

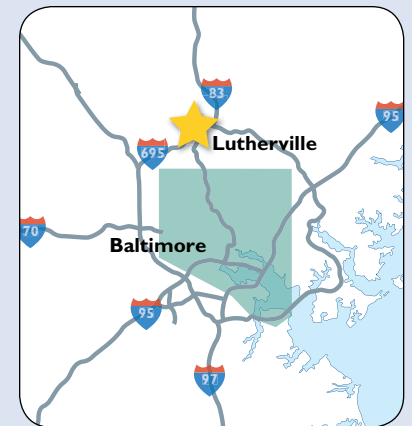
Physician Update

NEWS FOR PHYSICIANS FROM JOHNS HOPKINS MEDICINE

SUMMER 2019



Scheduled to open in stages beginning May 28, the 110,000-square-foot facility constitutes the suburban campus's third pavilion, which will house a specialty-services consultation space and an outpatient surgery center.



Johns Hopkins to Open Major Ambulatory Surgery Center in Maryland

THIS YEAR MARKS THE 25th anniversary of Johns Hopkins at Green Spring Station, and it introduces a new chapter of ambulatory care with the opening of one of the largest ambulatory surgery centers in the state of Maryland.

Located in Lutherville, the 110,000-square-foot facility constitutes the suburban campus's third pavilion, which will house a specialty-services consultation space and an outpatient surgery center. Featuring five operating rooms and four procedure rooms, it will offer adults and children a range of same-day surgeries in areas such as general surgery, neurosurgery, orthopaedics, gastroenterology, plastic surgery, gynecology and urology. The building also will include larger outpatient suites for departments such as radiology, medical oncology, urology, otolaryngology and facial plastic surgery, and a new musculoskeletal center featuring orthopaedics, pain management, and

physical medicine and rehabilitation services. It is scheduled to open in stages beginning May 28, with the outpatient surgery center set to open in September.

The move embraces a trend in health care to provide care in the least expensive setting, explains plastic and reconstructive surgeon **Patrick Byrne**, medical director of the new ambulatory surgical center.

"A lot of data has come out, especially in the last decade, about the high quality of surgery performed at free-standing outpatient surgical centers," he says, "and it's delivered at a fraction of the cost." Depending on their medical needs, some patients may still be referred to The Johns Hopkins Hospital or Johns Hopkins Bayview Medical Center for their surgical care, he says. Sophisticated analytics programs will help determine which patients will be best served in the new facility.

The outpatient surgery center will take up most of the building's third

floor, with 38 pre- and post-surgical beds, says **Gill Wylie**, president of Johns Hopkins Medical Management Corp. The third floor will include an outpatient suite for urology — the first time urology services will be offered at Green Spring Station.

The second floor will house a musculoskeletal center, space with 36 exam rooms, three X-ray rooms and a rehabilitation gym. Also on the floor will be comprehensive otolaryngology—head and neck surgery services and facial plastic surgery suites with 10 exam rooms, two allergy testing rooms, two audiology booths, five procedure rooms, a speech-language pathology room and two aesthetician rooms.

The first floor will feature a full radiology suite with three MRIs, a CT scanner, four mammography rooms, three ultrasound rooms and, for the first time at Green Spring Station, interventional radiology, as well as prep and recovery areas, Wylie says. A medical oncology suite sharing the floor will have nine

Johns Hopkins Green Spring Station Pavilion III

- Opens in stages beginning May 28
- 110,000-square-foot facility
- Outpatient surgery center featuring five operating rooms and four procedure rooms offering adults and children same-day surgeries in areas such as general surgery, neurosurgery, orthopaedics, gastroenterology, plastic surgery, gynecology and urology
- Outpatient suites for departments such as radiology, medical oncology, urology, otolaryngology and facial plastic surgery
- A new musculoskeletal center featuring orthopaedics, pain management, and physical medicine and rehabilitation services

exam rooms, 19 infusion bays and an oncology pharmacy. The space also will house a laboratory and presurgical evaluation center.

