



TEXAS HEART INSTITUTE CARDIAC SOCIETY

Fall 2017

MESSAGE FROM THE PRESIDENT

With great enthusiasm, I welcome the 2017-2019 Texas Heart Institute Cardiac Society Board. Joining me are Vice President Joggy George, Secretary-Treasurer George Younis, Members-at-Large Peter Ermis, Mehran Massumi, and Sam Sheth, President Emeritus Patrick Hogan, and Immediate Past President Eduardo Hernandez. The combination of disciplines and the diversity of generations complements ideas and enthusiasm with age and wisdom. We are looking forward to a banner year ahead!



I would like to thank Immediate Past President Dr. Ed Hernandez for his incredible leadership during our Board's inaugural 2-year term. During his tenure, the THICS Symposium reached new heights in its 8th and 9th years. With the 9th THICS Symposium in May 2017, more than 200 attendees obtained Continuing Medical Education credit while attending an exciting scientific program. Dr. Valentin Fuster's Igor Palacios Lectureship address, Dr. Gary Roubin's lecture about the history of coronary stenting, and talks from several Texas Heart Institute speakers, including Drs. Rasekh, Krajcer, Seger, Angelini, Strickman, Hernandez, Virani, and Cohn. After the Symposium, we had our annual pinning ceremony, and I extend my hearty congratulations to our graduates. Please save the date for our 10th Annual THI Cardiac Society Symposium, to be held on Friday May 11th, 2018. We look forward to your attendance – to network with old friends and meet new fellows and graduates.

Speaking of saving dates, our THICS Holiday Party will be held on December

(continued on page 2)

HOW FORTUNATE I AM

By ROBERT AERTKER, MD

As the weekend approached, we heard reports of the strengthening storm that was soon to become Hurricane Harvey. We live in the Heights area right off TC Jester and I-10, and I drive over White Oak Bayou at 11th Street on my way home from work every day. We had gotten only a little rain on Friday, but the bayou seemed a bit higher than normal.

On Saturday, we waited for the storm to come. The daytime was uneventful, with rainfalls that were probably less than anticipated. Our family spent the afternoon at the home of our long-time friends Jamey and Caitlin, who live a block north of us. I remember joking with them that we were going to be in for it when the storm finally hit because the bayou already seemed higher than it should have been. Little did I know.

I was set to work moonlighting shifts on Saturday and Sunday night. I was dreading this a bit, anticipating getting flooded in at the hospital during one of my shifts. As I drove to work Saturday night, the weather forecasters were predicting something like 5-10" of rainfall overnight. Our bayou had gone from 23 feet earlier in the morning back down to 13 feet by the time I left, so I felt fairly reassured.

My moonlighting shift was rather uneventful (RIP Tele B), and I spent time familiarizing myself with the Harris County Flood District website. As I'm sure all Houstonians are well aware now, they have flood gauges set up throughout the county that give real-time updates of the water levels in our bayous. The closest flood gauge on the map was at White Oak Bayou and Heights Boulevard. I was texting back and forth with Jamey about the Mayweather vs McGregor fight that was going on that night. As the fight neared its end, the rain really started coming down, and our bayou rose 11 feet in one hour. Our text conversation shifted to the rain and the state of the bayou.

Our neighborhood, Timbergrove, has a Facebook group, and people were posting pictures of the bayou closest to us throughout the night. One picture showed that the water was still several feet below the bridge at the 11th Street crossing. After seeing that, I followed the gauge readings on my phone all that night.

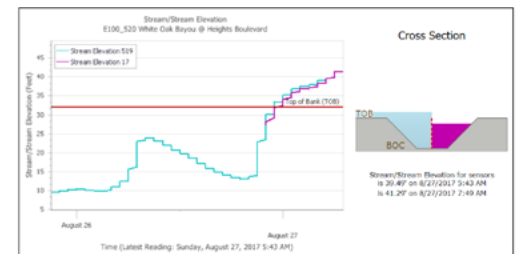
I was also texting with my wife throughout

the night about the flooding. She was home with our 5-year-old son and 3-year-old daughter. She also happens to be pregnant. I tried to keep her informed about the weather during the night but didn't want to panic her. At 4:26 AM, she sent me a text saying the middle of the street was not underwater but the rain was intensifying. And boy did it; we received an additional 9 inches of rain between 5 and 8 AM.

