

 **smith&nephew**  
**TRIGEN<sup>®</sup>**  
**INTERTAN<sup>®</sup>**  
Intertrochanteric Antegrade Nail

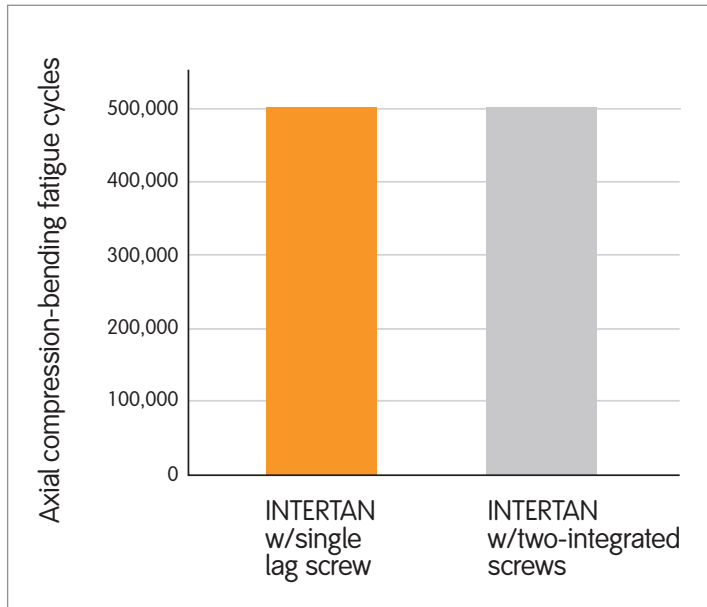
Versatility meets stability



# Versatility

Utilizing the same instrumentation, the single subtrochanteric screw can provide sufficient fixation for stable intertrochanteric and subtrochanteric fractures.

Biomechanical fatigue testing results summary



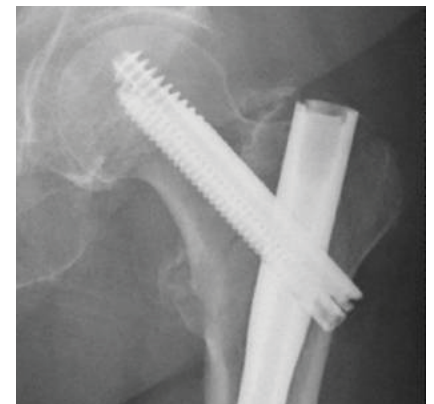
All three INTERTAN® single lag screw constructs and all three INTERTAN two-integrated screw constructs **survived 500,000 cycles without failure.**<sup>1</sup>



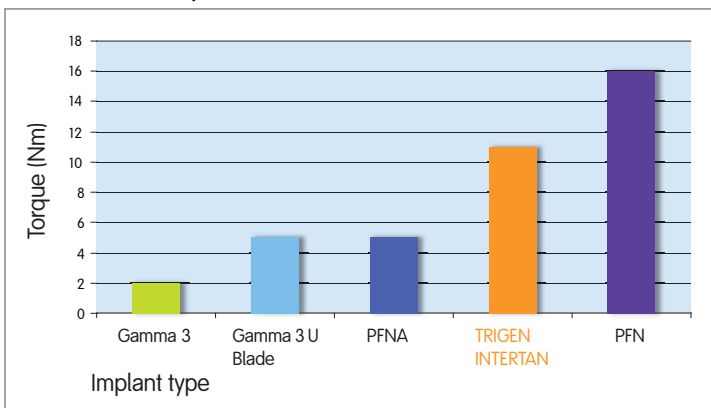
# Optimal stability

For unstable fracture patterns, the integrated lag and compression screw construct of the TRIGEN<sup>®</sup> INTERTAN<sup>®</sup> Nail System offers optimal rotational stability and resistance to cut-out.

In a separate, independent lab test designed to test rotational stability, **“The TRIGEN INTERTAN with its interlocking screw design was superior”** to the PFNA, standard Gamma 3 and Gamma 3 with U-Blade (Gamma RC Lag Screw).<sup>2</sup> The PFN showed to have greater rotational stability, however it was also associated with a major z-effect problem, high cut-out and a 24.6% re-operation rate<sup>3</sup> and was never marketed in the US.



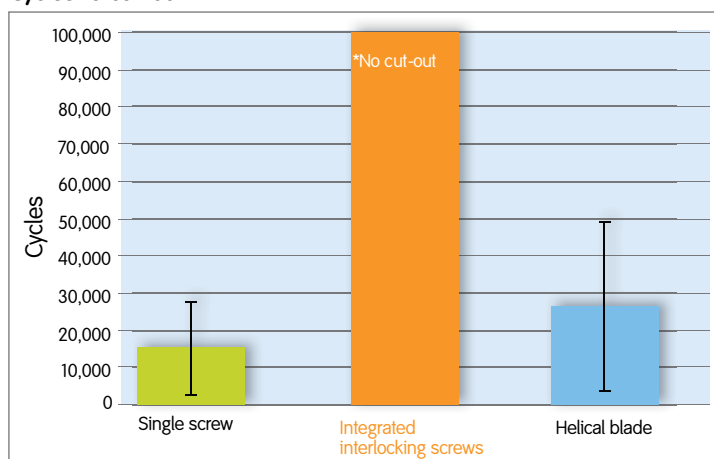
Rotational stability



In a lab test designed to replicate the protocol of the Sommers cutout test, Russell et al compared the INTERTAN nail with both single lag and helical blade devices.<sup>4</sup> Both the single screw/blade devices cut out before 30,000 cycles. After 100,000 cycles, the INTERTAN nail was still resistant to cut-out. **The INTERTAN nail survived 100,000 cycles without evidence of cut-out.**



Cycles to cut-out



#### References

- 1 Cartner J; Summy S; Zheng Y; Whitten A; Jones, B. Biomechanical Evaluation of the INTERTAN Nail used with a Single Subtrochanteric Screw. Internal Testing Report.
- 2 Bioengineering Bulletin, Dept of Medical Engineering and Physics, Royal Perth Hospital, March 2008.
- 3 Megas P; Kaisidis A; Zouboulis P; Papas M; Panagopoulos A; Lambiris E. Comparative Study of the Treatment of Pertrochanteric Fractures – Trochanteric Gamma Nail vs. Proximal Femoral Nail. Z Orthop Ihre Grenzgeb. 2005 Mar-Apr;143(2):252-7.
- 4 Russell TA; Summy SA; Whitten SA. Evaluation of cyclic cut-out failure in intramedullary nails using a single lag screw or two integrated interlocking screws. Poster Presentation. 2006 Annual Meeting, American Academy of Orthopedic Surgeons, Chicago, IL.

#### Orthopaedics

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