Holographic visor helps surgeons see with ‘X-ray’ vision

Use of tech allows NUHS to better plan surgery, anticipate problems

Clara Cheng

A surgeon’s ‘third eye’ made possible with Singapore’s first holographic guided laser operation—use of a new technology from the National University Health System.

The device, worn by the surgeon, allows for improved 3D visualisation of the area being operated on, reducing the need for tools or other equipment.

The technology, called the HoloLens 2, allows surgeons to see inside the patient’s body and visualise blood vessels and nerve impingement.

“Holographic visors are a useful tool for surgeons,” said Associate Professor Theodoros Kafatos, head and senior consultant of the department of cardiothoracic surgery and vascular surgery at NUHS. "They allow surgeons to see the area they are operating on in a three-dimensional manner, without the need for tools or other equipment."

Kafatos said that the technology has been used successfully to guide surgeons during open heart surgery, where it is particularly useful in visualising blood vessels and nerve impingement.

"The technology is particularly useful in complex cases where traditional equipment may not be adequate," he said. "It allows surgeons to make precise incisions and avoid damaging surrounding tissue, which is crucial in surgery where precision is key."