8/27/2017 7:00 AM	8/27/2017 8:00 AM	4.60"
8/27/2017 6:00 AM	8/27/2017 7:00 AM	1.96"
8/27/2017 5:00 AM	8/27/2017 6:00 AM	2.44"

Picture. 9 inches of rainfall between 5 AM and 8 AM.

As it neared 6 AM, I checked the gauge again but it wasn't updating in 2-10 minute intervals as it had earlier; White Oak Bayou was flooding so much at this location that the gauge was no longer working. This spot is about 3 miles from my house. I'm not sure why I thought trying to drive home was even remotely feasible at this point, but I found one of my co-fellows in the hospital, handed him my pager, and said I had to try and make it home. After traveling about 200 yards down Holcombe, my truck was already in almost a foot of water, and I decided to turn back.



Picture. Flood gauge last reading still shows 8/27/17 at 5:43 AM.

The flooding around our house worsened rapidly after this. The water went from halfway up our front yard to pouring into our house in probably less than an hour (I don't have time stamps on messages around this time). I was on the phone with my wife when she opened our garage door and water began pouring in. I told her where the hatchet was in the garage so she

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ARTICLE: HOW FORTUNATE I AM (Continued from page 1)

could go into the attic with the kids and still get out if necessary. I called Jamey and told him to get over there and help get my family out of the house. He walked through what I would guess was nearly chest-deep water in the street to help get them out of the house. Needless to say, I'll be buying his beer for the rest of my life. The picture below was taken from our street later that morning. You can see the water level just below the stop sign.

They made it back to Jamey and Caitlin's house, which is situated a few feet higher than ours, but unfortunately, they soon had a few inches of water in their house, too. Both their family and mine (sans myself) went to our other friends' house a few blocks away, which fortunately stayed dry.



Picture. Taken from the middle of our street, Queenswood, the morning of 8/27/17.



How fitting that I picked up a six pack of Buff Bayou Brewery beer to ride out this storm.

Well here's to you Hurricane Harvey, you [redacted] son of a [redacted]

On a more serious note, how thankful I am that my family is ok, that I was able to get back to them after being stuck in the hospital, and for the most wonderful friends in the world to help rescue my family from our flooded house when I was stuck away from them.



Picture. I had some choice words for Harvey.

MESSAGE FROM THE PRESIDENT

(continued from page 1)

8, 2017. Please consider celebrating with the Cardiac Society as we honor the fellows who do a phenomenal job supporting clinical care while learning from the best teaching faculty from around the world.

We are planning to reach out through social media. If you haven't already, please join us on Facebook by searching for and joining THICS – Texas Heart Institute Cardiac Society. We will have updates, stories, photos, and announcements you won't want to miss. It will be a great chance to catch up with former graduates while seeing what's happening at the Texas Heart Institute. We also hope to increase Journal Club/Happy Hours with our Houston-based members. Please stay tuned for details.

If you missed the news, Hurricane Harvey ravaged Texas's gulf coast, and Houston was not spared. Some fortunately escaped unscathed, but much of Houston is in the rebuilding process. Houstonians coming together to support one another was a sight to see! I'd like to share two stories from the field from our fellows on the front lines: Bobby Aertker and James O'Neill. Should you feel the urge to contribute, options include local organizations such as the mayor's Hurricane Harvey Relief Fund and the Houston Food Bank, and national organizations like the American Red Cross. Throughout the storm, the Texas Heart Institute remained strong!

Sincerely,

Wilson Lam, MD

Being trapped in the hospital, I agreed to help provide manpower there until further notice. I rounded on the folks in the CCU and helped with some work in the echo lab during the day. The rain stopped during the middle of the day, which allowed some of the water on the flooded roads to recede. However, another several inches of rain were predicted in the evening. Several of my friends helped rescue people by boat on my street throughout the day.

