



## JAHA: Journal of the American Heart Association

Volume 6, Issue 9  
September 2017

### Editorials

#### To Pretreat or Not to Pretreat (With Oral P2Y<sub>12</sub> Antagonists)? That is the Question

Angela Lowenstern, and L. Kristin Newby  
e007288. DOI: 10.1161/JAHA.117.007288.

#### Survival From Out-of-Hospital Cardiac Arrest: Are We Beginning to See Progress?

Stuart Berger  
e007469. DOI: 10.1161/JAHA.117.007469.

#### Embolic Stroke of Uncertain Source: An Entity Slowly Coming Into Focus

Mukul Sharma  
e007286. DOI: 10.1161/JAHA.117.007286.

#### Marfan on the Move

Vivian de Waard  
e007465. DOI: 10.1161/JAHA.117.007465.

### Original Research

#### Arrhythmia and Electrophysiology

##### Atrial Fibrillation in Acute Obstructive Sleep Apnea: Autonomic Nervous Mechanism and Modulation

Lilei Yu, Xuefei Li, Bing Huang, Xiaoya Zhou, Menglong Wang, Liping Zhou, Guannan Meng, Yuhong Wang, Zhenya Wang, Jielin Deng, and Hong Jiang  
e006264. DOI: 10.1161/JAHA.117.006264.

##### Concomitant Obesity and Metabolic Syndrome Add to the Atrial Arrhythmogenic Phenotype in Male Hypertensive Rats

Mathias Hohl, Dennis H. Lau, Andreas Müller, Adrian D. Elliott, Benedikt Linz, Rajiv Mahajan, Jeroen M. L. Hendriks, Michael Böhm, Ulrich Schotten, Prashanthan Sanders, and Dominik Linz  
e006717. DOI: 10.1161/JAHA.117.006717.

##### Alteration of Cholinergic Anti-Inflammatory Pathway in Rat With Ischemic Cardiomyopathy—Modified Electrophysiological Function of Heart

Shu-Jie Wu, Yue-Chun Li, Zhe-Wei Shi, Zhong-Hao Lin, Zhi-Heng Rao, Si-Chao Tai, Mao-Ping Chu, Lei Li, and Jia-Feng Lin  
e006510. DOI: 10.1161/JAHA.117.006510.

### Cardiovascular Surgery

##### Prevalence of Cerebral Microbleeds in Patients With Continuous-Flow Left Ventricular Assist Devices

Daisuke Yoshioka, Shuhei Okazaki, Koichi Toda, Sho Murase, Shunsuke Saito, Keitaro Domae, Shigeru Miyagawa, Yasushi Yoshikawa, Takashi Daimon, Manabu Sakaguchi, and Yoshiki Sawa  
e005955. DOI: 10.1161/JAHA.117.005955.

### Coronary Heart Disease

##### Vulnerabilities to Health Disparities and Statin Use in the REGARDS (Reasons for Geographic and Racial Differences in Stroke) Study

Praful Schroff, Christopher M. Gamboa, Raegan W. Durant, Asikhame Oikeh, Joshua S. Richman, and Monika M. Safford  
e005449. DOI: 10.1161/JAHA.116.005449.

---

**Trimethylamine-N-Oxide Induces Vascular Inflammation by Activating the NLRP3 Inflammasome Through the SIRT3-SOD2-mtROS Signaling Pathway**

Ming-liang Chen, Xiao-hui Zhu, Li Ran, He-dong Lang, Long Yi, and Man-tian Mi  
e006347. DOI: 10.1161/JAHA.117.006347.

**Prognostic Value of Aortic Stiffness in Patients After ST-Elevation Myocardial Infarction**

Hans-Josef Feistritz, Gert Klug, Sebastian J. Reinstadler, Martin Reindl, Lea Niess, Timo Nalbach, Christian Kremser, Agnes Mayr, and Bernhard Metzler  
e005590. DOI: 10.1161/JAHA.117.005590.

**Inorganic Nitrate in Angina Study: A Randomized Double-Blind Placebo-Controlled Trial**

Konstantin Schwarz, Satnam Singh, Satish K. Parasuraman, Amelia Rudd, Lee Shepstone, Martin Feelisch, Magdalena Minnion, Shakil Ahmad, Melanie Madhani, John Horowitz, Dana K. Dawson, and Michael P. Frenneaux  
e006478. DOI: 10.1161/JAHA.117.006478.

