Report of the American Heart Association (AHA)
Scientific Sessions 2015, Orlando

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The American Heart Association Scientific Sessions were held in Orlando on November 7–15, 2015. The meeting attracted more than 18,000 participants, including physicians, research scientists, students, and paramedical personnel, from more than 100 countries. Sessions over the 5 days included a comprehensive and unparalleled education delivered via more than 5,000 presentations, with 1,000 invited faculty members and 4,000 abstract presentations from the world leaders in cardiovascular disease. It also displayed the newest cardiovascular technology and resources by more than 200 exhibitors. There were 19 trials scheduled in 6 late-breaking clinical trial sessions. The Systolic Blood Pressure Intervention Trial (SPRINT) aimed to determine the most appropriate targets for the systolic blood pressure among persons without diabetes. A total of 9,361 persons with systolic blood pressure of ≥130 mmHg and an increased cardiovascular risk, but without diabetes, were randomly assigned to a target systolic blood pressure of <120 mmHg (intensive treatment) or a target of <140 mmHg (standard treatment). A significantly lower rate of the primary composite outcome and all-cause mortality in the intensive-treatment group than in the standard-treatment group was observed. Summaries and overviews of the late-breaking trials, clinical science special report sessions, and sessions to which members of the Japanese Circulation Society contributed are presented. (Circ J 2016; 80: 51–57)

Key Words: American Heart Association; Japanese Circulation Society; Late-breaking clinical trials; Scientific Sessions

The American Heart Association Scientific Sessions 2015 were held on November 7–11, 2015 at Orlando’s Orange County Convention Center (Figures 1A, B). The tagline of 2015 was “Life Is Why” (Figure 1C). The city of Orlando is located in central Florida and is nicknamed “The City Beautiful.” Orlando is also known as “The Theme Park Capital of the World” because it has the Walt Disney World Resort (Figures 1D, E), Universal Orlando Resort, SeaWorld, etc. It is busy city for conferences and conventions. This year’s AHA Scientific Sessions were attended by more than 17,000 professionals from 100 countries. In addition, 1.5 million medical professionals participated virtually in lectures and discussions about basic, translational, clinical, and population science. The sessions includes 5 days of a comprehensive, unparalleled education through more than 5,000 presentations, with 1,000 invited faculty members, and 4,000 abstract presentations, all from the world’s leaders in cardiovascular (CV) disease. It also included more than 200 exhibitors showcasing the latest CV technology and resources. The AHA Scientific Sessions encompass the best science and are one of the leading CV conferences for basic, translational, clinical, and population science in the United States. The main program included 6 late-breaking clinical trial (LBCT) sessions consisting of presentations on 19 clinical studies, 3 clinical science sessions, special reports sessions, 10 plenary sessions, and 10 special sessions. This year, almost 90% of the abstracts accepted were presented as posters to facilitate discussion, engagement, and networking. The e-Abstract sessions were presented in theaters featured in each core poster community, highlighting the must-see science of the day. Moderators led lively discussions between presenters and the audience. This report summarizes the highlights and several key presentations from the AHA Scientific Sessions 2015.

Opening Session

In the opening session (Figure 2A), the AHA President, Professor Mark A. Creager, exhorted scientific researchers and healthcare professionals to reduce the burden of vascular disease (Figure 2B). He quoted the words of Hippocrates almost 2,500 years ago that “blood vessels are the sources of human nature as rivers are sources of life and when a river becomes damaged or obstructed, everything around it suffers.” He also cited William Osler’s saying “Life’s tragedies are usually
arterial", which support atherosclerosis and thrombosis as the main pathogenesis of heart disease and strokes. Atherosclerosis causes peripheral vascular disease and affects about 8 million people in the USA and 200 million worldwide. As a result of the systemic burden of atherosclerosis, peripheral artery disease (PAD) is associated with heart attacks, strokes, and life-threatening health issues. PAD and its associated complications cost over US$200 billion/year, which is more than double the amount for all cancers. A recent survey found that 75% of the public and even some physicians are unaware of PAD. Few patients are receiving adequate risk factor modification and antiplatelet therapy despite both of these being able to reduce the risk of heart attacks, strokes, and CV death by 25%. He emphasized that healthcare professionals must understand the terrible toll of vascular diseases, and that prevention, diagnosis and treatment are important. He also announced the project funding of the CV Genome-Phenome Studies as a new class of research grants to accelerate the discovery of personalized treatment and prevention of CV diseases.

