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eAppendix 1. Data analysis overview and analytic notes for some of individual studies

Overview:

As previously described,¹ the collaborating cohorts were asked to compile a dataset with approximately 40 variables (key exposures [serum creatinine to estimate GFR and albuminuria], covariates [e.g., age, sex, race/ethnicity, diabetes], and outcomes [laboratory tests and hypertension]). To be consistent across cohorts, the CKD-PC Data Coordinating Center sent definitions for those variables to participating cohorts. We instructed studies not to impute any variables.

For 48 of the 63 cohorts in this specific study, the Data Coordination Center at Johns Hopkins University conducted the analysis; the remainder ran the standard code written in STATA by the Data Coordinating Center and shared the output with the Data Coordinating Center. The standard code was designed to automatically save all estimates and variance-covariance matrices needed for the meta-analysis. Then, the Data Coordinating Center meta-analyzed the estimates across cohorts using STATA.

As detailed in our previous reports,²³ each cohort was instructed to standardize their serum creatinine and report its method when available. The reported creatinine standardization allows grouping studies into studies that reported using a standard IDMS traceable method or conducted some serum creatinine standardization to IDMS traceable methods (ARIC, AusDiab, Beaver Dam CKD, CanPREDDICT, CARE FOR HOMe, ESTHER, GCKD, Geisinger, Gonryo, Gubbio, HUNT, Maccabi, MASTERPLAN, MMKD, NephroTest, NHANES, Okinawa 83 & 93, PREVEND, Rancho Bernardo, RCAV, REGARDS, RSIII, SEED, SRR-CKD, Takahata, Tromso) and studies where the creatinine standardization was not done (AASK, ADVANCE, Aichi, BC CKD, Beijing, CCF, ChinaNS, CHS, CKD-JAC, CRIB, Framingham, IPHS, KHS, MDRD, MESA, MRC, NZDCS, Ohasama, Pima, RENAAL, Sunnybrook, ULSAM, ZODIAC). For those cohorts without standardization, the creatinine levels were reduced by 5%, the calibration factor used to adjust non-standardization status (JMS, KP Hawaii, Mt Sinai, NIPPON DATA80, NIPPON DATA90, PSP-CKD, SMART, Taiwan MJ, and TLGS).

We calculated eGFR using the CKD-EPI equation: $eGFR_{CKD-EPI} = 141 \times (\text{minimum of standardized serum creatinine } [mg/dL]/\kappa \text{ or } 1)^{\alpha} \times (\text{maximum of standardized serum creatinine } [mg/dL]/\kappa \text{ or } 1)^{-1.209} \times 0.993^{age} \times (1.018 \text{ if female}) \times (1.159 \text{ if black})$, where κ is 0.7 if female and 0.9 if male and α is -0.329 if female and -0.411 if male.⁵ The selection of knots for eGFR and ACR was based on clinical thresholds.⁶

Notes for individual studies:

1. General population cohorts

Aichi: This cohort had no ACR measures. We used protein measures from dipstick tests to quantify albuminuria. This cohort does not have data on waist circumference.

ARIC: This cohort had no ACR measures at baseline. 16% of the creatinine measures were more than 5 years apart.

AusDiab: 67% of the creatinine measures were more than 5 years apart.

Beaver Dam CKD: This cohort had no ACR measures. We used protein measures from dipstick tests to quantify albuminuria. 14% of the creatinine measures were more than 5 years apart.

CHS: This cohort had no ACR measures at the baseline visit.

CIRCS: This cohort does not have data on waist circumference or ACR measures. We used protein measures from dipstick tests to quantify albuminuria.

ESTHER: This cohort does not have data on waist circumference or ACR measures. We used protein measures from dipstick tests to quantify albuminuria. Follow up visit was about 8.4 years after baseline.

Framingham: 45% of the creatinine measures were more than 5 years apart.

Geisinger: This cohort does not have data on waist circumference.

HUNT: Follow up visit was 11.2 years after baseline.

IPHS: This cohort does not have data on waist circumference.

JMS: This cohort had no ACR measures. We used protein measures from dipstick tests to quantify albuminuria.

Maccabi: This cohort does not have data on waist circumference.

MESA: Participants free from previous cardiovascular disease at baseline.

MRC: This cohort had no ACR measures. We used protein measures from dipstick tests to quantify albuminuria.

Mt Sinai BioMe: This cohort does not have data on waist circumference. Data for the outcome of death was not available.

NHANES: This cohort does not have data on waist circumference. Data for the outcome of ESKD was not available.

NIPPON DATA80: This cohort had no ACR measures or data on waist circumference.

NIPPON DATA90: This cohort had no ACR measures or data on waist circumference.

Ohasama: This cohort had no ACR measures. We used protein measures from dipstick tests to quantify albuminuria. 21% of the visits are more than 5 years apart.

Okinawa 83: This cohort does not have data on smoking or waist circumference. Antihypertensive medication use was not available. 4,614 subjects from the Okinawa 83 cohort were measured for creatinine again in 93 and these constitute the eGFR decline outcome.

Okinawa 93: This cohort does not have data on smoking or waist circumference. Antihypertensive medication use was not available.

PREVEND: 29% of the visits are more than 5 years apart.

Rancho Bernardo: 12% of the visits are more than 5 years apart.

RCAV: This cohort does not have data on waist circumference or smoking.

REGARDS: Follow up visit is 9.4 years from baseline.

SEED: This cohort does not have data on waist circumference and has no ACR measures.

Takahata: This cohort does not have data on waist circumference. Creatinine was not measured again after baseline. Data for the outcome of ESKD was not available.

TLGS: This cohort had no ACR measures. We used protein measures from dipstick tests to quantify albuminuria. 15% of the visits were more than 5 years apart.

Tromso: All of the creatinine measures were more than 5 years apart.

ULSAM: This cohort does not have data on waist circumference, smoking, or ACR measures. Data on use of antihypertensive medications was not available. Follow up was 21 years after baseline.

2. High-risk cohorts

ADVANCE: This study is an intervention study which includes participants with diabetes only.

KP Hawaii: This cohort does not have data on smoking or waist circumference. Data on use of antihypertensive medications was not available.

NZDCS: This cohort does not have data on waist circumference.

Pima: History of cardiovascular disease was not available. 38% of the visits are more than 5 years apart.

ZODIAC: This cohort does not have data on waist circumference. 14% of visits were more than 5 years apart.

3. CKD cohorts

AASK: This cohort does not have data on waist circumference. Urine protein-to-creatinine ratio was converted to urine albumin-to-creatinine ratio by dividing by 2.655 for men and 1.7566 for women.

BC CKD: This cohort does not have data on waist circumference.

CanPREDDICT: This cohort does not have data on smoking or waist circumference.

CARE FOR HOMe: ACR was not measured at baseline for this cohort.

CCF: This cohort does not have data on waist circumference. History of cardiovascular disease was defined as history of either coronary artery disease or coronary heart failure.

Gonryo: This cohort does not have data on waist circumference, smoking, or ACR measures. We used protein measures from dipstick tests to quantify albuminuria.

MDRD: This cohort does not have data on waist circumference. Urine protein-to-creatinine ratio was converted to urine albumin-to-creatinine ratio by dividing by 2.655 for men and 1.7566 for women. Anti-hypertensive medication use was not available.

MMKD: This cohort does not have data on waist circumference. Urine protein-to-creatinine ratio was converted to urine albumin-to-creatinine ratio by dividing by 2.655 for men and 1.7566 for women.

Nefrona: Patients free from previous cardiovascular disease.

NephroTest; This cohort does not have data on waist circumference.

PSP-CKD: This cohort does not have data on waist circumference. Urine protein-to-creatinine ratio was converted to urine albumin-to-creatinine ratio by dividing by 2.655 for men and 1.7566 for women.

RENAAL: This cohort does not have data on waist circumference. History of cardiovascular disease was not available.

SRR-CKD: This cohort does not have data on smoking

Sunnybrook: This cohort includes patients seen in the nephrology clinics at Sunnybrook Hospital in Toronto, Ontario, Canada with CKD stage 3-5 or proteinuric CKD stage 1-2. Urine protein-to-creatinine ratio was converted to urine albumin-to-creatinine ratio by dividing by 2.655 for men and 1.7566 for women.

Study	Ascertainment type			
AASK	Active			
ADVANCE	Active			
Aichi	n/a			
ARIC	Linkage to registry, Codes			
AusDiab	n/a			
BC CKD	Active			
Beaver Dam CKD	n/a			
Beijing	n/a			
CanPREDDICT	Active			
CARE FOR HOMe	n/a			
CCF	Linkage to registry			
ChinaNS	n/a			
CHS	Linkage to registry			
CIRCS	n/a			
CKD-JAC	Active			
COBRA	n/a			
CRIB	Active (with chart validation)			
ESTHER	n/a			
Framingham	n/a			
GCKD	Active (with confirmation)			
Geisinger	Linkage to registry			
Gonryo	Active			
Gubbio	n/a			
HUNT	Active, Linkage to registry			
IPHS	n/a			
JHS	n/a			
JMS	n/a			
KHS	Codes			
KP Hawaii	Active			
Maccabi	Active			
MASTERPLAN	Active			
MDRD	Active, Linkage to registry			
MESA	n/a			
MMKD	Active			
MRC Older People	n/a			
Mt Sinai BioMe	Codes			
Nefrona	Active			
NephroTest	Linkage to registry			
NHANES	n/a			
NIPPON DATA80	n/a			
NIPPON DATA90	n/a			
NZDCS	Linkage to registry, ICD codes			
Ohasama	n/a			
Okinawa 83/93	Linkage to registry			
Pima	Active, Linkage to registry			
PREVEND	n/a			
PSP-CKD	Active			
Rancho Bernardo	n/a			
RCAV	Linkage to registry			
REGARDS	Linkage to registry			
RENAAL	Active (with adjudication)			
RSIII	n/a			

SEED	n/a
SMART	Active (with chart validation)
SRR-CKD	Active, Linkage to registry
Sunnybrook	Linkage to registry
Taiwan MJ	n/a
Takahata	n/a
TLGS	n/a
Tromso	n/a
ULSAM	n/a
ZODIAC	n/a

eAppendix 2. Acronyms or abbreviations for studies included in the current report and their key references linked to the Web references

AASK:	African American Study of Kidney Disease and Hypertension ⁷
ADVANCE:	The Action in Diabetes and Vascular Disease: Preterax and Diamicron Modified Release
	Controlled Evaluation (ADVANCE) trial ⁸
Aichi:	Aichi Workers' Cohort Study ⁹
ARIC:	Atherosclerosis Risk in Communities Study ¹⁰
AusDiab:	Australian Diabetes, Obesity, and Lifestyle Study ¹¹
BC CKD:	British Columbia CKD Study ¹²
Beaver Dam CKD:	Beaver Dam CKD Study ¹³
Beijing:	Beijing Cohort Study ¹⁴
CanPREDDICT:	Canadian Study of Prediction of Death, Dialysis and Interim Cardiovascular Events ¹⁵
CARE FOR HOMe:	The Cardiovascular and Renal Outcome in CKD 2-4 Patients—The Fourth Homburg
	evaluation
CCF:	Cleveland Clinic CKD Registry Study ¹⁶
ChinaNS:	The China National Survey of Chronic Kidney Disease
CHS:	Cardiovascular Health Study ¹⁷
CIRCS:	Circulatory Risk in Communities Study ¹⁸
CKD-JAC:	Chronic Kidney Disease Japan Cohort
COBRA:	COBRA Study ¹⁹
CRIB:	Chronic Renal Impairment in Birmingham ²⁰
ESTHER:	Epidemiologische Studie zu Chancen der Verhütung, Früherkennung und optimierten
	THerapie chronischer ERkrankungen in der älteren Bevölkerung [GERMAN] ²¹
Framingham:	Framingham Heart Study ²²
GCKD:	German Chronic Kidney Disease Study ²³
Geisinger:	Geisinger Health System ²⁴
Gonryo:	Gonryo Study
Gubbio:	Gubbio Study ²⁵
HUNT:	Nord Trøndelag Health Study ²⁶
IPHS:	Ibaraki Prefectural Health Study ²⁷
JHS:	Jackson Heart Study
JMS:	Jichi Medical School cohort
KHS:	Korean Heart Study
KP Hawaii:	Kaiser Permanente Hawaii Cohort ²⁸
Maccabi:	Maccabi Health System ²⁹
MASTERPLAN:	Multifactorial Approach and Superior Treatment Efficacy in Renal
	Patients with the Aid of a Nurse Practitioner ³⁰
MDRD:	Modification of Diet in Renal Disease Study ³¹
MESA:	Multi-Ethnic Study of Atherosclerosis ³²
MMKD:	Mild to Moderate Kidney Disease Study ³³
MRC Older People:	MRC Study of assessment of older people ³⁴
Mt Sinai BioMe:	Mount Sinai BioMe Biobank Platform ³⁵
Nefrona:	Nefrona Study ³⁶
NephroTest:	NephroTest Study ³⁷
NHANES:	US National Health and Nutrition Examination Survey, using both NHANES III and the continuous NHANES from 1999-2010 ³⁸
NIPPON DATA80:	National Integrated Project for Prospective Observation of Non-communicable Disease and its Trends in the Aged 1980
NIPPON DATA90:	National Integrated Project for Prospective Observation of Non-communicable Disease and its Trends in the Aged 1990
NZDCS:	New Zealand Diabetes Cohort Study ³⁹
Ohasama:	Ohasama Study ⁴⁰

