

INVICTUS[®] MODULAR

SPINAL FIXATION SYSTEM

ENHANCE THE ADAPTABILITY OF INVICTUS
FIXATION WITH THE POWER OF MODULARITY

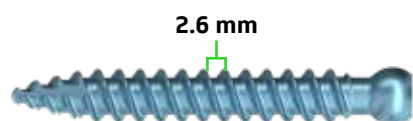
VISUALIZATION • VERSATILITY • VERIFICATION

*α*tec[™]
INFORMED BY EOS

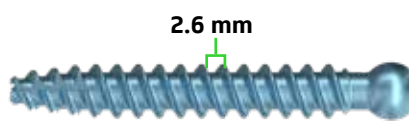
INVICTUS[™] MODULAR

SPINAL FIXATION SYSTEM

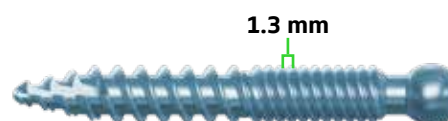
The Invictus Modular platform is an extension of ATEC's comprehensive Invictus thoracolumbar spinal fixation system. The adaptability of the Invictus Modular System enables the treatment of a variety of pathologies by providing surgeons with a customizable implant solution. The system is compatible with an open, MIS, or medialized approach in order to accommodate varying surgical techniques, while offering visualization, versatility, and verification.



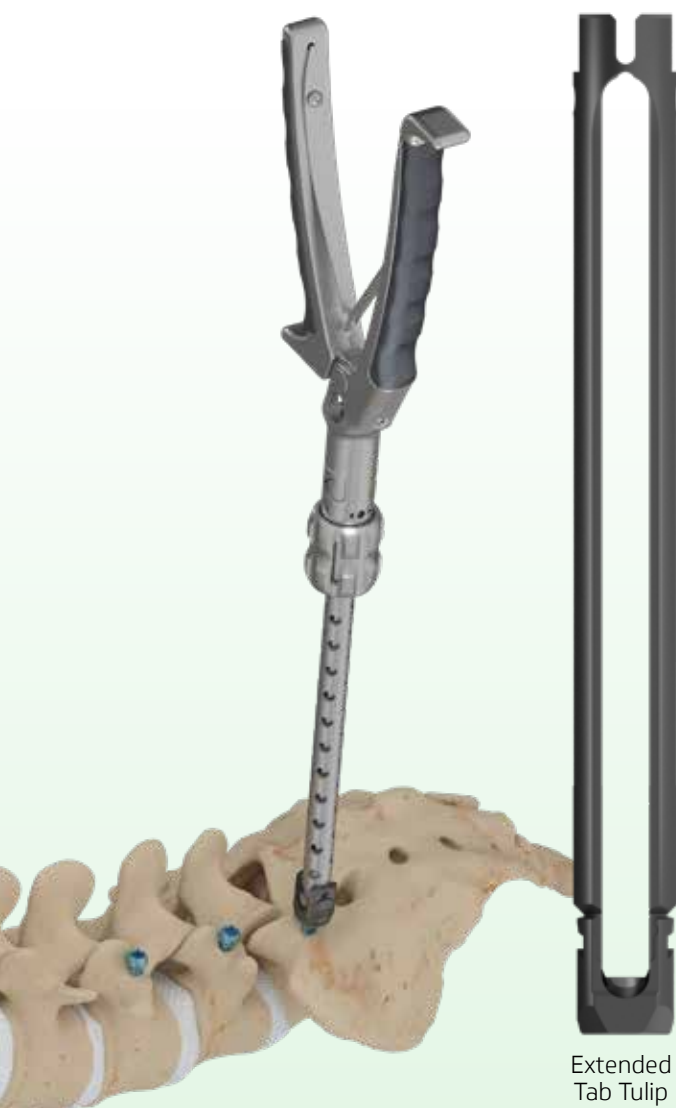
Modular Shank



MIS Modular Shank



VISE Cortical-Cancellous Modular Shank



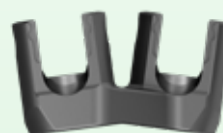
**Extended
Tab Tulip**

THE MODULAR SYSTEM

The Modular system features enhanced visualization through low-profile modular shanks in order to maintain anatomical landmarks for confirmation of proper implant placement, paired with the versatility of tulip optionality. Instill confidence with visual, tactile and audible confirmation of tulip attachment, and tulip interconnection 4.5x stronger than the average pull-out strength of pedicle screws.^{1,2}



