Earlier this year, Valley Health System announced an affiliation with Cleveland Clinic’s Sydell and Arnold Miller Family Heart & Vascular Institute. This affiliation combines the academic, clinical, and research components of the Cleveland Clinic Heart & Vascular Institute with Valley Health System’s renowned cardiac program. Under the agreement, the systems will share best practices, coordinate care and develop programs to improve quality and patient safety. Valley is one of just 10 hospitals nationwide to have been selected by Cleveland Clinic.

Through this affiliation, Valley Health System becomes a member of the Cleveland Clinic Cardiovascular Specialty Network. The Network is designed to accept patients from Cleveland Clinic’s Cardiovascular Program for Advanced Medical Care, which gives employers a means to provide high-quality care to employees by facilitating access to Cleveland Clinic for specific services. The Cardiovascular Specialty Network allows employers to offer their employees Cleveland Clinic-caliber heart care close to home.

To guide the current operations of Valley’s cardiac program, and to strategically plan for future innovation and program development, Valley has established the Cardiac Strategic Operating Leadership Council. “This four-member group will guide Valley Health System’s award-winning cardiac program, and will work in collaboration with Valley’s cardiologists and administrative staff,” says Gerald Sotsky, M.D., Chair of Cardiac Services for Valley Medical Group. “The Council will ensure patients are provided the best cardiac experience in all dimensions of care – diagnosis, treatment, and management.”

Shown here at the announcement event are (l-r): Gerald Sotsky, M.D., Chair of Cardiac Services for Valley Medical Group; Joseph Cacchione, M.D., Cardiologist and Chairman of Operations and Strategy at Cleveland Clinic’s Heart & Vascular Institute; Audrey Meyers, President and CEO of The Valley Hospital and Valley Health System; and Alex Zapolanski, M.D., Director of Cardiac Surgery for The Valley Hospital.

The Council comprises (l-r): Dr. Sotsky; Julie Karcher, Vice President for Administration; Alex Zapolanski, M.D., Director of Cardiac Surgery; and David Montgomery, Sub-Specialty Director of Cardiology.
Dear Colleague:

On behalf of the doctors and staff of The Valley Hospital’s outstanding cardiac program, I proudly present to you the eighth edition of our Outcomes Report. We are committed to a policy of transparency and, as a result, share our results with you.

This annual publication presents important data from our cardiac surgery program. It also showcases the latest diagnostic approaches, surgical procedures and advanced techniques used to treat cardiac conditions at our center.

Outcomes Reports are published by leading cardiac centers across the country to demonstrate how improvements in diagnosis, treatment and research are leading to better results for patients.

Our commitment to excellence has been recognized by The Society of Thoracic Surgeons (STS), which has given us the highest rating – 3 stars – for our aortic valve surgery and coronary bypass programs. We have received the same 3-star rating for our combined aortic valve surgery plus coronary bypass procedures. Only 1.8 percent of hospitals nationally have achieved these combined awards. We have also consistently been ranked by Healthgrades as one of America’s 100 Best Hospitals for Cardiac Surgery.

In 2015, and following a detailed evaluation of our program, we were selected by the Cleveland Clinic, the No.1 cardiac center in the country, to join their exclusive network. This relationship will enhance the excellent care and research that Valley already offers to the community.

We are very proud of these accomplishments as we believe it underscores our commitment to provide our patients with the highest quality care in the New Jersey and New York metropolitan region.

As always, please contact me with any questions you may have.

Sincerely,

Alex Zapolanski, M.D., FACC, FACS
Director of Cardiac Surgery
Cardiovascular Institute
zapoal@valleyhealth.com
201-447-8377
The Valley Hospital Cardiovascular Institute’s cardiac surgery program performed 4,292 procedures over a nine-year period (January 2006 to December 2014). Decision-making in the management of cardiac disease is in constant evolution. There is still some controversy regarding therapy for subsets of patients where different approaches seem equivalent. Referrals for surgical management are changing due to the effectiveness of medical management and percutaneous interventions. Yet, after several years of reduction in referrals for coronary bypass surgery, the numbers nationwide seem to have stabilized. On the contrary, patients with mitral regurgitation and aortic stenosis that are asymptomatic are being considered for surgical correction prior to ventricular deterioration.