**Role of Admission Troponin-T and Serial Troponin-T Testing in Predicting Outcomes in Severe Sepsis and Septic Shock**

Saraschandra Vallabhajosyula, Ankit Sakhuja, Jeffrey B. Geske, Mukesh Kumar, Joseph T. Poterucha, Rahul Kashyap, Kianoush Kashani, Allan S. Jaffe, and Jacob C. Jentzer  
e005930. DOI: 10.1161/JAHA.117.005930.

**Ectopic Fatty Acid-Binding Protein 4 Expression in the Vascular Endothelium is Involved in Neointima Formation After Vascular Injury**

Takahiro Fuseya, Masato Furuhashi, Megumi Matsumoto, Yuki Watanabe, Kyoko Hoshina, Tomohiro Mita, Shutaro Ishimura, Marenao Tanaka, and Tetsuji Miura  
e006377. DOI: 10.1161/JAHA.117.006377.

**Increased Hazard of Myocardial Infarction With Insulin-Provision Therapy in Actively Smoking Patients With Diabetes Mellitus and Stable Ischemic Heart Disease: The BARI 2D (Bypass Angioplasty Revascularization Investigation 2 Diabetes) Trial**

Asrar A. Khan, Matthew J. Chung, Eric Novak, and David L. Brown  
e005946. DOI: 10.1161/JAHA.117.005946.

**Sex Differences in Clinical Characteristics, Psychosocial Factors, and Outcomes Among Patients With Stable Coronary Heart Disease: Insights from the STABILITY (Stabilization of Atherosclerotic Plaque by Initiation of Darapladib Therapy) Trial**

Patricia Oliveira Guimarães, Christopher B. Granger, Amanda Stebbins, Karen Chiswell, Claes Held, Judith S. Hochman, Susan Krug-Gourley, Eva Lonn, Renato D. Lopes, Ralph A. H. Stewart, Dragos Vinereanu, Lars Wallentin, Harvey D. White, Emil Hagström, and Nicolas Danchin  
e006695. DOI: 10.1161/JAHA.117.006695.

**Risk Stratification Using the CHA<sub>2</sub>DS<sub>2</sub>-VASc Score in Takotsubo Syndrome: Data From the Takotsubo Italian Network**

Guido Parodi, Fernando Scudiero, Rodolfo Citro, Angelo Silverio, Benedetta Bellandi, Concetta Zito, Francesco Antonini-Canterin, Fausto Rigo, Chiara Zocchi, Eduardo Bossone, Jorge Salerno-Uriarte, Federico Piscione, Carlo Di Mario, and on the behalf of Takotsubo Italian Network (TIN)  
e006065. DOI: 10.1161/JAHA.117.006065.

**Competing Risks of Cardiovascular Versus Noncardiovascular Death During Long-Term Follow-Up After Acute Coronary Syndromes**

Alexander C. Fanaroff, Matthew T. Roe, Robert M. Clare, Yuliya Likhnygina, Ann Marie Navar, Robert P. Giugliano, Stephen D. Wiviott, Andrew M. Tershakovec, Eugene Braunwald, and Michael A. Blazing  
e005840. DOI: 10.1161/JAHA.117.005840.

**Apolipoprotein A-I Modulates Atherosclerosis Through Lymphatic Vessel-Dependent Mechanisms in Mice**

Andreea Milasan, Gabriel Jean, François Dallaire, Jean-Claude Tardif, Yahye Merhi, Mary Sorci-Thomas, and Catherine Martel  
e006892. DOI: 10.1161/JAHA.117.006892.

---

---

**Precatheterization Use of P2Y<sub>12</sub> Inhibitors in Non-ST-Elevation Myocardial Infarction Patients Undergoing Early Cardiac Catheterization and In-Hospital Coronary Artery Bypass Grafting: Insights From the National Cardiovascular Data Registry®**

Marwan Badri, Amr Abdelbaky, Shuang Li, Karen Chiswell, and Tracy Y. Wang

e006508. DOI: 10.1161/JAHA.117.006508.

**Trends in Use of Biomarker Protocols for the Evaluation of Possible Myocardial Infarction**

Brian J. Hachey, Michael C. Kontos, L. Kristin Newby, Robert H. Christenson, W. Frank Peacock, Katherine C. Brewer, and James McCord

e005852. DOI: 10.1161/JAHA.117.005852.

