

SUMMER 2024



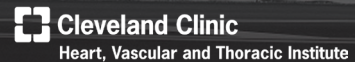
# THE VALLEY HEART AND VASCULAR INSTITUTE

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

THE VALLEY HOSPITAL LOCATED AT 4 VALLEY HEALTH PLAZA IN PARAMUS, NJ



In alliance with





# 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 the latest news, innovations, and research offered by Valley's cardiovascular team.

Read the latest on our collaboration with Cleveland Clinic Heart, Vascular & Thoracic Institute to redesign transcatheter aortic valve replacement recovery and discharge processes.





Cardiac Intensive Care Unit cutting ribbon on opening day.



## THE VALLEY HOSPITAL IN PARAMUS IS NOW OPEN

### **The Valley Hospital has officially moved to Paramus, New Jersey!**

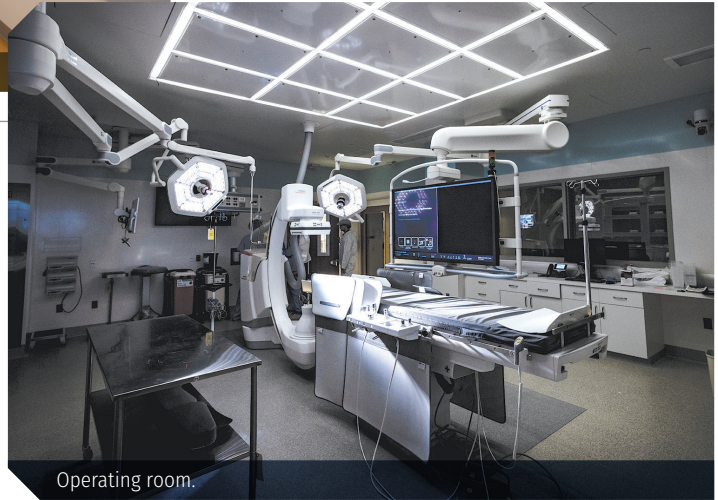
Valley's cardiovascular service line is excited to provide everything medicine can do and a few things medicine can't in a facility that serves as the anchor to our Valley Health System — Paramus Campus, a 40-acre health and wellness destination, which unites acute patient care with a range of outpatient services. The hospital is now located at 4 Valley Health Plaza in Paramus.



Patient room.

The Valley Hospital has been designed with the needs of patients and families as the top priority, featuring single-patient rooms, a vastly expanded Emergency Department, and enhancements to our cardiovascular offerings including:

- ◆ An interventional platform that includes state-of-the-art cardiac catheterization laboratories, electrophysiology laboratories, and cardiac operating suites
- ◆ Two dedicated elevators from the Emergency Department that lead directly to the hybrid operating rooms, cardiac catheterization labs, and electrophysiology labs



Operating room.

## VALLEY'S NEW HEARTHUB: A Central Location for Comprehensive Cardiovascular Care



The finest minds in cardiac care are now located together under one roof. The Valley Heart and Vascular Institute is pleased to announce that a comprehensive suite of hospital-based cardiovascular services have moved to the sixth and seventh floors of Valley's Medical Arts Pavilion located at 140 East Ridgewood Avenue in Paramus, NJ.

The hospital-based cardiovascular teams now located in this central location, include:

- Electrophysiology from The Snyder Center for Comprehensive Atrial Fibrillation
- Cardiovascular surgery
- Structural heart
- Interventional cardiology
- Heart failure specialists

Valley's cardiac rehab program and the Center for Comprehensive Heart Failure Care will soon be on-site to support and educate our patients.

## ADVANCING CARDIAC DIAGNOSTICS WITH PHOTON COUNTING SCANNERS

Valley's Advanced Cardiovascular Imaging Program, led by Himanshu Gupta, MD, Director of Cardiac Imaging for Valley Medical Group, is now using two Naeotom Alpha® with Quantum Technology computed tomography (CT) scanners, the world's first photo-counting CT manufactured by Siemens Healthineers.



