

**JAMIE VAN
GOMPEL:**

Hello, my name is Jamie Van Gompel. I'm a neurosurgeon at the Mayo Clinic in Rochester, Minnesota. I have a particular passion for performing skull-based surgery and delivering this in a maximally effective way with minimal repercussions in a minimally invasive way. Skull-based surgery involves complex surgery at the interface of the facial bones and the bones of the skull.

Some tumors we treat occur on the pituitary gland at the back of the nose. These include craniopharyngiomas, pituitary tumors, chordomas, chondrosarcomas, meningiomas. In the past, operative microscopes were utilized to remove these tumors, as these were the only way to magnify that space. Unfortunately, with operative microscopes, the light and the visualization occur outside the head. Therefore, larger openings were needed either in the head or through the nose to perform this surgery safely.

In the past 15 years, technological advances have occurred, through mostly other fields, with the introduction of endoscopes which have revolutionized the way that care is delivered in surgical fields. And skull-based surgery is no exception. Endoscopes offer the ability to bring light and surgical view into the tumor itself, thereby minimizing the exposure through the skull or nose, thereby potentiating improved removal, improved safety, and improved patient outcomes.

This prop mimics the difference between a microscopic pituitary surgery as well as an endoscopic pituitary surgery. The camera would mimic the microscope. With the microscope, you're limited in light that gets to the visual field of what you're actually working. Here, this cover demonstrates what it is like to look through the cranium or the nose. You can see that, if I advance this, by maneuvering the camera or the object, you can see bits and pieces of the object of interest in the deep field.

However, an endoscope is like bringing the camera to the actual field, here mimicked by taking the cover off. You're actually able to see the object of interest more clearly. This allows you to be more oriented, to improve your safety in terms of a more complete resection, and see critical structures more clearly. Skull-based tumors pose significant challenges due to their close proximity to important nerves and vessels. Surgical resection can be associated with significant morbidity, including damage to optic nerves, leakage of CSF fluid.

We here at the Mayo Clinic in Rochester, Minnesota, have specialists with experience in a range of innovative surgical techniques for treatment of these complex cases. Everything we do centers around maximally safe resection, limiting complications to patients, and trying to get them back to the normal work or family life that you previously had. Here at Mayo, we have a particular experience with those rare types of tumors, such as chordomas, chondrosarcomas, sinonasal malignancies, and [INAUDIBLE] neuroblastomas, and also have a wealth of experience in more common tumors, such as pituitary tumors and meningiomas.

Our expertise extends across several specialties. In addition to ourselves as neurosurgeons, the skull-based surgery team at Mayo has radiologists, rhinologists, otologists, and plastic surgeons. And in most cases, several experienced surgeons are involved with your case, which we believe significantly enhances patient safety and outcome.

In conclusion, we offer a full-range of surgical specialties for complex skull-based tumors. However, whenever possible, our team utilizes cutting edge technologies such as endoscopy to enhance your safety, improve your outcome, and get you back to your family and work as quickly as possible. Thank you for your time, and if needed, I look forward to seeing you in my clinic.