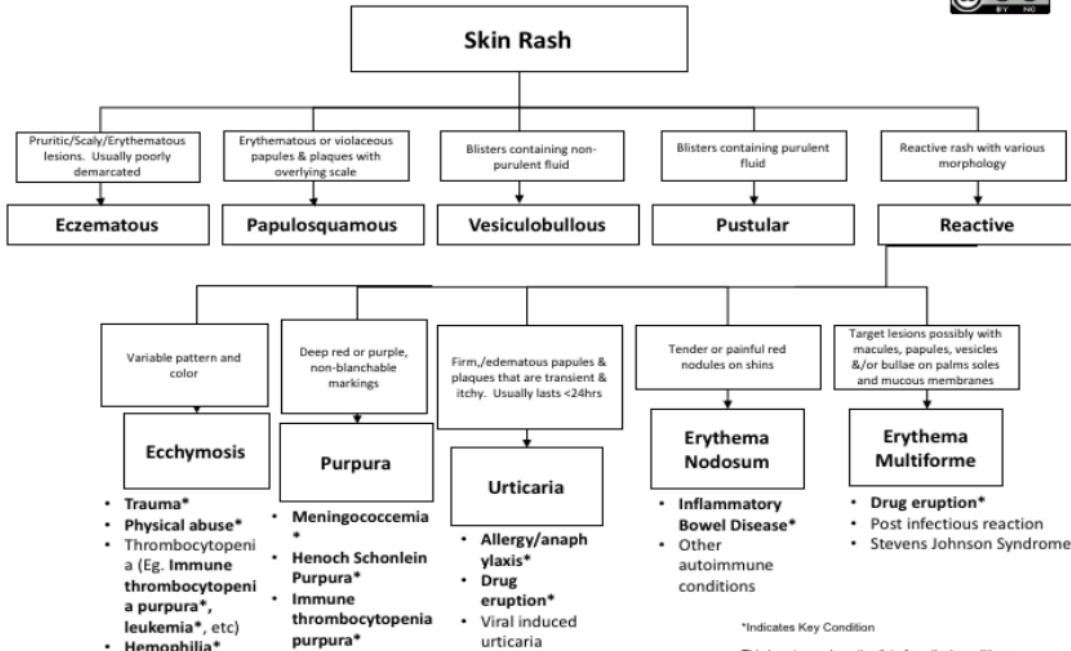
Rash (Pustular)



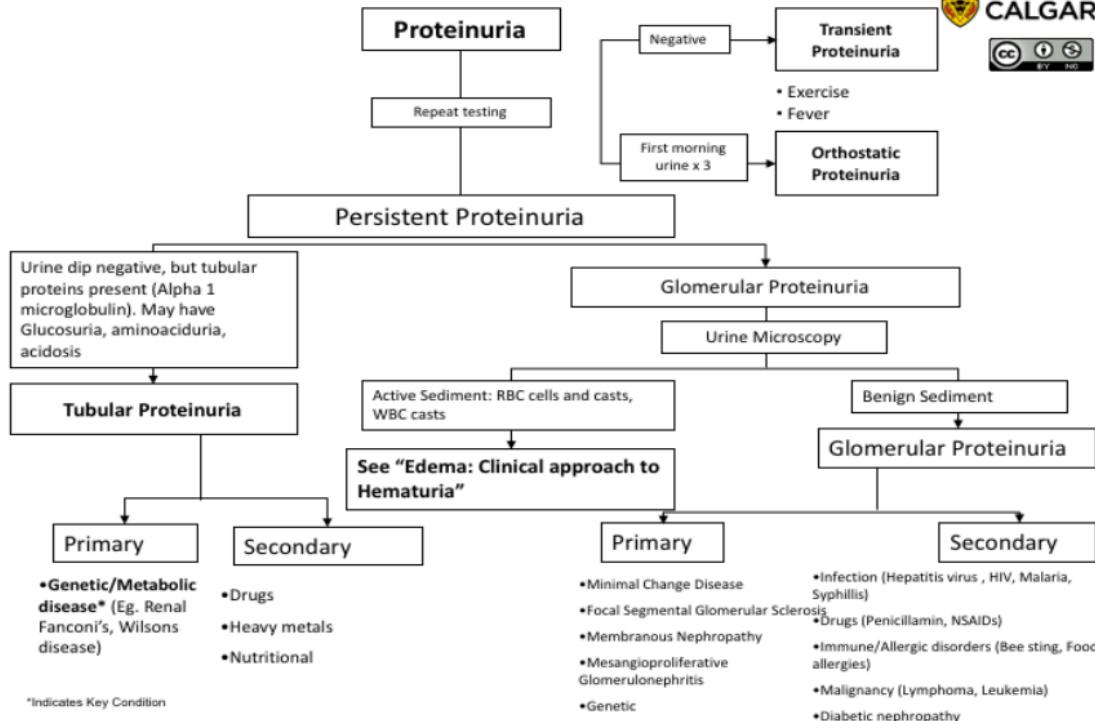
*Indicates Key Condition

This is not an exhaustive list of medical conditions.

