

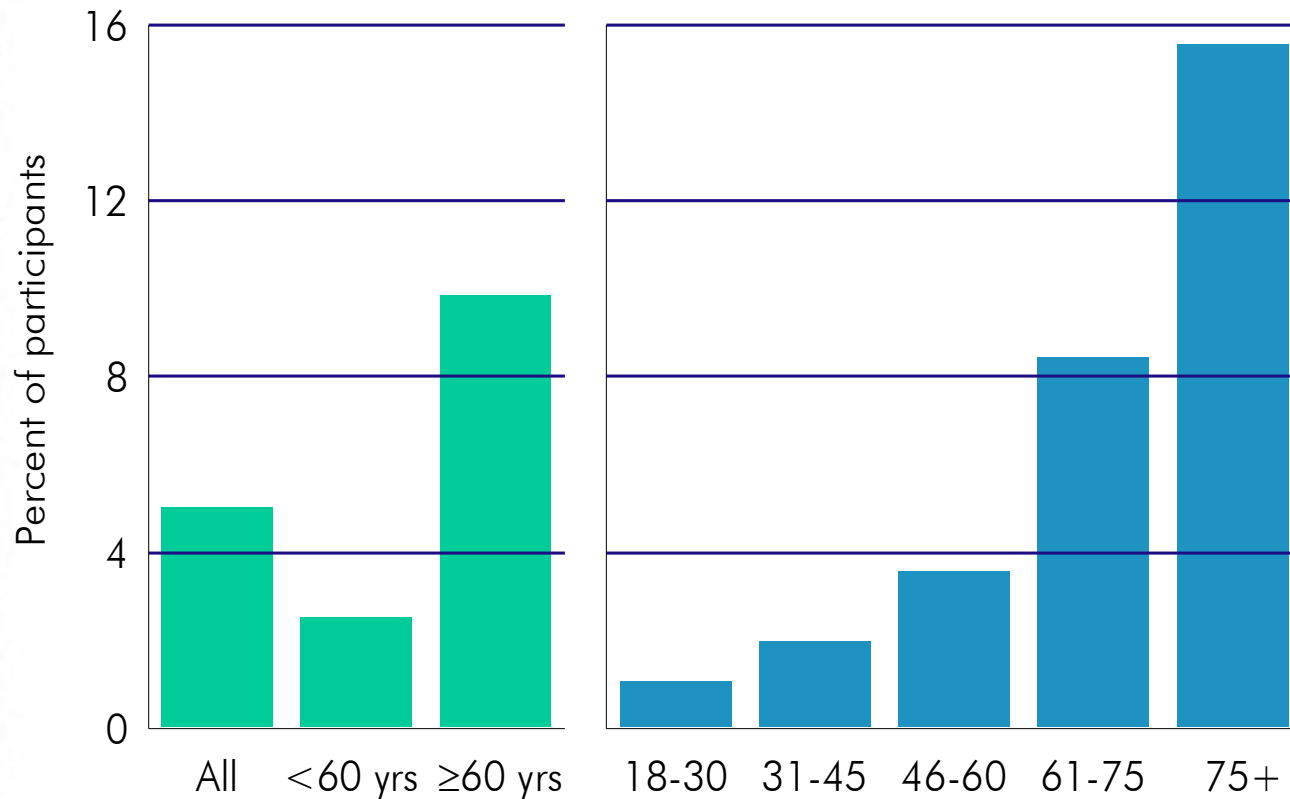
# KEEP 2.0 Annual Data Report

## Chapter Five



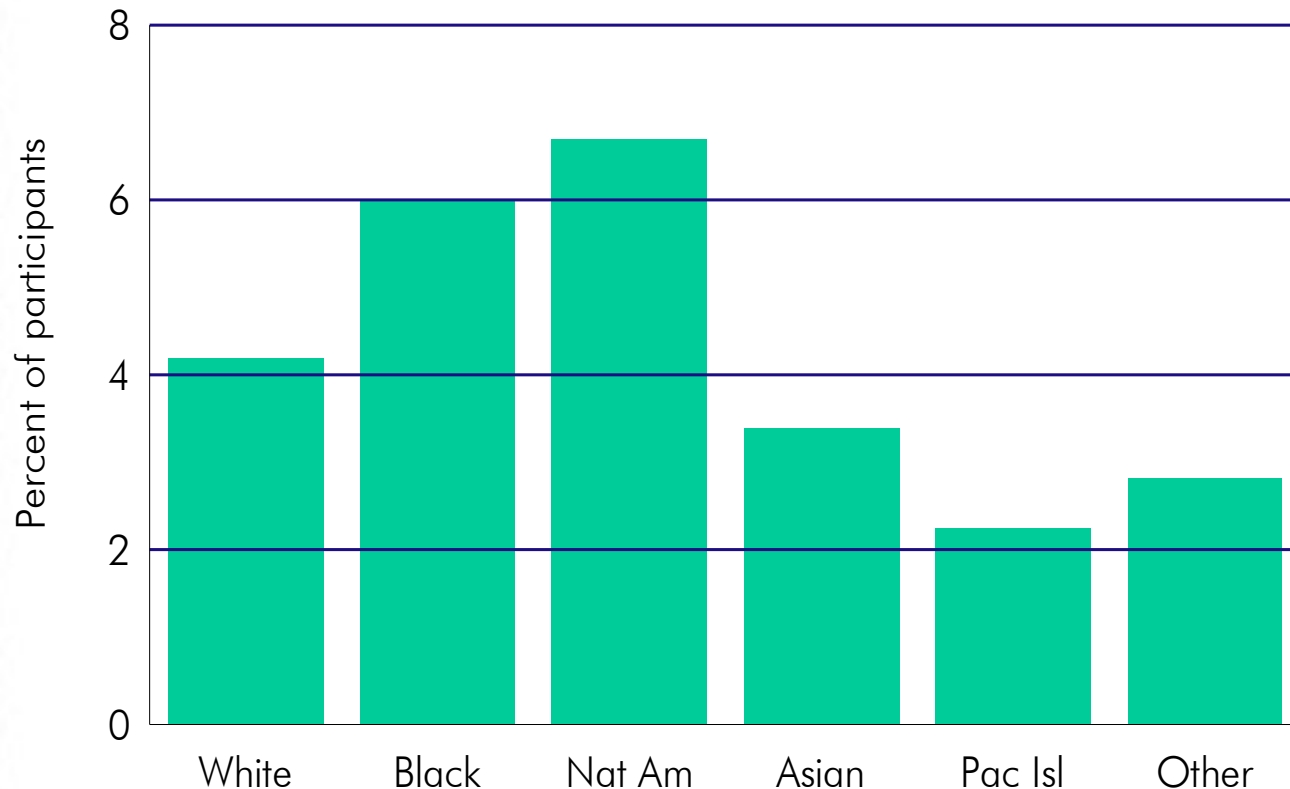
**NKF** National Kidney Foundation®  
*Making Lives Better*