**Polyaxial
Reduction Tulip**



Satellite Tulip



Polyaxial Tulip

¹ Liljenqvist U, Hackenberg L, Link T, Halm H. Pullout strength of pedicle screws versus pedicle and laminar hooks in the thoracic spine. *Acta Orthop Belg* 2001;67(2):157-63.

² Data on file: TR-101070.



Invictus® Open Modular

Aiming to provide enhanced in situ optionality, the Invictus Open Modular platform touts greater adaptability through low-profile implants, maintaining visualization of anatomical landmarks prior to potential osteotomies or interbody spacer preparation. The Invictus Open Modular instrumentation supports a variety of surgical techniques, from degenerative to deformity pathologies.

COMPRESSION/DISTRACTION RACK

The modular compression and distraction rack accommodates exposures in varying surgical scenarios. Low-profile and securely attached during distraction, the Modular Shank Tips or Lamina Distractor Tips support a direct decompression and thorough discectomy with interbody fusion, while the M/L or C/C Tips may provide temporary distraction in a PSO setting.



JOHN POLLINA, MD
Neurosurgeon | Buffalo, NY

CASE REVIEW

71-Year-Old Male

L4-5 spondylolisthesis with lateral recess/sub articular stenosis.

A TLIF at L4-5 was performed with IdentiTi™ Posterior Oblique interbody implant and Invictus Open Modular Fixation, supplemented with O-arm navigation.

"Invictus Open Mod solidly complements O-arm navigation for my degenerative cases, promoting efficient and rapid workflow for a seamless procedure that reduces OR time."