The Cardiovascular Institute at Valley performs a higher percentage of valvular and other complex procedures than The Society of Thoracic Surgeons’ average. We have reviewed our results for nine years, and our overall mortality was 2.2 percent. This includes all elective, urgent and emergent operations. No patient was excluded. The following pages provide a detailed analysis of the different types of procedures.
The Society of Thoracic Surgeons (STS) has developed a database that collects surgical demographics and results. It also uses a methodology to adjust for case complexity. These statistical techniques, while not perfect, attempt to compensate for the difficulty of assessing the risk of different groups of patients.

We use these national standards to evaluate our results. Our patients are entered into the STS database, which is provided to the Duke University Clinical Research Institute to generate a national comparison report. Based on past surgical experience, patients with a specific pathological process have an expected result from a heart operation. The observed result from any type of surgery can then be compared to the expected result. A ratio is calculated. Anything equal to 1 is satisfactory. A ratio less than 1 exceeds expectations.

**FOR EXAMPLE**

*Observed mortality = 1.5*
*Expected mortality = 2.0*
*Observed to Expected (O/E ratio) = 0.75 or better than expected.*

Improvements in surgical techniques and technological advances have contributed to enhanced results even with increased patient complexity. Morbidity and mortality continue to decrease, creating new standards to strive for.

We encourage you to review this information and keep it handy for reference.

Comparative data has been obtained from the 2014 Harvest of *The Society of Thoracic Surgeons*.

- **TVH** = The Valley Hospital
  *(data through December 31, 2014)*

- **STS** = The Society of Thoracic Surgeons, 2014 Harvest 1
  *(data from July 1, 2013 - June 30, 2014)*

- **LG** = Like Group
  STS participants similar to Valley in terms of annual site case volume and presence or absence of a surgical residency program.
  *(data from July 1, 2013 - June 30, 2014)*
**Major Procedures Mortality**

For nine years, the cardiac surgery program delivered consistently fewer complications and lower mortality than the national average.

**Sternal Wound Infection**

Glucose control has contributed to the avoidance of this complication. In addition, the limited number of surgeons involved in patient care reduces risk. In 2014, the sternal wound infection rate was once again 0 percent.
The evolution of heart surgery has changed many of the limitations that we faced in the past. Today, age alone is no longer a contraindication to undergoing cardiac surgery.

In October 2014, Bill Carhardt (at left, with his wife, Trudy, and Alex Zapolanski, M.D.), an active 94 year old, suffered a heart attack that nearly ended his life. He was given the option of having a quadruple bypass and mitral valve repair and elected to move forward with the operation. Today, Bill is at home and enjoys quality time with his family.

**Off-Pump Surgery Activity**

Off-Pump Coronary Artery Bypass (OPCAB) is a specialty operation that requires a coordinated team approach. Since the inception of OPCAB, Valley's cardiac surgeons have performed more than 4,500 procedures without cardiopulmonary bypass. Our data, as well as data in many publications, reflect the benefits of this technique in selected patients. Research performed at The Valley Hospital shows that off-pump surgery helps reduce mortality due to stroke.*

*Brizzo, ME. et al, Annals of Thoracic Surgery, January 2010
It should be noted that in the context of improvements in medical, pharmacological, and percutaneous interventional management of patients with coronary disease, a greater percentage of patients referred to surgery have left main trunk stenosis. We have a higher percentage of patients with left main and triple vessel disease than the national average.

