AdventHealth

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AdventHealth Heart, Lung and Vascular Institute

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AdventHealth Heart, Lung & Vascular Institute Continues to Enhance Care and Clinical Outcomes

The AdventHealth Cardiovascular Institute is now the AdventHealth Heart, Lung & Vascular Institute (HLVI), and we welcome you to the first edition of our new physician journal designed to keep you informed about the latest research and developments within our program.

We now have more than 300 specialists who share a common vision to become national leaders while delivering the best possible cardiovascular and pulmonary care to the local communities we are privileged to serve. While we have been tackling the challenges of a global pandemic with innovation and compassion, we are also dedicated to continuously improving our overall performance and clinical outcomes. Here are a few highlights of our program's recent accomplishments:

- **U.S. News & World Report recognized AdventHealth HLVI nationally as a "High Performing Cardiology & Heart Surgery Program."** This means our HLVI was within the top 10% of all hospitals across the country for cardiovascular care and outcomes. In addition, we ranked high performing in all six cardiovascular procedures and conditions, including heart attack, heart failure, transcatheter aortic valve replacement (TAVR), aortic valve replacement (AVR), abdominal aortic aneurysm (AAA), and coronary artery bypass graft surgery (CABG).
- **The Society of Thoracic Surgeons awarded our Orlando, Celebration and Daytona beach campuses with a 3-star rating (its highest level awarded) for isolated CABG.** In addition, Daytona and Orlando earned 3-star distinctions for mitral valve replacement/repair (MVRR) and TAVR.
- **AdventHealth Orlando earned "The ELSO Award for Excellence in Life Support" from the Extracorporeal Life Support Organization (ELSO) and is now one of only 34 Designated Platinum Level Centers of Excellence in the world.** This is the highest level of achievement awarded by ELSO and recognizes AdventHealth's exceptional results in delivering extracorporeal membrane oxygenation (ECMO). AdventHealth Orlando is the only healthcare institution in Central Florida and the only adult ECMO center in the Southeast to achieve this honor.
- **In July 2021, we launched a Cardiology Fellowship program at AdventHealth Orlando** to help train future leaders while bringing new ideas, fresh perspectives and research opportunities to our system.
- **We earned Electrophysiology Accreditation (EA) from the American College of Cardiology.** This operational model merges the latest science and process improvement methodologies within our Electrophysiology lab.
- **We established our HLVI Clinical Council,** bringing together multi-specialty experts and leaders from across the Central Florida Division to drive greater clinical standards, enhance consumer-centric approaches and develop new strategic initiatives.

We are excited about all these developments and remain committed to an ongoing journey of growing, improving, evolving and working in partnership with you to care for patients throughout our local and national communities.

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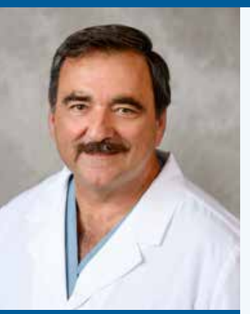
Society of Thoracic Surgery Awards Three AdventHealth Campuses Highest Quality Rating for Coronary Artery Bypass Graft Surgical Outcomes



George Palmer, III, MD
Cardiothoracic Surgeon
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Patrick Mangonon, MD
Cardiothoracic Surgeon
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AdventHealth's Celebration, Daytona Beach and Orlando campuses recently earned three-star ratings from the Society of Thoracic Surgery (STS) for coronary artery bypass graft (CABG) patient care and outcomes. The three-star rating, the highest category of quality awarded by STS, indicates achievement of outcomes "significantly better than expected," placing these three AdventHealth campuses in the top 20% of hospitals in the nation for CABG.

A not-for-profit organization, STS represents more than 7,600 surgeons, researchers and allied healthcare professionals worldwide. In 1989, the organization established the STS Adult Cardiac Surgery Database as a Quality improvement and patient safety initiative among cardiothoracic surgeons. A voluntary reporting program, the database is the world's premier clinical registry for cardiac surgery. It currently houses more than 7.5 million cardiac surgery procedure records and has nearly 3,800 participating physicians, including surgeons and anesthesiologists, from more than 90% of groups that perform heart surgery in the U.S.