Naeotom Alpha® with Quantum Technology CT scanners.

**ONE OF ONLY 30 MEDICAL FACILITIES IN THE U.S.  
TO UTILIZE THESE CT SCANNERS FOR DIAGNOSTIC IMAGING**

According to Siemens Healthineers, The Valley Hospital is **one of only 30 medical facilities in the United States** and **one of 100 medical facilities across the world** to utilize these CT scanners for diagnostic imaging.

The centerpiece of this scanner is a detector that converts X-ray photons directly into electric signals without information loss. The ultra-high-resolution images obtained provide vivid, detailed visuals that surpass the scope of traditional CT imaging. Physicians can make confident clinical decisions with diagnostic consistency and standardized results to help guide diagnosis, follow-up, and treatment recommendations. For patients with previously unscannable conditions or unique imaging needs, Naeotom Alpha® provides a new level of image detail and allows for more frequent scans.

# REVOLUTIONIZING ATRIAL FIBRILLATION TREATMENT

Valley's electrophysiology team at The Snyder Center for Comprehensive Atrial Fibrillation continually adapts to the evolving landscape of care to improve patient outcomes. Committed to advancing care, our electrophysiologists consistently adopt and implement the latest treatment techniques, including:

## **PulseSelect™ Pulsed Field Ablation System:**

The Valley Hospital has treated the first patient in New Jersey, and one of the first in the United States, using the PulseSelect™ Pulsed Field Ablation System manufactured by Medtronic.

**FaraPulse™ Pulsed Field Ablation System:** The team has also installed and adopted the FaraPulse™ Pulsed Field Ablation System, manufactured by Boston Scientific.

Both systems mentioned above utilize pulsed field energy as opposed to thermal energy — such as radiofrequency or cryo — to enhance procedural efficiency and optimize patient safety.



**Watchman FLX™ Pro:** The electrophysiology team now utilizes third-generation Watchman technology – the Watchman FLX™ Pro device – to treat nonvalvular atrial fibrillation in patients who are seeking an alternative to anticoagulation therapy. The third-generation device is designed to advance procedural performance and enable therapy to a broader patient population.





## INTERVENTIONAL HYPERTENSION MANAGEMENT: The Future of Hypertension at Valley

Valley's interventional cardiology team, led by Rajiv Tayal, MD, Director of the Cardiac Catheterization Laboratory and Structural Heart Program at The Valley Hospital, is pleased to announce the soon-to-be-established renal denervation program. This program introduces a novel approach to treating and managing resistant hypertension.

Renal denervation is designed for patients with resistant hypertension or those reliant on multiple medications for blood pressure control. The minimally invasive procedure employs a catheter to deliver ultrasound or radiofrequency (heat) energy to the renal arteries, reducing nerve activity and inducing a drop in blood pressure. This innovative therapy offers an alternative avenue for managing blood pressure without the need for ongoing medication.

Valley's introduction of this advanced therapy is made possible by a multidisciplinary, collaborative approach that provides patients with access to leading-edge treatments. This program goes beyond clinical trials, enabling Valley to treat a broader range of patients.

To learn more about Valley's approach to interventional cardiology, please visit [ValleyHealth.com/InterventionalCardiology](https://www.valleyhealth.com/InterventionalCardiology).



## RESEARCHING BREAKTHROUGH MEDICAL FRONTIERS

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. Our latest trials, include:



**Principal Investigator:**  
**Rajiv Tayal, MD**, Director of the Cardiac Catheterization Laboratory and Structural Heart Program at The Valley Hospital

### **PATCH (PerQseal® IDE Clinical Study):**

The objective of this pivotal study is to evaluate the safety and effectiveness of the Vivasure Medical PerQseal vascular closure device system when used to achieve haemostasis of common femoral arteriotomies created by 12 to 22 F sheaths (arteriotomy up to 26 F) in subjects undergoing percutaneous catheter-based interventional procedures.