## Epidemiology

**Subclinical Cerebrovascular Disease Increases the Risk of Incident Stroke and Mortality: The Northern Manhattan Study**

Clinton B. Wright, Chuanhui Dong, Enmanuel J. Perez, Janet De Rosa, Mitsuhiro Yoshita, Tatjana Rundek, Charles DeCarli, Jose Gutierrez, Mitchell S. V. Elkind, and Ralph L. Sacco

e004069. DOI: 10.1161/JAHA.116.004069.

**Follicle-Stimulating Hormone, Its Association with Cardiometabolic Risk Factors, and 10-Year Risk of Cardiovascular Disease in Postmenopausal Women**

Ningjian Wang, Hongfang Shao, Yi Chen, Fangzhen Xia, Chen Chi, Qin Li, Bing Han, Yincheng Teng, and Yingli Lu

e005918. DOI: 10.1161/JAHA.117.005918.

**High Levels of (Un)Switched Memory B Cells Are Associated With Better Outcome in Patients With Advanced Atherosclerotic Disease**

John A. L. Meeuwse, Amerik van Duijvenvoorde, Aisha Gohar, Maria O. Kozma, Sander M. van de Weg, Crystel M. Gijssberts, Saskia Haitjema, Harry Björkbacka, Gunilla N. Fredrikson, Gert J. de Borst, Hester M. den Ruijter, Gerard Pasterkamp, Christoph J. Binder, Imo E. Hofer, and Saskia C. A. de Jager

e005747. DOI: 10.1161/JAHA.117.005747.

**Prospective Association of Physical Activity and Heart Failure Hospitalizations Among Black Adults With Normal Ejection Fraction: The Jackson Heart Study**

Patrick Koo, Annie Gjelsvik, Gaurav Choudhary, Wen-Chih Wu, Wei Wang, F. Dennis McCool, and Charles B. Eaton

e006107. DOI: 10.1161/JAHA.117.006107.

**Impact of Worsened Metabolic Syndrome on the Risk of Dementia: A Nationwide Cohort Study**

Yen-Chun Fan, Chia-Chi Chou, San-Lin You, Chien-An Sun, Chien-Jen Chen, and Chyi-Huey Bai

e004749. DOI: 10.1161/JAHA.116.004749.

**Twenty-Year Predictors of Peripheral Arterial Disease Compared With Coronary Heart Disease in the Scottish Heart Health Extended Cohort (SHHEC)**

Hugh Tunstall-Pedoe, Sanne A. E. Peters, Mark Woodward, Allan D. Struthers, and Jill J. F. Belch

e005967. DOI: 10.1161/JAHA.117.005967.

**Kidney Disease Measures and Left Ventricular Structure and Function: The Atherosclerosis Risk in Communities Study**

Kunihiro Matsushita, Lucia Kwak, Yingying Sang, Shoshana H. Ballew, Hicham Skali, Amil M. Shah, Josef Coresh, and Scott Solomon

e006259. DOI: 10.1161/JAHA.117.006259.

**Self-Rated Health Status and Risk of Ischemic Heart Disease in the China Kadoorie Biobank Study: A Population-Based Cohort Study**

Wenhong Dong, Xiong-Fei Pan, Canqing Yu, Jun Lv, Yu Guo, Zheng Bian, Ling Yang, Yiping Chen, Tangchun Wu, Zhengming Chen, An Pan, Liming Li, behalf of the China Kadoorie Biobank Collaborative Group

e006595. DOI: 10.1161/JAHA.117.006595.

---

## Trends in Racial/Ethnic Disparities in Cardiovascular Health Among US Adults From 1999–2012

Lindsay R. Pool, Hongyan Ning, Donald M. Lloyd-Jones, and Norrina B. Allen  
e006027. DOI: 10.1161/JAHA.117.006027.

## Clinical Characteristics and Management of Coronary Artery Perforations: A Single-Center 11-Year Experience and Practical Overview

Miguel E. Lemmert, Rutger J. van Bommel, Roberto Diletti, Jeroen M. Wilschut, Peter P. de Jaegere, F. Zijlstra, Joost Daemen, and Nicolas M. Van Mieghem  
e007049. DOI: 10.1161/JAHA.117.007049.

## Magnitude and Characteristics of Patients Who Survived an Acute Myocardial Infarction

Mayra Tisminetzky, Tracy Y. Wang, Jerry Gurwitz, Lisa A. Kaltenbach, David McManus, Joel Gore, Eric Peterson, and Robert J. Goldberg  
e006373. DOI: 10.1161/JAHA.117.006373.

