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CARDIO BEAT

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Genetic Testing For HeFH Changed The Lives Of An Entire Family



Patients Mike and Maria

When Mike landed in the Emergency Department at Henry Ford West Bloomfield Hospital with a heart attack, the last thing on his mind was how this event would change the lives of his entire family. After receiving three stents in July 2020 and six more in September 2020, Interventional Cardiologist Khaldoon Alaswad, M.D., referred Mike to Cardiologist and Lipid Specialist Cori Russell, M.D., for cholesterol and risk reduction.

Mike knew for years that his cholesterol levels were extremely high. “I took several different statins, had several normal stress tests, ate healthy but none of it made a difference,” Mike explained. Dr. Russell put Mike on a combination of oral cholesterol-lowering medications as well as an injectable medication called Repatha®. “In just a few months Mike’s LDL went from 330 to 48,” said Dr. Russell.

“Because of his extremely elevated levels of LDL, I suspected Heterozygous Familial Hypercholesterolemia or HeFH or FH for short, which is a condition that affects 1 in 250 Americans and causes premature and severe

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AFib Clinic Opens at Henry Ford Allegiance In Jackson

Jackson area physicians now have a new resource in the atrial fibrillation (AFib) clinic that opened September 2021. “The advanced practice provider (APP) led clinic is designed to work with patients, their referring physician, and families to identify patients early in the disease process and expedite a personalized treatment plan,” said Deanna Tregoning, MSN, ARNP, FNP-C, who leads the clinic.

For many patients, they are first introduced to the services of the AFib clinic after a visit to the Emergency Department and diagnosed with AFib. “Typically, we meet with these patients 24 to 48 hours after their visit to provide a full comprehensive evaluation of their AFib with a focus on education. This includes controlling high blood pressure, the diagnosis and treatment of sleep apnea, and weight loss if necessary. Ultimately, reducing unnecessary hospital admissions through guideline driven treatment to improve the overall wellness of the local AFib population improves quality of life and decreases mortality by addressing modifiable risk factors,” explained Tregoning.

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CARDIOMEMS™ ADVANCES MANAGEMENT OF HEART FAILURE

Genetic Testing For HeFH Changed The Lives Of An Entire Family

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coronary artery disease.” Dr. Russell sent Mike for genetic testing. When his testing came back positive, she asked to meet and screen his two young adult children for the same disease. Unfortunately, their testing came back positive for the same genetic condition as Mike. Dr. Russell started both Mike and his children on the appropriate medication therapy to prevent them from following their father’s path to coronary disease.

As Dr. Russell delivered the positive HeFH test results to Mike’s son and daughter, their mother Maria shared with Dr. Russell that she also struggled with high LDL. After seeing Dr. Russell in clinic, Maria was diagnosed with a different but similarly important genetic mutation in cholesterol

metabolism and severe nearly obstructive multivessel coronary artery disease. Maria also needed a combination of oral and injectable cholesterol-lowering therapy. She is hopeful that, with the correct treatment, she will never need stents like her husband.

Mike and Maria have realized through their family experience that Mike’s grandmother, who passed from heart disease probably had high cholesterol, and his sister and brother experience the same high cholesterol numbers as Mike. They are both being encouraged to be tested. Also, Maria’s sister and two brothers who live in Spain are already seeking genetic testing.

Mike, Maria and their children were all followed by a cardiologist prior to being referred to Dr. Russell.

“Because of the lack of awareness about their genetic disorder, none of them were on exactly the right therapy. My hope is that we can improve awareness of HeFH and the importance of how a Lipid Clinic can truly change therapy for high-risk patients in a way that just cardiology and primary care may not be able to,” said Dr. Russell who runs the Lipid Clinic at Henry Ford Hospital.

“My hope is that we can improve awareness of HeFH and the importance of how a Lipid Clinic can truly change therapy for high-risk patients in a way that just cardiology and primary care may not be able to.”

–Cori Russell, M.D.

Mike says he took one for the family. “Having a heart attack was uncomfortable, the stents brought me to tears with the pain, but the painful experience helped my entire family not to have the same experience.” Maria explained, “You can’t exercise and diet your way out of genetics. Dr. Russell changed and saved our lives.”

