



Photo by Sarah Pack

MUSC Health care teams gathered Dec. 18 at the new MUSC Health West Ashley Medical Pavilion (at Citadel Mall) to complete “Day in the Life” activity sessions and exercises to familiarize staff prior to the Dec. 30 opening of the facility.

Retail therapy meets health care: MUSC Health West Ashley Medical Pavilion

BY HELEN ADAMS

adamshel@musc.edu

Patients are buying into the idea of the first MUSC Health site inside a shopping mall. The MUSC Health West Ashley Medical Pavilion opened Dec. 30 in the former J.C. Penney store in Citadel Mall. Less than two weeks later, more than 2,000 appointments have been completed there.

The medical pavilion, in the same wing of the mall as Foot Locker and a Charleston Police substation, is the newest addition to the almost 40-year-old mall. As the shopping center transitions from its 1980s roots to meet the needs of the West Ashley area of Charleston

and beyond in the 21st century, it’s set to be renamed the “Epic Center.”

Peter Zwerner, M.D., chief medical officer of MUSC Physicians, said that the MUSC Health West Ashley Medical Pavilion offers a wide range of services. “Over 18 different medical specialties will be seeing patients at this location. We’re also offering comprehensive imaging and laboratory services.”

Services include:



Zwerner



The new 126,000 square-foot campus is a large multispecialty practice with a diagnostic imaging center and on-location PT/OT services.

outpatient surgery, cardiology, dermatology, ENT care, endocrinology, gastroenterology, imaging/X-ray Center, infusion therapy, lab services, Musculoskeletal Institute, nephrology, neurology, occupational therapy, ophthalmology, pain management, physical therapy, primary care, rheumatology and a Spine Center.

Patrick Cawley, M.D., CEO of MUSC Health, said that it’s one of MUSC Health’s bigger sites. He loves the fact that there’s plenty of parking, and it’s easy to get to. “It’s bright and airy. They did a very nice job of making it patient and family accommodating.”

You can make an appointment online through muschealth.org or call 843-792-1414.

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Hope for transplant
patients.

8 Even the Grinch loves dogs
Kids respond to holiday
cheer.

2 Around Campus
3 Health and Well-Being
5 Meet Tung Giep, M.D.

PEOPLE

David Bundy



David Bundy, M.D., Department of Pediatrics, is the new chief quality officer for MUSC Health Charleston. Bundy was previously the medical director of quality and safety for MUSC Children's Health and former

patient safety officer for MUSC Health Charleston. Bundy replaces Danielle Scheurer, M.D., who has transitioned to the CQO role for MUSC Health System and RHN hospitals across the state.

Lisa Goodlett



Lisa Goodlett, chief financial officer of MUSC Health, was named among the top 100 CFOs of academic medical centers and health systems across the country by 2019 Beckers Healthcare Hospital Review.

Goodlett oversees the financial strategy and planning for MUSC Health and is responsible for the financial department of the hospital, children's hospital and Level 1 trauma center. Goodlett manages an annual budget of more than \$2.3 billion with an economic impact of more than \$3.8 billion.

AROUND CAMPUS



Photo provided

The Medical University Women's Club held its annual Teddy Bear Day last fall. Volunteers assisted Kelly Hedges, MUSC Volunteer Services manager, in managing the delivery of more than 200 teddy bears to adult patients at the University Hospital.

Lisa Kerr



Lisa Kerr, Ph.D., professor and director of the Office of Humanities, was named the 2019 MUSC Academic Affairs Faculty Member of the Year. Kerr was praised for her integrative

work in the humanities and ability to infuse the humanities into curricula for MUSC students. She's also recognized for creating SHARE grants in clinical care and educational research projects

as well as collaborating with the Arts in Healing Program and other programs.

Mark E. Ludlow



Mark E. Ludlow, D.M.D., associate professor in the James B. Edwards College of Dental Medicine, was elected to the American College of Prosthodontists board of directors at its Nov. 1 meeting.

Ludlow will serve a three-year term as continuing education division director.

EVENTS

Build, Remodel Expo

The Charleston Build, Remodel and Landscape Expo will be held from Friday to Sunday, Jan 10-12 at the Exchange Park Fairgrounds-Exhibits Building area, Hwy. 78 in Ladson. Connect with the area's leading remodelers, builders and design professionals and listen to experts who will help make home improvement projects a reality. Tickets are \$5 for adults and children are free.

30th Annual MLK Celebration

The Black History Intercollegiate Consortium (CofC, The Citadel, Charleston Southern University, Trident Technical College and MUSC) will host the 30th Annual MLK Celebration "The Dream in 2020, Conviction in Our Purpose, Clarity in Our Mission, Resilient in Our Progress" at 6:30 p.m., Tuesday, Jan. 21 at MUSC's Drug Discovery Building. The event is free and open to the public.

103.5 WEZL Concert for Kids

There's still time to get tickets for the Jan. 21 103.5 WEZL 2020 Concert for the Kids featuring Rodney Atkins, LOCASH and Haley & Michaels at the Charleston Music Hall. All of the proceeds benefit kids at MUSC. Tickets are \$25 and \$50. Save money by placing ticket orders via phone to the Charleston Music Hall at 843-853-2252. Also visit wezliheart.com/featured/concert-for-the-kids/.