Okinawa 83:	Okinawa 83 Cohort ⁴¹
Okinawa 93:	Okinawa 93 Cohort ⁴²
Pima:	Pima Indian Study ⁴³
PREVEND:	Prevention of Renal and Vascular End-stage Disease Study ⁴⁴
PSP-CKD:	Primary-Secondary Care Partnership to Prevent Adverse Outcomes in Chronic Kidney
	Disease
Rancho Bernardo:	Rancho Bernardo Study ⁴⁵
RCAV:	Racial and Cardiovascular Risk Anomalies in CKD Cohort ⁴⁶
REGARDS:	Reasons for Geographic And Racial Differences in Stroke Study ⁴⁷
RENAAL:	Reduction of Endpoints in Non-insulin Dependent Diabetes Mellitus with
	the Angiotensin II Antagonist Losartan ⁴⁸
RSIII:	Rotterdam Study Third Cohort ⁴⁹
SEED:	Singapore Epidemiology of Eye Diseases ⁵⁰
SMART:	Second Manifestations of ARTerial Disease Study
SRR-CKD:	Swedish Renal Registry CKD Cohort ⁵¹
Sunnybrook:	Sunnybrook Cohort ⁵²
Taiwan MJ:	Taiwan MJ Cohort Study ⁵³
Takahata:	Takahata Study ⁵⁴
TLGS:	Tehran Lipid and Glucose Study ⁵⁵
Tromso:	Tromso Study
ULSAM:	Uppsala Longitudinal Study of Adult Men ⁵⁶
ZODIAC:	Zwolle Outpatient Diabetes project Integrating Available Care ⁵⁷

eAppendix 3. Acknowledgements and funding for collaborating cohorts

Study	List of sponsors
AASK	AASK was supported by grants to each clinical center and the coordinating center from the National Institute of Diabetes and Digestive and Kidney Diseases. In addition, AASK was supported by the Office of Research in Minority Health (now the National Center on Minority Health and Health Disparities, NCMHD) and the following institutional grants from the National Institutes of Health: M01 RR-00080, M01 RR-00071, M0100032, P20- RR11145, M01 RR00827, M01 RR00052, 2P20 RR11104, RR029887, and DK 2818-02. King Pharmaceuticals provided monetary support and antihypertensive medications to each clinical center. Pfizer Inc, AstraZeneca Pharmaceuticals, Glaxo Smith Kline, Forest Laboratories, Pharmacia and Upjohn also donated antihypertensive medications.
ADVANCE	National Health and Medical Research Council (NHMRC) of Australia program grants 358395 and 571281 and project grant 211086
Aichi	KAKENHI (09470112, 13470087, 17390185, 18590594, 20590641, 20790438, 22390133, 26293153)
ARIC	The Atherosclerosis Risk in Communities study has been funded in whole or in part with Federal funds from the National Heart, Lung, and Blood Institute, National Institutes of Health, Department of Health and Human Services, under Contract nos. (HHSN268201700001I, HHSN268201700003I, HHSN268201700005I, HHSN268201700004I, HHSN2682017000021). The authors thank the staff and participants of the ARIC study for their important contributions.
AusDiab	The Baker IDI Heart and Diabetes Institute, Melbourne, Australia, their sponsors, and the National Health and Medical Research Council of Australia (NHMRC grant 233200), Amgen Australia, Kidney Health Australia and The Royal Prince Alfred Hospital, Sydney, Australia.
BC CKD	BC Provincial Renal Agency, an Agency of the Provincial Health Services Authority in collaboration with University of British Columbia.
Beaver Dam CKD	2U10EY006594
Beijing	The research for this study was supported by the Program for New Century Excellent Talents in University (BMU2009131) from the Ministry of Education of the People's Republic of China, and the grants for the Early Detection and Prevention of Non- communicable Chronic Diseases from the International Society of Nephrology Research Committee.
CanPREDDICT	
CARE FOR HOMe	Supported by the Else Kröner-Fresenius Stiftung
CCF	Supported by an unrestricted educational grant from Amgen to the Department of Nephrology and Hypertension.
ChinaNS	
CHS	This research was supported by contracts HHSN268201200036C, HHSN268200800007C, HHSN268201800001C, N01HC55222, N01HC85079, N01HC85080, N01HC85081, N01HC85082, N01HC85083, N01HC85086, and grants U01HL080295 and U01HL130114 from the National Heart, Lung, and Blood Institute (NHLBI), with additional contribution from the National Institute of Neurological Disorders and Stroke (NINDS). Additional support was provided by R01AG023629 from the National Institute on Aging (NIA). A full list of principal CHS investigators and institutions can be found at CHS-NHLBI.org.
CIRCS	
CKD-JAC	

COBRA	
CRIB	British Renal Society Project Grant Award
	British Heart Foundation Project Grant Award.
ESTHER	Ministry of Research, Science and the Arts Baden-Württemberg (Stuttgart, Germany), Federal Ministry of Education and Research (Berlin, Germany), Federal Ministry of Family Affairs, Senior Citizens, Women and Youth (Berlin, Germany), European Commission FP7 framework programme of DG-Research (CHANCES Project). Measurement of urinary albumin was funded by Dade-Behring, Marburg, Germany.
Framingham	NHLBI Framingham Heart Study (N01-HC-25195).
GCKD	The GCKD study is supported by grants from the Federal Ministry of Education and Research (Bundesministerium für Bildung und Forschung; www.bmbf.de), FKZ 01ER 0804, 01ER 0818, 01ER 0819, 01ER 0820 und 01ER 0821 and the Foundation for Preventive Medicine of the KfH (Kuratorium für Heimdialyse und Nierentransplantation e.V. – Stiftung Präventivmedizin; <u>www.kfh-stiftung-praeventivmedizin.de</u>) and corporate partners (for a list see <u>www.gckd.org</u>). The GCKD investigators gratefully acknowledge the expert support of all members of study staff, the dedicated contribution of all collaborating nephrologists (for a list of contributors and the 169 study sites, see www.gckd.org) and the support of patients participating in the study.
Geisinger	Geisinger Clinic
Gonryo	
Gubbio	Municipal and Health Authorities of Gubbio, Italy; Center of Gubbio Epidemiological Studies, Gubbio, Italy; University of Salerno, Salerno, Italy.
HUNT	Faculty of Medicine, Norwegian University of Science and Technology; The Norwegian Institute of Public Health; Nord-Trøndelag County Council; and Central Norway Regional Health Authority
IPHS	
JHS	The Jackson Heart Study (JHS) is supported and conducted in collaboration with Jackson State University (HHSN268201300049C and HHSN268201300050C), Tougaloo College (HHSN268201300048C), and the University of Mississippi Medical Center (HHSN268201300046C and HHSN268201300047C) contracts from the National Heart, Lung, and Blood Institute (NHLBI) and the National Institute for Minority Health and Health Disparities (NIMHD). The authors also wish to thank the staffs and participants of the JHS.
JMS	
KHS	
KP Hawaii	
Maccabi	
MASTERPLAN	The MASTERPLAN study is a clinical trial with trial registration ISRCTN registry: 73187232. Sources of funding: The MASTERPLAN Study was supported by grants from the Dutch Kidney Foundation (Nierstichting Nederland, number PV 01), and the Netherlands Heart Foundation (Nederlandse Hartstichting, number 2003 B261). Unrestricted grants were provided by Amgen, Genzyme, Pfizer and Sanofi-Aventis.
MDRD	NIDDK UO1 DK35073 and K23 DK67303, K23 DK02904
MESA	This research was supported by contracts HHSN268201500003I, N01-HC-95159, N01-HC-95160, N01-HC-95161, N01-HC-95162, N01-HC-95163, N01-HC-95164, N01-HC-95165,

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	NCDD TI, dead ded de de the statistical de contraction de la destatistica de la desta
	NCRR. The authors thank the other investigators, the start, and the participants of the
	MESA study for their valuable contributions. A full list of participating MESA investigators
	and institutions can be found at <u>http://www.mesa-nhlbi.org</u> .
MMKD	The MMKD study was funded by the Austrian Heart Fund and by the Innsbruck Medical
	University.
MPC Older	UK Medical Pasearch Council Department of Health for England Wales and the Scottish
Deemle	Office and Kidney Decourds UV
People	Office and Kidney Research UK
Mt Sinai BioMe	
Nefrona	The Nefrona study was funded by research grants from Abvie, and Instituto de Salud Carlos
	III (PI13/01565, PI16/01354, RD16/0009/0011 (Co-funded by European Regional
	Development Fund "A way to make Europe")
NonhroTost	The Nonbroat CKD cohort study is supported by grants from: Incorm CIS IPaSP AO
Nephiorest	The replicit est CKD consist study is supported by grants from. Inserin 015-1KeSF AO
	8113LS IGIR; French Ministry of Health AOM 09114 and AOM 10245; Inserm AO
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	Courbebaisse, D. Eladari et G. Maruani (European Georges Pompidou Hospital); Jean-
	Jacques Boffa, Pierre Ronco, H. Fessi, Eric Rondeau, Emmanuel Letavernier, Jean Philippe
	Haymann, P. Urena-Torres (Tenon Hospital)
NHANES	United States Center for Disease Control
NIPPON	Health and Labour Sciences Research Grants of the Ministry of Health Labour and Welfare
DATARO	Janan (Comprehensive Desearch on Life Style Poleted Diseases including Cardiovascular
DATAOU	Japan (Comprehensive Research on Ene-style Related Diseases including Caldiovascular
	Diseases and Diabetes Mellitus [H22-Junkankitou-Seisnuu-Sitei-017, H25-Junkankitou-
	Seishuu-Sitei-022])
NIPPON	Health and Labour Sciences Research Grants of the Ministry of Health, Labour and Welfare,
DATA90	Japan (Comprehensive Research on Life-Style Related Diseases including Cardiovascular
	Diseases and Diabetes Mellitus [H22-Junkankitou-Seishuu-Sitei-017, H25-Junkankitou-
	Seishuu-Sitei-022])
NZDCS	Now Zealand Haalth Desearch Council Auckland Medical Desearch Foundation and New
NZDCS	New Zearand Hearin Research Council, Auckland Medical Research Foundation and New
	Zealand Society for the Study of Diabetes
Ohasama	Grant-in-Aid(H20-22Junkankitou[Seishuu]-Ippan-009, 013 and H23-Junkankitou
	[Senshuu]-Ippan-005) from the Ministry of Health, Labor and Welfare, Health and Labor
	Sciences Research Grants, Japan; Japan Atherosclerosis Prevention Fund.
Okinawa 83/93	
Olimawa 05/95	
Dime	This work was supported by the Intromural Desearch Program of the National Institute of
Fiilla	This work was supported by the intraminal Research Program of the National Institute of
	Diabetes and Digestive and Kidney Diseases.
PREVEND	The PREVEND study is supported by several grants from the Dutch Kidney Foundation,
	and grants from the Dutch Heart Foundation, the Dutch Government (NWO), the US
	National Institutes of Health (NIH) and the University Medical Center Groningen, The
	Netherlands (UMCG) Dade Behring Marburg Germany supplied equipment and reagents
	for nonhalomatric monsurament of uniony albumin
DOD OVD	The pherometric measurement of urmary arbumin.
PSP-CKD	I ne PSP-CKD study was funded by the National Institute for Health Research (NIHR)
	Collaboration for Leadership in Applied Health Research and Care (CLAHRC) East
	Midlands. Ongoing support for the study is funded by NIHR CLAHRC East Midlands and
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Rancho	NIA AG07181 and AG028507 NIDDK DK31801
Bernardo	
DemanuO	

RCAV	This study was supported by grant R01DK096920 from NIH-NIDDK and is the result of work supported with resources and the use of facilities at the Memphis VA Medical Center
	and the Long Beach VA Medical Center. Support for VA/CMS data is provided by the
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Sunnybrook	
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TLGS	
Tromso	
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ZODIAC	