### Genetics

#### Cardiac Events During Competitive, Recreational, and Daily Activities in Children and Adolescents With Long QT Syndrome

Kristina D. Chambers, Virginie Beausejour Ladouceur, Mark E. Alexander, Robyn J. Hyland, Laura Bevilacqua, Douglas Y. Mah, Vassilios Bezzerides, John K. Triedman, Edward P. Walsh, and Dominic J. Abrams  
e005445. DOI: 10.1161/JAHA.116.005445.

### Health Services and Outcomes Research

#### Vena Cava Filter Retrieval Rates and Factors Associated With Retrieval in a Large US Cohort

Joshua D. Brown, Driss Raissi, Qiong Han, Val R. Adams, and Jeffery C. Talbert  
e006708. DOI: 10.1161/JAHA.117.006708.

#### PEA-15 (Phosphoprotein Enriched in Astrocytes 15) Is a Protective Mediator in the Vasculature and Is Regulated During Neointimal Hyperplasia

Fiona H. Greig, Simon Kennedy, George Gibson, Joe W. Ramos, and Graeme F. Nixon  
e006936. DOI: 10.1161/JAHA.117.006936.

#### Variation in Management of Patients With Obstructive Coronary Artery Disease: Insights From the Veterans Affairs Clinical Assessment and Reporting Tool (VA CART) Program

Amneet Sandhu, Maggie A. Stanislawski, Gary K. Grunwald, Kathryn Guinn, Javier Valle, Daniel Matlock, P. Michael Ho, Thomas M. Maddox, and Steven M. Bradley  
e006336. DOI: 10.1161/JAHA.117.006336.

#### The Decisions, Interventions, and Goals in Implantable Cardioverter-Defibrillator Therapy (DIGNITY) Pilot Study

Daniel B. Kramer, Daniel Habtemariam, Yaw Adjei-Poku, Michelle Samuel, Diane Engorn, Matthew R. Reynolds, and Susan L. Mitchell  
e006881. DOI: 10.1161/JAHA.117.006881.

#### Obesity, Treatment Times, and Cardiovascular Outcomes After ST-Elevation Myocardial Infarction: Findings From Mission: Lifeline North Texas

Tiffany Champagne-Langabeer, Junghyun Kim, Julie K. Bower, Angela Gardner, Raymond Fowler, and James R. Langabeer II  
e005827. DOI: 10.1161/JAHA.117.005827.

### Heart Failure

#### Cardiomyocyte-Specific Telomere Shortening is a Distinct Signature of Heart Failure in Humans

Maryam Sharifi-Sanjani, Nicholas M. Oyster, Elisia D. Tichy, Kenneth C. Bedi Jr, Ofer Harel, Kenneth B. Margulies, and Foteini Mourkioti  
e005086. DOI: 10.1161/JAHA.116.005086.

#### Biomechanical and Hemodynamic Measures of Right Ventricular Diastolic Function: Translating Tissue Biomechanics to Clinical Relevance

Sae Jang, Rebecca R. Vanderpool, Reza Avazmohammadi, Eugene Lapshin, Timothy N. Bachman, Michael Sacks, and Marc A. Simon  
e006084. DOI: 10.1161/JAHA.117.006084.

---

---

## Hemodynamic Profile of Patients With Heart Failure and Preserved Ejection Fraction Vary by Age

Shane Nanayakkara, Mark Haykowsky, Justin Mariani, Vanessa Van Empel, Micha T. Maeder, Donna Vizi, and David M. Kaye  
e005434. DOI: 10.1161/JAHA.116.005434.

### Hypertension

#### Arterial Stiffness Is Associated With Cytomegalovirus-Specific Senescent CD8<sup>+</sup> T Cells

Hee Tae Yu, Jong-Chan Youn, Jong Hoon Kim, Yeon-Jae Seong, Su-Hyung Park, Hyeon Chang Kim, Won-Woo Lee, Sungha Park, and Eui-Cheol Shin

e006535. DOI: 10.1161/JAHA.117.006535.

#### The Impact of Heterozygous *KCNK3* Mutations Associated With Pulmonary Arterial Hypertension on Channel Function and Pharmacological Recovery

Michael S. Bohnen, Danilo Roman-Campos, Cecile Terrenoire, Jack Jnani, Kevin J. Sampson, Wendy K. Chung, and Robert S. Kass

e006465. DOI: 10.1161/JAHA.117.006465.

