

[Request Information](#)

[Permalink](#)

Bubble Access Needle

Tech ID: 34649 / UC Case 2025-820-0

BRIEF DESCRIPTION

A specialized needle featuring a bubble level to enable precise percutaneous renal access in urological interventions.

FULL DESCRIPTION

This innovative medical device integrates a bubble level onto a needle used for percutaneous access to the kidney, ensuring precise 90-degree anteroposterior alignment during minimally invasive procedures. By providing real-time visual feedback on needle angle, it reduces reliance on continuous fluoroscopic imaging, thereby decreasing radiation exposure for patients and clinicians. The device simplifies the procedure, enhances accuracy, and is accessible even in resource-limited healthcare settings.

SUGGESTED USES

- » Percutaneous nephrolithotomy (PCNL) and other kidney stone removal procedures.
- » Minimally invasive interventions requiring precise renal access.
- » Healthcare facilities seeking safer, cost-effective alternatives to fluoroscopy-dependent techniques.
- » Resource-limited clinical settings lacking access to advanced imaging or robotic systems.

ADVANTAGES

- » Minimizes radiation exposure by reducing the need for continuous fluoroscopy.
- » Cost-effective alternative to expensive robotic and electromagnetic guidance systems.
- » Provides instant, real-time feedback for precise needle alignment.
- » Reduces procedural time and number of needle passes required.
- » Accessible in diverse healthcare environments, including resource-limited settings.
- » Easy to use, lowering the learning curve for less experienced clinicians. · Enhances procedural safety and consistency.

PATENT STATUS

Patent Pending

CONTACT

Alvin Viray
aviray@uci.edu
tel: 949-824-3104.



OTHER INFORMATION

CATEGORIZED AS

- » **Medical**
 - » Devices
 - » Disease: Kidneys and Genito-Urinary System
- » **Sensors & Instrumentation**
 - » Medical

RELATED CASES

2025-820-0

UCI Beall
Applied Innovation

5270 California Avenue / Irvine, CA
92697-7700 / Tel: 949.824.2683



© 2026, The Regents of the University of
California
[Terms of use](#)
[Privacy Notice](#)