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Psychiatric pharmacist to receive WSI's 2019 Advancement of Women Award on Jan. 16

Aimee McRae-Clark, Pharm.D., professor in the Department of Psychiatry and Behavioral Science and the Department of Neurosciences, was named the recipient of the MUSC Women Scholars Initiative 2019 Advancement of Women Award. The award recognizes a faculty members who best demonstrates

excellence in her commitment to the advancement and promotion of women faculty at MUSC.

An award presentation and reception honoring McRae-Clark at 4 p.m., Thursday, Jan. 16 at Colcock Hall. The MUSC community is invited.

Be part of the MUSC Imagine U team, join the 2020 Lowcountry Heart Walk

MUSC's enterprisewide employee well-being program, Imagine U, invites you to join the Imagine U team as we walk to fight against heart disease and stroke in the 2020 Lowcountry Heart Walk on Feb. 29 at Brittlebank Park.

The Lowcountry Heart Walk is the American Heart Association's mission in action. This annual event promotes physical activity while raising awareness about heart disease and stroke. Most importantly, this nationwide celebration raises funds for lifesaving research and science that enables millions of Americans to live longer and healthier lives, including many lives within our MUSC community.

This year, the MUSC Office of Health Promotion would like to challenge you and your colleagues to join the Imagine U team. By participating with and training alongside other Imagine U team members, you will not only be actively improving your physical and mental well-being but reducing your own risk for heart disease and stroke. You will also earn 25 Imagine U points by completing the 2020 Heart Walk Imagine U Challenge,

which makes you eligible to win a variety of Imagine U prizes and incentives.

Furthermore, studies show that simply by walking for 30 minutes a day, even in short bursts or distances, individuals experience numerous health benefits.

Walking:

1. Reduces the risk of or helps you manage Type 2 diabetes.
2. Strengthens your heart.
3. Improves cognitive function.
4. Strengthens bones.
5. Reduces the risk of cancer.
6. Improves flexibility.
7. Burns calories.
8. Lowers the risk of stroke.
9. Reduces the symptoms of depression.
10. Reduces stress.

Share this information with your colleagues as you recruit for the Imagine U team and train together.

The Lowcountry Heart Walk is an event for all care team members and their families – regardless of

MUSC Health & Well-Being

By Susan L. Johnson, Ph.D.,
MUSC Office of Health
Promotion



physical fitness level or experience. Simply take the first step and sign up today. Strollers and dogs are welcome.

To sign up, follow the three easy steps at www.musc.edu/iu. Select the Featured Challenges tab. Then select the 2020 Heart Walk Imagine U Challenge. Complete the steps. From there, train for the Lowcountry Heart Walk and walk with us on Feb. 29.

For information about Imagine U or participation in the 2020 Lowcountry Heart Walk Imagine U team, visit www.musc.edu/iu or email daporek@musc.edu.



HEALTH CARE POLICY symposium

Changing What's Possible

Jan 2020

Medicaid Supplemental Payments: History, Policy and Politics

Please join us for the next MUSC Health Care Policy Symposium with guest speaker Barbara Eyman!

Barbara is a nationally recognized health law and policy expert with more than 25 years' experience representing health care entities in Washington and serving as General Counsel for America's Essential Hospitals. Her presentation will focus on the historical and political context surrounding federal funding mechanisms like disproportionate share hospital (DSH) payments, graduate medical education (GME) payments, and supplemental teaching payments. Barbara will provide insight on recently proposed changes to these programs and the potential impact on essential hospitals like MUSC.

This will be the 5th MUSC Health Care Policy Symposium, which is an informative and interactive event series that allows the MUSC community to hear directly from health policymakers and experts. We look forward to hosting Barbara on Thursday, January 16, 2020 from 1:30-2:30 pm in the Storm Eye Auditorium, and hope to see you there!



SPEAKER:
Barbara Eyman



To register: <https://redcap.musc.edu/surveys/?s=C9MDKDPFRT>

Thursday, January 16, 2020 | 1:30 - 2:30pm
Storm Eye Auditorium

Changing What's Possible

The Department of Diversity, Equity and Inclusion



Rev. Dr. Martin Luther King Jr. Commemoration Program

"The time is always right to do what is right." **Tuesday, January 21, 2020**

The Rev. Dr. Martin Luther King Jr. commemoration is an annual celebration honoring the legacy of Dr. King. The keynote speaker will be Ms. Katie Dahlheim, Esq., Creator and Director of the Lowcountry Blessing Box Project - a local nonprofit addressing food insecurity in the Lowcountry.

12:00 pm - 1:00 pm

**Basic Science Auditorium
(Rm 100)**

We welcome the donation of nutritious, non-perishable food items. New mittens and socks are also appreciated.

Lunch will be provided for the first 50 attendees.

For more information, contact Dr. DaNine J. Fleming (flemid@musc.edu) or visit musc.edu/univdei.