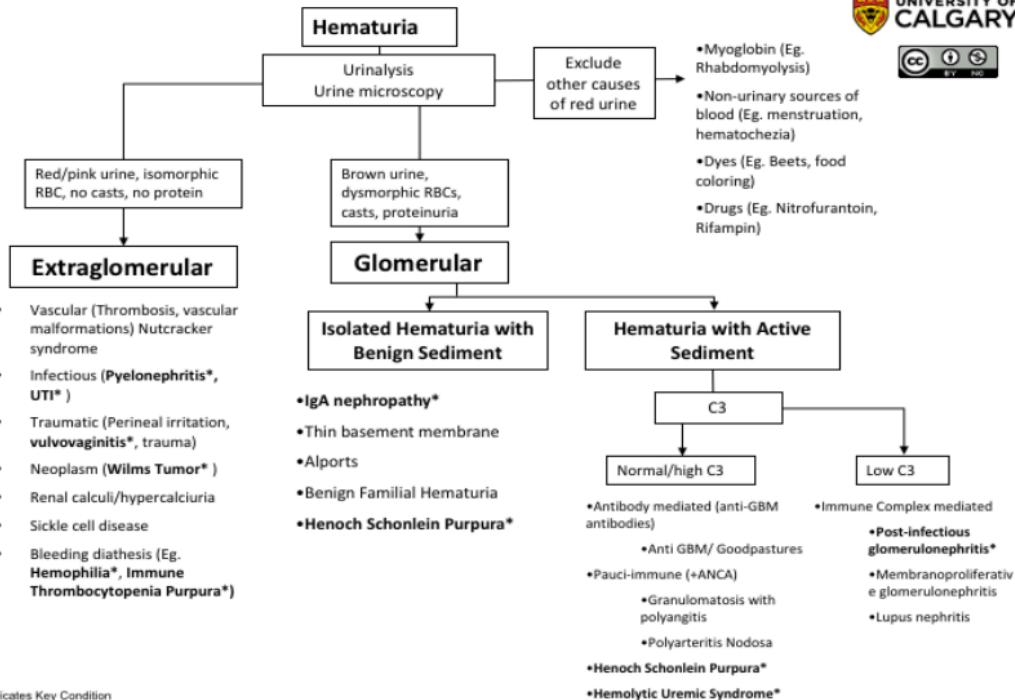
Rash (Reactive)



