Supplementary Note. NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium Banner Authorship List.

Namiko Abe¹, Gonçalo Abecasis², Francois Aguet³, Christine Albert^{4,5}, Laura Almasy⁶, Alvaro Alonso⁷, Seth Ament⁸, Peter Anderson⁹, Pramod Anugu¹⁰, Deborah Applebaum-Bowden¹¹, Kristin Ardlie³, Dan Arking¹², Donna K Arnett¹³, Allison Ashley-Koch¹⁴, Stella Aslibekyan¹⁵, Tim Assimes¹⁶, Paul Auer¹⁷, Dimitrios Avramopoulos¹², John Barnard¹⁸, Kathleen Barnes¹⁹, R. Graham Barr²⁰, Emily Barron-Casella¹², Lucas Barwick²¹, Terri Beaty¹², Gerald Beck²², Diane Becker²³, Lewis Becker¹², Rebecca Beer²⁴, Amber Beitelshees⁸, Emelia Benjamin^{25,26}, Takis Benos²⁷, Marcos Bezerra²⁸, Larry Bielak², Joshua Bis²⁹, Thomas Blackwell², John Blangero³⁰, Eric Boerwinkle³¹, Donald W. Bowden³², Russell Bowler³³, Jennifer Brody⁹, Ulrich Broeckel³⁴, Jai Broome⁹, Karen Bunting¹, Esteban Burchard³⁵, Carlos Bustamante³⁶, Erin Buth³⁷, Brian Cade³⁸, Jonathan Cardwell³⁹, Vincent Carey⁴, Cara Carty⁴⁰, Richard Casaburi⁴¹, James Casella¹², Peter Castaldi⁴², Mark Chaffin³, Christy Chang⁸, Yi-Cheng Chang⁴³, Daniel Chasman⁴⁴, Sameer Chavan³⁹. Bo-Juen Chen¹. Wei-Min Chen⁴⁵. Yii-Der Ida Chen⁴⁶. Michael Cho⁴. Seung Hoan Choi³, Lee-Ming Chuang⁴⁷, Mina Chung⁴⁸, Ren-Hua Chung⁴⁹, Clary Clish³, Suzy Comhair⁵⁰, Matthew Conomos³⁷, Elaine Cornell⁵¹, Adolfo Correa⁵², Carolyn Crandall⁴¹, James Crapo⁵³, L. Adrienne Cupples⁵⁴, Joanne Curran⁵⁵, Jeffrey Curtis², Brian Custer⁵⁶, Coleen Damcott⁸, Dawood Darbar⁵⁷, Sayantan Das², Sean David⁵⁸, Colleen Davis⁹, Michelle Daya³⁹, Mariza de Andrade⁵⁹, Lisa de las Fuentes⁶⁰, Michael DeBaun⁶¹, Ranjan Deka⁶², Dawn DeMeo⁴, Scott Devine⁸, Qing Duan⁶³, Ravi Duggirala⁶⁴, Jon Peter Durda⁵¹, Susan Dutcher⁶⁵, Charles Eaton⁶⁶, Lynette Ekunwe¹⁰, Adel El Boueiz⁶⁷, Patrick Ellinor²⁶, Leslie Emery⁹, Serpil Erzurum¹⁸, Charles Farber⁴⁵, Tasha Fingerlin⁶⁸, Matthew Flickinger², Myriam Fornage³¹, Nora Franceschini⁶⁹, Chris Frazar⁹, Mao Fu⁸, Stephanie M. Fullerton⁹, Lucinda Fulton⁶⁵, Stacey Gabriel³, Weiniu Gan²⁴, Shanshan Gao³⁹, Yan Gao¹⁰, Margery Gass⁷⁰, Bruce Gelb⁷¹, Xiaoqi (Priscilla) Geng², Mark Geraci⁷², Soren Germer¹, Robert Gerszten⁷³, Auyon Ghosh⁴, Richard Gibbs⁷⁴, Chris Gignoux¹⁶, Mark Gladwin²⁷, David Glahn⁷⁵, Stephanie Gogarten⁹, Da-Wei Gong⁸, Harald Goring⁷⁶, Sharon Graw¹⁹, Daniel Grine³⁹, C. Charles Gu⁶⁵, Yue Guan⁸, Xiuqing Guo⁴⁶, Namrata Gupta³, Jeff Haessler⁷⁰, Michael Hall¹⁰, Daniel Harris⁸, Nicola L. Hawley⁷⁷, Jiang He⁷⁸, Ben Heavner³⁷, Susan Heckbert⁹, Ryan Hernandez^{35,79}, David Herrington⁸⁰, Craig Hersh⁸¹, Bertha Hidalgo¹⁵, James Hixson³¹, Brian Hobbs⁴, John Hokanson³⁹, Elliott Hong⁸, Karin Hoth⁸², Chao (Agnes) Hsiung⁸³, Yi-Jen Hung⁸⁴, Haley Huston⁸⁵, Chii Min Hwu⁸⁶, Marguerite Ryan Irvin¹⁵, Rebecca Jackson⁸⁷, Deepti Jain⁹, Cashell Jaquish²⁴, Min A Jhun², Jill