

Exceed[®]

Biplanar Expandable Interbody Device



Dual Taper Nose

Biplanar Expansion

TiCell[®] Nano
Surface Technology

Integrated Grafting
Technique

Open
Architecture

SPINEWAVE

Dual Taper Nose

The Exceed® implant features a Dual Taper Nose offering a reduced insertion profile in two planes to reduce neural retraction, bony resection, and ease insertion into tight disc spaces.

- Dual taper design reduces profile in two planes for easy implant insertion
- Leading edge is 6mm smaller than final height
- Insert to desired posterior disc height



Insert to desired posterior disc space height

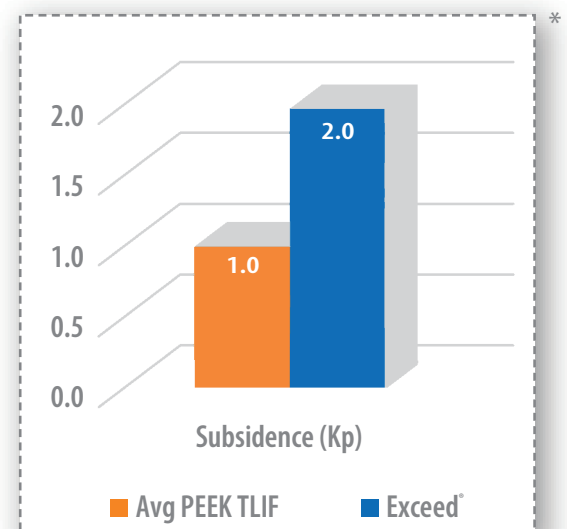
Dual taper reduces profile in two-planes for easy implant insertion

Biplanar Expansion

The Exceed® implant offers biplanar expansion with a simple, confirmable technique.

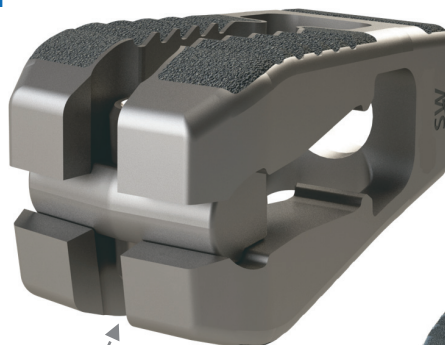
Width Expansion

- Increases implant footprint for enhanced stability
- Maximizes available graft space and graft window
- Allows for increased endplate surface area and reduces the risk of subsidence



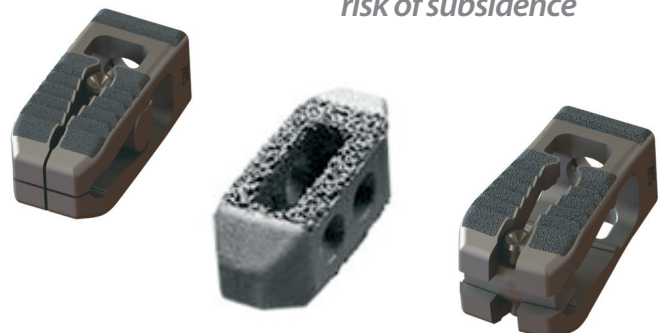
Height Expansion

- Restores sagittal balance offering 0°, 8°, and 15° lordotic options
- Optimized Fit
- Resists retropulsion



Biplanar anterior expansion with a simple confirmable technique

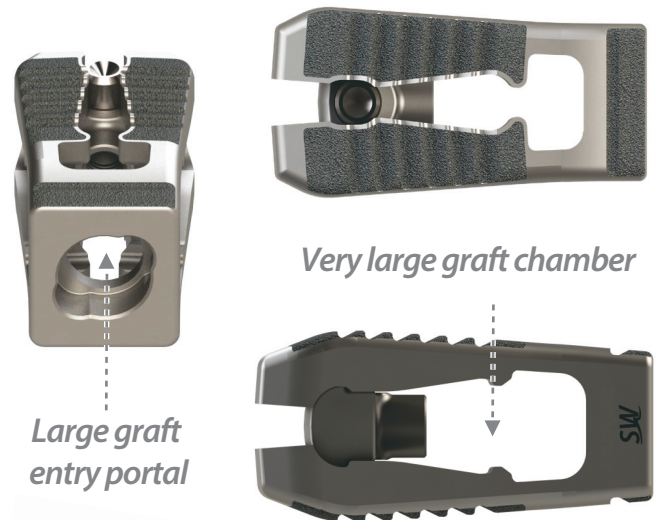
Width expansion creates graft window allowing for increased surface area reducing the risk of subsidence



Open Architecture

The Exceed® implant is designed with strategic use of titanium providing an open architecture.

