<table>
<thead>
<tr>
<th>Study Title</th>
<th>Principal Investigator</th>
<th>University Affiliation</th>
<th>Year funded</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nutrition Assessment in Chronic Renal Insufficiency Cohort (CRIC) Study Population</td>
<td>Cheryl Anderson, PhD, MPH</td>
<td>The Johns Hopkins University</td>
<td>2002</td>
<td>nutrition, cerebrovascular disease, protein-energy malnutrition, metabolism</td>
</tr>
<tr>
<td>A Structural Approach to Renal Bone Disease in CRIC</td>
<td>Mary Leonard, MD, MSCE</td>
<td>Children’s Hospital of Philadelphia</td>
<td>2003</td>
<td>renal bone disease, renal osteodystrophy, bone mineral density</td>
</tr>
<tr>
<td>Hypertension and Hypercholesterolemia Control in Patients with CKD</td>
<td>Paul Muntner, PhD</td>
<td>University of Alabama at Birmingham</td>
<td>2003</td>
<td>hypertension, hypercholesterolemia, cardiovascular disease, hemodynamics, nutrition</td>
</tr>
<tr>
<td>CRIC Heart Failure Detection Cohort and the CRIC Heart Failure Progression Cohort</td>
<td>Michael Shlipak, University of California, San Francisco</td>
<td>2003</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Development and Validation of GFR Estimating Equations</td>
<td>Andrew Levey, MD</td>
<td>Tufts University</td>
<td>2004</td>
<td>estimated glomerular filtration rate, meta analysis, equation</td>
</tr>
<tr>
<td>Carotid Intima-Media Thickness in Chronic Kidney Disease</td>
<td>Sylvia Rosas, MD, MSCE</td>
<td>University of Pennsylvania</td>
<td>2004</td>
<td>carotid intima-media thickness, carotid plaque, progression, cardiac outcomes</td>
</tr>
<tr>
<td>Hispanic Recruitment in CRIC</td>
<td>Julio Vijil, Jr., MD</td>
<td>University of Illinois, Chicago</td>
<td>2004</td>
<td>recruitment, Hispanic</td>
</tr>
</tbody>
</table>

*Please note that this list is limited to approved CRIC ancillary studies that have received funding. The CRIC Steering Committee reviews and approves new proposals on a rolling basis and maintains a separate list of approved but not yet funded proposals which are also considered when vetting new submissions.*
Cognitive Function in Chronic Renal Insufficiency  
Kristine Yaffe, MD  
University of California, San Francisco  
2005  
cognitive function, gfr, depression

Pulse Wave Velocity and Chronic Kidney Disease  
Raymond Townsend, MD  
University of Pennsylvania  
2005  
pulse wave velocity, hypertension, cardiovascular disease

Sleep Disturbances as a Non-traditional Risk Factor in CKD  
Eve Van Cauter, PhD  
University of Chicago  
2005  
sleep, risk factor, c-reactive protein

Diabetic and Hypertensive Retinopathy and CRI  
Juan E. Grunwald, MD  
University of Pennsylvania  
2005  
retinopathy, hypertension, diabetes, ophthalmology

Hispanic Chronic Renal Insufficiency Cohort  
James Lash, MD  
University of Illinois, Chicago  
2005  
hispanic, cardiovascular disease, progression

Cytokine Gene Polymorphism in the CRIC Cohort  
Dominic Raj, MD  
George Washington University  
2006  
cytokine, polymorphism, inflammation

Genetics of Atherosclerosis in Renal Disease  
Muredach P. Reilly, MBBCH, MSCE  
University of Pennsylvania  
2006  
genetics, atherosclerosis, metabolic syndrome, inflammation
CRIC Funded Ancillary Studies

**Study Title**
**Principal Investigator**
**University Affiliation**
**Year funded**
**Keywords**

**Vitamin D Deficiency, Physical Performance and Cardiovascular Disease**
Mary Leonard, MD, MSCE
Children’s Hospital of Philadelphia
2006
vitamin D, calcidiol, frailty, PTH

**Sodium and Cardiovascular Disease in Patients with CKD**
Jiang He, MD, PhD
Tulane University
2006
Sodium, electrolyte excretion, potassium, cardiovascular disease, cardiac outcomes