To refer a patient to the Henry Ford Hospital Lipid Clinic and Dr. Cori Russell, call 1-877-434-7470.



Cori Russell, M.D.



Polygenic Score for β -Blocker Survival Benefit in European Ancestry Patients With Reduced Ejection Fraction Heart Failure

For patients experiencing heart failure with reduced ejection fraction, β -Blockers (BBs) are the main therapy, yet how each patient responds may vary. In a recent study, researchers explored how genetic variation could be the reason. The goal of the study was to derive and validate the first polygenic response predictor (PRP) for BB-associated survival benefit in heart failure with reduced ejection fraction patients (HF_rEF) among patients with European ancestry.

David Lanfear, M.D., section head, Advanced Heart Failure and Transplant Cardiology, Henry Ford Hospital, explained, “Polygenic scores have been developed for several common diseases, such as coronary disease and many others, but similar analytic methods have not yet been successfully adapted to drug response.” There are emerging examples published he added, but none that applied to treatment of heart failure.

“Methodologic challenges, such as lack of sufficiently detailed drug exposure data and complexities of analysis may limit adaptation of polygenic scores to drug response,” explained Dr. Lanfear. “But this approach may help overcome the fact that single genetic alleles do not often contain enough predictive power to be actionable; by taking into account many genetic loci at the same time predictive power can be improved, which could have broad impact on precision medicine and drug development.”

Only self-reported White patients were included in this analysis because polygenic score techniques can currently only really work within ancestral groups. Dr. Lanfear’s team is actively working on a similar score for African Americans and scores that are robust to ancestry or genetic admixture.

First, a derivation group was randomly created, followed by testing in multiple independent datasets to test its performance. The study utilized data from one cohort study, the Henry Ford Heart Failure Pharmacogenomic Registry (HFPGR) and two clinical trials, the Trial of Intensified Versus Standard Medical Therapy in Elderly Patients With Congestive Heart Failure (TIME-CHF) (n=431), and Heart Failure: a Controlled Trial Investigating Outcomes of

Exercise Training (HF-ACTION) (n=510).

PRP creation resulted in optimal prediction with a 44 single-nucleotide polymorphism score and treatment cutoff at the 30th percentile of that score. In validation testing (n=1,188), greater BB exposure was associated with reduced all-cause mortality in patients with low PRP score (n=251; hazard ratio, 0.19 [95% CI, 0.04–0.51]; P = 0.0075) but not high PRP score (n=937; hazard ratio, 0.84 [95% CI, 0.53–1.3]; P = 0.448)—a difference that was statistically significant (P interaction, 0.0235). Results were consistent regardless of atrial fibrillation, ejection fraction ($\leq 40\%$ versus 41%–50%), or when examining cardiovascular death.



David Lanfear, M.D.

Dr. Lanfear explained the study concluded that, “Among patients of European ancestry with heart failure with reduced ejection fraction, a PRP distinguished the subset of patients who derive substantial survival benefit from BB exposure from a larger group that did not.” Additional work is needed to prospectively test clinical utility and to develop PRPs for other population groups and other medications.

This study was originally published online and can be viewed at: *Heart Failure*, Oct. 4, 2020, Vol. 13, No. 12. doi.org/10.1161/CIRCHEARTFAILURE.119.007012. Lanfear, D., Luzum, J., Ruicog, S., Gui, H., Donahue, M., O’Connor, C., Adams, K., Sanders-van Wijk, S., Zeld, N., Maeder, M., Sabbah, H., Kraus, W., Brunner-LaRocca, H., Li, J., and Williams, L.K. Polygenic Score for β -Blocker Survival Benefit in European Ancestry Patients With Reduced Ejection Fraction Heart Failure.

<https://www.ahajournals.org/doi/full/10.1161/CIRCHEARTFAILURE.119.007012> Circulation: Heart Failure. 2020;13

FACTS Trial Aims To Decrease Vascular Complications

Mechanical circulatory support devices like extra-corporeal membrane oxygenator (ECMO) and Impella® devices are increasingly utilized in the catheterization laboratory to stabilize patients with cardiogenic shock. These devices require large bore arterial access and are typically placed in the femoral or axillary arteries. Dr. Mohammad Al-Qarqaz, M.D., program director of the Interventional Cardiology Fellowship, explained, “Mechanical circulatory support devices have been associated with high risk of vascular complications, including limb ischemia (or decreased blood flow to the limbs) and amputations. When these complications occur, they are devastating and increase the risk of death in these already high-risk patients.”

