

[MUSIC PLAYING]

**GRIMSON:** In a stereotactic frame, you can think of as a cage that gets attached to your head. And it's on when the images are actually taken in the MR or CT scanners, so that it's going to be visible. And this cage has some movable parts to it, so that a probe can basically be positioned at any orientation that you can specify relative to some markings on the cage.

And the idea is you take the images with the cage in place. Looking at those images, you can figure out exactly what direction you want to come in at to get the tumor. And then you go off and do your work.

The downside to this, at least from the patient's perspective, is this cage is attached by literally screwing it into the skull two or three days ahead of the operation. I can see the wincing even in the dark room already. You've just eaten some doughnuts out there. This is going to be a wonderful talk to follow on with.

But the cage is attached by screwing it into the skull, and the patient gets to walk around for a couple days with this metal thing attached to their head. And as one of the surgeons put it to me, if you've ever had a migraine headache, it's going to feel like a real mild problem compared to having this metal cage screwed into your skull for three days.

What we want to do is replace that. What we are in fact doing, we think, is replacing that by giving the surgeons the ability to visualize internal structures exactly overlaid with the patient, so they can plan operations, so they can execute operations with a minimal damage to anything else nearby.

So it's x-ray vision. It's being Superman, if you like. Although, again, I'll note parenthetically that every time I talk to a surgeon and point out that we're trying to give them Superman powers, the surgeons always assure me that they are already Superman and they don't have any need for such help.