Johnsen⁸⁸, Andrew Johnson²⁴, Craig Johnson⁹, Rich Johnston⁷, Kimberly Jones¹², Hyun Min Kang⁸⁹, Robert Kaplan⁹⁰, Sharon Kardia², Sekar Kathiresan³, Shannon Kelly⁵⁶, Eimear Kenny⁷¹, Michael Kessler⁸, Alyna Khan⁹, Wonji Kim⁹¹, Greg Kinney³⁹, Barbara Konkle⁸⁵, Charles Kooperberg⁷⁰, Holly Kramer⁹², Christoph Lange⁹³, Ethan Lange³⁹, Leslie Lange³⁹, Cathy Laurie⁹, Cecelia Laurie⁹, Meryl LeBoff⁴, Jiwon Lee⁴, Seunggeun Shawn Lee², Wen-Jane Lee⁸⁶, Jonathon LeFaive², David Levine⁹, Dan Levy²⁴, Joshua Lewis⁸, Xiaohui Li⁴⁶, Yun Li⁶³, Henry Lin⁴⁶, Honghuang Lin⁹⁴, Keng Han Lin², Xihong Lin⁹⁵, Simin Liu⁹⁶, Yongmei Liu⁹⁷, Yu Liu⁹⁸, Ruth J.F. Loos⁹⁹, Steven Lubitz²⁶, Kathryn Lunetta⁹⁴, James Luo²⁴, Michael Mahaney⁵⁵, Barry Make¹², Ani Manichaikul⁴⁵, JoAnn Manson⁴, Lauren Margolin³, Lisa Martin¹⁰⁰, Susan Mathai³⁹, Rasika Mathias¹², Susanne May³⁷, Patrick McArdle⁸, Merry-Lynn McDonald¹⁵, Sean McFarland⁹¹, Stephen McGarvey⁶⁶, Daniel McGoldrick⁹, Caitlin McHugh³⁷, Hao Mei¹⁰, Luisa Mestroni¹⁹, Deborah A Meyers¹⁰¹, Julie Mikulla²⁴, Nancy Min¹⁰,

Mollie Minear²⁴, Ryan L Minster²⁷, Braxton D. Mitchell⁸, Matt Moll⁴², May E. Montasser⁸, Courtney Montgomery¹⁰², Arden Moscati⁷¹, Solomon Musani⁵², Stanford Mwasongwe¹⁰, Josyf C Mychaleckyj⁴⁵, Girish Nadkarni⁷¹, Rakhi Naik¹², Take Naseri¹⁰³, Pradeep Natarajan^{3,26,91}, Sergei Nekhai¹⁰⁴, Sarah C. Nelson³⁷, Bonnie Neltner³⁹, Deborah Nickerson⁹, Kari North⁶³, Jeff O'Connell⁸, Tim O'Connor⁸, Heather Ochs-Balcom¹⁰⁵, David Paik¹⁰⁶, Nicholette Palmer¹⁰⁷, James Pankow¹⁰⁸, George Papanicolaou²⁴, Afshin Parsa⁸, Juan Manuel Peralta⁶⁴, Marco Perez¹⁶, James Perry⁸, Ulrike Peters¹⁰⁹, Patricia Peyser², Lawrence S Phillips⁷, Toni Pollin⁸, Wendy Post¹¹⁰, Julia Powers Becker¹¹¹, Meher Preethi Boorgula³⁹, Michael Preuss⁷¹, Bruce Psaty⁹, Pankaj Qasba²⁴, Dandi Qiao⁴, Zhaohui Qin⁷, Nicholas Rafaels³⁹, Laura Raffield¹¹², Vasan S. Ramachandran ⁹⁴, D.C. Rao⁶⁵, Laura Rasmussen-Torvik¹¹³, Aakrosh Ratan⁴⁵, Susan Redline⁴, Robert Reed⁸, Elizabeth Regan⁵³, Alex Reiner¹⁰⁹, Muagututi'a Sefuiva Reupena¹¹⁴, Ken Rice⁹, Stephen Rich⁴⁵, Dan Roden¹¹⁵, Carolina Roselli³, Jerome Rotter⁴⁶, Ingo Ruczinski¹², Pamela Russell³⁹, Sarah Ruuska⁸⁵, Kathleen Ryan⁸, Ester Cerdeira Sabino¹¹⁶, Danish Saleheen²⁰, Shabnam Salimi⁸, Steven Salzberg¹², Kevin Sandow¹¹⁷, Vijay G. Sankaran^{3,118}, Christopher Scheller², Ellen Schmidt², Karen Schwander⁶⁵, David Schwartz³⁹, Frank Sciurba²⁷, Christine Seidman¹¹⁹, Jonathan Seidman¹²⁰, Vivien Sheehan¹²¹, Stephanie L. Sherman¹²², Amol Shetty⁸, Aniket Shetty³⁹, Wayne Hui-Heng Sheu⁸⁶, M. Benjamin Shoemaker¹²³, Brian Silver¹²⁴, Edwin Silverman⁴, Jennifer Smith², Josh Smith⁹, Nicholas Smith¹²⁵, Tanja Smith¹, Sylvia Smoller⁹⁰, Beverly Snively¹²⁶, Michael Snyder¹⁶, Tamar Sofer⁴, Nona Sotoodehnia⁹, Adrienne M. Stilp⁹, Garrett Storm³⁹, Elizabeth