#### Resistant Hypertension, Time-Updated Blood Pressure Values and Renal Outcome in Type 2 Diabetes Mellitus

Francesca Viazzi, Pamela Piscitelli, Antonio Ceriello, Paola Fioretto, Carlo Giorda, Pietro Guida, Giuseppina Russo, Salvatore De Cosmo, Roberto Pontremoli, AMD-Annals Study Group

e006745. DOI: 10.1161/JAHA.117.006745.

### Imaging

#### A Brain Phenotype for Stressor-Evoked Blood Pressure Reactivity

Peter J. Gianaros, Lei K. Sheu, Fatma Uyar, Jayanth Koushik, J. Richard Jennings, Tor D. Wager, Aarti Singh, and Timothy D. Verstynen

e006053. DOI: 10.1161/JAHA.117.006053.

### Interventional Cardiology

#### Percutaneous Coronary Intervention Versus Optimal Medical Therapy for Chronic Total Coronary Occlusion With Well-Developed Collaterals

Se Yeon Choi, Byoung Geol Choi, Seung-Woon Rha, Man Jong Baek, Yang Gi Ryu, Yoonjee Park, Jae Kyeong Byun, Minsuk Shim, Hu Li, Ahmed Mashaly, Won Young Jang, Woohyeun Kim, Jah Yeon Choi, Eun Jin Park, Jin Oh Na, Cheol Ung Choi, Hong Euy Lim, Eung Ju Kim, Chang Gyu Park, Hong Seog Seo, and Dong Joo Oh

e006357. DOI: 10.1161/JAHA.117.006357.

### Kidney in Cardiovascular Disease

#### Reversal of Arterial Stiffness and Maladaptative Arterial Remodeling After Kidney Transplantation

Alexandre Karras, Pierre Boutouyrie, Marie Briet, Erwan Bozec, Jean-Philippe Haymann, Christophe Legendre, Lawrence P. McMahon, and Michel Delahousse

e006078. DOI: 10.1161/JAHA.117.006078.

#### Acute In Vivo Analysis of ATP Release in Rat Kidneys in Response to Changes of Renal Perfusion Pressure

Oleg Palygin, Louise C. Evans, Allen W. Cowley, Jr, and Alexander Staruschenko

e006658. DOI: 10.1161/JAHA.117.006658.

#### Electrocardiographic Strain Pattern Is Associated With Left Ventricular Concentric Remodeling, Scar, and Mortality Over 10 Years: The Multi-Ethnic Study of Atherosclerosis

Yuko Y. Inoue, Elsayed Z. Soliman, Kihei Yoneyama, Bharath Ambale-Venkatesh, Colin O. Wu, Rodney Sparapani, David A. Bluemke, João A.C. Lima, and Hiroshi Ashikaga

e006624. DOI: 10.1161/JAHA.117.006624.

### Molecular Cardiology

#### MMI-0100 Inhibits Cardiac Fibrosis in a Mouse Model Overexpressing Cardiac Myosin Binding Protein C

Qinghang Meng, Bidur Bhandary, Hanna Osinska, Jeanne James, Na Xu, Kritton Shay-Winkler, James Gulick, Monte S. Willis, Cynthia Lander, and Jeffrey Robbins

e006590. DOI: 10.1161/JAHA.117.006590.

---

## Pediatric Cardiology

### A Wide and Specific Spectrum of Genetic Variants and Genotype–Phenotype Correlations Revealed by Next-Generation Sequencing in Patients with Left Ventricular Noncompaction

Ce Wang, Yukiko Hata, Keiichi Hirono, Asami Takasaki, Sayaka Watanabe Ozawa, Hideyuki Nakaoka, Kazuyoshi Saito, Nariaki Miyao, Mako Okabe, Keijiro Ibuki, Naoki Nishida, Hideki Origasa, Xianyi Yu, Neil E. Bowles, and Fukiko Ichida  
e006210. DOI: 10.1161/JAHA.117.006210.

## Preventive Cardiology

### Metabolic Syndrome Risks Following the Great Recession in Rural Black Young Adults

Gregory E. Miller, Edith Chen, Tianyi Yu, and Gene H. Brody  
e006052. DOI: 10.1161/JAHA.117.006052.

