Chronic Kidney Disease (CKD)  
Early Identification and Intervention

CKD causes a global burden

CKD disproportionately affects socially disadvantaged populations

Determine At-Risk Individuals and Populations

Screen for CKD in individuals with hypertension, diabetes, and/or cardiovascular disease

Consider other factors including
- Demographics, older age, race/ethnicity
- Other systemic diseases that impact kidneys
- Genetic risk factors
- Environmental exposures

Screening and Diagnosis of CKD

Measure kidney function
- Serum creatinine
- Serum Cystatin C if available for more accurate staging

Measure kidney injury
- Urine albumin-to-creatinine ratio (UACR)
- Urine dipstick if UACR not available

This ISN-KDIGO CKD Early Identification & Intervention Toolkit Initiative is supported by an unrestricted educational grant from AstraZeneca.
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Risk stratify for appropriate staging

<table>
<thead>
<tr>
<th>Prognosis of CKD by GFR and albuminuria categories: KDIGO 2012</th>
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<tbody>
<tr>
<td><strong>Classification</strong></td>
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<tr>
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</tr>
<tr>
<td>G1</td>
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<tr>
<td>G2</td>
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<td>G3a</td>
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<td>G3b</td>
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<td>G4</td>
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Use the KDIGO “heat map” to stage CKD based on estimated glomerular filtration rate (eGFR) and UACR

<table>
<thead>
<tr>
<th>Persistent albuminuria categories Description and range</th>
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<tbody>
<tr>
<td>A1</td>
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</tbody>
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< 30 mg/g | 30–300 mg/g | > 300 mg/g |
< 3 mg/mmol | 3–30 mg/mmol | > 30 mg/mmol |

Individualized Re-screening

Based on individualized risk of progression

Risk reduction for CKD & CVD progression and complications

- Lifestyle modification (e.g., physical activity; lower sodium intake)
- Smoking cessation
- Optimize blood pressure control
- Optimize glycemic control
- SGLT2 inhibitors in diabetic kidney disease
- RAAS inhibition
- Statins
- Treat metabolic acidosis
- Treat underlying cause of CKD
- Avoid nephrotoxins (e.g., NSAIDs)
- Adjust dosing of medications based on eGFR

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