# Figure 5.1. percent distribution of KEEP participants with elevated serum creatinine levels, overall & by age



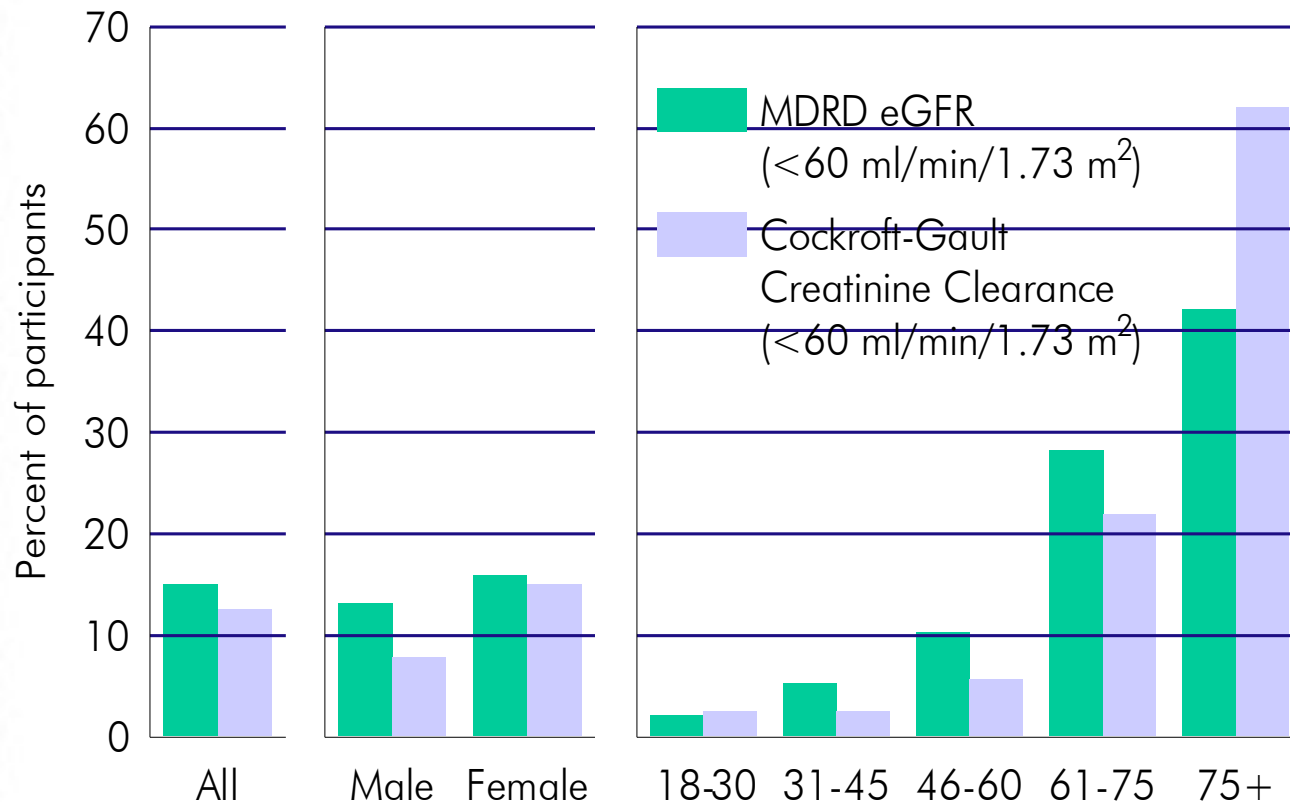
KEEP: n=10,725; excludes participants with missing serum creatinine values; elevated levels: >1.5 mg/dl in men, >1.3 mg/dl in women

## Figure 5.2. percent distribution of KEEP participants with elevated serum creatinine levels, by race



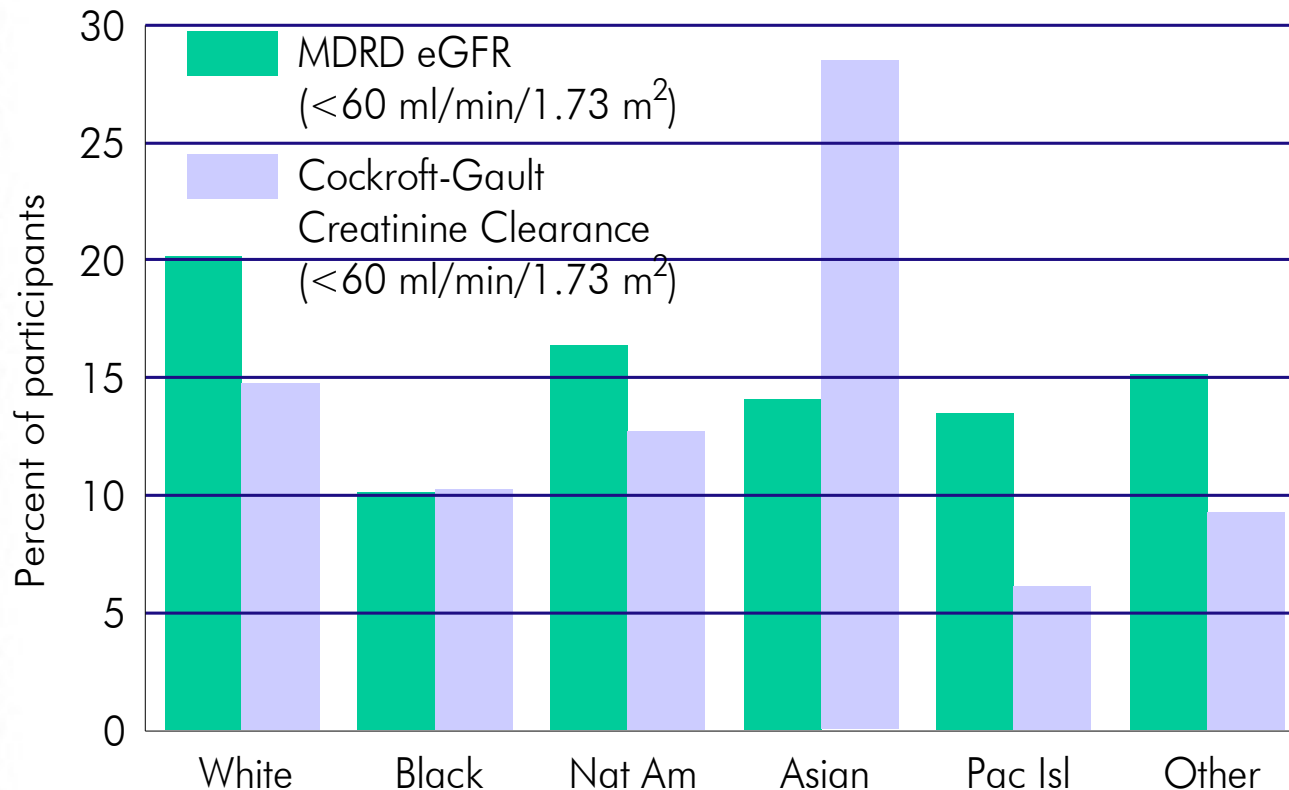
KEEP: n=10,413; excludes participants with missing serum creatinine values or unknown or missing race;  
elevated levels: >1.5 mg/dl in men, >1.3 mg/dl in women

# Figure 5.3• % distribution of KEEP participants with eGFR using MDRD & Cockcroft-Gault methods, overall & by age & gender



KEEP: MDRD eGFR, n=10,725; CG, n=10,614; excludes participants with missing values