### Body Mass Index Is Associated With Microvascular Endothelial Dysfunction in Patients With Treated Metabolic Risk Factors and Suspected Coronary Artery Disease

Dirk J. van der Heijden, Maarten A. H. van Leeuwen, Gladys N. Janssens, Mattie J. Lenzen, Peter M. van de Ven, Etto C. Eringa, and Niels van Royen  
e006082. DOI: 10.1161/JAHA.117.006082.

### Sympathomimetic Effects of Acute E-Cigarette Use: Role of Nicotine and Non-Nicotine Constituents

Roya S. Moheimani, May Bhetraratana, Kacey M. Peters, Benjamin K. Yang, Fen Yin, Jeffrey Gornbein, Jesus A. Araujo, and Holly R. Middlekauff  
e0006579. DOI: 10.1161/JAHA.117.006579.

## Resuscitation Science

### Description of Abnormal Breathing Is Associated With Improved Outcomes and Delayed Telephone Cardiopulmonary Resuscitation Instructions

Hidetada Fukushima, Micah Panczyk, Chengcheng Hu, Christian Dameff, Vatsal Chikani, Tyler Vadeboncoeur, Daniel W. Spaite, and Bentley J. Bobrow  
e005058. DOI: 10.1161/JAHA.116.005058.

### Multistate 5-Year Initiative to Improve Care for Out-of-Hospital Cardiac Arrest: Primary Results From the HeartRescue Project

Sean van Diepen, Saket Girotra, Benjamin S. Abella, Lance B. Becker, Bentley J. Bobrow, Paul S. Chan, Carol Fahrenbruch, Christopher B. Granger, James G. Jollis, Bryan McNally, Lindsay White, Demetris Yannopoulos, and Thomas D. Rea  
e005716. DOI: 10.1161/JAHA.117.005716.

## Stroke

### Human Papillomavirus Status and the Risk of Cerebrovascular Events Following Radiation Therapy for Head and Neck Cancer

Daniel Addison, Sara B. Seidemann, Sumbal A. Janjua, Hamed Emami, Pedro V. Staziaki, Travis R. Hallett, Bálint Szilveszter, Michael T. Lu, Richard P. Cambria, Udo Hoffmann, Annie W. Chan, Lori J. Wirth, and Tomas G. Neilan  
e006453. DOI: 10.1161/JAHA.117.006453.

### Physical Activity Frequency and the Risk of Stroke: A Nationwide Cohort Study in Korea

Han-Gil Jeong, Do Yeon Kim, Dong-Wan Kang, Beom Joon Kim, Chi Kyung Kim, Yerim Kim, Wookjin Yang, Eun-Sun Park, and Seung-Hoon Lee  
e005671. DOI: 10.1161/JAHA.117.005671.

### Sleep-Disordered Breathing in Acute Ischemic Stroke: A Mechanistic Link to Peripheral Endothelial Dysfunction

Nadja Scherbakov, Anja Sandek, Nicole Ebner, Miroslava Valentova, Alexander Heinrich Nave, Ewa A. Jankowska, Jörg C. Schefold, Stephan von Haehling, Stefan D. Anker, Ingo Fietze, Jochen B. Fiebach, Karl Georg Haeusler, and Wolfram Doehner  
e006010. DOI: 10.1161/JAHA.117.006010.

---

## Transfusion of Polynitroxylated Pegylated Hemoglobin Stabilizes Pial Arterial Dilatation and Decreases Infarct Volume After Transient Middle Cerebral Artery Occlusion

Suyi Cao, Jian Zhang, Li Ma, Carleton J. C. Hsia, and Raymond C. Koehler  
e006505. DOI: 10.1161/JAHA.117.006505.

## Professional Medical Interpreters Influence the Quality of Acute Ischemic Stroke Care for Patients Who Speak Languages Other than English

Betty M. Luan Erfe, Khawja A. Siddiqui, Lee H. Schwamm, Chris Kirwan, Anabela Nunes, and Nicté I. Mejía  
e006175. DOI: 10.1161/JAHA.117.006175.

## Association Between Troponin Levels and Embolic Stroke of Undetermined Source

Alexander E. Merkler, Gino Gialdini, Santosh B. Murthy, Setareh Salehi Omran, Antonio Moya, Michael P. Lerario, Ji Chong, Peter M. Okin, Jonathan W. Weinsaft, Monika M. Safford, Matthew E. Fink, Babak B. Navi, Costantino Iadecola, and Hooman Kamel  
e005905. DOI: 10.1161/JAHA.117.005905.