The STS CABG Composite rating evaluates outcomes within four domains: absence of operative mortality, absence of major morbidity, use of internal mammary artery (IMA) and use of evidence-based perioperative medications. The latest analysis of AdventHealth data included more than 20,000 cases and covered a 3-year period ending December 2021.

Preparing for the STS submission required measurement and evaluation of every process that touches a cardiac patient within AdventHealth and included compilation of hundreds of data points. It also involved a multidisciplinary team, including administration, physicians and providers, nursing, surgical staff and anesthesia, closely collaborating to achieve alignment and to drive continuous quality improvement efforts.

Achieving the three-star STS rating is a shared honor, and the entire AdventHealth team remains committed to ongoing innovation and improvement to achieve the best quality cardiac care for patients.

AdventHealth Performs Florida's First Alterra Adaptive Prestent and Valve Implant on a Patient with Congenital Heart Disease

Zahid Amin, MD
Director
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In June, AdventHealth Orlando pediatric interventional cardiologists were the first in Florida to implant a tetralogy of Fallout patient with the Alterra Adaptive Prestent and Valve Implant to correct severe pulmonary regurgitation without open-heart surgery.

Patients with congenital heart diseases where the pulmonary artery is involved, including tetralogy of Fallout, transposition of the great arteries (TGA) and truncus arteriosus, often suffer from right ventricular outflow tract (RVOT) dysfunction after their initial surgical repair. This can lead to decreased exercise capacity and increased risk of malignant arrhythmias. Over the course of a lifetime, these patients typically require several pulmonary valve replacements to correct RVOT dysfunction.

Before availability of the new Alterra prestent and valve technology, placing valves using percutaneous technology was only possible if the pulmonary valve was a maximum of 28 mm. If it was larger, repair required that the patient undergo open-heart surgery. The new Alterra transcatheter technology was approved in December 2021 by the U.S. Food and Drug Administration (FDA) for patients who weigh over 20 kilograms, and it can accommodate valves up to 40 mm, significantly increasing the number of patients who can have their valve replaced through an interventional approach. Most of these patients can go home the morning after the procedure and can be back to work within a few days.

More than 50% of tetralogy of Fallout patients have valves larger than 28 mm, and there are more adult survivors of this condition than any other cyanotic heart disease. Because the average lifespan of pulmonary valve implants is about 10 years, many of these patients have already had multiple open-heart surgeries. Each surgery becomes increasingly difficult for the patient in terms of pain and recovery time in addition to the risk of infection and anxiety that comes with the more invasive approach. With the new Alterra implant technology, a valve can be placed and then another valve within that valve, allowing these patients to go 20 to 30 years before they require another open-heart surgery and reducing the total number of open-heart surgeries they may need over their lifetime.

Kevin Accola, MD
Cardiothoracic Surgeon
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AdventHealth Among First in the U.S. to Use New MITRIS RESILIA Bioprosthetic Mitral Replacement Valve with Anti-calcification Technology

In March, the U.S. Food and Drug Administration (FDA) granted premarket approval of Edwards Lifescience's MITRIS RESILIA valve, a tissue-based mitral valve replacement designed to last longer than previous bioprosthetic valves. AdventHealth Orlando was among the first to use the new MITRIS valve and participated in the COMMENCE pre-market clinical trial to evaluate its safety and effectiveness.

According to the American College of Cardiology, an estimated 4 million people in the U.S. suffer from significant mitral valve disease process. Several conditions can cause this, including mitral regurgitation (the mitral valve doesn't close tightly), mitral stenosis (a narrowing of the mitral valve) and rheumatic valvular disease (permanent valve damage caused by untreated or under-treated streptococcal infection). While some mitral valves can be repaired, others require replacement with an artificial valve, and there are two primary types — mechanical and bioprosthetic.

Mechanical replacement valves have been around for decades and are still used and appropriate for some patients. These valves require lifelong anticoagulation treatment which can be a burden, especially for younger patients. Bioprosthetic valves incorporate animal tissue and eliminate the need for anticoagulants. However, they have historically proven less durable which has limited their use to older patients.

