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Thailand pilots use of Point-Assisted Spinal Sonography for patient safety

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To provide physicians with a more accurate tool



PASS (Point-Assisted Spinal Sonography), an ultrasound-guided lumbar puncture device, has been developed by Thailand-based Chulalongkorn University doctors and engineers that helps increase the precision and confidence in spinal tap procedures while reducing risks and pain for patients.

It is an ultrasound-guided device designed to engage the ultrasound probe that scans for the precise location, degree, and depth of needle penetration into the spinal canal to reduce the chance of the needle hitting the spine and decrease the pain for the patient.

PASS was a prototype medical device at the International Conference of Anesthesiologists at the end of 2020. Since then, anesthesiologists at King Chulalongkorn Memorial Hospital have been using PASS in difficult cases. It is also used as a pilot training for 6th-year medical students in the Department of Anesthesiology, Faculty of Medicine, by practicing with cadavers.

Currently, the PASS research and development team plans to expand its use into a business context and is supported by Chulalongkorn University Technology Center (UTC). In the future, the team will be producing ultrasound-guided PASS with mobile phones/tablets connection, which will make it even safer and more convenient for doctors to perform the procedure. Training for medical students and residents in hospitals and centres will also be organised.