ACKNOWLEDGEMENTS

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Summary

This document includes recommended statements that acknowledge the ARIC study in general and its various components and ancillary studies. Authors should follow the guidelines of the journal to which they submit as to the format, location and sometimes necessity to abbreviate. That said, each component which funded data used in a paper should be acknowledged. Some data collection (e.g. laboratory data which were collected using reagents donated by companies, CMS or cancer registry data) has additional requirements. This document lists the biggest ancillary studies to ARIC but **authors are responsible for knowing their own sources of support and acknowledge all sources relevant to the data included in their manuscript.** For example, we haven't listed all lab ancillaries, CAC, accelerometry, and other ancillaries or donated reagents for visits 4 and 5 (e.g. troponin, NTproBNP, cysC, PI:Ballantyne) or FGF23 ancillary (PI:Matsushita).

General acknowledgements for ARIC and ARIC-NCS

ARIC

Include in the acknowledgement section of ALL PAPERS USING ARIC DATA:

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. (75N92022D00001, 75N92022D00002, 75N92022D00003, 75N92022D00004, 75N92022D00005). The authors thank the staff and participants of the ARIC study for their important contributions.

ARIC Neurocognitive (ARIC-NCS) for selected components of Visit 5 and 7 and all of Visits 6-8

The Atherosclerosis Risk in Communities Study is carried out as a collaborative study supported by National Heart, Lung, and Blood Institute contracts (75N92022D00001, 75N92022D00002, 75N92022D00003, 75N92022D00004, 75N92022D00005). The ARIC Neurocognitive Study is supported by U01HL096812, U01HL096814, U01HL096899, U01HL096902, and U01HL096917 from the NIH (NHLBI, NINDS, NIA and NIDCD). The authors thank the staff and participants of the ARIC study for their important contributions.

NCS funded components

Visit 5 (2011-13)	Visit 6 (2016-17)	Visit 7 (2018-19)	Visit 8 (2020)
cognitive data	cognitive data	cognitive data	cognitive data
brain MRI			brain MRI
SPPB (short physical performance battery)	SPPB	SPPB	SPPB
	hearing testing	hearing testing	

Brain MRI examinations performed in the 2004-06 Brain MRI study were funded by R01HL70825.

Brain PET scans in 2011-13 and brain MRI and PET scans in 2016-19 were funded by R01AG040282.

Brain MRI scans in 2017-19 were funded by R01AG054491.

Ancillary study support of specific lab tests and donated reagents (Visits 6 and 7)

Visit 6 acknowledgement (in addition to the standard ARIC / ARIC-NCS acknowledgement):

Funding for laboratory testing and biospecimen collection at ARIC Visit 6 was supported by grant R01DK089174 from the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) of the National Institutes of Health (NIH).

Grant funding for Laboratory tests in ARIC Visit 6 and 7

Sample Type - Visit 6 Test	Lab	Grant support
Whole Blood - HbA1c	Minn	R01DK089174
Urine – Albumin	Minn	R01DK089174
Urine - Creatinine	Minn	R01DK089174
*Urine – calculated ACR	Minn	R01DK089174
Serum – Glucose	Minn	R01DK089174
Serum - Creatinine	Minn	R01DK089174
Serum – Fructosamine (Roche)	Minn	R01DK089174
Serum - Glycated Albumin (Asahi Kasei)	Minn	R01DK089174
Serum - 1,5-anhydroglucitol(GlycoMark)	Minn	R01DK089174
Plasma – hs-cTnT (Roche)	Baylor	R01DK089174
Plasma – NT-proBNP (Roche)	Baylor	R01DK089174
Plasma – hs-cTnI (Abbott)	Baylor	R01HL134320
Plasma - Galectin-3 (Abbott)	Baylor	R01HL134320
Plasma - ST2	Baylor	R01HL134320
Plasma - hs-CRP	Baylor	R01HL134320
Plasma - lipids TC	Baylor	R01HL134320
Plasma - lipids HDL-C	Baylor	R01HL134320
Plasma - lipids TG	Baylor	R01HL134320
*Plasma – lipids calculated LDL-C *Plasma – lipids calculated non-HDL-C	Baylor Baylor	R01HL134320
Plasma - Cytokine/MMP panel GDF-15	Baylor	R01HL134320
Plasma - Cytokine/MMP panel IL-1β	Baylor	R01HL134320
Plasma - Cytokine/MMP panel IL-6	Baylor	R01HL134320
Plasma - Cytokine/MMP panel IL-10	Baylor	R01HL134320
Plasma - Cytokine/MMP panel IL-18	Baylor	R01HL134320
Plasma - Cytokine/MMP panel TNF-α	Baylor	R01HL134320
Plasma - Cytokine/MMP panel MMP-1	Baylor	R01HL134320
Plasma - Cytokine/MMP panel MMP-2	Baylor	R01HL134320
Plasma - Cytokine/MMP panel MMP-7	Baylor	R01HL134320
Plasma - Cytokine/MMP panel TIMP-1	Baylor	R01HL134320