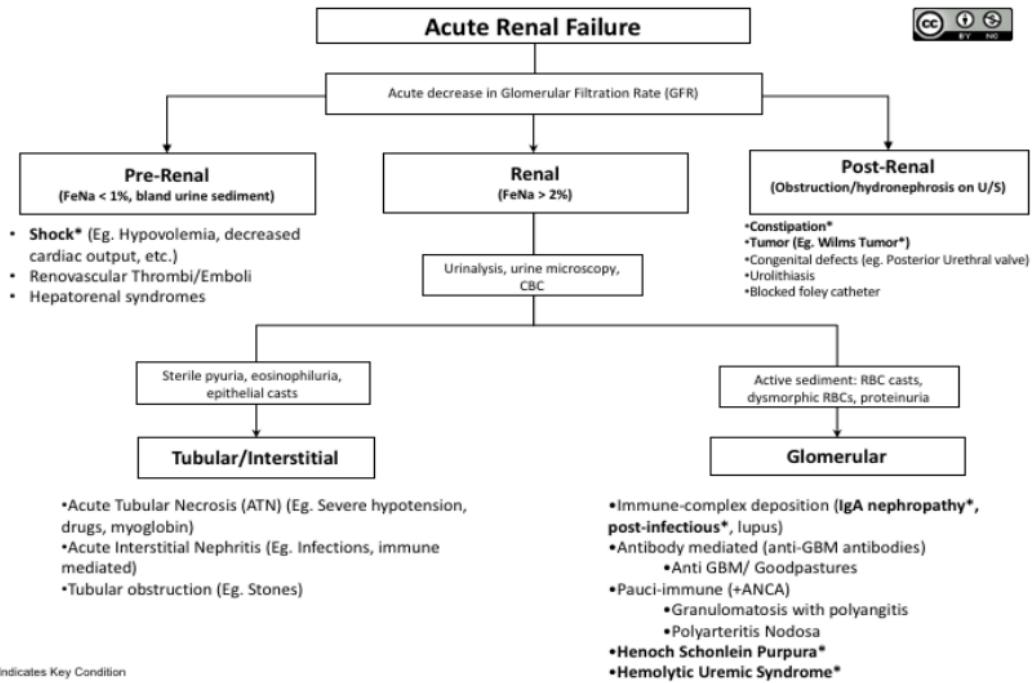
Proteinuria



Hematuria



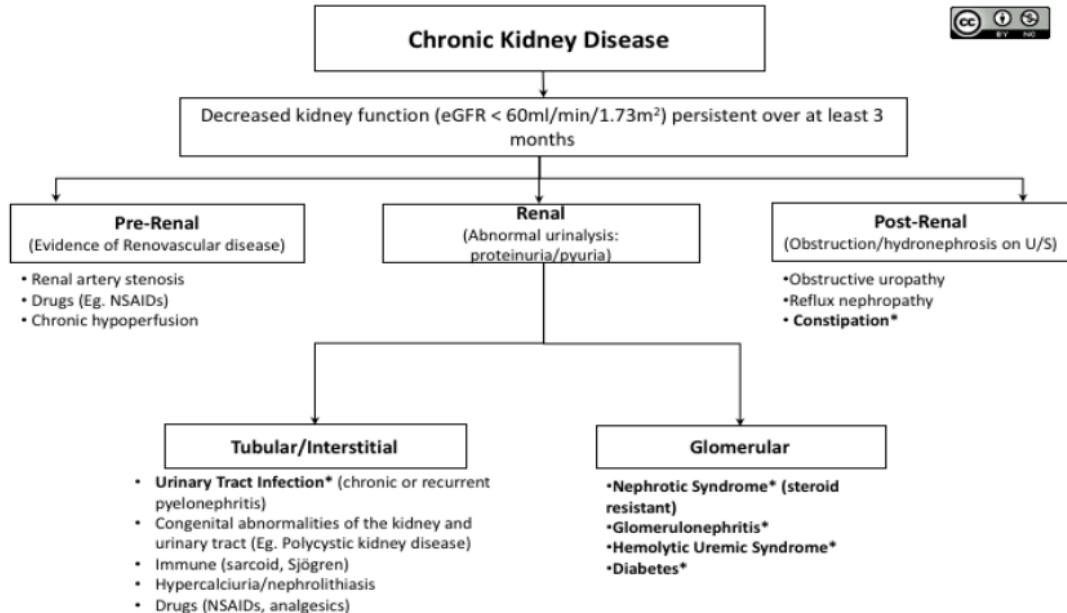
Acute Renal Failure



*Indicates Key Condition

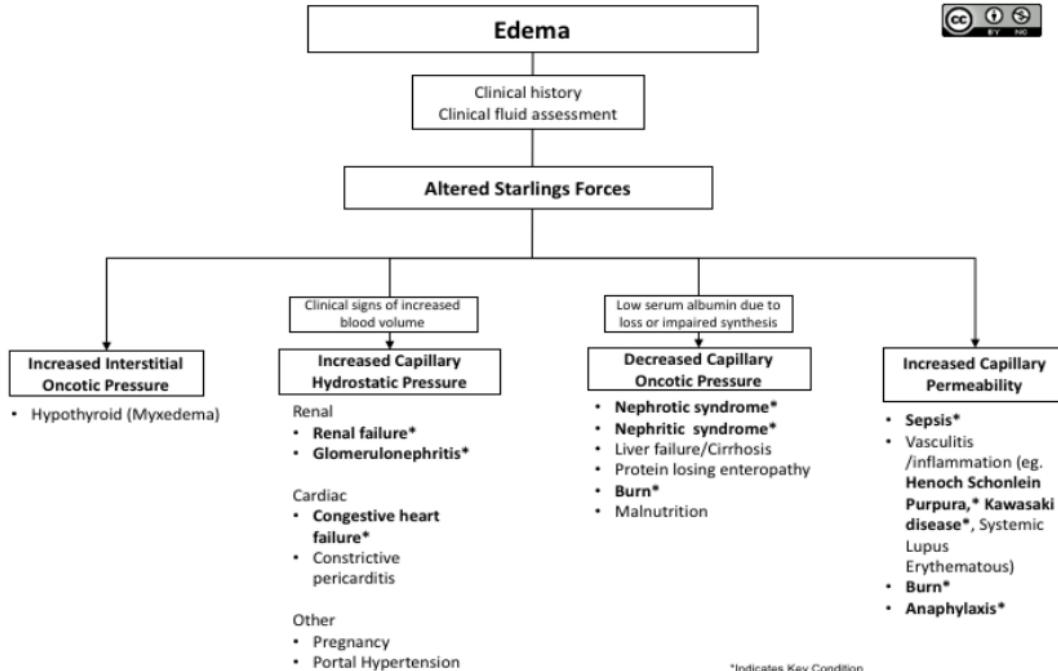
This is not an exhaustive list of medical conditions.

Chronic Kidney Disease

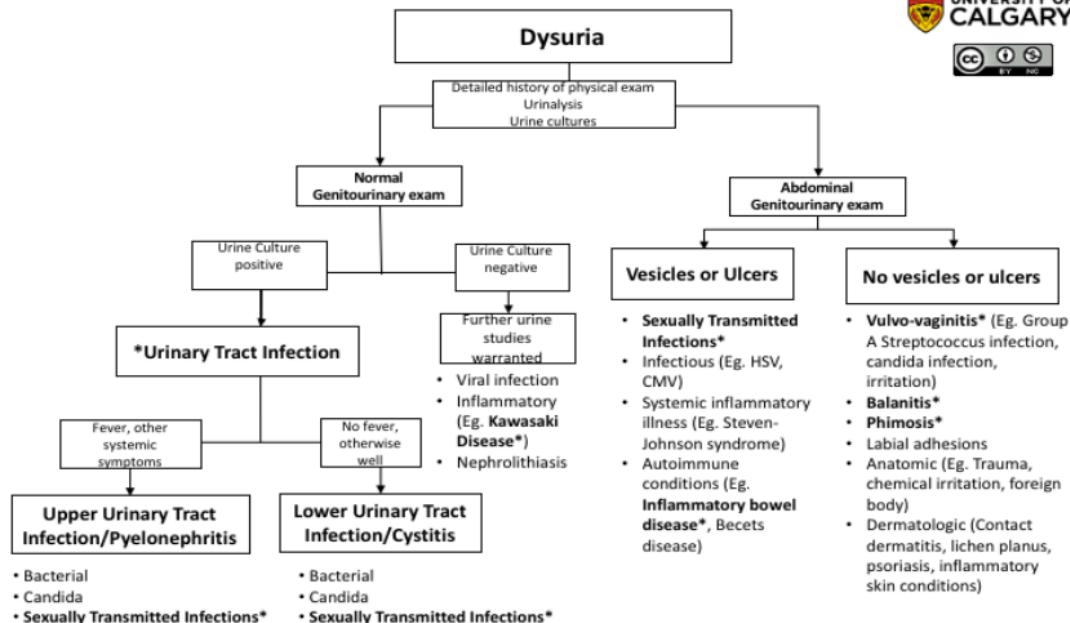


*Indicates Key Condition

This is not an exhaustive list of medical conditions.



