Hypertension

BP > 140/90; >130/80 (for diabetics)

Primary (Essential): 90-95%

(unknown cause, dx of exclusion)

- Onset btw age 20-50
- Positive family Hx of HTN
- No features of 2^0 HTN

Secondary: 5-10%

(cause is known)

- Onset <20 or > 50 yrs old (usually)
- Resistant or Urgent Hypertension
- No family Hx

Mislabelled?

(Repeatedly normal BP when measured at home, at work, or using ambulatory monitor)

BP = CO x SVR

HTN due to ↑ Cardiac output *(volume dependent)*

Renal Parenchymal Diseases

(High serum creatinine, abnormal urine analysis, epigastric systolic-diastolic bruit)

→Glomerulonephritis

→Renal artery stenosis *(most common)*

Mineralocorticoid (aldosterone) Excess

(Hypokalemia, metabolic alkalosis, high TTKG)

→Conn's syndrome *(1^0 hyper-aldosterone – measure plasma adlo/renin ratio)*

→Cushing's Syndrome *(excess cortisol/prednisone binds aldosterone-receptors)*

→Black licorice

→Renal artery stenosis *(activating RAAS)*

HTN due to ↑ Systemic Vascular Resistance *(vasoconstrictive)*

Angiotensin II excess

(Epigastric systolic-diastolic bruit, asymmetric kidney size on ultrasound, ↑ serum creatinine w/ ACE-I/ARB)

→Renal Artery Stenosis (unilateral)

Catecholamine excess

(paroxysmal pounding headache, sweating, tachycardia/palpitations)

→Pheochromocytoma *(diagnose w/ 24hr urine metanephrines)*

Aortic Coarctation

(Arm BP > Leg BP; Radiofemoral pulse delay, rib notching on CXR)

Note: oral contraceptives and sleep apnea can also cause HTN