Grant R01HL134320 also funded high-sensitivity cardiac Troponin I, high-sensitivity cardiac Troponin T, N-terminal pro-Brain natriuretic peptide, GDF15 and galectin 3 at Visits 4 and 5.

Visits 6 & 7 Donated reagent acknowledgement: Include the acknowledgement statement and check with the ancillary PI about providing a copy of the paper to the donor.

Reagents for the ALT, AST, GGT, beta-2 microglobulin, and fructosamine assays were donated by the Roche Diagnostics Corporation.

Reagents for the 1,5-anhydroglucitol assays were donated by GlycoMark, Inc.

Reagents for the glycated albumin assays were donated by the Asahi Kasei Pharma Corporation.

Reagents for the hs-cTnT, NT-proBNP and GDF15 assays were donated by the Roche Diagnostics Corporation.

Reagents for hs-cTnI and galectin 3 were donated by Abbott Diagnostics

ARIC Carotid MRI Study

The Atherosclerosis Risk in Communities Study is carried out as a collaborative study supported by National Heart, Lung, and Blood Institute contracts (75N92022D00001, 75N92022D00002, 75N92022D00003, 75N92022D00004, 75N92022D00005) with the ARIC carotid MRI examination funded by U01HL075572. The authors thank the staff and participants of the ARIC study for their important contributions.

ARIC Cancer

Studies on cancer in ARIC are also supported by the National Cancer Institute (U01 CA164975). and the National Heart, Lung, and Blood Institute, National Institutes of Health, Department of Health and Human Services, under Contract nos. (75N92022D00001, 75N92022D00002,

75N92022D00003, 75N92022D00004, 75N92022D00005). The authors thank the staff and participants of the ARIC study for their important contributions.

The content of this work is solely the responsibility of the authors and does not necessarily represent the official views of the National Institutes of Health.

Cancer incidence data have been provided by the Maryland Cancer Registry, Center for Cancer Surveillance and Control, Department of Mental Health and Hygiene, 201 W. Preston Street, Room 400, Baltimore, MD 21201. We acknowledge the State of Maryland, the Maryland Cigarette Restitution Fund, and the National Program of Cancer Registries (NPCR) of the Centers for Disease Control and Prevention (CDC) for the funds that helped support the availability of the cancer registry data.

ARIC CAC Ancillary Study

Include the following statement in addition to the general ARIC acknowledgement statement:
CT scans to evaluate coronary artery calcium and extra-coronary calcium in ARIC were supported by R01HL136592 (Co-PIs: Drs. Matsushita and Blaha).

Longitudinal assessment of FGF-23 and other bone-mineral metabolism biomarkers (when results of the following laboratory measurements are used as key variables, the following acknowledgment should be added)

Visit 3:

Calcium	Phosphorus	Albumin	Creatinine	Cystatin C	PTH	hs-cTnT	NTproBNP	FGF23

Visit 5:

FGF23	Albumin	PTH	25OHD2	25OHD3

The measurement of X, Y, and Z (*variable names to be specified here*) was conducted in an ancillary study supported by research funding from Kyowa Kirin (PI: Dr. Matsushita).

ARIC Omics

Commented [KR1]: Send to Megan and Eric B to ask if these need to be updated.

