

UNIVERSITY OF MARYLAND MEDICINE
ROUNDS

Clinical and Research Updates from the *University of Maryland School of Medicine* and the *University of Maryland Medical Center*

In this
ISSUE

Esophageal Cancer	P1
Atrial Fibrillation	P4
Pituitary Tumors	P7
Facial Paralysis	P8
New Leadership	P10
Pediatric Cardiology	P10

**A TRADITION OF INNOVATION
TAKES ON ESOPHAGEAL CANCER**

When Whit Burrows, M.D., joined the University of Maryland 16 years ago, he looked forward to working at a cancer center that was at the forefront of the University's multidisciplinary esophageal cancer therapy.

Today the University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center has only built on the tradition to becoming a highly developed program and remains one of the biggest centers nationwide for combination treatment of esophageal cancer. The degree of specialization and expertise has only become more pronounced and systematic through the years.

THOROUGH AND THOUGHTFUL CARE

Patients come to Maryland because we know how to take care of esophageal cancer in many, many different ways," says Dr. Burrows, an associate professor of surgery at the University of Maryland School of Medicine.

Depending on their cancer stage, patients may receive high-dose, concurrent chemotherapy and radiation therapy, followed by esophagogastrectomy. Despite the aggressiveness of that care, patients experience some of the lowest complication rates in the nation. | *Cont. p2*



The University of Maryland Medical Center (UMMC) offers one of the largest groups of thoracic surgeons in the region. Besides Dr. Burrows, the esophageal cancer team includes assistant professors of surgery: Shamus Carr, M.D., Gavin Henry, M.D., and Shelby Stewart, M.D., all under the leadership of Joseph Friedberg, M.D., Charles Reid Edwards, MD Professor in Surgery and Division Head of Thoracic Surgery.

“Just because patients are sent here with esophageal cancer doesn’t necessarily mean they’re going to undergo an operation. What it means is that they’re going to get a thoughtful, comprehensive approach to their problems,” says Dr. Carr, who is also associate chief of surgery at UMMC. It helps that team members “rub elbows and cross paths” with a core group of specialists in gastroenterology, thoracic surgery, medical oncology and radiation oncology.

UMMC has one the largest groups of thoracic surgeons in the region.

Elsewhere, patients who receive multimodal care might have to trudge from one office to another across town. In contrast, at the University’s Marlene and Stewart Greenebaum Comprehensive Cancer Center, esophageal cancer specialists, including thoracic surgeons, medical oncologists, and radiation oncologists, “dance around the patient,” as Dr. Burrows describes it. One after another, they see the newly diagnosed patient, all in the same room in the thoracic oncology clinic and share their thoughts regarding the best treatment strategy. Afterwards, they meet to discuss the patient’s care.

Bruce Greenwald, M.D., a gastroenterologist whom Dr. Burrows describes as having “extreme expertise,” sees any undiagnosed patients for an endoscopy and determines cancer

stage. He performs endoscopic mucosal resections using a similar procedure, mitigating the need for an esophagectomy for some patients with early-stage cancer.

For many patients with more advanced esophageal cancer, the team of UM physicians provides high-dose, concurrent chemoradiation therapy followed by esophagectomy. Dr. Burrows praises the radiation and medical oncologists he works with as “very, very talented.”

The Maryland Proton Treatment Center (MPTC), one of only two proton therapy facilities in the mid-Atlantic area that tackle esophageal cancer, opened in 2016 near UMMC’s campus at the University of Maryland BioPark. MPTC is the first proton therapy center on the East Coast to offer pencil-beam scanning, the most advanced form of proton therapy, in all its treatment

rooms. Its 90-ton cyclotron beams proton radiation that, unlike conventional photo radiation, can stop at the perimeter of the treatment area without penetrating farther because protons can be programed to release their energy at a predetermined depth. This gives patients with esophageal cancer the advantage of receiving radiotherapy with a dramatically reduced effect on their heart and lungs.

For patients who need surgery, UMMC surgeons perform both open and minimally invasive esophagectomies. UMMC’s high esophagectomy volumes demonstrate the center’s experience, and patients benefit from the center’s unusually low complication and high survival rates among esophageal surgery patients.



