

The Evolution of Neurosurgery at UPMC Passavant



With the addition of advanced specialty services and new technology to meet the needs of a growing community over the past several years, UPMC Passavant is growing well beyond its historical role as a traditional community hospital.



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equipment, UPMC Passavant has evolved into a world-class tertiary care center that is now attracting patients from around the region and country for advanced specialty care,” says Teresa G. Petrick, president, UPMC Passavant.

An example of this advanced specialty care can be found in the hospital’s Center of Excellence for spine and neurosurgical services. “With more than 8,000 spine procedures performed at UPMC Passavant to date, we have built one of the most comprehensive spine

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centers in the region,” explains Matt El-Kadi, MD, clinical professor and vice-chairman, Department of Neurosurgery, UPMC, and chief of Neurosurgery at UPMC Passavant. “As a result of the success of the spine and neurosurgery program, we will be adding new services that will enhance and grow our advanced neurosurgical services not only in the northern corridor but also in the tri-state area.”

“The best indicator of our spine surgery program is the hospital’s outcome measurements, which include hospital stay, patient satisfaction, infection prevention and clinical recovery times,” says Donna Jasko, vice president of Operations. UPMC Passavant has been found to be among the top reported outcomes not only in Pennsylvania, but in the nation based on CMS (Centers for Medicare and Medicaid Services) reporting measures. UPMC Passavant was also recognized with the Blue Distinction for spine care from Highmark Blue Cross Blue Shield of Pittsburgh, which is another indicator of the excellent outcomes and experience of its surgeons.

The Facilities

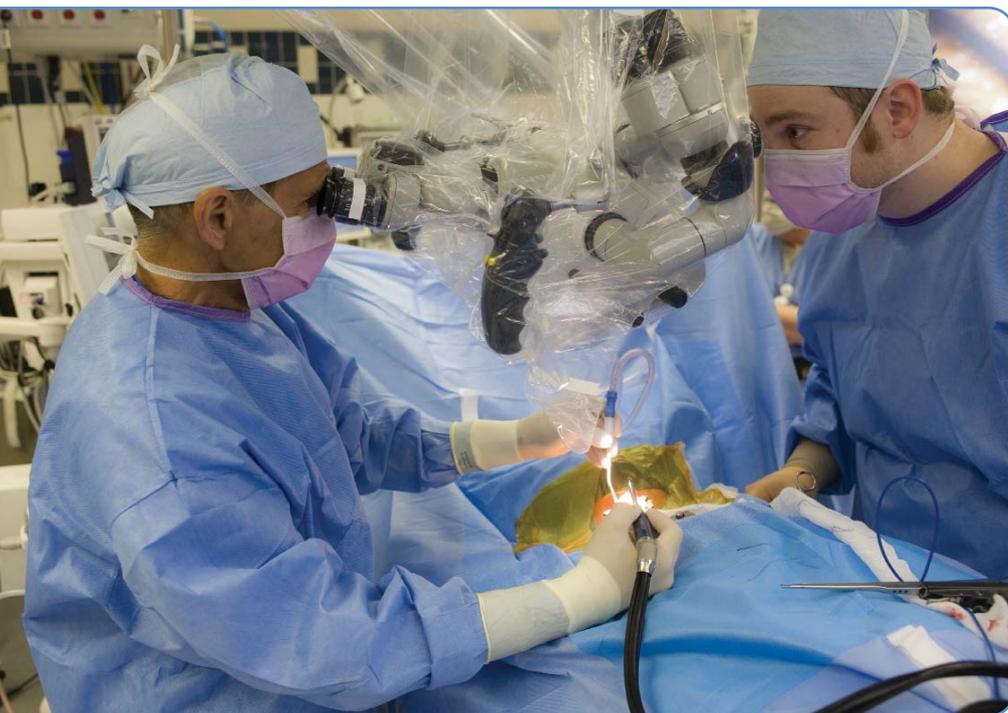
On the second floor of the new pavilion is a complete navigation suite operating room for spine surgery. This innovative suite, which will attract physicians, residents and administrators from around the world to observe spine surgeries and learn the latest techniques, is a major step in establishing the hospital as a global training, education and observation Neurosurgical Center of Excellence. In addition to high definition monitors

and surgical lights mounted from the ceiling to offer maximum visibility and increased floor space for operating staff, the navigation suite is equipped with the most advanced spine navigation software, SpineMap 3D, which seamlessly integrates with a 3D c-arm.

“Three of the pavilion’s six new ORs were built specifically for neurosurgery, and are equipped with the latest intraoperative microscopes, the essential tool for microsurgery and minimally invasive procedures,” says Dr. El-Kadi, who specializes in spinal disorders including minimally invasive spine surgery, spinal stabilization and fusion, and treatment of primary and metastatic spine tumors. “These tools enhance visualization of the nervous structures through small incisions, which help to decrease intraoperative complications, shorten hospital stays, and improve outcomes.”

