When it comes to complex valve disease, Mission Heart is at the forefront of treatment innovation, performing more than 400 cardiac valve procedures every year.
Mission Heart cardiothoracic surgeons have exceptional patient outcomes using advanced valve repair and replacement technologies. Performing more than 400 cardiac valve procedures each year, Mission Heart is in the top 2 percent of U.S. hospitals for valve procedure volumes. Studies show that high volume centers consistently produce better patient results.
World-Class Facilities for World-Class Care

As technology and research continue to expand cardiac care options, the facilities for care delivery must keep pace with new advances. Mission Heart continually upgrades its equipment and technologies to provide complex valve care. Our state-of-the-art hybrid operating room integrates advanced imaging, hemodynamic monitoring, and interventional and surgical techniques for complex valve procedures.

Our Advanced Cardiac Care Clinic provides the following services:

- New and complex valve therapies
- Sophisticated surgical procedures to treat atrial fibrillation and structural heart disease
- Comprehensive treatment of heart failure resulting from valve disease
- Personal navigational services before, during and after treatment
Experience Matters

Cardiac surgery is a highly technical specialty requiring an experienced team. The Mission Heart multidisciplinary team consists of cardiothoracic surgeons, anesthesiologists and cardiologists with expertise in managing patients with complex valve problems throughout their treatment. Our skilled team also includes credentialed echocardiographers, certified nurses and compassionate nurse navigators. At Mission Heart, we have the experience and expertise to:

- Perform a high volume of annual procedures – including 5 times more valve surgery than the average U.S. open heart program
- Offer a wider variety of treatment options for valve repair
- Perform complex valve procedures
- Treat high-risk patients with success:
  - 27 percent of valve patients at Mission Heart are more than 80 years old
  - 20 percent of valve surgery patients are in Class III or IV heart failure
  - 20 percent of valve surgery patients have had prior cardiac surgery

MISSION HEART vs. AVERAGE US HEART CENTER
Annual Procedures – Year 2013

![Bar chart showing annual procedures at Mission Heart vs. Average US Heart Center for 2013]
Treatment of Complex Valve Disease

Mission Heart surgeons have extensive experience performing the following complex procedures:

- Double valve surgery (mitral-aortic valve surgery, with or without CABG)
- Complex aortic root reconstruction

**MISSION HEART vs. AVERAGE US HEART CENTER**  
Complex Valve Surgery - Year 2013

NOTE: U.S. center averages were calculated using reported and published national open heart surgery volumes.

Transcatheter Aortic Valve Replacement (TAVR)

TAVR is the least invasive option for patients with severe aortic stenosis not amenable to conventional surgery. An expandable valve is deployed in the aorta through the femoral artery, or surgically through the left ventricle or the aorta.

Surgeons and cardiologists collaborate starting with decision-making and continuing through the completion of the procedure in a “hybrid” operating room and during recovery. Since 2012, nearly 100 such procedures have been performed at Mission Heart. Mission serves as a reference center training site sharing innovative approaches to procedures such as TAVR.
A Passion for Valve Repair

In valvular surgery, the surgeon has two options:

- Replace the valve with a prosthesis best designed for the specific patient
- Repair the valve using a variety of techniques to restore the valve to normal function

Benefits of valve repair include:

- No long-term anti-coagulant therapy with the risk of bleeding complications
- No structural deterioration of prosthetic material

Valve repair is technically more demanding with a longer learning curve than valve replacement. The surgeons at Mission Heart have become highly skilled by performing more than 1,200 valve repairs over the last 10 years.
Superior Valve Surgery Outcomes

We continually track our outcomes to provide feedback to our team, our referring physicians and our patients.

The two graphs on the following page summarize Mission Heart’s outcomes for two of our most common valve procedures performed between 2008 and 2013. The first graph compares Mission Heart’s 30-day mortality for aortic valve replacement to a recent JAMA article reporting 30-day mortality for a large national cohort of aortic valve replacement patients. The second graph provides Mission Heart’s observed-to-expected mortality for mitral valve surgery patients calculated using the Society of Thoracic Surgeons’ adult cardiac risk of mortality model.
MISSION HEART vs. AVERAGE US HEART CENTER
30-day Mortality Rates for Aortic Valve Replacement

OBSERVED MORTALITY vs. EXPECTED MORTALITY
30-day Mortality Rates for Mitral Valve Surgery
Exceptional Quality – Highest National Rating

Mission Heart’s Cardiac Surgery Program has earned the highest national quality rating (3-Star) from the Society of Thoracic Surgeons (STS) for seven consecutive years, beginning with the first year of the STS award. The STS registry evaluates all aspects of cardiac surgery and compares outcomes (mortality, morbidity and care processes) to those of 1,042 centers throughout the U.S.

Only 10 percent of programs have received the highest rating, placing Mission Heart in a quality tier with the most highly regarded cardiac centers.

Mission Heart’s Cardiac Surgery Program has been recognized by The Joint Commission for meeting that national organization’s standards for certification, the first such program in North Carolina to receive this recognition. This certification signifies that patients consistently receive exceptional care from one of the most advanced cardiovascular care centers in the nation.

“The experts at Mission Heart are, quite simply, the best at what they do. I know that my patients will always be in good hands there.”

– John Edmunds, M.D.
Cardiologist, Robbins Cardiology
Lenoir, NC
Cutting-Edge Research

Mission Heart is actively involved in major research studies and clinical trials to advance the development of innovative treatments and technologies for complex valve disease. Our activities include:

Conducting major clinical trials, including:

- CONVERT-AF (surgical concomitant AF therapy)
- Trifecta™ (aortic valve replacement)
- TRANSFORM™ (surgical treatment of aortic stenosis)
- NIH-sponsored trial on ischemic mitral regurgitation
- Portico™ (next-generation transcatheter aortic heart valve)

Submitting and presenting abstracts at national and international professional societies, including:

- American Heart Association
- Society of Thoracic Surgeons
- Heart Failure Society of America
- Heart Valve Society of America
- International Society for Minimally Invasive Surgery
- Southern Thoracic Surgical Association

Publishing in professional journals, including:

- Circulation
- Annals of Thoracic Surgery
- Journal of Thoracic and Cardiovascular Surgery

Functioning as a reference center site for training physicians on new technologies