

FALL 2024

1200
EAST RIDGEWOOD AVENUE




THE VALLEY HEART AND VASCULAR INSTITUTE

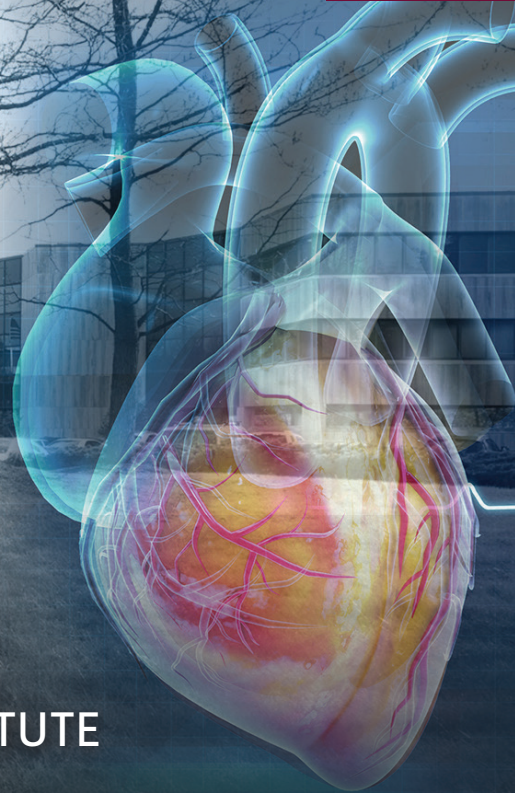
Everything Medicine Can Do. A Few Things Medicine Can't.

1200 EAST RIDGEWOOD AVENUE
ONE OF SEVERAL VALLEY MEDICAL GROUP CARDIOVASCULAR PRACTICE LOCATIONS.



In alliance with

 **Cleveland Clinic**
Heart, Vascular and Thoracic Institute





Juan B. Grau, MD, in the operating room.

THE VALLEY HEART AND VASCULAR INSTITUTE

Everything Medicine Can Do. A Few Things Medicine Can't.

The Valley Heart and Vascular Institute is known for its depth of experience, high-quality care, and its alliance with the nationally ranked Cleveland Clinic Heart, Vascular & Thoracic Institute. Valley's multidisciplinary team approach to care represents a forward-thinking and integrated strategy for the treatment of cardiovascular pathologies that is centered on each individual patient's needs.

We are pleased to present a roundup of the latest programs, technology, and research offered by Valley's cardiovascular team. For more information about The Valley Heart and Vascular Institute, please visit ValleyHealth.com/Heart.



ABDOMINAL AORTIC ANEURYSM REPAIR



HEART ATTACK



HEART BYPASS SURGERY



HEART FAILURE



TRANSCATHETER AORTIC VALVE REPLACEMENT

We are pleased to announce The Valley Hospital has been rated as a high performing hospital for abdominal aortic aneurysm repair, heart attack, heart bypass surgery, heart failure, and transcatheter aortic valve replacement (TAVR) by *U.S. News & World Report 2024–25*.

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VALLEY LAUNCHES CERTIFIED THERAPY PROGRAM FOR ADVANCED HEART FAILURE CARE

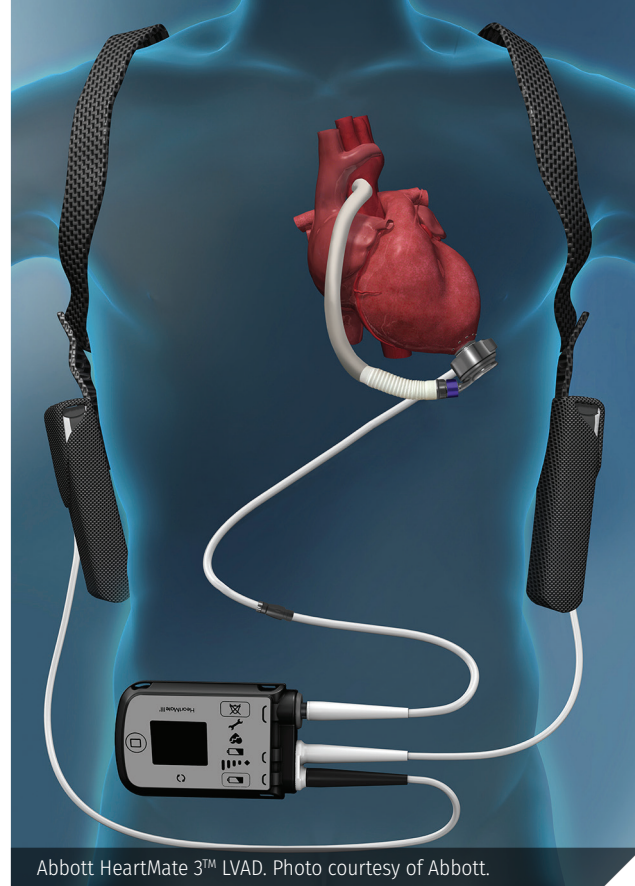
The Valley Hospital is pleased to announce the launch of its Left Ventricular Assist Device (LVAD) Therapy program, certified by DNV, offering advanced care for heart failure patients.

