UAB Comprehensive Valve Program

UAB’s Comprehensive Valve Program, the first and largest heart valve disease treatment program in Alabama, has been strong for decades and brings the most advanced aortic and mitral valve treatments to Alabama and the South. Open surgical valve replacement has traditionally been the cornerstone of our program. While this continues to be the most appropriate treatment method for many of our patients, we are increasingly able to offer alternative surgical and interventional options. Currently, our surgeons perform over 400 surgical valve cases per year, making us the largest valve program in the state. In addition, UAB is the only facility in Alabama with the full range of expertise to manage adult patients with congenital heart disease.

Services & Treatment Options
The UAB Comprehensive Valve Program offers interventional and surgical treatment options for patients with heart valve disease.

- **Aortic and Mitral Valvuloplasty** is used as a bridge to valve replacement surgery or to improve quality of life for patients who are not candidates for major heart surgery. Balloon valvuloplasty is a non-surgical procedure in which a balloon catheter is threaded through the groin into the heart. The balloon is then inflated, stretching the valve back open.

- **Minimally Invasive Valve Surgery** involves smaller incisions than standard heart surgery, but larger incisions than robotic surgery. Typically, minimally invasive valve surgery is recommended when valves need replacement rather than repair, or when the repair is complex. Any of the four heart valves can be reached using some form of minimally invasive surgery.

- **Robotic Valve Surgery** uses one of the country’s leading robotic surgical systems to allow the surgeon to repair malfunctioning valves endoscopically without splitting the breastbone or making any incisions in the chest larger than 1 inch. Currently, the mitral and tricuspid valves that have leakage (regurgitation) are most commonly repaired robotically.

- **Valve-sparing Aortic Root Replacement** is performed for a number of conditions that cause aneurysmal formation in the aortic root. In aortic root disease, valve-sparing may present a better option for suitable patients in freeing them from the complications of prosthetic valves. Root replacement is considered when the maximum diameter of the root reaches 5.0 to 5.5 cm.

- **Periprosthetic Leak Closure** is used for the treatment of periprosthetic leaks that have developed around a surgically implanted valve. While this is uncommon, patients affected by this condition are likely to suffer from severe hemolysis or heart failure. Closure of these periprosthetic defects is now feasible using a percutaneous approach in patients with suitable anatomy, and allows for treatment without the need for surgery.

- **Transcatheter Valve-in-Valve Procedure** uses percutaneous techniques to place a transcatheter valve in the existing dysfunctional bioprosthetic valve. The treatment is available for patients with aortic bioprosthetic valve dysfunction who are not candidates for surgery because of their prohibitive risk.

Heart Valve Disease
The UAB Comprehensive Valve Program offers procedures and treatment for patients with all forms of heart valve disease, including:

- Aortic Stenosis • Tricuspid Valve Disease • Pulmonary Valve Disease
- Myxomatous Degeneration • Mitral Valve Disease • Endocarditis • Aortic Root Aneurysm
- Aortic Incompetence or Regurgitation
Transcatheter Aortic Valve Replacement (TAVR)

The average survival is less than 2 years for patients with severe aortic stenosis (AS) who do not have an aortic valve replacement (AVR). The predicted survival of inoperable patients with severe AS without surgery is lower than metastatic breast, lung or colorectal cancers.

The only efficacious treatment of AS is valve replacement. An estimated 85,000 AVR procedures are performed in the United States each year. Since 2005, more TAVR cases have been performed by heart and vascular specialists at UAB than any other facility in the state. Our clinic’s interdisciplinary approach provides patients with comprehensive care from a dedicated team of cardiovascular surgeons, interventional cardiologists and other UAB Heart and Vascular Services health care specialists.

Transcatheter Aortic Valve Replacement (TAVR) provides symptomatic relief and improved long-term survival in adults with aortic stenosis. The new procedure allows valve replacement without open-heart surgery. UAB was the first in Alabama to offer the recently approved procedure, which requires a hybrid operating room with both surgery and radiographic capabilities, and a multidisciplinary team including cardiologists, surgeons, radiologists and anesthesiologists.

Criteria for Transcatheter Aortic Valve Replacement (TAVR)

Transapical Approach:
- Indicated for patients with severe AS, without severe aortic insufficiency, and with ejection fraction greater than 20% who have been examined by a cardiac surgeon and cardiologist and found to be operative candidates for AVR but who have an operative risk score greater than or equal to 8% or are judged to be at a greater than or equal to 15% risk of mortality for surgical AVR.

Transfemoral Approach:
- Indicated for patients with severe AS who are deemed inoperable by two cardiothoracic surgeons, and in whom existing co-morbidities would not preclude the expected benefit from correction of the AS, or are operative candidates for AVR but have an operative risk score greater than or equal to 8% or are judged to be at a greater than or equal to 15% risk of mortality for surgical AVR.

Since 2005, the results of TAVR procedures at UAB in terms of mortality, length of stay (LOS), average age and approach:

For Referring Physicians
UAB Valve Clinic is located on the 5th floor of The Kirklin Clinic of UAB Hospital, 2000 6th Avenue South, Birmingham, Ala., 35233

To refer a patient, please call UAB MIST at 1.800.UAB.MIST (800.822.6478). For more information, visit us online at uabmedicine.org/valve

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