Reflect. Learn. Serve. Celebrate.

Nation's doctor gives inspiring talk at MUSC

By HELEN ADAMS

adamshel@musc.edu

A standing-room-only crowd turned out on Dec. 19 to hear U.S. Surgeon General Jerome M. Adams speak at MUSC. His talk, which blended personal stories with policy concerns, gave students and medical professionals the chance to hear from a man known as the nation's doctor.

Adams, an anesthesiologist who became the nation's 20th surgeon general in 2017, started with a reality check. "Life expectancy is trending down for the third year in a row. And that's the first time that's happened in over half a century. So, to put it another way, I stand before you as the first generation of parents in the last 50 years who, as of right now, can't look their kids in the eye and say, 'You're going to live a longer life than I'm going to live.'"

The country needs to take steps now to change that, the surgeon general said. In his view, we shouldn't wait until those kids grow up and some of them get cancer or have heart problems decades from now. We should take steps today that may keep them from getting sick in the future.

Adams gave an example from his own life. Early last year, his wife Lacey was diagnosed with metastatic melanoma, the most serious type of skin cancer. Thanks to immunotherapy, she appears to be cured for now, and he's grateful to the

years of research that made that possible.

But Adams added a big "what if" prevention question to the story. "It's easy to get caught up in that and not think about the fact that gosh, how much money and acrimony and heartache would we have saved, if instead of focusing on making immunotherapy available to her, 20 years earlier, we'd passed a policy that said teenagers aren't allowed in tanning beds. And then she would have never gotten that melanoma in the first place."

That's the kind of thing that can really make a difference, Adams said — looking for ways to protect people from things that have the potential to harm them. That's part of his job as surgeon general, a role that calls for him to give the public the best scientific information around to help people improve their health and lower their risk of getting sick or hurt. He also oversees the U.S. Public Health Service Commissioned Corps, a group of more than 6,000 public health professionals.

Adams called on audience members at MUSC to become advocates for prevention as well.

"We don't have a health care system. What we have is a sick reimbursement system. We wait till people get cancer or have a heart attack or show up in my operating room needing their foot amputated. We need to help folks understand that we aren't going to change our trajectory from a health care cost



Photos by Sarah Pack

U.S. Surgeon General Jerome M. Adams speaks to a packed auditorium at MUSC.



Audience members, including many willing to stand for the entire talk because all of the seats were taken, applaud during Dr. Adams' speech.



The Surgeon General talks with MUSC leaders, including College of Medicine Dean Raymond DuBois, left, and MUSC President David Cole.

point of view unless we really lean into prevention."

So, what does leaning into prevention look like? It starts by viewing health as an opportunity, Adams said.

"One of my top priorities is my community health and economic prosperity initiative. Communities that invest in health don't just see health metrics improve. They see economic metrics improve. They see job growth. They see less absenteeism. We need to help them understand that healthy communities draw new businesses to town. And businesses' No. 2 expense is health care. If we really lean into prevention, we will lower their No. 2 expense and make their businesses more

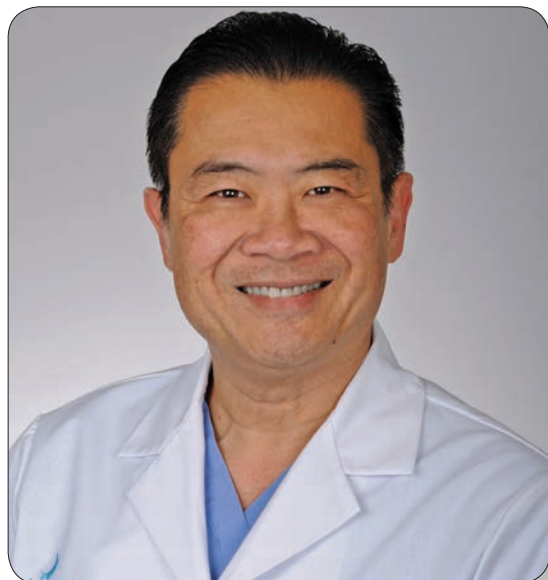
profitable."

Adams outlined some of what he views as current threats to public health, including marijuana that's dramatically more potent than in the past, youth e-cigarette use and the opioid crisis. He demonstrated how easy it is to carry and use naloxone, a medication that can quickly reverse an opioid overdose. And he pointed out how societal and health factors impact something Americans place a high value on: national security.

"Seventy percent of our 18- to 24-year-olds are ineligible for military service right now because they can't pass their physical, they can't meet the education requirements or they have a criminal

See VISIT on page 10

MEET TUNG



Tung Giep, M.D.

Department; How long at MUSC

Department of Pediatrics-Division of Neonatal Perinatal Medicine; five months

How are you changing what's possible at MUSC

I'm charged with developing a community neonatology program.

Family

Wife, Michelle Ngo, and son, Sebastian

Something that people don't know about you

I'm a pretty good cook.

Favortie football team

Pittsburgh Steelers

Dream job

Coming back to MUSC after being in private practice for the past 25 years. I'm finishing my career where I started medical school and residency.

