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

Yes

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

No

Yes

AKI confirmed

No current evidence of AKI

Stage and monitor based on AKI criteria¹

Resolution within 7 days of injury

No

Yes

Test for subsequent kidney disease after a total of 3 mos

AKI confirmed

No current evidence of kidney disease

Stage and monitor based on AKI criteria¹

Resolution within 7 days of injury

No

Yes

Test for subsequent kidney disease after a total of 3 mos

No

Yes

AKD likely

Stage and monitor based on AKD criteria
Test for subsequent CKD

No

Yes

CKD confirmed

Stage and monitor based on CKD criteria

One or more criteria met within 7 days of suspected injury

No

Yes

No current evidence of kidney disease

One or more of the following criteria met:
• eGFR² <60 mL/min/1.73 m²
• 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

Yes, for >3 mos

References


Abbreviations
AER Albumin excretion rate
AKD Acute kidney disease
AKI Acute kidney injury
CKD Chronic kidney disease
eGFR Estimated glomerular filtration rate
eGFRcr Estimated glomerular filtration rate derived from creatinine
eGFRcys Estimated glomerular filtration rate derived from cystatin C
uACR Urine albumin-to-creatinine ratio

¹eGFRcr should be confirmed with eGFRcys when clinical circumstances could impact the accuracy of creatinine-based results. See Evaluation of Acute Kidney Injury and Chronic Kidney Disease for more information.
²Frequency of monitoring should be determined according to patient risk and progression.
³AKI 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.