Study	Baseline	N*	Follow-up	Follow-	Follow-up time	Death	ESKD	GFR decline [†]
	Year(s)		time for	up time to	for GFR		Events	events
			death (y)	ESKD (y)	decline [†] (y)			
General Population								
Aichi	2002-2003	4802	8 (2)			81		<50
ARIC	1987-1990	15488	22 (7)	22 (7)	14 (9)	6304	418	2344
AusDiab	1999-2000	10957	13 (2)		10 (3)	1362		62
Beaver Dam CKD	1988-1995	4787	14 (5)		5 (0)	2052		75
Beijing	2004	1505	6(1)			83		<50
ChinaNS	1994-2008	44514	6 (2)			797		
CHS	1992-1993	4574	12 (6)	12 (6)	4 (0)	3939	65	106
CIRCS	1986-1993	11425	19 (4)		13 (6)	1413		509
COBRA	2004-2005	1163	7 (3)			256		<50
ESTHER	2000-2002	9746	11 (2)		8 (0)	1538		484
Framingham	1979-1986	2947	10 (2)		8 (3)	300		114
Geisinger	1996-2017	390614	9 (5)	7 (5)	7 (5)	48573	3346	27935
Gubbio	1988-1992	1676	17 (3)			233		<50
HUNT	1995-1997	63852	13 (2)	13 (2)	11 (1)	7090	98	833
IPHS	1993-2004	93397	18 (5)		10 (4)	25922		537
JHS	2000-2004	3463	10 (2)		8(1)	296		108
JMS	1992-1995	4905	12 (2)			287		
KHS	1996-2004	350556	13 (3)	13 (3)	3 (2)	13330	1184	942
Maccabi	2006-2012	656640	6 (2)	6(2)	6 (2)	33636	2325	12180
MESA	2000-2002	6710	8 (2)		5 (1)	501		142
MRC	1995-1999	11965	7 (4)		- ()	7916		
Mt Sinai BioMe	2003-2014	23112	4 (3)	4 (3)	4 (3)		821	1544
NHANES	1988-1994	58477	10(7)			7581		
NIPPON	1980	8847	24 (8)			3203		
DATA80								
NIPPON	1990	7219	18 (5)			1651		
DATA90								
Ohasama	1990-2010	1595	13 (6)			326		<50
Okinawa 83	1983	8927		17 (1)	10 (0)		94	754
Okinawa 93	1993	89368		7 (0)			160	
PREVEND	1997-1998	7865	11 (3)		10 (3)	768	<50	97
Rancho Bernardo	1992-1997	1735	13 (6)		8 (3)	758		66
RCAV	2004-2012	3018133	7 (2)	6 (2)	6 (2)	583387	9103	195158
REGARDS	2003-2007	28469	11 (3)	8 (2)	9(1)	6586	428	2085
RSIII	2006-2008	3384	8 (2)			243		<50
SEED	2004-2012	6424	5 (2)			221	<50	
Taiwan MJ	1994-2008	473863	9 (4)		5 (3)	17577		354
Takahata	2004-2006	2272	9(1)			180		<50
TLGS	1995-2006	10212	11 (3)		11 (3)	706		158
Tromso	1994-2008	7762	16 (4)		11 (3)	2390	<50	226
ULSAM	1970-1973	1210	35 (6)		21 (0)	843	<50	61
Subtotal		5459014	8 (3)	7 (2)	6 (3)	782329	18042	246874
High CVD Risk Cohorts								
ADVANCE	2001-2003	11038	9 (3)	9 (3)	5 (1)	2242	81	1284
KP Hawaii	2000-2006	29480	2 (1)	2 (1)	2 (1)	1288	289	1450
NZDCS	1999-2006	27725	9 (3)	9 (3)	2 (1)	7910	942	179
Pima	1982-2007	4015	12 (7)	12 (7)	12 (7)	1060	306	273
SMART	1996-2014	10485	7 (4)	7 (4)		1338	66	

eTable 1. Number of Participants, Events, and Follow-up Time by Study Cohort

ZODIAC	1998-2002	1674	10 (4)		8 (3)	808		158
Subtotal		84417	6 (3)	6 (3)	3 (2)	14646	1684	3344
CKD Cohorts	-							
AASK	1995-1998	1087	8 (3)	7 (3)	6 (4)	211	298	525
BC CKD	2003-2012	7646	7 (3)	4 (3)	4 (3)	2909	2673	3221
CanPREDDICT	2008	1643	3 (1)	3 (2)	3 (1)	381	381	619
CARE FOR	2008-2015	462	4 (2)			63	<50	<50
HOMe								
CCF	2005-2009	36018	2(1)	2 (1)	2 (1)	5455	995	1669
CKD-JAC	2007-2009	2478	4 (2)	4 (2)	3 (1)	73	502	1075
CRIB	1996-1998	369	6 (3)	4 (3)	3 (1)	141	184	137
GCKD	2009-2012	5050	2 (0)	2 (0)	2 (0)	157	71	238
Gonryo	2006-2008	3352	4 (2)	4 (2)	4 (2)	126	336	453
MASTERPLAN	2004-2006	671	5 (1)	4(1)	4 (1)	118	148	192
MDRD	1989-1991	1771	16 (6)	9 (7)	2(1)	819	1136	272
MMKD	1997-1998	198		4 (2)		<50	74	<50
Nefrona	2009-2011	1751	4(1)	2 (0)	2 (0)	103	130	96
NephroTest	2000-2013	1891	6 (3)	5 (3)	4 (2)	364	448	234
PSP-CKD	2010-2013	20429	4 (2)	4 (2)	2(1)	4707	204	271
RENAAL	1996-1998	1468	3 (1)	3 (1)	2(1)	304	330	852
SRR-CKD	2005-2012	2463	3 (2)	3 (2)	2(1)	690	669	285
Sunnybrook	2000	2860	3 (2)	3 (2)	2 (2)	695	340	460
Subtotal		91607	4 (2)	3 (2)	2 (1)	17316	8919	10599
Total		5635038	8 (3)	7 (2)	6 (3)	814291	28645	260817

CKD: chronic kidney disease; CVD: cardiovascular disease; eGFR: estimated glomerular filtration rate; ESKD: end-stage kidney disease

Cohorts with <50 events for an outcome were not included in analyses for that outcome.

*Total N reflects the number of participants at risk for death in all cohorts except in MESA it represents number of participants at risk for death or GFR decline and in Mt Sinai it represents the number of participants at risk for ESKD or GFR decline.

†GFR decline defined as eGFR decline \geq 40%, initiation of kidney replacement therapy or eGFR <10 mL/min/1.73 m².

General Population Cohorts					
	18.5to <25	25 to <30	30 to <35	≥35	Total
n	1837795	1958101	1055261	607857	5459014
Age, years	51 (15)	57 (14)	57 (13)	55 (13)	55 (14)
Female	705942 (38%)	415334 (21%)	199411 (19%)	150168 (25%)	1470855 (27%)
Black	137038 (7%)	201712 (10%)	141229 (13%)	87869 (14%)	567848 (10%)
Asian	757467 (41%)	314566 (16%)	36442 (3%)	4330 (1%)	1112805 (20%)
Current smoking	200241 (11%)	116930 (6%)	35394 (3%)	22490 (4%)	375055 (7%)
Systolic blood pressure					
(mmHg)	124 (18)	131 (18)	134 (17)	136 (17)	130 (18)
Cholesterol (mmol/L)	4.89 (1.02)	4.98 (1.07)	4.97 (1.11)	4.91 (1.09)	4.95 (1.07)
Diabetes	142016 (8%)	320314 (16%)	280521 (27%)	229211 (38%)	972062 (18%)
History of CVD	168230 (9%)	277506 (14%)	175473 (17%)	106849 (18%)	728058 (13%)
eGFR (ml/min/1.73m2)	89 (18)	85 (17)	85 (17)	87 (18)	86 (17)
ACR > 30 mg/g	41588 (6%)	34388 (9%)	17873 (16%)	13772 (24%)	107621 (8%)
Waist Circumference (cm)	75 (12)	87 (12)	99 (12)	113 (14)	80 (14)
Waist Height Ratio	0.46 (0.13)	0.53 (0.15)	0.60 (0.07)	0.69 (0.08)	0.49 (0.14)
High CVD Risk Cohorts					-
n	19049	29495	19559	16314	84417
Age, years	63 (14)	62 (13)	59 (12)	53 (12)	60 (13)
Female	9553 (50%)	12021 (41%)	9076 (46%)	9436 (58%)	40086 (47%)
Black	21 (0%)	41 (0%)	25 (0%)	20 (0%)	107 (0%)
Asian	2708 (14%)	2524 (9%)	576 (3%)	136 (1%)	5944 (7%)
Current smoking	2529 (13%)	3508 (12%)	2083 (11%)	1714 (11%)	9834 (12%)
Systolic blood pressure					
(mmHg)	135 (21)	138 (20)	138 (20)	137 (20)	137 (20)
Cholesterol (mmol/L)	5.10 (1.22)	5.12 (1.22)	5.17 (1.22)	5.15 (1.18)	5.13 (1.21)
Diabetes	11297 (59%)	20248 (69%)	14919 (76%)	12730 (78%)	59194 (70%)
History of CVD	4959 (26%)	8147 (28%)	4455 (23%)	2747 (17%)	20308 (24%)
eGFR (ml/min/1.73m2)	77 (22)	77 (21)	79 (22)	85 (23)	79 (22)
CKD Cohorts					
n	26502	33654	19061	12390	91607
Age, years	69 (13)	70 (11)	69 (11)	66 (11)	69 (12)
Female	14131 (53%)	14662 (44%)	9183 (48%)	7661 (62%)	45637 (50%)
Black	1335 (5%)	2125 (6%)	1517 (8%)	1400 (11%)	6377 (7%)
Asian	4877 (18%)	2520 (7%)	619 (3%)	166 (1%)	8182 (9%)
Current smoking	2811 (11%)	2833 (8%)	1588 (8%)	965 (8%)	8197 (9%)
Systolic blood pressure					
(mmHg)	132 (20)	134 (19)	135 (19)	136 (19)	134 (19)
Cholesterol (mmol/L)	4.85 (1.19)	4.77 (1.25)	4.75 (1.19)	4.75 (1.23)	4.78 (1.22)
Diabetes	5604 (21%)	9316 (28%)	7008 (37%)	5990 (48%)	27918 (30%)
History of CVD	6160 (23%)	9041 (27%)	5285 (28%)	3368 (27%)	23854 (26%)
eGFR (ml/min/1.73m2)	47 (18)	46 (15)	46 (14)	46 (14)	46 (16)
ACR > 30 mg/g	8483 (58%)	11314 (62%)	6650 (62%)	4229 (60%)	30676 (61%)

eTable 2. Summary Baseline Characteristics by BMI Category

Waist Circumference (cm)	83 (8)	98 (8)	109 (9)	122 (11)	98 (14)
Waist Height Ratio	0.50 (0.05)	0.58 (0.05)	0.65 (0.05)	0.73 (0.06)	0.59 (0.08)