Streeten⁸, Jessica Lasky Su⁴, Yun Ju Sung⁶⁵, Jody Sylvia⁴, Adam Szpiro⁹, Carole Sztalryd⁸, Daniel Taliun², Hua Tang¹²⁷, Margaret Taub¹², Kent D. Taylor¹²⁸, Matthew Taylor¹⁹, Simeon Taylor⁸, Marilyn Telen¹⁴, Timothy A. Thornton⁹, Machiko Threlkeld¹²⁹, Lesley Tinker⁷⁰, David Tirschwell⁹, Sarah Tishkoff¹³⁰, Hemant Tiwari¹³¹, Catherine Tong¹³², Russell Tracy¹³³, Michael Tsai¹⁰⁸, Dhananjay Vaidya¹², David Van Den Berg¹³⁴, Peter VandeHaar², Scott Vrieze^{108,135}, Tarik Walker³⁹, Robert Wallace⁸², Avram Walts³⁹, Fei Fei Wang⁹, Heming Wang⁴, Karol Watson⁴¹, Daniel E. Weeks²⁷, Bruce Weir⁹, Scott Weiss⁴, Lu-Chen Weng²⁶, Jennifer Wessel¹³⁶, Cristen Willer¹³⁷, Kayleen Williams³⁷, L. Keoki Williams¹³⁸, Carla Wilson⁴, James Wilson¹³⁹, Quenna Wong⁹, Joseph Wu¹⁰⁶, Huichun Xu⁸, Lisa Yanek¹², Ivana Yang³⁹, Rongze Yang⁸, Norann Zaghloul⁸, Maryam Zekavat³, Yingze Zhang¹⁴⁰, Snow Xueyan Zhao⁵³, Wei Zhao¹⁴¹, Degui Zhi³¹, Xiang Zhou², Xiaofeng Zhu¹⁴², Michael Zody¹, Sebastian Zoellner²

1 - New York Genome Center, New York, New York, US; 2 - University of Michigan, Ann Arbor, Michigan, US; 3 - Broad Institute, Cambridge, Massachusetts, US; 4 - Brigham & Women's Hospital, Boston, Massachusetts, US; 5 - Cedars Sinai, Los Angeles, California, US; 6 - Children's Hospital of Philadelphia, University of Pennsylvania, Philadelphia, Pennsylvania, US; 7 - Emory University, Atlanta, Georgia, US; 8 - University of Maryland, Baltimore, Maryland, US; 9 - University of Washington, Seattle, Washington, US; 10 - University of Mississippi, Jackson, Mississippi, US; 11 - National Institutes of Health, Bethesda, Maryland, US; 12 - Johns Hopkins University, Baltimore, Maryland, US; 13 - University of Kentucky, Lexington, Kentucky, US; 14 - Duke University, Durham, North Carolina, US; 15 - University of Alabama, Birmingham, Alabama, US; 16 - Stanford University, Stanford, California, US; 17 - University of Wisconsin Milwaukee, Milwaukee, Wisconsin, US; 18 - Cleveland Clinic, Cleveland, Ohio, US; 19 - University of Colorado Anschutz Medical Campus, Aurora, Colorado, US; 20 - Columbia

University, New York, New York, US; 21 - The Emmes Corporation, LTRC, Rockville, Maryland, US; 22 - Cleveland Clinic, Quantitative Health Sciences, Cleveland, Ohio, US; 23 - Johns Hopkins University, Medicine, Baltimore, Maryland, US; 24 - National Heart, Lung, and Blood Institute, National Institutes of Health, Bethesda, Maryland, US: 25 - Boston University, Massachusetts General Hospital, Boston University School of Medicine, Boston, Massachusetts, US; 26 - Massachusetts General Hospital, Boston, Massachusetts, US; 27 -University of Pittsburgh, Pittsburgh, Pennsylvania, US; 28 - Fundação de Hematologia e Hemoterapia de Pernambuco - Hemope, Recife, BR; 29 - University of Washington, Cardiovascular Health