2014 Comparison of the Severity of Risk for Valley Hospital Patients Versus STS Coronary Artery Bypass Patients

Patients with Left Main Disease
- TVH: 37%
- Region/LG: 33%
- STS: 33%

Patients with Triple Vessel Disease
- TVH: 37%
- Region/LG: 30%
- STS: 30%

There were 809 operations performed in nine years on patients with left main disease. The overall mortality rate for this complex subset of patients was 0.7 percent (includes urgent and emergent cases). This number is below the mortality rate of the Syntax trial and sets a standard for the management of patients with this type of anatomical lesion. The majority of these patients were operated on without cardiopulmonary bypass.
**Observed-to-Expected Mortality Ratio**

Isolated CABG (Coronary Artery Bypass Graft) refers to patients undergoing coronary bypass without any other procedures. The Valley Hospital's cardiac surgeons performed 2,023 isolated CABGs in the past nine years with a combined mortality of 0.7 percent (2006 to 2014).

**Isolated Coronary Artery Bypass Graft Surgery Mortality By Year**

**Observed to Expected Mortality Ratio By Year**

**Major Complications 2013-14**
Re-operative coronary surgery carries a higher mortality than primary procedures. For nine consecutive years, mortality at Valley for re-operative coronary surgery has been zero.

**Completeness of Revascularization**

The cardiac surgery team performs more grafts per patient than other hospitals. Off-pump techniques do not compromise the extensiveness and complexity of the operation. Complete revascularization improves long-term results.

**Arterial Graft Utilization**

Arterial grafts improve long-term results by reducing risk of re-operation and reducing risk of cardiac events. The STS considers the use of the internal mammary artery (IMA) as a quality indicator. Valley uses both single and bilateral IMAs more frequently than the national average. When the left anterior descending coronary artery required grafting, the IMA was used in 100 percent of patients.
The cardiac surgery team is continually striving to minimize the use of blood during coronary artery bypass surgery. The following results reflect improvements over the past nine years. In 2014, 80 percent of patients had no transfusions at all. We have been carefully assessing patients that received platelet inhibitors (i.e. Plavix®, Effient®) prior to cardiac catheterization. The ability to assess the patient’s clotting performance has helped us reduce the need for blood and blood products. In addition, the use of off-pump techniques for the majority of patients receiving coronary bypass surgery at The Valley Hospital reduces hemodilution, as well as blood loss.

Even when patients were transfused, they received fewer blood products than the national average. Figures below are for the 2013-2014 period.

Percentage of Patients Not Receiving Blood Products During CABG

<table>
<thead>
<tr>
<th>Year</th>
<th>Intra-Operative</th>
<th>Post-Operative</th>
<th>Intra-Operative &amp; Post-Operative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>30%</td>
<td>33%</td>
<td>47%</td>
</tr>
<tr>
<td>2007</td>
<td>28%</td>
<td>31%</td>
<td>45%</td>
</tr>
<tr>
<td>2008</td>
<td>8%</td>
<td>19%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Number of Units of Blood/per Patient Requiring Transfusion

<table>
<thead>
<tr>
<th>Year</th>
<th>Intra-Operative</th>
<th>Post-Operative</th>
<th>Intra-Operative &amp; Post-Operative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>1.5</td>
<td>13.7</td>
<td>19.6</td>
</tr>
<tr>
<td>2007</td>
<td>2.3</td>
<td>12.4</td>
<td>18.7</td>
</tr>
<tr>
<td>2008</td>
<td>2.3</td>
<td>12.4</td>
<td>18.7</td>
</tr>
</tbody>
</table>

Percentage of Patients Receiving Fresh Plasma

<table>
<thead>
<tr>
<th>Year</th>
<th>Intra-Operative</th>
<th>Post-Operative</th>
<th>Intra-Operative &amp; Post-Operative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>47%</td>
<td>45%</td>
<td>47%</td>
</tr>
<tr>
<td>2007</td>
<td>45%</td>
<td>45%</td>
<td>45%</td>
</tr>
<tr>
<td>2008</td>
<td>45%</td>
<td>45%</td>
<td>45%</td>
</tr>
</tbody>
</table>