Developed and refined at Henry Ford Hospital, transcaval access is a technique which avoids the need for large bore access. “This unique technique is now used internationally in patients with small caliber or diseased arteries who need large bore access. We have seen very encouraging outcomes and reduced vascular complication rates,” explained Dr. Al-Qarqaz. “Through a venous access we cross over to the aorta in the mid-abdomen. Given the larger artery size in this location there is very little risk of limb ischemia.”

Drs. Al-Qarqaz and Babar Basir, D.O., have begun the study at Henry Ford Hospital called the FACTS trial (Femoral Artery versus Transcaval access for Temporary Support). The study will examine if utilizing transcaval access in patients requiring mechanical circulatory support devices will decrease rates of major vascular access complications. The investigators are hopeful this study will continue to improve the care of patients in cardiogenic shock.

The study intends to enroll about 30 patients with cardiogenic shock requiring large bore mechanical circulatory support devices with small or diseased femoral arteries. Patients will be randomized to the traditional arterial access versus Transcaval access. They will be followed closely for any vascular complications related to device placement.

“We estimate the study will need 1-2 years to complete. We are optimistic the study will support our hypothesis and demonstrate reduced rates of vascular access complications,” concluded Dr. Al-Qarqaz.

To learn more about this study, contact Dr. Basir at mbasir1@hfhs.org or Dr. Al-Qarqaz at malqarq1@hfhs.org.



Mohammad Al-Qarqaz, M.D.



Babar Basir, M.D.

CardioMEMS™ Advances Management of Heart Failure

Heart failure affects over 6 million Americans each year, 1 in 5 will develop heart failure; and, 1 in 9 will die from heart failure. At Henry Ford Allegiance, Interventional Cardiologist Elizabeth Pielsticker, M.D., along with the Henry Ford Detroit-based heart failure team use the CardioMEMS™ Heart Failure System to monitor patients for changes in pulmonary artery pressure in real-time.

“Patients eligible for monitoring are in Class III heart failure and have been hospitalized within the past year with either preserved ejection fraction (HFpEF) or reduced ejection fraction (HFrEF),” explained Dr. Pielsticker, Cardiac Catheterization Lab director at Henry Ford Allegiance.

“In an outpatient procedure, the sensor device is inserted into the pulmonary artery typically through the femoral vein, up to and through the right side of the heart and into the pulmonary artery,” said Dr. Pielsticker. The sensor, once deployed, is 15 mm x 10 mm, or smaller than a paper clip-sized monitoring device.

To activate the device for real-time monitoring, patients lie down daily on a pillow-like device with sensors which activates a database linked to and monitored by the heart failure team at Henry Ford Hospital in Detroit, where this new technology is also used. “An early warning of changes in pulmonary artery pressure tends to be an early warning that the patient is going into heart failure. If pressure in the pulmonary artery changes, we can adjust and tailor a patient’s medications without delay,” Dr. Pielsticker explained. The ability to individually set patient thresholds allows physicians to personalize and optimize care and medical management for each patient.

Traditionally, clinicians focused on patient weight, blood pressure, etc. to detect worsening heart failure. Unfortunately, these markers appear late in the time course of decompensation allowing little time to respond before hospitalization is necessary. “Adding this device to a patient’s treatment can help to prevent acute exacerbations of heart failure and/or dehydration which consequently results in a decrease of hospital admissions. Patients share they like knowing how they are doing and knowing more about their condition in real-time,” added Dr. Pielsticker.

Fred Ballou of Lansing was the first to receive a CardioMEMS™ at Henry Ford Allegiance Hospital on August 20, 2021. With congestive heart failure worsening, Fred’s cardiologist explained that they needed to start

“thinking out of the box and I would have been dumb not to,” said Fred. He struggles with fluid overload and laughed, “If I cheat, this baby will tattle on you.”

