

North Pavilion

Michael and Christi
Cardiac Critical Care

Thank You to Our Generous Donors

SPRING 2025

THE VALLEY HEART AND VASCULAR INSTITUTE

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

The Valley Hospital's Cardiac Intensive Care Unit Team.



THE VALLEY HEART AND VASCULAR INSTITUTE

is known for its depth of experience and high-quality care. 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. For more information about The Valley Heart and Vascular Institute, please visit ValleyHealth.com/Heart.



VOTE FOR VALLEY IN THIS YEAR'S U.S. NEWS BEST HOSPITALS SURVEY

Each year, *U.S. News & World Report* asks physicians to cast their votes in its Best Hospitals survey. Paper surveys have been permanently retired, and the only way to vote is via Doximity.

If you don't have a Doximity account, registering is quick and easy:

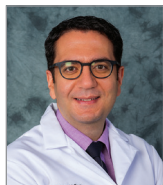
1. Go to Doximity.com or scan the QR code below
2. Enter your first and last name on the home screen
3. Click on "find my profile"

Surveys will be available in mid-February. Watch your email and your Doximity profile for the opportunity to vote. As you cast your ballot for Cardiology, Heart & Vascular Surgery (one category), please remember to **VOTE FOR VALLEY!**



MEET THE NEW DIRECTORS

The Valley Heart and Vascular Institute is proud to announce the promotion of several esteemed team members. Their outstanding leadership and unwavering commitment to advancing patient care are key to the Institute's continued success.



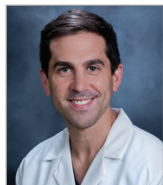
Mohammadali Habibi, MD, Director, Ventricular Arrhythmia Program, The Valley Hospital

Dr. Habibi is a board-certified cardiologist and electrophysiologist specializing in the treatment of cardiac arrhythmias, especially ventricular arrhythmias such as premature ventricular contractions (PVC) and ventricular tachycardia (VT) and those requiring advanced cardiac interventions. Dr. Habibi received his medical degree from Tehran University School of Medicine and completed his residency in internal medicine at Medstar Union Memorial Hospital. He then completed two years of research fellowship in the field of cardiac electrophysiology at The Johns Hopkins Hospital. He went on to complete clinical fellowships in cardiology at Montefiore Medical Center and in electrophysiology at The Johns Hopkins Hospital.



Habib Jabagi, MD, Director, Aortic Aneurysm Program, The Valley Hospital

Dr. Jabagi is a board-certified cardiac surgeon specializing in thoracic aortic disease, aortic valve disease, and complex conditions like Marfan Syndrome, Vascular Ehlers-Danlos Syndrome, and Loeys-Dietz Syndrome. He excels in advanced surgical techniques, including valve sparing aortic root replacement (the David procedure), aortic valve repair, the Ross procedure, transcatheter aortic valve replacement (TAVR), and thoracic endovascular aortic repair (TEVAR). Dr. Jabagi obtained his medical degree from the University of Queensland, followed by a residency in cardiac surgery at the University of Ottawa Heart Institute. He further honed his expertise by completing a super fellowship in advanced aortic open and endovascular aortic surgery at the University of Michigan.



Yonathan Litwok, MD, Director, Cardiac Critical Care, The Valley Hospital

Dr. Litwok is a board-certified critical care cardiologist. His clinical experience and training background allow him to care for patients who are critically ill with heart disease, including heart attacks, congestive heart failure, abnormal heart rhythms, those recovering from heart surgery, and more. Dr. Litwok received his medical degree from Rutgers New Jersey Medical School, completed a residency in internal medicine and a fellowship in cardiology at Northwell Health, as well as a fellowship in critical care medicine at Mount Sinai Medical Center.



A LETTER FROM SUNEET MITTAL, MD

GROWTH

Dear Colleagues,

As we begin 2025, I would like to take a moment to reflect on the significant progress made at The Valley Heart and

Vascular Institute throughout 2024 and share our continued vision for the upcoming year. Last year marked a period of substantial growth, innovation, and clinical excellence, all of which have positioned us to continue advancing cardiovascular care in 2025.

Strategic Advancements in Patient Care

A major highlight of 2024 was the relocation of **The Valley Hospital to its new state-of-the-art campus in Paramus, New Jersey**. This 40-acre health and wellness campus offers an expanded Emergency Department and advanced cardiovascular care capabilities in an environment designed for healing and collaboration.