**Japanese Circulation Society (JCS) in the AHA Scientific Sessions**

The JCS maintains a close relationship with the AHA every year.¹⁻³ This year, the JCS/ReSS (Resuscitation Science Symposium) Joint Session’s theme was the cardiac arrest national registry. Doctors Benjamin Abella and Kei Nishiyama organized this session. In this session, Dr. Noritoshi Ito from Osaka Saiseikai Senri Hospital presented a prospective cohort study that examined the association between regional cerebral oxygen saturation (rSO₂) levels measured immediately on hospital arrival and the neurological outcome upon hospital discharge in cardiac arrest on arrival (CAOA) patients after an out-of-hospital cardiac arrest (OHCA). Among the CAOA patients, none in the lowest level group (rSO₂ ≤20%) had a good neurological outcome upon hospital discharge. The mortality after the CAOA decreased with increasing rSO₂ levels. This study suggested the importance of maintaining rSO₂ levels during resuscitation in cases of refractory cardiac arrests. Dr. Tetsuya Matoba presented the prognostic impact of the post-procedural TIMI flow grade in ST-elevated myocardial infarction (STEMI) patients with cardiogenic shock undergoing a primary percutaneous coronary intervention (PCI), analyzed from the JCS Shock Registry at the ReSS poster session. In the JCS Shock Registry that covered contemporary emergency CV care in Japan, the 30-day mortality of STEMI complicated by cardiogenic shock was 24% among patients who underwent a primary PCI and resulted in a TIMI grade 3 flow in the culprit arteries. The use of thrombus aspiration, stents, and distal protection during the primary PCI were associated with a better chance of a post-procedural TIMI grade 3 flow. The JCS also featured a booth in the Science and Technology Hall (Figure 2C) to advertise JCS activities to the AHA attendees (Figure 2D).
Late-Breaking Clinical Trials

The LBCT sessions were innovative, provided the latest breakthroughs in clinical science, and potentially will have a significant effect on the clinical practice. The Clinical Science Report sessions highlighted the trial updates, registries, and important clinical science.

Failure Is Not an Option: New Drugs and Systems of Care

Randomized Trial of Liraglutide for High-Risk Heart Failure Patients With Reduced Ejection Fraction This randomized, double-blinded, placebo-controlled clinical trial of treatment with the GLP-1 agonist, liraglutide, vs. a placebo for 6 months in high-risk heart failure (HF) patients with a reduced ejection fraction (LVEF ≤40%) and recent hospitalization, showed that liraglutide, reduced body weight and improved blood glucose control. The composite of death, HF, hospitalization for HF, and renal function was favorable but not statistically significant.

Nitrate’s Effect on Activity Tolerance in Heart Failure With Preserved Ejection Fraction (NEAT-HFpEF) This study compared the effect of nitrates or a placebo on the daily activity of patients with HF and a preserved ejection fraction (HFpEF). The 110 patients with HFpEF were assigned to a 6-week dose-escalation regimen of isosorbide mononitrate from 30 to 60 to 120mg once daily or a placebo. As compared with placebo, isosorbide mononitrate decreased daily activity levels and did not improve submaximal exercise capacity, quality-of-life scores, or NT-proBNP levels in the HFpEF patients. This study did not support the use of long-acting nitrates for the relief of symptoms in HFpEF patients.4

Oral sGC Stimulator, Vericiguat, in Patients With Worsening Chronic Heart Failure and Reduced Ejection Fraction: The SOLuble guanylate Cyclase stimulatoR in heArT failurE patientS With REDUCED EF (SOCRATES-REDUCED) Study This is a phase II trial performed to determine the optimal dose and tolerability of vericiguat, a soluble guanylate cyclase stimulator, in patients with worsening chronic HF and a reduced left ventricular ejection fraction (LVEF). Among these patients, compared with the placebo, vericiguat did not have a statistically significant effect on the change in the NT-proBNP level at 12 weeks, but was well tolerated.5

Remote Patient Management After Discharge of Hospitalized Heart Failure Patients: The Better Effectiveness After Transition-Heart Failure (BEAT-HF) Study This study evaluated the effectiveness of a care transition intervention using remote patient monitoring among a broad population of 1,404 older (≥50 years) adults hospitalized with HF. Patients received education for HF and in the use of telemonitoring equipment before discharge. Regular telephone coaching and telemonitoring of their weight, blood pressure, heart rate, and symptoms using a Bluetooth device were scheduled. These interventions did not reduce the all-cause readmission or mortality after HF hospitalization during 30 or 180 days.

