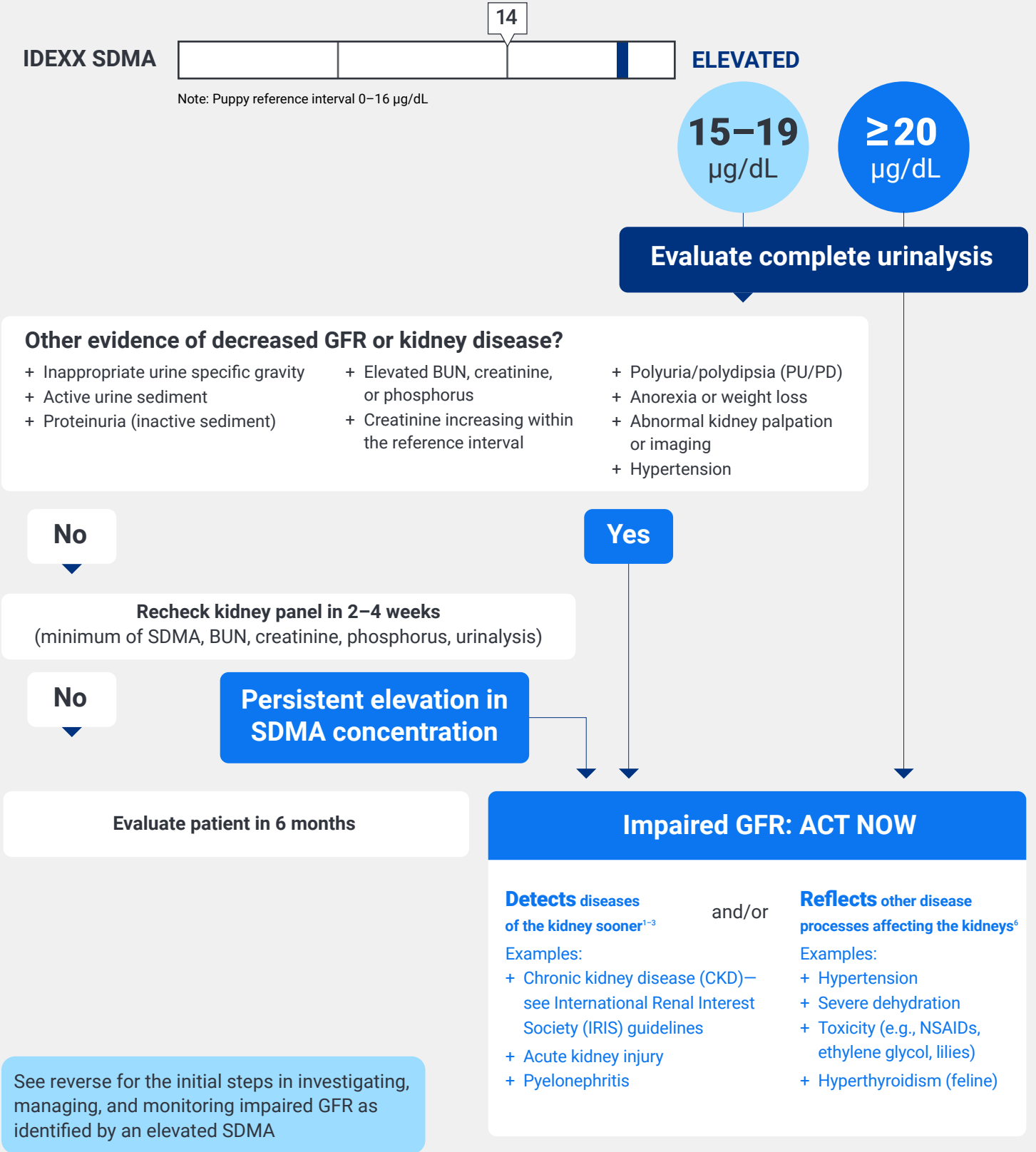


IDEXX SDMA algorithm

An elevated SDMA* concentration is a reflection of impaired glomerular filtration rate (GFR). Both primary kidney disease and secondary kidney insults, such as concurrent disease, can cause an elevation in SDMA concentration. Follow this algorithm to investigate elevated SDMA concentrations and determine whether acute, active, or chronic injury is occurring and how to begin to investigate, manage, and monitor disease.



Initial steps in investigating, managing, and monitoring impaired GFR as identified by an elevated SDMA

Investigate

Underlying cause, treatable condition, concurrent disease, chronic kidney disease (CKD)



Underlying cause

- + Urinary tract infection (UTI)/pyelonephritis
- + Toxicity (e.g., NSAIDs, ethylene glycol, lilies)
- + Acute kidney injury
- + Systemic hypertension
- + Chronic kidney disease (CKD)



Consider performing

- + Urine culture and minimum inhibitory concentration (MIC) susceptibility
- + Infectious disease testing
- + Abdominal imaging
- + Urine protein:creatinine (UPC) ratio (proteinuria)
- + Blood pressure



Concurrent condition to assess

- + Hydration status
- + Thyroid status (feline)

Manage

Treat underlying disease, manage assessed kidney injury, adjust care protocols



Treat appropriately

- + Underlying disease (e.g., pyelonephritis, infectious disease)
- + Dehydration
- + Discontinue nephrotoxic medications (e.g., NSAIDs)
- + Hypertension
- + Proteinuria



Additional support

- + Ample, clean water
- + Kidney-supportive diet if warranted



Adjust anesthesia protocols

- + Provide fluids (intravenous or subcutaneous)
- + Oxygen support prior to, during, and after procedure
- + Adjust pain management

Monitor

Manage and monitor outcomes



Monitor renal biomarkers

- + Trended testing of the following:
- + SDMA, BUN, creatinine, and phosphorus
- + Urinalysis
- + Blood pressure

Outcome

GFR impairment, stable



SDMA remains increased, but stable

- + GFR remains impaired but stable
- + Consider CKD diagnosis, refer to IRIS staging and treatment guidelines
- + Institute appropriate supportive care and monitoring

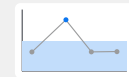
GFR impairment, progressive



SDMA continues to increase

- + Ongoing active kidney injury
- + Revisit investigate: repeat or perform additional diagnostics
- + Institute ongoing supportive care

GFR restoration



SDMA returns to normal

- + Recovery from mild injury
- + Response to appropriate therapy
- + Compensatory mechanisms
- + Recheck within 6 months–1 year

Remember that patients can move back to an investigation stage from management or monitoring depending on progression or change in renal status.

*Symmetric dimethylarginine.

For a complete list of references, visit idexx.com/sdma.

The information contained herein is intended to provide general guidance only. As with any diagnosis or treatment, you should use clinical discretion with each patient based on a complete evaluation of the patient, including history, physical presentation, and complete laboratory data. With respect to any drug therapy or monitoring program, you should refer to product inserts for a complete description of dosages, indications, interactions, and cautions. Diagnosis and treatment decisions are the ultimate responsibility of the primary care veterinarian.

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