	Ν				Age				Female	e			Black				Asian				Current Sr	noking		
	18.5- <25	25-<30	30-<35	≥35	18.5 -<25	25- <30	30- <35	≥35	18.5- <25	25-<30	30-<35	≥35	18.5- <25	25-<30	30-<35	5≥35	18.5- <25	25-<30	30-<35	≥35	18.5-<25	25-<30	30- <35	≥35
General Popu	lation																							
Aichi	3698	1043	55	6	49 (7)	50 (7)	48 (7)	44 (4)	832 (22%)	119 (11%)	7 (13%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3698 (100%)	1043 (100%)	55 (100%	6 (100%	1039 (29%)	326 (32%)	21 (40%)	0 (0%)
ARIC	5042	6163	2875	1408	55 (6)	55 (6)	55 (6)	54 (6)	3132 (62%)	2725 (44%)	1569 (55%)	1070 (76%)	864 (17%)	1549 (25%)	1007 (35%)	662 (47%)	17 (0%)	12 (0%)	2 (0%)	1 (0%)	1655 (33%)	1500 (24%)	616 (21%)	222 (16%)
AusDiab	4051	4436	1737	733	50 (15)	54 (14)	54 (13)	51 (13)	2584 (64%)	1974 (44%)	907 (52%)	523 (71%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	687 (17%)	647 (15%)	265 (16%)	90 (13%)
Beaver Dam CKD	1340	1984	1002	461	63 (12)	63 (11)	62 (11)	60 (10)	924 (69%)	943 (48%)	496 (50%)	304 (66%)	0 (0%)	0 (0%)	0 (0%)	1 (0%)	7 (1%)	4 (0%)	0 (0%)	1 (0%)	359 (27%)	376 (19%)	141 (14%)	63 (14%)
Beijing	715	651	131	8	60 (10)	60 (10)	62 (9)	55 (8)	367 (51%)	310 (48%)	74 (56%)	6 (75%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	715 (100%)	651 (100%)	131 (100%)	8 (100%)	175 (24%)	148 (23%)	26 (20%)	2 (25%)
ChinaNS	28071	13874	2285	284	46 (15)	50 (13	50 (14	48 (15)	16244 (58%)	7549 (54%)	1341 (59%)	195 (69%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	28071 (100%)	13874 (100%)	2285 (100%	284 (100%	6525 (23%)	3486 (25%)	548 (24%)	54 (19%)
CHS	1659	1939	707	269	76 (6)	75 (5)	74 (5)	73 (4)	980 (59%)	997 (51%)	446 (63%)	214 (80%)	192 (12%)	327 (17%)	169 (24%)	103 (38%)	1 (0%)	2 (0%)	0 (0%)	0 (0%)	213 (13%)	152 (8%)	52 (7%)	13 (5%)
CIRCS	8176	2901	326	22	54 (9)	55 (8)	55 (9)	55 (9)	4890 (60%)	1798 (62%)	244 (75%)	20 (91%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	8176 (100%)	2901 (100%)	326 (100%	22 (100%	2259 (28%)	637 (22%)	58 (18%)	4 (18%)
COBRA	440	429	191	103	56 (12)	53 (10)	51 (9)	49 (9)	223 (51%)	263 (61%)	145 (76%)	91 (88%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	440 (100%)	429 (100%)	/ 191 (100%)	103 (100%	164 (37%)	141 (33%)	49 (26%)	27 (26%)
ESTHER	2635	4603	1927	581	62 (7)	62 (7)	62 (6)	61 (7)	1676 (64%)	2261 (49%)	1050 (54%)	366 (63%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	567 (22%)	642 (14%)	242 (13%)	67 (12%)
Framingham	880	1248	571	248	59 (10)	59 (10)	60 (9)	57 (9)	612 (70%)	560 (45%)	251 (44%)	143 (58%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	150 (17%)	169 (14%)	91 (16%)	33 (13%)
Geisinger	92279	119063	89851	89421	44 (19)	50 (18)	51 (17)	48 (16)	61056 (66%)	59591 (50%)	44869 (50%)	55243 (62%)	2156 (2%)	2835 (2%)	2430 (3%)	2707 (3%)	1228 (1%)	829 (1%)	284 (0%)	108 (0%)	24931 (27%)	26301 (22%)	18040 (20%)	16934 (19%)
Gubbio	404	796	380	96	54 (6)	54 (6)	, 55 (6)	, 55 (6)	249 (62%)	392 (49%)	212 (56%)	73 (76%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	158 (39%)	253 (32%)	87 (23%)	23 (24%)
HUNT	25632	27599	8446	2175	46 (17)	52 (16)	55 (16)	54 (16)	14939 (58%)	12501 (45%)	4713 (56%)	1598 (73%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	8859 (35%)	7240 (26%)	1932 (23%)	455 (21%)
IPHS	64358	26305	2543	191	59 (11)	60 (10)	59 (10)	57 (10)	41774 (65%)	17651 (67%)	1999 (79%)	168 (88%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	64358 (100%)	26305 (100%)	2543 (100%)	191 (100%)	13224 (21%)	4405 (17%)	388 (15%)	23 (12%)

eTable 3. Baseline Characteristics by BMI Category – Demographics

JHS	489	1074	922	978	50 (14)	51 (12)	51 (11)	49 (11)	256 (52%)	555 (52%)	572 (62%)	746 (76%)	489 (100%)	1074 (100%)	922 (100%)	978 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	111 (23%)	156 (15%)	113 (12%)	108 (11%)
JMS	3741	1060	100	4	54 (11)	56 (10	55 (10	54 (11	2339 (63%)	704 (66%)	73 (73%)	3 (75%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3741 (100%)	1060 (100%)	100 (100%	4 (100%	850 (23%)	206 (19%)	17 (17%)	0 (0%)
KHS	233940	108088	8020	508	46 (10)	47 (10	46 (10	46 (11)	94399 (40%)	32373 (30%)	3385 (42%)	280 (55%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	233940 (100%)	108088 (100%)	8020 (100%	508 (100%	57190 (31%)	27396 (32%)	1926 (30%)	88 (21%)
Maccabi	231926	240646	123905	60163	44 (16)	51 (16	52 (15	51 (15	151710 (65%)	115532 (48%)	65412 (53%)	39016 (65%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	4793 (2%)	5153 (2%)	2520 (2%)	1135 (2%)
MESA	1882	2653	1418	757	63 (11)	63 (10	62 (10	60 (9)	1047 (56%)	1212 (46%)	726 (51%)	553 (73%)	317 (17%)	694 (26%)	503 (35%)	347 (46%)	491 (26%)	246 (9%)	32 (2%)	2 (0%)	276 (15%)	418 (16%)	216 (15%)	92 (12%)
MRC	4891	5045	1621	408	82 (5)	81 (4)	× 80 (4)	80 (4)	3017 (62%)	2823 (56%)	1051 (65%)	324 (79%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	671 (14%)	491 (10%)	143 (9%)	28 (7%)
Mt Sinai BioMe	6973	7524	4591	4024	49 (17)	53 (15	53 (14	50 (14	4144 (59%)	3950 (52%)	2847 (62%)	2946 (73%)	1378 (20%)	1794 (24%)	1352 (29%)	1572 (39%)	330 (5%)	168 (2%)	40 (1%)	19 (0%)	910 (14%)	1067 (15%)	721 (17%)	603 (16%)
NHANES	20023	19980	10915	7559	42 (21)	/ 49 (20	/ 49 (18	46 (17	10494 (52%)	8991 (45%)	5744 (53%)	4955 (66%)	4171 (21%)	3973 (20%)	2613 (24%)	2435 (32%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3868 (22%)	3182 (17%)	1651 (16%)	1074 (15%)
NIPPON DATA80	6841	1810	181	15	50 (13)	50 (12	53 (12	43 (8)	3734 (55%)	1048 (58%)	146 (81%)	14 (93%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	6841 (100%)	1810 (100%)	181 (100%)	15 (100%)	2298 (34%)	518 (29%)	25 (14%)	1 (7%)
NIPPON DATA90	5379	1653	168	19	52 (14)	54 (13)	53 (13)	52 (11)	3126 (58%)	939 (57%)	116 (69%)	13 (68%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5379 (100%)	1653 (100%)	168 (100%)	19 (100%)	1520 (28%)	476 (29%)	40 (24%)	4 (21%)
Ohasama	1105	445	37	8	64 (10)	63 (9)	61 (10)	61 (12)	643 (58%)	277 (62%)	28 (76%)	5 (63%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1105 (100%)	445 (100%)	37 (100%)	8 (100%)	193 (18%)	53 (12%)	1 (3%)	2 (25%)
Okinawa 83	5824	2655	411	37	51 (16)	52 (13)	52 (14)	51 (15)	3449 (59%)	1565 (59%)	285 (69%)	30 (81%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	5824 (100%)	2655 (100%)	411 (100%	37 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Okinawa 93	55560	29433	3987	388	54 (16)	56 (13)	54 (13	50 (13)	32111 (58%)	16160 (55%)	2513 (63%)	264 (68%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	55560 (100%)	29433 (100%)	3987 (100%)	388 (100%				
PREVEND	3398	3231	961	275	46 (12)	53 (13	54 (12	53 (12	1900 (56%)	1360 (42%)	481 (50%)	195 (71%)	25 (1%)	28 (1%)	14 (1%)	9 (3%)	69 (2%)	65 (2%)	25 (3%)	2 (1%)	1359 (40%)	951 (29%)	264 (27%)	72 (26%)
Rancho Bernardo	881	656	150	48	72 (12)	71 (11)	69 (11)	, 67 (10)	618 (70%)	323 (49%)	82 (55%)	29 (60%)	1 (0%)	0 (0%)	0 (0%)	0 (0%)	5 (1%)	3 (0%)	0 (0%)	0 (0%)	68 (8%)	36 (6%)	12 (8%)	5 (10%)
RCAV	659151	1173855	756831	428296	61 (15)	61 (14	59 (13	57 (11	49457 (8%)	57809 (5%)	42946 (6%)	35369 (8%)	125403 (19%)	185489 (16%)	129220 (17%)	76338 (18%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)				
REGARDS	6801	10644	6380	4644	67 (10)) 66 (9)) 65 (9)) 62 (8)	3784 (56%)	4961 (47%)	3534 (55%)	3252 (70%)	2031 (30%)	3926 (37%)	2989 (47%)	2711 (58%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1317 (19%)	1427 (13%)	784 (12%)	516 (11%)

RSIII	981	1555	607	241	56 (7)	57 (6)	58 (7)	57 (7)	636 (65%)	783 (50%)	334 (55%)	158 (66%)	11 (1%)	23 (1%)	10 (2%)	6 (2%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	308 (31%)	405 (26%)	138 (23%)	56 (23%)
SEED	3364	2248	628	184	59 (10)	58 (9)	57 (10	55 (9)	1553 (46%)	1025 (46%)	392 (62%)	138 (75%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	3364 (100%)	2248 (100%)	628 (100%)	184 (100%	1009 (30%)	628 (28%)	137 (22%)	31 (17%)
Taiwan MJ	333042	120874	17370	2577	40 (14)	46 (14)	45 (14)	40 (14)	180363 (54%)	48243 (40%)	8386 (48%)	1308 (51%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	333042 (100%)	120874 (100%)	17370 (100%)	2577 (100%)	59935 (22%)	26089 (28%)	3686 (27%)	596 (29%)
Takahata	1524	661	83	4	63 (10)	64 (9)	62 (11)	58 (18)	846 (56%)	355 (54%)	63 (76%)	4 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1524 (100%)	661 (100%)	83 (100%)	4 (100%)	284 (19%)	96 (15%)	9 (11%)	0 (0%)
TLGS	3770	4138	1812	492	37 (16)	44 (15	46 (13)	47 (13)	1874 (50%)	2208 (53%)	1240 (68%)	396 (80%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	648 (17%)	626 (15%)	202 (11%)	41 (8%)
Tromso	3365	3288	917	192	58 (11)	60 (9)	61 (9)	62 (9)	2090 (62%)	1616 (49%)	591 (64%)	138 (72%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1357 (40%)	933 (28%)	211 (23%)	26 (14%)
ULSAM	659	496	48	7	50 (1)	50 (1)	50 (1)	50 (0)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	311 (47%)	200 (40%)	22 (46%)	2 (29%)
Subtotal	1837795	1958101	1055261	607857	(15)	57 (14	57 (13	55 (13)	705942 (38%)	415334 (21%)	199411 (19%)	150168 (25%)	137038 (7%)	8201712 (10%)	2 141229 (13%)	87869 (14%)	757467 (41%)	314566 (16%)	36442 (3%)	4330 (1%)	200241 (11%)	116930 (6%)	35394 (3%)	22490 (4%)
High CVD Ris	sk Cohorts	s					/	/					1					1						1
ADVANCE	2987	4538	2404	1109	66 (6)	67 (6)	66 (6)	65 (6)	1269 (42%)	1729 (38%)	1074 (45%)	615 (55%)	4 (0%)	17 (0%)	11 (0%)	5 (0%)	2069 (69%)	1763 (39%)	317 (13%)	40 (4%)	464 (16%)	681 (15%)	324 (14%)	191 (17%)
KP Hawaii	6933	9336	6645	6566	66 (15)	62 (14	58 (13	53 (13)	4150 (60%)	4326 (46%)	3083 (46%)	3484 (53%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)				
NZDCS	4600	9139	7437	6549	65 (17)	64 (14	61 (13	55 (13	2260 (49%)	3840 (42%)	3494 (47%)	4007 (61%)	17 (0%)	24 (0%)	14 (0%)	15 (0%)	639 (14%)	761 (8%)	259 (3%)	96 (1%)	669 (15%)	1203 (13%)	1060 (14%)	1132 (17%)
Pima	550	1029	1070	1366	32 (17)	36 (16	34 (14	31 (12	292 (53%)	549 (53%)	602 (56%)	913 (67%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	114 (29%)	209 (28%)	211 (30%)	219 (26%)
SMART	3663	4742	1556	524	57 (14)	59 (11	57 (11	53 (12)	1432 (39%)	1230 (26%)	541 (35%)	265 (51%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1211 (33%)	1272 (27%)	411 (27%)	146 (28%)
ZODIAC	316	711	447	200	71 (12)	67 (12	66 (11	64 (12	150 (47%)	347 (49%)	282 (63%)	152 (76%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	71 (23%)	143 (20%)	77 (17%)	26 (13%)
Subtotal	19049	29495	19559	16314	63 (14)	62 (13)	59 (12)	53 (12)	9553 (50%)	12021 (41%)	9076 (46%)	9436 (58%)	21 (0%)	41 (0%)	25 (0%)	20 (0%)	2708 (14%)	2524 (9%)	576 (3%)	136 (1%)	2529 (13%)	3508 (12%)	2083 (11%)	1714 (11%)
CKD Cohorts						-	-							•							•			
AASK	215	362	265	245	56 (11)	55 (11)	55 (10)	52 (11)	87 (40%)	117 (32%)	95 (36%)	123 (50%)	215 (100%)	362)(100%)	265)(100%)	245)(100%	0 (0%)	0 (0%)	0 (0%)	0 (0%)	100 (47%)	99 (27%)	73 (28%)	46 (19%)

