

Media Clips for OSF Innovation brings VR beating hearts to life for safer surgeries

The technology creates a digital twin.

"This is taking a CT scan of a patient, a retrospectively gated CT scan, and converting a patient's own heart – in each phase of that cardiac cycle – and making it beat in a virtual environment." (:13)

The automation software allows what once took months can be done with a single click.

"You ever seen a flip book where you see a drawing move? That's what we're doing with these 3D models in a digital, virtual space." Dr. Bramlet explains, "We're just turning them off and on in rapid succession until we have that beating heart." (:13)

The AI began rendering valves — structures notoriously difficult to see on CT scans.

"Now we can see that valve which we really couldn't see before. So, repeat valve procedures are very valuable for this. TAVR or any valve in the cath lab, we're finding good use with these as well as the hypertrophic cardiomyopathy cases." (:22)

Dr. Bramlet says as surgeons interact with the models, they are amazed.

"I see those lightbulbs go on and there's nothing like being able to observe and interact with these 3D models in a format, and especially a 4D model, in a way they've never been able to see them before, and it will become the standard of care, I have no doubt." (:21)