

# SpineGuard®

Make spine surgery safer

**Dr. Randal Betz is on a mission: To make spine surgery as safe as possible for both patients and surgeons.** He is the principal investigator for an ongoing, postmarketing clinical study of **PediGuard®**, the world's *first and only* handheld device capable of alerting surgeons to potential pedicular or vertebral breaches during pedicle screw site preparation. "I see no reason why the PediGuard platform can't become standard of care in any kind of spine surgery," says Dr. Betz, a member of the editorial board of the *Journal of Pediatric Orthopaedics* and associate editor of *Spinal Frontiers*. "Anything we can do to help us get a safer screw insertion is certainly worthwhile, given that published rates of pedicle screw misplacements can be as high as 40%."

Without PediGuard, fluoroscopy must be used to continuously monitor the correct placement of pedicle screws into the spine. Fluoroscopy is an imaging technique commonly used to obtain real-time images of the internal structures of a patient through the use of a fluoroscope (C-Arm). Fluoroscopy involves use of x-rays, a form of ionizing radiation; while the exposure to a patient during one surgery is minimal, spine surgeons may perform 140 or more cases per year. On the other hand, surgeons who use PediGuard do not have to use continuous fluoroscopic guidance. Indeed, **use of PediGuard may reduce surgeons' radiation exposure by about 30 percent.**

## RECENT NEWS

**SG September 15, 2011:** Study shows use of PediGuard reduced the incidence of clinically relevant misplaced pedicle screws in spine surgery. *Full release available at [www.spineguard.com](http://www.spineguard.com)*

**SG Jan 31, 2011:** SpineGuard expands its PediGuard franchise. *Full release available at [www.spineguard.com](http://www.spineguard.com)*

**SG July 5, 2010:** SpineGuard reports over 1,000 PediGuard units sold in 2Q 2010. *Full release available at [www.spineguard.com](http://www.spineguard.com)*

**SpineGuard**  
Company Fact Sheet 2011  
Privately Held  
Sector: Medical Device/Spine



Pierre Jérôme, CEO

"The primary focus of **SpineGuard** is to establish **PediGuard** as the standard of care for safer screw placement in spine surgery."

## LEADERSHIP

**Pierre Jérôme**  
Chief Executive Officer

**Stéphane Bette**  
CTO; GM, U.S. Operations

**Maurice Bourlion, PhD**  
Co-Inventor of PediGuard

**Ciaran Bolger, MD, PhD**  
Co-Inventor of PediGuard

**Randal R. Betz, MD**  
Chief Medical Officer,  
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*Jrnl of Pediatric Orthopaedics*;  
Asso. Ed., *Spinal Frontiers*;  
Reviewer, *Journal of Bone  
and Joint Surgery*,  
*Journal of Pediatric  
Orthopaedics*, and *Spine*.

**Alan Olsen**  
Chairman of the Board;  
Founder, Danek Medical

## INVESTORS

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**Innoven Partenaires**  
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**A Plus Finance**  
Paris, France

**Delta Partners**  
Dublin, Ireland

## PediGuard®: Making Spine Surgery Safer

### Challenge



Pedicle screw placement is too lateral and can damage soft tissue or nerves.



Pedicle screw placement is too medial and can damage spinal cord.



Pedicle screw is correctly placed within the pedicle.

### Solution



- Rationale: Safe pedicle screw placement can be a major hurdle in spine surgery, as published rates of misplaced pedicle screws range from 10%-40%. Perforations can lead to complications such as dural tear, nerve root injury, paraplegia or vascular injury.

- PediGuard is the first and only free-hand drilling instrument with the capability to anticipate and detect iatrogenic breaches in the pedicle (before they occur), enabling surgeons to better and more safely place pedicle screws in the vertebra while consistently avoiding critical structures (i.e. nerve roots, spinal cord and major blood vessels).

- In addition, PediGuard serves to shorten overall operating time, as well as limit physician exposure to X-rays, given the reduced need for fluoroscopy imaging.

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[www.spineguard.com](http://www.spineguard.com)

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