Green Spring Station has been a popular location with "explosive growth" since Johns Hopkins took over Pavilion I in 1994, and Pavilion II in 1996, says Wylie. Since 2000,

(continued on back cover)

For Patients with Cochlear Implants: Auditory Rehabilitation Therapy Is Key

IN THE HOLLYWOOD MOVIE version of cochlear implantation, the happy ending happens instantaneously when the implant is first turned on, says **Charles Della Santina**, director of the Johns Hopkins Listening Center. “But in the real world,” he says, “it takes time, effort and expert help to get the best possible performance.”

A key part of that effort for patients at the Listening Center, Della Santina says, is the services delivered by Johns Hopkins’ auditory rehabilitation therapists, including **Kristin Ceh**, who works primarily with adults; and **Deborah Bervinchak** and **Kathleen Lehnert**, who work primarily with children.

Auditory rehabilitation benefits cochlear implant users of all ages, explains Ceh. In adults, she and her colleagues counsel patients on what to expect from their device. They also help patients train their brains to interpret the signals delivered by the implants. Therapy schedules for adult patients vary according to availability and skill levels.

Auditory rehabilitation therapy is

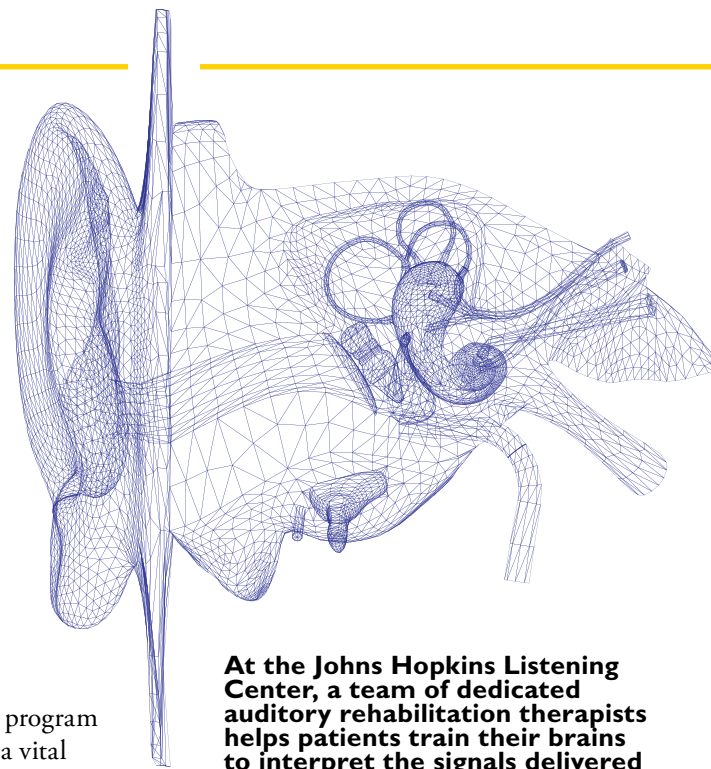
vital for children receiving cochlear implants, says Bervinchak, especially those just developing listening and spoken language skills. For young patients, therapy isn’t just geared toward the individual — it includes the entire family and the community that surrounds the child, including day care providers and teachers.

For the past two decades, explains Lehnert, Johns Hopkins Listening Center therapists have performed in-person consultations at patients’ schools, collaborating with educators to develop Individualized Family Service Plans and Individualized Education Plans, which lay out the special education, support and services that each child needs to make progress and succeed in school. Lehnert notes that she and her colleagues are versed in education law, allowing them to better advise families about the services and accommodations that their children are entitled to.

Juggling this outreach work with their busy clinical schedules, Listening Center therapists have provided these services free of charge, critically extending the work they perform in

the clinic. Close coordination among therapists, teachers and parents helps children generalize listening skills learned in the clinic for use in their classrooms and homes. “We are very passionate about this program because it plays such a vital role in nurturing the total well-being of each child,” says Lehnert.