BC CKD	2182	2796	1605	1063	68 (16)	69 (13)	68 (12)	65 (11)	1020 (47%)	1115 (40%)	686 (43%)	588 (55%)	12 (1%)	15 (1%)	13 (1%)	5 (0%)	709 (32%)	634 (23%)	252 (16%)	81 (8%)	117 (12%)	157 (12%)	94 (12%)	52 (10%)
CanPREDDICT	344	569	390	340	67 (15)	71 (12)	69 (12)	66 (11)	147 (43%)	156 (27%)	137 (35%)	157 (46%)	3 (1%)	12 (2%)	11 (3%)	1 (0%)	17 (5%)	10 (2%)	5 (1%)	2 (1%)				
CARE FOR HOMe	68	164	161	69	63 (15)	66 (12)	67 (12	62 (11)	32 (47%)	59 (36%)	65 (40%)	32 (46%)	1 (1%)	0 (0%)	1 (1%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	6 (9%)	19 (12%)	14 (9%)	8 (12%)
CCF	8858	13366	7971	5823	75 (13)	73 (11)	71 (11	67 (11	5221 (59%)	6284 (47%)	4109 (52%)	3822 (66%)	879 (10%)	1388 (10%)	1021 (13%)	1003 (17%)	74 (1%)	54 (0%)	14 (0%)	8 (0%)	799 (9%)	954 (7%)	569 (7%)	401 (7%)
CKD-JAC	1643	685	131	19	61 (11)	61 (11)	56 (13	53 (12)	600 (37%)	211 (31%)	45 (34%)	9 (47%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	1643 (100%)	685 (100%)	131 (100%)	19 (100%)	224 (16%)	104 (18%)	25 (22%)	4 (27%)
CRIB	134	159	54	22	61 (16)	63 (13)	61 (12)	56 (11)	57 (43%)	46 (29%)	14 (26%)	11 (50%)	6 (4%)	8 (5%)	4 (7%)	4 (18%)	6 (4%)	13 (8%)	3 (6%)	2 (9%)	24 (18%)	17 (11%)	5 (9%)	0 (0%)
GCKD	1015	1876	1252	907	55 (14)	62 (11)	62 (11)	62 (10)	518 (51%)	607 (32%)	460 (37%)	418 (46%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	241 (24%)	266 (14%)	184 (15%)	112 (12%)
Gonryo	2236	931	153	32	62 (15)	63 (13	57 (15	50 (16	1055 (47%)	412 (44%)	82 (54%)	25 (78%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	2236 (100%)	931 (100%)	153 (100%	32 (100%				
MASTERPLA N	203	314	112	42	57 (14)	62 (11	63 (11	59 (11	75 (37%)	71 (23%)	33 (29%)	25 (60%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	65 (33%)	50 (16%)	18 (16%)	6 (15%)
MDRD	614	711	329	117	47 (14)	53 (12	53 (12	50 (12	301 (49%)	223 (31%)	108 (33%)	61 (52%)	54 (9%)	84 (12%)	52 (16%)	34 (29%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	85 (14%)	82 (12%)	28 (9%)	15 (13%)
MMKD	107	72	14	5	44 (13)	51 (10	54 (11	52 (6)	50 (47%)	11 (15%)	4 (29%)	2 (40%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	29 (27%)	11 (15%)	1 (7%)	1 (20%)
Nefrona	358	726	465	202	53 (14)	61 (11	62 (10	62 (10	162 (45%)	214 (29%)	164 (35%)	115 (57%)	1 (0%)	0 (0%)	2 (0%)	1 (0%)	3 (1%)	0 (0%)	0 (0%)	0 (0%)	98 (27%)	136 (19%)	75 (16%)	35 (17%)
NephroTest	751	722	302	116	55 (16)	61 (14	62 (13	60 (12	293 (39%)	174 (24%)	97 (32%)	46 (40%)	94 (13%)	105 (15%)	32 (11%)	13 (11%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	126 (17%)	84 (12%)	40 (13%)	12 (10%)
PSP-CKD	5731	7636	4492	2570	78 (11)	75 (10	72 (10	69 (10	3655 (64%)	4153 (54%)	2600 (58%)	1809 (70%)	43 (1%)	80 (1%)	56 (1%)	28 (1%)	62 (1%)	105 (1%)	45 (1%)	16 (1%)	711 (19%)	690 (14%)	360 (13%)	208 (12%)
RENAAL	333	530	329	276	60 (8)	61 (7)	61 (7)	, 57 (8)	103 (31%)	158 (30%)	125 (38%)	155 (56%)	27 (8%)	71 (13%)	60 (18%)	66 (24%)	127 (38%)	88 (17%)	16 (5%)	6 (2%)	96 (29%)	79 (15%)	51 (16%)	37 (13%)
SRR-CKD	802	965	464	232	67 (17)	69 (14)	68 (14)	65 (12)	304 (38%)	251 (26%)	141 (30%)	104 (45%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)		(10,0)	(10,0)	(10,0)

Sunnybrook	908	1070	572	310	63	65	64	59	451	400	218	159	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	90 (10%)	85	51	28
-					(20)	(16	(15	(15	(50%)	(37%)	(38%)	(51%)										(8%)	(9%)	(9%)
)))																
Subtotal	26502	33654	19061	12390	69	70	69	66	14131	14662	9183	7661	1335	2125	1517	1400	4877	2520	619	166	2811	2833	1588	965
					(13)	(11	(11	(11	(53%)	(44%)	(48%)	(62%)	(5%)	(6%)	(8%)	(11%)	(18%)	(7%)	(3%)	(1%)	(11%)	(8%)	(8%)	(8%)
)))																
Total	1883346	2021250	1093881	636561	51	57	57	55	729626	442017	217670	167265	138394	203878	142771	89289	765052	319610	37637	4632	205581	123271	39065	25169
					(15)	(14	(13	(13	(39%)	(22%)	(20%)	(26%)	(7%)	(10%)	(13%)	(14%)	(41%)	(16%)	(3%)	(1%)	(11%)	(6%)	(4%)	(4%)
)))																

	SBP				Diabetes				History of C	VD		
	18.5-<25	25-<30	30-<35	≥35	18.5-<25	25-<30	30-<35	≥35	18.5-<25	25-<30	30-<35	≥35
General Population	n											
Aichi	125 (15)	132 (15)	139 (15)	136 (18)	295 (8%)	121 (12%)	10 (18%)	3 (50%)	34 (1%)	9 (1%)	1 (2%)	0 (0%)
ARIC	116 (19)	121 (18)	125 (18)	130 (19)	246 (5%)	640 (10%)	545 (19%)	400 (28%)	457 (9%)	756 (12%)	429 (15%)	273 (19%)
AusDiab	124 (18)	132 (18)	135 (18)	136 (18)	175 (4%)	333 (8%)	249 (14%)	161 (22%)	251 (6%)	423 (10%)	182 (11%)	64 (9%)
Beaver Dam CKD	128 (21)	132 (20)	136 (20)	139 (19)	57 (4%)	139 (7%)	108 (11%)	89 (19%)	130 (10%)	214 (11%)	104 (10%)	42 (9%)
Beijing	123 (18)	127 (18)	131 (19)	144 (24)	179 (26%)	200 (32%)	36 (29%)	3 (38%)	113 (16%)	131 (20%)	31 (24%)	3 (38%)
ChinaNS	123 (19)	134 (20)	142 (21)	140 (22)	1644 (6%)	1487 (11%)	318 (14%)	49 (17%)	589 (2%)	458 (4%)	107 (5%)	12 (5%)
CHS	135 (22)	136 (21)	138 (20)	142 (22)	162 (10%)	290 (15%)	181 (26%)	91 (34%)	447 (27%)	500 (26%)	193 (27%)	79 (29%)
CIRCS	130 (18)	136 (18)	140 (18)	139 (18)	202 (2%)	114 (4%)	15 (5%)	2 (9%)	97 (1%)	42 (1%)	9 (3%)	1 (5%)
COBRA	154 (24)	153 (24)	148 (24)	140 (22)	79 (18%)	93 (22%)	35 (18%)	22 (21%)	75 (17%)	76 (18%)	34 (18%)	17 (17%)
ESTHER	134 (19)	140 (19)	145 (19)	148 (21)	278 (11%)	843 (18%)	539 (28%)	216 (37%)	357 (14%)	800 (17%)	439 (23%)	137 (24%)
Framingham	124 (19)	129 (19)	132 (17)	132 (18)	27 (3%)	78 (6%)	73 (13%)	55 (22%)	69 (8%)	138 (11%)	75 (13%)	32 (13%)
Geisinger	119 (18)	126 (18)	129 (18)	131 (18)	3988 (4%)	9635 (8%)	11225 (12%)	16884 (19%)	5221 (6%)	8166 (7%)	6128 (7%)	5639 (6%)
Gubbio	125 (18)	130 (18)	134 (18)	138 (17)	8 (2%)	35 (4%)	36 (9%)	11 (11%)	14 (3%)	43 (5%)	27 (7%)	14 (15%)
HUNT	131 (20)	140 (21)	146 (22)	147 (23)	436 (2%)	876 (3%)	546 (6%)	239 (11%)	1395 (5%)	2442 (9%)	938 (11%)	209 (10%)
IPHS	132 (18)	138 (17)	142 (17)	144 (18)	1661 (3%)	890 (3%)	110 (4%)	13 (7%)	2686 (4%)	1457 (6%)	187 (7%)	9 (5%)
JHS	124 (18)	125 (17)	126 (16)	127 (16)	29 (6%)	131 (12%)	185 (20%)	269 (28%)	33 (7%)	84 (8%)	83 (9%)	82 (8%)
JMS	125 (19)	133 (18)	137 (20)	139 (15)	2073 (55%)	595 (56%)	58 (58%)	1 (25%)	32 (1%)	13 (1%)	5 (5%)	0 (0%)
KHS	119 (17)	127 (18)	133 (19)	139 (20)	12778 (5%)	9228 (9%)	1017 (13%)	99 (19%)	3525 (2%)	2003 (2%)	181 (2%)	17 (3%)
Maccabi	117 (16)	126 (17)	131 (18)	134 (19)	11178 (5%)	29439 (12%)	23811 (19%)	15485 (26%)	18305 (8%)	31782 (13%)	17986 (15%)	8242 (14%)
MESA	122 (22)	127 (21)	129 (21)	132 (21)	131 (7%)	301 (11%)	246 (17%)	173 (23%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
MRC	148 (23)	149 (22)	151 (22)	153 (22)	295 (6%)	406 (8%)	186 (11%)	60 (15%)	842 (17%)	868 (17%)	267 (17%)	76 (19%)
Mt Sinai BioMe	120 (19)	127 (19)	130 (19)	132 (20)	826 (12%)	1302 (17%)	1083 (24%)	1154 (29%)	556 (8%)	771 (10%)	584 (13%)	533 (13%)
NHANES	119 (19)	125 (19)	126 (18)	127 (18)	1070 (5%)	2300 (12%)	1901 (17%)	1880 (25%)	1287 (7%)	1871 (10%)	1137 (11%)	831 (12%)
NIPPON DATA80	135 (21)	142 (21)	147 (23)	143 (21)	182 (3%)	77 (4%)	12 (7%)	0 (0%)	188 (3%)	43 (2%)	5 (3%)	0 (0%)

eTable 4. Baseline Characteristics by BMI Category – Cardiovascular Disease and Chronic Kidney Disease Risk Factors