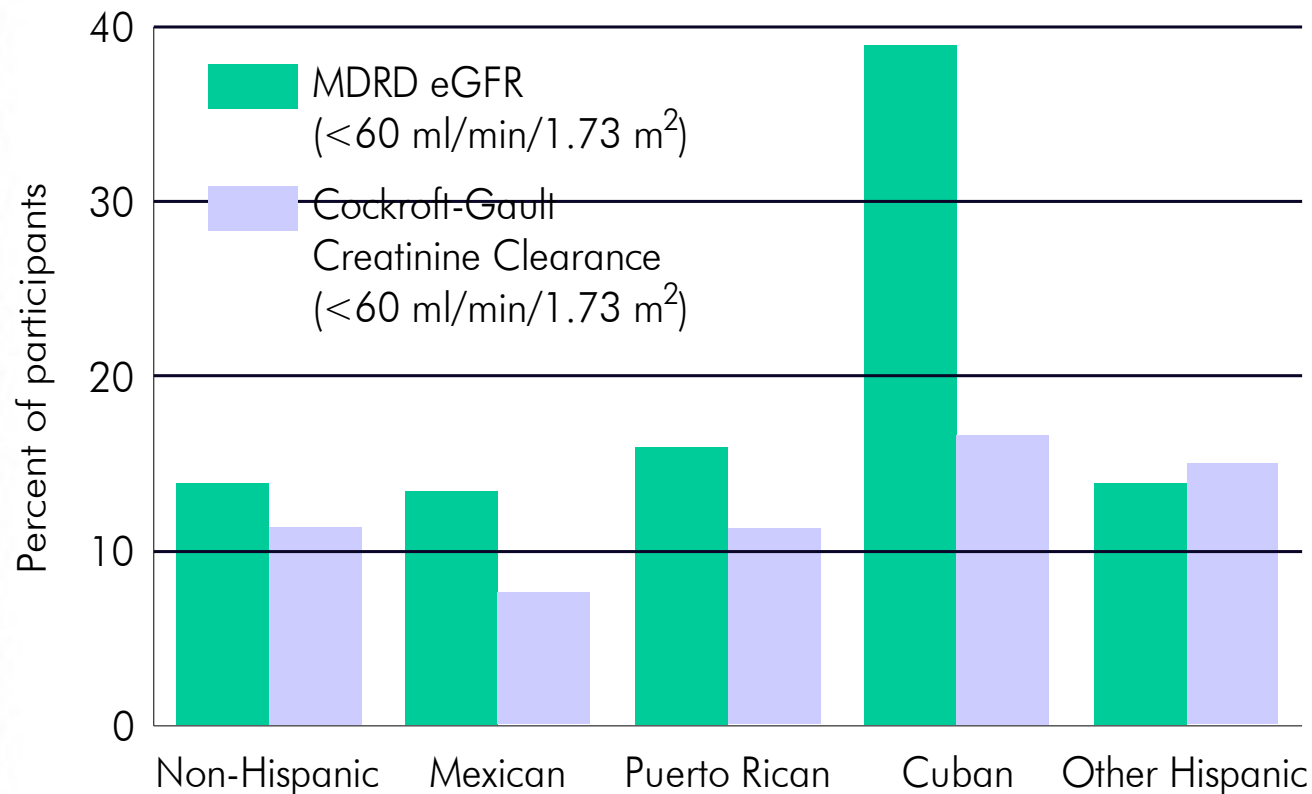
# Figure 5.4• percent distribution of KEEP participants with eGFR using MDRD & Cockcroft-Gault methods, by race



KEEP: MDRD eGFR, n=10,413; CG, n=10,308; excludes participants with missing values