I asked Dr. Reddy to try to find someone, anyone, to come into the hospital so I could try and get out. I was convinced that the evening of Sunday the 27th would be my only window to get out of the hospital for a long time, and I had tremendous guilt for what my wife had just gone through without me there. Dr. Reddy said there was a resident close by who could make it in to relieve me. Because about 75% of the bayous were out of their banks at this point, I used the iPhone maps, which provided remarkably accurate information about road closures throughout this entire flood event, to plan a route home. Despite my initial doubts, the route worked, and I reached my family at around 7 PM that night. The word "relief" does not adequately describe how I felt to be back with them.

The flood waters in our neighborhood had abated a fair bit by the evening, and I was able to get into the house. The water had risen to about 18 inches inside. I saw the hatchet sitting on top of our microwave. I grabbed my kids' floaties (in case the whole city started floating away), the cooler full of food and drinks we had packed when we first lost power, and some clothes for everyone. It started pouring rain again, and it was pretty dark because the power

was out, so I retreated. Our three families discussed the events over a beer.

We spent the next day (Monday) salvaging what we could from the house and transporting it to my parents' house in Katy. That evening, their neighborhood was put under voluntary evacuation because of the Barker Reservoir overflow issues. Fortunately, they did not have any issues, but it was one of those hard-to-believe moments: Were we really going to go through all that again?

On Tuesday, our neighborhood began the clean-up process. All of our furniture was ruined – beds, chairs, sofas, dressers. It was disgusting work. Fortunately, everyone seemed to have an abundance of help from relatives, friends, or neighbors; our streets were lined on both sides with helpers' cars. I can't

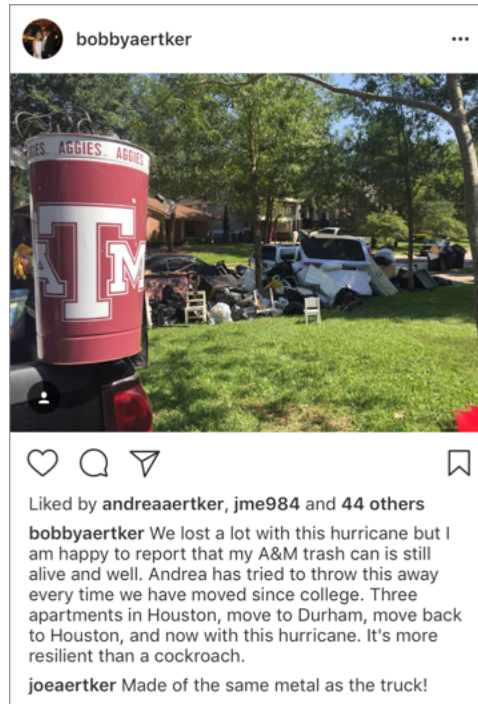
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ARTICLE: HOW FORTUNATE I AM *(Continued from page 3)*

tell you how many times complete strangers came down the street handing out Chick-fil-A sandwiches, pizzas, bags of gourmet cookies, and beer for the end of the day. I drove back to my parents' place that night, where the radio said they had more volunteers than they could use at the George R. Brown Convention Center, which had been turned into a shelter. Many people came in to help with the high-water rescues, from the Cajun Navy to random people with a bass boat, kayak, canoe, or brodozer. It was truly heartwarming to see this outpouring of support.

I was thankful that my family was okay, but I'd be lying if I said I didn't allow myself to wallow in self-pity at times. We lost most of our stuff to the flood. I was going to have to dip into my emergency fund that I had worked so hard to build up with extra moonlighting shifts. But I took solace in salvaging my A&M trashcan, which my wife has tried to throw away no less than six times during our marriage.

