



# Augmented reality transjugular intrahepatic portosystemic shunt (AR-TIPS) set and other interventional devices

**An augmented reality (AR) system to assist clinicians in performing medical procedures inside the body where 3D anatomical information is important**

**IP Status:** PCT Pending **Application #:** PCT/US 2021/070787

## Applications

- Transjugular intrahepatic portosystemic shunt (TIPS)
- Percutaneous endovascular targeting
- Percutaneous biopsy tracking of a flexible needle

## Technology Overview

Researchers at the University of Minnesota have developed an AR system to guide clinical procedures in real-time. This novel technology enables visualization of a medical tool within the interior of a patient's body and with respect to the exterior anatomy. The system includes an AR headset with a camera, image target and electromagnetic field generators and position sensors. A controlling software integrates the information from the camera and sensors and it is capable of generating visual overlays for the AR headset. This technology was originally developed to assist with transjugular intrahepatic portosystemic shunt (TIPS) procedures, but it can be adapted to various other applications requiring visualization of the position of the distal end of a device. This technology can greatly enhance the success rate of image-guided clinical procedures.

## Phase of Development

### TRL: 2-4

Early-stage prototype to assist with the transjugular intrahepatic portosystemic shunt procedure is under development

## Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

Please contact our office to share your business' needs and learn more.

## Researchers

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## Technology ID

2021-131

## Category

Life Sciences/Diagnostics & Imaging

Life Sciences/Human Health

Life Sciences/Medical Devices

Software & IT/Algorithms

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