He explained if his weight fluctuates, he gets a call from a member of the Heart Failure Team with instructions how to adjust his medications without leaving his home. Fred has had some adjustments and learned how important it is to keep the pillow sensor away from all electronic devices when it is in use. “When I went to my daughter’s we learned how to hook the pillow up to WIFI with a USB, so now I know travel will be easy.” He joked, the device has “changed the meaning of pillow talk.”

The clinically proven benefits for patients include prevention of worsening heart failure, lower mortality rates and improvement in quality of life. “Patients also benefit from reducing their visits to the heart failure clinic as physicians safely monitor and advise our patients virtually,” concluded Dr. Pielsticker. “Our decision to expand use of CardioMEMS™ from our program at Henry Ford Hospital in Detroit to our program at Henry Ford Allegiance in Jackson has already provided local patients a new option for heart failure treatment closer to home.”

For Evelyn Rice of Jackson, her decision to accept CardioMEMS™ came after being told she had only six months to live and learning her heart valves were beyond repair. “I’m going to prove them wrong and live a long time,” chuckled Evelyn. “I feel so much better and finally my medications are perfect and all the swelling is gone.” Amazed by the technology and how it is transmitted and monitored, Evelyn said she is very happy with her decision and anyone who is eligible, but uncertain, should “go for it, it was worth it.” She’s using the extra time she’s gained by not going to doctor’s appointments “for sitting and enjoying.”

To refer a heart failure patient to the Heart Failure Clinic at Henry Ford Allegiance, call 517-205-3345; for the Heart Failure Clinic at Henry Ford Hospital in Detroit, call 1-877-434-7470.

When deployed, the actual sensor is 15 mm by 10 mm, or smaller than a paper clip.



Elizabeth Pielsticker, M.D.



Next Phase of NCSI Trial: CERAMICS To Begin in 2022

The next phase of the National Cardiogenic Shock Initiative (NCSI) has been approved and is expected to begin in early 2022. Can Escalation Reduce Acute Myocardial Infarction Mortality in Cardiogenic Shock (CERAMICS) trial will be investigated by Henry Ford interventional cardiologists, Babar Basir, D.O., director of the acute mechanical circulatory support program, and William O'Neill, M.D., director for Structural Heart Disease.

This trial will recruit 120 patients. Hospitals eligible to participate in this next phase of the study will be currently utilizing the NCSI treatment protocol and have the necessary equipment / devices to support escalation of hemodynamic support devices. In this prospective, single arm trial the goal is to increase survival rates beyond 80%.

Physicians interested in learning more about the CERAMICS trial may contact Research Coordinator Michael Hacala at mhacala1@hfhs.org.

New Trial: Incorporating Supersaturated Oxygen in Cardiogenic Shock (ISOSHOCK)

Babar Basir, D.O., and William O'Neill, M.D., are set to begin a new trial to study the use of Supersaturated Oxygen in SHOCK (ISOSHOCK). The trial will include treating patients using the NCSI shock protocol and randomizing 60 patients in 20 sites across the U.S. to standard of care or supersaturated oxygen. The trial was given investigational device exception (IDE) by the FDA in April 2021.

Babar Basir, D.O., director of the acute mechanical circulatory support program and principal investigator of the study explained, "Cardiogenic shock remains one of the most challenging diagnoses for interventional cardiologists to manage, especially in the setting of STEMI."

Supersaturated Oxygen (SSO₂) Therapy is the first and only FDA-approved treatment to significantly reduce cardiac muscle damage in heart attack patients after percutaneous coronary intervention. It is currently indicated for patients who suffer from ST-segment elevation myocardial infarction (STEMI) with a left anterior descending artery (LAD) culprit when presenting within six hours of symptom onset.

William O'Neill, M.D., director of the Center for Structural Heart Disease and principal investigator said, "I have utilized SSO₂ therapy in previous trials for anterior STEMI and seen positive results, and I think there is a significant potential benefit for this high-risk population as well."

The pilot study will test the safety of SSO₂ in shock and the investigators are hopeful to conduct a pivotal trial to assess if infarct sizes and clinical outcomes are lowered with SSO₂. The study will utilize a 60-minute SSO₂ infusion after successful PCI and plan to obtain MRI 3-7 days after PCI.

