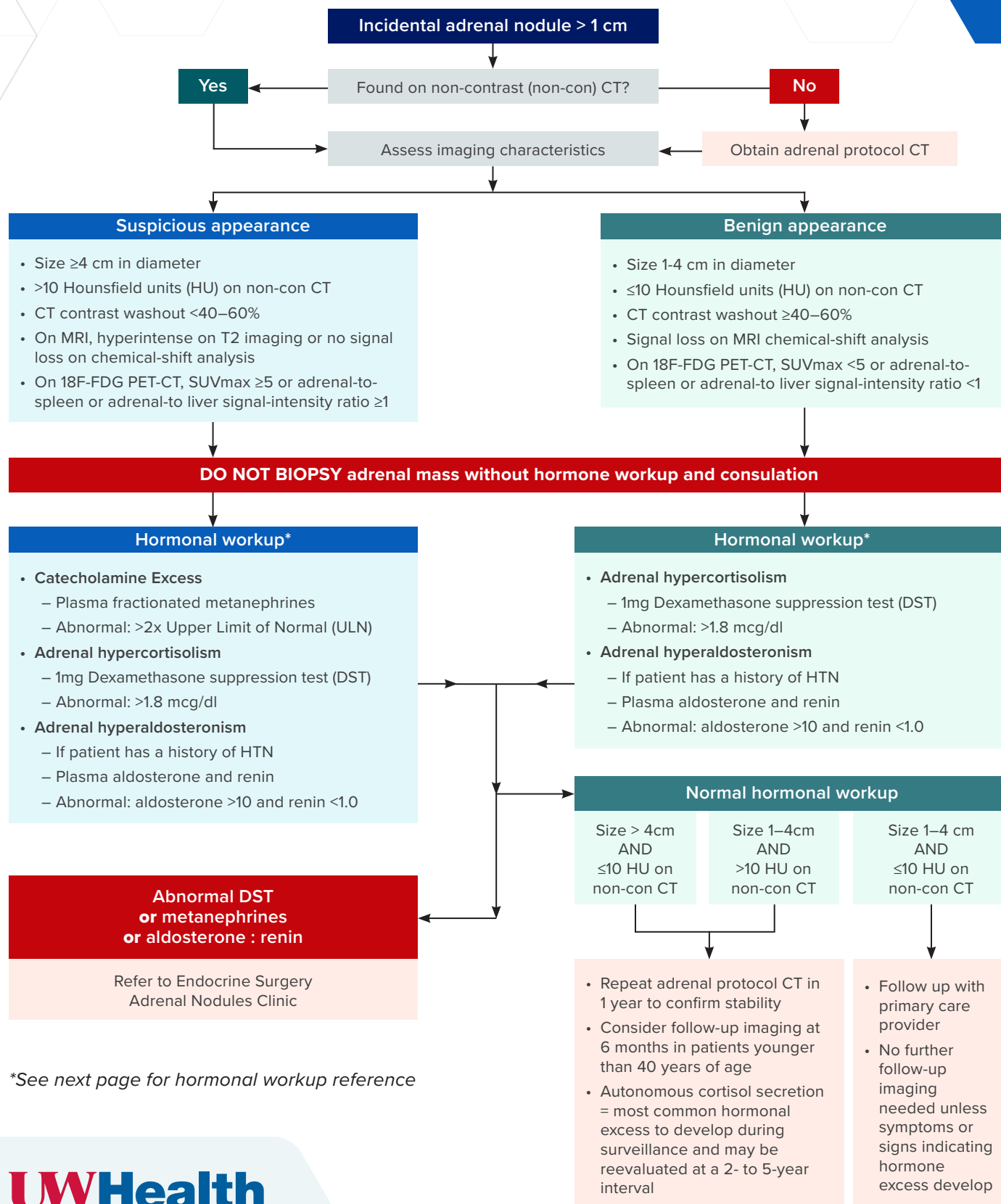


Evaluating adrenal nodules



Hormonal workup reference

1. Cortisol evaluation

Dexamethasone Suppression Test (DST)

- Prescribe 1 mg of oral dexamethasone to be taken at 11 pm
- The next morning at 8 am, a cortisol and dexamethasone level are drawn
- If the 8 am cortisol is < 1.8 mcg/dL, cortisol excess is ruled out
- If the am cortisol after dexamethasone is > 1.8 mcg/dL, then screening is POSITIVE or ABNORMAL
- Cortisol between 1.8–5.0 mcg/dL may represent mild cortisol excess, therefore you need to proceed with confirmatory testing:
 - Morning serum corticotropin and cortisol levels
 - 24-hr urinary cortisol
 - 3 midnight/late-night salivary cortisol
 - Midnight serum cortisol
 - DHEAS (< 40 mcg/dL)
- Failure to suppress below 5.0 mcg/dL raises concern for cortisol excess

2. Screen for aldosteronoma

Aldosterone level : Plasma Renin Activity (PRA)

- Perform if patient has a history of hypertension or hypokalemia
- Obtain mid-morning plasma aldosterone concentration and plasma renin activity
 - These must be drawn at the same time and should not be done with the DST
- Divide the aldosterone level by the PRA to calculate the aldosterone : renin (ARR)
- If the ARR is > 20 , screen is POSITIVE or ABNORMAL for hyperaldosteronism
- If aldosterone > 10 ng/dL AND renin < 1.0 ng/dL then screen is POSITIVE or ABNORMAL for hyperaldosteronism
 - Proceed to confirmatory testing with oral sodium load test, aldosterone suppression test or seated saline infusion test
- If aldosterone < 10 ng/dL OR renin > 1.0 ng/dL, then screen is NEGATIVE or NORMAL for hyperaldosteronism
- If aldosterone > 10 ng/dL AND renin > 1.0 ng/dL and is on a potentially interfering medication, then hold/replace medications for 4 weeks and repeat

3. Screen for pheochromocytoma

Plasma-free metanephrines

- POSITIVE or ABNORMAL if elevated $> 2x$ ULN
- Elevations $< 2x$ ULN may be false positives and should be considered equivocal
- Elevations $< 2x$ ULN and no classic signs of pheochromocytoma
 - Confirm with 24-hour urine metanephrines = less likely to be falsely positive
- If mildly elevated or concern for false positive, stop medications:

– Tricyclic antidepressants	– Amphetamines
– Phenoxybenzamine	– Buspirone
– Levodopa	– Methyldopa
– Beta blockers	– Chlorpromazine
– Labetalol	
- Confirmatory testing = 24-hour urine metanephrines
- Consider genetic testing in confirmed pheochromocytoma