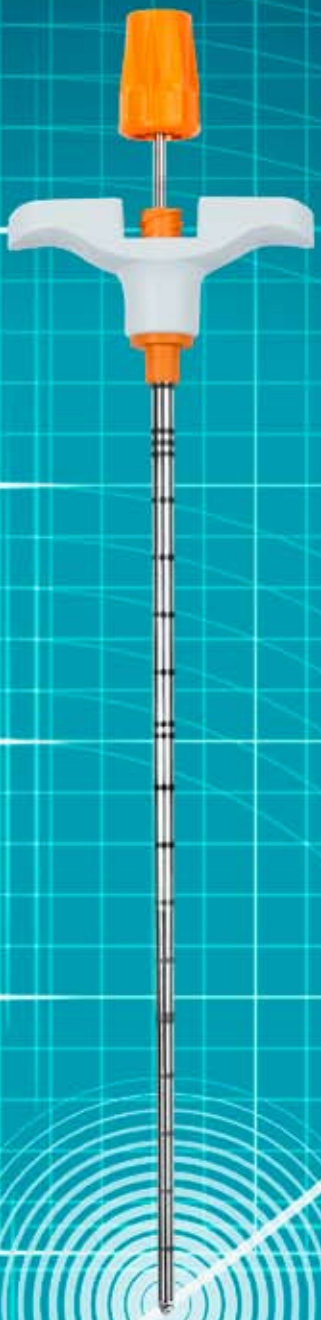
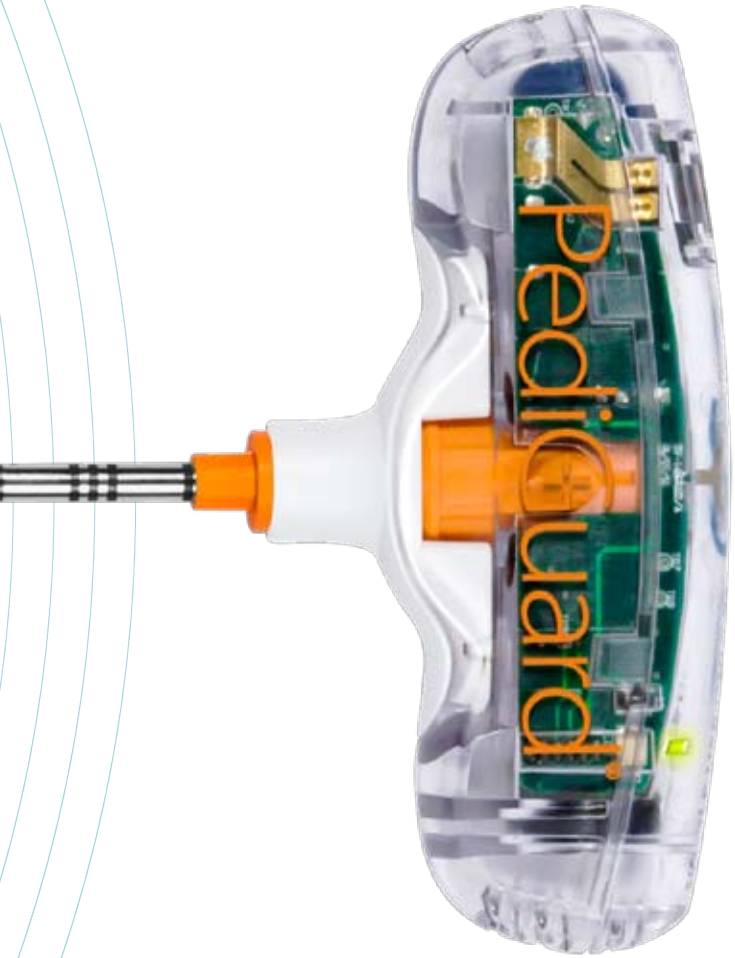


Classic
Curved
Cannulated

PediGuard®

***Hear* what you cannot see**

SpineGuard®
Make spine surgery safer



Simple. Innovative. *Smart.*

Classic
Curved
Cannulated

PediGuard®

Introducing the Cannulated PediGuard® for Minimally Invasive Spine Surgery (MIS): a handheld device that can detect possible vertebral cortex perforation during pedicle preparation for screw placement.