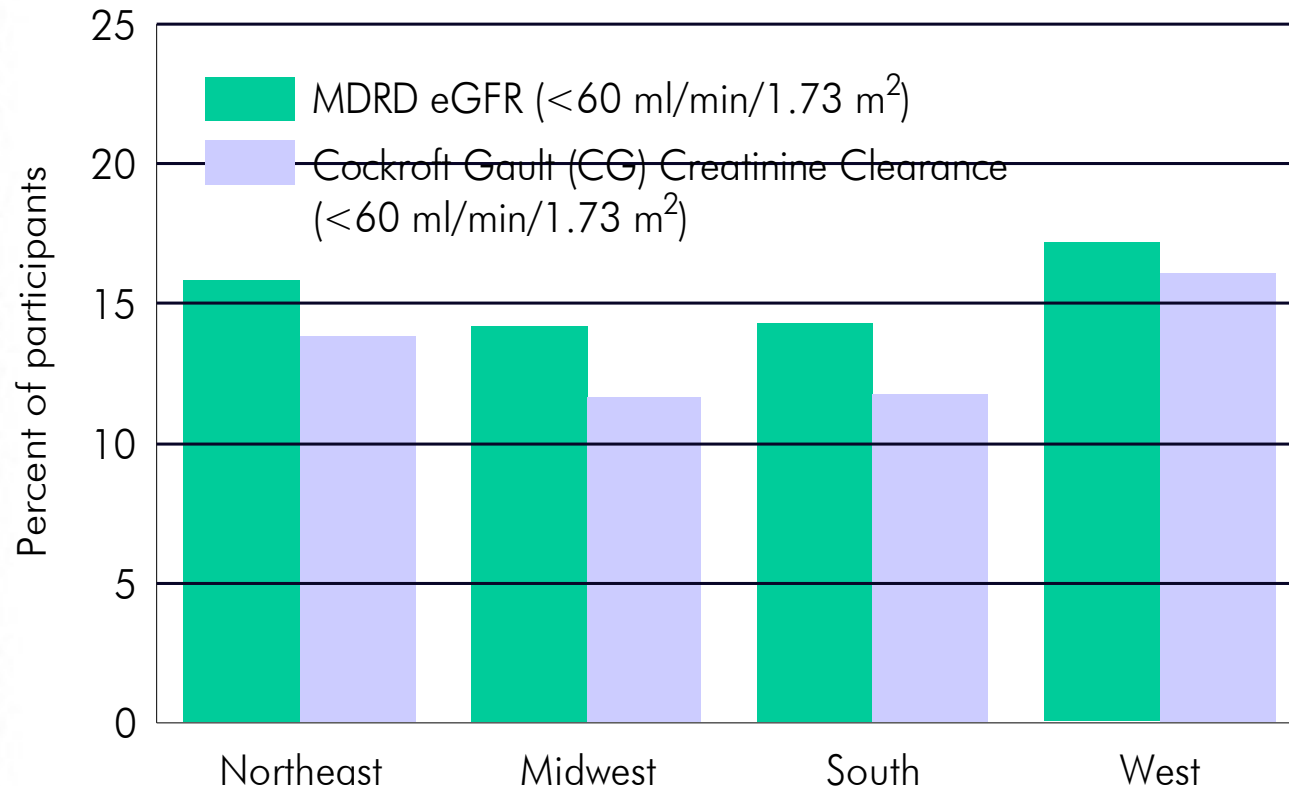


## Figure 5.5• % distribution of KEEP participants with eGFR using MDRD & Cockcroft-Gault methods, by Hispanic ethnicity



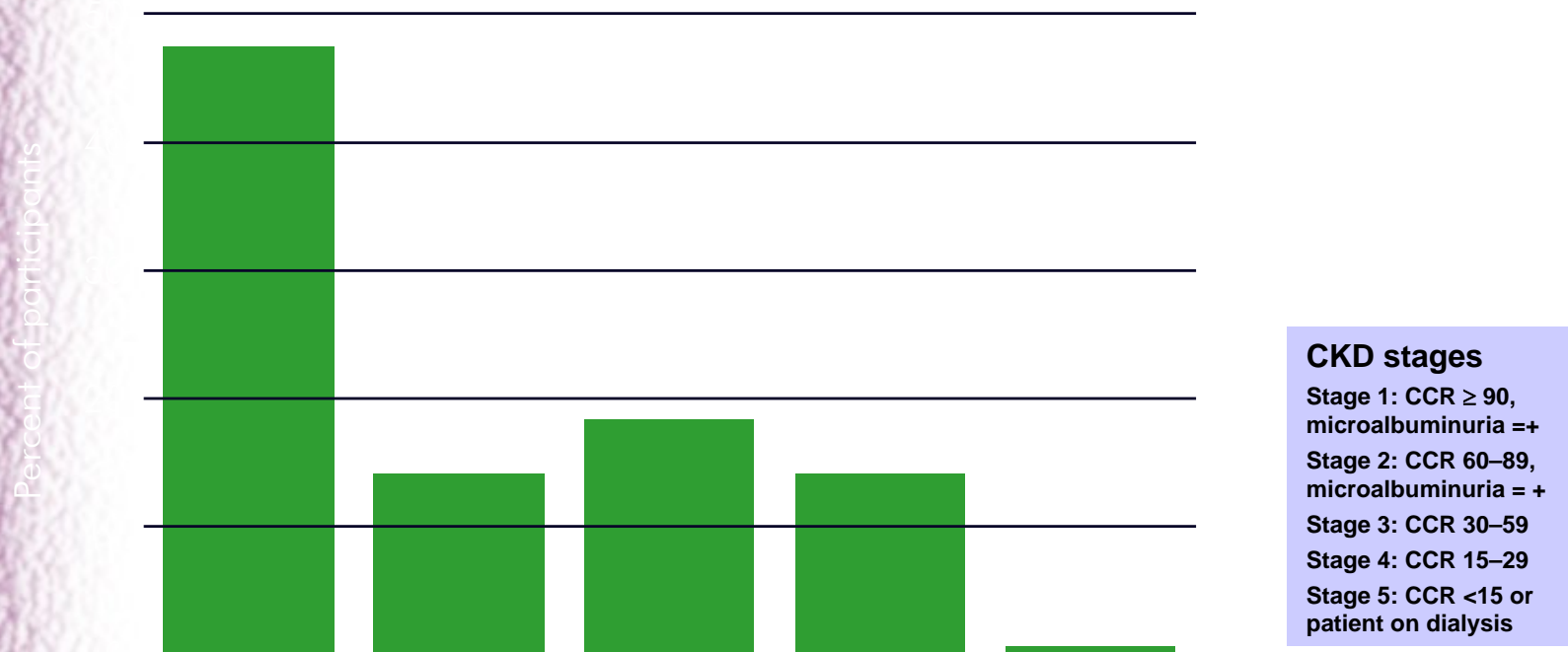
KEEP: MDRD eGFR, n=7,195; CG, n=7,142; excludes participants with missing ethnicity

# Figure 5.6• percent distribution of KEEP participants with eGFR using MDRD & Cockcroft-Gault methods, by U.S. region



KEEP: MDRD eGFR, n=10,725; CG, n=10,614; excludes participants with missing values

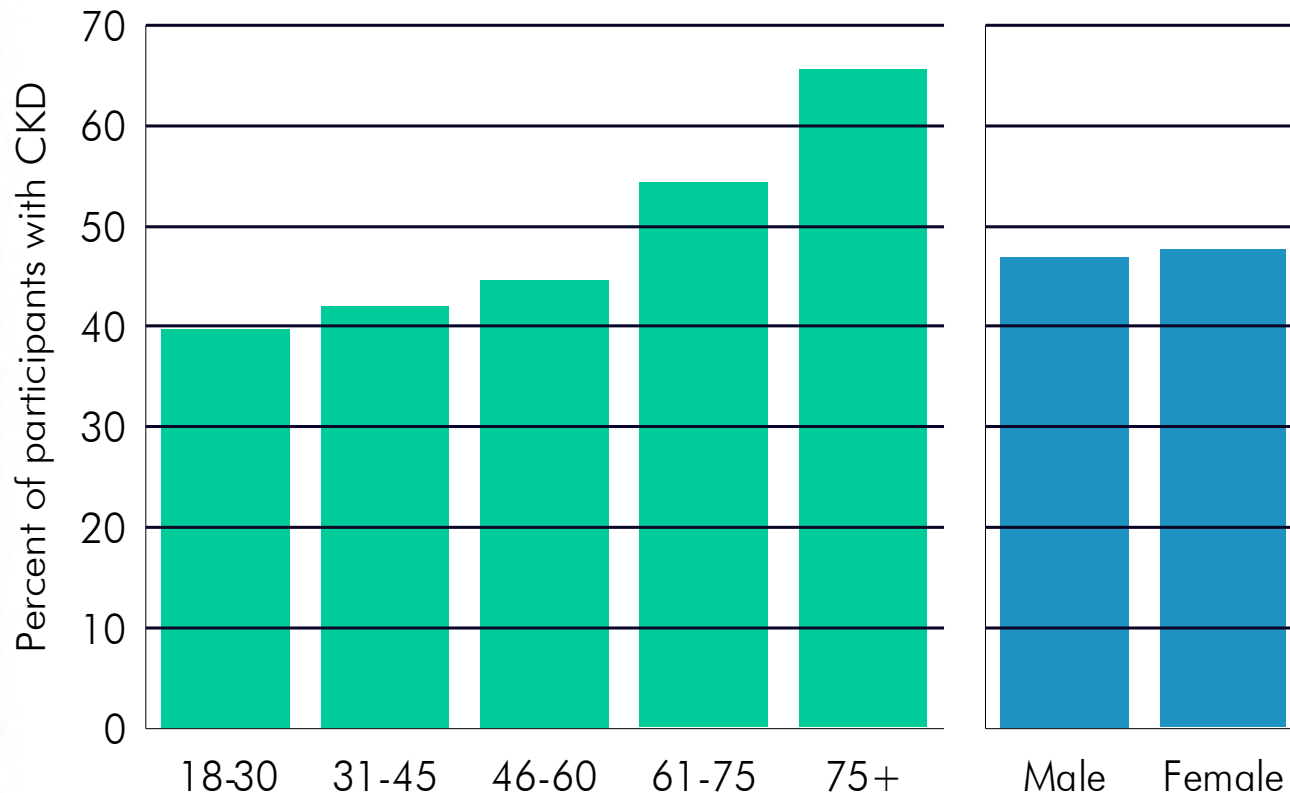
# Figure 5.7. percent distribution of KEEP participants with CKD, by CKD status



- KEEP: n=10,651; excludes participants with missing eGFR; CKD defined by eGFR  $<60$  ml/min/1.73 m<sup>2</sup> (MDRD formula) or presence of microalbuminuria if eGFR  $\geq 60$  ml/min/1.73 m<sup>2</sup>