A primary challenge with bioprosthetic replacement has been structural valve deterioration caused by calcium buildup on the valve's tissue over time. The new MITRIS RESILIA, made with bovine pericardial tissue and designed to mimic the native valve, incorporates an anti-calcification, integrity-preservation technology designed to help the valve last longer. This technology also allows the valve to be stored under dry packaging conditions.

In addition, the MITRIS valve features a low-profile frame that helps avoid obstruction of the left ventricular overflow tract by stent posts and is visible under fluoroscopy to facilitate potential future transcatheter interventions for patients, including valve-in-valve implantation.

We continue to explore new approaches to increase the durability of bioprosthetic valves. The technology built into the MITRIS valve should help mitigate the calcium buildup issue and extend longevity, which could benefit younger patients who have historically had to receive mechanical valves instead.

The COMMENCE trial included 83 patients in its mitral valve replacement arm along with 694 in an aortic replacement valve arm using the same tissue technology. Patients were followed for five years, and findings included clinically stable hemodynamics (blood flow), minimal regurgitation and no evidence of structural valve deterioration. A new arm of the COMMENCE trial will explore 10-year outcomes of the MITRIS RESILIA valve, and AdventHealth will participate in that as well.

At the AdventHealth Heart, Lung & Vascular Institute, we believe in continually improving patient care and outcomes. That is why we are committed to staying on the cutting edge of new valve replacement technologies that will allow our patients to have the most advanced solutions for their specific needs.

Usman Siddiqui, MD
Cardiology, Clinical Cardiac Electrophysiology
AdventHealth Heart, Lung & Vascular Institute

AdventHealth First in Central Florida to Implant Dual-Chamber Leadless Pacemaker as Part of AVEIR DR i2i Clinical Trial

In August 2022, AdventHealth Heart, Lung & Vascular Institute implanted Central Florida's first dual-chamber leadless pacemaker system as part of its participation in the Aveir DR i2i clinical trial, a prospective, multicenter, international, single-arm study designed to evaluate the clinical safety and efficacy of this new device.

While a traditional transvenous pacemaker delivers electrical impulses through thin, insulated wires, called cardiac leads, that connect to the heart muscle chambers, a leadless pacemaker is a self-contained generator and electrode system implanted directly into the right ventricle. It is implanted directly into the heart through a minimally invasive, catheter-based procedure and requires no subcutaneous generator pocket. This approach decreases the risk of complications like infection, erosion and pocket hematoma. In addition, it allows for a less restrictive recovery period and aesthetically, the patient does not have to live with device protrusion.

While nearly 80% of people who receive a pacemaker need a dual-chamber option to pace both chambers on the right side of the heart, leadless pacemakers have historically been limited to single-chamber devices because synchronization of two leadless pacemakers had been difficult to achieve. However, the technology in the new Aveir DR i2i dual-chamber leadless pacemaker was designed to solve for this challenge, regulating the heart rate synchronously between two leadless pacemakers – one placed in the right ventricle and the other positioned in the right atrium.

This new dual-chamber leadless pacemaker provides a real-time mapping capability so physicians can assess therapy delivery and reposition the device before implant during a patient's procedure. It was also designed to be retrievable so the system can be replaced as therapy needs evolve.

AdventHealth is excited to be part of this pivotal research and clinical milestone in the evolution of leadless pacing technology to enhance patient care. Recruitment for the study has closed, and it is expected to wrap up by the end of 2022.

Tim Farley, RN, BSN, MBA, FACHE
Programs & Partnerships Director
AdventHealth Heart, Lung & Vascular Institute

AdventHealth Partners with Pritikin Intensive Cardiac Rehab to Enhance Program

To help strengthen patient outcomes and experience, AdventHealth has launched a partnership with Pritikin Intensive Cardiac Rehab (ICR) at its Orlando, Celebration and Waterman campuses. Pritikin ICR is a Medicare-approved, comprehensive lifestyle change program that teaches patients how to maximize recovery from a cardiovascular disease-related event and reduce their risk of having another heart event.