PRE-OP

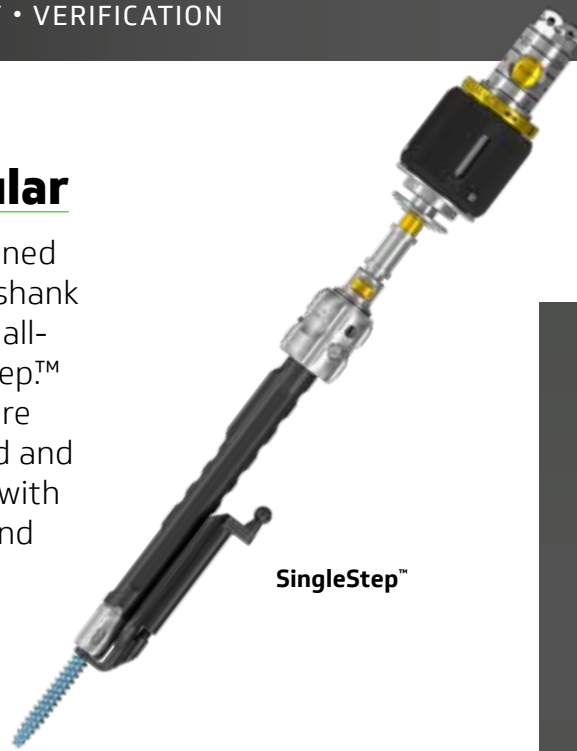


POST-OP



Invictus® MIS Modular

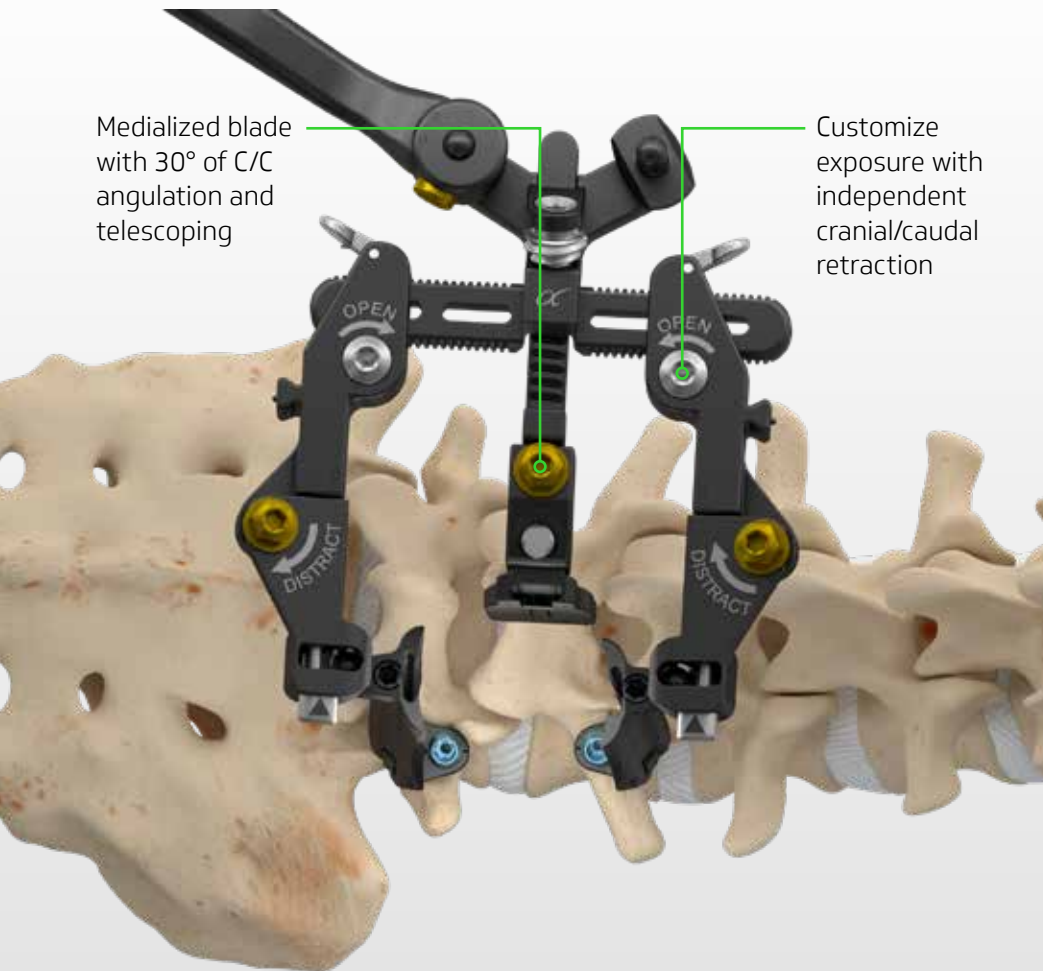
Invictus MIS Modular is designed for advanced and simplified shank and blade insertion with the all-in-one shank driver, SingleStep™. Multiple instrument passes are eliminated with an integrated and steerable stylet, compatible with SafeOp™ Neuromonitoring and O-arm navigation.



SingleStep™

SIGMA™ TLIF

Paired seamlessly with the Invictus MIS Modular System, Sigma TLIF is a pedicle-based access system that provides direct visualization of key anatomical landmarks creating a reproducible, minimally disruptive, customized TLIF approach.



SAMUEL JOSEPH, MD

Orthopedic Surgeon | Tampa, FL

CASE REVIEW

49-Year-Old Female

L4-5 spondylolisthesis with lateral recess/subarticular stenosis.

A TLIF at L4-5 was performed with the Sigma TLIF access system, IdentiTi Posterior Oblique interbody implant, and Invictus MIS Modular Fixation supplemented with SingleStep.

"Invictus MIS Modular paired with SIGMA TLIF allows me to customize my exposure and reproducibly and efficiently perform a TLIF. The simplified instrumentation drives efficiency and confidence, especially during tulip attachment at the end of the case."