KEY POINTS

- UMMC has long been known for treating esophageal cancer with combination therapy: high-dose, concurrent chemotherapy and radiation followed by esophagectomy.
- The medical center’s team of thoracic surgeons, one of the largest groups in the region, performs a high volume of esophagectomies and works with a multidisciplinary team of esophageal cancer specialists.
- The Maryland Proton Treatment Center delivers the most precise form of radiation therapy available, sparing vital organs during treatment for esophageal cancer.
- UMMC offers the spectrum of esophagogastrectomy from open to minimally invasive esophagectomy, which tends to ease short-term recovery and achieves long-term outcomes on par with those from open procedures.
- The medical center houses the mid-Atlantic’s only inpatient dedicated thoracic intermediate care unit.

LESS INVASIVE SURGERY

The newer, less invasive way to remove the cancer and rebuild the esophagus requires a smaller incision and lessens trauma to the chest wall or abdomen. Carr says patients – and even physicians – look at the small incision and wonder how he performed the surgery. Dr. Burrows describes Dr. Carr as “particularly skilled in the minimally invasive esophagectomy” (MIE).

Dr. Carr says that MIE is “no safer, nor is it any riskier” than conventional surgery. However, he says, the literature suggests that patients who have had MIE spend slightly less time in the hospital, use slightly less narcotic medication after they leave the hospital, and feel recovered sooner than those who received open esophagectomy. Dr. Carr hopes to be able to offer robot-assisted MIE in the near future.

Long-term results for MIE look similar to those for the open-chest procedure.

“Once you get out to six months, we can line up 10 of our patients, and you wouldn’t be able to tell who had open and who had minimally invasive surgery,” Dr. Carr says.

Of course, not all patients are candidates for minimally invasive surgery.

“Dr. Carr and I pride ourselves on being completely upfront with our patients about their expectations,” says Dr. Burrows.

If Dr. Carr or one of his colleagues offers the possibility of MIE to a patient, he or she is also psychologically prepared for the possibility that the surgeon will need to convert mid-procedure to the open approach.

SPECIALIZED POST-SURGERY CARE

Neither the esophagus nor the stomach is a vital organ, but Dr. Burrows tells patients that an esophagectomy “is a very challenging procedure to

recover from, even more so than some operations on vital organs like the heart or lungs.” Fortunately, UMMC’s specialized, comprehensive approach to esophageal cancer continues postoperatively.

After either open esophagectomy or MIE, immediate postoperative care takes place in UMMC’s dedicated thoracic intermediate care unit (TIMC) – a care model that is unique to UMMC in the entire mid-Atlantic region. In the TIMC, patients receive care from a team of specially trained professionals, including nurses, nurse practitioners, physical therapists, respiratory therapists and dietitians.

They “know how to get a patient over this operation,” Dr. Burrows says.

Despite the challenges of esophageal cancer care, UMMC has achieved impressive results.

“We have the unique ability to really cover everything,” says Dr. Burrows.

From diagnosis to staging to multimodal care with the most advanced radiotherapy and surgical techniques, UMMC’s highly experienced team is continuing its tradition of innovative care.



To reach the thoracic surgery team, please call **410-328-6366**.

“Patients come to Maryland because we know how to take care of esophageal cancer in many, many different ways,”

- WHIT BURROWS, M.D. | Pictured Right



TREATMENT OPTIONS, INCLUDING LEADLESS PACEMAKER, PREVENT SUFFERING FROM ATRIAL FIBRILLATION



Patients with atrial fibrillation often end up in an emergency room or hospital bed. Not long ago, physicians had no good options for treating the arrhythmia, says Stephen Shorofsky, M.D., Ph.D., a cardiac electrophysiologist and director of the UMMC electrophysiology laboratory. Now, he and his colleagues at the University of Maryland Medical Center (UMMC) have options to help patients with Afib feel better.

“Most doctors who take care of patients with AFib tend to tell them, ‘It’s not really harming you too much; just live with it,’” says Dr. Shorofsky, a professor of medicine at the University of Maryland School of Medicine. Then patients needlessly compromise their lives. Despite that, “no one has to suffer from AFib,” he says. In fact, UMMC offers a full range of options for treating AFib, including a tiny new pacemaker, all at a single consult site. “We’re about as cutting-edge as it gets in what’s out there,” he says.