Last book read

"Justice on Fire" by J. Patrick O'Connor

Favorite place in the world

Singapore

Black History Intercollegiate Consortium

30th Annual

MLK

CELEBRATION

"The Dream in 2020: Conviction in our Purpose,
Clarity in our Mission, Resilient in our Progress"

January 21, 2020, 6:30 p.m.

Medical University of South Carolina
Drug Discovery Building, Auditorium
70 President Street

Reception to Follow
(Drug Discovery Lobby)

Free Event, Open to the Public

BHIC Member
Institutions:



Conversation Cafe
1.15.20



BRIDGING THE ASHLEY

Wednesday, January 15th | 1-2pm
Drug Discovery Building Room 110

A conversation with Charleston Moves on the future Ashley River bike-pedestrian bridge and their vision of a more-connected Charleston

musc.edu/gogreen



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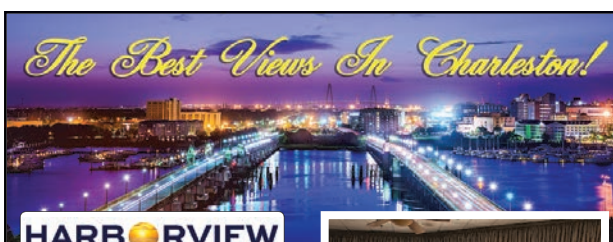
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Researchers awarded patent on nanoparticle that delivers transplant drug

BY LESLIE CANTU
cantul@musc.edu

Organ transplants have allowed hundreds of thousands of people in the United States to add years to their lives. But the procedure is far from perfect. Recipients must take antirejection drugs for the remainder of their lives, and these drugs leave them vulnerable to serious side effects.

“In the current state of affairs, people are taking these antirejection medications, which are going through their whole body,” said Satish Nadig, M.D., D.Phil., who holds the P.K. Baliga, M.D. Endowed Chair in Solid Organ Transplantation. “It’s preventing early rejection, which is great, but patients are also succumbing to heart disease,

diabetes, infections, and failure of the organs that the drugs are supposed to be protecting, because they’re toxic to those organs as well.”

But the team of Nadig; bioengineer Ann-Marie Broome, Ph.D., M.B.A.; immunologist Carl Atkinson, Ph.D.; nanochemist Suraj Dixit, Ph.D.; and the MUSC Foundation for Research Development (FRD) has just been granted a patent for a method of delivering antirejection drugs directly to the transplanted organ. The scientists believe that targeting the drugs to the transplanted organ will allow the rest of the body’s immune system to keep its guard up, protecting against infection and disease.

The process of developing an invention and applying for a patent



Photo by Sarah Pack

Drs. Suraj Dixit and Ann-Marie Broome brought bioengineering and nanochemical experience to the group of four MUSC researchers who worked on the nanoparticle idea.

takes years. Broome recalls that she got a call “out of the blue” about four months after she joined MUSC in 2012. It was Nadig, who was about to join the faculty; he had heard that she was doing nanoparticle research.

Nadig had been particularly affected by the death of a college-aged patient who succumbed to the antirejection medication. He started thinking there

See **NANOPARTICLE** on page 11

David Kent and Charlotte Lemon



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Cancer affecting congressman, game show host set to become No. 2 killer

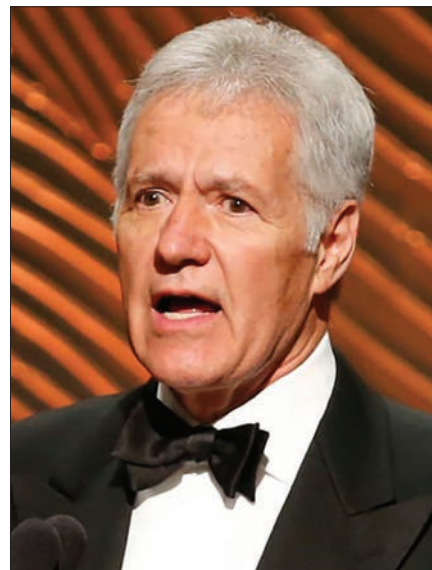
BY HELEN ADAMS

adamshel@musc.edu

When Congressman John Lewis and "Jeopardy" host Alex Trebek announced that they're fighting pancreatic cancer, the disease was already at an advanced stage in both men. Stage 4 means the cancer has spread from its original site, in this case the pancreas, to other areas of the body.

Pancreatic cancer's tendency to hide until it's at a dangerously advanced stage is part of the reason the disease is on track to become the No. 2 cancer killer in the U.S. within the next decade, says MUSC Health cancer surgeon Katherine Morgan. She serves as medical director of the National Pancreas Foundation's South Carolina chapter.

In the Q&A (see box below), Morgan answers some key questions about the cancer sometimes called a silent killer.



Photos provided

Congressman John Lewis, "Jeopardy" host Alex Trebek and Justice Ruth Bader Ginsburg are among tens of thousands of Americans living with pancreatic cancer.