As a result of this new partnership, the number of sessions offered to patients during a 12-week rehabilitation period will increase from 36 to 72. In addition to basic patient education on how to exercise safely to decrease the incidence of recurring heart disease, the program will offer participants access to more robust, whole-person education, including one-on-one consultation with a registered dietician and healthy mindset coach as well as healthy cooking demonstrations.

The nutrition education component focuses on fueling a healthy body and adapting mindful approaches to eating, and includes guidance on label reading, menus and dining out. Healthy mindset education encompasses strategies on managing stress, moods and relationships as well as tobacco cessation if appropriate. In addition, AdventHealth's pastoral service team has incorporated a spiritual component into the healthy mindset classes.

More than 100 peer-reviewed published studies have documented the Pritikin program's success in reducing risk factors for heart disease and other conditions, including the following:

- A 9% decrease in blood pressure
- A 23% decline in LDL
- A 33% decline in triglycerides
- Average weight loss of ~7-11 pounds

In addition, 54% of patients on the Pritikin ICR lowered their blood pressure to normal levels and left Pritikin after 3 weeks, free of anti-hypertensive pills. The majority of the others had their dosages reduced. Furthermore, 78% of Pritikin graduates indicated they were still exercising regularly and had 50% or greater adherence to the diet after 5 years.

This enhanced Cardiac Rehab program is designed for patients with any of the following cardiovascular conditions or events:

- Acute myocardial infarction within the preceding 12 months
- Coronary artery bypass surgery
- Current stable angina pectoris
- Heart valve repair or replacement
- Percutaneous transluminal coronary angioplasty/stenting
- Heart or lung transplant
- Chronic heart failure

Patricia Guerrero, MD
Medical Director, Cardiovascular Prevention & Wellness
AdventHealth Heart, Lung & Vascular Institute
Fellow of the American Society for Preventive Cardiology

AdventHealth Establishes Dedicated Program for Cardiovascular Prevention & Wellness

Cardiovascular disease is the number one cause of mortality in the United States with more than 3 million deaths annually according to the latest figures from the Centers for Disease Control and Prevention (CDC). Throughout its history, AdventHealth has earned a reputation for providing high-quality, complex cardiovascular care. Now we are also leading the way in early cardiovascular disease identification and prevention.

A movement that began in the 1980's amongst cardiovascular experts within academic institutions, the field of preventive cardiology has evolved and expanded significantly in the past two decades with the incorporation of the American Society for Preventive Cardiology in 2005. The focus is on prevention of cardiovascular disease and preservation of cardiovascular health through evidence-based diagnostics and intervention.

Launched in 2018, AdventHealth's Cardiovascular Prevention & Wellness program is an interdisciplinary effort dedicated to researching and implementing effective new approaches to maximize cardiovascular health as well as educating both providers and patients on the importance of early cardiovascular risk identification and intervention to achieve the best possible patient outcomes. Current efforts are focused in five key areas:

1. **Cardiovascular Genetics/Genomics** — identifies patients with cardiomyopathies, genetic arrhythmias/channelopathies, vascular disorders and aortopathies, heritable lipid disorders/dyslipidemias, and congenital heart defects with the goal of implementing appropriate primordial and primary prevention strategies
2. **Cardio-oncology** — connects oncology patients to testing, including electrocardiogram (ECG) surveillance, to monitor their cardiovascular health before, during and after cancer therapy
3. **Mother's Heart Wise** — coordinates with obstetricians to identify women with adverse pregnancy outcomes that increase their lifetime risk of developing cardiovascular disease and connect them to ongoing, preventive, risk-reduction care
4. **Men's Heart Initiative** — in similar fashion to Heart Wise, exploring ways to collaborate with urologists to identify male patients with elevated cardiovascular risk and work in a multidisciplinary manner to implement early intervention measures
5. **Sports Cardiology** — addressing the specific cardiovascular health needs and challenges of athletes

Through all these initiatives and more to come, AdventHealth aims to optimize the community's cardiovascular health and looks forward to working in close collaboration with healthcare providers and their patients.

To refer a patient for cardiovascular genetic testing or counseling, contact AdventHealth's CV Genomics Nurse Navigator at 407-303-7108 or CFD.CVHealth&WellnessFax@AdventHealth.com. To learn more about any of the other initiatives discussed above, email Patricia.Guerrero.MD@AdventHealth.com.