QUALITY OF LIFE GUIDES TREATMENT

Dr. Shorofsky specializes in helping patients with arrhythmias, palpitations, or syncope. He also treats those whose weakened hearts put them at risk for dangerous cardiac rhythms.

Since many arrhythmias are nonlethal, evaluation and treatment typically revolve around how much they disrupt patient’s lives. “We can do everything from invasive studies to noninvasive studies to genetic analyses to nothing, depending on the symptoms that a person presents with,” he explains.

Along similar lines, treatment of AFib, the most common serious arrhythmia, follows one of two paths. The rate-control approach leaves the arrhythmia untouched but keeps the atria from driving the ventricles too fast. The rhythm-control method tries to keep the patient out of AFib. According to Dr. Shorofsky, large studies show that targeting the ventricular rate works as well as controlling the heart rhythm in patients who have mild or no symptoms. In contrast, patients whose AFib symptoms hamper their lives need a rhythm-control strategy.

SETTING THE PACE IN RATE-CONTROL TREATMENT

Dr. Shorofsky uses rate-controlling medication to keep the ventricular rate at rest from topping 110 beats per minute. If that fails to control persistent AFib, he may “ablate and pace.” That involves electrically ablating the atrioventricular node--cutting it off from the ventricles--and then installing a pacemaker that tells the ventricles to pump together.

Typical pacemakers, placed just under the skin near the collarbone, have one to three wires that are threaded into the heart through a nearby vein. However, some patients, such as those who have had dialysis or a previous pacemaker, lack places to put the wires. Dr. Shorofsky says, “One of the weak links in pacemaker design is that the wires might break or have a problem.” Furthermore, “as the wires fail and new ones get put in, things get crowded in the heart.”

To avoid such problems, Medtronic now offers a new leadless pacemaker called the Micra; UMMC was the first center in Baltimore to implant one. In a minimally invasive procedure, Dr. Shorofsky inserts the Micra through a catheter in the thigh

until it snugs itself into the ventricle wall. The capsule-shaped device, about an inch long and a quarter inch wide, contains its own circuitry. With no wires to thread, the Micra not only offers an option for those who lack access sites for a traditional pacemaker, it keeps the veins free for future remedies if needed.

The Micra may offer other advantages as well: Dr. Shorofsky thinks the lack of a chest incision may enable patients to recover from implantation faster. Also, he says, the device “may decrease the risk of infection in the future, but that has yet to be proven.” If so, it may particularly help people, such as dialysis patients and those with shunts, who are at high risk of infection.

Currently, the Micra comes only in a one-chamber version, so it cannot help patients who need a two-chamber pacemaker. However, Dr. Shorofsky expects that, 10 to 15 years from now, a device in the atrium will talk to a device

in the ventricle, or to a defibrillator outside the body.

The United States Food and Drug Administration just approved the Micra in April 2016, but Dr. Shorofsky says Europeans have years of experience with it. Medicare now covers it when used as part of a study.

REINING IN ROGUE RHYTHMS

When needed for symptom relief and to ensure quality of life, rhythm-control options may come into play. They come in four varieties. The first, anti-arrhythmic medications, usually work initially, but “there’s about a 50 percent chance that they’ll stop working within 2 years” as the disease progresses, Dr. Shorofsky notes.

Should that happen, he could ablate the tissue producing the chaotic electrical signals. According to Dr. Shorofsky, ablation worked better than drugs in

head-to-head comparisons. “However, it is an invasive procedure,” he warns.

In a third option, a cardiac surgeon performs a maze procedure, an operation that requires putting the patient on cardiac bypass, as the surgeon freezes or burns a small part of the atria, creating scar tissue that blocks erratic electrical signals. A fourth option combines parts of the Maze and ablation procedures. Dr. Shorofsky’s colleague, Murtaza Dawood, M.D., an assistant professor of surgery at the UM School of Medicine, does the surgery, and then an electrophysiologist ablates the troublesome tissue through a catheter.

“One of the advantages of the arrhythmia program at the University of Maryland is that we have a multi-disciplinary team consisting of

KEY POINTS

- The tiny new leadless Medtronic Micra pacemaker, available at UMMC, avoids problems with pacemaker wires.
- Patients need not limit their lives because of Afib, when treatment options could relieve their symptoms.
- UMMC offers a full range of assessment and treatment options for atrial fibrillation, all at a single consult site, to improve patients’ lives.
- To prevent blood clots that can cause strokes, UMMC can install a device to close off the left atrial appendage.