## Topography and Determinants of Magnetic Resonance Imaging (MRI)-Visible Perivascular Spaces in a Large Memory Clinic Cohort

Sara Shams, Juha Martola, Andreas Charidimou, Mykol Larvie, Tobias Granberg, Mana Shams, Maria Kristoffersen-Wiberg, and Lars-Olof Wahlund  
e006279. DOI: 10.1161/JAHA.117.006279.

### Valvular Heart Disease

#### Aortic Valve Stenosis Alters Expression of Regional Aortic Wall Shear Stress: New Insights From a 4-Dimensional Flow Magnetic Resonance Imaging Study of 571 Subjects

Pim van Ooij, Michael Markl, Jeremy D. Collins, James C. Carr, Cynthia Rigsby, Robert O. Bonow, S. Chris Malaisrie, Patrick M. McCarthy, Paul W.M. Fedak, and Alex J. Barker  
e005959. DOI: 10.1161/JAHA.117.005959.

#### Sex Differences in the Utilization and Outcomes of Surgical Aortic Valve Replacement for Severe Aortic Stenosis

Zakeih Chaker, Vinay Badhwar, Fahad Alqahtani, Sami Aljohani, Chad J. Zack, David R. Holmes, Charanjit S. Rihal, and Mohamad Alkhoulí  
e006370. DOI: 10.1161/JAHA.117.006370.

### Vascular Medicine

#### Lower Mitochondrial Energy Production of the Thigh Muscles in Patients With Low-Normal Ankle-Brachial Index

Majd AlGhatrif, Ariel Zane, Matt Oberdier, Marco Canepa, Stephanie Studenski, Eleanor Simonsick, Richard G. Spencer, Kenneth Fishbein, David Reiter, Edward G. Lakatta, Mary M. McDermott, and Luigi Ferrucci  
e006604. DOI: 10.1161/JAHA.117.006604.

#### Growth Differentiation Factor 15 Is Associated With Major Amputation and Mortality in Patients With Peripheral Artery Disease

Judith J. De Haan, Saskia Haitjema, Hester M. den Ruijter, Gerard Pasterkamp, Gert J. de Borst, Martin Teraa, Marianne C. Verhaar, Hendrik Gremmels, and Saskia C. A. de Jager  
e006225. DOI: 10.1161/JAHA.117.006225.

#### Ultraviolet B Exposure Inhibits Angiotensin II-Induced Abdominal Aortic Aneurysm Formation in Mice by Expanding CD4<sup>+</sup>Foxp3<sup>+</sup> Regulatory T Cells

Tomohiro Hayashi, Naoto Sasaki, Tomoya Yamashita, Taiji Mizoguchi, Takuo Emoto, Hilman Zulkifli Amin, Keiko Yo DOI, Takuya Matsumoto, Kazuyuki Kasahara, Naofumi Yoshida, Tokiko Tabata, Naoki Kitano, Atsushi Fukunaga, Chikako Nishigori, Yoshiyuki Rikitake, and Ken-ichi Hirata  
e007024. DOI: 10.1161/JAHA.117.007024.

---

## Cardiovascular Benefits of Moderate Exercise Training in Marfan Syndrome: Insights From an Animal Model

Aleksandra Mas-Stachurska, Anna-Maria Siegert, Monsterrat Batlle, Darya Gorbenko del Blanco, Thayna Meirelles, Cira Rubies, Fabio Bonorino, Carla Serra-Peinado, Bart Bijmens, Julio Baudin, Marta Sitges, Lluís Mont, Eduard Guasch, and Gustavo Egea  
e006438. DOI: 10.1161/JAHA.117.006438.

## Systematic Review and Meta-analysis

### Role of Total, Red, Processed, and White Meat Consumption in Stroke Incidence and Mortality: A Systematic Review and Meta-Analysis of Prospective Cohort Studies

Kyuwoong Kim, Junghyeon Hyeon, Sang Ah Lee, Sung Ok Kwon, Hyejin Lee, NaNa Keum, Jong-Koo Lee, and Sang Min Park  
e005983. DOI: 10.1161/JAHA.117.005983.

### Relationship of Sleep Duration With All-Cause Mortality and Cardiovascular Events: A Systematic Review and Dose-Response Meta-Analysis of Prospective Cohort Studies

Jiawei Yin, Xiaoling Jin, Zhilei Shan, Shuzhen Li, Hao Huang, Peiyun Li, Xiaobo Peng, Zhao Peng, Kaifeng Yu, Wei Bao, Wei Yang, Xiaoyi Chen, and Liegang Liu  
e005947. DOI: 10.1161/JAHA.117.005947.