SSO₂ Therapy developed by ZOLL Circulation, was designed to recover damaged myocardium in heart attack patients, with the intention of preventing heart failure.

Physicians interested in learning more about the Incorporating Supersaturated Oxygen in SHOCK (ISOSHOCK) trial may contact Research Coordinator Margaret Fox at mfox2@hfhs.org.



Babar Basir, M.D.



William O'Neill, M.D.

ELECTROPHYSIOLOGY

RHYTHMIA HDx™: Accurate, Efficient HD Cardiac Mapping

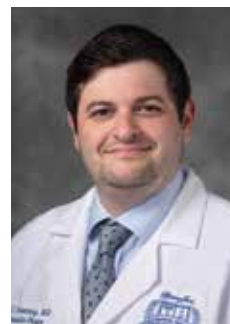
Electrophysiologists at Henry Ford Wyandotte Hospital now have an advanced mapping system in the RHYTHMIA HDx™. When performing supraventricular tachycardia ablation (SVT) for treatment of atrial flutters, the software provides continuous cardiac mapping and an intelligent annotation algorithm that rapidly processes a high volume of data providing 99.98% annotation accuracy. It uses 3-D accuracy to visualize activation maps without the need for manual re-annotation to deliver targeted therapy and confidently achieve procedural endpoints.

“For patients with atrial flutters who have failed pharmacological therapies, use of RHYTHMIA HDx™ improves our accuracy and means less procedural time for the patient,” said Arfaat Khan, M.D., electrophysiologist at Henry Ford Wyandotte Hospital. “It also reduces physician and patient exposure to fluoroscopy radiation.”

Joshua Greenberg, M.D., electrophysiologist, who recently joined Henry Ford Wyandotte Hospital, explained, “Use of this 3-D mapping system makes SVTs more accurate in effectively treating the patient. They have access to experienced electrophysiologists, the latest technology in our Cath Lab and it’s close to their homes right here in the Wyandotte community.”



Arfaat Khan, M.D.



Joshua Greenberg, M.D.

Same Day Discharge for PCI Patients

A collaborative effort between the physicians and the hospital, patients who had an elective cardiac catheterization – diagnostic and interventional – are being discharged from Henry Ford Wyandotte Hospital the same day. “It started with the need to keep our patients safe from COVID-19 exposure,” said Christian Fisher, RN, BSN, MBA, nursing administrator, Cardiovascular Services. “Over 90% of these patients are going home same day and 98% of patients on next day follow up were very pleased they were able to go home and not be mixed in the general population.” This prevented what many physicians were concerned about, “Patients did not delay their care because we addressed their concern to protect them from potential COVID-19 exposure. Overall, it also helped the hospital with better bed flow to care for the sickest of patients,” Fisher concluded.

National Study Focus On Improving Safety in High-Risk PCI

The use of a catheter that detects bleeding, made by Saranas®, is the focus of the study: Safe Surveillance Of PCI Under Mechanical Circulatory Support With The Saranas® Early Bird® Bleed Monitoring System (SAFE-MCS). “Patients who require high-risk PCI where an Impella® device is being utilized are eligible for the study. We will use the most contemporary practices to obtain safe access and use the Early Bird® to evaluate how safe these high-risk procedures can be,” explained Babar Basir, D.O., interventional

cardiologist and director of the acute mechanical circulatory support program at Henry Ford Hospital.

As the primary investigator of this national study, Dr. Basir said, “We will enroll 240 patients at 20 hospitals across the country.”

Physicians interested in learning more or enrolling patients in the SAFE-MCS study may contact Research Coordinator Margaret Fox at mfox2@hfhs.org.

Two Studies Examine The Effect of Socioeconomic Disparities In Vascular Surgery

Long before the COVID-19 pandemic raised national awareness of socioeconomic disparities in medical care, vascular surgeons at Henry Ford Hospital were first to study if socioeconomic status (SES) impacted survival rates in aortic dissection and abdominal aortic aneurysm (AAA) repair in two groundbreaking studies.