Research Unit, Department of Medicine, Seattle, Washington, US: 30 -University of Texas Rio Grande Valley School of Medicine, Human Genetics, Brownsville, Texas, US; 31 - University of Texas Health at Houston, Houston, Texas, US; 32 - Wake Forest Baptist Health, Department of Biochemistry, Winston-Salem, North Carolina, US; 33 - National Jewish Health, National Jewish Health, Denver, Colorado, US; 34 - Medical College of Wisconsin, Milwaukee, Wisconsin, US; 35 - University of California, San Francisco, San Francisco, California, US: 36 - Stanford University, Biomedical Data Science, Stanford, California, US; 37 - University of Washington, Biostatistics, Seattle, Washington, US; 38 -Brigham & Women's Hospital, Brigham and Women's Hospital, Boston, Massachusetts, US: 39 - University of Colorado at Denver, Denver, Colorado, US; 40 - Washington State University, Pullman, Washington, US; 41 - University of California, Los Angeles, Los Angeles, California, US; 42 - Brigham & Women's Hospital, Medicine, Boston, Massachusetts, US; 43 - National Taiwan University, Taipei, TW; 44 - Brigham & Women's Hospital, Division of Preventive Medicine, Boston, Massachusetts, US; 45 - University of Virginia, Charlottesville, Virginia, US; 46 - Lundquist Institute, Torrance, California, US; 47 - National Taiwan University, National Taiwan University Hospital, Taipei, TW; 48 - Cleveland Clinic, Cleveland Clinic, Cleveland, Ohio, US; 49 - National Health Research Institute Taiwan, Miaoli County, TW; 50 - Cleveland Clinic, Immunity and Immunology, Cleveland, Ohio, US; 51 - University of Vermont, Burlington, Vermont, US; 52 - University of Mississippi, Medicine, Jackson, Mississippi, US; 53 - National Jewish Health, Denver, Colorado, US; 54 - Boston University, Biostatistics, Boston, Massachusetts, US; 55 - University of Texas Rio Grande Valley School of Medicine, Brownsville, Texas, US; 56 - Vitalant Research Institute, San Francisco, California, US; 57 -University of Illinois at Chicago, Chicago, Illinois, US; 58 - University of Chicago, Chicago, Illinois, US; 59 - Mayo Clinic, Health Sciences Research, Rochester, Minnesota, US; 60 -Washington University in St Louis, Department of Medicine, Cardiovascular Division, St. Louis, Missouri, US; 61 - Vanderbilt University, Nashville, Tennessee, US; 62 - University of Cincinnati, Cincinnati, Ohio, US; 63 - University of North Carolina, Chapel Hill, North Carolina, US; 64 -University of Texas Rio Grande Valley School of Medicine, Edinburg, Texas, US; 65 -Washington University in St Louis, St Louis, Missouri, US; 66 - Brown University, Providence, Rhode Island, US: 67 - Harvard University, Channing Division of Network Medicine, Cambridge. Massachusetts, US; 68 - National Jewish Health, Center for Genes, Environment and