

Adrenal Hyperfunction (Cushing Syndrome) Testing

[Click here for topics associated with this algorithm](#)

INDICATIONS FOR TESTING

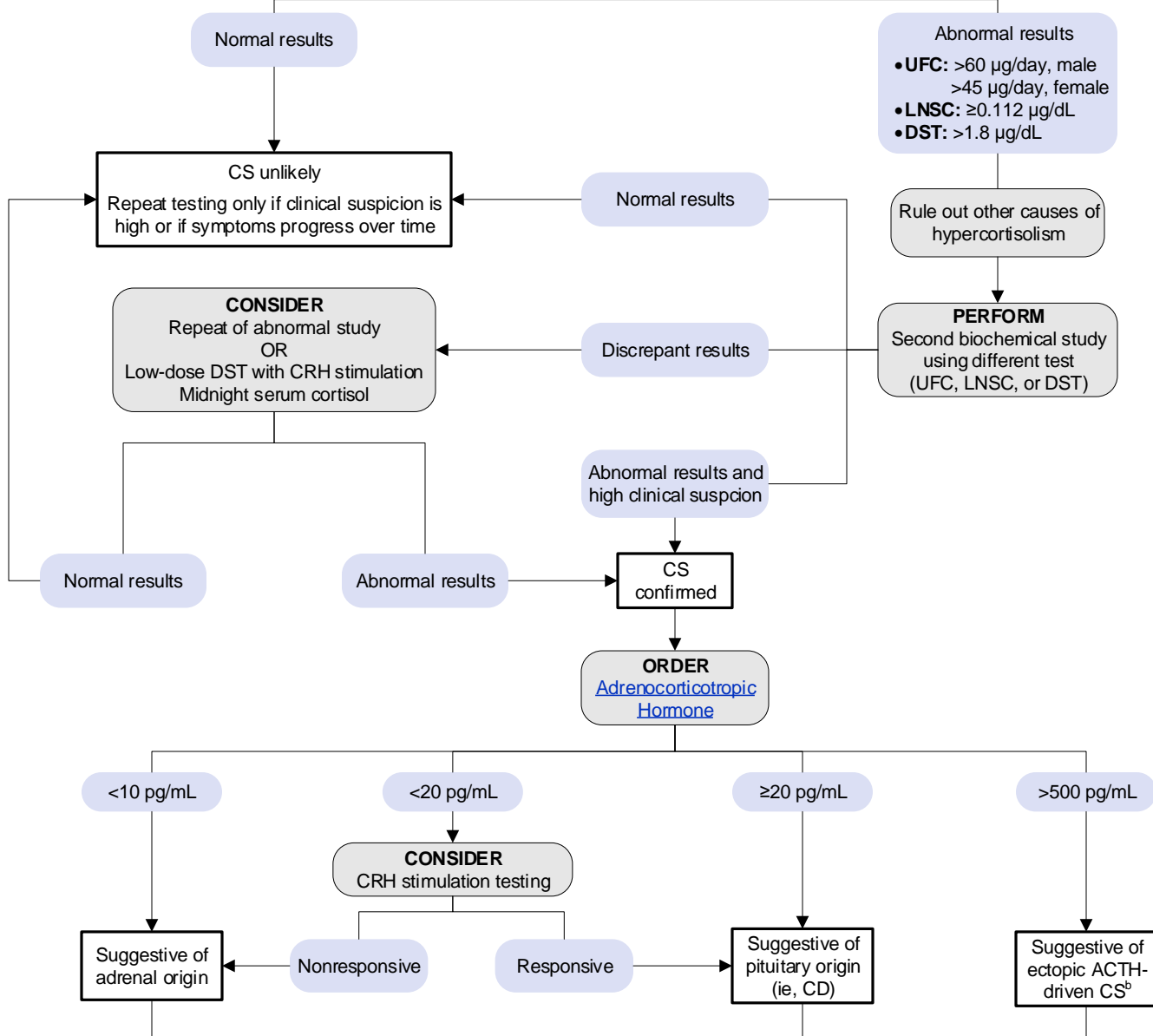
- Multiple features of Cushing syndrome (after ruling out exogenous glucocorticoid use)
- Presence of adrenal incidentaloma

Select one of the following biochemical tests^a:

PERFORM
24-hr urinary free cortisol
([Cortisol Urine Free by LC-MS/MS](#))

PERFORM
Late-night salivary cortisol
([Cortisol, Saliva](#))

PERFORM
Dexamethasone suppression testing
([Cortisol, Serum](#))



^aFor details on test protocol, see [Cushing Syndrome](#) topic on ARUP Consult.
^bMay consider high-dose DST to differentiate between ectopic ACTH-driven CS and CD; cortisol suppression of >50% is suggestive of pituitary origin.

Perform imaging and/or anatomic investigations (BIPPS, AVS of **left** and **right** adrenal glands) to confirm diagnosis and/or assist in treatment decisions

Abbreviations

| | |
|-------|--|
| ACTH | Adrenocorticotrophic hormone |
| AVS | Adrenal venous sampling |
| BIPPS | Bilateral inferior petrosal sinus sampling |
| CD | Cushing disease |
| CRH | Corticotropin-releasing hormone |
| CS | Cushing syndrome |
| DST | Dexamethasone suppression testing |
| LNCS | Late-night salivary cortisol |
| UFC | Urinary free cortisol |

Nieman LK, Findling JW, Newell-Price J, et al. The diagnosis of Cushing's syndrome: an Endocrine Society clinical practice guideline. *J Clin Endocrinol Metab.* 2008;93(50):1526-1540.
Pappachan JM, Hariman C, Edavath M, et al. Cushing's syndrome: a practical approach to diagnosis and differential diagnoses. *J Clin Pathol.* 2017;70(4):350-359.