

Staging for Chronic Kidney Disease in Dogs & Cats

DEAR EDITOR:

We were gratified to read the discussion of symmetric dimethylarginine (SDMA) incorporation into the International Renal Interest Society (IRIS) Chronic Kidney Disease (CKD) Guidelines in the article “Chronic Kidney Disease Staging in Dogs & Cats” by David F. Senior, BVSc, DACVIM (SAIM), DECVIM-CA, in the June 2017 issue of *Clinician's Brief*. Dr. Senior represents accurately that SDMA may add to or supplant diagnostic information about a patient's glomerular filtration rate determined via creatinine measurement, noting that SDMA increases earlier in CKD and that it is less affected by extrarenal factors (eg, muscle mass) that confound traditional testing. However, the supporting resource “CKD Toolkit: Staging in Dogs & Cats” incorrectly represents how IRIS has incorporated SDMA into its CKD staging guidelines.

IRIS has not yet adopted SDMA cutoffs for the different stages and instead suggests that patients with low BCS may be considered understaged based on creatinine measurements when SDMA is comparatively higher than expected. The following interpretive comments for the diagnostic and therapeutic use of SDMA were incorporated into the 2015 IRIS CKD Guidelines:

SDMA concentrations in blood (plasma or serum) may be a more sensitive biomarker of renal function than blood creatinine concentrations. A persistent increase in SDMA above 14 µg/dL suggests reduced renal function and may be a reason to consider a dog or cat with creatinine values less than 1.4 mg/dL or less than 1.6 mg/dL, respectively, as IRIS CKD Stage 1.

In IRIS CKD Stage 2 patients with low body condition scores, SDMA greater than or equal to 25 µg/dL may indicate the degree of renal dysfunction has been underestimated. Consider treatment recommendations listed under IRIS CKD Stage 3 for [these patients].

In IRIS CKD Stage 3 patients with low body condition scores, SDMA greater than or equal to 45 µg/dL may indicate the degree of renal dysfunction has been underestimated. Consider treatment recommendations listed under IRIS CKD Stage 4 for [these patients].

These additions to the guidelines are preliminary, based on early data derived from the use of SDMA in veterinary patients. The IRIS board fully expects them to be updated as the veterinary profession gains further experience using SDMA alongside the long-established marker, creatinine, in

the diagnosis and therapeutic monitoring of canine and feline CKD.¹

We believe the infographic accompanying the article has specific errors shown for SDMA in each of the recognized stages of CKD. The corrections are as follows:

- For Stage 1, SDMA should be greater than 14 µg/dL, rather than less than as shown.
- For Stage 2, SDMA should be greater than 14 µg/dL, rather than 14-25 µg/dL as shown.
- For Stage 3, SDMA should be moderately increased, rather than greater than or equal to 25 µg/dL as shown.
- For Stage 4, SDMA should be markedly increased, rather than greater than or equal to 45 µg/dL as shown.

—Sincerely,

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Reference

1. International Renal Interest Society. IRIS Staging of CKD. IRIS website. http://iris-kidney.com/pdf/003-5559.001-iris-website-staging-of-ckd-pdf_220116-final.pdf. Modified 2015. Accessed October 17, 2017.

CKD = chronic kidney disease

IRIS = International Renal Interest Society

SDMA = symmetric dimethylarginine