The next morning, I pulled up to the pile of our stuff that we had hauled out to the curb the day before, which will be taken to the



Picture. Victory!

dump at some point. A middle-aged woman walked up with her daughter, who was probably 12 years old. They didn't speak English well but gestured to me to see if it was ok to go through what I considered junk and get clothes out for their family. I nodded my head yes. They were only there a few minutes and then went on their way.

Here I was feeling bad for my situation, but others clearly were worse off. I should have asked them their names. I wish I had given them the three dollars I had in my wallet. I think I was just too dumbfounded by the situation and how my perspective on things had changed in an instant.

I cried. I realized how fortunate I am.

The worst of times bring out the best in so many people. It seems the entire city is volunteering their efforts in one way or another. Tens of millions of dollars have been raised in a matter of days. Our city will continue to rally. I hope we can hold onto the good in all of us that has been brought out in these trying times. Now more than ever, we need to reach out and help a stranger; I hope that next time I do better. 🙏

MY LONGEST SHIFT:

HOW I SPENT HURRICANE HARVEY IN CHI ST. LUKE'S MEDICAL CENTER

By JAMES ONEILL, MD

When my co-fellows and I made the call schedule a couple of months ago, there was no reason to believe that Saturday, August 26 would be anything but a normal Saturday. However, that Friday night, I watched as newscasters promised that Hurricane Harvey would be a natural disaster beyond anything seen in Houston for many years. The next morning, as I drove down Main Street, I was pleasantly surprised that the predicted terrible storm had turned out to be only a light drizzle. Throughout the day, I kept expecting torrential rains, and yet every time I looked outside it wasn't even raining. "Fake news," I mused to myself. Social media was already mocking Harvey as another sensationalist news story, joking that "we will rebuild."

That Saturday night was filled with typical admissions and nursing pages, and I wasn't even aware that Harvey had arrived. But on Sunday morning, when the light of day revealed the flooded streets and heavy ongoing rain, nobody was laughing anymore.

While my cardiology call was technically over, those of us in the hospital could not drive home, and the other fellows could not drive to the hospital to relieve us. This was also true for the nurses caring for our patients in the CCU, ICUs, and floors. Despite the

natural disaster afflicting our city outside, a hospital full of patients inside required medical attention. We had become the emergency team. We were necessary personnel. And we were short-handed.

I received a phone call from Dr. Raja Reddy, an intensivist and the director of medical education at St. Luke's, who asked if I was in the hospital. I explained my situation. He was asking all available house staff to assist with ICU coverage as moonlighters. So, in addition to helping the first-year cardiology fellow with the CCU, I was tasked with rounding on patients in the 7 South 2 MICU. I was no longer the consulting cardiologist; now, my patients included those with septic shock, bleeding esophageal varices, opportunistic HIV infections, and airway compromise. Onward I pressed, making rounds over the phone with the ICU attending, adjusting antibiotics and ventilator settings, and transfusing blood. One attending intensivist managed to make it in, after wading through deep water when his car stalled near Rice University.

One of my patients with hepatic encephalopathy, acute renal failure, nonischemic cardiomyopathy, and an ejection fraction of 15% needed a dialysis catheter and an arterial line placed. Despite his comorbidities, he

remained muscular; I could only imagine the strength this man must have had in his youth. The encephalopathy had made him paranoid and aggressive. His borderline blood pressure made heavy sedation inadvisable, so after sedating him just enough to calm him without compromising his hemodynamics, I began the procedure. When the needle punctured his jugular, suddenly the raging storm was no longer limited to the downpour outside. The already exhausted nurses held his extremities, and I immobilized his head with my left arm while continuing the procedure. The line went in with no complications, other than hypertension and tachycardia in the operator. The patient was started on continuous renal replacement therapy, and business went on as usual in the MICU.