Health, Denver, Colorado, US: 69 - University of North Carolina, Epidemiology, Chapel Hill, North Carolina, US; 70 - Fred Hutchinson Cancer Research Center, Seattle, Washington, US; 71 -Icahn School of Medicine at Mount Sinai, New York, New York, US; 72 - Indiana University, Medicine, Indianapolis, Indiana, US; 73 - Beth Israel Deaconess Medical Center, Boston, Massachusetts, US; 74 - Baylor College of Medicine Human Genome Sequencing Center,

Houston, Texas, US: 75 - Yale University, New Haven, Connecticut, US: 76 - University of Texas Rio Grande Valley School of Medicine, San Antonio, Texas, US; 77 - Yale University, Department of Chronic Disease Epidemiology, New Haven, Connecticut, US; 78 - Tulane University, New Orleans, Louisiana, US; 79 - McGill University, Montreal, CA; 80 - Wake Forest Baptist Health, Winston-Salem, North Carolina, US; 81 - Brigham & Women's Hospital, Channing Division of Network Medicine, Boston, Massachusetts, US; 82 - University of Iowa, lowa City, Iowa, US; 83 - National Health Research Institute Taiwan, Institute of Population Health Sciences, NHRI, Miaoli County, TW; 84 - Tri-Service General Hospital National Defense Medical Center, TW: 85 - Blood Works Northwest, Seattle, Washington, US: 86 - Taichung Veterans General Hospital Taiwan, Taichung City, TW; 87 - Ohio State University Wexner Medical Center, Internal Medicine, Division of Endocrinology, Diabetes and Metabolism, Columbus, Ohio, US; 88 - Blood Works Northwest, University of Washington, Seattle, Washington, US; 89 - University of Michigan, Biostatistics, Ann Arbor, Michigan, US; 90 - Albert Einstein College of Medicine, New York, New York, US; 91 - Harvard University, Cambridge, Massachusetts, US: 92 - Lovola University, Public Health Sciences, Maywood, Illinois, US: 93 -Harvard School of Public Health, Biostats, Boston, Massachusetts, US; 94 - Boston University, Boston, Massachusetts, US; 95 - Harvard School of Public Health, Boston, Massachusetts, US; 96 - Brown University, Epidemiology and Medicine, Providence, Rhode Island, US; 97 - Duke University, Cardiology, Durham, North Carolina, US: 98 - Stanford University, Cardiovascular Institute, Stanford, California, US; 99 - Icahn School of Medicine at Mount Sinai, The Charles Bronfman Institute for Personalized Medicine, New York, New York, US; 100 - George Washington University, Washington, District of Columbia, US; 101 - University of Arizona, Tucson, Arizona, US: 102 - Oklahoma Medical Research Foundation, Genes and Human Disease, Oklahoma City, Oklahoma, US; 103 - Ministry of Health, Government of Samoa, Apia, WS; 104 - Howard University, Washington, District of Columbia, US; 105 - University at Buffalo, Buffalo, New York, US; 106 - Stanford University, Stanford Cardiovascular Institute, Stanford, California, US; 107 - Wake Forest Baptist Health, Biochemistry, Winston-Salem, North Carolina, US; 108 - University of Minnesota, Minneapolis, Minnesota, US; 109 - Fred Hutchinson Cancer Research Center, University of Washington, Seattle, Washington, US; 110 - Johns Hopkins University, Cardiology/Medicine, Baltimore, Maryland, US; 111 - University of Colorado at Denver, Medicine, Denver, Colorado, US; 112 - University of North Carolina, Genetics, Chapel Hill, North Carolina, US; 113 - Northwestern University, Chicago, Illinois, US; 114 - Lutia I Puava Ae Mapu I Fagalele, Apia, WS; 115 - Vanderbilt University, Medicine, Pharmacology, Biomedicla Informatics, Nashville, Tennessee, US; 116 - Universidade de Sao Paulo, Faculdade de Medicina, Sao Paulo, BR; 117 - Lundquist Institute, TGPS, Torrance, California, US; 118 - Harvard University, Division of Hematology/Oncology, Cambridge, Massachusetts, US; 119 - Harvard Medical School, Genetics, Boston, Massachusetts, US; 120 - Harvard Medical School, Boston, Massachusetts, US; 121 - Baylor College of Medicine, Pediatrics, Houston, Texas, US; 122 - Emory University, Human Genetics, Atlanta, Georgia, US; 123 -Vanderbilt University, Medicine/Cardiology, Nashville, Tennessee, US; 124 - UMass Memorial Medical Center, Worcester, Massachusetts, US; 125 - University of Washington, Epidemiology, Seattle, Washington, US; 126 - Wake Forest Baptist Health, Biostatistical Sciences, Winston-Salem, North Carolina, US; 127 - Stanford University, Genetics, Stanford, California, US; 128 -Lundquist Institute, Institute for Translational Genomics and Populations Sciences, Torrance,

California, US; 129 - University of Washington, University of Washington, Department of Genome Sciences, Seattle, Washington, US; 130 - University of Pennsylvania, Genetics, Philadelphia, Pennsylvania, US; 131 - University of Alabama, Biostatistics, Birmingham, Alabama, US; 132 - University of Washington, Department of Biostatistics, Seattle, Washington, US; 133 - University of Vermont, Pathology & Laboratory Medicine, Burlington, Vermont, US; 134 - University of Southern California, USC Methylation Characterization Center, University of Southern California, US; 135 - University of Colorado at Boulder, Boulder, Colorado, US; 136 - Indiana University, Epidemiology, Indianapolis, Indiana, US; 137 - University of Michigan, Internal Medicine, Ann Arbor, Michigan, US; 138 - Henry Ford Health System, Detroit, Michigan, US; 139 - Beth Israel Deaconess Medical Center, Cardiology, Boston, Massachusetts, US; 140 - University of Pittsburgh, Medicine, Pittsburgh, Pennsylvania, US; 141 - University of Michigan, Department of Epidemiology, Ann Arbor, Michigan, US; 142 - Case Western Reserve University, Department of Population and Quantitative Health Sciences, Cleveland, Ohio, US