The first study published in 2016 linked neighborhood socioeconomic status to overall survival among aortic dissection patients treated at a Henry Ford Hospital, a tertiary medical center. The second study published in 2019 linked SES to AAA repair. Both were published in the *Journal of Vascular Surgery*.

Both studies used the Messer neighborhood deprivation index. The index used data from urban centers, heterogeneous counties and the census tract-level data from 2000 U.S. Census to generate a standardized and reproducible index.

Timothy J. Nypaver, M.D., head, Division of Vascular Surgery explained, “The effect of SES on many disease states has been documented in literature, but it had not yet been studied in patients with ascending thoracic aortic dissection (TAAD) Type A or descending thoracic aorta (TBAD) Type B; and abdominal aortic aneurysm (AAA) repair. The demographics of our Detroit community made it important to our patient population that we undertake these studies.”

Thoracic Aortic Dissection

This retrospective study evaluated the effect of SES on 30-day and long-term survival of patients after aortic dissection. Patients with TAAD and TBAD were identified for this study using Henry Ford Hospital medical records between January 2003 and September 2012. “International Classification of Diseases, Ninth Revision, codes and our hospital discharge registry were also used to identify acute TBAD patients who were admitted to our tertiary care center,” said Dr. Nypaver. “The Society of Thoracic Surgery’s registry was used to identify all TAAD dissections admitted to our hospital during the same period.”

The results of the study showed of the 268 patients identified, 212 with aortic dissections were included; of which, 118 were type A and 94 were type B with a median follow-up of 7.6 years. The mean age was 58

years and 67% were male, with an equal distribution of African American (50%) and White (46%). Dr. Nypaver explained, “There was a significant difference between TAAD and TBAD dissections in racial profile with African Americans constituting 41% of TAAD patients versus 61% of TBAD patients (P-.005).”



Timothy J. Nypaver, M.D.

Sociodemographic variables collected included age, sex, race/ethnicity (African American, White, and other), tobacco use and educational level. Comorbidities including preoperative hypertension (86%) trended in patients more frequently with TBAD (91%) vs. TAAD (81%). Hyperlipidemia (36%), coronary artery disease (22%), diabetes (10%), chronic obstructive pulmonary disease (11%), end state renal disease (3%) and body mass index (mean 30 + kg/m²) were also identified.

To measure SES accurately, the use of several variables were required as explained in the data collection. This study showed a 30-day mortality similar to national averages. Survival at 5 and 10 years was the same for TAAD and TBAD.

Dr. Nypaver explained, “This study found that social economic disadvantage was associated with increased comorbidities which linked to increased incidents of aortic dissection. More patients with TBAD live in lower socioeconomic neighborhoods than patients with TAAD.”

Patients with a lower SES had reduced short-term and long-term survival after aortic dissection. Further he shared, “The results need to be tested and replicated in other areas, but the unique influence of neighborhood circumstances on survival outcomes can lead to improved clinical practice with a better understanding of SES for aortic dissection patients.”

Abdominal Aortic Aneurysm

This retrospective study evaluated the unknown association between SES and the outcome of AAA repair. The influence of SES on postoperative survival after AAA repair on Henry Ford Hospital patients identified in Henry Ford Hospital medical records and the Michigan

Social Security Death Index between January 1993 and July 2013 were identified, using criteria of postoperative 30-day mortality and long-term mortality. SES was quantified using the neighborhood deprivation index (NDI) which is a standardized and reproducible index used in research that summarizes eight domains of socioeconomic deprivation.

NDI is based on six social domains: poverty housing, occupation, employment, education, residential stability and racial composition. NDI is calculated, and a score is given to each individual ranging from 1.59 to 5.54. Higher scores represent lower SES.


Those who had open surgical repair and endovascular aneurysm repair were included in the study. The results of the study included 767 patients with infrarenal AAA

repairs, 383 patients with open repairs and 384 patients who had endovascular repairs. The median age of 73 years, 80% male, with 77% being White and 20% being African American.

After adjusting for the variables that were significant on univariable analysis (age, medical comorbidities, length of stay and year of surgery), the association between NDI and long-term mortality was significant (P = .021; hazard ratio, 1.21 [1.05-1.37]).