**Study of Advanced Chronic Renal Insufficiency**
Chi-yuan Hsu, MD, MSc
University of California, San Francisco
2006
progression, transition to ESRD, GFR

**KDQOL and the Spanish-Speaking CKD Population**
Julio Vijil, Jr., MD
University of Illinois, Chicago
2007
KDQOL, hispanic, HCRIC

**Health Literacy and Acculturation in Hispanic Patients with Chronic Kidney Disease**
Claudia Lora, MD
University of Illinois, Chicago
2007
HCRIC, health literacy, Hispanic, acculturation, risk factor, cardiovascular disease

**Genomics of myocardial transcription factors in cardiac remodeling**
Thomas P. Cappola, MD, ScM
University of Pennsylvania
2007
genetics, cardiac remodeling, transcription factors

**Pulse Wave Velocity and Chronic Kidney Disease**
Stephanie DeLoach, MD
Thomas Jefferson University
2007
pulse wave velocity, cardiovascular disease
CRIC Funded Ancillary Studies

**Study Title**
**Principal Investigator**
**University Affiliation**
**Year funded**
**Keywords**

**Corin Allelle and Heart Disease**
Daniel L. Dries, MD
Yale University
2007
genetics, cardiovascular disease, natriuretic peptide system, cardiac hypertrophy, corin

**CRIC Plus – Race Group Analysis**
Vanessa Grubbs, MD, MPH
University of California, San Francisco
2007
racial disparities, progression, CRIC-plus, ESRD

**Carotid Intima-Media Thickness in Chronic Kidney Disease (Renewal)**
Sylvia Rosas, MD, MSCE
University of Pennsylvania
2007
carotid intima-media thickness, carotid plaque, progression, cardiac outcomes

**Using 2-D Gel to Identify Patterns of Urine Protein Excretion that Predict Loss of GFR**
Chi-yuan Hsu, MD, MSc
University of California, San Francisco
2008
two-dimension differential gel electrophoresis, GFR, proteinuria

**Molecular Predictors of Progressive Renal Failure in the Chronic Renal Insufficiency Cohort**
Matthias Kretzler, MD
University of Michigan
2008
progression, molecular predictors, biomarkers

**Clinical Outcomes of Pre-ESRD CKD Patients with Hepatitis C Infection**
Akinlolu O. Ojo, MD, PhD, MPH
University of Michigan
2008
HCV, pre-ESRD

**Genetic of Lipoprotein Metabolism and CVD in CKD**
Daniel J. Rader, MD
University of Pennsylvania
2008
lipoproteins, metabolism, genetics
## CRIC Funded Ancillary Studies

<table>
<thead>
<tr>
<th>Study Title</th>
<th>Principal Investigator</th>
<th>University Affiliation</th>
<th>Year funded</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Role of FGF-23 in Mineral Metabolism and CVD in Pre-dialysis CKD</td>
<td>Myles S. Wolf, MD, MMSc</td>
<td>University of Miami</td>
<td>2008</td>
<td>FGF-23, phosphate therapy, hyperphosphatemia, left ventricular mass</td>
</tr>
<tr>
<td>The Renin-Angiotensin-Aldosterone System and Cardiac Arrhythmias</td>
<td>Rajat Deo, MD</td>
<td>University of Pennsylvania</td>
<td>2009</td>
<td>atrial fibrillation, renin, aldosterone, angiotensin, cardiovascular disease</td>
</tr>
<tr>
<td>CKD, Metabolic Syndrome and Cardiovascular Disease</td>
<td>Harold I. Feldman, MD, MSCE</td>
<td>University of Pennsylvania</td>
<td>2009</td>
<td>metabolic syndrome, insulin resistance, cardiovascular disease, progression</td>
</tr>
<tr>
<td>GWAS in CKD: The CRIC Study</td>
<td>Harold I. Feldman, MD, MSCE</td>
<td>University of Pennsylvania</td>
<td>2009</td>
<td>GWAS, genetics, GFR, progression</td>
</tr>
<tr>
<td>Chronic Kidney Disease Biomarker Validation</td>
<td>Chi-yuan Hsu, MD, MSc and Kathleen D. Liu, MD, PhD, MAS</td>
<td>University of California, San Francisco</td>
<td>2009</td>
<td>biomarkers, kidney injury</td>
</tr>
<tr>
<td>The Role of Neuregulin in Human Cardiac Remodeling and Heart Failure</td>
<td>Bonnie Ky, MD, MSCE</td>
<td>University of Pennsylvania</td>
<td>2009</td>
<td>NRG-1, cardiac remodeling</td>
</tr>
<tr>
<td>Hypertension in Advanced Chronic Kidney Disease</td>
<td>Nisha Bansal, MD, MAS</td>
<td>University of California, San Francisco</td>
<td>2010</td>
<td>hypertension, progression, ESRD, blood pressure, cardiovascular disease</td>
</tr>
</tbody>
</table>
CRIC Funded Ancillary Studies