Q&A about pancreatic cancer with Dr. Katherine Morgan

Q: Why is pancreatic cancer considered so dangerous?

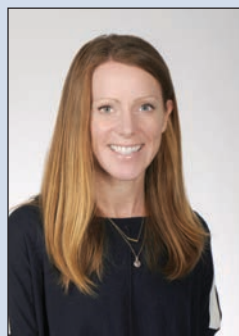
Morgan: Pancreatic cancer often presents late in its course as it spreads throughout the system very early. That's why it is such a difficult disease to cure and has such a poor prognosis. Most people present with advanced disease — stage 4, which is metastatic, and has spread beyond the pancreas.

Q: Why isn't pancreatic cancer caught earlier?

Morgan: There aren't good screening tests that can consistently detect pancreatic cancer in its early stages, and the symptoms don't usually show up until later in the disease. Pancreatic cancer tends to spread systemically earlier than other gastrointestinal malignancies.

Q: What are the symptoms of pancreatic cancer?

Morgan: The most common symptom is painless jaundice, which is when a patient's eyes turn yellow, their urine turns dark and they may develop clay-colored stools. Other symptoms include abdominal pain, fatigue, weight loss, diarrhea and



Morgan

new-onset diabetes.

Q: What causes pancreatic cancer?

Morgan: Risk factors for pancreatic cancer include smoking, obesity, new-onset diabetes and a family history of having this type of cancer. In the past several years, the role of genetics in the development of some cases of pancreatic cancer has become clearer.

Q: How is pancreatic cancer treated?

Morgan: In all stages of pancreatic cancer, chemotherapy is the primary treatment. It uses drugs to try to kill the cancer cells.

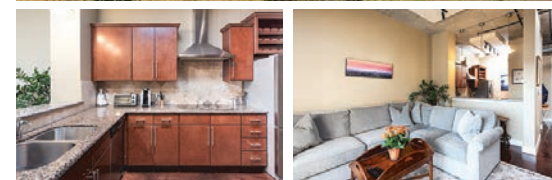
In patients whose cancer is just in the pancreas and has not spread, surgery to remove the cancer may be the best chance for cure.

If the cancer is in the head of the pancreas, which means the widest part of the organ, we do a Whipple procedure. That means we remove the head of the pancreas along with the end of the bile duct, the first part of the small bowel (the duodenum) and the surrounding lymph nodes. We may also remove and reconstruct portions of the nearby major blood vessels if they're involved with the tumor.

In patients who have cancer in the body or tail of the pancreas, which are the narrower parts of the

See CANCER on page 11

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JP04-184215-1

The love and luck that binds us all together

By **BYRCE DONOVAN**
donovanb@musc.edu

Sullivan Cole's tiny head is a tangle of yellow, red and blue wires as he clutches Fierce, a 12-year-old Chihuahua, with all his might. His bright green Minecraft pajamas drag the floor as he follows me around his room at MUSC's Children's Hospital.

"Are you the Grinch?" he asks. He loves that movie, his mother tells me.

It's a fair question because, after all, I'm wearing a lime green onesie, the hood of which has the face of the aforementioned curmudgeon on it and the words "The Grinch" emblazoned on the chest in that classic Seuss script. But it's also a fair question because unbeknownst to Sullivan, I complain about the stupidest stuff. All. The. Time.

"Yes," I say, the tiniest of cracks in my voice. And then I can't speak. My mind is bathed in guilt, because now I'm not thinking about Sullivan and his family. About their battle. Their struggle with the unknown. No. I'm thinking about how my kids are at school, probably out on the playground, running around, screaming and laughing at this very same moment, living healthy, normal lives. Then the guilt deepens because I think about how I always get on them for stupid things, like forgetting to turn off the lights when they leave a room or chewing with their mouths open.

"So, is this Max?" Sullivan asks, mercifully tearing me away from my thoughts as he gestures toward the little dog in his arms.

I nod and hand him a plush horse the size of his head, which he happily trades for Fierce. Marybeth Myers, Fierce's mom and one of the nearly 100 pet therapy volunteers for MUSC, gently takes her pup back and wishes Sullivan happy holidays.

How I have the opportunity to meet Sullivan is thanks to Cathy Bennett, director of MUSC's Pet Therapy program. She let me tag along with her and more than a dozen dogs and their owners during the Pet Therapy Parade — with only one caveat: I had to dress up as the Grinch. It's a small price to pay for the opportunity to be involved in the annual tradition that rounds up as many volunteers and canines as possible. The pups are dressed in hilarious holiday-themed costumes and then spend half the day touring the children's hospital, giving out presents and a wide variety of furry shoulders to lean on.

"This event is a time for everybody to forget where they are," Bennett says. "I think it's just a feel-good moment for everybody."

The Centers for Disease Control and Prevention says pets "provide invaluable health benefits to their human companions." Studies have shown that they can lower your blood pressure, cholesterol, pain levels and most



Photo by Sarah Pack

Pet therapy volunteer Marybeth Myers tries to discuss Christmas with Sullivan Cole, but all he wants to do is hold Fierce and talk about the macaroni and cheese he's getting for lunch.

importantly, the feeling of loneliness. So, it's no wonder this event is a huge hit with patients, families and staff alike.