ARIC GWAS data (including HapMap and 1000G imputed data):

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding was also supported by R01HL087641 and R01HL086694; National Human Genome Research Institute contract U01HG004402; and National Institutes of Health contract HHSN268200625226C. Infrastructure was partly supported by Grant Number UL1RR025005, a component of the National Institutes of Health and NIH Roadmap for Medical Research.

Note: For venous thromboembolism data, also include the statement for ARIC LITE data.

ARIC, CHS and FHS WES Freeze 3 and 4 data

Include the general ARIC acknowledgement statement after the following statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419). Data for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by Eric Boerwinkle on behalf of the Atherosclerosis Risk in Communities (ARIC) Study, L. Adrienne Cupples, principal investigator for the Framingham Heart Study, and Bruce Psaty, principal investigator for the Cardiovascular Health Study. Sequencing was carried out at the Baylor College of Medicine Human Genome Sequencing Center and supported by the National Human Genome Research Institute grants U54 HG003273 and UM1 HG008898.

The Framingham Heart Study is conducted and supported by the NHLBI in collaboration with Boston University (Contract No. N01-HC- 25195), and its contract with Affymetrix, Inc., for genome-wide genotyping services (Contract No. N02- HL-6-4278), for quality control by Framingham Heart Study investigators using genotypes in the SNP Health Association Resource (SHARe) project. A portion of this research was conducted using the Linux Cluster for Genetic Analysis (LinGA) computing resources at Boston University Medical Campus. This CHS research was supported by contracts HHSN268201200036C, HHSN268200800007C, N01 HC55222, N01HC85079, N01HC85080, N01HC85081, N01HC85082, N01HC85083, N01HC85086 and grants HL080295, HL087652, HL105756 from the National Heart, Lung, and Blood Institute (NHLBI) with additional contribution from National Institute of Neurological Disorders and

Stroke (NINDS). Additional support was provided through AG023629 from the National Institutes on Aging (NIA). A full list of CHS principal investigators and institutions can be found at CHS-NHLBI.org.

For manuscripts with ARIC exome chip data only:

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419).

ARIC methylation (HM450) data (blacks and whites) with exome chip PCs

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding was also supported by 5RC2HL102419 and R01NS087541.

ARIC WES Freeze 4 and exome chip data

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419). Sequencing was carried out at the Baylor College of Medicine Human Genome Sequencing Center (U54 HG003273 and R01HL086694).

ARIC GWAS and exome chip data

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding was also supported by R01HL087641, and R01HL086694; National Human Genome Research Institute contract U01HG004402; and National Institutes of Health contract HHSN268200625226C.

Infrastructure was partly supported by Grant Number UL1RR025005, a component of the National Institutes of Health and NIH Roadmap for Medical Research. Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419).

Note: For venous thromboembolism data, also include the statement for ARIC LITE data.

Metabolomics and exome chip data

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419). Metabolomics measurements were sponsored by the National Human Genome Research Institute (3U01HG004402-02S1).

ARIC WGS Freeze 3 data (low pass) only

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419). Sequencing was carried out at the Baylor College of Medicine Human Genome Sequencing Center and supported by the National Human Genome Research Institute grants U54 HG003273 and UM1 HG008898.

ARIC WES Freeze 3 or 4 and ESP data only

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419). CHARGE sequencing was carried out at the Baylor College of Medicine Human Genome Sequencing Center (U54 HG003273 and R01HL086694). Funding for GO ESP was provided by NHLBI grants RC2 HL-103010 (HeartGO) and exome sequencing was performed through NHLBI grants RC2 HL-102925 (BroadGO) and RC2 HL-102926 (SeattleGO).

Metabolomics, ARIC WES Freeze 4 and ARIC WGS Freeze 3 (low pass) data

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding support for "Building on GWAS for NHLBI-diseases: the U.S. CHARGE consortium" was provided by the NIH through the American Recovery and Reinvestment Act of 2009 (ARRA) (5RC2HL102419). Metabolomics measurements were sponsored by the National Human Genome Research Institute (3U01HG004402-02S1). Sequencing was carried out at the Baylor College of Medicine Human Genome Sequencing Center and supported by the National Human Genome Research Institute grants U54 HG003273 and UM1 HG008898.