Percentage of Patients Receiving Platelets

<table>
<thead>
<tr>
<th>Year</th>
<th>Intra-Operative</th>
<th>Post-Operative</th>
<th>Intra-Operative &amp; Post-Operative</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>19.6</td>
<td>18.7</td>
<td>19.6</td>
</tr>
<tr>
<td>2007</td>
<td>18.7</td>
<td>18.7</td>
<td>18.7</td>
</tr>
<tr>
<td>2008</td>
<td>18.7</td>
<td>18.7</td>
<td>18.7</td>
</tr>
</tbody>
</table>
The use of off-pump techniques reduces time on a ventilator and in the intensive care unit. Fewer complications result in shorter hospital stays. At The Valley Hospital, patients go home sooner than the STS and LG averages. Rarely do patients require prolonged hospitalization.

Figures below are for the 2013-2014 period.

**POST-OPERATIVE STAYS AFTER CORONARY BYPASS SURGERY**

Endoscopic vein harvesting has become the standard of care. Patients operated on at Valley benefit routinely from this technique. Endoscopic harvesting improves cosmesis, reduces pain, and has virtually eliminated the risk of infection in the lower extremities.
As the population ages, surgery of the aortic valve has become more prevalent. From January 2006 through December 2014, surgeons at Valley performed aortic valve replacements and repairs in 1,434 patients. This included patients with isolated aortic valve disease, aortic valve and coronary pathology, multiple valve replacements and aortic valve surgery in association with surgery of the ascending aorta. Our team’s approach to aortic valve surgery helps explain the difference in results and our 3-star rating from the STS. Despite a significantly older population, shorter procedures, fewer transfusions, and less time in intensive care has led to a lower mortality rate.

The below results highlight the success of isolated AVR and aortic valve surgery at Valley in 2014. These procedures have been chosen by the STS as a method for evaluating cardiovascular programs.

### Aortic Valve Results

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Valley</th>
<th>STS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of patients who had previous CABG</td>
<td>22%</td>
<td>7.5%</td>
</tr>
<tr>
<td>Percentage of patients who had previous valve surgery</td>
<td>16.7%</td>
<td>7.3%</td>
</tr>
<tr>
<td>Mortality</td>
<td>0%</td>
<td>2.2%</td>
</tr>
<tr>
<td>Total ICU Time (Hours Mean)</td>
<td>26</td>
<td>47</td>
</tr>
<tr>
<td>Total Length of Stay (Days)</td>
<td>7.6</td>
<td>8.7</td>
</tr>
</tbody>
</table>

### Aortic Valve Plus CABG Results

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Valley</th>
<th>STS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percentage of patients who had previous cardiac surgery</td>
<td>14.3%</td>
<td>9.3%</td>
</tr>
<tr>
<td>Percentage of patients who had previous valve surgery</td>
<td>9.5%</td>
<td>3.8%</td>
</tr>
<tr>
<td>Mortality</td>
<td>0%</td>
<td>4%</td>
</tr>
<tr>
<td>Pump Times (Minutes)</td>
<td>115</td>
<td>143</td>
</tr>
<tr>
<td>Cross Clamp Times (Minutes)</td>
<td>93</td>
<td>111</td>
</tr>
<tr>
<td>Total ICU Time (Hours Mean)</td>
<td>62</td>
<td>92</td>
</tr>
<tr>
<td>Total Length of Stay (Days)</td>
<td>8.6</td>
<td>10.4</td>
</tr>
</tbody>
</table>
Thoracic aortic disease is becoming more prevalent. The Valley Hospital has developed an integrated aortic program to treat patients with aortic pathology. Since 2006, the Valley team has performed 385 surgeries on the thoracic aorta, and 338 elective procedures have been performed with a mortality rate of 2.5 percent.

Acute aortic dissections were treated emergently in 47 patients with an 8.5 percent mortality rate. These results compare favorably to leading institutions in the country and have been published in the *Journal of Surgical Research*.

*Contemporary Results for Proximal Aortic Replacement in North America, JACC 2012*

### The Thoracic Aortic Aneurysm Surveillance Program

The thoracic aortic aneurysm surveillance program is a multidisciplinary, preventive monitoring program run by the departments of cardiac surgery, cardiology, vascular surgery and diagnostic imaging at The Valley Hospital. The program’s goal is to reduce the risk of the development of life-threatening aortic ruptures or tears (dissections) through education, regular monitoring, and ongoing research studies.

