

The Virtua Cardiologist

Issue 1, September 2020

Medical Editor: Vincent J. Spagnuolo, MD, FACC

News Exclusively for Virtua Cardiologists

Welcome to the inaugural issue of *The Virtua Cardiologist*, a quarterly e-newsletter to help keep our clinicians informed of the services and capabilities available within Virtua Health.

When Virtua and Lourdes came together last year, we became the largest and most well-regarded provider of cardiac services in the region, and these figures offer a window into the breadth and depth of our capabilities:

- Over 100 cardiologists, CT surgeons, and nurse practitioners
- Five acute care hospitals, three of them offering interventional services
- Four outpatient heart failure centers
- Three dedicated, ACC-accredited electrophysiology labs
- 19 practice locations across four counties

With sophisticated subspecialty services that rival those across the river, Virtua Cardiology can provide your patients with the care they need, right here in our community.

We welcome your comments and suggestions for our next issue. Please send to VSpagnuolo@virtua.org.



Save the Date: Virtua Cardiology Quarterly Meeting

We are initiating a series of quarterly meetings for Virtua Cardiology, with the first virtual meeting to be held Oct. 14 from 6 to 7:30 p.m. Look for an invite coming via Outlook, with Skype details.



Virtua Cath Lab Capabilities Expand, Integrate

Virtua Health is proud to offer advanced cardiac services across our system. At Virtua Memorial Hospital, our excellent Cath Lab team, headed by Randy Mintz, MD, and including Rajeev Marreddy, DO, and Brian Shaw, DO, are now joined by interventionalists Ibrahim Moussa, MD, Anthony Smeglin, MD, and Adam Levine, DO, all formerly of Lourdes Cardiology. In addition, we have a new member of the team, Luai Tabaza, MD. These physicians are available to perform procedures at Memorial, providing greater coverage and convenience for patients in Burlington County.

Like all health care organizations across the U.S., Virtua's interventional teams have been concerned about patients who may be neglecting serious heart problems, delaying care and risking their health because of COVID-19 concerns. Here in [this video](#), we profile a patient who acted quickly and sought

care immediately at Virtua Memorial, despite the pandemic. The case illustrates the importance of having community-based resources and an experienced team.

Virtua Cardiology Performs Nuclear Scintigraphy for Cardiac Amyloidosis

By Raghunandan Dudda Subramanya, MD

Cardiac amyloidosis (CAm) is an infiltrative restrictive cardiomyopathy resulting from myocardial deposition of misfolded amyloid protein causing a diverse spectrum of systemic diseases. Most cardiac cases result from two protein precursors: amyloid immunoglobulin light-chain (AL, wherein protein is monoclonal immunoglobulin light-chain) and amyloid transthyretin (ATTR, wherein proteins transthyretin serum transport protein). Different types of CAm display heterogeneity in clinical course, prognosis, and treatment approach.

At Virtua Cardiology we are now performing standardized protocol for cardiac amyloid nuclear scanning. Radionuclide imaging using bone-avid radiotracer **Technetium-99m pyrophosphate (99mTc-PYP)** has emerged as an alternative to biopsy for diagnosing ATTR amyloidosis. **In the presence of a Grade 2-3 positive 99mTc-PYP, cardiac scan without evidence for monoclonal proteins in blood and urine, diagnosis of ATTR cardiac amyloidosis can be made without a biopsy (specificity and PPV >98%).**

Diagnosis of CAm remains challenging due to clinical overlap with more common diseases causing LVH (i.e., HTN, CKD, hypertrophic cardiomyopathy, aortic stenosis). ATTR appears quite common compared to AL with prevalence 10 to 16% of older patients with CHF and aortic stenosis. The most common mutation in ATTR (Val122Ile) has been demonstrated in 3 to 4% of African-Americans, suggesting nearly 2 million carriers in U.S. with risk of CAm.

Treatment options are rapidly expanding. ATTR amyloidosis now have several trials of monoclonal-antibodies, novel therapeutics that suppress TTR expression (FDA approved) and are successful in reducing all-cause mortality. It is evident early diagnosis will be essential to afford the most effective treatment option.