PATIENTS WITH AFIB ...

...have a five-fold increased risk of stroke and many therapies are systemic in nature requiring a multi-disciplinary approach to treatment. At UMMC, cardiologists and cardiac surgeons, who are specially-trained in arrhythmia care, have a long track record of successfully treating complex adult and pediatric arrhythmias, including atrial fibrillation, atrial tachycardia and ventricular tachycardia. This expertise, along with the center’s advanced technology, imaging and techniques, ensures patients receive comprehensive care and achieve optimal outcomes.

TEAM MEMBERS INCLUDE

MURTAZA DAWOOD, M.D.
 Assistant Professor of Surgery
 Surgical Director, Program in Atrial Fibrillation

STEPHEN SHOROFSKY, M.D.
 Professor of Medicine
 Director, Electrophysiology Laboratory

TIMM-MICHAEL DICKFELD, M.D., PH.D.
 Professor of Medicine

MUKTA SRIVASTAVA, M.D.
 Assistant Professor of Medicine

VINCENT SEE, M.D.
 Assistant Professor of Medicine
 Medical Director, Program in Atrial Fibrillation

LIBIN WANG, M.D.
 Assistant Professor of Medicine



To speak with a rhythmic specialist, please call **410-328-6056**.

COLLABORATIVE APPROACH DISTINGUISHES DIAGNOSIS AND TREATMENT OF PITUITARY TUMORS

When it comes to tackling pituitary tumors — a common type of brain lesion — it's unusual to find the collaborative, multidisciplinary approach distinguishing the University of Maryland Medical Center (UMMC) and its program to optimize treatments aimed at tumors in the body's "master gland."

Between 300 and 400 cases of pituitary tumors are diagnosed and/or treated at the University of Maryland each year among a diverse group that includes young and old, both genders and every race, according to Graeme Woodworth, M.D., an associate professor of neurosurgery at the University of Maryland School of Medicine.

Located at the base of the brain, the pea-sized pituitary gland is often referred to as the body's master gland because it regulates the balance of many hormones. "The vast majority of tumors we see are not cancerous, but they still greatly affect patients' overall health," explains endocrinologist Kashif Munir, M.D., an associate professor of medicine at the University of Maryland School of Medicine.

"We hold a multidisciplinary conference regularly to review cases together, laying out treatment options for each patient and discussing the options as a team -- which includes several

neurosurgeons as well as specialists in endocrinology, oncology, ophthalmology, otolaryngology, radiology and radiation oncology -- so we can offer the best combined recommendation to each patient at each phase of care," says Dr. Woodworth, also director of neurosurgical oncology at the University of Maryland. "The broad spectrum of resources at UMMC is what differentiates our center."

SCANS VITAL TO DIAGNOSIS

Found in approximately 15% of individuals during autopsy studies — even if they never triggered symptoms — pituitary tumors are typically only diagnosed after a patient has noticed certain signs, which can range from mild to severe. Dr. Woodworth explains three common patterns precipitating diagnosis, **including:**

- **Hormone imbalance:** The pituitary releases an array of hormones affecting bodily functions such as growth, metabolism, egg and sperm production, breast milk production and the production of cortisol, a hormone with properties similar to steroids. Any of these processes can be disrupted by tumor pressure, causing a variety of symptoms.
- **Headaches:** During a medical workup for frequent headaches — which may be due to migraines or trauma such as an accident — a pituitary tumor may be discovered.

- **New vision loss:** The most alarming of the three patterns, vision loss is assessed with an eye exam and MRI scan of the brain. A pituitary tumor can prompt vision loss or double vision by pressing on optic nerves. "This can have a major impact on quality of life, because the patient can't drive and may not be able to work," Dr. Woodworth notes.

Regardless of presentation, diagnosing pituitary tumors commonly incorporates imaging scans such as CT or MRI. The latter is perhaps more effective, however, "because MRI is much better at visualizing soft tissue and brain structures," Dr. Woodworth says.