PRE-OP

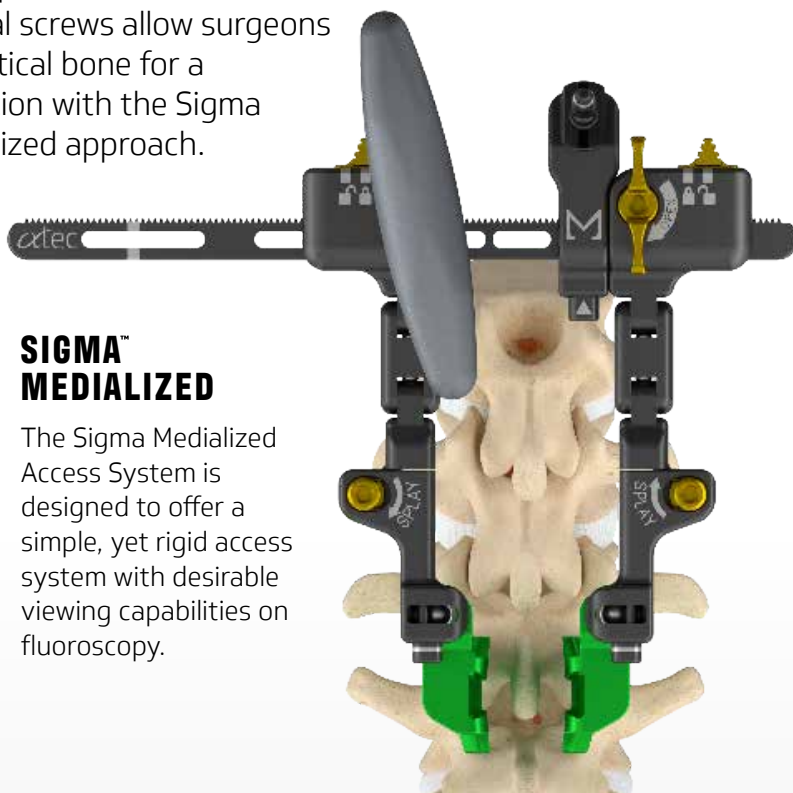
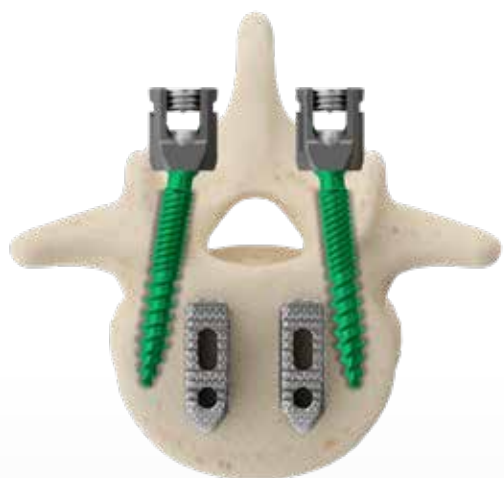


POST-OP



Invictus® Medialized Modular

The Invictus Medialized Modular system accommodates minimized exposure and tissue disruption, while offering the perfect working window for decompression and fusion from a medialized approach. Unlike screws placed in the traditional screw trajectory, cortical screws allow surgeons to medialize their approach and capture the cortical bone for a 30% increase in pull-out strength.^{3,4} Couple fixation with the Sigma Medialized Access System for a complete medialized approach.



SIGMA™ MEDIALIZED

The Sigma Medialized Access System is designed to offer a simple, yet rigid access system with desirable viewing capabilities on fluoroscopy.