**Study Title**
**Principal Investigator**
**University Affiliation**
**Year funded**
**Keywords**

*The Effect of Sickle Cell Trait upon Progression of Chronic Kidney Disease*
Vimal Derebail, MD, MPH
University of North Carolina
2010
risk factors, sickle cell trait, hemoglobinopathy

*Elevated Nighttime BP – Clinical and Demographic Features, Correlates, and Changes Over Time*
Paul E. Drawz, MD, MHS
Case Western Reserve University
2010
hypertension, blood pressure, nighttime ABP

*Joint Analysis of Longitudinal Outcomes and Clinical Events in Chronic Kidney Disease Cohorts*
Tom Greene, PhD
University of Utah
2010
longitudinal analysis, statistical methods, multi-state models, causal models

*Health Literacy, Acculturation and Social Support in Hispanics with Chronic Kidney Disease*
Claudia Lora, MD
University of Illinois, Chicago
2010
HCRIC, health literacy, Hispanic, acculturation, risk factors, cardiovascular disease

*Validation of the Beck Depression Inventory in Hispanics with Chronic Kidney Disease*
Ana C. Ricardo, MD, MPH, MS
University of Illinois, Chicago
2010
Beck depression inventory, Hispanic, depression,

*Carbamylated LDL and Cardiovascular Events*
Sudhir V. Shah, MD
University of Arkansas
2010
carbamylated LDL, cardiovascular disease, risk factors, atherosclerosis

*Pulse Wave Velocity (Renewal)*
Raymond Townsend, MD
University of Pennsylvania
2010
pulse wave velocity, hemodynamics, blood pressure
CRIC Funded Ancillary Studies

Study Title
Principal Investigator
University Affiliation
Year funded
Keywords

Modifiable and Novel Risk Factors for and Consequences of Acute Kidney Injury in the Setting of Chronic Kidney Disease: a CRIC Ancillary Study
Amanda Hyre Anderson, PhD, MPH
University of Pennsylvania
2011
acute kidney injury, progression, mortality

Do patient safety events account for adverse outcomes in CKD?
Jeffrey Fink, MD
University of Maryland
2011
safety incidents, outcomes, metabolic disturbance

Abrupt Transition to ESRD from CKD
Chi-yuan Hsu, MD, MSc
University of California, San Francisco
2011
ESRD, transition

CKD Blood Biomarker Discovery (sub-protocol of the CKD Biomarkers Consortium)
Lesley Inker, MD, MS
Tufts University
2011
biomarkers, progression, proteomics

Hispanic Chronic Renal Insufficiency Cohort (Renewal)
James Lash, MD
University of Illinois, Chicago
2011
Hispanic, cardiovascular disease, progression

Novel Paradigm to Understand Diabetic Complications
Kumar Sharma, MD
University of California, San Diego
2011
mitochondria, urine metabolomics, nephropathy, retinopathy

Cognitive Decline in Chronic Renal Insufficiency (Renewal)
Manjula Tamura, MD, MPH and Kristine Yaffe, MD
Stanford University
2011
cognitive function, gfr, decline, oxidative stress markers
CRIC Funded Ancillary Studies

**Study Title**

**Health Disparities in Chronic Kidney Disease**
James Lash, MD
University of Illinois, Chicago
2012
socioeconomic status, health literacy, health disparities