FIGURES AND LEGENDS: Examples from our center:

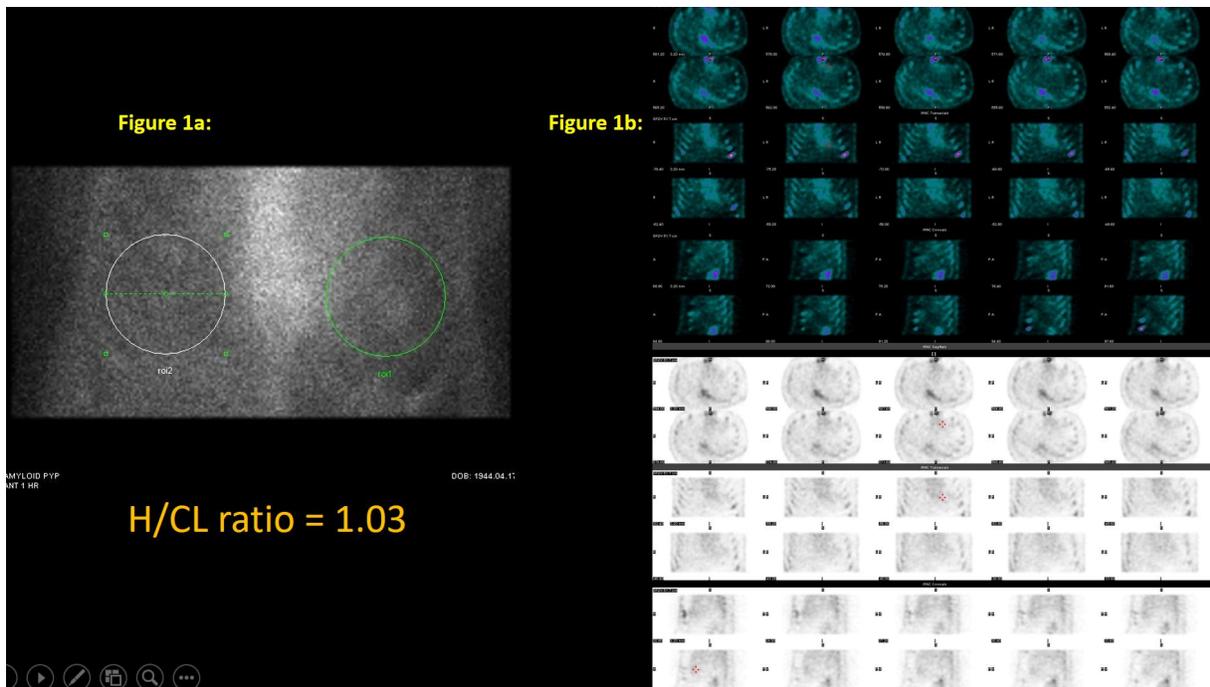


Figure 1: Amyloid scan negative for ATTR Cardiac Amyloidosis (Normal) in a patient with Grade 0 uptake:

1a: Frontal planar image showing normal sternal and rib uptake but no 99mTc-PYP uptake in myocardium. Semiquantitative tracer count ratio- Heart/Contralateral ratio < 1.5. Region of interest (circle) should be positioned to minimize overlap with sternal or focal rib uptake, and maximize coverage of the heart without including adjacent lung.

1b: SPECT image distribution (color and black/white) in same patient showing no 99mTc-PYP uptake in myocardium.