NIPPON DATA90	134 (21)	141 (19)	148 (22)	157 (22)	263 (5%)	96 (6%)	11 (7%)	0 (0%)	226 (4%)	84 (5%)	8 (5%)	1 (5%)
Ohasama	129 (18)	133 (16)	129 (14)	143 (22)	134 (12%)	60 (13%)	2 (5%)	3 (38%)	61 (6%)	32 (7%)	1 (3%)	1 (13%)
Okinawa 83	129 (20)	137 (20)	145 (21)	151 (21)	69 (3%)	47 (5%)	16 (13%)	1 (9%)				
Okinawa 93	125 (17)	131 (17)	135 (17)	138 (17)	1326 (3%)	1216 (6%)	281 (10%)	49 (17%)				
PREVEND	121 (17)	133 (20)	139 (20)	139 (20)	171 (5%)	251 (8%)	107 (11%)	30 (11%)	102 (3%)	233 (7%)	61 (6%)	21 (8%)
Rancho Bernardo	136 (24)	136 (21)	136 (18)	140 (20)	94 (11%)	101 (15%)	30 (20%)	19 (40%)	131 (15%)	98 (15%)	16 (11%)	6 (13%)
RCAV	130 (19)	133 (17)	135 (17)	137 (17)	88755 (13%)	245887 (21%)	232922 (31%)	189250 (44%)	120182 (18%)	215009 (18%)	143343 (19%)	89158 (21%)
REGARDS	124 (17)	127 (16)	129 (16)	132 (16)	636 (9%)	1833 (17%)	1743 (27%)	1809 (39%)	1499 (22%)	2528 (24%)	1511 (24%)	1094 (24%)
RSIII	127 (19)	134 (18)	137 (19)	139 (18)	52 (5%)	177 (11%)	130 (21%)	96 (40%)	53 (5%)	113 (7%)	79 (13%)	25 (10%)
SEED	136 (21)	139 (20)	142 (21)	141 (19)	730 (22%)	752 (33%)	266 (42%)	91 (49%)	304 (9%)	258 (11%)	69 (11%)	24 (13%)
Taiwan MJ	118 (18)	129 (20)	134 (21)	137 (20)	11352 (3%)	9713 (8%)	2181 (13%)	383 (15%)	8638 (3%)	5543 (5%)	1077 (6%)	158 (6%)
Takahata	133 (16)	138 (15)	141 (13)	161 (21)	147 (10%)	99 (15%)	10 (12%)	0 (0%)	66 (4%)	27 (4%)	2 (2%)	0 (0%)
TLGS	113 (16)	121 (19)	125 (20)	131 (19)	172 (5%)	366 (9%)	216 (12%)	78 (16%)	113 (3%)	222 (5%)	91 (5%)	35 (7%)
Tromso	138 (21)	146 (22)	152 (23)	160 (22)	69 (2%)	131 (4%)	77 (8%)	41 (21%)	152 (5%)	264 (8%)	83 (9%)	14 (7%)
ULSAM	129 (16)	134 (17)	141 (17)	144 (27)	15 (2%)	13 (3%)	1 (2%)	1 (14%)	0 (0%)	5 (1%)	0 (0%)	0 (0%)
ULSAM Subtotal	129 (16) 124 (18)	134 (17) 131 (18)	141 (17) 134 (17)	144 (27) 136 (17)	15 (2%) 142016 (8%)	13 (3%) 320314 (16%)	1 (2%) 280521 (27%)	1 (14%) 229211 (38%)	0 (0%) 168230 (9%)	5 (1%) 277506 (14%)	0 (0%) 175473 (17%)	0 (0%) 106849 (18%)
ULSAM Subtotal High CVD Risk C	129 (16) 124 (18)	134 (17) 131 (18)	141 (17) 134 (17)	144 (27) 136 (17)	15 (2%) 142016 (8%)	13 (3%) 320314 (16%)	1 (2%) 280521 (27%)	1 (14%) 229211 (38%)	0 (0%) 168230 (9%)	5 (1%) 277506 (14%)	0 (0%) 175473 (17%)	0 (0%) 106849 (18%)
ULSAM Subtotal High CVD Risk C ADVANCE	129 (16) 124 (18) Cohorts 141 (22)	134 (17) 131 (18) 145 (21)	141 (17) 134 (17) 148 (21)	144 (27) 136 (17) 147 (21)	15 (2%) 142016 (8%) 2987 (100%)	13 (3%) 320314 (16%) 4538 (100%)	1 (2%) 280521 (27%) 2404 (100%)	1 (14%) 229211 (38%) 1109 (100%)	0 (0%) 168230 (9%) 667 (22%)	5 (1%) 277506 (14%) 1213 (27%)	0 (0%) 175473 (17%) 636 (26%)	0 (0%) 106849 (18%) 286 (26%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii	129 (16) 124 (18) Cohorts 141 (22) 132 (21)	134 (17) 131 (18) 145 (21) 133 (20)	141 (17) 134 (17) 148 (21) 134 (19)	144 (27) 136 (17) 147 (21) 136 (20)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19)	141 (17) 134 (17) 148 (21) 134 (19) 139 (19)	144 (27) 136 (17) 147 (21) 136 (20) 140 (19)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS Pima	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20) 116 (18)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19) 120 (19)	141 (17) 134 (17) 148 (21) 134 (19) 139 (19) 120 (18)	144 (27) 136 (17) 147 (21) 136 (20) 140 (19) 119 (16)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%) 127 (23%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%) 325 (32%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%) 301 (28%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%) 373 (27%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20) 116 (18) 139 (22)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19) 120 (19) 142 (21)	141 (17) 134 (17) 148 (21) 134 (19) 139 (19) 120 (18) 144 (21)	144 (27) 136 (17) 147 (21) 136 (20) 140 (19) 119 (16) 144 (21)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%) 127 (23%) 489 (13%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%) 325 (32%) 850 (18%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%) 301 (28%) 475 (31%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%) 373 (27%) 220 (42%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%) 1892 (52%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%) 2953 (62%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%) 937 (60%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%) 231 (44%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20) 116 (18) 139 (22) 148 (25)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19) 120 (19) 142 (21) 152 (25)	141 (17) 134 (17) 148 (21) 134 (19) 139 (19) 120 (18) 144 (21) 152 (23)	144 (27) 136 (17) 147 (21) 136 (20) 140 (19) 119 (16) 144 (21) 154 (24)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%) 127 (23%) 489 (13%) 316 (100%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%) 325 (32%) 850 (18%) 711 (100%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%) 301 (28%) 475 (31%) 447 (100%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%) 373 (27%) 220 (42%) 200 (100%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%) 1892 (52%) 136 (43%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%) 2953 (62%) 223 (31%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%) 937 (60%) 161 (36%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%) 231 (44%) 67 (34%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20) 116 (18) 139 (22) 148 (25) 135 (21)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19) 120 (19) 142 (21) 152 (25) 138 (20)	141 (17) 134 (17) 134 (17) 134 (17) 134 (19) 139 (19) 120 (18) 144 (21) 152 (23) 138 (20)	144 (27) 136 (17) 147 (21) 136 (20) 140 (19) 119 (16) 144 (21) 154 (24) 137 (20)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%) 127 (23%) 489 (13%) 316 (100%) 11297 (59%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%) 325 (32%) 850 (18%) 711 (100%) 20248 (69%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%) 301 (28%) 475 (31%) 447 (100%) 14919 (76%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%) 373 (27%) 220 (42%) 200 (100%) 12730 (78%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%) 1892 (52%) 136 (43%) 4959 (26%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%) 2953 (62%) 223 (31%) 8147 (28%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%) 937 (60%) 161 (36%) 4455 (23%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%) 231 (44%) 67 (34%) 2747 (17%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal CKD Cohorts	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20) 116 (18) 139 (22) 148 (25) 135 (21)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19) 120 (19) 142 (21) 152 (25) 138 (20)	141 (17) 134 (17) 148 (21) 134 (19) 139 (19) 120 (18) 144 (21) 152 (23) 138 (20)	144 (27) 136 (17) 136 (20) 140 (19) 119 (16) 144 (21) 154 (24) 137 (20)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%) 127 (23%) 489 (13%) 316 (100%) 11297 (59%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%) 325 (32%) 850 (18%) 711 (100%) 20248 (69%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%) 301 (28%) 475 (31%) 447 (100%) 14919 (76%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%) 373 (27%) 220 (42%) 200 (100%) 12730 (78%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%) 1892 (52%) 136 (43%) 4959 (26%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%) 2953 (62%) 223 (31%) 8147 (28%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%) 937 (60%) 161 (36%) 4455 (23%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%) 231 (44%) 67 (34%) 2747 (17%)
ULSAM Subtotal High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal CKD Cohorts AASK	129 (16) 124 (18) Cohorts 141 (22) 132 (21) 135 (20) 116 (18) 139 (22) 148 (25) 135 (21)	134 (17) 131 (18) 145 (21) 133 (20) 138 (19) 120 (19) 142 (21) 152 (25) 138 (20)	141 (17) 134 (17) 134 (17) 134 (17) 134 (19) 139 (19) 120 (18) 144 (21) 152 (23) 138 (20)	144 (27) 136 (17) 147 (21) 136 (20) 140 (19) 119 (16) 144 (21) 154 (24) 137 (20) 153 (24)	15 (2%) 142016 (8%) 2987 (100%) 2778 (40%) 4600 (100%) 127 (23%) 489 (13%) 316 (100%) 11297 (59%)	13 (3%) 320314 (16%) 4538 (100%) 4685 (50%) 9139 (100%) 325 (32%) 850 (18%) 711 (100%) 20248 (69%) 0 (0%)	1 (2%) 280521 (27%) 2404 (100%) 3855 (58%) 7437 (100%) 301 (28%) 475 (31%) 447 (100%) 14919 (76%) 0 (0%)	1 (14%) 229211 (38%) 1109 (100%) 4279 (65%) 6549 (100%) 373 (27%) 220 (42%) 200 (100%) 12730 (78%) 0 (0%)	0 (0%) 168230 (9%) 667 (22%) 1384 (20%) 880 (19%) 1892 (52%) 136 (43%) 4959 (26%) 126 (59%)	5 (1%) 277506 (14%) 1213 (27%) 1754 (19%) 2004 (22%) 2953 (62%) 223 (31%) 8147 (28%) 185 (51%)	0 (0%) 175473 (17%) 636 (26%) 1192 (18%) 1529 (21%) 937 (60%) 161 (36%) 4455 (23%) 141 (53%)	0 (0%) 106849 (18%) 286 (26%) 1110 (17%) 1053 (16%) 231 (44%) 67 (34%) 2747 (17%) 93 (38%)

Total	124 (18)	131 (18)	134 (17)	136 (18)	158917 (8%)	349878 (17%)	302448 (28%)	247931 (39%)	179349 (10%)	294694 (15%)	185213 (17%)	112964 (18%)
Subtotal	132 (20)	134 (19)	135 (19)	136 (19)	5604 (21%)	9316 (28%)	7008 (37%)	5990 (48%)	6160 (23%)	9041 (27%)	5285 (28%)	3368 (27%)
Sunnybrook	131 (22)	136 (21)	136 (20)	136 (21)	333 (37%)	513 (48%)	321 (56%)	191 (62%)	105 (12%)	133 (12%)	63 (11%)	29 (9%)
SRR-CKD	139 (23)	141 (23)	142 (23)	143 (21)	197 (25%)	336 (35%)	245 (53%)	144 (62%)	234 (29%)	314 (33%)	151 (33%)	75 (32%)
RENAAL	151 (21)	153 (20)	154 (18)	153 (18)	333 (100%)	530 (100%)	329 (100%)	276 (100%)	<u>.</u>			
PSP-CKD	132 (16)	133 (15)	134 (15)	135 (15)	1010 (18%)	1837 (24%)	1493 (33%)	1113 (43%)	1765 (31%)	2279 (30%)	1313 (29%)	699 (27%)
NephroTest	133 (21)	138 (20)	140 (19)	139 (21)	117 (16%)	240 (33%)	148 (49%)	73 (63%)	99 (13%)	161 (22%)	82 (27%)	37 (32%)
Nefrona	140 (22)	145 (21)	146 (20)	149 (23)	73 (45%)	206 (51%)	175 (61%)	89 (72%)				
MMKD	139 (23)	137 (18)	133 (21)	151 (26)	0 (0%)	0 (0%)	0 (0%)	0 (0%)	8 (7%)	13 (18%)	1 (7%)	0 (0%)
MDRD	130 (19)	133 (18)	136 (18)	134 (18)	21 (3%)	40 (6%)	25 (8%)	16 (14%)	40 (7%)	95 (13%)	40 (12%)	15 (13%)
MASTERPLAN	135 (20)	141 (20)	141 (24)	144 (24)	30 (15%)	75 (24%)	41 (37%)	17 (40%)	45 (22%)	105 (34%)	43 (39%)	12 (29%)
Gonryo	131 (16)	134 (15)	134 (15)	136 (17)	681 (30%)	311 (33%)	59 (39%)	14 (44%)	394 (18%)	154 (17%)	21 (14%)	4 (13%)
GCKD	136 (20)	141 (20)	141 (21)	139 (20)	163 (16%)	528 (28%)	554 (44%)	560 (62%)	225 (22%)	578 (31%)	495 (40%)	404 (45%)
CRIB	150 (22)	154 (21)	150 (25)	147 (22)	16 (12%)	20 (13%)	22 (41%)	6 (27%)	53 (40%)	82 (52%)	23 (43%)	10 (45%)
CKD-JAC	131 (18)	136 (19)	134 (19)	144 (18)	455 (28%)	292 (43%)	56 (43%)	12 (63%)	158 (10%)	94 (14%)	13 (10%)	1 (5%)
CCF	129 (21)	130 (19)	132 (19)	133 (20)	1227 (14%)	2751 (21%)	2311 (29%)	2462 (42%)	2259 (26%)	3778 (28%)	2220 (28%)	1486 (26%)
HOMe	145 (25)	152 (24)	151 (22)	158 (25)	11 (16%)	47(29%)	72 (45%)	41 (59%)	18 (26%)	51 (31%)	48 (30%)	24 (35%)
CanPREDDICT	132 (20)	132 (19)	134 (19)	136 (21)	106 (31%)	261 (46%)	225 (58%)	246 (72%)	111 (32%)	240 (42%)	143 (37%)	137 (40%)