DAVID JONES, MD
Neurosurgeon | Greensboro, NC

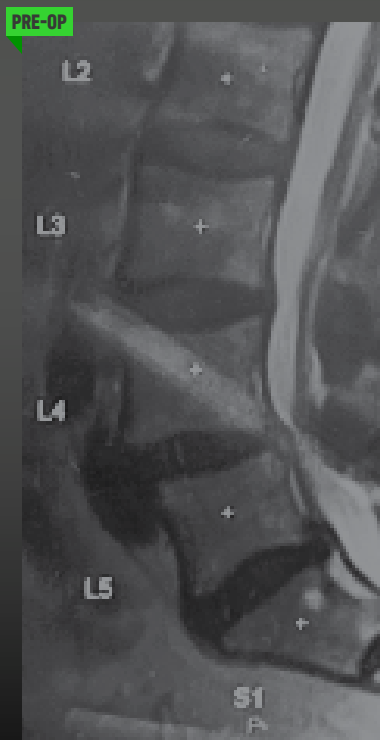
CASE REVIEW

68-Year-Old Female

L4-5 disc herniation causing radicular pain in the left leg.

A PLIF was performed with Transcend® PS utilizing the Sigma Medialized access system for minimized tissue disruption and supplemented with Medialized Modular cortical cancellous shanks.

"The Invictus Medialized Modular system enhances the overall procedural solution to the medialized approach with its cortical-cancellous thread pitch, expediting screw insertion time. The system allows me to address a wide range of spinal pathologies through a mini-open or MIS technique that offers all the critical advantages of MIS for my patients, while significantly improving patient outcomes in both a hospital and ASC setting."



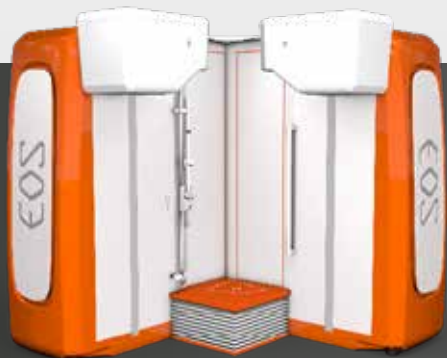
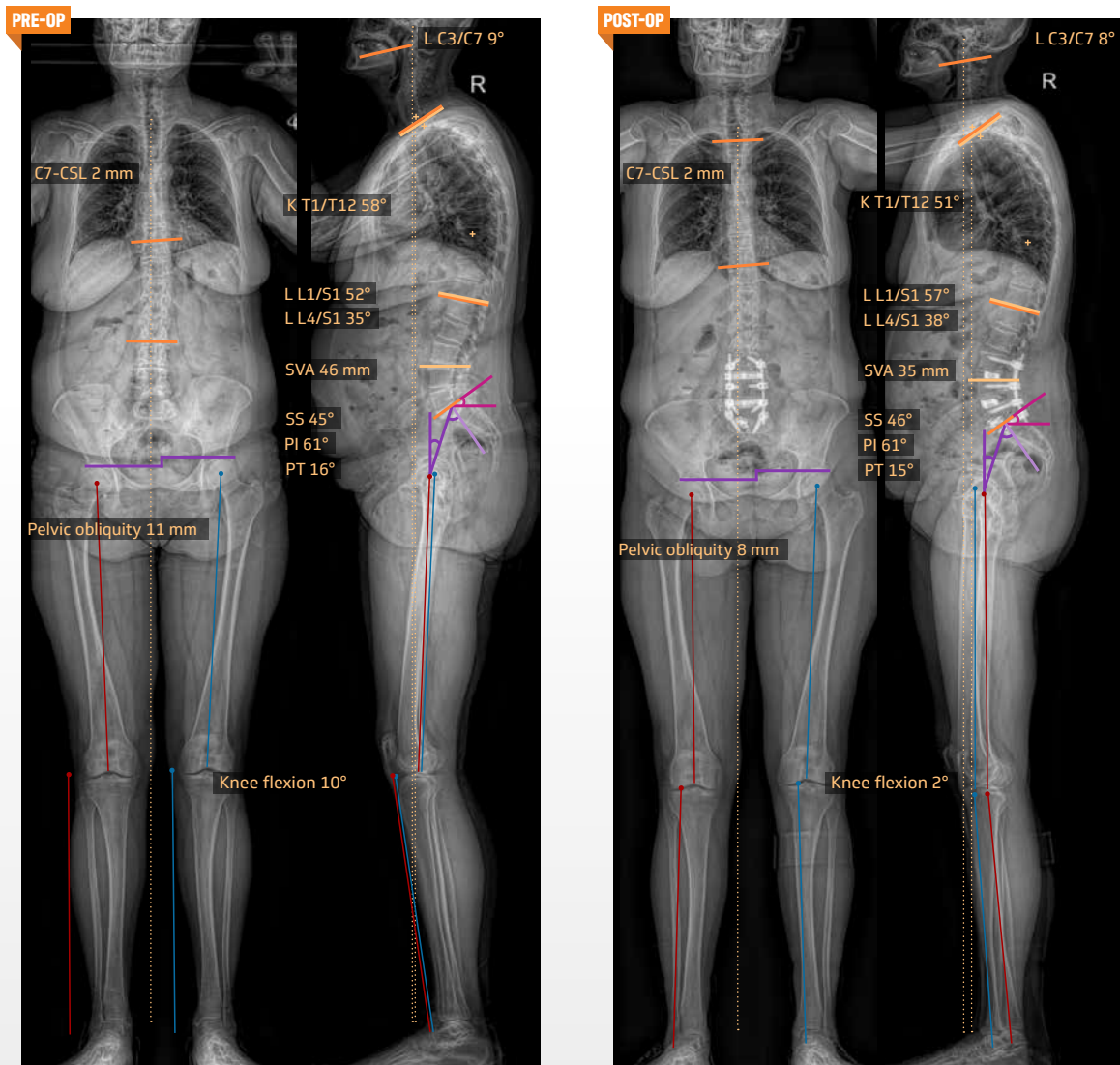
³Santoni BG, Hynes RA, McGilvray KC, et al. Cortical bone trajectory for lumbar pedicle screws. *Spine J* 2009;6:14-7.

