Acute Kidney Injury and Chronic Kidney Disease Testing Algorithm

INDICATIONS FOR TESTING

Signs and/or symptoms of kidney disease or acute injury

AKI suspected

Assess for AKI

ORDER

Serum creatinine (twice in 48 hrs) AND/OR Urinary output measurement

ORDER

Etiologic testing as needed

One or more of the following criteria met:

- Creatinine ≥1.5 x baseline
- Creatinine increased by ≥0.3 mg/dL over period of 48 hrs
- Urinary output <0.5 mL/kg/hr for ≥6 hrs

No

Monitor creatinine and/or urinary output for up to 7 days

Yes

No current evidence of AKI

AKI confirmed

Stage and monitor based on AKI criteria

Resolution within 7 days of injury

No

Test for subsequent kidney disease after a total of 3 mos

Yes

Stage and monitor based on AKI criteria

No

No current evidence of AKI

AKI confirmed

Stage and monitor based on AKI criteria

Resolution within 7 days of injury

No

Test for subsequent kidney disease after a total of 3 mos

Yes

Stage and monitor based on AKI criteria

No

No suspicion of AKI

Assess for kidney disease

ORDER

- eGFR<sub>cr</sub>
- uACR
- Serum cystatin C
- Etiologic testing as needed

One or more of the following criteria met:

- eGFR<sub>c</sub> <60 mL/min/1.73 m<sup>2</sup>
- Albuminuria (AER ≥30 mg/24 hrs; uACR ≥30 mg/g)
- Another marker of kidney damage present (eg, structural or functional abnormalities, history of kidney transplantation, etc.)

No

Yes, for ≤3 mos

AKD likely

Stage and monitor based on CKD criteria

Test for subsequent CKD after a total of 3 mos

Yes, for >3 mos

CKD confirmed

Stage and monitor based on CKD criteria

Abbreviations

AER Albumin excretion rate
AKD Acute kidney disease
AKI Acute kidney injury
CKD Chronic kidney disease
eGFR Estimated glomerular filtration rate
eGFR<sub>cr</sub> Estimated glomerular filtration rate derived from creatinine
eGFR<sub>cys</sub> Estimated glomerular filtration rate derived from cystatin C
uACR Urine albumin-to-creatinine ratio

* eGFR<sub>c</sub> should be confirmed with eGFR<sub>cys</sub> when clinical circumstances could impact the accuracy of creatinine-based results. See Evaluation of Acute Kidney Injury and Chronic Kidney Disease for more information.

†Frequency of monitoring should be determined according to patient risk and progression.

‡AKI can coincide with AKD and CKD. When AKI is suspected, testing strategies and staging for AKI should be used, regardless of any preexisting kidney disease.

References