

Excerpt from: [Orthopedics This Week 2014](#)



THE ELEVEN BEST NEW SPINE TECHNOLOGIES FOR 2014

Category: Minimally Invasive Spine Care

S4 Element MIS

Company: Aesculap, Inc.

Inventors: Peyman Pakzaban, M.D., Scott Webb, D.O.

Engineering Team: Thomas Hur, Andrew Dauster

S4 Element MIS is all about direct visualization through an endoscope and allows the surgeon pure percutaneous posterior pedicle screw fixation. Here's how:



S4 Element MIS

First, you can better see what you are doing and do so with much less radiation exposure. Why? The endoscope. Many surgeons rely heavily on C-arms to compensate for the lack of direct visualization, especially during screw insertion and rod passage. Because of this, they are exposed to radiation for considerably longer periods especially if they are new to MIS.

With S4 Element MIS the surgeon can visualize during rod passage, confirm rod delivery, position, and length, and, therefore, trouble shoot challenges and minimize guesswork (i.e., soft tissue impeding starting set screw, impeding rod delivery, confirmation of downtube proper reattachment, etc.) associated with MIS. And, of course, there's that reduction in radiation exposure.

Finally, the S4 Element MIS downtube has industry leading rescue instrumentation and technique that enable in-situ downtube reattachment to the screw in the simplest, possible way. This robust instrumentation and technique eliminates the concerns of open conversion, builds confidence, and provides a powerful arsenal in the surgeon's bag.



(L to R) John Love, Dr. Peyman Pakzaban, Tom Bishow (RRY Publications), Tommy Hur, Dr. Scott Webb, Jeff Cole, Marissa Varju