In the afternoon, during a brief break in the storm, one of my co-fellows and I climbed the stairs to the top of Garage 2 to surveil the condition of the roads. As we stared down at the street, which looked like the canals of Venice, we could not believe the destruction before our eyes. On Holcombe Blvd, multiple abandoned cars sat in water that rose to the window level of an SUV. The valet entrance

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ARTICLE: MY LONGEST SHIFT *(Continued from page 3)*

to the MD Anderson Cancer Center was submerged. I could see the worry in my colleague's face; his wife and young children had been forced to evacuate their home earlier in the day when two feet of water accumulated in his living room. He came to work the night before to carry out his duty to his patients, but in this moment, he wanted nothing more than to comfort his frightened children, who had taken shelter at a friend's home.

Although this scene captured our attention, the demands of the hospital continued, and I was called to assist Dr. Salman Bandedali with a coronary angio for a patient with unstable angina and ongoing ischemic chest pain. We discovered a 90% proximal LAD lesion and proceeded with PCI. The cath lab nurses and technologists, who were also held over for the storm, performed their jobs skillfully despite their fatigue and makeshift accommodations. Dr. Bandedali achieved an excellent result and restored the vessel to full caliber, even as the city of Houston became increasingly volume overloaded.

I managed to get a little rest that night in the CHO (cardiology house officer) call room – my makeshift “bachelor pad,” as one of my colleagues called it. The next morning, I realized that the CCU fellow, Dr. Grant Heberton, had been on call for essentially 48 hours, with only a three-hour nap during his shift. He had done a heroic job, so I took his pager and sent him to rest. I mused that this perhaps made me the first interventional fellow in the history of THI to cover the CCU, but desperate times called for desperate measures. –Walking through the unit, I saw the same faces that I had seen for the previous two days. The nurses had been sleeping in empty patient rooms on one of the medical floors. They were exhausted, and worried about their homes, but they kept pouring their remaining energy into caring for their patients. They did not complain. They did a world-class job.

By Monday morning, certain parts of town were dry enough to be accessible by car. Some additional THI brothers could come in to work, which allowed most of the fellows who had been at the hospital during the storm to return home. Unfortunately, my street was still underwater, and my little low rider coupe was no match for the flood water. It hit me that in the hospital I had electricity, air conditioning, internet, and fellow THI bros to hang out with. Most importantly, I was still needed, as many attendings and fellows could not access the Medical Center. So, I stayed, and returned to rounding in the MICU as I continued my stint as a critical care fellow.

That afternoon, Dr. Bandedali had another emergency case for which the cath lab was activated. This patient was a 74-year-old woman who had undergone extensive bowel

surgery for complications of Crohn's disease. Her operation was complicated by pneumoperitoneum, requiring emergent reoperation for washout, further resection, and formation of an ileostomy. Her postoperative course was further complicated by circulatory shock. A bedside echo revealed apical akinesis and an ejection fraction of 30%. We assumed that she had sustained a postoperative myocardial infarction involving the LAD. However, coronary angiography revealed normal coronaries, indicating a diagnosis of Takotsubo cardiomyopathy. We measured her LVEDP to be 24 mmHg and she was in cardiogenic shock, so we proceeded to insert an Impella percutaneous ventricular assist device in the left ventricle. Overnight, her hemodynamic status progressively deteriorated. Dr. Bandedali brought her back to the lab the next day to place her on VA-ECMO. While we were connecting her to the pump, I marveled that although Hurricane Harvey had brought Houston to a standstill, the cath lab continued to deliver the best medical care available, placing a patient on the most advanced form of percutaneous mechanical support. That patient was later weaned from mechanical support and is alive today.

Tuesday was my fourth straight day in the hospital. More personnel could come in as the streets became more passable. Thus, patient care responsibilities were spread over a larger pool of fellows – a welcome change from the frenetic pace of the previous three days. However, seeing my colleague Dr. Alexander Postalain performing bedside echos with the portable echo machine reminded me that things weren't quite back to normal. I congratulated him on his promotion to echo tech.