Currently, 1,300 individuals are followed in the thoracic aortic aneurysm surveillance program. Regular education and support group meetings are held for patients and their families throughout the year.

Using a collaborative working arrangement, all of a patient’s scans are viewed by two independent physicians. An appropriate screening interval or surgical timing is determined based on the patient’s individual risk factors such as age, family history, congenital abnormalities (i.e. bicuspid aortic valve), and prior radiation exposure.

Through careful screening, preventive surgeries are scheduled and discussed in a team approach to offer each patient the most appropriate surgical intervention.

Innovative techniques used at Valley to repair aneurysms include advanced neuro-protection, endovascular stent grafting, and valve-sparing procedures, including the David and Florida Sleeve procedures.
Mitrval Valve Surgery

Since 1993, 1,131 mitral valves have been repaired at The Valley Hospital. The great majority of patients with myxomatous and ischemic disease received a valve repair. Mitrval valve repair provides patients with better outcomes in degenerative disease. In the period between January 2006 and December 2014, we performed 248 mitral valve repairs in two categories: isolated mitral valves and mitral valve with coronary bypass procedures.

Mortality Rates

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Rate</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isolated Mitral Valve Repair</td>
<td>1.4%</td>
<td>2 of 136</td>
</tr>
<tr>
<td>Mitral Valve Repair + CABG</td>
<td>5.3%</td>
<td>6 of 112</td>
</tr>
<tr>
<td>*Isolated Mitral Valve Replacement</td>
<td>9.2%</td>
<td>11 of 119</td>
</tr>
<tr>
<td>Mitral Valve Replacement + CABG</td>
<td>4.4%</td>
<td>4 of 89</td>
</tr>
</tbody>
</table>

*Includes endocarditis cases, multiple reoperations, and ruptures of the papillary muscle in the setting of an acute myocardial infarction.

Electrophysiology

The Valley Hospital’s electrophysiologists lead the country in performing innovative treatments for disorders of the heart’s electrical system, and in conducting clinical research into atrial fibrillation (Afib) and other complex heart rhythm problems.

LARIAT

Valley was among the first hospitals in the area to perform the LARIAT,™ a catheter-based left atrial appendage (LAA) occlusion procedure for atrial fibrillation patients who are at high risk for embolic stroke and have contraindications or intolerance to anticoagulants. Irregular heartbeats in Afib patients disrupt blood flow, causing idling of blood and the development of clots that can embolize to the brain.

During the LARIAT procedure, a magnetically-tipped guide wire is threaded to create a path to the LAA, a muscular pouch connected to the left atrium of the heart. The LARIAT Suture Delivery Device is then guided over the LAA, where a lasso-like suture is placed and then closed to prevent blood clots from traveling to the brain.

FIRM Procedure

Valley’s electrophysiologists employ the FIRM (focal impulse and rotor modulation) procedure for appropriate patients with Afib.
Our team of interventional cardiologists specialize in diagnosing and treating cardiovascular conditions through heart catheterizations, a technique during which a tube is threaded through an artery or vein to the heart. The interventional cardiologists at The Valley Hospital perform more than 3,500 procedures a year in the cardiac catheterization laboratory. They perform all aspects of catheter-based procedures including diagnostic procedures of the coronary arteries, interventional procedures such as angioplasties, atherectomy and valvuloplasties, and detailed hemodynamic assessments of heart valve leakage, blockage and pulmonary hypertension.

Using an electrical mapping catheter to find the source of the arrhythmia and a radio frequency cauterization tool to perform ablation, Valley’s electrophysiologists can effectively block the source of the heart’s “misfiring.”

**Robotic Cardiac Ablation**

Valley employs the robotic cardiac ablation procedure using the Stereotaxis Epoch™ Platform for complex cardiac conditions.

