Rush Center for Adult Congenital and Structural Heart Disease

September 2020

Case Study

Novel TAVR Technique for Patient with Coronary Obstruction Risk

A new technique referred to as BASILICA (Bioprosthetic or Native Aortic Scallop Intentional Laceration to Prevent Iatrogenic Coronary Artery Obstruction) uses wire-transmitted electrical energy to perforate the leaflet of the bioprosthetic valve and lacerate the leaflet prior to placing the TAVR valve (see figures below). This results in a splitting of the leaflet so that when the new valve is placed there is no compromise of coronary blood flow due to leaflet obstruction.

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Watch Video Series

Latest News

Updates Expected on National Coverage Determination for TAVR

Professional organizations have weighed in with recommendations for institutions and operators who wish to perform transcatheter mitral valve repair procedures.

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Research and Clinical Trials



Advancing the Field of Congenital and Structural Heart Disease

Rush is committed to advancing the field of congenital and structural heart disease, and trains future structural proceduralists who will go on to careers in this area. There is a one-year advanced fellowship in structural heart disease available to qualified individuals. We offer courses to qualified practicing physicians on how to perform advanced catheter-based procedures using a mixture of didactics, simulation and live animal models.

The center is actively engaged in numerous clinical studies in the area of structural heart disease. We also have a large pre-clinical animal facility where we develop new innovative device designs to treat patients with congenital and structural heart disease.

Structural and Congenital Heart Disease Clinical Trials

Our Program

Comprehensive Care for Structural, Congenital Conditions

The Rush Center for Adult Congenital and Structural Heart Disease serves patients throughout Rush University System for Health. The multidisciplinary team includes specialty trained interventional cardiologists, cardiovascular surgeons, cardiac anesthesiologists, research coordinators, advanced practice providers, nurses and clinic coordinators. A full range of treatment options are offered for patients with complex valvular, congenital and acquired structural heart disease.

Complex and Basic Interventions

Our Team

Physician Profile: Joshua Murphy, MD, Pediatric Cardiology



Joshua Murphy, MD, is currently the chief of pediatric cardiology at Rush University Medical Center, as well as the associate director of the Rush Center for Adult Congenital and Structural Heart Disease. Murphy received his medical degree from Loyola University and completed a pediatric residency at INOVA Fairfax Hospital in Virginia, followed by a cardiology fellowship at Yale University and Washington University. Trained as a pediatric cardiologist, Murphy is an integral part of our multi-disciplinary procedural team.

Learn More About Our Team

Academic Medicine Close to Home in Northwest Indiana



Rush interventional cardiologist Hussam Suradi, MD, has opened a new office at 16000 W. 101st Ave. in Dyer to improve access to Rush cardiovascular services in Northwest Indiana. Patients will have easy access to physicians at the Rush Center for Adult Congenital and Structural Heart Disease. Suradi and his team of specialists offer a full range of treatment options for all types of valve disease in adults, including aortic and mitral valve disorders, as well as adult congenital heart diseases.

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