SURGERY TOPS TREATMENT OPTIONS

Among treatment options, surgery is tapped most often to accurately diagnose and treat pituitary tumors when indicated, Dr. Woodworth explains. He along with Drs. Francois Aldrich, Howard Eisenberg and Charles Sansur are the neurosurgeons consulted to handle these cases at UMMC. The most pressing indication for surgery is when a patient is suffering from a neurological problem such as vision loss from the mass. But when the tumor is clearly growing, surgery is indicated, as well as when a hormone imbalance is at play. "For tumors that secrete hormones, we are often able to use the capsule on the outside of the tumor to obtain a complete resection, and potentially cure patients of their disease and help eliminate the need for repeat surgery," adds Dr. Sansur, an associate professor of neurosurgery. Typically, pituitary tumors are removed surgically through the nasal passage.

"The caveat is that prolactin-secreting tumors, which can stimulate breast milk production without pregnancy, may respond well to medical management

electrophysiologists and surgeons. When patients are referred to us, we first get an idea of what the arrhythmia burden is since there is a wide spectrum of arrhythmia symptoms. There is also a wide spectrum of arrhythmia treatments here, so we have a lot to offer patients," adds Dr. Dawood.

STRIKING AGAINST STROKES

Besides tackling the heart rate or rhythm, Dr. Shorofsky evaluates patients' risk factors to see if any need addressing. Because AFib causes more strokes than any other factor, he

AFib causes more strokes than any other factor

believes in evaluating all patients to see if they need anticoagulation therapy. Unfortunately, many AFib patients cannot take anticoagulant drugs, due to dietary restrictions, potential drug interactions, or bleeding complications.

In such cases, the electrophysiology lab can put in an atrial appendage closure device, such as the Watchman from Boston Scientific. Most Afib-related strokes happen after clots form in the left atrial appendage, where blood pools. The Watchman closes off that area. To learn more about the Watchman from the UM team, visit: physicians.umm.edu/watchman.

COMPREHENSIVE CARE FOR BETTER LIVING

Dr. Shorofsky says he and his colleagues see too many patients who have been limiting their activity or tolerating AFib for years. They can stop doing so, because UMMC offers comprehensive AFib treatment, from drugs to the most advanced surgical techniques to a tiny new leadless pacemaker.

"We give people their life back," he says, "so they don't have to settle with compromising their life because of atrial fibrillation. There are good options nowadays to treat it."

"The broad spectrum of resources at UMMC is what differentiates our center."

- GRAEME WOODWORTH, M.D.

with dopamine-related drugs,” he says. Radiation therapy may also be used to treat pituitary tumors when surgery is deemed high-risk or in the case of recurrent tumors, Dr. Woodworth says.

In cases where radiation therapy is recommended, UMMC patients have access to proton therapy, a highly advanced and precise form of radiation, through the Maryland Proton Treatment Center (MPTC). MPTC offers the most advanced form of proton therapy in the world, called pencil beam scanning, which delivers powerful beams directly to tumors, protecting sensitive nearby

tissues. “At MPTC we are researching ways to improve radiation treatment,” explains Dr. Robert Malyapa, M.D., Ph.D., a professor of radiation oncology at the University of Maryland School of Medicine.

“There’s also very exciting imaging research here to help predict which pituitary tumors are better candidates for certain surgical approaches and types of treatments. We use new MRI methods to look at the consistency of the tumor — whether it’s firm or soft — and how that may impact surgical or radiation treatment,” adds Dr. Woodworth.

“Yet some tumors may just need monitoring or medications to halt their growth,” explains Dr. Munir. He adds, “What makes the University of Maryland stand out for pituitary tumor care is the number of experts working together to ensure patients get the best care possible.”

For appointments, please call 410-328-6148. Information about the Proton Center can be found by calling 410-369-5200.

RESHAPING FACIAL PARALYSIS CARE WITH INNOVATIVE PARTNERSHIP

In a partnership years in the making, a board-certified facial plastic surgeon and a physical therapist (serving as a contractor) are working side by side at the University of Maryland in facial plastic surgery to provide expert, personalized care for patients with facial paralysis. The surgeon, Kalpesh Vakharia, M.D., believes that patients benefit greatly from the different skill sets and perspectives he and Jodi Barth, PT, bring to their efforts to help patients function and look their best.