**Acidosis, Net Acid Excretion and Morbidity in CKD**
Julia Scialla, MD, MHS
Duke University
2012
metabolic acidosis, nutrition, bone and mineral metabolism, urinary electrolytes, progression, cardiovascular disease, mortality

**Genetics of Race and Disordered Mineral Metabolism in CKD**
Myles S. Wolf, MD, MMSc
Northwestern University
2012
phosphate, FGF23, klotho, CKD, CVD, genetics, ancestry, racial disparities

**Mexico Chronic Renal Insufficiency Cohort (MCRIC)**
James Lash, M.D.
University of Illinois, Chicago
2012
Chronic kidney disease progression, Hispanics, Mexico

**Metabolomic Studies in Chronic Kidney Disease**
Harold I. Feldman, MD, MSCE
University of Pennsylvania
2012
metabolomics

**Gender Disparities and Endogenous Estrogen in Chronic Kidney Disease Outcomes**
Ana Ricardo, MD, MPH, MS
University of Illinois, Chicago
2013
Sex hormones, gender disparities
CRIC Funded Ancillary Studies

**Study Title**  
**Principal Investigator**  
**University Affiliation**  
**Year funded**  
**Keywords**

**Mediators & Prognostic Value of Muscle Mass & Function in Chronic Kidney Disease**  
Perry Wilson, M.D.  
Yale University  
2013  
Sarcopenia, creatinine generation rate, chronic kidney disease, myostatin, caspase-3, activin A, inflammation, tnf-alpha, tgf-beta, frailty

**FGF-23 and Clinical Outcomes in ADPKD Patients**  
Myles S. Wolf, MD, MMSc  
Northwestern University  
2013  
FGF23, CKD, ADPKD, phosphate

**Validation of the Kidney Knowledge Survey (KiKS) in Hispanics with Chronic Kidney Disease.**  
Claudia Lora  
University of Illinois at Chicago  
2013  
Hispanics, Chronic Kidney Disease Knowledge, Spanish language

**Estimating GFR from a Panel of Endogenous Filtration Markers (Panel eGFR)**  
Lesley Inker  
Tufts Medical Center  
2013  
GFR, beta trace protein, beta 2 microglobulin, cystatin C, creatinine

**Serum Bicarbonate and Cardiovascular Risk in Patients with Chronic Kidney Disease**  
Mirela Dobre, M.D.  
Case Western Reserve University  
2013  
metabolic acidosis, metabolic alkalosis, cardiovascular disease, mortality

**Role of Sclerostin in Disordered Mineral Metabolism in CKD**  
Tamara Isakova, MD, MMSc  
Northwestern University  
2013  
CKD, sclerostin, FGF23, PTH, phosphate

**Pathophysiological Role of Prorenin**  
Alfred Cheung, M.D.  
University of Utah  
2013  
Prorenin, chronic kidney disease, retinopathy, cardiovascular disease, diabetes

20201124
CRIC Funded Ancillary Studies

**Study Title**
Enhancing appreciation of the clinical significance of acute kidney injury

**Principal Investigator**
Raymond Hsu

**University Affiliation**
University of California, San Francisco

**Year funded**
2013

**Keywords**
Acute kidney injury (AKI), chronic kidney disease (CKD)

**Vitamin D catabolism in chronic kidney disease**
Ian de Boer

**University of Washington**

**Year funded**
2013

**Keywords**
Vitamin D, mineral metabolism, CKD

**Plasma KIM-1 and Chronic Kidney Disease**
Sushrut Waikar

**Brigham and Women’s Hospital**

**Year funded**
2014

**Keywords**
Tubular injury; biomarkers of progression

**Novel metabolites associated with renal outcomes**
Tammy Sirich

**Stanford University**

**Year funded**
2014

**Keywords**
mass spectrometry, metabolomic, CKD

**Is there a digital divide in chronic kidney disease?**
Clarissa Diamantidis

**Duke University**

**Year funded**
2014

**Keywords**
CKD, health information technology, e-literacy, patient safety

**Performance of Vitamin D-Binding Protein (DBP) ELISA by Genotype: Validation using Mass Spectrometry**
Mary Leonard, Michelle Denburg