That afternoon, my street was finally drivable, and I heard from a neighbor that my condo had not flooded. I approached the attending who was coordinating the cardiovascular operations during the hurricane, and asked if I could go home. He requested that one of the interventional fellows remain in house, in case Harvey made a second pass over Houston, as the meteorologists were predicting at the time. The other fellows were all tending to their families and were unavailable to come in. So as the only single man without any children to watch over, I stayed. Some of the restaurants in Rice Village had re-opened by that night, so after four days of cafeteria food (which was getting progressively less appetizing), I ordered a filet mignon and chocolate cake. It was one of the best meals I had eaten in my life. And it was good that I had this energy-rich meal, because later that evening, a STEMI case and an emergency Impella case were done in the cath lab. After the Impella case finished at 1:00 AM, I realized that in six hours I would be able to go home.

The rest of the night was quiet, and I got some much-needed rest in the CHO call room. On Wednesday morning, I awakened to the light of a bright and beautiful sun that was shining over Houston. After four days of storm and cloud cover, the sight was truly inspiring. All the fellows could drive to work, and I was finally able to go home. I was overcome with joy that this terrible disaster and my longest shift had come to an end. As I walked out the door with my suitcase in hand, I received a call from a good friend who informed me that his home had flooded badly, and that he needed help with the tear-down and cleanup. It was time for me to leave the hospital. We had a city to rebuild. 🏠



The inpatient team. From left to right: Robert Aertker, MD, Salman Bandedali, MD, James O'Neill, MD, Wassim Shatila, MD, Jordan Chaisson, MD

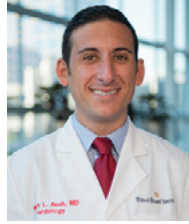
NEW FELLOWS

ANJU BHARDWAJ



MEDICAL SCHOOL: Government Medical College India (2004)
RESIDENCY: St. Joseph Regional Medical Center (2009)

AARON BUSH



MEDICAL SCHOOL: University of Miami (2014)
RESIDENCY: Johns Hopkins (2017)

GEORGE HEBERTON



MEDICAL SCHOOL: UT Houston Med School (2013)
RESIDENCY: Washington U Barnes Jewish Hospital (2016)

AUSTIN HOWARD



MEDICAL SCHOOL: University of Mississippi Med Center (2013)
RESIDENCY: University of North Carolina Hospital (2016)

CARLOS MANRIQUE



MEDICAL SCHOOL: Pontificia Universidad Javeriana (1998)
RESIDENCY: Jacobi Medical Center, Albert Einstein College of Medicine (2012)

JUSTIN MAXFIELD



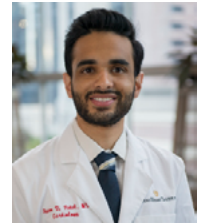
MEDICAL SCHOOL: University of Kansas (2014)
RESIDENCY: Washington U Barnes Jewish Hospital (2016)

MICHAEL MILLARD



MEDICAL SCHOOL: St. Louis University (2014)
RESIDENCY: University of Virginia (2017)

AGAM PATEL



MEDICAL SCHOOL: University of Pittsburgh (2014)
RESIDENCY: New York Presbyterian (2017)

2017 GRADUATES

GENERAL CARDIOLOGY

Bobby Aertker
 David Burkland
 Brian Greet
 David Kuten ****Tauber Outstanding Fellow**
 James O'Neill
 Wassim Shatila

INTERVENTIONAL CARDIOLOGY

Salman Bandeali
 Brett Goodwin
 Mehran Massumi
 Robert Salazar
 Sam Sheth
 Chalam Mulukutla

ELECTROPHYSIOLOGY

Indranill Basu Ray
 Ketan Koranne

ADVANCED HEART FAILURE

Salman Gohar
 Ziad Taimeh

2017 PLANS

Interventional Cardiology – THI
 Electrophysiology – THI
 Electrophysiology – THI
 Interventional Cardiology – THI
 Interventional Cardiology – THI
 Interventional Cardiology – THI

BSLMC – Texas Heart Institute
 Imperial Health - Lake Charles, LA
 Kelsey Seybold – Texas Heart Institute
 Texas Cardiology Associates of Houston
 BSLMC – Texas Heart Institute
 Pending