Epoch is a state-of-the-art computer controlled robotic navigation system that allows physicians to safely navigate in a patient’s heart to ablate diseased tissue causing cardiac arrhythmias or irregular heartbeats.

The technology enables Valley’s electrophysiologists, who each possess extensive experience in performing catheter ablation, to confidently treat areas of the heart previously unreachable or potentially unsafe with manual techniques.

### Interventional Cardiology

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Catheterizations</th>
<th>Percentage</th>
<th>Total Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012</td>
<td>301/2254</td>
<td>13%</td>
<td>(301/2254)</td>
</tr>
<tr>
<td>2013</td>
<td>559/2265</td>
<td>25%</td>
<td>(559/2265)</td>
</tr>
<tr>
<td>2014</td>
<td>560/2182</td>
<td>26%</td>
<td>(560/2182)</td>
</tr>
</tbody>
</table>

In addition to the traditional access site in the femoral artery in the groin, Valley's interventional cardiologists have been using the radial artery approach in the wrist to perform cardiac catheterizations. This approach makes the procedure safer by decreasing the risk of bleeding and allowing patients to walk shortly after the procedure has been completed.
Following the introduction of TAVR (transcatheter aortic valve replacement), a minimally invasive procedure that uses a synthetic heart valve to treat and replace a diseased aortic valve, The Valley Hospital has expanded its services to offer catheter-based treatments for simple and complex structural heart disease. Structural interventional cardiologists specialize in treating defects in the heart – including congenital abnormalities of the valves, aorta or cardiac chambers – using minimally invasive techniques.

At the core of the program is a dedicated multidisciplinary team of specialists who collaborate closely in the evaluation and development of a treatment plan. This program is designed to help deliver the best possible care and outcome for each patient.

Structural heart disease services include advanced procedures such as TAVR, minimally-invasive procedures to repair the mitral valve (MitraClip), catheter-based closure of bioprosthetic and mechanical valve leaks, and valve-in-valve procedures to fix stenotic or regurgitant valves in high-risk or inoperable patients.

In addition, through the use of advanced imaging capabilities and procedural techniques, Valley’s structural heart specialists can close atrial and ventricular wall defects and reduce the thickening of the heart muscle through alcohol septal ablation for individuals with hypertrophic cardiomyopathy.

The interventional and structural heart disease physicians at The Valley Hospital are committed to improving the quality of care and services for patients who have coronary artery disease, heart valve disease, structural heart disease, peripheral arterial disease, and heart failure.
Whether heart failure patients are newly diagnosed or just trying to better manage their condition, Valley’s comprehensive team of heart failure experts can help them optimize their health through the Outpatient Transitional Care Program.

Boasting a program readmission rate of less than 10 percent – compared to the national average of almost 23 percent – the program’s success lies largely in its ability to ensure a smooth transition of care from hospital to home or other medical facilities (rehabilitation, assisted living, etc.). With a core philosophy that is centered on treating the whole person, our monitoring plans and follow-up care help patients not only manage their symptoms, but also gain access to nutritional counseling, education, and information on medication costs and transportation issues. Visits to the Outpatient Transitional Care Program can also include treatment, such as intravenous diuretics as needed, and referrals to other programs, such as those for smoking cessation.

The Outpatient Transitional Care team (l-r): Vera Usinowicz, A.P.N.-C.; Kariann Abbate, M.D.; and Robin Giordano, A.P.N.-C.

For more information about the Outpatient Transitional Care Program, please call 201-447-8018.
**Research**

**Peer-Reviewed Publications**


Improvements in surgical techniques and technological advances have contributed to enhanced results even with increased patient complexity. Morbidity and mortality continue to decrease, creating new standards to strive for.