**Stanford University/Children’s Hospital of Philadelphia**

**Year funded**
2014

**Keywords**
Vitamin D, vitamin D-binding protein, genotype

**Visceral adiposity and fitness among CRIC participants (phase 3)**
Sankar Navaneethan

**Cleveland Clinic**

**Year funded**
2014

**Keywords**
Obesity, fitness, and kidney disease
CRIC Funded Ancillary Studies

**Study Title**
**Principal Investigator**
**University Affiliation**
**Year funded**

**Keywords**

*Measures of fibrosis and clinical outcomes in chronic kidney disease*
Amanda Hyre Anderson, PhD, MPH
University of Pennsylvania
2015
fibrosis, CKD progression, cardiovascular disease, galectin-3, CTGF or CCN2, collagen type III, MMP-2

*Heart failure and arrhythmias in CKD*
Nisha Bansal, MD, MAS
University of California, San Francisco
2015
heart failure, prediction, cardiac arrhythmias, biomarkers

*Whole-exome sequencing study of diabetic nephropathy*
Tanika Kelly
Tulane University
2015
diabetic nephropathy; next-generation sequencing; whole-exome sequencing; rare variants; low frequency variants

*Longitudinal Changes in Metabolomic Biomarkers and CKD Progression*
Eugene Rhee
Massachusetts General Hospital/Broad Institute
2015
metabolomics, CKD, CKD progression

*Oxalate in CKD Pathogenesis and Progression*
Sushrut Waikar
Brigham and Women’s Hospital
2015
oxalate; chronic kidney disease; cardiovascular disease; decline in GFR

*Epigenetic dysregulation in diabetic kidney disease*
Katalin Susztak
University of Pennsylvania
2015
cytosine methylation, epigenetics

*Prognostic biomarkers in chronic kidney disease*
Farsad Afshinnia
University of Michigan
2015
chronic kidney disease, progression, end stage renal disease, biomarker, metabolomics, Mass spectrometry

20201124
CRIC Funded Ancillary Studies

**Study Title**

Pilot Study on Proteomics of Kidney Disease Progression in the CRIC Study
Rajat Deo
University of Pennsylvania
2015
proteomics, progressive kidney disease, SOMAscan

Targeted Biomarkers of Chronic Kidney Disease (CKD) and its Complications
Jeffrey Schelling
Case Western Reserve University
2015
Chronic kidney disease, diabetic nephropathy, biomarker, case-cohort study

Identifying Modifiable Biomarkers/Mediators for Cardiovascular Disease in Chronic Kidney Disease
Peter Ganz
University of California, San Francisco
2016
cardiовascular risk prediction model; chronic kidney disease; proteomics

Tubular Secretion and Chronic Kidney Disease Complications
Bryan Kestenbaum
University of Washington
2016
tubular secretion, biomarkers, kidney, hippurate

Assessing the accuracy of information in the CMS Medical Evidence Report (form CMS-2728)
Chi-yuan Hsu
University of California, San Francisco
2016
incident ESRD, co-morbidity, information bias

Novel Diagnostics and Therapeutic Targets for Calcification in CKD
Tamara Isakova
Northwestern University
2016
vascular calcification; calcification propensity; calciprotein particles

Assessment of nicotine exposure from toenail clippings of CRIC participants
Edgar Jaimes
MSKCC
2016
nicotine, smoking, chronic kidney disease (CKD)
CRIC Funded Ancillary Studies

Study Title
Principal Investigator
University Affiliation
Year funded
Keywords

Metabolomics for Identifying Biomarkers of Dietary Intake & Kidney Disease Progression
Casey Rebholz
Johns Hopkins University
2016
diet; metabolomics; kidney disease progression

The Gut Microbiome and the metabolome in CKD
Amanda Anderson
University of Pennsylvania
2016
gut microbiota, metabolomics, metabolic profiling, CKD

Weight trajectory in chronic kidney disease and risk of adverse outcomes
Elaine Ku
University of California, San Francisco
2016
Weight loss, BMI, CKD, ESRD

Vitamin K status, CVD and arterial stiffness in chronic kidney disease: The Chronic Renal Insufficiency Cohort
Kyla Shea
Tufts University
2017
Vitamin K, matrix gla protein, kidney function, CVD, arterial stiffness