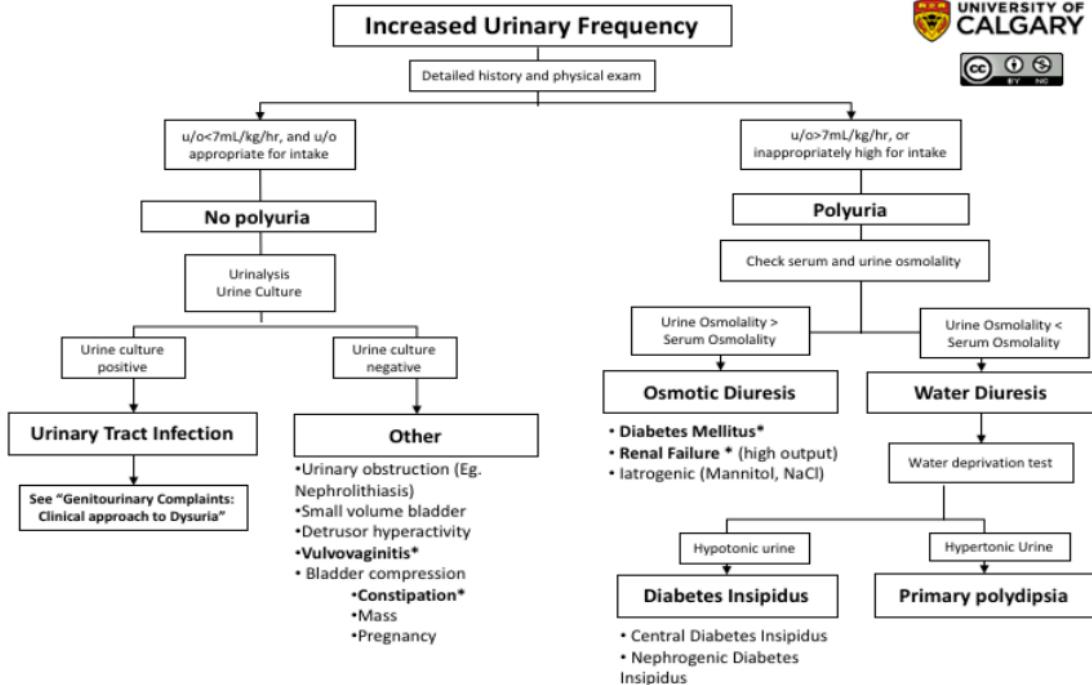
Dysuria



*Indicates Key Condition

This is not an exhaustive list of medical conditions.

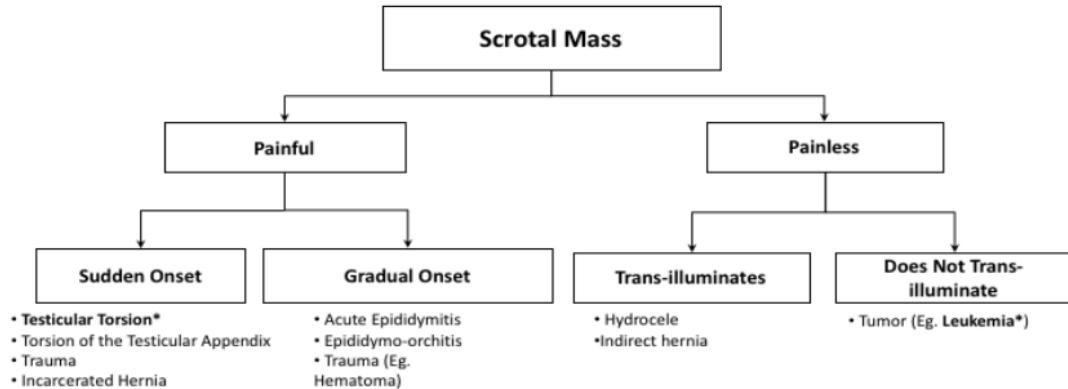
Increased Urinary Frequency



*Indicates Key Condition

This is not an exhaustive list of medical conditions.

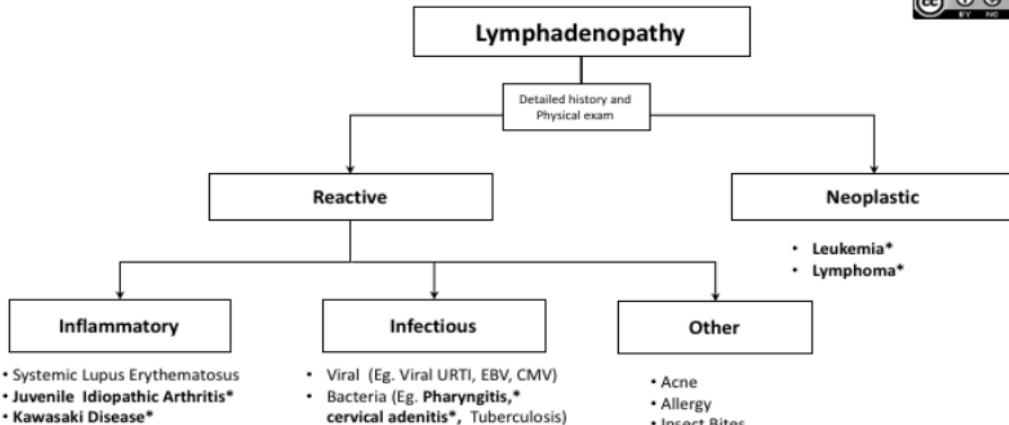
Scrotal Mass



*Indicates Key Condition

This is not an exhaustive list of medical conditions.

