

IDEXX Cystatin B Test: interpreting normal results



Note

- + Certain medications may contribute to nephrotoxicity. Consider risk/benefit of such medications in overall management of the patient.
- + Under experimental conditions, doxycycline hyclate has been shown to interfere with urine cystatin B recovery when spiked into specimens with urine cystatin B concentrations below 250 ng/mL.²

IDEXX Cystatin B Test: interpreting increased results

Cystatin B \geq 100 ng/mL
There is an increased potential of active kidney injury

Patient presented for reason other than wellness visit
(e.g., sick, anesthesia/sedation, etc.)

Patient presented for wellness visit

SDMA and creatinine within reference intervals
Appropriately concentrated urine

SDMA and creatinine outside reference intervals
Inappropriately concentrated urine

SDMA and creatinine within reference intervals
Appropriately concentrated urine

Possible active (ongoing) kidney injury or early IRIS* AKI Grades I–II (acute kidney injury)

Active/acute kidney injury is likely

Possible subclinical kidney injury
In a well patient, subclinical kidney injury cannot be ruled out
Subclinical kidney injury may be caused by a single acute inciting event and may not result in overt clinical signs or changes in functional markers

Recommend rechecking functional kidney markers (SDMA, creatinine) with urinalysis and cystatin B within 24–48 hours
Consider additional diagnostics (urine protein:creatinine [UPC] ratio, culture and sensitivity, blood pressure, electrolytes, imaging)

- + Address current renal deficits
- + Monitor according to severity of clinical signs
 - Functional kidney markers (SDMA, creatinine)
 - Every 12–48 hours
 - Urine output
 - Every 6–12 hours
 - Complete urinalysis with cystatin B
 - Every 12–48 hours
 - Manage electrolyte imbalances
- + Consider additional diagnostics (urine protein:creatinine [UPC] ratio, culture and sensitivity, blood pressure, electrolytes, imaging)

A comprehensive history, such as diet, medications, supplements, preventives, travel, and other information, should be obtained
Consider rechecking cystatin B and other kidney markers, including SDMA, in 1–2 weeks or sooner if clinical signs become apparent

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*IRIS is the International Renal Interest Society.

References

1. Segev G, Vaden S, Ross S, et al. Urinary cystatin B differentiates progressive versus stable IRIS Stage 1 chronic kidney disease in dogs. *J Vet Intern Med.* 2023;37(6):2251–2260. doi:10.1111/jvim.16887
2. Data on file at IDEXX Reference Laboratories, Inc. Westbrook, Maine USA.