An LVAD is a surgically implanted mechanical heart pump that supports patients with weakened heart function. Valley's team is implanting the FDA-approved Abbott HeartMate 3™ LVAD, which has demonstrated significant improvements in survival rates and quality of life according to Abbott.

This therapy is designed for patients with congestive heart failure and poor left ventricular function.

"Introducing the LVAD program at The Valley Hospital represents a significant milestone in our commitment to providing the highest level of care for heart failure patients," said Paul Burns, MD, Director of Heart Failure Surgery at The Valley Hospital. "By implanting LVADs, we are offering a technology that enhances the quality of life for our patients. We are excited to bring this advanced therapy to our community."

If you have a patient who may be a candidate for LVAD implantation, our team would be happy to consult. Please call the Center for Comprehensive Heart Failure Care at 201-447-8018.



Abbott HeartMate 3™ LVAD. Photo courtesy of Abbott.

THE FUTURE IS HERE: Guiding an Ablation with Holographic Visualization

The Valley Hospital is pleased to announce

the treatment of the first patient in New Jersey, and one of the first patients in the United States, whose ablation procedure was guided using a new FDA-cleared holographic cardiac ablation visualization platform known as CommandEP manufactured by SentiAR. To date, more than 100 procedures have been performed across the country using CommandEP as a visual guide.

The completion of this pulsed field ablation procedure, performed by Dan Musat, MD, Associate Director of Electrophysiology at The Valley Hospital, and Director



of Electrophysiology Research for Valley Health System, makes Valley the first center in the world to perform pulsed field ablation using the CommandEP platform, according to SentiAR.

The CommandEP system is the world's first FDA-cleared, holographic, augmented reality (AR) cardiac ablation visualization platform, according to SentiAR.

VALLEY'S
ELECTROPHYSIOLOGY TEAM
IS ON TRACK TO PERFORM
MORE THAN 900
ABLATIONS THIS YEAR.

Physicians using the system will wear a pair of AR glasses that integrate with the hospital's electroanatomic mapping system (EAMS) platforms to display an interactive, intuitive, and hand free view of the patient's heart. This real-time view of the patient's specific anatomy assists in guiding the procedure while improving efficiency.



Cardiovascular spaces in Valley's Medical Arts Pavilion located at 140 East Ridgewood Avenue in Paramus, New Jersey.



CENTRALIZING CARDIOVASCULAR CARE AT VALLEY

Valley Health System is excited to announce that its cardiac rehabilitation program and the Center for Comprehensive Heart Failure Care have relocated to the sixth floor of Valley's Medical Arts Pavilion located at 140 East Ridgewood Avenue in Paramus, New Jersey. This move centralizes these essential services with other specialized cardiovascular care present on the seventh floor, which includes the following:

- ◆ The electrophysiology team, including The Snyder Center for Comprehensive Atrial Fibrillation,
- ◆ The cardiovascular surgery team,
- ◆ Structural heart specialists, and
- ◆ Interventional cardiologists.

By bringing these expert teams together in a single location, Valley Health System aims to enhance the coordination and quality of cardiac care.