Dr. Nypaver explained that, “This study showed that SES, quantified by the NDI, is a significant predictor of mortality after adjusting for confounders. To be exact, every 1-unit increase in the NDI was associated with a 28% increase in the probability of mortality over time when controlling for other variables.”

Neighborhood Deprivation Index (NDI) Categorization



NDI Quintile	NDI Lower Limit	NDI Upper Limit
1 (Least deprived)	-1.59	-0.16
2	-0.16	1.26
3	1.26	2.69
4	2.69	4.11
5 (Most deprived)	4.11	5.54

These studies were published:

[Socioeconomic disparities affect survival after aortic dissection.](#) *Journal of Vascular Surgery*, November 2016. Kabbani, L., Wasilenko, S., Nypaver, T., Weaver, M., Taylor, A., Abdul-Nour, K., Borgi, J., and Shepard, A., Henry Ford Hospital, Detroit, Mich.

[Survival after abdominal aortic aneurysm repair is affected by socioeconomic status.](#) *Journal of Vascular Surgery*, May 2019. Adas, Z., Nypaver, T., Shepard, A., Weaver, M., Ryan, J., Huang, J., Harriz, R., and Kabbani, L., Henry Ford Hospital, Detroit, Mich.

STAFF UPDATE

Joshua C. Greenberg, M.D.

Electrophysiology



MEDICAL SCHOOL EDUCATION

Mount Sinai School of Medicine,
NY

FELLOWSHIPS

Henry Ford Health System, Detroit,
MI, Cardiac Electrophysiology

Henry Ford Health System, Detroit,
MI, Cardiovascular Disease

RESIDENCIES & INTERNSHIPS

University of Michigan Health
System, MI, Internal Medicine

BOARD CERTIFICATIONS

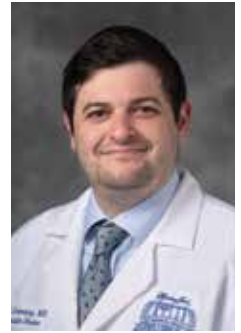
American Board of Internal
Medicine (ABIM) - Cardiovascular
Disease

American Board of Internal
Medicine (ABIM) - Internal
Medicine

National Board of
Echocardiography Certified (NBE)

RESEARCH INTERESTS

Dr. Greenberg's research
interests include non-contact
mapping and ablation of
supraventricular tachycardias,
electronic interference of wearable
consumer electronics and
implantable cardiac devices, and
conduction system dysfunction
post transcatheter aortic valve
replacement.



Joshua C. Greenberg, M.D.

Henry Ford Hospital
Henry Ford West
Bloomfield Hospital
Henry Ford Wyandotte
Hospital

Anjani C. Rao, M.D.

Cardiology



MEDICAL SCHOOL EDUCATION

American University of the
Caribbean (St. Maarten), FL

FELLOWSHIP

Ascension Providence Hospital,
Cardiovascular Disease, MI

RESIDENCIES & INTERNSHIPS

Ascension Providence Hospital,
Internal Medicine, MI

BOARD CERTIFICATIONS

National Board of
Echocardiography

Certification Board of Nuclear
Cardiology

American Board of Internal
Medicine – Cardiovascular Disease

RESEARCH INTERESTS

Dr. Rao also speaks Telegu
(Indian dialect).



Anjani C. Rao, M.D.

Henry Ford Medical
Center - Fairlane

Kyle G. Miletic, M.D.

Thoracic Surgery



MEDICAL SCHOOL EDUCATION

Wayne State University School of
Medicine, MI

RESIDENCIES & INTERNSHIPS

Cleveland Clinic Foundation,
Thoracic Surgery, OH

BOARD CERTIFICATIONS

Candidate Member, Society of
Thoracic Surgeons



Kyle G. Miletic, M.D.

Henry Ford Hospital
Henry Ford Macomb –
Clinton Township

AFib Clinic Opens at Henry Ford Allegiance In Jackson

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Andrew Sekela, one of the AFib clinic's earliest patients, affirmed the education provided has helped him when he could "barely walk up the hill in my back yard." While he had been diagnosed with AFib in 2006, he did not experience any further episodes until October of 2021. On the advice of his doctor, he went to Henry Ford Allegiance emergency room. "When I got to the ER my blood pressure was very high, so I was there for quite a while until it came down. The doctors referred me to the AFib clinic where I learned about the KardiaMobile app so I could monitor my heart to know if I was in AFib."