"I cannot tell you how much this means to

See **PARADE** on page 10

MUSC Women's Health Interest Group



Please join us for our quarterly meeting on
Monday, February 24th
12:00-1:00pm
Gazes Room 125
Lunch will be provided

This workgroup meets quarterly to discuss potential
and ongoing cross-campus research collaborations in the field of sex
and gender differences.

This group is sponsored by the MUSC SCORE



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Specialties join forces to provide unified care for pregnant women with diabetes

BY LESLIE CANTU

cantul@musc.edu

Women with diabetes who become pregnant have among the most difficult pregnancies to manage. But a new joint endocrine and obstetric clinic at MUSC Women's Health seeks to move those 40 weeks of pregnancy along smoothly to a successful and healthy birth.

The joint clinic, a passion of Timothy Lyons, M.D., director of the Division of Endocrinology at MUSC Health, began taking patients in November.

Endocrinologist Aundrea Loftley, M.D., said that in the past, obstetricians would manage a patient's diabetes with consultation from an endocrinologist as necessary. Some hospitals have established endocrine/obstetric clinics in

which a patient can see both doctors on the same day, but MUSC Health wants to take the model a step further.

"Our concept is quite novel. Most other joint-clinic models do have the obstetrician, the dietician and the endocrinologist all there, but traditionally, the patient would go from room to room. We are trying something a little different," she said. "We want to pilot a program where the patient is able to see the obstetrician and endocrinologist simultaneously. That's going to improve the communication between the specialties. That's going to give us better health outcomes. And it's also going to make it easier for our pregnant patients to get the care they need."

Donna Johnson, M.D., chairwoman



Photo by Sarah Pack

Left row from back: Dr. Barbara Head, Dr. Ryan Cuff, dietician Betsy Johnson, Dr. Aundrea Loftley. Right row from back: Dr. Harsha Karanchi, nurse Courtney Spell, registration representative Olivia King and nurse Acina Greene.

of the Department of Obstetrics and Gynecology, said the clinic is starting by taking women with Type 1 diabetes or poorly controlled Type 2 diabetes.

Diabetes increases the risk of preeclampsia, stillbirth and growth problems, Johnson said. Research suggests it can also have lifelong implications for the baby. Once thought of as an older person's disease, diabetes has increased in recent decades among U.S. adults and adolescents, meaning more women of childbearing age have the condition.

Maternal fetal medicine specialist Barbara Head, M.D., noted that doctors must help to control diabetes in pregnant women much more strictly than in women who are not pregnant, and she credited the endocrinology team with helping patients to achieve the degree of control they need.

Loftley, Head and the two other doctors involved in the clinic — maternal fetal medicine specialist Ryan Cuff, M.D., and endocrinologist Harsha Karanchi, M.D. — appreciate the collaborative nature of the clinic. Cuff said the team approach creates a welcome opportunity for each specialty to learn from the other and to share that knowledge with patients in other

settings. More importantly, the doctors agreed, the patients seem to appreciate the collaboration.

"Patients want to know that their providers are talking to one another so when they see them in the room together, they know that's happening," Head said.

"Patients' perception of their care is highly associated with health outcomes," Loftley added. "We want good health outcomes, so if the patients perceive there is more continuity in their care and better communication, they are going to have better health outcomes. I think it's good all the way around."

In fact, the clinic just received a three-year grant from the Duke Endowment to expand the model beyond the Lowcountry region via telemedicine. The group hopes to start the telemedicine clinic in January.

Karanchi and Head also noted they'd eventually like to add preconception counseling.

"We really would like to have an opportunity to meet with those women before they're pregnant, because that's going to result in the best pregnancy outcomes for them and their babies," Head said.

January "Health Focus" on S.C. Public Radio

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Jan 13 — Segment #1

Topic: Keeping Kids Safe from Firearms in the Home

Guest: Dr. Annie Andrews

Pediatrician Dr. Annie Andrews talks about keeping children safe from firearm injuries in the home. Andrews is the director of advocacy for the Department of Pediatrics.

Jan. 13 — Segment #2

Topic: Sepsis Research

Guest: Dr. Andrew Goodwin

MICU medical director Dr. Andrew Goodwin discusses severe sepsis and research that is underway to develop new treatments for this condition. Goodwin is an associate professor of pulmonary and critical care medicine.

Jan. 20 — Segment #1

Topic: Tips for Getting a Good Night's Sleep

Guest: Dr. Andrea Rinn

Sleep specialist Dr. Andrea Rinn discusses healthy sleep habits and

routines for adults. Rinn is a physician in the Department of Pulmonary, Critical Care and Sleep Medicine.

Jan. 20 — Segment #2

Topic: Cervical Cancer Prevention

Guest: Dr. Jessica Tarleton

Gynecologist and infectious disease specialist Dr. Jessica Tarleton talks about cervical cancer prevention and screening.