Chung MK, Holcomb RG, Mittal S, Steinberg JS, Gleva M, Mela T, Uslan DZ, Mitchell K, Poole JE, for the REPLACE investigators. REPLACE DARE (Death After Replacement Evaluation) score: Determinants of all-cause mortality after implantable device replacement or upgrade from the REPLACE registry. Circ Arrhythm Electrophysiol. 2014 (in press)


Ghosh S, Stadler RW, Mittal S. Automated detection of effective left ventricular pacing: Going beyond percentage pacing counters. Europace. 2015 [In press]

MANUSCRIPTS


**ABSTRACTS**


Grau JB, Johnson CK, Kuschnier CE, Ferrari G, Shaw RE, Brizzio ME, Kesselbrenner MB, Zapolanski A. The negative effects of perioperative blood transfusion may be mitigated when performing coronary artery bypass grafting off-pump. Presented at the American College of Cardiology 64th Annual Scientific Session, March 14-16, 2015 – San Diego, California, USA.

BOOKS AND CHAPTERS


CASE REPORTS


Clinical Trials

Clinical trials are an integral part of The Valley Hospital’s cardiovascular program. With 30 clinical trials open to qualified participants, our physicians, nurses and researchers are always looking at new and innovative ways to treat a wide range of cardiovascular conditions. Currently, approximately 200 patients are enrolled in cardiovascular clinical trials at Valley. Some of our latest research initiatives include studies to evaluate:

- statin-intolerant patients
- novel cardiac devices, such as a leadless pacemaker
- patients who have been given external saphenous vein support using an eSVS® Mesh device (part of an international study)

In addition, Valley researchers continue to study bioreabsorbable stents; new medications for heart failure, acute coronary syndrome and atrial fibrillation; new cardiac surgery techniques; and ways to improve a patient’s quality of life.

New Research Facility

**OKONITE RESEARCH CENTER EXPANDS CARDIAC RESEARCH**

Cardiac research at The Valley Hospital has entered a new era of innovation with the opening of the Okonite Research Center. The expansion of cardiac research (as well as research programs for cancer and neurological disorders) was made possible by a $5 million grant from the Okonite Company of Ramsey, N.J., led by Chairman and CEO Victor A. Viggiano.

At the Okonite Research Center, Valley is already opening up new frontiers in cardiac care. In late 2014, for example, Valley was 1 of 17 cardiac surgery centers in the United States and Europe to participate in a clinical feasibility trial of a new implant designed to support vein grafts used in cardiac bypass procedures. The trial is just one of several studies currently underway at the center.

The Okonite Research Center is located at the Bolger Medical Arts Building, which opened in June 2015. The building was made possible with a $5 million donation from philanthropist and longtime Valley supporter David F. Bolger and the Bolger Foundation. Other services located at the Bolger Medical Arts Building include the Snyder Center for Comprehensive Atrial Fibrillation and The Arrhythmia Institute.

For more information about clinical trials at Valley, please call 201-447-8453.
Heart Care for Women’s new location at 1200 East Ridgewood Ave. in Ridgewood is a one-stop source for cardiovascular care tailored to the unique needs of women. Here, the group’s five physicians – cardiologists, an electrophysiologist and an interventional cardiologist – employ the latest tools and techniques to diagnose, treat and prevent cardiovascular disease. Heart Care for Women also believes in applying an integrated approach to heart health and promotes overall wellness through nutrition, physical activity and lifestyle.

Central to Heart Care for Women’s mission is its free heart screening program. The screening has helped more than 5,000 women learn their heart risk, discover ways to lower their risk and recognize the signs and symptoms of cardiovascular disease.

Other services offered at Heart Care for Women’s state-of-the-art space include EndoPAT, a noninvasive test used to assess arterial function; an exercise studio for yoga, tai chi and other classes; a fully equipped kitchen for cooking classes; biofeedback and mindful meditation sessions; and more.

For more information about services offered at Heart Care for Women, please call 201-444-1587.
# Medical Staff

## Cardiac Intensive Care
- Srinivasa Edara, M.D.
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- Raghad H. Said, M.D.

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- Alex Zapolanski, M.D.