To Dr. Vakharia, an assistant professor of otolaryngology, head and neck surgery, at the University of Maryland School of Medicine, the idea of a surgeon and a physical therapist working together makes “perfect sense” for patients with paralyzed

faces. “Having this combined approach gives us the ability to tailor the therapy, because different people, even though they may have the same facial dysfunction, will care about different things and approach their facial deficit in different ways,” he says. Barth

believes their program is unique in that they see the patients jointly to develop a treatment plan.

“It’s one thing for Dr. Vakharia to write a script and say, ‘Go see Jodi to do this.’ – it’s another thing when we’re talking together with the patient, understanding what their goals of therapy are,” says Barth, a physical therapist for more than 35 years, and one of only a handful of PTs in the country who are licensed in facial paralysis.

A SURE FOOTING ON THE ROAD TO RECOVERY

“Many patients are floundering and don’t know what to do when they have facial palsy,” says Barth. On top of that, they carry a terrible psychological burden: “Imagine what it’s like to look in the mirror and try to smile, and you can’t smile; you don’t feel like yourself.”

Dr. Vakharia and Barth have seen many patients whose doctors told them, “There’s not much more we can do,” or, “You’re just going to have to live with it.” Yet, treatments exist that could help them. Indeed, patients with facial palsy “need the expertise of a physician like Dr. Vakharia,” says Barth.

Compounding the challenges for these patients, misinformation about facial paralysis continues to exist and thrive. Dr. Vakharia says that clinicians, when they see a patient with facial paralysis, “instantly jump to Bell’s palsy,” which should only be diagnosed by ruling out other potential causes. “You don’t want to treat the end result of the facial paralysis and ignore what’s causing it,” he says.

Potential causes of facial paralysis form a long list, with strokes, brain tumors, ear infections, Herpes and Lyme disease serving as but a few examples. For unknown reasons, some women develop facial paralysis while pregnant. In addition, quite a few patients with trauma-related facial paralysis come to Dr. Vakharia through the University of Maryland R Adams Cowley Shock Trauma Center.

After narrowing down the diagnosis, the team functions as what Dr. Vakharia describes as “an entry point to multidisciplinary teams” if needed. Whether patients require a neurosurgeon to treat a brain tumor, an otologist to treat an ear problem, or a surgeon to treat head-and-neck cancer, Dr. Vakharia knows a team member within the University of Maryland who can help. Afterwards, they get him involved in any reconstructive surgery needed.

RESTORING THE FACE

For Bell’s palsy, the most common type of facial paralysis, Dr. Vakharia divides treatment into early and late phases. Early on, he prescribes oral steroids to lessen inflammation around the facial nerve. The palsy keeps patients from closing the affected eye, which could dry it out. To save patients’ vision, he advises them to moisturize the eye with artificial tears and Lacri-Lube, and to tape it shut at night. He may also place weights, like those made of platinum, surgically into the eyelid to help close the eye. He will evaluate patients to determine if surgical treatment for their Bell’s palsy is necessary.

To gain maximal benefits from medical therapy, Dr. Vakharia says patients also

need physical therapy; that teaches them how to use their “new anatomy” and restore function. In that spirit, Barth teaches patients neuromuscular exercises to retrain the area while, at the same time, trying to keep the nerves from regenerating abnormally. She advises patients on activities to avoid, such as chewing gum, and provides them with massage techniques.

A year after treatment for Bell’s palsy, “the majority of patients will recover to pretty decent facial function,” Dr. Vakharia says. However, some will have developed muscle spasms, tightness, or synkinesis, in which puckering the lips, for instance, causes the eye to close. He treats such symptoms with Botox.

For the small group of patients who still have a “completely droopy” face, Dr. Vakharia may recommend surgery. Depending on which option they choose, surgery can either give them facial symmetry at rest or restore some voluntary movement on the paralyzed side, so that they can smile when they want. After surgery or Botox, he usually recommends physical therapy.

Barth notes that many patients who have had facial paralysis for 10 or more years come to them. After treatment with, say, Botox and physical therapy, they start recovering more than they did in all those years.

A FACIAL PARALYSIS RESOURCE

In their devotion to improving patients’ quality of life, Dr. Vakharia and Barth want to serve as a resource on facial paralysis. Already, patients from around the world, including Germany, England, Mexico, Saudi Arabia and throughout the United States, call on them for their needs. Barth provides telehealth services to patients outside of Maryland and surrounding areas, sometimes giving them exercises to do. When appropriate, she sends them to Dr. Vakharia for evaluation.