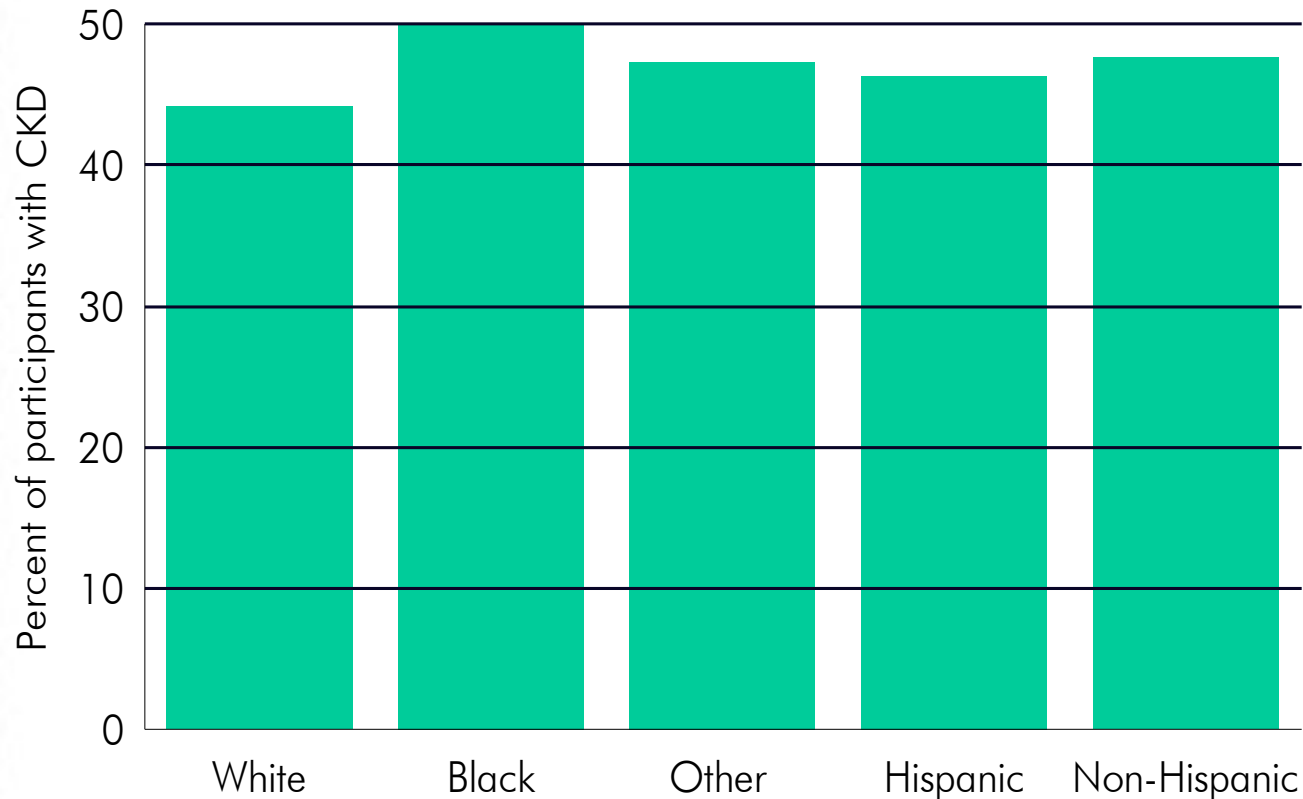


# Figure 5.8. percent distribution of KEEP participants with CKD, by age & gender



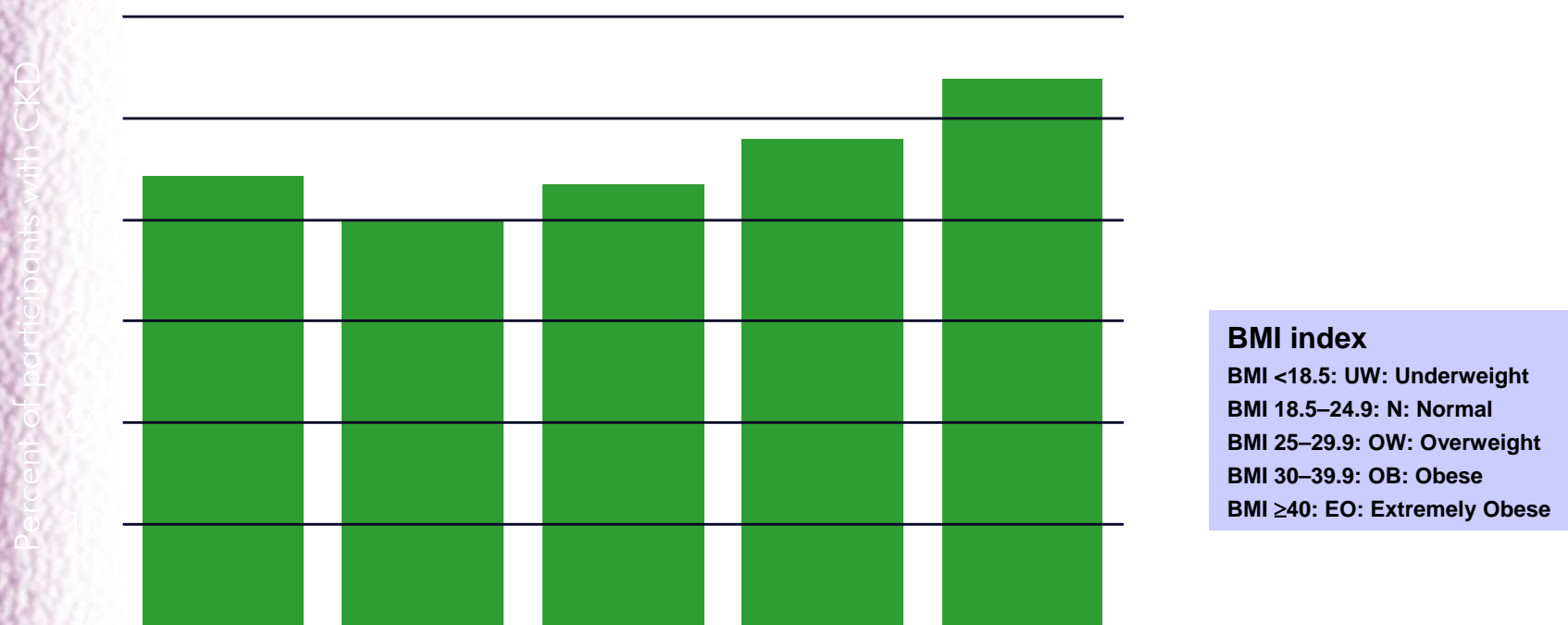
- KEEP: n=10,651; excludes participants with missing eGFR; CKD defined by eGFR  $<60$  ml/min/1.73 m<sup>2</sup> (MDRD formula) or presence of microalbuminuria if eGFR  $\geq 60$  ml/min/1.73 m<sup>2</sup>

## Figure 5.9. percent distribution of KEEP participants with CKD, by race & Hispanic ethnicity



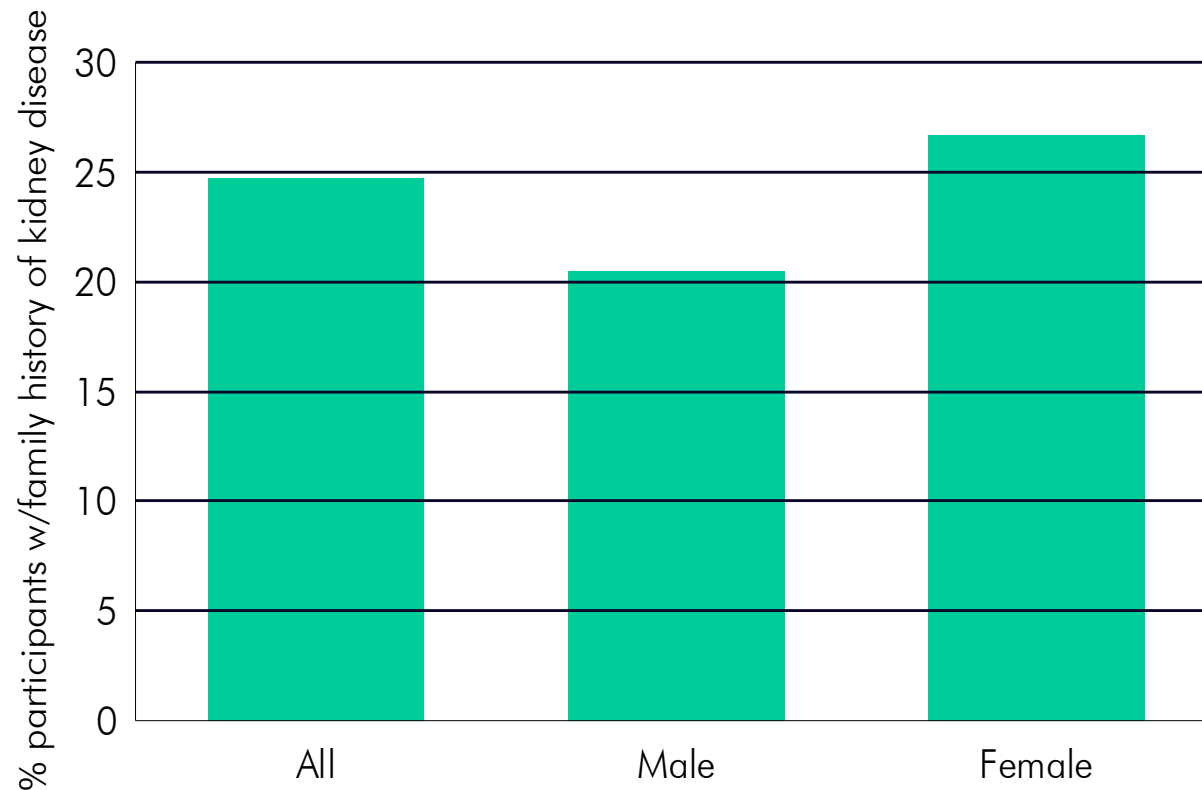
KEEP: n=10,343; excludes participants with missing eGFR or race; CKD defined by eGFR <60 ml/min/1.73 m<sup>2</sup> (MDRD formula) or presence of microalbuminuria if eGFR ≥60 ml/min/1.73 m<sup>2</sup>. Race & Hispanic ethnicity are not mutually exclusive.