Marcos Hazday, MD
Cardiologist
AdventHealth Heart, Lung & Vascular Institute

Breakthrough Therapy Mavacamten Offers New Treatment Option for Patients with Obstructive Hypertrophic Cardiomyopathy

AdventHealth Heart, Lung & Vascular Institute's (HLVI) Hypertrophic Cardiomyopathy (HCM) Program, a designated HCM Center of Excellence by the Hypertrophic Cardiomyopathy Association, now offers patients with symptomatic New York Heart Association (NYHA) Class II-III obstructive HCM access to the recently FDA-approved drug Camzyos™ (mavacamten) to improve functional capacity and symptoms. This new therapy provides an alternative treatment option that could help prevent disease progression, allowing many obstructive HCM patients to postpone surgical septal reduction therapy (SRT) or even avoid surgery altogether.

HCM is the most common inherited cardiac disease with reported prevalence estimated at 1 in 500. People with one parent with HCM have a 50% chance of having the genetic mutation for the disease. It typically causes thickening in the septum between the two ventricles although other variants exist. With obstructive HCM, the most common type that accounts for about 2/3 of cases, this thickening blocks blood flow out of the heart and can cause shortness of breath, chest pain or changes in the heart's electrical system, resulting in life-threatening irregular arrhythmias and even sudden death.

For decades, cardiologists have had to repurpose drugs like beta-blockers, calcium channel blockers and disopyramide to treat the symptoms of obstructive HCM. When these medications no longer provided benefit, SRT surgery was often recommended.

Mavacamten was approved by the Food & Drug Administration (FDA) in April 2022 and is the first and only cardiac myosin inhibitor that specifically targets the underlying physiology of obstructive HCM, decreasing the number of myosin-actin cross-bridges and reducing excessive contractility. Approval of mavacamten was based on data from the Phase 3 EXPLORER-HCM trial which demonstrated a significant reduction in post-exercise left ventricular outflow tract (LVOT) gradient compared with placebo at 30 weeks.

While mavacamten is an exciting new development, patients who undergo treatment with it require vigorous risk mitigation. The AdventHealth HLVI participates in Bristol Myers Squibb's Camzyos Risk Evaluation and Mitigation Strategy (REMS) program. Because the drug reduces left ventricular ejection fraction (LVEF) and can cause heart failure due to systolic dysfunction, echocardiogram assessments of LVEF are required both before and during treatment. Mavacamten is not recommended for patients with LVEF <55% and should be stopped if LVEF is ever <50% or if the patient experiences heart failure symptoms or worsening clinical status. In addition, its use is contraindicated with moderate-to-strong CYP2C19 inhibitors or strong CYP3A4 inhibitors, and moderate-to-strong CYP2C19 inducers or moderate-to-strong CYP3A4 inducers. Mavacamten also has multiple drug interactions that could lessen its effectiveness, further warranting the rigorous monitoring and follow-up by the cardiac team to ensure patients don't experience adverse effects.

This novel cardiac myosin inhibitor is a major step forward in treatment of congestive HCM with the potential to significantly improve patients' quality of life.

Rohit Bhatheja, MD
Interventional Cardiologist
AdventHealth Heart, Lung & Vascular Institute

First-in-Human Study to Assess the Safety and Feasibility of the Bashir Endovascular Catheter for the Treatment of Acute Intermediate-Risk Pulmonary Embolism

Multi-center Study Published in *Circulation: Cardiovascular Interventions*

Akhilesh K Sista[1], **Rohit Bhatheja**[2], Parth Rali[3], Kannan Natarajan[4], Philip Green[5], Gregory Piazza[6], Anthony J Comerota[7], Sahil A Parikh[5], Vladimir Lakhter[8], Riyaz Bashir[8], Kenneth Rosenfield[9]

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Background: The Bashir Endovascular Catheter (BEC) is a novel pharmaco-mechanical device designed to enhance thrombolysis by increasing the exposure of thrombus to endogenous and exogenous thrombolytics. The aim of this prospective, multi-center, single-arm study was to evaluate the feasibility and initial safety of the BEC in patients with acute intermediate-risk pulmonary embolism (PE).

