Cortex--*hyperfunction*	Anatomic	Labs	Symptoms
Cushing Syndrome	Bilateral adrenal hyperplasia if pituitary (ACTH), or ectopic ACTH; unilateral if adenoma Bilateral adrenal atrophy if exogenous meds	1. Primary (adenoma) ↑cortisol ↓ACTH 2. Secondary (pituitary, ectopic) ↑cortisol ↑ACTH 3. Ectopic vs. pituitary—dexamethasone suppression doesn't work in ectopic	Centripetal obesity, moon facies, buffalo hump, weakness, hirsutism, HTN, glucose intolerance, osteoporosis, neuropsych, menstrual, striae
Hyperaldosteronism	Primary(Conn)—adenoma (80%) or hyperplasia of glomerulosa Secondary—B/l hyperplasia of glomerulosa from stimulation of renin-angiotensin system. Renal ischemia, tumors	1. Primary(Conn) ↓ renin (negative feedback from HTN), ↑ Na, ↓ K 2. Secondary ↑renin (decreased flow detected thru kidneys)	1. Primary (Conn)—HTN, hypokalemic acidosis 2. Secondary—Pure renin excess due to other causes
Adrenal virilism	Adenoma, carcinoma, or hyperplasia of reticularis. May be d/t hyperplasia caused by 21-OHase (more common) or 11-OHase deficiency	Congenital--↓cortisol, compensatory ↑ACTH with resultant hyperplasia, androgen production 1. 21-OH—salt-wasting, hypotension 2. 11-OH—salt retention, HTN	Androgen excess produces virilism in females, precocious puberty in males
Cortex--*hypofunction*			
Hypocorticism	Idiopathic adrenal atrophy (autoimmune), TB, infectious, or secondary (pituitary/hypothalamic)	1.Primary—hypoaldosteronism, ↑ACTH, ↓Na, ↓glucose, ↓Cl, ↓HCO3, ↑K	In idiopathic (autoimmune) or TB—hypotension, hyperpigmentation In infectious (Waterhouse-Friedrichsen)—meningococcemia,

			hemorrhagic necrosis of cortex, DIC with purpura, life-threatening rapid hypotension and shock
Medulla			
Pheochromocytoma	Chromaffin cell tumor, benign or malignant (10% rule—10% malignant, 10% in childhood, 10% extra-adrenal, 10% associated with MEN)	Elevated catecholamines, increased VMA, increased metanephrines	Tumor secretes catecholamines, causes secondary HTN
MEN syndromes			
MEN I (Wermer)	Pituitary, pancreas, parathyroid, pheochromocytoma		Pituitary—adenomas Parathyroid—hyperplasia Pancreas—adenoma, hyperplasia Thyroid—Medullary ca and C-cell hyperplasia
MEN II (Sipple)	Parathyroid, thyroid pheochromocytoma		
MEN II-B	Pheochromocytoma, thyroid, extraendocrine		