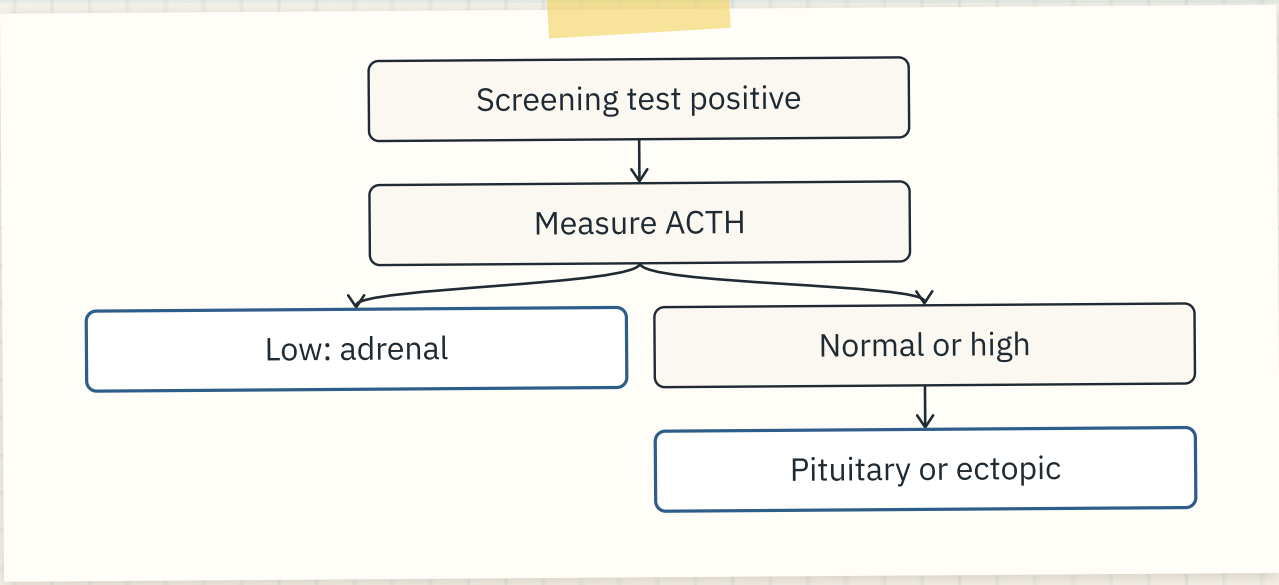
Cushing syndrome: find the source

Cortisol testing, ACTH and dexamethasone suppression



Step by step

1. Rule out glucocorticoid medicines
2. Screen: urine, late-night saliva or 1 mg test
3. Measure ACTH
4. High-dose dexamethasone or petrosal sampling
5. Imaging last

ACTH	High-dose dexamethasone	Source
Low or undetectable	n/a	Adrenal
Normal or high	Usually suppresses (> 50% fall)	Pituitary
High, often very high	Usually no suppression	Ectopic

Localising the source

Rule of thumb

Low ACTH: adrenal

High or normal ACTH: pituitary or ectopic

Pituitary keeps some feedback; ectopic ignores it

Exam traps

- A normal morning cortisol does not rule out Cushing syndrome.
- 1 mg test: in a healthy axis, morning cortisol falls below about 1.8 micrograms/dL; in Cushing syndrome it stays above.
- Petrosal sampling: a central to peripheral ACTH ratio above 3 after stimulation points to the pituitary.

Cushing syndrome: the dexamethasone suppression test and ACTH

Video, written lesson, practice question and sources: medservatory.com/usmle-step-1/endocrinology/cushing-syndrome-dexamethasone-suppression-acth

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