

## Use and interpretation of results in dogs



Diseases of adrenocortical origin are quite common in dogs. Clinical suspicion relies on details of the illness, symptoms and blood biochemistry changes (electrolytes, alkaline phosphatase, total cholesterol, lymphopenia and urine density).

Because of its low specificity, UCCR is considered more to be a test for ruling out a low suspicion of spontaneous Cushing's syndrome than for diagnosis.

An isolated value of plasma Cortisol is not sufficient for making a diagnosis in light of symptoms suggestive of adrenal dysfunction.

Resorting to dynamic tests is essential.

## Dynamic testing for adrenal diseases - Protocols

### Tetracosactide Stimulation (ACTH)

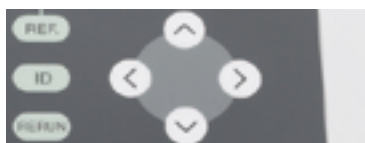
Whilst very practical to implement, it does not, however, reveal the aetiological origin during spontaneous hypercorticism. By contrast, it is the test of choice to confirm or rule out hypercorticism.

### Low dose suppression

With excellent sensitivity, it sometimes presents false positives due to severe stress.

ACTH Stimulation	Dexamethasone Suppression
<b>Tetracosactide (DECHRA)</b> IM Injection <ul style="list-style-type: none"> <li>&lt; 10 kg: 1/4 vial</li> <li>10-20 kg: 1/2 vial</li> <li>20-30 kg: 3/4 vial</li> <li>&gt; 30 kg: 1 vial</li> </ul>	<b>Low dose</b> 0.01 mg/kg IV
<b>Immediate synacthen, ND</b> 1 ampoule per dog, IM	<b>Strong dose</b> 0.1 mg/kg IV
<b>Blood tests</b> T0; T0 + 1 at 1.5 hrs	<b>Blood tests</b> T0; T0 + 8h (+/- T0 + 4hrs)

## Use of dilution mode with the FUJI DRY CHEM Immuno AU10 analyser



At the *READY* display on the AU10, the Worklist may be recalled if the machine is connected to patient management software.

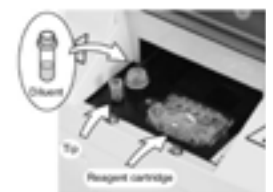
Select or identify the patient, then *ENTER*.

Switch then to dilution mode by simultaneously pressing the keys  and .

01-04-2014 10:01

DILUENT & PIPETTE TIP  
then START

- Position a dry tube filled halfway with diluent (NaCl 0.9%)
- Position a pipette tip
- Position the Cortisol cartridge
- Press *START*



01-04-2014 10:01

SAMPLE & PIPETTE TIP  
then START

- When returning the cartridge, remove the tube of diluent AND leave the cartridge in place
- Position another pipette tip
- Position the sample tube (plasma)
- Press *START*

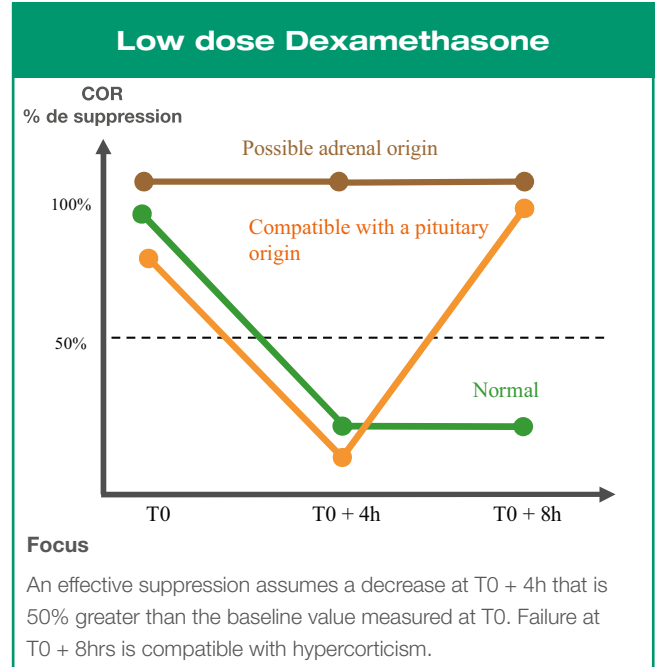
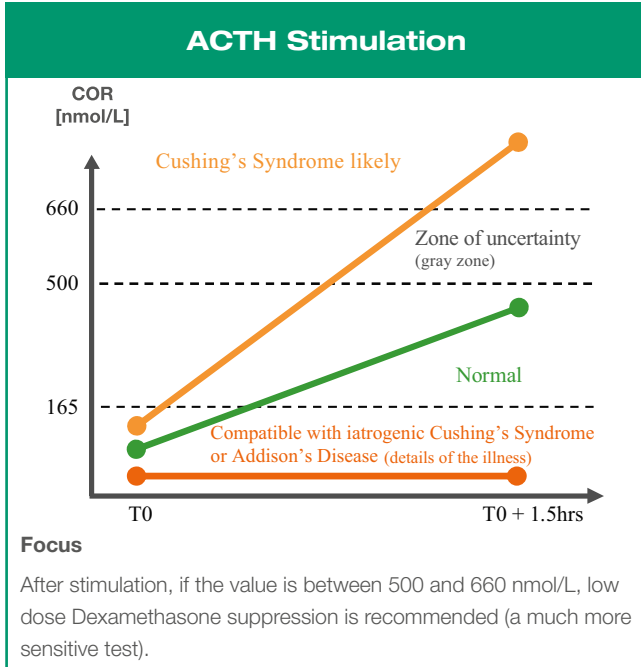




## Interpretation of results

According to IFCC standards, the reference range obtained, measured with the FDC Immuno AU10 analyser, is:  
 \*WARNING: A single baseline value is insufficient to make a diagnosis, even if it is higher than 165 nmol/L.

**Baseline Cortisol\*  
 < 165 nmol/L**



## Treatment control with Trilostane, ND

Perform regular ACTH stimulations according to laboratory recommendations	
Blood collection 1	T0, 2 to 4 hours after taking treatment
Blood collection 2	T0 + 1.5 hrs

A clinically controlled dog has a plasma concentration of between 30 and 200 nmol/l at T0 + 1.5 hrs

**References:**

Rannou B. and Rosenberg D. Le diagnostic de l'hypercorticisme et le suivi de traitement au Trilostane en l'absence de Synacthène® - PratiqueVet (2014) 49: 662-664.  
 Gilor C and Graves TK. Interpretation of laboratory tests for canine Cushing's syndrome. Top Companion Anim Med. 2011; 26: 98-108.  
 Nelson RW, Couto CG, Small Animal Internal Medicine, third edition, USA Mosby: 2003.

Design: Image and Text - 21249 - Credits: Fuji, DR, AdresseStock - November 2016. \*Value from Innovation

### Technical characteristics

- ▶ Cortisol ..... v-COR Cartridge
- ▶ Analysis time ..... 10 minutes
- ▶ Sample ..... Plasma and Serum - 100 µl
- ▶ Measuring range ..... 28 - 820 nmol/L
- ▶ Measuring range (dilution mode) ..... 28 - 1380 nmol/L
- ▶ Storage ..... 4 - 8°C

v-COR vs. Standard Method