Featuring a detachable electronic handle and cannulated shaft, the Cannulated PediGuard provides you with real-time feedback for smart navigation of the pedicle while significantly reducing the need for intraoperative fluoroscopy[2,6].

- ***Hear and feel*** what you cannot see
- ***Be reassured*** that your trajectory is sound
- ***Reduce your radiation*** exposure by relying on PediGuard feedback
- ***Anticipate possible breaches*** of the pedicular wall or vertebral body[7]
- ***Redirect with complete confidence***
- ***Safely cannulate deeper into the vertebral body*** than with traditional MIS techniques, then introduce the k-wire

Minimally Invasive Spine Surgery: Benefits and Risks

Minimally Invasive Spine surgery has been developed to treat disorders of the spine with less blood loss and soft tissue destruction, allowing quicker recovery and faster patient return to normal function. However the pedicle screw placement challenge is even greater in these less invasive procedures due to the lack of visual landmarks and tactile feel, resulting in excessive use of fluoroscopy.

The new Cannulated PediGuard can help you take advantage of the benefits of MISS while addressing the challenges in pedicle screw placement.

The one-of-a-kind **PediGuard** technology is

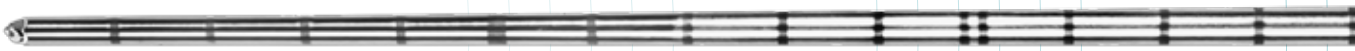
placing navigation back in your hands.

Classic
Curved
Cannulated

PediGuard®

Make your first pass the right pass

The PediGuard technology provides valuable feedback unmatched by fluoroscopy and other technologies without interrupting your surgical procedure. The result is continuous real-time navigation in a simple, handheld device.

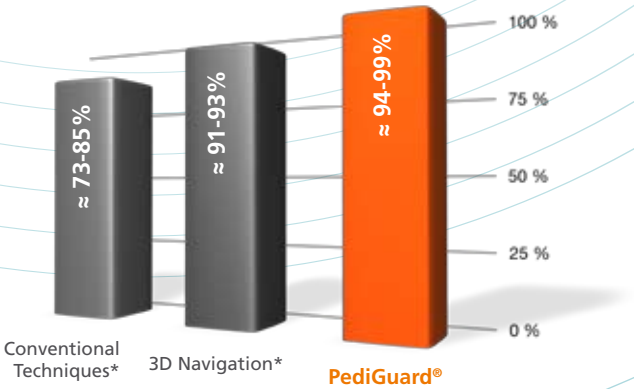


Electromagnetic bipolar sensor
Monitors real-time changes
in electrical conductivity
5 times per second

Stainless steel shaft and cannula
(160mm total length)
Stiff tapered tip for smooth
insertion and removal

Safety is our primary concern

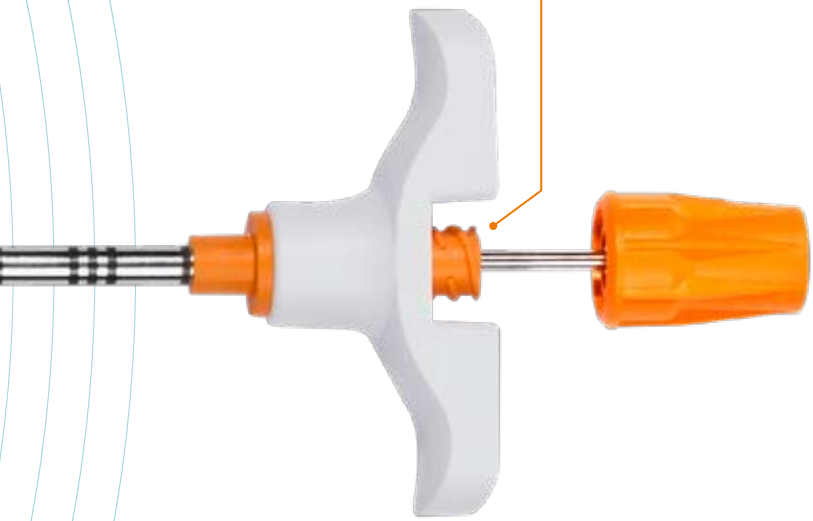
Rates of properly placed screws (%)