CHI St Vincent's, Little Rock, AR
 Mason City Clinic Heart Center – Mason City, IA

Baylor Scott and White Heart and Vascular Institute - Temple, TX
 BSLMC – Texas Heart Institute

UPCOMING EVENTS

OCTOBER 21-22
Diabetes for Primary Care in 2017
13th Annual Diabetes Symposium

NOV 4
THICS Tennis Day

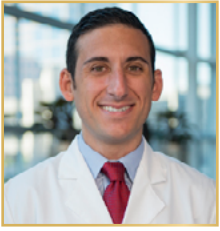
DECEMBER 8
Cardiology Fellows Annual Holiday Party

JANUARY 20
8th Annual Women's Heart and Vascular Symposium
Emerging Strategies to Impact Women's Health and Longevity

FEBRUARY 3
The Ali Massumi Cardiac Arrhythmia Symposium

2017-2018 CARDIOLOGY FELLOWS

FIRST YEAR FELLOWS



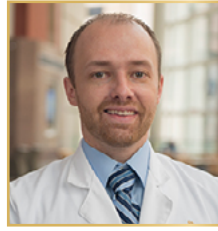
Aaron Bush



George Heberton



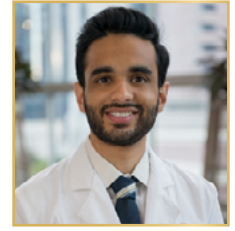
Austin Howard



Justin Maxfield



Michael Millard

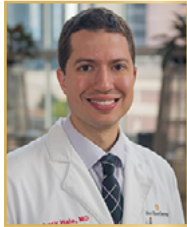


Agam Patel

SECOND YEAR FELLOWS



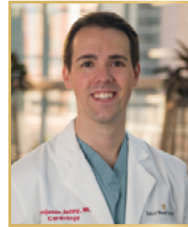
Briana Costello



Zachary Hale



Kenneth Igbalode



Benjamin Jenny



Carol Lai



Dhaval Parekh



Alexander Postalian

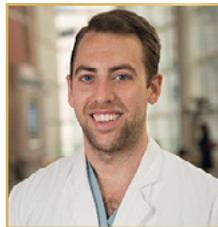
THIRD YEAR FELLOWS



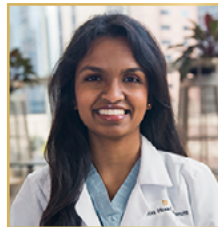
Jordan Chaisson



Robert Godley



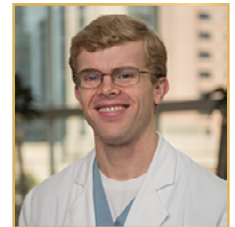
Michael McArdle



Priyanka Sen



Anoop Shah

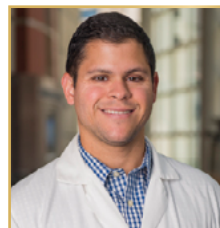


John Tyler

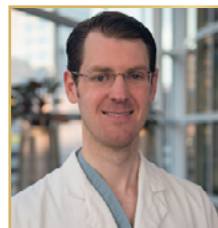
INTERVENTIONAL FELLOWS (4TH YEAR)



Robert Aertker



David Kuten

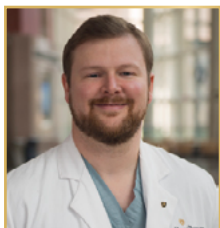


James O'Neill



Wassim Shatila

EP FELLOWS (4TH YEAR)

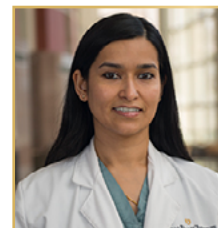


David Burkland

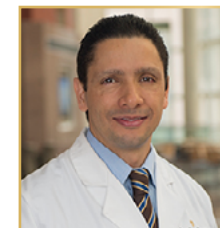


Brian Greet

ADVANCED HEART FAILURE



Anju Bhardwaj



Carlos Manrique