### Secondary Open Aortic Procedure Following Thoracic Endovascular Aortic Repair: Meta-Analytic State of the Art

Ivancarmine Gambardella, George A. Antoniou, Francesco Torella, Cristiano Spadaccio, Aung Y. Oo, Mario Gaudino, Francesco Nappi, Matthew A. Shaw, and Leonard N. Girardi  
e006618. DOI: 10.1161/JAHA.117.006618.

### Retrograde Type A Aortic Dissection After Thoracic Endovascular Aortic Repair: A Systematic Review and Meta-Analysis

Yanqing Chen, Simeng Zhang, Lei Liu, Qingsheng Lu, Tianyi Zhang, and Zaiping Jing  
e004649. DOI: 10.1161/JAHA.116.004649.

## Basic Science for Clinicians

### Valve Interstitial Cells: The Key to Understanding the Pathophysiology of Heart Valve Calcification

Arkady Rutkovskiy, Anna Malashicheva, Gareth Sullivan, Maria Bogdanova, Anna Kostareva, Kåre-Olav Stensløkken, Arnt Fiane, and Jarle Vaage  
e006339. DOI: 10.1161/JAHA.117.006339.

## Contemporary Review

### Impact of Electronic Cigarettes on the Cardiovascular System

Hanan Qasim, Zubair A. Karim, Jose O. Rivera, Fadi T. Khasawneh, and Fatima Z. Alshbool  
e006353. DOI: 10.1161/JAHA.117.006353.

### Cardiotoxicity From Human Epidermal Growth Factor Receptor-2 (HER2) Targeted Therapies

Roberta Florido, Karen L. Smith, Kimberly K. Cuomo, and Stuart D. Russell  
e006915. DOI: 10.1161/JAHA.117.006915.

## Meeting Highlights

### The Next Best Thing in Cardiovascular Research

#### Highlights From the Basic Cardiovascular Sciences Scientific Sessions

Ryan L. Boudreau  
e007245. DOI: 10.1161/JAHA.117.007245.

## AHA Scientific Statement

### Self-Care for the Prevention and Management of Cardiovascular Disease and Stroke

#### A Scientific Statement for Healthcare Professionals From the American Heart Association

Barbara Riegel, Debra K. Moser, Harleah G. Buck, Victoria Vaughan Dickson, Sandra B. Dunbar, Christopher S. Lee, Terry A. Lennie, JoAnn Lindenfeld, Judith E. Mitchell, Diane J. Treat-Jacobson, David E. Webber, on behalf of the American Heart Association Council on Cardiovascular and Stroke Nursing; Council on Peripheral Vascular Disease; and Council on Quality of Care and Outcomes Research  
e006997. DOI: 10.1161/JAHA.117.006997.



---

## Correction

Sex Differences in Percutaneous Coronary Intervention—Insights From the Coronary Angiography and PCI Registry of the German Society of Cardiology

e002331. DOI: 10.1161/JAHA.117.002331.

The Impact of Cryoballoon Versus Radiofrequency Ablation for Paroxysmal Atrial Fibrillation on Healthcare Utilization and Costs: An Economic Analysis From the FIREANDICE Trial

e002230. DOI: 10.1161/JAHA.117.002230.

A Brain Phenotype for Stressor-Evoked Blood Pressure Reactivity

e002235. DOI: 10.1161/JAHA.117.002235.

Suppression of Tumorigenicity 2 in Heart Failure With Preserved Ejection Fraction

e002231. DOI: 10.1161/JAHA.117.002231.

Impact of the Metabolic Syndrome on Mortality is Modified by Objective Short Sleep Duration

e002182. DOI: 10.1161/JAHA.117.002182.

6 (9)

*J Am Heart Assoc.* 2017;6::; originally published September 1, 2017;

The *Journal of the American Heart Association* is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231  
Online ISSN: 2047-9980

The online version of this article, along with updated information and services, is located on the World Wide Web at:

<http://jaha.ahajournals.org/content/6/9.citation>

Subscriptions, Permissions, and Reprints: The *Journal of the American Heart Association* is an online only Open Access publication. Visit the Journal at <http://jaha.ahajournals.org> for more information.