*Tian 2011, Gelalis 2011, Verma 2010

The PediGuard technology has demonstrated strong results in a wide number of clinical studies with more studies forthcoming:

- ***97% screw placement accuracy***[2, 3, 4, 5, 6]
- ***98% probability of breach detection***[1]
- ***87% breach anticipation***[7]
- ***3-fold reduction in neuro-monitoring alarms***[8]
- ***15% time saving during screw placement***[6]



Universal luer Lock

Radiolucent T-handle
Low profile improves surgeon access and space

Battery
No external power supply needed

Detachable handle
With electronic circuit board

LED
Alerts surgeon with changes in flashing LED cadence

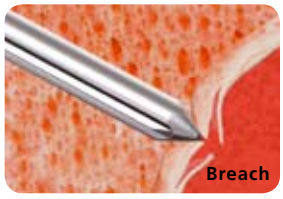
Audio system
Alerts the surgeon with changes in pitch and cadence

Tip in **CANCELLOUS BONE:**
MEDIUM pitch, **MEDIUM** cadence

NORMAL

Tip approaching **CORTICAL BONE:**
LOW pitch, **LOW** cadence

DECREASING



Imminent **CORTICAL BREACH:**
HIGH pitch, **HIGH** cadence

INCREASING

Protect yourself from the dangers of radiation exposure

Research suggests that the average spine surgeon will receive the maximum allowable lifetime exposure of radiation for classified workers within 8 years of practice*.

Studies show that PediGuard can significantly reduce the radiation exposure to you and your staff:

- ***73% radiation time reduction***[9]
- ***51% reduction in thyroid radiation exposure to the surgeon***[9]
- ***25% - 30% reduction in Fluoroscopy shots during pedicle screw placement***[2,6]

*Ul Haque 2006

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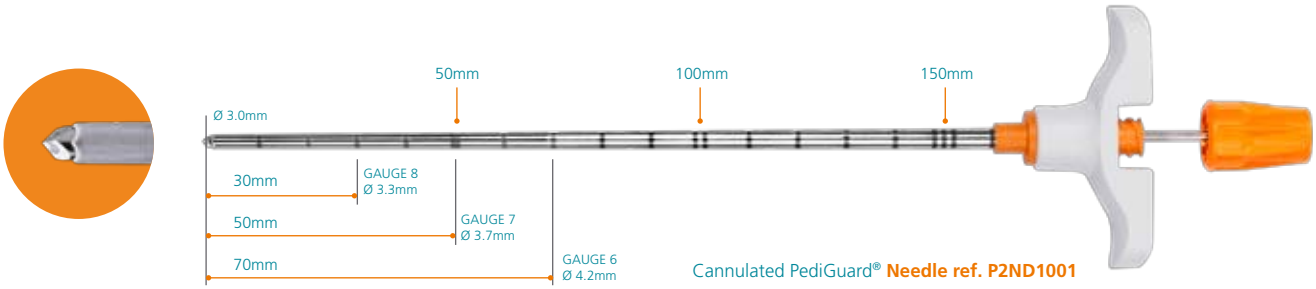
***Hear* what you cannot see**

Cannulated PediGuard® **Handle ref. P2HE1000**



Cannulated PediGuard® **Needle ref. P2ND1001**

Cannulated PediGuard® **Starter Stylet - Bevel ref. P2ST1050**

Cannulated PediGuard® **Starter Stylet - Trocar ref. P2ST1060**

Delivered sterile, ready to use.

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