“The facilities are nothing less than spectacular; the space, equipment and personnel are all superb,” agrees Joseph Maroon, MD, clinical





professor and vice-chairman, Neurosurgery, who specializes in minimally invasive procedures for the spine. “The endoscopic and microscopic equipment is state-of-the-art and the level of technology makes procedures much more efficient.”

“The way the patient area is set up, for example, is with the holding area and the operating rooms right next door to each other,” he continues. “Because of this efficiency, the turnover time between cases is markedly reduced, which tends to be a major issue in operating rooms across the country.”

According to Arlan Mintz, MD, FACS, FRCS, the director of Adult Neurosurgical Oncology, patients will also benefit from having access to an intraoperative CT scan in one of the operating rooms, which allows for real-time navigation. “There are not many of these types of operating rooms in the country,” he explained. “We can operate on patients while they are in the scanner, merging the pre-op MRI scan with the CT scan for real time-navigation. This

advanced neuronavigation system shows us exactly where the instrument is in the brain.”

Surgical navigation is like having a GPS system in the operating room. It allows surgeons to track their instruments within the patient’s body through a virtual, three-dimensional mapping system. This not only helps reduce operating time, but radiation exposure to both the patient and staff by eliminating the need for repetitive fluoroscopic imaging for tool placement.

“As a result of surgical navigation, we can see the tumor in the brain or spine to determine how much has been removed and how much more is left to do,” says Dr. Mintz. “This navigation system can also be used for brain biopsies and placements of shunts, and provides a more accurate, safer way of operating on the brain.”

Expanded Service Lines

With so much new technology available, more complex procedures can be performed. Pedro Aguilar, MD, clinical assistant professor,

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Neurological Surgery, will head up the Functional Pain Surgery program at UPMC Passavant, which includes spinal cord stimulation and intrathecal pumps for chronic and palliative pain management. Dr. Mintz, who has extensive experience in cranial surgery for tumors, hydrocephalus and other brain disorders, will also begin treating patients at UPMC Passavant.

“My focus is on taking pain management and chronic pain problems to functional aspects of treatment in terms of spinal cord stimulation,” explains Dr. Aguilar. “This is the ability to tell the brain, via the spine, to eliminate the pain the patient is having. This procedure is basically for patients who have no other options.”

While spinal cord stimulation has been around for 20 years, it is a constantly advancing field. “At UPMC Passavant, we will be getting involved in all forms of neuromodulation, including motor cortex stimulation for patients who have had strokes, or who have severe pain,” says Dr. Aguilar. Intrathecal pumps, which provide high doses of concentrated medication to the spine and bypass the rest of the body, are also an option for pain management. “These pumps do not have the side effects of oral pain medications,” says Dr. Aguilar.

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Dr. Mintz, who specializes in treating primary and secondary brain tumors, will be establishing UPMC Passavant’s first Cranial Program. “Before, patients had to travel into the city to UPMC Shadyside or UPMC Presbyterian for this type of treatment,” he says. “Because UPMC Passavant already has a full cancer center, which is, in fact, the second largest cancer center in the area outside of Hillman, patients can remain in the neighborhood for ongoing care after surgery.

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Besides brain tumors, surgeons in the

Cranial Program will treat minor traumatic injuries, such as subdural hematomas, insert reservoirs for chemotherapy treatment, and treat Normal Pressure Hydrocephalus (NPH), a reversible cause of dementia in older patients. “Once the condition is diagnosed, we can put a shunt in to fix the problem so that patients can go back to leading productive lives,” says Dr. Mintz.

Patient- and Family-Focused Care

While technologically advanced facilities are certainly important to patient care, so is the ability to make patients and their families feel comfortable while at the hospital. “The new patient rooms are spacious and private,” says Dr. Maroon. “The expertise of nurses and new equipment add so much to the patient experience; in my opinion, UPMC Passavant is one of best equipped and most pleasant hospitals in western Pennsylvania.”

From the minute that a patient enters the hospital, staff work to ensure that he or she has a positive experience. “The hospital has a dedicated nursing, physical therapy and social services staff that focus on a patient’s wellness from the moment of registration,” says Dr. El-Kadi. “They address not only the hospital stay, but also discharge planning. Their goal is to address patients’ physical, mental and emotional needs.”

“Advanced tertiary care does not overshadow the importance of providing our patients and families with the most welcoming environment possible,” adds Ms. Petrick. “This includes concierge and valet services, easy-to-understand signage, patient and family resource centers, comfortable waiting and respite rooms, and even a family convenience area with a private bathroom and shower.”

Along with the new pavilion construction, the hospital’s entrance and exit routes have been redesigned and reconstructed to make arrivals and departures easier. By the end of this summer, a meditation garden will be completed to provide a quiet outdoor sanctuary for patients and visitors.

To view UPMC Passavant’s new pavilion, log onto www.UPMC.com/Passavant and take the virtual tour.



UPMC Passavant–McCandless
9100 Babcock Blvd.
Pittsburgh, PA 15237
412-367-6700

UPMC Passavant–Cranberry
One St. Francis Way
Cranberry Township, PA 16066
724-772-5300

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For more information or a physician referral, call 1-800-533-UPMC (8762) or visit upmc.com/passavant