To learn more about the PATCH trial, please visit [ValleyHealth.com/PATCH](http://ValleyHealth.com/PATCH).



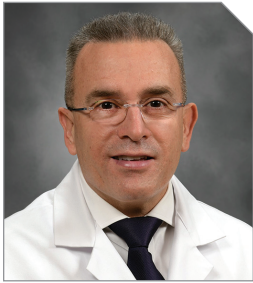
**Principal Investigator:**  
**Suneet Mittal, MD**,  
Chair of the Cardiovascular Service Line for Valley Health System and Director of Electrophysiology for The Valley Hospital

### **REACT-AF (The Rhythm Evaluation for Anticoagulation with Continuous Monitoring of Atrial Fibrillation):**

The objective of this study is to assess whether AF-sensing smart watch (AFSW) guided, time-delimited direct oral anticoagulation (DOAC) therapy is non-inferior to continuous DOAC therapy for a composite endpoint that includes, ischemic stroke, systemic embolism, and all-cause mortality.

To learn more about the REACT-AF trial, please visit [ValleyHealth.com/REACTAF](http://ValleyHealth.com/REACTAF).

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.



**Principal Investigator:**  
**Juan B. Grau, MD**, Director  
of Cardiothoracic Surgery  
for The Valley Hospital

**TITAN: SvS (Treatment in Thoracic Aortic Aneurysm: Surgery Versus Surveillance):** The primary objective of this study is to compare the composite outcome of the all-cause mortality and incidence of acute aortic events between surveillance and elective ascending aortic surgery for patients with degenerative or bicuspid valve-related ascending aortic aneurysm after two years of follow up.

To learn more about the TITAN: SvS trial, please visit [ValleyHealth.com/TITAN](https://ValleyHealth.com/TITAN).

## RECENT PUBLICATIONS

**Jabagi, H.**, Shaw, R.E., Gharibeh, L., **Tayal, R.**, **Rahim, H.**, **Kim, F.**, Zapolanski, A., & **Grau, J.B.** (2024). Patient characteristics and outcomes associated with sentinel protection device use in patients with aortic valve disease undergoing TAVR in a “Real-World” setting. *Reviews in Cardiovascular Medicine*, 25(1), 3. <https://doi.org/10.31083/j.rcm2501003>

Lakkireddy, D.R., Wilber, D.J., **Mittal, S.**, Tschopp, D., Ellis, C.R., Rasekh, A., Hounshell, T., Evonich, R., Chandhok, S., Berger, R.D., Horton, R., Hoskins, M.H., Calkins, H., Yakubov, S.J., Simons, P., Saville, B.R., Lee, R.J., & aMAZE Investigators (2024). Pulmonary vein isolation with or without left atrial appendage ligation in atrial fibrillation: The aMAZE randomized clinical trial. *JAMA*, 331(13), 1099–1108. <https://doi.org/10.1001/jama.2024.3026>

Serruys, P.W., Kageyama, S., Pompilio, G., Andreini, D., Pontone, G., Mushtaq, S., La Meir, M., De Mey, J., Tanaka, K., Doenst, T., Teichgräber, U., Schneider, U., Puskas, J.D., Narula, J., **Gupta, H.**, Agarwal, V., Leipsic, J., Masuda, S., Kotoku, N., ... Onuma, Y. (2024). Coronary bypass surgery guided by computed tomography in a low-risk population. *European Heart Journal*, 00, 1-12. <https://doi.org/10.1093/eurheartj/ehae199>

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





In alliance with



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

**The Valley Heart and Vascular Institute**  
4 Valley Health Plaza, Paramus, NJ 07652  
[ValleyHealth.com/Heart](http://ValleyHealth.com/Heart)



**ABDOMINAL AORTIC ANEURYSM REPAIR**



**HEART ATTACK**



**HEART BYPASS SURGERY**



**HEART FAILURE**



**TRANSCATHETER AORTIC VALVE REPLACEMENT**

