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
Chronic Kidney Disease (CKD) Early Identification and Intervention

**Risk stratify for appropriate staging**

<table>
<thead>
<tr>
<th>Albuminuria categories</th>
<th>Description and range</th>
<th>A1</th>
<th>A2</th>
<th>A3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Normal to mildly increased</td>
<td>Normal to mildly increased</td>
<td>&lt;30 mg/g</td>
<td>30-399 mg/g</td>
<td>&gt;300 mg/g</td>
</tr>
<tr>
<td>Severe proteinuria</td>
<td>Severe proteinuria</td>
<td>&lt;3 mg/mmol</td>
<td>3-29 mg/mmol</td>
<td>&gt;29 mg/mmol</td>
</tr>
</tbody>
</table>

**Albuminuria categories**

- **G1:** Normal or high
- **G2:** Mildly decreased
- **G3a:** Mildly to moderately decreased
- **G3b:** Moderately to severely decreased
- **G4:** Severely decreased
- **G5:** Kidney failure

**GFR categories**

- 15-44 mL/min per 1.73 m²
- 45-99 mL/min per 1.73 m²
- 10-44 mL/min per 1.73 m²
- <15 mL/min per 1.73 m²

**Use the KDIGO “heat map” to stage CKD based on estimated glomerular filtration rate (eGFR) and UACR**

**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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