Methods: Patients with symptomatic PE and right ventricular to left ventricular diameter ratio ≥0.9 as documented by computer tomography angiography were eligible for enrollment. The primary safety end points were device related death or adverse events, and major bleeding within 72 hours after BEC directed therapy.

Results: Nine patients were enrolled across 4 U.S. sites. The total dose of r-tPA (recombinant tissue-type plasminogen activator) was 14 mgs in bilateral PE and 12 mgs in unilateral PE over 8 hours delivered via the expanded BEC. At 30-day follow-up, there were no deaths or device-related adverse events. At 48 hours post-BEC therapy, the right ventricular to left ventricular diameter ratio decreased from 1.52±0.26 to 0.97±0.06 (P=0.0009 [95% CI, 0.33-0.82]; 37.0% reduction). Thrombus burden as measured by the Modified Miller Index decreased from 25.4±5.3 to 16.0±4.0 (P=0.0005; [95% CI, 5.5-13.4]; 37.1% reduction).

Conclusions: In this early feasibility study of the BEC for intermediate-risk PE, there were no deaths or device-related adverse events and a significant reduction in right ventricular to left ventricular diameter.

Ahmad Zeeshan, MD
Cardiothoracic Surgeon
AdventHealth Heart, Lung & Vascular Institute

AdventHealth First in Florida to Successfully Implant Thoraflex™ Hybrid Device in Patient with Complex Aortic Arch Dissection

On October 3, 2022, an AdventHealth Heart, Lung & Vascular Institute (HLVI) team became the first in Florida to successfully implant the Thoraflex™ Hybrid Frozen Elephant Trunk (FET) device in a 73-year-old patient with a complex aortic arch dissection that involved the aortic root, ascending aorta and the aortic arch. This first-of-its-kind surgical device enhances treatment of aortic arch pathology.

Terumo Aortic's Thoraflex™ Hybrid device is indicated for the surgical treatment of complex aortic aneurysms and dissections. It has been used in Europe for a while, and after the U.S. Food and Drug Administration's (FDA) approval in April 2022, the device is now commercially available in the U.S. It is made of a polyester graft section that reinforces a weakened section of the aorta. A connected stented section (nitinol wire frame on polyester graft material) keeps the descending aorta open and allows better blood flow through the true lumen. The polyester graft and stented portions are coated with a bovine gelatin to seal the implant and prevent unnecessary blood loss from the graft pores. The gelatin-coated woven polyester graft replaces the remaining diseased aorta.

Complex aortic arch reconstruction is an unusual surgical procedure that requires placing the patient under deep hypothermic circulatory arrest. The Thoraflex™ device decreases the duration of implant time; hence, the duration of deep hypothermic circulatory arrest time, resulting in fewer complications. The faster implantation is due to the hybrid design of the device. The results of a multicenter U.S. clinical trial were recently published in the *Journal of Thoracic and Cardiovascular Surgery*. The study found that use of the Thoraflex™ Hybrid device resulted in 81% freedom from major adverse events at one year. Additionally, the device facilitates stage 2 of the elephant trunk procedure when needed.

Prior to the availability of the Thoraflex™ Hybrid device at AdventHealth HLVI, Central Florida patients had to be referred out for complex aortic arch surgery. Now, they can receive this care closer to home. This is an exciting milestone for AdventHealth HLVI. Our team remains committed to combining technical ability with the latest technology to bring advanced cardiovascular care to patients.

Scott Silvestry, MD
Surgical Director of Thoracic Transplant Programs
Co-medical Director AdventHealth Heart, Lung & Vascular Institute

Outcomes with Direct and Indirect Thrombin Inhibition During Extracorporeal Membrane Oxygenation for COVID-19

Study Published in *ASAIO Journal*

Over the past two decades, extracorporeal membrane oxygenation (ECMO) support for adult patients with acute hypoxemic respiratory failure has increased, and during the COVID-19 pandemic, it became a valuable strategy to provide time for resolution of pulmonary insult, giving some patients a final chance at survival.