Della Santina hopes to establish an endowment to perpetually support the Listening Center’s free IEP/IFSP consultation program. If you are interested in contributing, please contact Donna Clare at 410-955-0173 or dclare2@jhmi.edu. ■



At the Johns Hopkins Listening Center, a team of dedicated auditory rehabilitation therapists helps patients train their brains to interpret the signals delivered by cochlear implants. For both adult and pediatric patients, these efforts are a key to best outcomes. (Image shows artist rendering of internal structure of human ear.)

“It takes time, effort and expert help to get the best possible performance.”

—CHARLES DELLA SANTINA



PHYSICAL MEDICINE AND REHABILITATION

Intense Rehabilitation: The Only Treatment for Acute Flaccid Myelitis

NATIONAL NEWS REPORTS IN 2018 were peppered with stories of young children who were seemingly fighting a cold one day, then paralyzed the next. One of a handful of centers with experience treating children with this polio-like condition, acute flaccid myelitis (AFM), is the International Center for Spinal Cord Injury (ICSCI) program shared by the Johns Hopkins Department of Physical Medicine and Rehabilitation and the Kennedy Krieger Institute, which specializes in pediatric developmental disabilities and disorders of the brain, spinal cord and musculoskeletal system.

“As of now, rehabilitation is the only known intervention that helps children with AFM,” says **Cristina Sadowsky**, clinical director of the ICSCI program. “Early, intensive rehabilitation is essential for day-to-day function for children to be able to get dressed, go to school and perform activities of daily living.”

AFM is a rare condition that affects motor neurons in the spinal cord, resulting in a sudden onset of limb weakness and loss of muscle tone and reflexes, explains Sadowsky. Children around age 4 are most often affected, some with symptoms such as facial weakness, difficulty swallowing or slurred speech. The cause is unknown, though it is thought



Cristina Sadowsky

to be brought on by a virus.

Children with AFM seen on an inpatient or outpatient basis in the ICSCI program typically receive up to six hours of speech, physical and occupational therapy per day targeted to neurologic deficits. Therapists employ a range of modalities, including functional electrical stimulation to generate movement in paralyzed muscles, aqua therapy and walking while holding on to parallel bars. The unit has seven different methods to promote gait training, including robotic technology and an underwater treadmill. In this pediatric environment, most activities are designed to look like play.

“We know that activity helps with restoration of function in the nervous system,” says Sadowsky, who is also a clinical researcher in spinal cord injury and paralysis restoration. “Synaptic formation and connection between nerves, and new cell birth in the nervous system, are all dependent on activity.”

Unlike traditional rehabilitation in which individuals may learn compensatory motor patterns to complete motor skills such as dressing and feeding, she says, the therapy used in the ICSCI unit — activity-based restorative therapy for individuals with spinal cord disease-related paralysis, including AFM — involves trying to reproduce the “normal” motor patterns used before the illness. And “it can take hundreds or thousands of repetitions to relearn,” she cautions.

AFM tends to come in biennial cycles, Sadowsky says, with about 120 cases nationwide reported in 2014, 149 in 2016 and 210 in 2018. Johns Hopkins and Kennedy Krieger have seen children with AFM-like disease since 2006. Beyond providing rehabilitation, ICSCI program experts are performing nerve transfers in some cases to help restore muscle movement, studying genetics of the condition, and participating in a national AFM work group established in October 2018 and led by Johns Hopkins physicians. ■

Chin-on-Chest Cervical Spine Deformity Surgery and Recovery

THE MAIN OBJECTIVE OF SURGERY TO correct cervical kyphosis is to achieve a straight-ahead gaze for patients. While this goal might sound simple and straightforward, the surgery and recovery are anything but.

Lee Riley III, executive vice chairman in the Johns Hopkins Department of Orthopaedic Surgery, specializes in cervical spine revisions and deformities such as spondylosis, degenerative disk disease and severe hyperkyphoses such as chin-on-chest deformities. He says the procedures to correct chin-on-chest deformities often take 10 to 12 hours and involve a posterior approach to the neck, followed by an anterior approach, and then another posterior approach.

“It’s basically three operations under the same anesthetic,” says Riley. “Part of the challenge is determining how to execute the surgery from a technical and sequencing standpoint and understanding what you can accomplish in one sitting. You have to consider the merits of staging, and you need to anticipate complications both during and after the operation.”