MicroRNAs in progressive renal disease – a pilot study in CRIC (MIRROR-TRIC)
Christos Argyropoulos
University of New Mexico
2017
microRNAs, Chronic Kidney Disease, Proteinuria, RNA-seq, biomarkers, measures of renal function

Developing and validating prognostic metabolomic signatures of diabetic kidney disease
Loki Natarajan
University of California, San Diego
2017
Diabetic kidney disease; metabolomics; prognostic models; variable selection

Health literacy and Self-Management in Chronic Kidney Disease: a CRIC Ancillary Study
Sarah Schrauben
University of Pennsylvania
2017
Self-management; CKD progression; Health literacy
CRIC Funded Ancillary Studies

**Study Title**
**Principal Investigator**
**University Affiliation**
**Year funded**
**Keywords**

*Hispanic CRIC Study renewal*
James Lash
University of Chicago Illinois
2017
Hispanic/Latino; chronic kidney disease

*Soluble Fms-Like Tyrosine Kinase-1 (sFlt-1), Placental growth factor (PlGF) and CVD in Participants with CKD*
Saif Anwaruddin and Rajat Deo
University of Pennsylvania
2018
Cardiovascular disease, soluble Fms-Like Tyrosine Kinase-1, Placental growth factor (PlGF)

*The effects of protein carbamylation in chronic kidney disease (CKD)*
Sahir Kalim
Massachusetts General Hospital
2018
Protein carbamylation; CKD; kidney function; mortality; chronic renal insufficiency cohort (CRIC), CKD progression

*Statistical Methods for Genomics of CKD*
Andrea Foulkes
Mount Holyoke
2018
Genomics, biomarker trajectories, chronic kidney disease

*Acute kidney injury among patients with chronic kidney disease*
Chi Hsu
University of California, San Francisco
2018
Acute kidney injury (AKI)

*The role of functional iron deficiency in systemic complications of CKD*
Monique Cho
University of Utah
2018
Iron, chronic kidney disease, hepcidin, cardiovascular disease

*Cardiovascular disease risk and risk factors among adults with chronic kidney disease taking moderate or high intensity statins*
Paul Muntner
University of Alabama at Birmingham
2018
Chronic kidney disease, statins, cardiovascular disease
CRIC Funded Ancillary Studies

Study Title
Principal Investigator
University Affiliation
Year funded
Keywords

Sleep disordered breathing as a predictor of outcomes in chronic kidney disease
Ana Ricardo
University of Illinois at Chicago
2019
Sleep apnea, chronic kidney disease progression, cardiovascular disease

Population-Based Limits of 24-Hour Urinary Creatinine Excretion
Bryan Kestenbaum
2019
Urine creatinine, excretion, height, weight

A Mixed Methods Study of Chronic Kidney Disease Self-Management
Sarah Schrauben
University of Pennsylvania
2019
Self-management; CKD progression

Dynamic Prediction of Renal Failure Using Longitudinal Prognostic Information among Patients with Chronic Kidney Disease and Kidney Transplant
Liang Li
University of Texas MD Anderson Cancer Center
2019
Dynamic prediction; Prediction model; CKD; Kidney transplant; ESRD; Graft failure

American Indian Chronic Renal Insufficiency Cohort Study (AI-CRIC Study)
Vallabh Shah
University of New Mexico HSC
2019
Native American, Disparity, CKD, CVD

Access to Health Care and Health Outcomes in Chronic Kidney Disease
Stephanie Toth-Manikowski
University of Illinois
2019
Access to care, Healthcare Access, Chronic kidney disease, Health disparities

Adiposity-obesity-related subgroups discovery and metabolomics analysis using machine learning algorithm for chronic kidney disease
Emma Zheng
University of Pennsylvania
2019
Obesity, adiposity, metabolomics, patient subgroups, biomarkers, high dimensional data mining
**CRIC Funded Ancillary Studies**

**Study Title**

**Characterization of Illness Representation Groups in Chronic Kidney Disease**
Eleanor Rivera
University of Pennsylvania
2019
Chronic kidney disease, illness representation, treatment adherence, health literacy, health care utilization

**SAREG in urine and serum as a biomarker of CKD severity and progression**
Andreas Herrlich
Washington University School of Medicine in St. Louis
2019
Amphiregulin (AREG), epidermal growth factor (EGF), epidermal growth factor receptor (EGFR)