Although ECMO is potentially lifesaving, it is associated with severe hematologic adverse events, including thrombosis and bleeding. As a result, anticoagulation strategies are applied and can include direct or indirect thrombin inhibitors. Traditionally, indirect thrombin inhibitors like unfractionated heparin (UFH) have been used. However, more recently, some centers have begun using direct thrombin inhibitors (DTI), including argatroban and bivalirudin, with the potential benefits of eliminating the risk of heparin-induced thrombocytopenia (HIT) and removing the need for monitoring and supplementation of antithrombin. DTI use has been limited, however, due to the lack of a rapid onset reversal agent, such as protamine for UFH, as well as higher cost.

AdventHealth Orlando participated in a retrospective, multicenter study to evaluate differences in outcomes with these two different kinds of agents. It included a total of 411 adult patients with COVID-19 placed on ECMO between March 1, 2020, and April 30, 2021, at 17 leading ECMO centers that were part of a consortium formed during the pandemic called the COVID-19 ECMO Working Group.

DTI was used in 160 cases, while 251 received UFH. Primary findings included the following:

- At 90 days, in-hospital mortality was 50% for the DTI group and 61% for the UFH group.
- Deep vein thrombosis, ischemic, and hemorrhagic stroke were similar between the two groups.
- Bleeding requiring transfusion was lower in patients receiving DTI.

As a result, the study concluded that the use of DTI during ECMO for COVID-19 was not associated with a greater burden of adverse events and may potentially limit hemorrhagic complications. This, coupled with ease in administration, may support further use of DTI during ECMO.

Cardiovascular Disease Fellowship Program at AdventHealth Orlando Completes Successful Initial Year

Rodrigo Marinas Do Lago, MD
Interventional Cardiologist
Program Director Cardiovascular Disease Fellowship
AdventHealth Heart, Lung & Vascular Institute

With a mission to develop cardiology clinicians of excellence and the future leaders in the field of cardiovascular disease, AdventHealth Orlando launched its three-year ACGME-accredited Cardiovascular Disease Fellowship in July 2021, and the inaugural class of fellows recently completed their first year.

The curriculum immersed the fellows in general cardiology, echocardiography, cardiac catheterization, cardiovascular imaging, heart failure, consultative cardiology and electrophysiology. The second- and third-year curriculum will build upon these skills and incorporate experiences in cardiac transplantation/mechanical circulatory support, vascular medicine, structural heart disease and adult congenital heart disease. Fellows will also explore clinical cardiology subspecialty areas to tailor their clinical training to their specific goals.

At the end of each year, the fellows select a faculty member who they feel has inspired them through outstanding mentorship and teaching. The 2021-2022 Cardiology Fellowship Teaching Award was presented to **Mukul Khanna, MD**.

To learn more about AdventHealth Orlando's Cardiovascular Disease Fellowship Program, visit adventhealth.com/adventhealth-graduate-medical-education/cardiovascular-disease-fellowship or email randal.torres@adventhealth.com.

Looking Ahead to 2022-2023

Xuan Guan, MD, PhD, and **James Nguyen, MD**, have been named Chief Cardiology Fellows for the 2022-2023 class, which includes the following physicians:

Jin Ling, MD — Dr. Ling completed her internal medicine training in Massachusetts and an advanced heart failure and transplant cardiology residency at the University of Alabama. She was also a research scholar at the Framingham Heart Study.

Alexandra Lackey, MD — Dr. Lackey completed her training at AdventHealth Orlando, serving as Chief Resident and as Assistant Medical Director for the Orlando Community Medical Clinic.

Weija Li, MD — Dr. Li completed his internal medicine training at Jacobi Medical Center/Albert Einstein School of Medicine in New York where he also worked as a co-investigator for several clinical trials and studies.

While providing a tremendous training opportunity to these physicians by exposing them to a wide range of pathologies and a high volume of cases, the Cardiovascular Disease Fellowship Program is also enriching the overall level of cardiovascular care provided at AdventHealth Orlando, infusing the system with new, transformative ideas and research opportunities.

Physician Relations Representative

For more information on any of the articles in this publication or to communicate directly with one of the physicians, please respond to:

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