# Figure 5.10• percent distribution of KEEP participants with CKD, by BMI



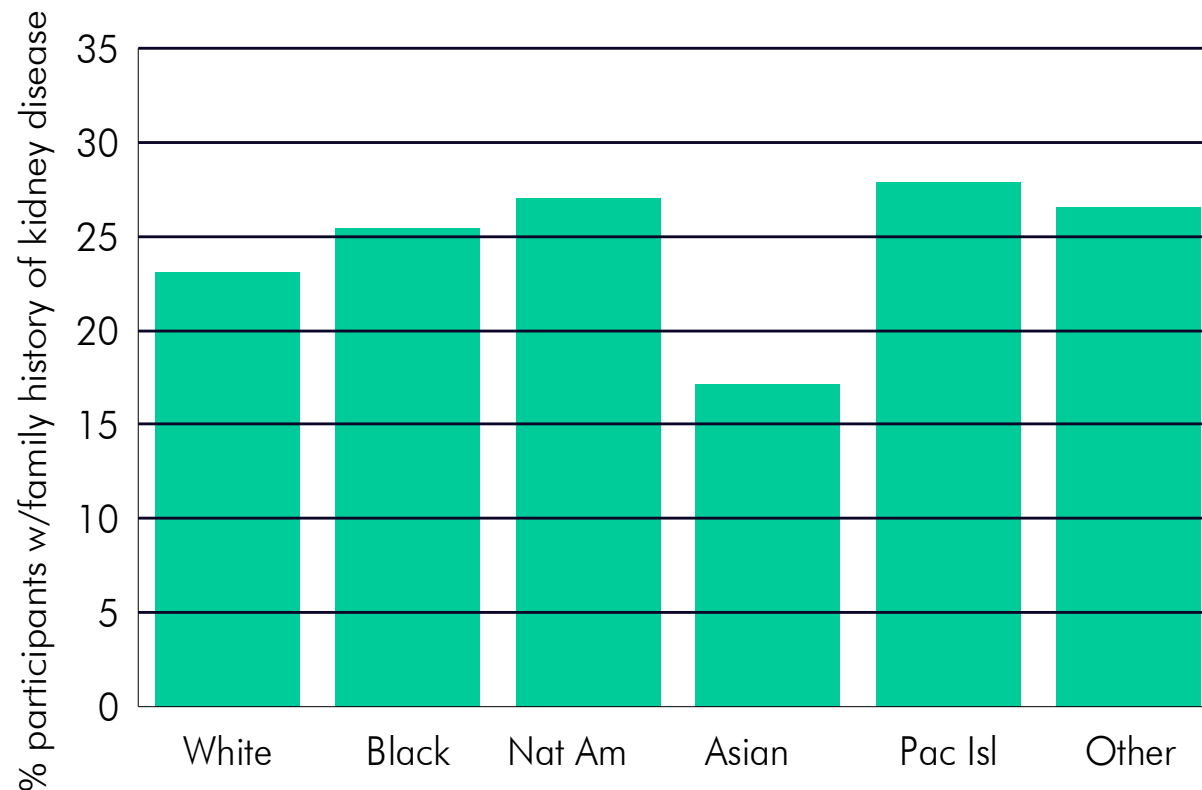
KEEP: n=11,122; excludes participants with missing eGFR or BMI values; CKD defined by eGFR <60 ml/min/1.73 m<sup>2</sup> (MDRD formula) or presence of microalbuminuria if eGFR ≥60 ml/min/1.73 m<sup>2</sup>

# Figure 5.11• percent distribution of KEEP participants with a family history of kidney disease, overall & by gender



KEEP: n=10,960 total, 2,707 with a reported family history of kidney disease; excludes participants with missing family history

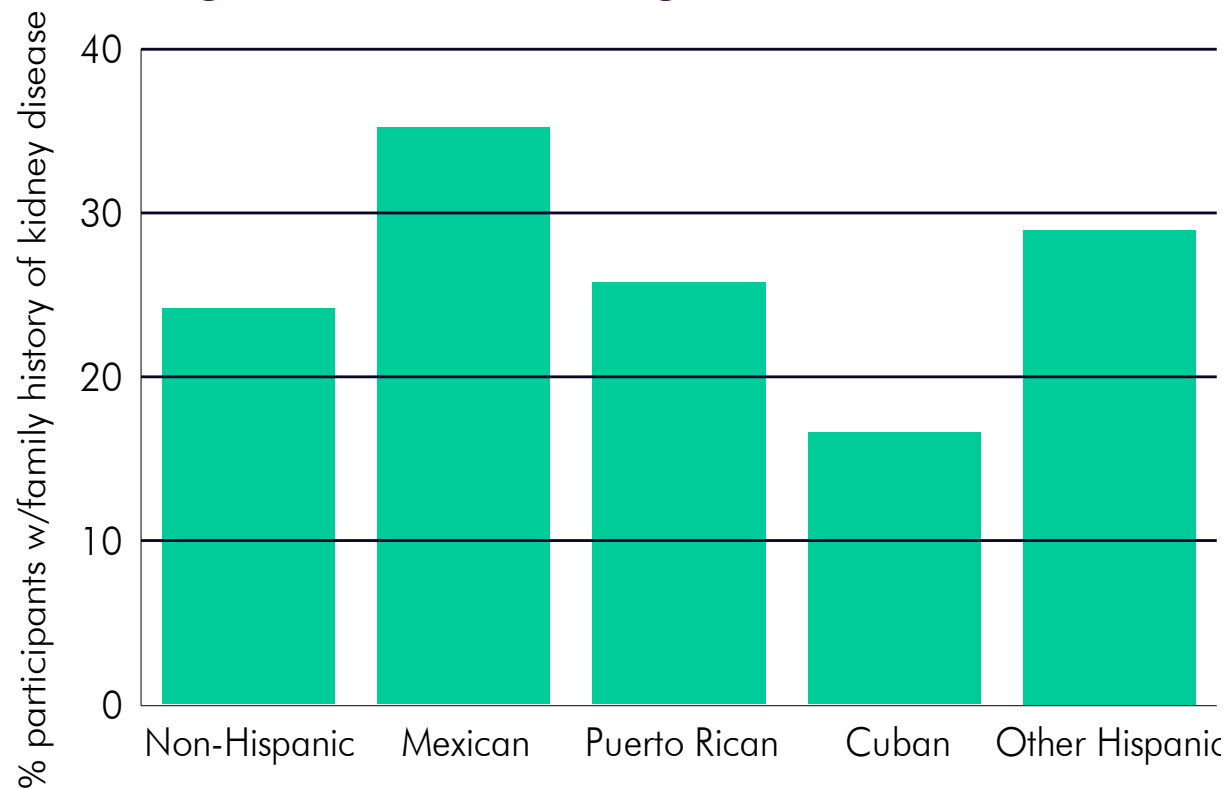
## Figure 5.12• percent distribution of KEEP participants with a family history of kidney disease, by race



