Figure 6.1 · % distribution of KEEP & NHANES III participants with chronic kidney disease

KEEP: n=5,051, NHANES III: n=2,252; CKD status defined by calculated creatinine clearance using the MDRD formula. Stage 5 in NHANES III data does not include patients on dialysis.
Figure 6.2 · percent distribution of KEEP & NHANES III participants with anemia (WHO definition), by age

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

KEEP: n= 10,448, NHANES III: n=16,795; excludes participants with missing hemoglobin values
Figure 6.3 · percent distribution of KEEP & NHANES III participants with anemia (WHO definition), by race/ethnicity

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

KEEP: race, n=10,136, Hispanic ethnicity, n=10,448, NHANES III: n=16,795; excludes participants with missing race, ethnicity, or hemoglobin values. Race & Hispanic ethnicity are not mutually exclusive.
Figure 6.4: percent distribution of KEEP & NHANES III participants with anemia (WHO definition), by CKD status

WHO anemia definition
Male: Hemoglobin < 13 g/dl
Female: Hemoglobin < 12 g/dl

Definition of CKD
If calculated creatinine clearance by K/DOQI MDRD < 60 ml/min/1.73 m² or;
If calculated creatinine clearance by K/DOQI MDRD ≥ 60 ml/min/1.73 m² and microalbuminuria +

KEEP: total, n=10,332, anemia, n=1,376, NHANES III: n=15,670

KEEP 2003
Figure 6.5 · percent distribution of KEEP & NHANES III participants with anemia (WHO definition), by race & CKD status

KEEP: non-CKD, n=5,248 CKD, n=4,779; NHANES III: n=15,670; excludes participants with missing race or hemoglobin values
Figure 6.6 · percent distribution of KEEP & NHANES III participants with anemia (WHO definition), by gender & CKD status

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

Definition of CKD
If calculated creatinine clearance by K/DOQI MDRD < 60 ml/min/1.73 m² or;
If calculated creatinine clearance by K/DOQI MDRD ≥ 60 ml/min/1.73 m² and microalbuminuria +

KEEP: non-CKD, n=5,400, CKD, 4,932; NHANES III: n=15,670; excludes participants with missing hemoglobin values
Figure 6.7 · distribution of KEEP participants with a hemoglobin less than 11 g/dl, by stage of CKD & self-reported diabetic status

KEEP: diabetics, n=2,481, non-diabetics, n=7,684; excludes participants with missing hemoglobin values or CKD stage
Figure 6.8 · distribution of KEEP participants with a hemoglobin less than 11 g/dl, by stage of CKD & gender

KEEP: males, n=3,424, females, n=6,908; excludes participants with missing hemoglobin values or CKD status
**Figure 6.9 · percent of KEEP participants with a hemoglobin less than 11 g/dl, by stage of CKD & race**

<table>
<thead>
<tr>
<th>Percent with hemoglobin &lt; 11 g/dl</th>
<th>All</th>
<th>No CKD</th>
<th>Stage 1</th>
<th>Stage 2</th>
<th>Stage 3</th>
<th>Stage 4+5</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Black</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tr>
<tr>
<td>Other</td>
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<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

**CKD stages**
- Stage 1: CCR ≥ 90, microalbuminuria =+
- Stage 2: CCR 60–89, microalbuminuria = +
- Stage 3: CCR 30–59
- Stage 4: CCR 15–29
- Stage 5: CCR <15 or patient on dialysis

KEEP: white, n=3,730; black, n= 4,577; other, n=1,720; excludes participants with missing hemoglobin values or CKD status

KEEP 2003
Figure 6.10 · influence of eGFR on anemia

( WHO definition )

<table>
<thead>
<tr>
<th>eGFR</th>
<th>KEEP</th>
<th>NHANES III</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;=90</td>
<td>0.0</td>
<td>0.5</td>
</tr>
<tr>
<td>60-&lt;90</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>&lt;60</td>
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<td>2.5</td>
</tr>
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<td>3.0</td>
</tr>
<tr>
<td>3.0</td>
<td>3.5</td>
<td>4.0</td>
</tr>
</tbody>
</table>

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

KEEP: n=8,686, NHANES III: n=16,011; method: logistic regression, adjusted for age, gender, race, family history, & smoking status; reference is eGFR ≥ 90 ml/min/1.73 m²
WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

Figure 6.11· odds of anemia (WHO definition), by age & self-reported diabetic status

KEEP: n=8,686, NHANES III: n=16,011; method: logistic regression, adjusted for, gender, race, family history, & smoking status; reference is age 46–60
Figure 6.12 · odds of anemia (WHO definition), by race & study population

KEEP: n=8,686, NHANES III: n=16,011; method: logistic regression, adjusted for age, gender, family history, & smoking status; reference is white non-diabetics

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl
Figure 6.13 · mean C-reactive protein in all NHANES III patients, by CKD stage & anemia status (WHO definition)

NHANES III: n=16,293

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

CKD stages
Stage 1: CCR ≥ 90, microalbuminuria = +
Stage 2: CCR 60–89, microalbuminuria = +
Stage 3: CCR 30–59
Stage 4: CCR 15–29
Stage 5: CCR <15 or patient on dialysis
Figure 6.14 · mean C-reactive protein in NHANES III males, by CKD stage & anemia status (WHO definition)

NHANES III: males, n=7,617
Figure 6.15 · mean C-reactive protein in NHANES III females, by CKD stage & anemia status (WHO definition)

NHANES III: females, n=8,676

WHO anemia definition
Male: Hemoglobin <13 g/dl
Female: Hemoglobin <12 g/dl

CKD stages
Stage 1: CCR ≥ 90, microalbuminuria = +
Stage 2: CCR 60–89, microalbuminuria = +
Stage 3: CCR 30–59
Stage 4: CCR 15–29
Stage 5: CCR <15 or patient on dialysis