Figure 2. In the opening session Nancy Brown (A), Chief Executive Officer, and Marc Creager (B), President of the AHA, each made a speech. In the Science and Technology Hall (C), the JCS had a booth (D).
Decreasing the Global Burden of Disease: Breakthroughs in Prevention

Efficacy and Safety of Varenicline, a Selective α4β2 Nicotinic Receptor Partial Agonist, for Smoking Cessation in Patients Hospitalized With Acute Coronary Syndrome: A Randomized Controlled Trial

This study assessed the efficacy of varenicline, a selective α4β2 nicotinic receptor partial agonist, and in conjunction with low-intensity counseling it was efficacious for smoking cessation. A total of 302 patients were randomized to varenicline or a placebo for 12 weeks. At 24 weeks, the patients randomized to varenicline had higher rates of smoking abstinence and showed a reduction. The point-prevalence abstinence rates were 47.3% in the varenicline group and 32.5% in the placebo group (P=0.012). The adverse events rates were similar between the groups. Varenicline was efficacious for smoking cessation (Figure 3A).

Impact of a Comprehensive Lifestyle Peer-Group-Based Intervention on Cardiovascular Risk Factors: A Randomized Controlled Trial

The aim of the Fifty-Fifty Program was to evaluate the effect of a multicenter community-based comprehensive lifestyle intervention for self-control of CV risk factors through peer-group dynamics. A total of 543 adults aged 25–50 years with at least 1 risk factor were randomly assigned to a peer-group based intervention group (IG) or a self-management control group (CG). After 12 months, the mean BEWAT score values were significantly higher in the IG (n=277) than in the CG (n=266) [IG mean=8.84 (8.37–9.32); CG mean=8.17 (7.55–8.79), P=0.02]. The increase in the overall score was significantly larger in the IG than in the CG [diff: 0.75(0.32–1.18); P=0.02]. The mean improvement in the individual components was uniformly greater in the IG, with a significant difference for the tobacco component. The peer-group intervention had beneficial effects on CV risk factors, with significant improvements in the overall score and specifically tobacco cessation.

Clinical Trial of a Mobile Health Intervention for Simultaneous vs. Sequential Diet and Activity Change

This study is a mobile health trial designed to determine whether targeting diet and activity risk behaviors simultaneously or sequentially maximizes a healthy lifestyle change. A total of 212 adults were randomized to 3 treatments: a sequential treatment that targeted fruit and vegetable intake and sedentary behavior first, then physical activity; a simultaneous treatment group that targeted all 3 at once; and a control program addressing stress and sleep levels only. A smart phone app gave the patients feedback about their behaviors. This was uploaded to a coach who would advise them on their progress and give suggestions for improvements. After 9 months, the intervention groups experienced an increase in their daily fruit/vegetable intake (mean difference 5.9 credits, 95% confidence interval (CI) 4.5–7.2), decreased leisure screen time (mean difference 126.9 min, 95% CI 100.3–153.4), and decreased saturated fat intake (mean difference 3.7%, 95% CI 2.1–5.4) compared with the controls. The participants who were asked to improve their dietary, leisure time, and physical activity through weekly coaching and maintenance calls showed improvements in their composite diet and activity relative to the controls.
Effect of Disclosing Genomic Risk of Coronary Heart Disease on Low-Density Lipoprotein Cholesterol Levels: The Myocardial Infarction Genes (MI-GENES) Study This study investigated whether knowledge of genetic risk influences the relevant clinical outcome. The genetic risk score (GRS) was based on 28 genetic variants. The lowering of low-density lipoprotein cholesterol (LDL-C) was greatest in individuals with a high GRS for coronary artery disease (CAD). Disclosure of a CAD risk estimate that included genetic information led to lower LDL-C levels at 6 months than disclosure of a conventional risk estimate. Individuals who received a GRS in addition to conventional risk assessment for CAD had lower LDL-C levels 6 months after disclosure.