Jan. 27 — Segment #1

Topic: Educating Sugar in Your Child's Diet

Guest: Dr. Rachel Zweigoren

Pediatrician Dr. Rachel Zweigoren discusses health benefits and practical tips for reducing sugar in your child's diet.

Jan. 27 — Segment #2

Topic: Drug Recalls

Guest: Dr. Jeffrey Brittain

Pharmacy Support Services director Dr. Jeffrey Brittain talks about drug recalls in the U.S.

PARADE *Continued from Page Seven*

everybody,” one nurse says, wiping away tears. “You just don’t have any idea how great this is. For all of us.”

In room after room, we encounter kids like Sullivan. Some are able to move, dragging their IVs and tubes around with them as they shuffle. Some aren’t even able to get out of bed. No matter their situation, it’s up to us, as a part of the Pet Therapy Parade, to try to transport them somewhere else — even if just for a moment — by giving them a smile, a stuffed animal, time to love on a dog.

It’s a very tiny gift, but in the big picture, it’s huge. Sure, some of these kids will be fortunate enough to make it home in time for Christmas. But the sad truth is many will not. They’ll take all the smiles they can get.

One floor up from Sullivan is 13-year-old Claire Trowbridge. She’s a huge soccer fan, with bright, energetic eyes that flash a glimpse of her competitiveness. In August, Claire and her family found out she has acute lymphoblastic leukemia.

Right now, Claire doesn’t care about attacking midfielders or mutating cells. She’s solely focused on Jazz and Mercy, two gigantic black and white Newfoundlands with enough fur between them to make a third dog.

“They are so soft,” she says with a



Pet therapy volunteer Marybeth Myers joins Bryce “the Grinch” Donovan at the holiday pet parade.

smile almost as big as the dogs she’s squeezing.

The disease Claire is battling has an 80% cure rate, her mom tells me. Though those odds are strongly in her favor, her mom says that what really buoys the family’s spirit is Claire’s attitude. “She is so tough it’s incredible,” her mother Laura says. “Her positivity through all this has been tremendous.”

This visit is a scheduled one, she says. Medicine to help battle the cancer. “But they’re not all like this,” she says. “Sometimes you aren’t this lucky.”

Lucky. It’s a word I have heard a lot today.

It’s hard to reconcile that word with

Photo by Sarah Pack

the fact that these parents are in a hospital with kids who are really sick. As humans, all we’re really trying to do in this world is make sense of things. But when the very things we’re trying to decipher don’t have satisfying answers, it can be unsettling.

Like why does one kid have a playdate while the other gets chemotherapy? Why can one kid skip and hop and another will never be able to feed himself? Why does one family get to play basketball in the driveway while another sleeps in chairs in the ICU?

It’s easy to get discouraged by these kinds of questions, so it’s important that we lean on the things we do understand.

The things that make sense to us. Things like family and friends. And yeah, some really cute pooches don’t hurt either.

“To see dogs wearing elf ears or dressed as Santa Claus, it has a tendency to make you stop and remember what this season is all about,” Bennett says.

And at the end of the day, when all the dogs are gone and the presents opened, we turn to the ones who are with us day after day. We rely on them for their love and support — and the words they speak.

Words like “lucky.”

It’s that word that, in particular, rings over and over in my brain. And I’m starting to think that maybe I’ve been looking at this all wrong. Surrounding me are sick kids. But immediately thinking of my own healthy ones shouldn’t make me feel bad. And while I might never be able to answer all the whys that echo inside my head, they can serve to remind me that it’s our love that keeps us sane. Binds us. Gives us hope. Reminds us that we are all lucky in our own way. Lucky to have kids that forget to turn off the lights. Lucky to have strong ones that ignore the electrodes taped to their heads. Lucky to be in this together.

Because, as a few wise kids once taught me, it’s not about the hand you’re dealt but how you handle it that truly matters the most. And it doesn’t hurt when there’s a dog to snuggle with, too.

VISIT *Continued from Page Four*

record. Our nation’s poor health isn’t just a matter of diabetes or hypertension or cancer 30 or 40 years down the road. We’re a less safe country right now because we’re an unhealthy country.”

Earlier in the day, Adams sat down with MUSC leaders to talk about maternal mortality, vaccine-preventable diseases, mental health, substance misuse, social determinants of health and the need to better integrate oral health into health care. They also discussed the importance of creating healthy environments, including smoke-free areas, healthy food options and safe and walkable neighborhoods.

The surgeon general also made time to meet with MUSC students, including some from the College of Medicine’s Group on Diversity Affairs. They

talked about diversity in medicine, the importance of equal access to health care, what motivated the students to go into medicine and how they’re trying to make a difference in world. He encouraged them to find good mentors and become good role models.

Back in the auditorium, Adams asked the people in the audience to use their expertise as medical professionals to speak out about the best ways to make people healthier. Political leaders need their input to make more informed decisions.

“I continue to be shocked at the frequency with which decisions are made about the way clinical care is going to be delivered in your community without the input of anyone who’s actually touched a patient,” Adams said. “I think it’s critical that you all get involved and facilitate your colleagues getting involved.”

The Medical University of South Carolina may be able to help!