ENHANCING PATIENT APPOINTMENT ACCESSIBILITY

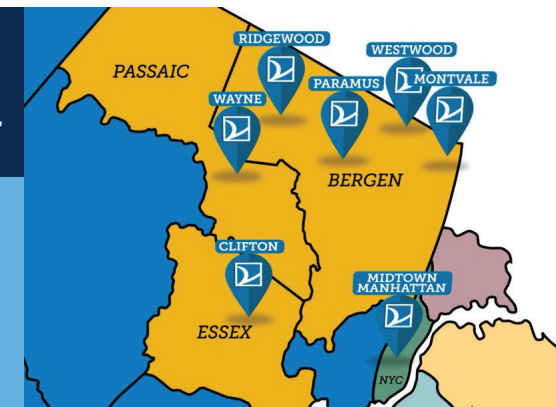
Amid rising national wait times for patients to obtain an appointment with a cardiologist, Valley's cardiovascular service line is committed to making access easier and faster for our patients. With an extensive network of offices – in northern New Jersey as well as Manhattan – and a promise to schedule appointments within 72 hours, or even same-day when needed, we have reduced our average wait time for an appointment from 12.9 days in 2023 to just 4.4 days in 2024. We are actively measuring patient feedback on appointment accessibility and holding our leadership accountable for improvements.

Scan the QR code to watch a video from Suneet Mittal, MD, Chair of the Cardiovascular Service Line for Valley Health System, to learn more about Valley's efforts to improve patient access and ensure timely care.



A PROMISE TO SCHEDULE APPOINTMENTS WITHIN **72 HOURS**

WE HAVE REDUCED OUR AVERAGE WAIT TIME FOR AN APPOINTMENT
 FROM **12.9 DAYS** TO **4.4 DAYS**



THE VALLEY HEART AND VASCULAR INSTITUTE

DIVERSE TREATMENT MODALITIES FOR VENTRICULAR TACHYCARDIA: From Medications to Advance Therapies

Ventricular tachycardia (VT) remains a challenging arrhythmia to treat resulting from its ability to rapidly deteriorate into life-threatening situations. Valley's electrophysiology team offers a breadth of advanced techniques to treat this condition, including:



Catheter Ablation Catheter ablation for VT aims to destroy the abnormal heart tissue located in the endocardium. This treats the source of the condition, making it the most effective method for reducing or eliminating VT episodes.



Epicardial Ablation Epicardial ablation is often considered when VT is resistant to standard treatments or when imaging shows that the abnormal electrical circuits are on the epicardium. By targeting these specific areas, epicardial ablation effectively disrupts or eliminates the abnormal pathways causing VT.



Non-Invasive Stereotactic Body Radiation

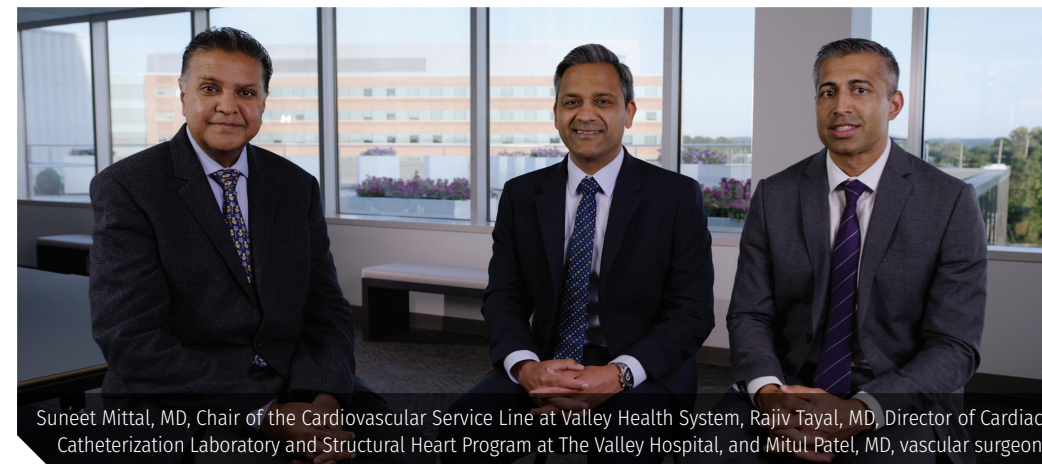
Although not yet approved by the U.S. Food and Drug Administration (FDA), radiation therapy targeting the heart has shown effectiveness in reducing arrhythmia burden in several studies. This treatment is available at only a select number of centers, and The Valley Hospital is proud to be among the few able to offer it to patients who are not candidates for medication or ablation therapy.



Implantable Cardioverter Defibrillator

In cases where the heart has become damaged or scar tissue has formed due to previous heart attacks or other cardiac conditions, VT can be life-threatening. This level of disease often necessitates treatment with an implantable cardioverter-defibrillator (ICD). The ICD is placed under the skin to monitor heart rhythm, delivering a shock if a dangerous rhythm is detected to restore a normal heartbeat.