Empagliflozin and Cardiovascular Outcomes in Patients With Type 2 Diabetes Mellitus at High Cardiovascular Risk This trial is the first to evaluate CV outcomes in type 2 diabetes patients administered the sodium glucose cotransporter-2 (SGLT-2) inhibitor, empagliflozin. Empagliflozin was given to patients with type 2 diabetes and a high CV risk in addition to standard therapy. Empagliflozin reduced both HF hospitalization and CV death in patients with and without HF.

Two-Year Clinical Update: CT Surgery Network Severe MR Trial Two-Year Outcomes Following Mitral Valve Repair or Replacement for Severe Ischemic Mitral Regurgitation The trial represents the 2-year follow-up of the comparative effectiveness between mitral valve repair vs. mitral valve replacement for the treatment of severe ischemic mitral regurgitation. There was no significant difference in the left ventricular end-systolic volume index (LVESVI), survival, or adverse events at 1 year after surgery repair and replacement in patients with severe ischemic mitral regurgitation. The 2-year outcomes of this trial showed no significant between-group differences in left ventricular reverse remodeling or survival. Mitral regurgitation recurred more frequently in the repair group, resulting in more serious adverse events related to HF and CV readmissions.7

SPRINT Trial Results: Latest News in Hypertension Management Systolic Blood Pressure Intervention Trial SPRINT aimed to determine the most appropriate targets for systolic blood pressure (SBP) among persons without diabetes. A total of 9,361 subjects with a SBP ≥130 mmHg and an increased CV risk, but without diabetes, were randomly assigned to a SBP target <120 mmHg (intensive treatment) or <140 mmHg (standard treatment). The intervention was stopped early after a median follow-up of 3.26 years owing to a significantly lower rate of the primary composite outcome in the intensive-treatment group than in the standard-treatment group (1.65% per year vs. 2.19% per year; hazard ratio with intensive treatment, 0.75; 95% CI, 0.64–0.89; P<0.001). The all-cause mortality was also significantly lower in the intensive-treatment group (hazard ratio, 0.73; 95% CI, 0.60–0.90; P=0.003). However, significantly higher rates of some adverse events were observed in the intensive-treatment group.2

ACS and PCI: The Continuum of Care Providing Rapid Out-of-Hospital Acute Cardiovascular Treatment PROACT-4 evaluated patients with chest pain in which 601 patients were randomized to usual-care (troponin testing in the emergency department) and to point-of-care troponin testing done by paramedics in the ambulance. For those receiving point-of-care troponin testing, they were discharged in 8.88h, whereas those receiving usual-care were discharged in 9.32h. Adding troponin to the EMS ambulance care reduced the time to test by 100min and the total time to final disposition by 20min. There was a borderline significant reduction in the time from first medical discharge to final disposition and a statistically significant reduction in the time needed to discharge the patient from the emergency department.

Clinical Outcomes of Intravascular Ultrasound-Guided Everolimus-Eluting Stents Implantation in Long Coronary Lesions This study was performed to determine whether the long-term clinical outcomes with IVUS-guided drug-eluting stent implantations are superior to those with angiography-guided implantations in patients with long coronary lesions. Among the patients requiring long coronary stent implantations, the use of IVUS-guided everolimus-eluting stent implantations, compared with angiography-guided implantations, resulted in a significantly lower rate of the composite of major adverse cardiac events at 1 year. These differences were primarily related to a lower risk of target lesion revascularization.8

Long-Term Tolerability of Ticagrelor in the PEGASUS-TIMI 54 Trial This trial investigated 21,162 patients with a history of myocardial infarction (MI) and additional risk factors such as age or diabetes, and who had experienced the MI 1–3 years prior to participating in the study; they were randomly assigned to a twice-daily regimen of ticagrelor at 90 mg or 60 mg or a placebo. With a mean follow-up of 33 months, more patients stopped ticagrelor 90 mg (3.3%) and ticagrelor 60 mg (3.0%) than the placebo (2.3%). Adverse events were the reason for discontinuation by 19% of the 90mg group and for 16.4% in the 60mg group. The majority of cases of discontinuation because of dyspnea were non-serious (>95%) and only mild to moderate in intensity (>80%); the majority of cases of discontinuation because of bleeding were minimal and did not require medical attention. Overall, for the ticagrelor groups, the risk of CV death, MI or strokes was “significantly reduced” as compared with placebo (6.7 vs. 8.4, respectively).