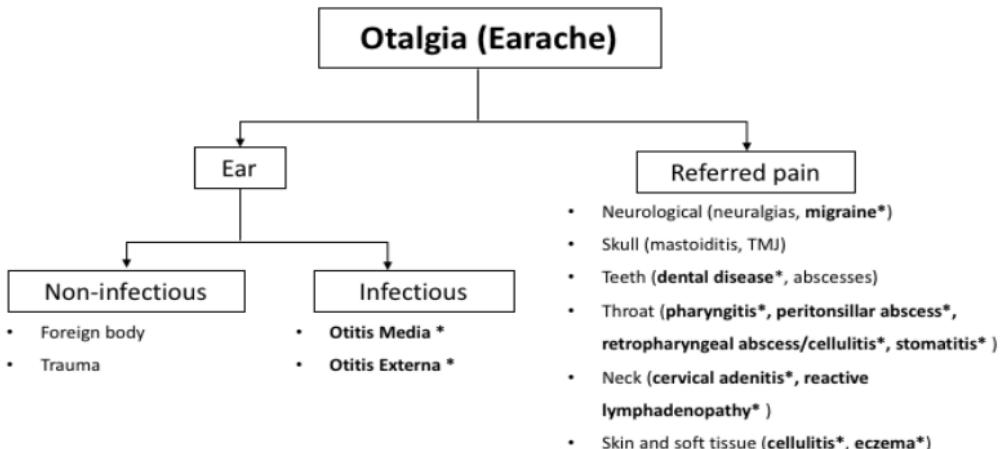
Lymphadenopathy



*Indicates Key Condition

This is not an exhaustive list of medical conditions.

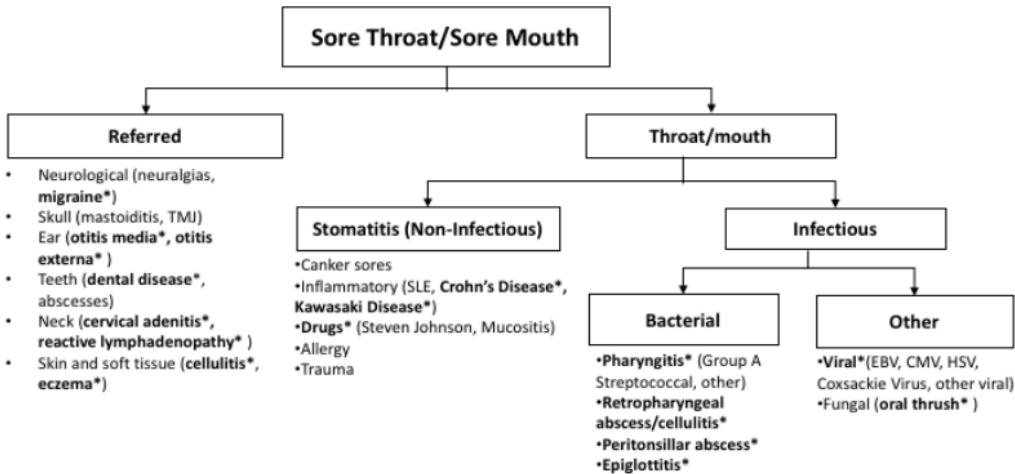
Otalgia (Earache)



*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

Fatigue.....	395
Acute Fever	396
Fever of Unknown Origin / Chronic Fever.	397
Hypothermia.....	398
Sore Throat / Rhinorrhea.....	399