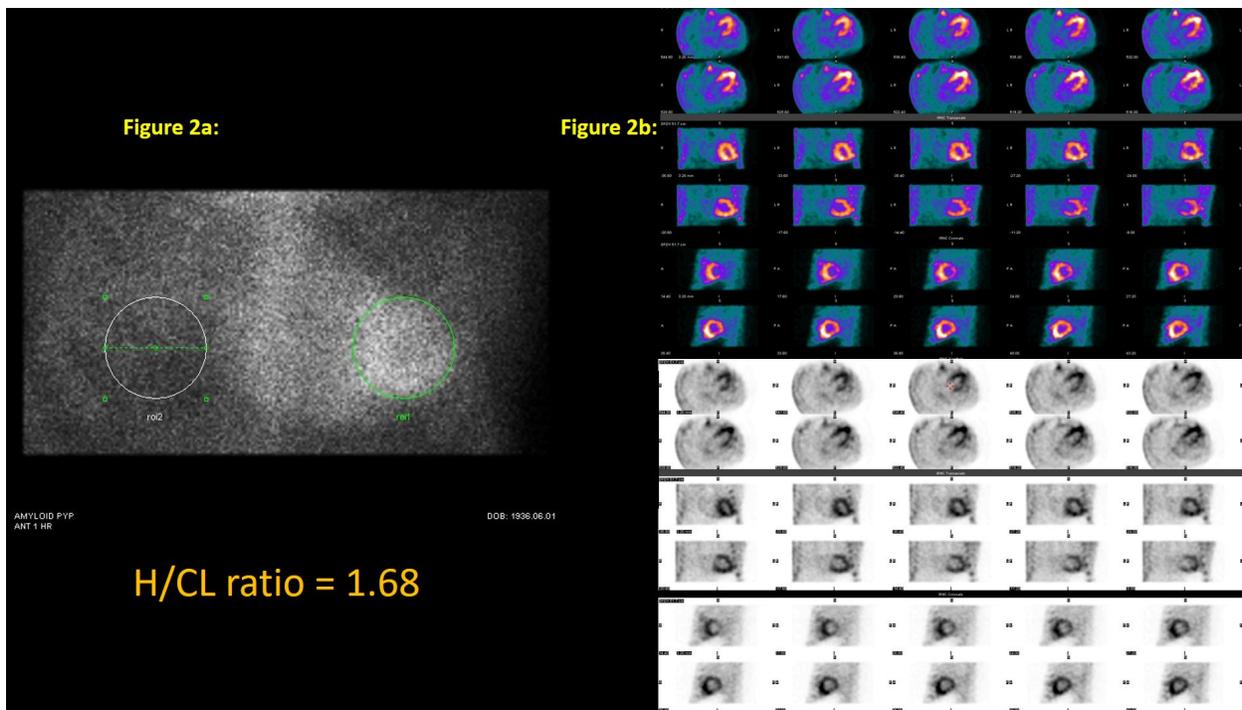


Figure 2: Amyloid scan positive for ATTR Cardiac Amyloidosis (abnormal) in a patient with Grade 3 uptake:

2a: Frontal planar image showing normal sternal and rib uptake but no 99mTc-PYP uptake in myocardium. Semiquantitative tracer count ratio- Heart/Contralateral ratio > 1.5.

2b: SPECT image distribution (color and black/white) in same patient showing 99mTc-PYP uptake in all segments of myocardium.

Welcome to Two New Virtua Cardiologists

Virtua Cardiology welcomes two new clinicians to the team. **Luai Tabaza, MD**, is a subspecialist interventional cardiologist, and **Aatish Garg, MD**, an electrophysiologist who has joined Virtua's Heart Rhythm team.



Luai Tabaza, MD

Dr. Tabaza is a board-certified interventional cardiologist with expertise in complex, higher-risk coronary and endovascular interventions, chronic total occlusions, mechanical circulatory support, below-the-knee interventions, critical limb ischemia and venous interventions. Dr. Tabaza's primary office location is with the Virtua Vein & Vascular Experts – Voorhees, with plans to expand locations in the future. He can be reached via DoChalo as well as Qliq



Aatish Garg, MD

Dr. Garg comes to Virtua from Virginia Commonwealth University, an institution acclaimed for its heart rhythm specialty. Dr. Garg most recently co-authored "[Resolution of new left bundle branch block and ventricular tachycardia with immunosuppressive therapy in a patient with cardiac sarcoidosis](#)" that appeared in *HeartRhythm Case Reports*. Dr. Garg practices with Virtua Heart Rhythm Specialists, with a primary location in our Brace Road location at the Virtua Health & Wellness Center – Cherry Hill, with plans to expand locations in the future. He can be reached by DocHalo as well as Qliq.



Virtua Cardiothoracic Surgery: Experience & Leadership

Earlier this year, Arthur T. Martella, MD, Virtua’s chief of cardiothoracic surgery, performed his 1,000th robotic-assisted heart surgery. He is among an elite group of surgeons, nationally and internationally, to achieve this milestone.

“We are fortunate to have a surgeon as skilled and experienced as Dr. Martella performing such advanced procedures so close to home. When Virtua and Lourdes came together last year, we considered the cardiothoracic program, led by Dr. Martella, to be among the most important and complementary services we could now offer to a wider community. Dr. Martella’s achievement reinforces our belief that Virtua and Lourdes are truly better together,” said Virtua Health EVP and Chief Clinical Officer Reginald Blaber, MD, FACC, MBA.

Dr. Martella strives to provide the highest-quality outcomes through the least-invasive methods. His clinical outcomes demonstrate the advantages that robotic surgical systems and other enabling technologies provide to both providers and patients. For surgeons, the robotic equipment offers greater flexibility, visualization, and precision – which often benefits patients through less pain, reduced risk of infection, faster recovery, and minimal scarring. Dr. Martella and the Virtua team perform common, though highly complex, robotic procedures, including mitral valve repair or replacement, lead placement for pacemakers and defibrillators, and coronary artery bypass graft (CABG) surgery.

In addition to robotics, the cardiothoracic team has been working with Virtua’s interventionalists to expand the use of hybrid coronary revascularization options. According to Dr. Martella, the hybrid approach “offers the best of both worlds by combining coronary stenting with minimally invasive approaches that reduce risk for complications and speed recovery for patients.” This translates into shorter intubation times, fewer days in ICU, quicker return to activities and better overall patient satisfaction. He adds that this less-invasive approach is potentially available to a much larger group of patients.