	mean	(SD) eGFR	ml/min/1.	.73m ²		N (%) A0	CR >30mg/g			N (%) missi	ng ACR	
	18.5-<25	25-<30	30-<35	≥35	18.5-<25	25-<30	30-<35	≥35	18.5-<25	25-<30	30-<35	≥35
General Populatio	n											
Aichi	100 (13)	98 (13)	99 (13)	97 (15)	62 (2%)	32 (3%)	7 (14%)	1 (17%)	198 (5%)	49 (5%)	5 (9%)	0 (0%)
ARIC	103 (14)	101 (16)	102 (17)	106 (18)					5042 (100%)	6163 (100%)	2875 (100%)	1408 (100%)
AusDiab	88 (16)	84 (16)	84 (16)	87 (17)	217 (5%)	261 (6%)	159 (9%)	79 (11%)	7 (0%)	11 (0%)	11 (1%)	4 (1%)
Beaver Dam CKD	81 (19)	79 (17)	78 (18)	79 (19)	45 (3%)	72 (4%)	48 (5%)	31 (7%)	9 (1%)	6 (0%)	2 (0%)	2 (0%)
Beijing	84 (14)	82 (15)	79 (14)	84 (14)	39 (5%)	43 (7%)	5 (4%)	1 (13%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
ChinaNS	102 (18)	98 (17)	97 (17)	100 (19)	3015 (11%)	1724 (12%)	410 (18%)	57 (20%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
CHS	70 (17)	71 (16)	71 (17)	71 (19)					1659 (100%)	1939 (100%)	707 (100%)	269 (100%)
CIRCS	89 (15)	87 (15)	87 (16)	84 (22)	198 (2%)	126 (4%)	17 (5%)	4 (18%)	27 (0%)	10 (0%)	0 (0%)	0 (0%)
COBRA	93 (22)	97 (19)	101 (19)	106 (17)	78 (18%)	64 (15%)	26 (14%)	12 (12%)	2 (0%)	0 (0%)	0 (0%)	1 (1%)
ESTHER	87 (20)	87 (20)	87 (20)	87 (22)	246 (9%)	502 (11%)	279 (15%)	123 (21%)	10 (0%)	20 (0%)	8 (0%)	2 (0%)
Framingham	89 (17)	88 (19)	88 (22)	90 (18)	112 (13%)	134 (11%)	73 (13%)	36 (15%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Geisinger	99 (23)	92 (22)	91 (22)	94 (22)	977 (34%)	1760 (30%)	2070 (31%)	3326 (35%)	89414 (97%)	113116 (95%)	83244 (93%)	79797 (89%)
Gubbio	84 (11)	85 (12)	85 (11)	83 (13)	13 (3%)	27 (3%)	17 (4%)	13 (14%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
HUNT	102 (18)	96 (19)	92 (20)	93 (20)	260 (11%)	502 (12%)	293 (14%)	122 (17%)	23250 (91%)	23253 (84%)	6385 (76%)	1447 (67%)
IPHS	87 (14)	84 (14)	84 (15)	87 (16)	1189 (2%)	849 (3%)	150 (6%)	15 (8%)	734 (1%)	302 (1%)	38 (1%)	5 (3%)
JHS	100 (22)	97 (20)	98 (21)	99 (22)	20 (6%)	60 (8%)	71 (11%)	107 (17%)	157 (32%)	330 (31%)	280 (30%)	339 (35%)
JMS	98 (15)	96 (15)	97 (14)	97 (19)	59 (2%)	44 (4%)	3 (3%)		27 (1%)	6 (1%)	2 (2%)	0 (0%)
KHS	87 (14)	84 (14)	85 (15)	86 (16)	18479 (12%)	7283 (11%)	568 (11%)	60 (18%)	85775 (37%)	39193 (36%)	2744 (34%)	170 (33%)
Maccabi	97 (21)	89 (21)	88 (21)	90 (22)	2246 (15%)	5453 (17%)	4881 (22%)	3436 (27%)	217225 (94%)	209388 (87%)	101904 (82%)	47512 (79%)
MESA	83 (16)	83 (16)	83 (17)	86 (18)	140 (7%)	227 (9%)	164 (12%)	109 (14%)	6 (0%)	8 (0%)	10 (1%)	5 (1%)
MRC	58 (15)	57 (15)	56 (14)	53 (14)	346 (8%)	350 (7%)	120 (8%)	25 (7%)	282 (6%)	255 (5%)	81 (5%)	27 (7%)
Mt Sinai BioMe	87 (26)	83 (25)	82 (25)	87 (27)	310 (50%)	420 (45%)	328 (44%)	346 (48%)	6354 (91%)	6598 (88%)	3845 (84%)	3297 (82%)
NHANES	102 (25)	95 (25)	95 (25)	98 (26)	1932 (10%)	2088 (11%)	1404 (13%)	1206 (16%)	450 (2%)	411 (2%)	157 (1%)	142 (2%)
NIPPON DATA80	84 (17)	82 (17)	79 (18)	90 (20)					6841 (100%)	1810 (100%)	181 (100%)	15 (100%)

eTable 5. Baseline Characteristics by BMI Category - Kidney Measures

NIPPON	95 (17)	91 (16)	91 (17)	94 (15)					5379 (100%)	1653 (100%)	168 (100%)	19 (100%)
DATA90	05 (12)	04 (12)	04 (16)	00 (10)	52 (50)	24 (80)	2 (90)		15 (10/)	7 (20)	0 (00)	0 (00()
Ohasama	95 (12)	94 (13)	94 (16)	99 (10)	53 (5%)	34 (8%)	3 (8%)		15 (1%)	7 (2%)	0(0%)	0(0%)
Okinawa 83	76 (17)	74 (15)	73 (15)	78 (19)	1073 (18%)	630 (24%)	145 (35%)	16 (43%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Okinawa 93	78 (17)	75 (16)	77 (17)	80 (17)	1642 (3%)	1357 (5%)	336 (8%)	53 (14%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
PREVEND	100 (15)	93 (16)	93 (16)	96 (17)	260 (8%)	397 (12%)	152 (16%)	59 (21%)	13 (0%)	10 (0%)	7 (1%)	0 (0%)
Rancho Bernardo	65 (16)	65 (15)	66 (15)	69 (16)	134 (15%)	91 (14%)	15 (10%)	9 (19%)	10 (1%)	1 (0%)	0 (0%)	0 (0%)
RCAV	86 (17)	83 (15)	83 (15)	85 (16)	1543 (23%)	4036 (22%)	3981 (23%)	3306 (26%)	652497 (99%)	1155417 (98%)	739740 (98%)	415567 (97%)
REGARDS	84 (19)	84 (20)	85 (20)	88 (23)	845 (13%)	1337 (13%)	995 (16%)	915 (21%)	266 (4%)	392 (4%)	250 (4%)	201 (4%)
RSIII	87 (13)	86 (14)	86 (14)	86 (16)	42 (5%)	69 (5%)	45 (8%)	25 (11%)	60 (6%)	80 (5%)	31 (5%)	15 (6%)
SEED	87 (18)	84 (19)	84 (20)	87 (21)					3364 (100%)	2248 (100%)	628 (100%)	184 (100%)
Taiwan MJ	90 (18)	84 (17)	85 (18)	90 (20)	5214 (2%)	3759 (3%)	927 (5%)	227 (9%)	15940 (5%)	2656 (2%)	484 (3%)	105 (4%)
Takahata	98 (12)	96 (12)	96 (16)	96 (30)	191 (13%)	120 (18%)	28 (34%)	3 (75%)	5 (0%)	2 (0%)	0 (0%)	0 (0%)
TLGS	81 (15)	74 (14)	72 (14)	72 (14)	66 (2%)	71 (2%)	40 (3%)	14 (4%)	1019 (27%)	1032 (25%)	440 (24%)	116 (24%)
Tromso	95 (13)	92 (13)	91 (13)	90 (15)	142 (5%)	195 (7%)	64 (8%)	26 (16%)	561 (17%)	360 (11%)	112 (12%)	29 (15%)
ULSAM	99 (10)	97 (10)	96 (12)	104 (6)					659 (100%)	496 (100%)	48 (100%)	7 (100%)
Subtotal	89 (18)	85 (17)	85 (17)	87 (18)	41588 (6%)	34388 (9%)	17873 (16%)	13772 (24%)	1113893 (61%)	1564974 (80%)	943759 (89%)	550501 (91%)
Subtotui										(0070)	(0) /0)	()1/0)
High CVD Rick ([°] ohorts					•						
High CVD Risk C	Cohorts 79 (18)	78 (17)	76 (17)	77 (17)	940 (33%)	1301 (30%)	663 (29%)	321 (31%)	107 (4%)	184 (4%)	139 (6%)	71 (6%)
High CVD Risk C ADVANCE KP Hawaii	Cohorts 79 (18) 73 (23)	78 (17) 75 (23)	76 (17) 79 (23)	77 (17) 83 (25)	940 (33%) 1660 (33%)	1301 (30%) 2330 (34%)	663 (29%) 1890 (38%)	321 (31%) 2106 (44%)	107 (4%) 1893 (27%)	184 (4%) 2469 (26%)	139 (6%) 1654 (25%)	71 (6%) 1746 (27%)
High CVD Risk C ADVANCE KP Hawaii NZDCS	Cohorts 79 (18) 73 (23) 75 (24)	78 (17) 75 (23) 74 (22)	76 (17) 79 (23) 76 (22)	77 (17) 83 (25) 81 (23)	940 (33%) 1660 (33%) 242 (6%)	1301 (30%) 2330 (34%) 495 (6%)	663 (29%) 1890 (38%) 586 (9%)	321 (31%) 2106 (44%) 618 (11%)	107 (4%) 1893 (27%) 655 (14%)	184 (4%) 2469 (26%) 1189 (13%)	139 (6%) 1654 (25%) 852 (11%)	71 (6%) 1746 (27%) 673 (10%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima	Cohorts 79 (18) 73 (23) 75 (24) 121 (21) 121 (21)	78 (17) 75 (23) 74 (22) 116 (22)	76 (17) 79 (23) 76 (22) 119 (19)	77 (17) 83 (25) 81 (23) 123 (15)	940 (33%) 1660 (33%) 242 (6%) 110 (20%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART	Cohorts 79 (18) 73 (23) 75 (24) 121 (21) 79 (19)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC	Cohorts 79 (18) 73 (23) 75 (24) 121 (21) 79 (19) 66 (17) 66 (17)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18) 69 (17)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19) 67 (17)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20) 70 (17)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%) 27 (9%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%) 62 (9%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%) 27 (6%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%) 18 (9%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%) 11 (3%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%) 21 (3%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%) 12 (3%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%) 4 (2%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal	Cohorts 79 (18) 73 (23) 75 (24) 121 (21) 79 (19) 66 (17) 77 (22)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18) 69 (17) 77 (21)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19) 67 (17) 79 (22)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20) 70 (17) 85 (23)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%) 27 (9%) 3347 (24%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%) 62 (9%) 4986 (22%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%) 27 (6%) 3603 (23%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%) 18 (9%) 3403 (25%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%) 11 (3%) 5148 (27%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%) 21 (3%) 6991 (24%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%) 12 (3%) 3591 (18%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%) 4 (2%) 2779 (17%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal CKD Cohorts	Cohorts 79 (18) 73 (23) 75 (24) 121 (21) 79 (19) 66 (17) 77 (22)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18) 69 (17) 77 (21)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19) 67 (17) 79 (22)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20) 70 (17) 85 (23)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%) 27 (9%) 3347 (24%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%) 62 (9%) 4986 (22%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%) 27 (6%) 3603 (23%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%) 18 (9%) 3403 (25%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%) 11 (3%) 5148 (27%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%) 21 (3%) 6991 (24%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%) 12 (3%) 3591 (18%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%) 4 (2%) 2779 (17%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal CKD Cohorts AASK	Cohorts 79 (18) 73 (23) 75 (24) 121 (21) 79 (19) 66 (17) 77 (22) 45 (15) 45 (15)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18) 69 (17) 77 (21)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19) 67 (17) 79 (22)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20) 70 (17) 85 (23) 46 (15)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%) 27 (9%) 3347 (24%) 112 (52%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%) 62 (9%) 4986 (22%) 184 (51%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%) 27 (6%) 3603 (23%) 143 (54%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%) 18 (9%) 3403 (25%) 153 (63%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%) 11 (3%) 5148 (27%) 0 (0%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%) 21 (3%) 6991 (24%) 4 (1%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%) 12 (3%) 3591 (18%) 0 (0%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%) 4 (2%) 2779 (17%) 1 (0%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal CKD Cohorts AASK BC CKD	Cohorts 79 (18) 79 (18) 73 (23) 75 (24) 121 (21) 79 (19) 66 (17) 66 (17) 77 (22) 45 (15) 32 (16)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18) 69 (17) 77 (21) 46 (14) 33 (15)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19) 67 (17) 79 (22) 46 (14) 34 (16)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20) 70 (17) 85 (23) 46 (15) 36 (17)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%) 27 (9%) 3347 (24%) 112 (52%) 1173 (69%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%) 62 (9%) 4986 (22%) 184 (51%) 1383 (67%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%) 27 (6%) 3603 (23%) 143 (54%) 772 (65%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%) 18 (9%) 3403 (25%) 153 (63%) 511 (66%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%) 11 (3%) 5148 (27%) 0 (0%) 482 (22%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%) 21 (3%) 6991 (24%) 4 (1%) 719 (26%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%) 12 (3%) 3591 (18%) 0 (0%) 426 (27%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%) 4 (2%) 2779 (17%) 1 (0%) 286 (27%)
High CVD Risk C ADVANCE KP Hawaii NZDCS Pima SMART ZODIAC Subtotal CKD Cohorts AASK BC CKD CanPREDDICT	Cohorts 79 (18) 79 (23) 73 (23) 75 (24) 121 (21) 79 (19) 66 (17) 66 (17) 77 (22) 45 (15) 32 (16) 25 (10) 25 (10)	78 (17) 75 (23) 74 (22) 116 (22) 77 (18) 69 (17) 77 (21) 46 (14) 33 (15) 26 (10)	76 (17) 79 (23) 76 (22) 119 (19) 79 (19) 67 (17) 79 (22) 46 (14) 34 (16) 26 (10)	77 (17) 83 (25) 81 (23) 123 (15) 83 (20) 70 (17) 85 (23) 46 (15) 36 (17) 26 (10)	940 (33%) 1660 (33%) 242 (6%) 110 (20%) 368 (31%) 27 (9%) 3347 (24%) 112 (52%) 1173 (69%) 124 (66%)	1301 (30%) 2330 (34%) 495 (6%) 271 (26%) 527 (33%) 62 (9%) 4986 (22%) 184 (51%) 1383 (67%) 216 (72%)	663 (29%) 1890 (38%) 586 (9%) 214 (20%) 223 (36%) 27 (6%) 3603 (23%) 143 (54%) 772 (65%) 146 (75%)	321 (31%) 2106 (44%) 618 (11%) 245 (18%) 95 (40%) 18 (9%) 3403 (25%) 153 (63%) 511 (66%) 134 (73%)	107 (4%) 1893 (27%) 655 (14%) 0 (0%) 2482 (68%) 11 (3%) 5148 (27%) 0 (0%) 482 (22%) 157 (46%)	184 (4%) 2469 (26%) 1189 (13%) 0 (0%) 3128 (66%) 21 (3%) 6991 (24%) 4 (1%) 719 (26%) 270 (47%)	139 (6%) 1654 (25%) 852 (11%) 0 (0%) 934 (60%) 12 (3%) 3591 (18%) 0 (0%) 426 (27%) 195 (50%)	71 (6%) 1746 (27%) 673 (10%) 0 (0%) 285 (54%) 4 (2%) 2779 (17%) 1 (0%) 286 (27%) 156 (46%)

