Smilow Cancer Hospital’s new Skull Base Surgery Program is designed to make these complicated treatments more smooth and effective. “These patients need a lot of care from lots of different teams,” said R. Peter Manes, MD, FACS, Associate Professor of Surgery, whose specialty is nasal and sinus tumors. “They need lots of different appointments and lots of different imaging studies. The idea is to give patients consolidated care. They can call one number and we’ll coordinate everything and help them navigate through the system.

“If patients can arrange to see the neurosurgeon, the ENT (Ear, Nose, and Throat) surgeon, the ophthalmologist, and the endocrinologist in a single visit, that is the ideal way to deliver our expertise,” said Sacit Bulent Omay, MD, Assistant Professor of Neurosurgery, who teams up with Dr. Manes on skull base surgeries. “And post-operatively as well, because all these specialties follow up with these patients. If it’s not well organized, they will have a new appointment every week, which is very inconvenient.”

Dr. Lim’s training in oculoplastics enables her to not only excise ocular tumors but also to reconstruct the eyelid afterward. “I am humbled to be able to provide these services to my patients,” Dr. Lim said. “Having such extensive training uniquely benefits my patients.”

Patients also benefit from genetic sequencing of tumors, which in some cases can open the door to targeted therapy for their cancer. “The future of cancer treatment is targeted therapy,” Dr. Lim explained. “We have the ability to test tumors for gene mutations and to alter treatment options based on the results.” Genetic counselors help patients—and their families—understand the results, and the Smilow nursing staff and social workers support them throughout treatment. “At Smilow, we understand that we are not just treating the patients but their families as well,” Dr. Lim said.

As other cutting-edge cancer treatments progress through Yale’s research pipeline, Dr. Lim looks forward to adopting them for her own patients as she leads the Ocular Oncology Program in its critical mission: to conserve the life, eye, and sight of each of her patients.
“Skull base” is a broad category that includes various tumors located behind the eyes and nose, and above the lip, “explained Dr. Manes, “and the surgeon would have changed drastically in the past decade. “Traditionally, radiation oncology.

includes about 15 physicians, including specialists from another team handles lateral surgeries. The program Manes and Omay do anterior surgeries endoscopically, a neurosurgeon working together. Smilow’s program divides skull base surgeries into two categories defined by location anterior and lateral. Drs. Manes and Omay also anterior surgeries endoscopically, another team handles lateral surgeries. The program includes about 15 physicians, including specialists from endocrinology, medical oncology, and radiation oncology.

Surgical techniques for treating skull base tumors have changed drastically in the past decade. “Traditionally, surgery involved a cut along the side of the head down to the tip,” explained Dr. Manes, “and the surgeon would basically lift the face off. For an open cranialotomy, they would make a large incision on the top of the head, and then pull back the brain.”

Now, for many patients, surgeons can run an endoscope through a small incision to the side of the tumor and treat it, with no disfiguring incisions or risky retraction of the brain.

These minimally invasive surgeries also reduce post-operative complications. “With endoscopes, visualization—allows the patient to see what they’re doing—and the surgeon is right there,” said Dr. Omay.

Smilow is among several top cancer hospitals that have established special programs for skull base surgeries. “The tumors are really complicated and not easy to reach,” said Dr. Omay. “So they are best treated in large academic hospitals where surgical, medical, and nursing support are all available.”

For example, consider the process for a patient with a primary adenoma, one of the most common skull base tumors. The primary gland sits under the brain and behind the nose in a small space that’s hard to access. It also sits near the carotid artery, which feeds the brain, and the optic nerve. A primary tumor may press on these, causing headaches, vision problems, or other neurological issues. The patient usually seeks help first from a primary care physician, who refers the patient along to specialists.

That’s how Rennie Negron ended up in surgery with Drs. Manes and Omay. Ms. Negron, who works as a research program manager at the Yale Institute for Network Science, Drs. Manes and Omay. Ms. Negron, who works as a research program manager at the Yale Institute for Network Science, woke up in the middle of the night with a terrible headache. She also had palsy in one eye. “I thought it was a sinus infection,” she said. “I went to an urgent care center, which sent me to the emergency room at Yale-New Haven Hospital. A CT scan revealed a pituitary adenoma.”

If the tumor is especially large or difficult, the surgery takes place in a special surgical suite with an intraoperative MRI. Smilow is one of the few hospitals in the country equipped with this expensive high-tech apparatus, which allows surgeons to image the patient’s tumor throughout the operation. “The process involves many teams,” said Dr. Omay, “which is why it’s important to perform these operations in designated centers.”

Ms. Negron’s surgery went perfectly. Dr. Omay was amazing. The way we were able to talk to them, and how they explained the whole process and potential outcomes and challenges, was incredibly helpful through the recovery process. I couldn’t be any happier with the care and the relationships I had with them.”

“During the surgery itself, Drs. Manes and Omay work together closely. Dr. Manes guides an endoscope through the nose to the floor of the skull. “Take me directly to the tumor,” explained Dr. Omay. “The endoscope brings a light and a camera to exactly where the pathology is. You can push it a couple of centimeters from the tumor, so there is a beautiful visualization of what we are doing while we are operating. I do the incision of the nose, consider the pressure for a patient with a primary adenoma, one of the most common skull base tumors. The primary gland sits under the brain and behind the nose in a small space that’s hard to access. It also sits near the carotid artery, which feeds the brain, and the optic nerve. A primary tumor may press on these, causing headaches, vision problems, or other neurological issues. The patient usually seeks help first from a primary care physician, who refers the patient along to specialists.

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