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Changing What's Possible

NANOPARTICLE *Continued from Page Six*

must be a way to target transplanted organs in the same way oncologists target tumors. Broome was excited about the idea.

"It was a unique avenue for me because I was primarily studying cancerous diseases, not necessarily associated with surgical transplantation. It was exhilarating because it was a whole new field to explore," she said.

They quickly pulled in Atkinson for his immunology expertise. Dixit was a postdoctoral fellow in Broome's lab who had expertise in packaging and delivering nanoparticles to fight cancer. Initially, the group wanted to create a more focused path to deliver drugs directly to the transplanted organ after surgery. While that remains a goal, they realize there is a long regulatory path to reach it.

"The satisfaction and effectiveness of team science is that you come up with a lofty idea and then you delve down and think, where is the low hanging fruit that you can do quickly?" Broome said.

And as they tossed around ideas, they realized – organs often spend hours in transport after being removed from the donor. What's being done during that

time to prep the organ for transplant?

Answer: Not much.

"That's a prime opportunity where not much is happening other than storage and delivery," Broome said. "It gives us a chance to treat for events that we know are going to happen downstream, after the transplant occurs."

So the group began working on an idea to bathe the donor organ in the anti-rejection drug rapamycin as it was en route to the hospital where the transplant surgery would occur. Once they came up with the idea, it seemed that, surely, someone else would have already thought of it. But, Broome said, "With the assistance of FRD, we did an analysis on what was out there, and to our surprise, it hadn't been done."

Constructing the nanoparticle took quite a bit of work, Broome said.

As the nanochemist, Dixit took the lead in figuring out the best elements to use to encapsulate the drug. The group then went a step further by developing a targeting system so the nanoparticle would head to the organ and then rupture upon contact with the endothelium, releasing the drug.

The group tested three ideas: letting the drug float freely in the perfusion



Photo by Sarah Pack

Drs. Carl Atkinson and Satish Nadig have collaborated on a number of projects.

solution, encapsulating the drug in a nanoparticle, and encapsulating the drug while also adding the targeting effect.

"We were very excited to see that packaging and targeting worked. In fact, we repeated many of the experiments multiple times because we could not believe our eyes," Broome said.

Thanks to a Small Business Technology Transfer Grant from the

National Institutes of Health National Institute of Biomedical Imaging and Bioengineering, the group is now conducting preclinical trials. If all goes well, the group can move on to clinical trials in humans, which could be "paradigm shifting," Nadig said.

"It's really the next era of transplant," he said.

CANCER *Continued from Page Seven*

organ, we remove the affected parts but leave the head of the pancreas.

Chemoradiation is also often part of the treatment of cancer that hasn't spread beyond the pancreas. It combines chemotherapy with radiation.

There are several newer ablation therapies for people with localized cancers that can't be removed surgically, typically due to extensive blood vessel involvement. Ablation means we use extreme heat or cold to destroy tumors.

There are also many clinical trials available to patients who aren't candidates for standard therapies.

While we still have a long way to go – pancreatic cancer still is a difficult disease with a poor prognosis – there is certainly

optimism in terms of the new treatment options that have come across in the last few years. There have been major advances in chemotherapy over the past decade. We've become much more adept with new surgical approaches and techniques for pancreatic cancer. There are multiple new therapies. And we are so close to clinical translation with several important research initiatives, focusing on personalized treatment options. I am hopeful we will see a real difference in survival rates for this difficult disease in the next decade.

We are fortunate at MUSC Health to have a multidisciplinary team with experts in oncology, surgery, pathology, gastroenterology and radiology who specialize in treating pancreatic cancer, with many on the national forefront of new treatment options for this cancer.

Q: The Food & Drug Administration

recently approved the use of the drug Lynparza for pancreatic cancer. How does it work, and are you encouraged by its possibilities for people with pancreatic cancer?

Morgan: Lynparza is a chemotherapy agent historically used in ovarian cancer patients and has recently been shown to help people with advanced pancreatic cancer go longer without the disease getting worse.

While its benefit has been shown only in people with advanced disease, it's exciting because it's a good example of a targeted therapy – a type of personalized medicine.

You can read more about pancreatic cancer at MUSC Health's Digestive Disease Center at ddc.musc.edu/public/diseases/pancreas-biliary-system/pancreatic-cancer.html.



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MUSC CELEBRATES RESEARCH EXCELLENCE AT RESEARCH DAY



Photos by Jonathan Coultas

Left photo: The 53rd Annual Perry V. Halushka Research Day winners were recognized at the event Nov. 1, 2019. The day featured more than 200 presentations by undergraduate students (high school and college), postdoctoral fellows, clinical fellows, residents, staff scientists and research specialists showcasing various research. MUSC faculty judges recognized first- and second-place winners in multiple divisions. Awards were also given in special categories including interprofessional research, innovation and the Center on Aging. Right photo: Khalil Mallah receives a \$500 first place award (oral presentation) from the Ralph H. Johnson VA Medical Center. For the full list of winners, visit <https://gradstudies.musc.edu/about/news/musc-research-day/winners-list>.

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