In addition, the **integration of our hospital-based cardiovascular services on the sixth and seventh floors of Valley's Medical Arts Pavilion, located at 140 East Ridgewood Avenue in Paramus**, has fostered a centralized, multidisciplinary care model. This

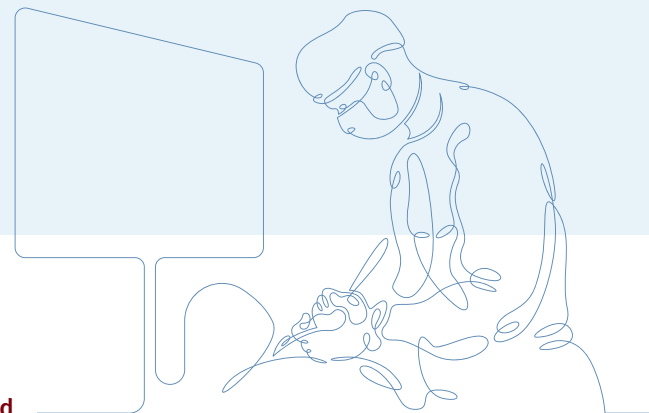
strategic consolidation of services — including electrophysiology, cardiovascular surgery, interventional cardiology, heart failure, and cardiac rehabilitation — ensures comprehensive, coordinated care for our patients. Additionally, our **expansion into Montvale, New Jersey**, enables us to better serve the broader region with cardiovascular services.

Innovations in Cardiovascular Technology

2024 saw the successful adoption of several pioneering technologies at The Valley Heart and Vascular Institute:

- **Pulsed Field Ablation (PFA):** We introduced Medtronic's PulseSelect™ and Boston Scientific's FaraPulse™ systems for the treatment of atrial fibrillation, offering more precise and safer ablation options for patients.
- **CommandEP Platform:** Valley became the first in New Jersey — and among the first in the nation — to utilize this holographic cardiac ablation visualization platform, improving the accuracy of cardiac ablation procedures through augmented reality.
- **Photon-Counting CT Scanner:** Our adoption of the Naeotom Alpha® with Quantum Technology CT scanner provides

& INNOVATION



unparalleled imaging clarity, improving diagnostic precision and treatment planning.

- **Renal Denervation (RDN):** As one of only three institutions in New Jersey offering this FDA-approved procedure for resistant hypertension, we continue to address complex conditions with innovative approaches.

These advancements, combined with the expertise of our newly established **Pulmonary Embolism Response Team (PERT)**, a multidisciplinary initiative that provides rapid, evidence-based care for patients with acute pulmonary embolism, reflect our dedication to providing leading edge care.

Commitment to Research

Our commitment to advancing cardiovascular care through research and collaboration remains a core focus. **In 2024, our Clinical Trials and Research program enrolled 234 participants across 18 active trials and launched nine new studies**, all of which contribute to the development of the next generation of cardiovascular therapies.

Looking Ahead

As we look toward 2025, we remain committed to utilizing emerging technologies, such as **artificial intelligence, wearable health sensors, and robotics**, to enhance the precision and personalization of care. We also continue to **prioritize improving access to cardiovascular services**, with same-day and 72-hour appointment availability, which has contributed to a significant reduction in wait times for our patients.

As we navigate the challenges of increasing demand for cardiovascular services, our mission remains clear: **to provide exceptional care through innovation, research, and collaboration.**

Suneet Mittal, MD

Chair, Cardiovascular Service Line, Valley Health System

THE VALLEY APPROACH TO CRITICAL CARE

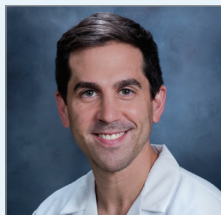
When emergent and severe cardiac conditions occur, The Valley Hospital's Cardiac Intensive Care Unit (CICU) is available to provide 24-hour specialized care. Our multidisciplinary team, led by Yonathan Litwok, MD, Director of Cardiac Critical Care at The Valley Hospital, specializes in managing complex cardiac illnesses such as congestive heart failure, arrhythmias, coronary artery disease, and cardiogenic shock.

We employ advanced monitoring and treatment modalities tailored to each patient's needs. Invasive procedures, including arterial

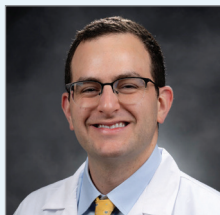
lines for continuous blood pressure monitoring, central lines for precise medication delivery, and Swan-Ganz catheters for assessing intracardiac pressures, are utilized when necessary. Additionally, bedside ultrasound is frequently used to evaluate cardiac and pulmonary status, guiding real-time clinical decisions.

