

[MUSIC PLAYING]

BERNARD R BENDOK: So I am very excited about where we are today with brain tumor care and where we're going. I think many technologies have come together to allow us to dramatically enhance surgical outcomes.

First, we're bringing very advanced imaging technologies to the OR, such as intraoperative MR and robotics, fluorescent imaging, and augmented reality, as well as holography. All these technologies are coming together to make surgery less invasive and more effective.

Our ability to map the brain with the patient awake has also been dramatically enhanced. Our understanding of the functional capabilities of the brain and the individual maps that we're creating before surgery, and then confirming during surgery, are allowing us to do surgery more effectively for the patient and in a safer fashion to provide the best outcomes from the cancer standpoint but also from the quality of life standpoint.

ALFREDO QUINONES-HINOJOSA: It is amazing. Nowadays, we're using the 3D technology printing for brain tumors, brain aneurysms. In my profession, mainly for brain tumors, when you show a patient the reconstruction of a tumor in their brain, and you can move parts, and you can have them touch that tumor, and you explain to them this is this cranial nerve, this is this blood vessel, this is the brain stem, these are the things that we're going to disconnect from speech, motor, sensory, the ability to move your leg, your arm, not only do they understand what they have, but they also understand the risk of the surgery and they're better prepared to welcome the challenges that will come after whatever type of brain surgery they will have.

So I love that technology because it is allowing us to better communicate with patients and better prepare patients, so they have better outcomes, a better quality of life.

BERNARD R BENDOK: The care of a brain tumor really requires collaboration and teamwork across multiple departments and multiple specialties. For many brain tumors, it is very critical to integrate fantastic surgery with great radiation oncology and world-class cutting edge neuro-oncology and medical care. And getting that all into a cohesive plan for the patient is absolutely essential to make sure that patients get the best outcomes. That is something we do really well at Mayo Clinic.

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