Individualizing Treatment Duration of Dual Antiplatelet Therapy After Percutaneous Coronary Intervention: An Analysis of the DAPT Study This study examined patients who had not had a major ischemic or bleeding event within the first year after a PCI. The DAPT score identified that ischemic benefits outweighed the bleeding risk, and the bleeding risk outweighed the ischemic benefits. This score may help clinicians decide which patients should or should not be treated with DAPT (Figure 3B).

Angina and Quality of Life Following PCI With Incomplete Revascularization: Results From the Ranolazine for Incomplete Vessel Revascularization (RIVER-PCI) Trial This trial examined whether ranolazine would be effective in reducing angina and improving the quality of life (QOL) in incomplete revascularization (ICR) post-PCI patients. Patients with a history of chronic angina who had ICR post-PCI were randomized to oral ranolazine vs. placebo. There was no incremental benefit in angina or the QOL measures from additional ranolazine in this angiographically-identified population (Figure 3C).9

One-Year Follow-up Results From AUGMENT-HF: A Multicenter Randomized Controlled Clinical Trial of the Efficacy of Left Ventricular Augmentation With Algisy1-LVR in the Treatment of Heart Failure AUGMENT-HF evaluated whether Algisy1 (injectable calcium alginate hydrogel) is superior to standard medical therapy (SMT) for improving the functional capacity and clinical outcomes in patients with advanced HF for 1 year. Algisy1 in addition to SMT was more effective than
SMT alone for providing sustained 1-year benefits in the VO₂ at the anaerobic threshold, 6-min walk test distance, and NYHA functional class (all P<0.001) for patients with advanced HF.

First-in-Man Randomized Trial of a β3-Adrenoceptor Agonist in Chronic Heart Failure: the BEAT-HF Trial This trial was designed to evaluate the effect on heart pump function and safety of a β-3 receptor agonist in patients with chronic HF. The β3-adrenoceptor agonist, mirabegron, did not increase the LVEF in patients with a mean EF of 40% and there was no significant effect on the secondary endpoints. However, the target dose was reached in 94% of the patients and adverse events were generally mild and transient.

Prevention of Cardiac Dysfunction During Adjuvant Breast Cancer Therapy (PRADA): Primary Results of a Randomized, 2×2 Factorial, Placebo-Controlled, Double-Blind Clinical Trial This randomized, placebo-controlled, double-blind trial assessed the effect of the β-blocker, metoprolol, and the angiotensin-receptor blocker, candesartan, as preventive cardioprotective therapy included in an early adjuvant breast cancer regimen with or without trastuzumab and radiation. Concomitant treatment with candesartan, but not metoprolol, provides protection against a decline in the LVEF in women treated for early breast cancer with adjuvant anticancer treatment.

ANNEXA™-R Part 2 Andexanet is designed to reverse the anticoagulant effect of factor Xa inhibitors. Among healthy older volunteers taking the factor Xa inhibitor, apixaban or rivaroxaban, administration of a bolus alone or bolus plus a 2-h infusion reduced factor Xa activity and restored thrombin generation within 2–5 min without any adverse or thrombotic events.

Prevention of Acute Kidney Injury by Nitric Oxide During and After Prolonged Cardiopulmonary Bypass: A Double-Blind Randomized Controlled Trial Nitric oxide was delivered during and after a prolonged cardiopulmonary administration of 80 ppm via an oxygenator and ventilator for 24 h in patients undergoing multiple cardiac valve replacements requiring prolonged cardiopulmonary bypass. There was a decreased incidence of acute kidney injury from 63% to 50% (P=0.04).

Randomized, Placebo-Controlled Trial of Late Na Channel Inhibition (Ranolazine) in Coronary Microvascular Dysfunction (CMD): Impact on Angina and Myocardial Ischemia The RWISE study is a randomized, double-blind placebo-controlled, crossover trial of oral ranolazine 500–1,000 mg twice daily for 2 weeks in women and men with symptoms and signs of myocardial ischemia, no obstructive CAD, and an abnormal volumetric flow reserve or abnormal myocardial perfusion index (MPRI) on cardiac magnetic resonance imaging (CMRI). The primary endpoints were angina stability and frequency as measured by the Seattle Angina Questionnaire (SAQ) and SAQ-7 questionnaire score. However, ranolazine did not affect angina or myocardial perfusion in patients with CMD.