Our approach emphasizes patient- and family-centered care. We prioritize clear communication, ensuring that patients and their families are well-informed and actively involved in the decision-making process. Our team engages in shared decision-making to deliver care that respects individual preferences and values.

MEET OUR TEAM (also featured on the front cover)



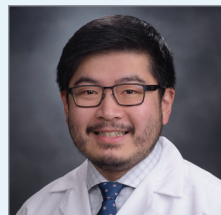
Yonathan Litwok, MD
Cardiac critical
care specialist



Brian Sumner, MD
Cardiac critical
care specialist



Ashish Rai, MD
Cardiac critical care
and pulmonary
hypertension specialist



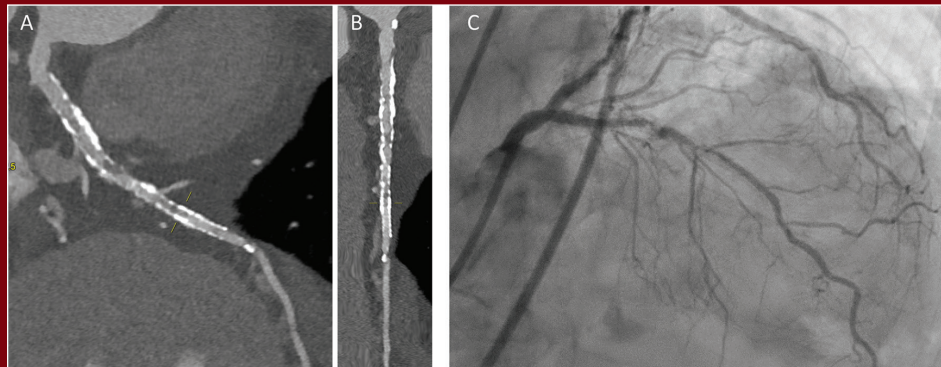
Winston Wong, MD
Cardiac critical
care specialist

TRANSFORMING DIAGNOSTIC IMAGING AT THE VALLEY HOSPITAL

The Valley Hospital is proud to lead the way in advanced imaging as **one of the first hospitals in the United States — and the first in New Jersey** — to use the Naeotom Alpha® with Quantum Technology computed tomography (CT) scanner from Siemens Healthineers. This state-of-the-art technology, the first photon-counting CT, provides ultra-high-resolution images that redefine diagnostic precision.

The photon-counting detector in the Naeotom Alpha is a significant advancement over traditional CT technology. It delivers vivid, detailed images, even in challenging scenarios such as imaging patients with metal implants. This makes it especially impactful for pulmonary, oncology, and cardiac imaging.

"This new CT scanner has been impactful when it comes to cardiac imaging," said

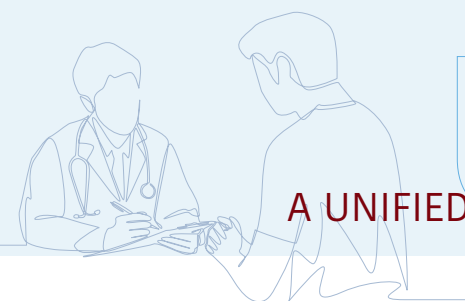


Ultrahigh resolution CT scan images of left anterior descending (LAD) coronary artery (curved and straightened reformats, A and B respectively) demonstrating severe in-stent stenosis of LAD that was confirmed on invasive angiogram (panel C).

Himanshu Gupta, MD, Director of Cardiac Imaging for Valley Medical Group. "The images obtained provide remarkable resolution revealing an impressive view of the patient's coronary arteries. We are able to scan patients with metal stents, high coronary calcium burden, and

prosthetic heart valves in details that are not possible with previous generation CT scanners."

Now available for inpatient and outpatient diagnostics, this advanced technology is transforming cardiovascular imaging at The Valley Hospital.



UNIFIED

A UNIFIED APPROACH TO TREATING HYPERTROPHIC CARDIOMYOPATHY

At The Valley Hospital we believe treating hypertrophic cardiomyopathy (HCM) is a team sport, and the patient is the captain of the team. Our team of specialists in cardiac imaging, heart failure, interventional cardiology, electrophysiology, and cardiac surgery, specialized in treating HCM, are eager to connect not only with patients, but also with their cardiologists for a deeper understanding of their concerns and goals of treatment. Together, these groups have established the Hypertrophic Cardiomyopathy Program. We collaborate to deliver personalized care.

