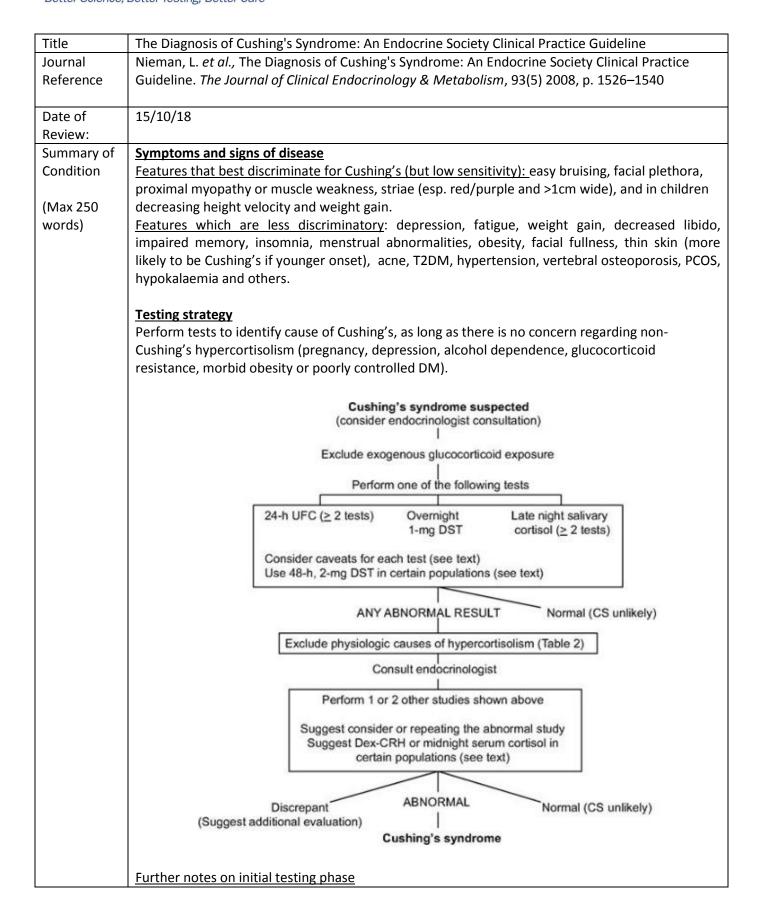


Summary of Endocrinology Society Guidelines



Use of a longer but lower dose dexamethasone suppression test (DST) (2mg/d for 48 hr) has improved specificity (but lower sensitivity), and can be useful in patients with psychiatric conditions (depression, anxiety or OCD), morbid obesity, alcoholism or DM. Suggest repeat test in 6 month if Cushing's unlikely and signs or symptoms progress. <u>Further notes on subsequent investigations:</u> Use dexamethasone-CRH test or midnight serum cortisol if the patient has equivocal or normal urinary free cortisol (UFC) results with high index of suspicion. **Special considerations** 1. Pregnancy: Use UFC and avoid DST 2. Epilepsy: Use non-suppressed cortisol in blood, saliva or urine and avoid use DST if on anti-epilepsy medication (increases dexamethasone clearance) 3. Renal failure: Use 1mg DST and avoid UFC in severe renal disease 4. Cyclical Cushing's syndrome: use UFC or midnight salivary cortisol and avoid DST 5. Adrenal incidentaloma: Use 1mg DST or late night cortisol test and avoid UFC if mild Cushing's is suspected Overview of Guideline does not recommend which methodologies should be employed, but notes certain assays used limitations. Immunoassays (IA) may be affected by cross reactivity with cortisol metabolites and synthetic glucocorticoids. HPLC and LC-MS/MS methods suffer less from cross-reactivity however some drugs (eg carbamazepine and fenofibrate) can positively interfere with chromatographic methods while HPLC and LC-MS/MS have lower upper reference limit (URL) compared to IA. Drugs interference may accelerate dexamethasone metabolism by CYP3A4 (phenobarbital, phenytoin, carbamazepine and others), impair dexamethasone metabolism by inhibiting CYP3A4 (cimetidine, diltiazem, aprepitant and others) or to increase cortisol binging globulin which falsely elevates cortisol concentrations (oestrogens, mitotane). Drugs which interfere with UFC include: carbamazepine, fenofibrate (if HPLC), some synthetic glucocorticoids (IA) and drugs which inhibit 11β-HSD2 (liquorice, carbenoxolone). Suggested cut offs for Cushing's syndrome are: UFC >URL for assay Serum cortisol >50 nmol/L after 1 mg dexamethasone Late night salivary cortisol >4 nmol/L Lab professionals ✓ Chemical Pathologist ✓ Clinical Scientist to be made **Biomedical Scientist** aware Important Impact on Lab Please detail Diagnosis involves biochemical evidence of raised cortisol, and these test results guide referral the impact decisions. of this Successful diagnosis can lead to reversal of symptoms and improves patient outcomes. This is guideline notable as in 1952 the 5 year survival rate was just 50% (death often due to vascular or infectious complications).

Impact on Lab

- **None**: This guideline has no impact on the provision of laboratory services
- Moderate: This guideline has information that is of relevance to our pathology service and may require review of our current service provision.
- **Important:** This guideline is of direct relevance to our pathology service and will have a direct impact on one or more of the services that we currently offer.

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