Historical Editors

Dr. Heather Baxter

Dr. Harvey Rabin

Dr. Ian Wishart

Brittany Weaver

Geoff Lampard

Harinee Surendra

Kathy Truong

Student Editors

Adrianna Woolsey

Fatima Pirani

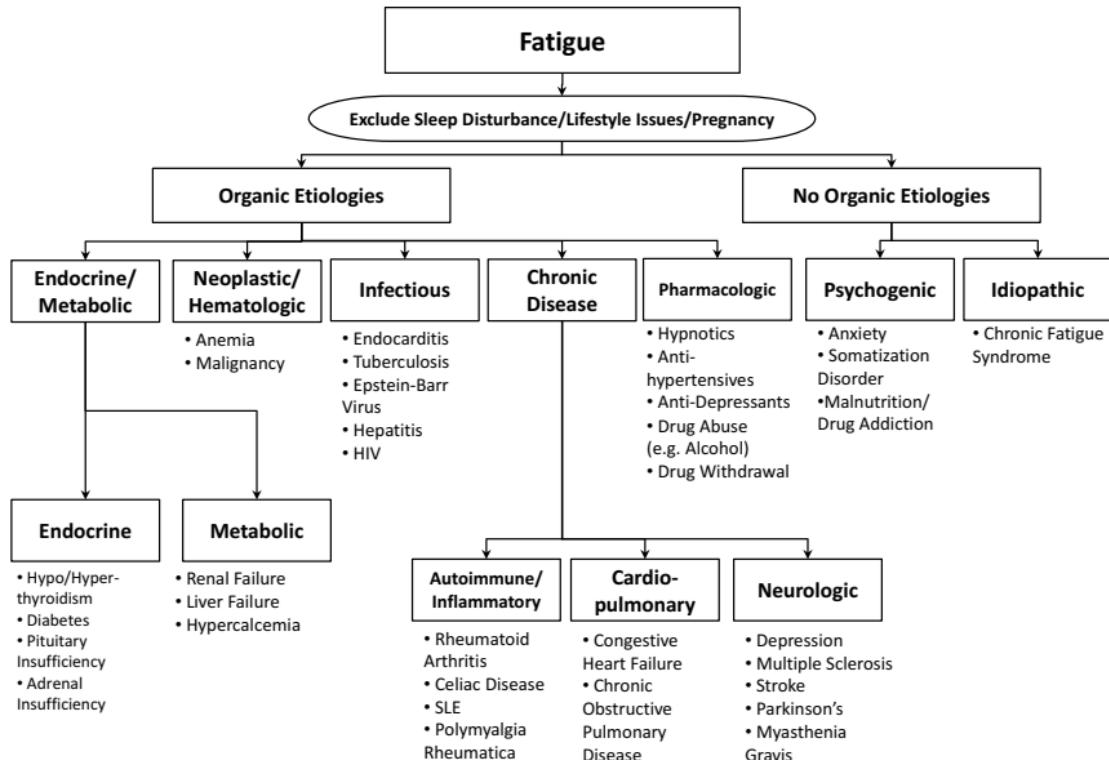
Senior Editor

Dr. Monique Munro

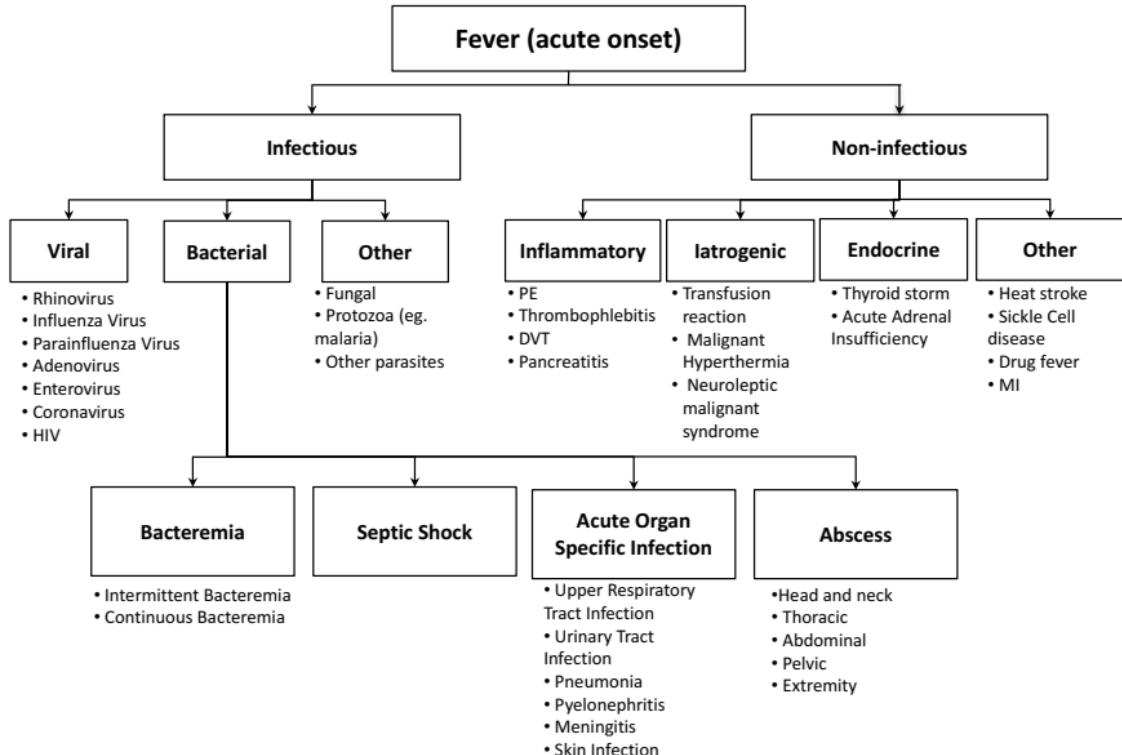
Faculty Editor

Dr. Sylvain Coderre

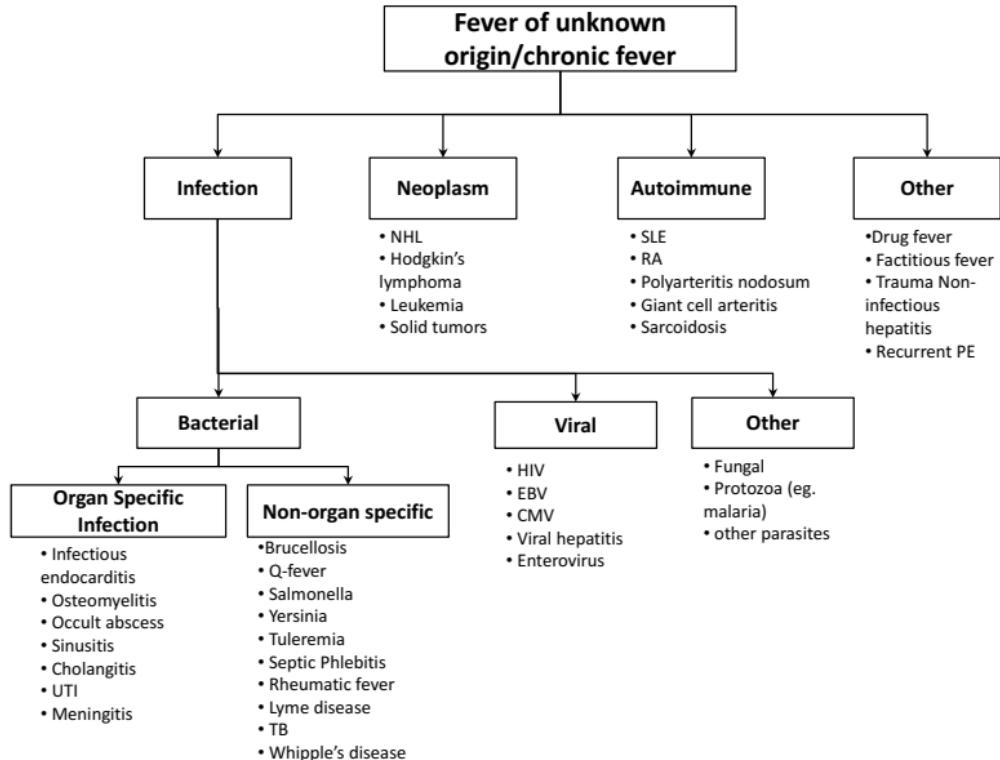
Fatigue



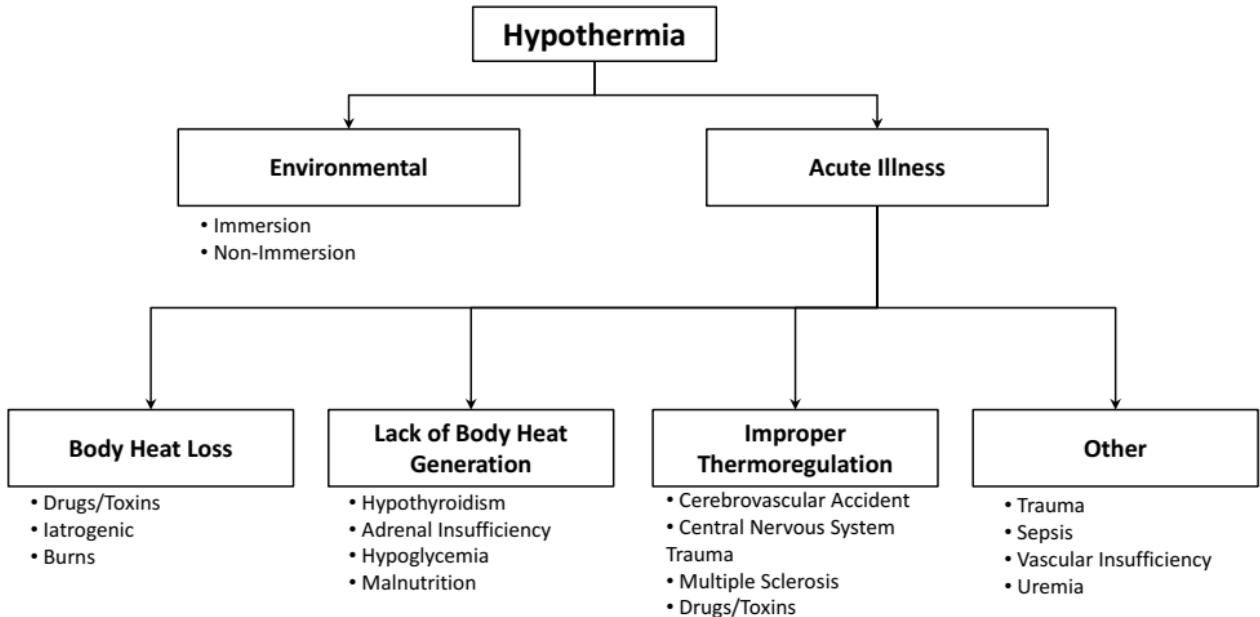
Acute Fever



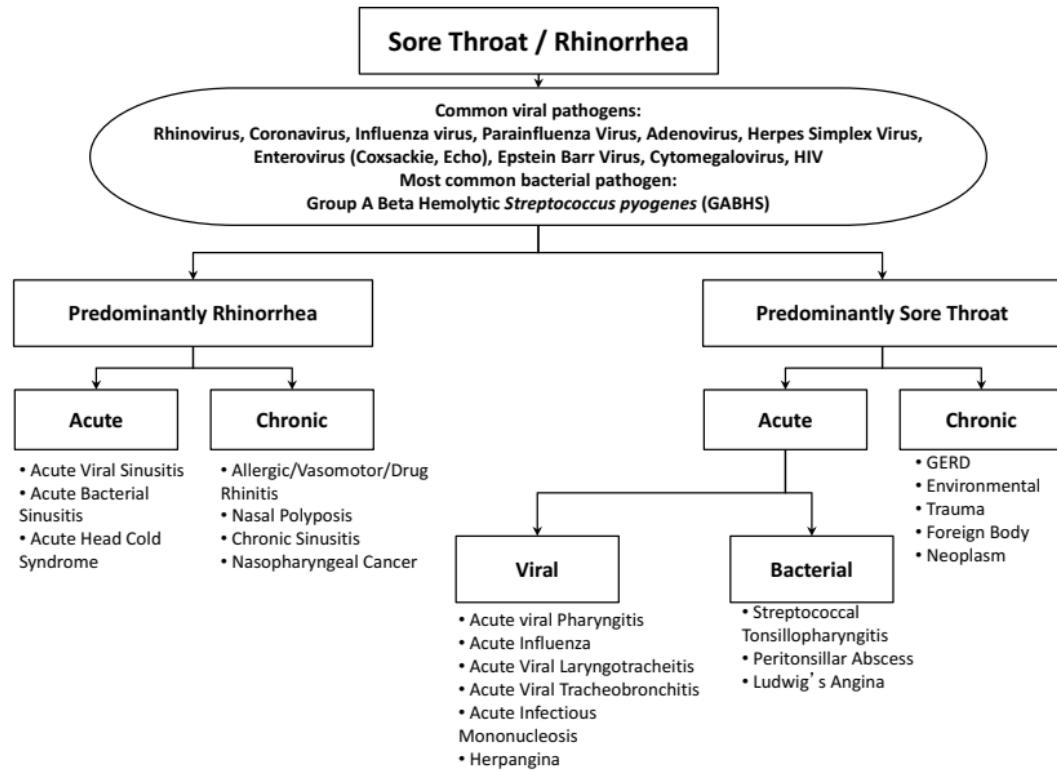
Fever of Unknown Origin / Chronic Fever



Hypothermia



Sore Throat / Rhinorrhea



Historical Executive Student Editors

2016-2017	Joshua Nicholas, Peter Rogers & Scott Belyea
2015-2016	Jared McCormick & Hai (Carlos) Yu
2014-2015	Jared McCormick & Hai (Carlos) Yu
2013-2014	Yang (Steven) Liu & Brian Glezerson
2012-2013	Neha Sarna & Sarah Sy
2011-2012	Katrina Kelly & Harinee Surendra
2010-2011	Jonathan Dykeman & Kathy Truong
2009-2010	Lucas Gursky & Ting Li
2008-2009	Linnea Duke & Mustafa Hirji
2007-2008	Brett Poulin (<i>Founder of the Calgary Black Book Project</i>)

Scheme Creators

Students

M. Abouassaly
A. Aristarkhova
M. Broniewska
P. Chen
M. Chow
R. Cormack
P. Davis
L. Duke
J. Evinu
A. Geist
F. Grgis
A. Hicks
J. Hodges
G. Ibrahim
C. Johannes
D. Joo
S. Khan
