SpineGuard®
Making spine surgery safer

DANIEL BRADLEY, MD

1 **Texas Back Institute**, one of the largest academic spine centers in the world, has pioneered many innovative spine technologies, and one of its most prominent surgeons is among the first in Texas to adopt PediGuard® probes with DSG™ (Dynamic Surgical Guidance) technology, designed to enhance spine surgery by improving the accuracy of pedicle screw implantation during spine surgery and, therefore, mitigating the risk of mislocating the screws.

2 Why is this important? Screw-based spine stabilization has become the gold standard for treating spinal instabilities and deformities. There is overwhelming evidence from the most recent scientific literature, which shows that, on average, 1 in 5 screws is misplaced during spine surgery (see illustration at right, middle). This can result in pathological consequences for 1 in 20 of these patients and may require "revision" surgery. Just one "revision" surgery to correct a misplaced pedicle screw ranges from about $18,000 to $28,000. The rate of revision surgery is estimated to be 4 – 5% of spine surgeries in the U.S.

3 **Dr. W. Daniel Bradley**, a Spine Surgeon in TBI's Denton clinic, is one of the few spine surgeons to offer residents of Dallas / Ft. Worth area in Texas the benefit of the DSG Technology by using the PediGuard probes to prepare pedicles prior to screw placement. The PediGuard probes are the only stand-alone devices that help a surgeon navigate through the various types of tissue and prepare an optimal path for screw placement.

4 The PediGuard probes provide audio and visual cues to help the surgeon identify the type of tissue at the tip of the probe. This feedback helps the surgeon anticipate potential misplacement and redirect the trajectory as necessary.

5 The new devices (PediGuard) being used by Dr. Bradley have been cleared by the FDA. These devices are designed to dramatically reduce the incidence and hence the risk of misplaced pedicle screws. The PediGuard probes with the DSG technology have been validated under rigorous clinical studies (8 published) and have shown to significantly improve accuracy while reducing x-ray (radiation) exposure for the patient, surgeon and hospital staff.

PediGuard®

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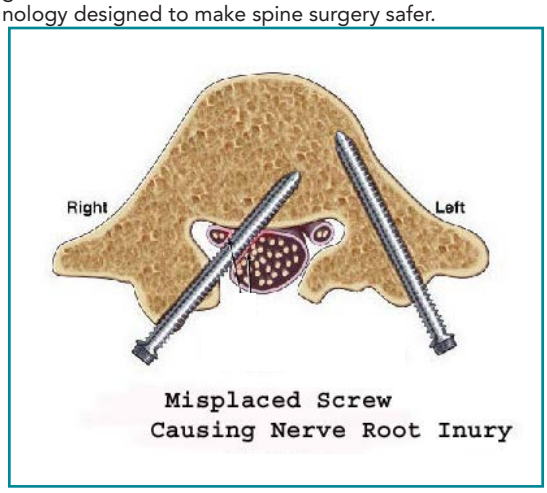
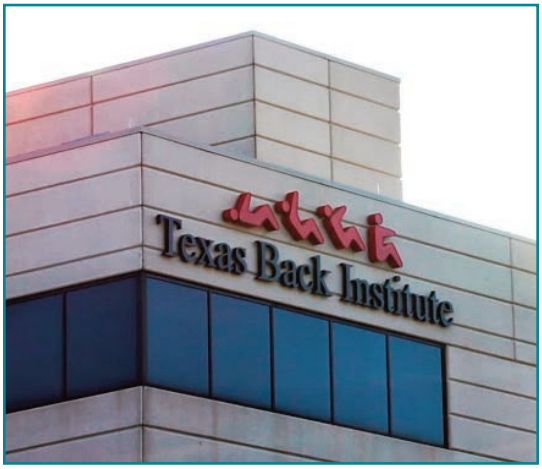
Dr. W. Daniel Bradley, a prominent Spine Surgeon at Texas Back Institute (TBI), is among the first spine surgeons to offer Texas residents the benefit of new technology designed to make spine surgery safer.



This illustration shows a misplaced pedicle screw. The frequency of misplaced screws (20%) occurs far too frequently.



Texas Back Institute (TBI) is one of the preeminent spine and orthopedic facilities in the world.