KEEP: n=10,637, 2,608 with a reported family history of kidney disease; excludes participants with missing family history or race



## Figure 5.13• percent distribution of KEEP participants with a family history of kidney disease, by Hispanic ethnicity



KEEP: n=7,356, 1,845 with a reported family history of kidney disease; excludes participants with missing family history or ethnicity

# Table 5.1· concordance of eGFR, BSA-CG creatinine clearance, & gender-specific cut-points for categorizing abnormal kidney function

Serum creatinine	MDRD eGFR			BSA-CG creatinine clearance		
	<60	≥60	All	<60	≥60	All
Elevated	524	13	537	317	211	528
Not elevated	1,077	9,111	10,188	1,025	9,061	10,086
All	1,601	9,124	10,725	1,342	9,272	10,614

Elevated: men >1.5, women >1.3 mg/dl

Not elevated: men ≤1.5, women ≤1.3 mg/dl

eGFR <60 ml/min/1.73 m<sup>2</sup> = moderate reduction in kidney function

# Table 5.2• blood pressure levels, by stage of CKD, MDRD eGFR, & BSA-CG creatinine clearance

	Systolic (mmHg)				Diastolic (mmHg)			
	Mean	Median	SD	Interquar. range	Mean	Median	SD	Interquar. range
MDRD								
Stage I	132.6	130.0	20.2	24.0	80.0	80.0	12.0	16.0
Stage II	135.7	133.0	20.8	28.0	80.5	80.0	11.8	16.0
Stage III	142.1	140.0	22.4	28.0	79.3	80.0	12.4	18.0
Stages IV–V	148.1	148.0	26.6	29.0	77.9	78.0	13.8	18.0
Missing	133.9	131.5	21.0	27.0	81.2	80.0	12.9	17.0
Cockcroft-Gault								
Stage I	134.8	132.0	20.2	26.0	81.4	80.0	11.9	17.0
Stage II	134.8	132.0	21.7	28.0	78.4	79.0	11.5	16.0
Stage III	140.7	140.0	23.1	30.0	77.5	78.0	12.2	15.0
Stages IV–V	144.3	142.0	24.9	30.0	75.4	77.0	11.9	14.0
Missing	134.5	132.0	21.4	28.0	80.7	80.0	12.9	18.5

## CKD stages

Stage 1: CCR  $\geq 90$ , microalbuminuria =+

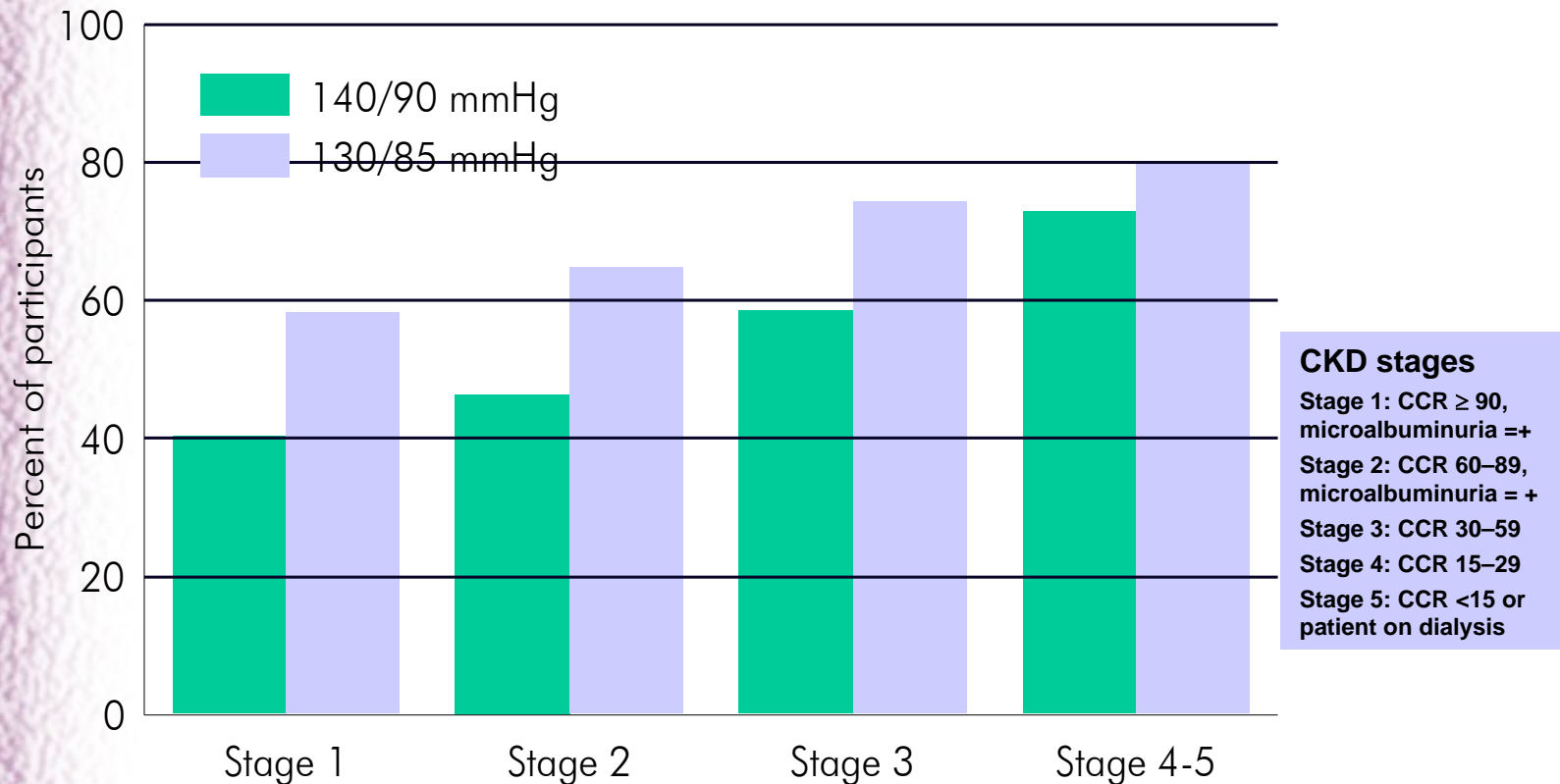
Stage 2: CCR 60–89, microalbuminuria = +