L. Kimmet
M. Klassen
J. Lawrence
J. Laxton
K. Leifso
J. McCormick

Faculty

V. Lekhi
S. Lipkewich
C. Lu
L. Luft
A. Lys
D. McDougall
B. McLane
J. McMann
J. Nadeau
B. Poulin
V. Prajapati
N. Ramji
K. Sahi
R. Schachar
P. Schneider
R. Simms
A. Skinn
U. Unligil
C. Verenka
H. Waymouth
P. Zareba
K. Swicker
V. David

K. Burak
D. Burback
K. Busche
S. Casha
M. Clark
S. Coderre
M. Doran
P. Federico
K. Fraser
S. Furtado
N. Hagen
J. Huang
N. Jette
A. Jones
G. Klein
S. Kraft
A. Mahalingham
H. Mandin
J. Mannerfeldt
K. McLaughlin
D. Miller
L. Parsons
D. Patry

A. Peets
G. Pineo
M-C. Poon
H. Rabin
T. Remington
B. Ruether
A. Smithee
O. Suchowersky
P. Veale
B. Walley
L. Welikovitch
R.C. Woodman
L. Zanussi

Missing a credit?

If you are the creator of a scheme currently used in the Blackbook and believe you have not been credited appropriately, please contact us at

blackbk@ucalgary.ca

Abbreviations

AAA	Abdominal Aortic Aneurysm	DKA	Diabetic Ketoacidosis
ACE	Angiotensin-Converting Enzyme	DRE	Digital Rectal Exam
ACTH	Adrenocorticotrophic Hormone	DVT	Deep Vein Thrombosis
ADPKD	Autosomal Dominant Polycystic Kidney Disease	EABV	Effective Arterial Blood Volume
ADH	Antidiuretic Hormone	ECF	Extracellular Fluid
AIN	Acute Interstitial Nephritis	ENaC	Epithelial Sodium Channel