Tregoning explained that the FDA-cleared personal EKG "KardiaMobile is an app patients can use on their smart phone which allows them to do a one-lead EKG by placing four fingers on a monitor. The device detects if the patient is in AFib, bradycardia, tachycardia or has a normal heart rhythm. It's a great tool, however the reading can sometimes be confusing to the patient." Andrew shared how comforting it is to know that when he has questions there is someone to ask and "Deanna always gets right back with me and tells me what I should do," he said. In his first visit that was 24 hours after being discharged he was in the AFib clinic, "Deanna spent a lot of time with me to educate me on the disease process so I could manage my own AFib."

While most patients are referred through the Emergency Department, "community physicians might appreciate the resources we have available for their patients in the AFib clinic. Our network allows for direct referrals to many resources, including dietitians, sleep specialists and our electrophysiologists," explained Tregoning. If patients need advanced treatment options the AFib clinic includes electrophysiologists Bipin Ravindran, M.D., MPH, director and Timothy Shinn, M.D.

The clinic welcomes patients who were recently diagnosed with atrial fibrillation, require ongoing disease management, or have an acute issue that needs attention. Same-day and next-day appointments are available.

Henry Ford Electrophysiology - Jackson

Professional Building,
Second Floor, Suite 204
1100 E. Michigan Avenue
(517) 205-0163



Bipin Ravindran, M.D.



Timothy Shinn, M.D.



**Deanna Tregoning,
MSN, ARNP, FNP-C**

Keep an eye out in upcoming CardioBeat newsletters, as we launch more AFib Clinics throughout Southeast Michigan in 2022.

To connect with a Henry Ford physician, call:

Heart & Vascular Institute
1-877-434-7470



Heart & Vascular Institute
Henry Ford Hospital
2799 West Grand Boulevard
Detroit, MI 48202

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IN THE NEWS



Dr. Richard Byler Retires After 29 Years

After a rigorous nomination and review process, the American Heart Association presented Cardiologist Richard Byler, M.D., with the Cor Vitae Award for Community Services, celebrating his professional accomplishments contributing to longer, healthier lives in our community. Dr. Byler was presented with his award at the Ann Arbor-Jackson Heart Ball on Saturday, Oct. 16, 2021. Dr. Byler celebrated his retirement after 29 years of service in Jackson on Oct. 1. Dr. Byler brought exceptional dedication and a high standard of care for his patients for decades have earned him high esteem and profound trust from patients, the community, and equally from peers and colleagues. Most recently, his patient said, "I am so grateful for the knowledge and experience Dr. Byler brings to my care from beginning to end." Dr. Byler and his wife, Pat, are world travelers, having traveled to Turkey, Belize, Burundi and New Zealand, among other places. Congratulations on your retirement, Dr. Byler.



Annual fundraiser "Women Rock Science" honors Dr. Celeste Williams

Congratulations to Celeste Williams, M.D., director of Cardiac Transplantation, on receiving the 2021 Rock Star Award presented by the Cranbrook Institute of Sciences. The annual Women Rock Science Awards recognize incredible women making a difference in STEAM fields while also raising money to bring programming to underserved students in Michigan.



Celeste Williams, M.D.



Advice to Women in Medicine

Shalini Modi, M.D., cardiologist, has seen a lot since she served as a Captain in the Indian Army Medical Corps after graduation in 1994. Dr. Modi reflects on the progress she's personally seen women make in medicine over the years, "I have seen an increase in the number of medical students, acceptance of female physicians in male dominated fields of Medicine, increasing numbers of female researchers and women being accepted in leadership positions in Medicine."



Shalini Modi, M.D.

Her advice to females in medicine is inspiring:

- Women are born to be resilient, dedicated and caring which automatically makes them well suited for Medicine.
- Mentors are valuable as this journey is navigated.
- Keep believing in yourself and your passion for taking care of others.