⁴Ueno M, Sakai R, Tanaka K, et al. Should we use cortical bone screws for cortical bone trajectory? *J Neurosurg Spine* 2015;22:416-21.



Global Assessment

EOS measurements provide improved, more reproducible alignment parameters.⁵ Leverage full-body EOS images and reports to establish preoperative objectives and evaluate outcomes along the continuum of care.



Standardized Imaging

EOSedge® captures full-body images of the patient in a functional standing position – enabling a global assessment of all alignment factors. The standardized acquisition protocol leverages best-in-class radiographic technology to deliver 1:1 calibrated, high resolution images with homogenous image quality.

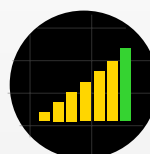
⁵Okamoto M, Jabour F, Sakai K, Hatsushikano S, Le Huec JC, Hasegawa K. Sagittal balance measures are more reproducible when measured in 3D vs in 2D using full-body EOS® images. *Eur Radiol.* 2018 Nov;28(11):4570-4577

Intraoperative Predictability

ATEC's SafeOp Neural Informatix System provides surgeons real-time, objective, and actionable information during posterior fixation procedures enabling them to detect nerve proximity and monitor the health of nerves at risk.

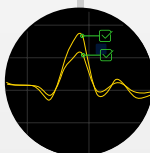


FAST, RELIABLE, DISCRETE NEURAL INFORMATION



FAST

Provides readings 4x faster than competitive systems⁶



RELIABLE

Validated responses to eliminate inaccurate readings



DISCRETE

EMG values delivered audibly and visually

Dynamic tEMG technology provides real-time feedback during pedicle preparation and screw placement to reduce the risk of pedicle breach.

Validated Response Thresholding (VRT) algorithm is designed to deliver industry-leading nerve detection while reducing the incidence of false-positive responses.

SafeOp peripheral devices and the Invictus posterior fixation instruments are designed to seamlessly integrate critical neural information into ATEC's posterior approaches.



CUSTOMER SERVICE

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