New Minimally Invasive Procedure Removes Blood Clots from the Lungs, Saving Lives

The heart team at Virtua Our Lady of Lourdes Hospital is using a new tool to treat pulmonary embolism. The FlowTrievers[®] uses a catheter to remove a clot from the lung arteries and the body, immediately restoring blood flow and a patient's ability to breathe.

The FlowTrievers, manufactured by Inari Medical, is the first FDA-approved mechanical thrombectomy device purposely designed to treat pulmonary embolism.

The device offers a minimally invasive, catheter-based method to remove large clots from large vessels, immediately restoring blood flow. Says interventional cardiologist Ibrahim Moussa, DO, FACC, FSCAI, RPVI. "Performing this procedure through a catheter, we avoid open-chest surgery and long intensive care unit stays, as well as drugs that can increase bleeding risk, especially in older patients."



New Device Improves Quality of Life for Heart Failure Patients

Virtua's Heart Rhythm team is now employing an innovative new device to improve the lives of people with heart failure. The Optimizer Smart System[®] utilizes an electrical current to improve the heart's ability to pump blood and oxygen to the body.

"The device delivers a precisely timed electrical current to the heart muscle," said Virtua heart rhythm specialist Heath Saltzman, MD, FACC, FHRS, FACP. "Unlike a traditional pacemaker or defibrillator that works to maintain or restore a normal heart rhythm, the Optimizer works on the cellular level, affecting how calcium is managed in the heart. It strengthens the heart's contractions and has been shown to improve a patient's quality of life, reducing heart failure-related symptoms and hospitalizations."

The device, manufactured by Impulse Dynamics, is implanted in a small pocket under the skin of the upper chest and connected to leads that are placed in the right ventricular septum of the heart. The procedure, which occurs while the patient is under light sedation, takes about 45 minutes. The patient then is monitored overnight in the hospital.

The Optimizer sends electrical pulses to the heart muscle for a total of five hours a day, in one-hour treatments separated by regular intervals. Cardiac contractility modulation increases the influx of calcium ions into cardiac muscle cells, enhancing the heart's ability to contract. Ultimately, over time, the amount of blood pumped out of the heart with each heartbeat increases. Patients experience a reduction in symptoms like shortness of breath and fatigue, and a better quality of life, said Dr. Saltzman.

Patients charge the device once a week for an hour using an external charger placed on their chest.

The device works alongside other heart failure therapies, including medication, a low-sodium diet and exercise. Another advantage is that device does not interfere with implantable cardioverter-defibrillators (ICDs). The Optimizer is expected to last about 15 years before needing to be replaced.



New Transfer Center Module Goes Live Nov. 1

When the ONEVirtua 2020 program goes live on **Sunday, Nov. 1** at Lourdes Medical Associates, Virtua Our Lady of Lourdes Hospital, and Virtua Willingboro Hospital, a new feature of Epic also will go live — the Transfer Center module. This new system component will replace the many disparate systems in use today, allowing for a streamlined process for facility transfers enterprise-wide. All internal and external transfers will be centrally managed through the Transfer Center.

All bed requests will be initiated electronically while maintaining current workflows. A team of approximately 15 colleagues at the Virtua Access Center will attend a training course to become the new Transfer Center team.

“We are excited to roll out the Transfer Center module at Virtua. Streamlining the workflow will provide a better patient experience as well as an efficient process across all Virtua hospital locations,” said Tom Gordon, senior vice president and chief information officer.

The benefits of the new transfer center include:

- An automated solution for streamlining the transfer workflow across the enterprise
- Bed requests initiated electronically, allowing for a more efficient workflow
- Enhanced ability to report on utilization, efficiency, and success of the transfer workflow

Additionally, implementing Epic’s Transfer Center module will provide one patient chart, one efficient workflow, and one reporting and tracking repository to support the growing transfer needs for all Virtua facilities.

To learn more, visit the [Digital 411](#) site and click on the [ONEVirtua 2020](#) tab on the VINE or visit the [ONEVirtua SharePoint](#) site.



Virtua Launches New Heart Care Campaign

Earlier this month, Virtua launched a new commercial as part of a multi-channel campaign to further establish Virtua as a leader in heart care. The campaign was developed after a thorough fact-finding process among physicians and senior leaders, as well as consumer research and strategic assessment. The campaign positions Virtua as the region’s leading cardiac program, nationally recognized as among the top 5 percent of cardiac programs, with more than 100 specialists and appointment availability within 48 hours.

Click [here](#) to view the commercial. Keep an eye out for the commercial on local cable/broadcast television and look for print ads in your local papers and magazines as well as in digital ads and billboards too.