INNOVATIVE INITIATIVES TO TRANSFORM PATIENT CARE



Suneet Mittal, MD, Chair of the Cardiovascular Service Line at Valley Health System, Rajiv Tayal, MD, Director of Cardiac Catheterization Laboratory and Structural Heart Program at The Valley Hospital, and Mitul Patel, MD, vascular surgeon.

At Valley, our cardiovascular team is transforming patient care with innovative approaches to complex health challenges.

Our Pulmonary Embolism Response Team (PERT) provides rapid, multidisciplinary intervention for life-threatening blood clots, improving patient outcomes through a coordinated, expert approach. Additionally, we have introduced renal denervation, a leading-edge procedure designed to treat resistant hypertension and enhance overall cardiovascular health. These advancements reflect Valley's commitment to pioneering solutions that improve patient outcomes and enhance the quality of care.

DISCOVER how these initiatives are transforming care by scanning the QR codes below to learn more about each of these developments.



Pulmonary Embolism Response Team



Renal Denervation



RESEARCHING BREAKTHROUGH MEDICAL FRONTIERS



Principal Investigator:
Mohammadali Habibi, MD,
electrophysiologist

At the Okonite Research Center, Valley's state-of-the-art home for research and clinical trials, the cardiovascular team is spearheading a multitude of cardiac clinical trials, pioneering advancements in cardiovascular research, and treatment methodologies.

Left Bundle BRAVE (Comparison of left bundle branch area versus right ventricular septal pacing in patients with high-degree conduction disease after transcatheter aortic valve replacement): The purpose of this

prospective, randomized, double-

blind, crossover study is to determine if patients with high grade atrioventricular block after transcatheter aortic valve replacement will benefit from left bundle branch area pacing (LBBAP) compared to right ventricular septal pacing as evidenced by improved left ventricular ejection fraction and left ventricular global longitudinal strain while they are assigned to LBBAP compared to traditional right ventricular septal pacing.

To learn more about Left Bundle BRAVE, please scan the QR code.



The Valley Hospital has been ranked as **one of New Jersey's top research centers** by NJBiz. The annual list generated by NJBiz, New Jersey's leading business journal, is ranked by the number of individuals at a center who participate in research.

RECENT PUBLICATIONS

Boersma, L.V.A., Natale, A., Haines, D., DeLurgio, D., Sood, N., Marchlinski, F., Calkins, H., Hoyt, R.H., Sanders, P., Irwin, J., Packer, D., **Mittal, S.**, Durrani, S., DiBiase, L., Sangrigoli, R., Tada, H., Sasano, T., Tomita, H., Yamane, T.,...Verma, A. (2024). **Prevalence, timing, and impact of early recurrence of atrial tachyarrhythmias after pulsed field ablation: A secondary analysis of the PULSED AF trial.** *Heart Rhythm*. Advance online publication. <https://doi.org/10.1016/j.hrthm.2024.06.036>

Castillero, E., Camillo, C., Erwin, W.C., Singh, S., Mohamoud, N., George, I., Eapen, E., **Dockery, K.**, Ferrari, G., & **Gupta, H.** (2024). **Somatostatin receptors in fibrotic myocardium.** *PLOS One*, 19(7). <https://doi.org/10.1371/journal.pone.0304813>

Castillero, E., Camillo, C., Levine, D., D'Angelo, A.M., Kosuri, Y., **Grau, J.B.**, Levy, R.J., & Ferrari, G. (2024). **Serotonin transporter deficiency in mice results in an increased susceptibility to HTR2B-dependent pro-fibrotic mechanisms in the cardiac valves and left ventricular myocardium.** *Cardiovascular Pathology*, 74. Advance online publication. <https://doi.org/10.1016/j.carpath.2024.107689>

Musat, D.L., Milstein, N.S., Saberito, M., **Bhatt, A., Habibi, M., Sichrovsky, T.C., Preminger, M.W.,** Shaw, R.E., & **Mittal, S.** (2024). **Defining the blanking period, using continuous ECG monitoring, after cryoballoon pulmonary vein isolation.** *Heart Rhythm*, 21(5), 530–537. <https://doi.org/10.1016/j.hrthm.2024.02.014>



To view additional publications, please visit [ValleyHealth.com/CardiologyPublications](https://www.valleyhealth.com/CardiologyPublications) or scan the QR code.



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ECHOCARDIOGRAPHY



CARDIAC ELECTROPHYSIOLOGY



TRANSCATHETER VALVES