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- Michael Mentakis, M.D.
- Thomas J. Molloy, M.D.
- David H. Montgomery, M.D.
- Patricia L. Murphy, M.D.
- Rimvda Obeleniene, M.D.
- Sunandan A. Pandya, M.D.
- John S. Pantazopoulos, M.D.
- Shital R. Parikh, M.D.
- Kedar D. Sankholkar, M.D.
- Ashok K. Sharma, M.D.
- Gerald Sotsky, M.D.
- Mark I. Sotsky, M.D.
- Aderemi B. Soyombo, M.D.
- Bangalore Sridhara, M.D.
- Brendan P. Sullivan, M.D.
- Mark Teicher, M.D.
- Satish R. Tiyyagura, M.D.
- Ijaz R. Vehra, M.D.
- Mitchell M. Weiser, M.D.
- Renee Weslow, M.D.
- Marcus L. Williams, M.D.
- Siu-Sun Yao, M.D.

## Electrophysiology
- Advay Bhatt, M.D.
- Suneet Mittal, M.D.
- Dan L. Musat, M.D.
- Mark W. Preminger, M.D.
- Tina C. Sichrovsky, M.D.
- Jonathan S. Steinberg, M.D.

## Interventional Cardiology
- Arvind K. Agarwal, M.D.
- Robert Baklajian, M.D.
- Mahesh Bikkina, M.D.
- Navin Budhwani, M.D.
- John A. Co, M.D.
- Thomas P. Cocke, M.D.
- Ravi Diwan, M.D.
- David Jacoboff, M.D.
- Joel Jacowitz, M.D.
- Edward Julie, M.D.
- Michael B. Kesselbrenner, M.D.
- Joel S. Landzberg, M.D.
- John H. Lee, M.D.
- William K. Lee, M.D.
- Elliott S. Lichtstein, M.D.
- Warren L. Maresca, M.D.
- Rajeev L. Narayan, M.D.
- Hamid M. Nia, M.D.

## Vascular Surgery
- Tarek A. Alshafie, M.D.
- Kuchipudi Bapineedu, M.D.
- Joshua W. Bernheim, M.D.
- Daniel J. Char, M.D.
- Kumar R. Patel, M.D.
- Mitul S. Patel, M.D.
- Ignatios S. Zairis, M.D.

## Structural Heart
- Sean Wilson, M.D.
Healthgrades recognized The Valley Hospital as one of America’s 100 Best Hospitals for Cardiac Surgery in 2014.

Valley earned a 2014 Excellence Award in Cardiac Surgery from Healthgrades.

For 2014, Valley earned 5-star ratings from Healthgrades for Coronary Bypass Surgery and Valve Surgery.

Valley has been named a Top Performer on Key Quality Measures by The Joint Commission for exemplary clinical performance in heart attack and heart failure.

For the second consecutive year, Valley has received the Women’s Choice Award as one of America’s Best Hospitals for Heart Care.

The Society of Thoracic Surgeons has recognized Valley’s cardiac surgery program with a 3-star rating – its highest designation of quality and clinical excellence. Valley’s three-category recognition – which covers bypass procedures, aortic valve replacement and a combination of the two procedures – has only been achieved by 1.7 percent of hospitals.

Valley is among the top 15 hospitals in the country for heart surgery, according to Consumer Reports’ 2014 hospital ratings, and is the only hospital in the New Jersey-New York metropolitan area to receive the highest possible ratings in coronary artery bypass and aortic valve replacement.

The Joint Commission has awarded Valley its Gold Seal of Approval in myocardial infarction and heart failure.

Valley’s Cardiac Surgery Intensive Care and Coronary Care units have received the Beacon Award for Excellence from the American Association of Critical-Care Nurses.

Valley has earned a Get With the Guidelines–Resuscitation Bronze Award from the American Heart Association and American Stroke Association, highlighting Valley’s efforts to save the lives of patients by following specific, research-based resuscitation protocols for patients who suffer cardiac arrest.

Horizon Blue Cross Blue Shield of New Jersey has named Valley one of the first Blue Distinction Center+ hospitals in the nation for cardiac care. Blue Distinction Centers+ are recognized for their expertise and efficiency in delivering specialty care.