Dr. Vakharia and Barth not only enjoy helping

patients throughout their healing process – they also want to serve as a resource for clinicians who treat facial palsy. In fact, they welcome inquiries from providers who have questions about facial palsy or who want to use them for second opinions, even if they wish to continue treating the patient themselves.

Dr. Vakharia and Barth are confident that their partnership is truly benefiting patients. In fact, Barth says about their comprehensive, multi-disciplinary team approach, “It’s really the way medicine should be practiced.”

“The idea of a surgeon and a PT working together makes ‘perfect sense.’”

– KALPESH VAKHARIA, M.D.



For more information, please call 667-214-1772 or email medspa@som.umaryland.edu.

KEY POINTS

- In treating facial paralysis, University of Maryland specialists provide comprehensive care tailored to patients’ needs and goals.
- Diagnosing Bell’s palsy requires first ruling out the many alternative explanations for facial paralysis.
- Integrating medical-surgical care with physical therapy helps patients with facial palsy recover both function and appearance.
- Physical therapy focuses on teaching patients to use their new anatomy while minimizing abnormal facial movement.



PEDIATRIC CARDIOLOGY TEAM HELPS LEAD THE WAY TO BETTER CARE

With its finger on the pulse of how patients should be treated, the physician team of the Children's Heart Program at the University of Maryland Children's Hospital has a history of setting standards. The program's leader, Geoffrey L. Rosenthal, M.D., Ph.D., professor of pediatrics, spent five years as the Chair of the Pediatric Advisory Committee to the U.S. Food and Drug Administration, making recommendations on what research and therapeutics would benefit children.

Now, most recently, Carissa Baker-Smith, M.D., M.S., M.P.H., is helping set the standard in the practice of pediatric cardiology--literally. Concerned that the treatment received by pediatric cardiology patients varies a lot by center, region, and physician training, she has sought to bridge gaps in care quality. To do so, she has worked with leading professional groups, such as the American Academy of Pediatrics and the American College of Cardiology, to develop much-needed guidelines to help clinicians treat their young cardiac patients.

"The goal is standardizing practice, so that everyone has a chance for an equal outcome," says Dr. Baker-Smith, an assistant professor of pediatric cardiology at the University of Maryland School of Medicine. She notes that specialists in adult cardiology learn from having large populations of patients with, say, atherosclerosis or atrial fibrillation. That also allows researchers to conduct large, randomized clinical trials testing treatment strategies, yielding evidence to guide clinical practice.

"In pediatric cardiology, it's not quite that simple," says Dr. Baker-Smith. Fewer patients have any given condition, making it harder for clinicians to learn from treatment experiences. Even in the case of congenital heart disease, the most common birth anomaly in children, the number of patients remains small; this hinders efforts to gauge the impact of a particular treatment and to ensure that every youngster receives first-rate

care. Despite clinical progress that has enhanced outcomes for children with congenital heart disease and other heart concerns, those who treat them need more solid evidence to inform their work.

CREATING BENCHMARKS FOR TOP-NOTCH CARE

A native Marylander, Dr. Baker-Smith joined the University of Maryland faculty in 2010 after completing her fellowship training at Duke University Medical Center. Since that homecoming, she has joined national organizations in a number of quality-improvement projects. For instance, she has worked with the American Academy of Pediatrics on a policy statement about the use of non-nutritive sweeteners, an effort that fits well with her degree in public health. Likewise, she serves on an American Heart Association committee focusing on atherosclerosis, hypertension and obesity in youth.

In her work with the American College of Cardiology, Dr. Baker-Smith serves in the Adult Congenital and Pediatric Cardiology (ACPC) Section. As part of a push to gather data, share it and formulate best practices, she helped develop quality metrics for the practice of ambulatory pediatric cardiology, an area with few existing guidelines.

SAVING THE DAY WITH A NEW WAY

The project focused on five medical issues, with a working group devoted to each: chest pain, which prompts many referrals to pediatric cardiologists;

infection prevention, a concern that spans diagnoses, including endocarditis and asplenia; Kawasaki disease, for which the American Heart Association was updating existing guidelines; tetralogy of Fallot, and transposition of the great arteries (TGA) after an arterial switch operation (ASO). The latter two conditions lack any published guidelines for pediatric practice. Dr. Baker-Smith joined the TGA group.

started with 44 candidate metrics; only 31 survived their deliberations and moved on to the next phase.