ALN-PCSsc, an RNAi Investigational Agent That Inhibits PCSK9 With Potential for Effective Quarterly or Possibly Biannual Dosing: Results of Single-Blind, Placebo-Controlled, Phase 1 Single-Ascending Dose (SAD), and Multi-Dose (MD) Trial in Adults With Elevated LDL-C, on and off Statins An RNAi investigational agent that inhibits PCSK2 with the potential for effective quarterly or possibly bi-annual dosing, ALN-PCSsc was well tolerated and no serious adverse events or discontinuation because of adverse events occurred. A reduction in the lipoprotein A, total cholesterol, and non-HDL cholesterol levels, with no change in the HDL level, was obtained.

Clinical Science Special Report Sessions

The Clinical Science Special Report Sessions handled the hot topics in CV research and the Special Session was delivered to a full audience. The sessions included the Novel Findings from Next Generation Registries, Cutting Edge Technologies in EP, and Managing Risk Factors for CAD: Clinical Trial Updates. From the Cutting Edge Technologies in EP, the efficacy and safety of novel devices were reported.

Miniaturized Transcatheter Delivered Cardiac Pacing: Primary Results of a Worldwide Clinical Trial The purpose of this clinical study was to evaluate the safety and efficacy of the Micra Transcatheter Pacing System and to assess its long-term performance. This novel intracardiac transcatheter pacing system was successfully implanted (99.2%) in clinically diverse patients around the world. Major complications occurred in 4% of the patients, which was 51% less than in the transvenous pacemaker control group.

Periprocedural Safety of Left Atrial Appendage Occlusion With the Watchman Device: Preliminary Data From the EWOLUTION Registry Current ESC guidelines recommend left atrial appendage (LAA) closure in patients with a contraindication to oral anticoagulation and an increased risk of stroke. Preliminary data from the EWOLUTION registry of LAA occlusions with the Watchman device (Boston Scientific Corporation) were presented. A total of 1,025 patients who

Figure 4. AHA Scientific Sessions 2016 will be held in New Orleans, Louisiana, USA.
were scheduled for a Watchman implant at 47 centers in 13 countries were enrolled. They reported that 99.3% of the procedures were successful and 93.1% of the patients were free from any adverse events within the first 30 days of the implant procedure, despite being a high-risk population. The investigators concluded that LAA closure with the Watchman device has a high initial success rate in achieving complete LAA closure with minimal periprocedural risk when performed by appropriately trained operators.

Kenneth D. Bloch Memorial Lecture

This lecture was established in 2015 by the Council on Cardiopulmonary, Critical Care, Perioperative and Resuscitation (3CPR) and the Council on Basic Cardiovascular Sciences (BCVS) to honor Dr Kenneth D. Bloch. Dr Bloch had a distinguished scientific carrier in the study of pulmonary arterial hypertension (PAH). In this session, after the Memorial Lecture by Stephen L. Archer, MD, from Keio University, Tokyo, presented a genome-wide association study (GWAS) for PAH patients entitled “A genome-wide association analysis identifies PDE1A|DNAJC10 locus on chromosome 2 associated with idiopathic PAH in the Japanese population”. In that presentation, she talked about how the GWAS was performed in a Japanese population comprising a total of 44 individuals with idiopathic or heritable PAH (I/HPAH) and 2,993 healthy controls, which identified novel I/HPAH-associated SNPs at the PDE1A|DNAJC10 locus. Further, she concluded that PDE1A could be a novel therapeutic target of PAH (Figure 3D). Dr Kimura was awarded the 2015 3CPR Best Abstract Award (Cardiopulmonary/Critical Care) for this study (Figure 3E).

Closing Remarks

In recent years, cardiologists have been more likely to attend the European Society of Cardiology rather than the AHA Scientific Sessions. However, the AHA Scientific Sessions are definitely a wonderful experience in which we can truly interact with significant clinicians and basic research scientists worldwide. The AHA Scientific Sessions are like an all-you-can-eat buffet at a 5-star restaurant. The Scientific Sessions worldwide. The AHA Scientific Sessions are like an all-you-can-eat buffet at a 5-star restaurant. The Scientific Sessions.

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Disclosures

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