**Health Disparities in Chronic Kidney Disease Mentoring Program**
Jim Lash
University of Illinois, Chicago
2019
Health disparities, chronic kidney disease, physical activity, sleep disorders

**Whole Exome Sequencing of Participants in the Chronic Renal Insufficiency Cohort (CRIC) Study**
Harv Feldman
University of Pennsylvania
2020
Genetics, exome sequencing, chronic kidney disease

**Cleveland CRIC-KPMP Cohort (CCKC)**
Jonathan Taliercio
Cleveland Clinic
2020
KPMP, CRIC, kidney biopsy, biosample, kidney atlas

**Natarajan Inference for Functional Principal Components of Kidney Disease Progression in Diabetic Patients Across Albuminuria Groups in the Chronic Renal Insufficiency Cohort (CRIC) Study**
Loki Natarajan
UCSD
2020
Albuminuria; chronic kidney disease (CKD); clustering; diabetes; eGFR; functional data analysis; functional principal components analysis (FPCA); nonlinear; statistical inference; trajectory modeling

**Lp(a) and the risk for atherosclerotic cardiovascular events among adults with CKD and a history of atherosclerotic cardiovascular disease in the CRIC study**
Lisandro Colantonio
University of Alabama at Birmingham
2020
Lipoprotein(a), chronic kidney disease, cardiovascular disease.
CRIC Funded Ancillary Studies

<table>
<thead>
<tr>
<th>Study Title</th>
<th>Principal Investigator</th>
<th>University Affiliation</th>
<th>Year funded</th>
<th>Keywords</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metabolomics and tubular secretory status</td>
<td>Eugene Rhee, Bryan Kestenbaum</td>
<td>Mass General Hospital</td>
<td>2020</td>
<td>Metabolomics, Tubular secretion, CKD</td>
</tr>
<tr>
<td>Metabolites and Neuro-Cognition, Sleep and Depression</td>
<td>Eugene Rhee, Rakesh Malhotra</td>
<td>Mass General Hospital</td>
<td>2020</td>
<td>Metabolomics, CKD, Neurocognition, Sleep, Depression</td>
</tr>
<tr>
<td>Improving Kidney Function Assessment in Health and Disease</td>
<td>Lesley Inker</td>
<td>Tufts Medical Center</td>
<td>2020</td>
<td>GFR, metabolites, heart failure, race</td>
</tr>
<tr>
<td>Metabolomics and Tubular secretory status</td>
<td>Eugene Rhee, Kendra Wulczyn</td>
<td>Mass General Hospital</td>
<td>2020</td>
<td>Metabolomics, Tubular secretion, CKD</td>
</tr>
<tr>
<td>Elucidating the Biology of Cardiovascular Risk in Hemodialysis Patients Using Proteomics</td>
<td>Ruth Dubin</td>
<td>University of California San Francisco</td>
<td>2020</td>
<td>Proteomics, Hemodialysis</td>
</tr>
<tr>
<td>Establishing A New Diagnostic Paradigm for Peripheral Artery Disease among Patients with Chronic Kidney Disease</td>
<td>Jing Chen</td>
<td>Tulane University</td>
<td>2020</td>
<td>PAD, ABI, CKD</td>
</tr>
<tr>
<td>Patient perceptions about influenza vaccination in nephrology care</td>
<td>Junichi Ishigami</td>
<td>Johns Hopkins University</td>
<td>2021</td>
<td>Influenza vaccine, chronic kidney disease</td>
</tr>
</tbody>
</table>
Consequences of Clonal Hematopoiesis of Indeterminate Potential in Chronic Kidney Disease
Tanika Kelly
Tulane University
2021
CHIP, CKD, Inflammation

Metabolomics and HFpFF in CKD
Rupal Mehta
Northwestern University
2021
Metabolomics, CKD, HFpEF

CCC-Tobacco (Cross Cohort Collaboration)-a harmonized dataset created by pooling existing de-identified tobacco data across NHLBI-funded cohorts
Michael Blaha
Johns Hopkins University
2021
Cardiovascular disease, cigarette, smoking, subclinical atherosclerosis, tobacco