Stage 3: CCR 30–59

Stage 4: CCR 15–29

Stage 5: CCR <15 or patient on dialysis

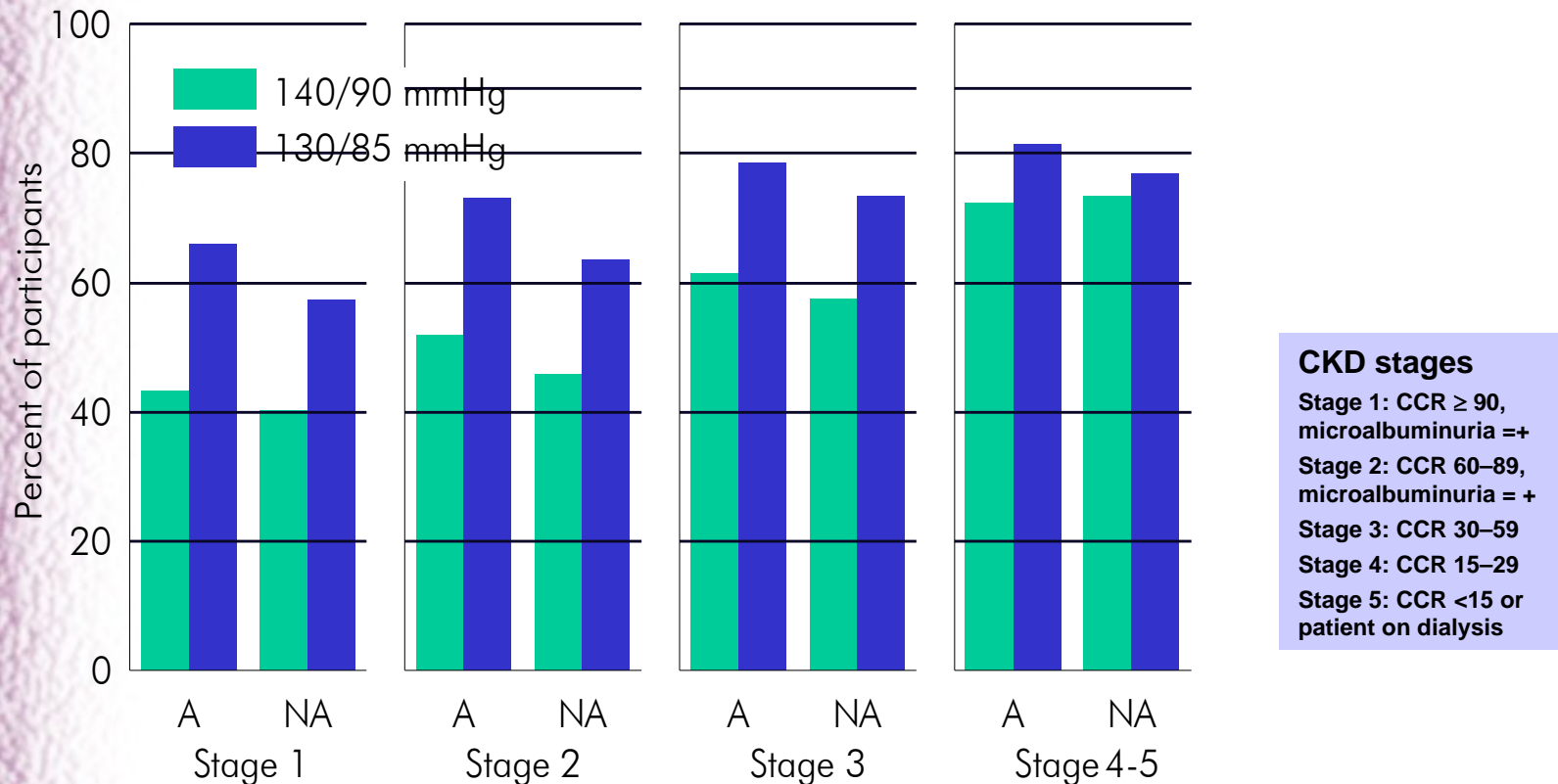
# Figure 5.14• percent distribution of KEEP participants with elevated blood pressure, by CKD stage



KEEP: n=10,584; excludes participants with missing CKD stage or blood pressure value



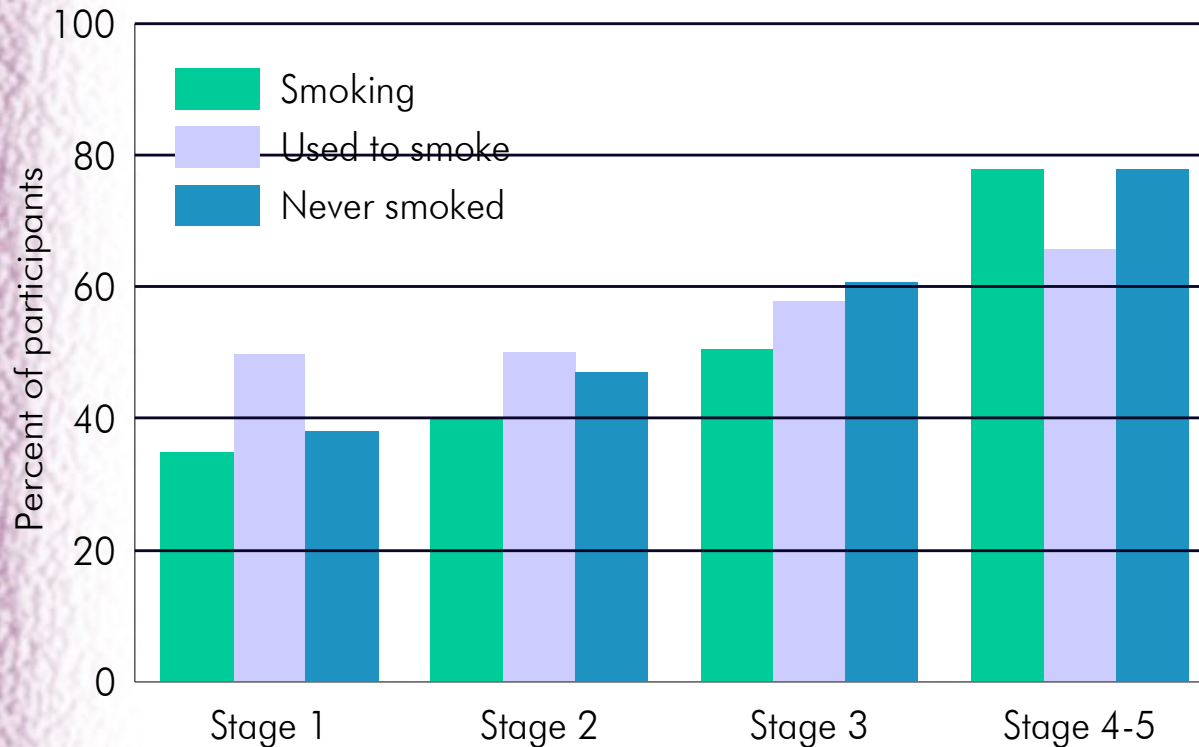
# Figure 5.15• percent distribution of KEEP participants with elevated blood pressure, by CKD stage, anemia, & eGFR



KEEP: n=10,319; excludes participants with missing CKD stage, anemia status, or blood pressure value; anemia defined by NKF-K/DOQI: males: Hgb  $<12$  g/dl; females age  $>50$ : Hgb  $<12$  g/dl; females age  $\leq 50$ : Hgb  $<11$  A= anemia, NA= no anemia



# Figure 5.16• percent distribution of KEEP participants with elevated blood pressure, by CKD & smoking status



## CKD stages

Stage 1: CCR  $\geq 90$ , 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

## JNC VI hypertension

Stage I: systolic 140–159 or diastolic 90–99  
Stage II: systolic 160–179 or diastolic 100–109  
Stage III: systolic  $\geq 180$  or diastolic  $\geq 110$

KEEP: n=9,940; excludes participants with missing CKD status, blood pressure status, or smoking status.  
Hypertension based on JNC definition.