CARE FOR	47 (20)	48 (18)	48 (19)	50 (16)	37 (54%)	75 (46%)	84 (52%)	39 (57%)	0 (0%)	0 (0%)	1 (1%)	0 (0%)
HOMe												
CCF	47 (12)	48 (11)	48 (11)	47 (12)	2321 (74%)	3679 (75%)	2265 (72%)	1670 (67%)	5718 (65%)	8437 (63%)	4828 (61%)	3331 (57%)
CKD-JAC	37 (17)	38 (18)	39 (17)	45 (15)	172 (11%)	59 (10%)	16 (14%)		134 (8%)	72 (11%)	15 (11%)	2 (11%)
CRIB	21 (11)	23 (11)	24 (11)	23 (11)	114 (87%)	129 (82%)	44 (83%)	17 (85%)	3 (2%)	1 (1%)	1 (2%)	2 (9%)
GCKD	53 (21)	49 (17)	48 (17)	48 (17)	646 (64%)	1083 (59%)	648 (53%)	475 (53%)	11 (1%)	25 (1%)	20 (2%)	15 (2%)
Gonryo	74 (33)	76 (30)	78 (34)	88 (36)	739 (83%)	271 (82%)	56 (84%)	11 (92%)	1346 (60%)	600 (64%)	86 (56%)	20 (63%)
MASTERPLAN	38 (15)	37 (15)	34 (14)	31 (12)	141 (74%)	204 (69%)	81 (74%)	31 (76%)	13 (6%)	20 (6%)	3 (3%)	1 (2%)
MDRD	39 (23)	41 (20)	42 (20)	43 (20)					614 (100%)	711 (100%)	329 (100%)	117 (100%)
MMKD	49 (33)	45 (26)	47 (24)	31 (19)	99 (93%)	66 (92%)	12 (86%)	5 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Nefrona	30 (15)	32 (14)	33 (14)	31 (13)	140 (68%)	261 (65%)	185 (65%)	92 (70%)	151 (42%)	326 (45%)	181 (39%)	70 (35%)
NephroTest	48 (24)	43 (21)	40 (19)	43 (21)	485 (65%)	468 (66%)	222 (74%)	85 (73%)	7 (1%)	11 (2%)	3 (1%)	0 (0%)
PSP-CKD	50 (13)	51 (13)	52 (12)	53 (13)	1807 (66%)	2702 (69%)	1692 (70%)	906 (67%)	3008 (52%)	3728 (49%)	2058 (46%)	1210 (47%)
RENAAL	38 (13)	39 (13)	39 (12)	39 (12)	333 (100%)	530 (100%)	329 (100%)	276 (100%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
SRR-CKD	23 (11)	24 (11)	24 (10)	25 (10)	605 (75%)	746 (77%)	384 (83%)	187 (81%)	0 (0%)	0 (0%)	0 (0%)	0 (0%)
Sunnybrook	52 (33)	49 (28)	53 (28)	57 (32)	414 (74%)	477 (71%)	265 (72%)	158 (73%)	347 (38%)	401 (37%)	205 (36%)	95 (31%)
•	47 (18)	46 (15)	46 (14)	46 (14)	8483 (58%)	11314	6650 (62%)	4229 (60%)	11991 (45%)	15325 (46%)	8351 (44%)	5306 (43%)
Subtotal						(62%)						
Total	89 (18)	84 (17)	84 (17)	86 (18)	53418 (7%)	50688 (12%)	28126 (20%)	21404 (27%)	1131032 (60%)	1587290 (79%)	955701 (87%)	558586 (88%)



eFigure 1. Relationships of BMI with Waist Circumference (A and B) and Waist-Height Ratio (C and D), in Women (A and C) and Men (B and D)



eFigure 2. Hazard Ratios at 35 vs. 25 kg/m² in Individual General Population Cohorts, by Median Baseline Year

This figure plots the adjusted hazard ratio for each general population cohort study on the y-axis and the baseline year of the study on the x-axis. The green line corresponds to the meta-regression line of the log hazard ratios against the median baseline year of each cohort. The size of each bubble is inversely proportional to the variance of the effect estimate within each study cohort.





Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m². Panel D is additionally adjustment for SBP, eGFR, diabetes, total cholesterol, and history of CVD beyond the demographic characteristics of age, sex, and race.



eFigure 4. BMI Interactions by Age (A), Black Race (B), Hypertension (C), and Albuminuria (D) with GFR decline in General Population Cohorts

Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with a reference point at 25 kg/m² in each subgroup.





Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m². Panel D is additionally adjustment for SBP, eGFR, diabetes, total cholesterol, and history of CVD beyond the demographic characteristics of age, sex, and race.

eFigure 6. Sensitivity Analyses Excluding the First 3 Years of Follow-up (A), ESKD as the Sole Outcome (B), Competing Risk of Death (C), and Adjusting for Potential Mediators (D) for BMI in CKD Cohorts



Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m². Panel D is additionally adjustment for SBP, eGFR, diabetes, total cholesterol, and history of CVD beyond the demographic characteristics of age, sex, and race.



eFigure 7. Association of Waist Circumference (A and C) and Waist-Height Ratio (B and D) with GFR Decline in High CVD Risk (A and B) and CKD (C and D) Cohorts

Panels demonstrate the meta-analyzed hazard ratio and 95% confidence interval related to waist circumference or waist-height ratio, modeled using linear splines with knots at 82cm/68cm, 92cm/78cm, 102cm/88cm, 112cm/108cm in men and women, respectively, for waist circumference and 0.44, 0.5, 0.56, 0.62 for waist-height ratio, with solid circles indicating points in which there are significant differences in risk from the reference point at 92cm in men/78cm in women for waist circumference and .5 for waist-height ratio.



eFigure 8. Association of Adiposity Measures with All-Cause Mortality in General Population Cohorts

Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body mass index, waist circumference, or waist-height ratio with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m² for body mass index, 92cm in men/78cm in women for waist circumference, and .5 for waist-height ratio.



eFigure 9. Interaction of eGFR on BMI and Association with All-Cause Mortality in General Population Cohorts

Panel demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with a reference point at 25 kg/m² in each subgroup.

eFigure 10. Sensitivity Analyses Excluding the First 3 Years of Follow-up (A) and Adjusting for Potential Mediators (B) for BMI and All-Cause Mortality in General Population Cohorts



Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m². Panel B is additionally adjustment for SBP, eGFR, diabetes, total cholesterol, and history of CVD beyond the demographic characteristics of age, sex, and race



eFigure 11. Association of Adiposity Measures with All-Cause Mortality in High Cardiovascular Risk Cohorts

Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body mass index, waist circumference, or waist-height ratio with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m² for body mass index, 92cm in men/78cm in women for waist circumference, and .5 for waist-height ratio.

eFigure 12. Sensitivity Analyses Excluding the First 3 Years of Follow-up (A) and Adjusting for Potential Mediators (B) for BMI and All-Cause Mortality in High Cardiovascular Risk Cohorts



Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m². Panel B is additionally adjustment for SBP, eGFR, diabetes, total cholesterol, and history of CVD beyond the demographic characteristics of age, sex, and race.



eFigure 13. Association of Adiposity Measures with All-Cause Mortality in CKD Cohorts

Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body mass index, waist circumference, or waist-height ratio with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m² for body mass index, 92cm in men/78cm in women for waist circumference, and .5 for waist-height ratio.

eFigure 14. Sensitivity Analyses Excluding the First 3 Years of Follow-up (A) and Adjusting for Potential Mediators (B) for BMI and All-Cause Mortality in CKD Cohorts



Panels demonstrates the meta-analyzed hazard ratio and 95% confidence interval related to body-mass index, modeled using linear splines with knots at 20, 25, 30, and 35 kg/m², with solid circles indicating points in which there are significant differences in risk from the reference point at 25 kg/m². Panel B is additionally adjustment for SBP, eGFR, diabetes, total cholesterol, and history of CVD beyond the demographic characteristics of age, sex, and race.

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