Our program provides a comprehensive, multidisciplinary approach to diagnosing and managing HCM with the goal of improving patients' symptoms and safety.

Comprehensive Diagnostics

Our advanced diagnostic tools, such as echocardiograms, cardiac MRI, and cardiac CT, perform under specific protocols to ensure precise identification of HCM. We also offer genetic counseling and testing to identify familial patterns and recommend appropriate screening for at-risk relatives.

Tailored Treatments

We recognize that each patient's experience with HCM is unique. Treatment plans may include:

- **Medical management:** Beta-blockers, calcium channel blockers, and other therapies for symptom relief.
- **Interventional procedures:** Septal reduction therapies, such as surgical septal myectomy and alcohol septal ablation, to improve cardiac function.
- **Implantable devices:** ICDs for patients at risk of sudden cardiac death.

How Can Valley's HCM Program Help Your Patients?

Our program provides long-term management and seamless coordination with referring physicians. We ensure continuous updates and closely involve referring doctors in treatment decisions. Together, we aim to optimize outcomes and improve the quality of life for patients with HCM.

PARTNERING

PARTNERING TO LIMIT THE PROGRESSION OF PULMONARY HYPERTENSION



Are your patients presenting with shortness of breath, especially during physical activity? Have they experienced chest pain, syncope, or palpitations? Do they have underlying cardiac or pulmonary co-morbidities?

If you suspect your patient may be displaying signs of pulmonary hypertension (PH), our Pulmonary Arterial Hypertension Program can help you diagnose and treat

this condition. Upon initial outreach, our multidisciplinary team — inclusive of a pulmonary hypertension specialist and experienced heart failure providers — will triage and accurately diagnose underlying PH within 30 days.

Diagnosis: Our program offers advanced diagnostic tools, including echocardiogram and right heart catheterization to accurately diagnose disease. Right heart catheterization will be used when an echocardiogram shows pulmonary hypertension. This procedure measures blood pressure in the main pulmonary arteries and right ventricle.

Treatment: Together with you, the patient's primary provider, and the patient, we will develop a personalized treatment plan. Our team offers a full spectrum of therapeutic options, including advanced medications and IV infusion therapies.

Valley's Pulmonary Arterial Hypertension Program is committed to empowering patients and enhancing their quality of life. We look forward to partnering with you to offer specialized care, all while remaining in Valley Health System's network.

THE LATEST CARDIOVASCULAR CLINICAL TRIALS AT VALLEY

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.

TRIAL

TRANSFORM: A Randomized Comparison of Cleerly Coronary Artery Disease Stage-Based Care Versus Risk Factor-Based Care for Primary Prevention of Cardiovascular Events



OBJECTIVE

TRANSFORM is a prospective, randomized, open blinded endpoint (PROBE), event-driven, pragmatic trial in patients who are at increased risk for atherosclerotic cardiovascular (CV) disease but with no known symptomatic CV disease. The trial tests the hypothesis that a Cleerly Coronary Artery Disease (CAD) Staging System-based care strategy reduces CV events compared with risk factor-based care.

PRINCIPAL INVESTIGATOR

Himanshu Gupta, MD, Director, Cardiac Imaging, Valley Medical Group



RECENT PUBLICATIONS

Alemaný, V.S., Fortier, J., **Gupta, H.**, Zaider, A., **Grau, J.B.**, Burns, P., & **Jabagi, H.** (2024). A rare case of IgG4-related aortitis in the thoracic aorta mimicking an intramural hematoma: Navigating the diagnostic labyrinth. *Journal of Cardiothoracic Surgery*, 19(1), 599. <https://doi.org/10.1186/s13019-024-03026-w>

Aufan, M.R., **Gupta, H.**, Sharifov, O.F., Perry, G.J., Denney Jr, T.S., & Lloyd, S.G. (2024). Non-invasively measured myocardial torsional modulus: Comparison to invasive evaluation of diastolic function. *Journal of Cardiovascular Magnetic Resonance*. <https://doi.org/10.1016/j.jocmr.2024.101122>

Nuche, J., Ellenbogen, K.A., **Mittal, S.**, Windecker, S., Benavent, C., Philippon, F., & Rodés-Cabau, J. (2024). Conduction disturbances after transcatheter aortic valve replacement. *JACC: Cardiovascular Interventions*, 17(22), 2575–2595. <https://doi.org/10.1016/j.jcin.2024.07.032>



To view additional publications, please visit ValleyHealth.com/CardiologyPublications or scan the QR code.

