



Technology Licensing Office and Life Sciences Incubator
BioVentures, LLC
4301 W. Markham St., #831, Little Rock, AR 72205-7199
(501) 686-6696
bioventures.uams.edu

PIV Monitor for Estimating Anesthetic Depth

Application

This device analyses venous pressure to estimate anesthetic depth

Key Benefits

- Peripheral venous pressure waveforms can be measured routinely and used to estimate depth of anesthesia
- Applicable to both inhaled and intravenous anesthesia
- Improved patient safety
- Reduces overuse of anesthesia for cost savings to provider

Market Summary

Costs related to surgery can be 40% or more of a hospital's expenses, and anesthesia costs account for approximately 6% of these expenses. The general anesthesia drug market is expected to approach \$5 billion annually by 2022. Thus, usage of only the necessary amount of anesthesia can lead to significant cost savings. Additionally, accurate monitoring of anesthetic depth provides for a safer patient experience.

Technical Summary

Peripheral venous pressure (PVP) waveforms can be collected from patients using a peripheral intravenous catheter connected to a pressure transducer. An algorithm has been developed by using machine learning to assess the PVP waveform as an estimate of anesthetic depth.

Developmental Stage

The algorithm has been generated and utilized to assess depth of isoflurane anesthesia in pediatric patients undergoing elective surgery

Patent Information

App Type	Country	Serial No.	Patent No.	File Date	Issue Date
Provisional	US	63/011,654		4/17/2020	

Contact

Nancy M. Gray, Ph.D. nmgray@uams.edu

Tech ID

2012

Inventors

Kevin Sexton, Melvin Dassinger, Patrick Bonasso, Joseph Sanford