After an open comment period, the ACPC Leadership Council endorsed 18 of the proposed metrics, deeming all valid and feasible to carry out in outpatient clinical settings. Dr. Baker-Smith describes the approved metrics as "bare-bones recommendations" to help clinicians achieve better outcomes

We're just trying to help kids live their fullest lives. The heart is critical to that, so whatever we can do to improve their outcomes, we do.

- CARISSA BAKER-SMITH, M.D., M.S., M.P.H.

Her efforts and those of about 70 other expert panelists culminated in a February 2017 report in the Journal of the American College of Cardiology. Dr. Baker Smith says it "summarizes an approach to establishing these quality metrics that's unique," a less tedious process than getting experts to agree.

In the past, failure to reach a consensus doomed efforts to develop quality yardsticks in some data-starved areas of pediatric cardiology. The ACPC work groups dodged that problem by using a modified Delphi process pioneered by RAND and the University of California, Los Angeles. Specifically, each expert scored the feasibility and validity of each proposed metric in two rounds, first alone and later in a meeting with other panelists. They

for patients. For instance, one of the approved metrics addressed the high risk of neurodevelopmental disorder after arterial switch surgery. It called for measuring the proportion of ASO patients 2 to 5 years old who were recommended for evaluation of their neurodevelopment. Another asks clinicians treating patients who report chest pain as their chief complaint to document any early coronary artery disease, cardiomyopathy, sudden cardiac death, or unexplained death in patients' relatives.

According to Dr. Baker-Smith, health-care centers across the country have been putting the recommendations into practice. "All centers are welcome to join this initiative--to study, to improve their quality outcomes--and then we'll determine if, in fact, quality

RESHAPING CARE PEDIATRIC CARDIOLOGY

is improved by using these metrics," she says. The metrics have been incorporated into a national quality improvement network with thirty centers participating.

BRINGING THE GUIDELINES HOME

Dr. Baker-Smith knows firsthand the usefulness of this. "I use the information from being involved with these projects to really guide the care of my patients," she says.

Patients come to her with a variety of complaints, including chest pain and reported heart murmur. She also treats children with congenital heart diseases, which may put them at risk for heart failure. In addition, she strives to prevent heart disease in young people who have hypertension, hyperlipidemia, or other risk factors. She provides care for children with a variety of cardiomyopathies and, when necessary evaluates candidates for heart transplantation.

Dr. Baker-Smith and the rest of the Children's Heart Program team really have one ultimate goal: "We're just trying to help kids live their fullest lives. The heart is critical to that, so whatever we can do to improve their outcomes, we do." Indeed, as pediatric cardiology continues to advance, many more children with congenital heart disease are surviving into adulthood than ever before.

KEY POINTS

- Because relatively few children develop heart disease, efforts to review the available data and use it to guide clinical practice play an outsized role in pediatric cardiology.
- The American College of Cardiology recently developed guidelines for ambulatory pediatric cardiology, using an approach that bypassed the need for expert consensus.
- As part of UMMC's commitment to quality health care, Carissa Baker-Smith, M.D., M.S., M.P.H., serves on expert panels writing policies and practice guidelines in pediatric cardiology.
- Many care centers have begun using the approved metrics; all centers may join the drive to see if using them boosts care quality.



For appointments, please call 410-328-4348.

NEW LEADERSHIP

Michael P. Grant, M.D., Ph.D., FACS, has been named Chief of the Division of Plastic and Reconstructive Surgery at the R Adams Cowley Shock Trauma Center. He has also been appointed an associate professor in the departments of surgery and ophthalmology at the University of Maryland School of Medicine.

Dr. Grant received his medical degree from Case Western Reserve University and completed a residency in ophthalmology and surgery at Johns Hopkins. He also completed a combined training program in plastic surgery at University of Maryland School of Medicine and Johns Hopkins University School of Medicine.

Board certified in both plastic surgery and ophthalmology, Dr. Grant's clinical expertise involves complex primary and secondary craniofacial reconstruction and the application of image-guided techniques and computer-assisted surgery for craniofacial reconstruction.

To contact Dr. Grant, please call 410-328-3058 or email Michael.Grant@umm.edu.

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