To correct cervical kyphosis, Riley first uses a posterior approach to loosen the joints in the back of the neck, decompressing the nerves. He then inserts screws as fixation points. In an anterior stage, Riley makes a small incision, advances past the esophagus, trachea and blood vessels, and removes disks or part of the bone, which allows him to mobilize the

patient’s neck. He then adds structural bone, which he says acts “kind of like a doorjamb that allows the bone to heal together but also provides structural support.” In the final posterior stage, Riley repositions the neck using screws, rods and bone graft.

“The difficulty,” Riley says, “is that all of this manipulation must be performed within the constraints of how much manipulation the nerves and spinal cord can tolerate. You have to maximize the space for the nerves and the spinal cord to move in order to avoid paralysis or damage to the spinal cord.”

For patients, the six- to 12-month-long recovery process can be very difficult. “Helping patients understand preoperatively what they are committing themselves to and then making a commitment to them that you will get them through the operation is really important,” says Riley.

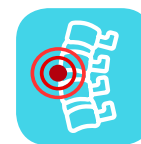
Postoperatively, Riley monitors for instrumentation failure, infection and nerve injury. Because the patient will likely require a gastric feeding tube for a period of time after surgery, swallowing and speech therapists are involved during the early postoperative period. These therapists can help advise patients on steps they can take to avoid complications such as aspiration and pneumonia.

“We have tremendous resources available here at Hopkins — cutting-edge equipment, operating rooms, intensive care units, as well as skilled intensivists,” says Riley. “Everyone is committed to expert, patient-centered care.” ■

Postoperative Period



Recovery takes six to 12 months.



Patients are monitored closely for instrumentation failure, infection and nerve injury.

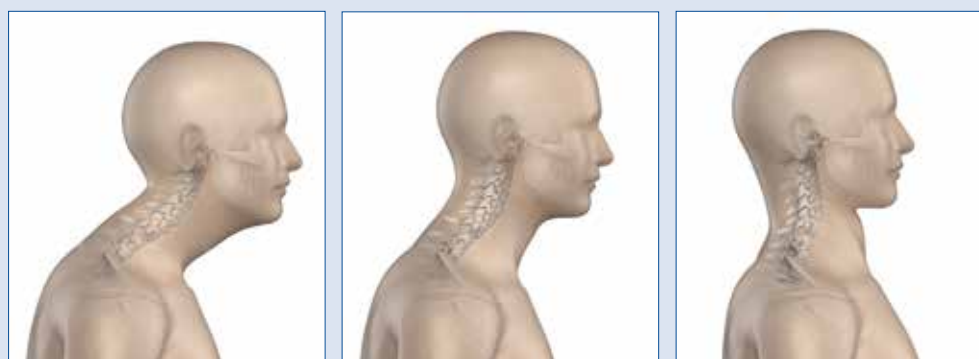


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—LEE RILEY III, ORTHOPAEDIC SURGEON



Cervical Kyphosis

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Johns Hopkins Green Spring Station III (continued from front cover)

Johns Hopkins has been slowly leasing any available space on the campus, including many office areas above the shops, leaving some departments spread out. Relocating some services to Pavilion III will help them function more cohesively, he says.

Additional Johns Hopkins medical services and departments will backfill spaces being vacated in Pavilions I and II, says Wylie. This includes expanding the Wilmer Eye Institute and its surgery center; gynecology/obstetrics women's services and the reproductive endocrinology/in vitro fertilization program; dermatology, including Mohs surgery and phototherapy; and primary care. The plan includes making the campus more pedestrian-friendly, and building a path from the new pavilion to the shops, Wylie says. ■

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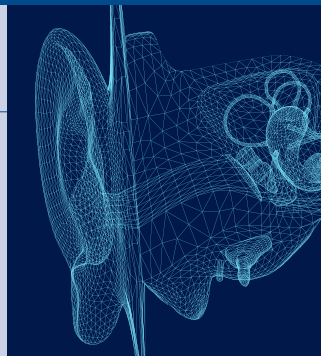
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