ALS	Amyotrophic Lateral Sclerosis	FEV₁	Forced Expiratory Volume in One Second
ARB	Angiotensin Receptor Blocker	FJN	Familial Juvenile Nephronophthisis
ARF	Acute Renal Failure	FSGS	Focal Segmental Glomerulosclerosis
ARPKD	Autosomal Recessive Polycystic Kidney Disease	FSH	Follicle Stimulating Hormone
BPH	Benign Prostatic Hypertrophy	FVC	Forced Vital Capacity
CCD	Cortical Collecting Duct	GBM	Glomerular Basement Membrane
CHF	Congestive Heart Failure	GERD	Gastrointestinal Esophageal Reflux Disease
CIN	Chronic Interstitial Nephritis	GFR	Glomerular Filtration Rate
CLL	Chronic Lymphocytic Leukemia	GHRH	Growth Hormone Releasing Hormone
CNS	Central Nervous System	GH	Growth Hormone
COPD	Chronic Obstructive Pulmonary Disease	GI	Gastrointestinal
CRF	Chronic Renal Failure	GN	Glomerulonephritis
CRH	Corticotrophic Releasing Hormone	GnRH	Gonadotropin Releasing Hormone
CT	Computed Tomography	GPA	Granulomatosis with Polyangiitis
DCIS	Ductal Carcinoma In Situ	GRA	Glucocorticoid
DHEA	Dehydroepiandrosterone	GTN	Gestational Trophoblastic Neoplasm
DHEA-S	Dehydroepiandrosterone Sulfate	H⁺	Hydrogen
DIC	Disseminated Intravascular Coagulation	HCG	Human Chorionic Gonadotropin

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

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