ARIC RNAseq or miRNAseq data

Include the following statement in addition to the general ARIC acknowledgement statement:

RNA sequencing was carried out at the Baylor College of Medicine Human Genome Sequencing Center and supported by the National Human Genome Research Institute grants U54 HG003273 and UM1 HG008898.

ARIC WGS from TOPMed phase 1 and 2 (Freeze 6b or later which includes joint call with CCDG)

Include the general ARIC acknowledgement statement after the following statement:

Whole genome sequencing (WGS) for the Trans-Omics in Precision Medicine (TOPMed) program was supported by the National Heart, Lung and Blood Institute (NHLBI). WGS for "NHLBI TOPMed: Atherosclerosis Risk in Communities (ARIC)" (phs001211) was performed at the Baylor College of Medicine Human Genome Sequencing Center (HHSN268201500015C and 3U54HG003273-12S2) and the Broad Institute for MIT and Harvard (3R01HL092577- 06S1). Centralized read mapping and genotype calling, along with variant quality metrics and filtering were provided by the TOPMed Informatics Research Center (3R01HL-117626-02S1). Phenotype harmonization, data management, sample-identity QC, and general study coordination, were provided by the TOPMed Data Coordinating Center (3R01HL- 120393- 02S1). We gratefully acknowledge the studies and participants who provided biological samples and data for TOPMed.

The Genome Sequencing Program (GSP) was funded by the National Human Genome Research Institute (NHGRI), the National Heart, Lung, and Blood Institute (NHLBI), and the National Eye Institute (NEI). The GSP Coordinating Center (U24 HG008956) contributed to cross program scientific initiatives and provided logistical and general study coordination. The Centers for Common Disease Genomics (CCDG) program was supported by NHGRI and NHLBI, and whole genome sequencing was performed at the Baylor College of Medicine Human Genome Sequencing Center (UM1 HG008898).

Note: For venous thromboembolism data, also include the statement for ARIC LITE data.

ARIC methylation (EPIC) data and include exome chip PCs

Include the following statement in addition to the general ARIC acknowledgement statement:

Funding was also supported in whole or in part by 5RC2HL102419, 5R01NS087541, R01HL131136, 7R01AR073178, 5R00HL130580, and 5P01CA138338.

ARIC LITE (Venous thromboembolism) data

In addition to the general ARIC acknowledgement statement include the following statement ONLY if the focus is on venous thromboembolism:

Venous thromboembolism funding was also provided by R01HL059367 from NHLBI.

ARIC WGS from CCDG

Include the following statement in addition to the general ARIC acknowledgement statement:

The Genome Sequencing Program (GSP) was funded by the National Human Genome Research Institute (NHGRI), the National Heart, Lung, and Blood Institute (NHLBI), and the National Eye Institute (NEI). The GSP Coordinating Center (U24 HG008956) contributed to cross-program scientific initiatives and provided logistical and general study coordination. The Centers for Common Disease Genomics (CCDG) program was supported by NHGRI and NHLBI, and whole genome sequencing was performed at the Baylor College of Medicine Human Genome Sequencing Center (UM1 HG008898).

Note: For venous thromboembolism data, also include the statement for ARIC LITE data.

Analysis Commons – Resource for Data Analysis

Include the following statement in addition to the general ARIC acknowledgement statement:

The Analysis Commons was funded by R01HL131136.

Proteomic (SomaLogic) data

Include the following statement in addition to the general ARIC acknowledgement statement:

“SomaLogic Inc. conducted the SomaScan assays in exchange for use of ARIC data. This work was supported in part by NIH/NHLBI grant R01 HL134320.”

Data availability statement: Pre-existing data access policies for each of the parent cohort studies specify that research data requests can be submitted to each steering committee; these will be promptly reviewed for confidentiality or intellectual property restrictions and will not unreasonably be refused. Please refer to the data sharing policies of these studies. Individual level patient or protein data may further be restricted by consent, confidentiality or privacy laws/considerations. These policies apply to both clinical and proteomic data.