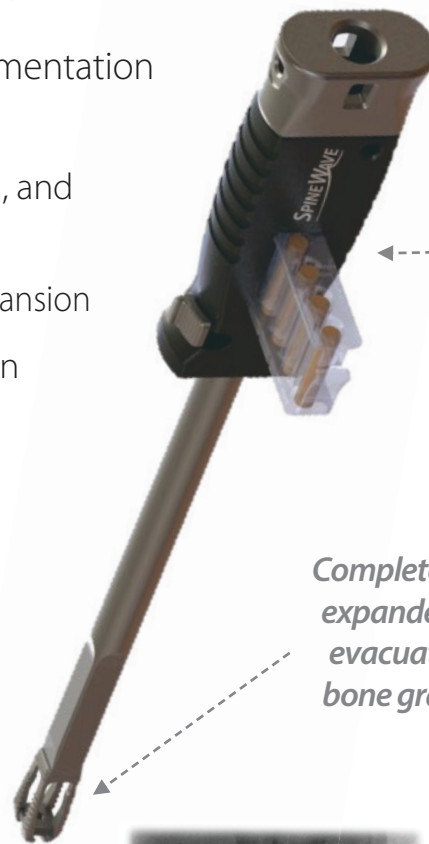
- Large graft chamber and graft entry portal for unrivaled grafting into and through the implant
- Less implant material provides improved radiographic visibility of the fusion mass



Streamlined Procedure

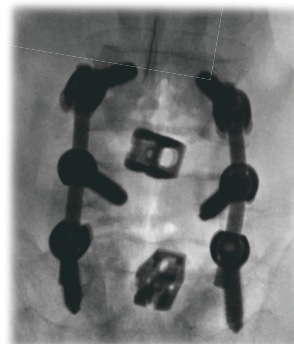
Exceed® features simple, and reliable instrumentation designed to improve workflow.

- One pass by the nerve root to insert, expand, and deliver graft
- Simple, powerful, and confirmable implant expansion
- Integrated, through-inserter, grafting solution provides fast, safe, and easy graft insertion using the GraftMag® EX Graft Delivery System
- No posterior backflow of graft material



Fast, safe, easy bone graft insertion using the integrated GraftMag® EX Graft Delivery System

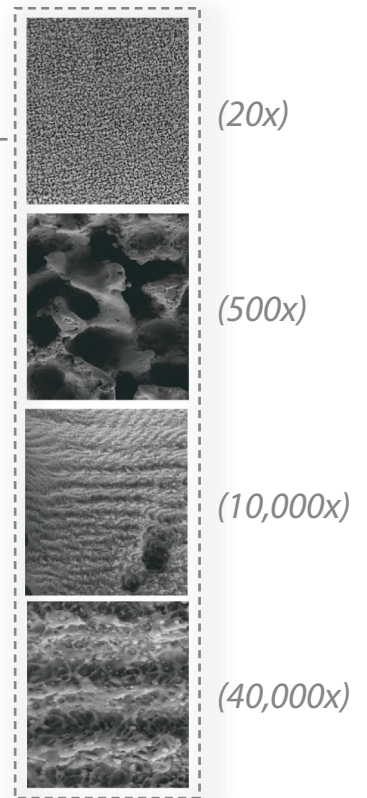
Completely and easily fill the expanded implant, and the evacuated disc space with bone graft, post-placement



TiCell[®] Nano

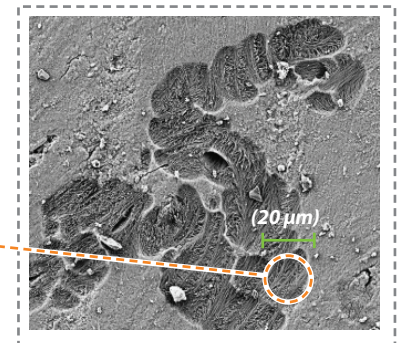
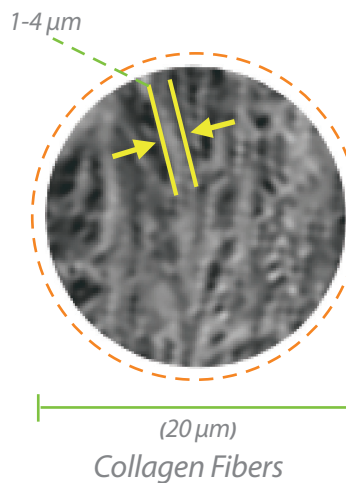
Advanced Surface Technology

TiCell[®] Nano Surface Technology is a proprietary advanced surface technology that uses a 2-Stage Laser Ablation process that creates porosity, micro roughness, and nanoscale features.

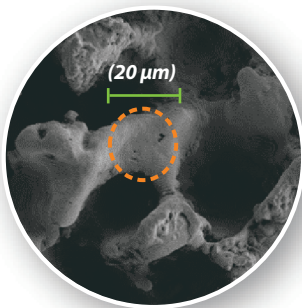


Emulating Nature by Advanced Laser Technology

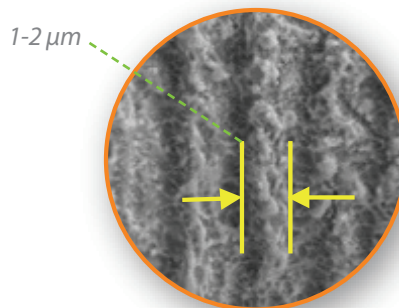
	Human Bone Tissue**	TiCell [®] Nano*
Collagen Fiber	1-4 μ m	1-2 μ m
Collagen Fibril	10-300 nm	50-100 nm



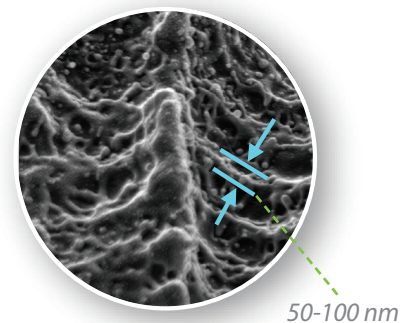
Osteoclastic Pits



TiCell[®] Nano
(500x)



TiCell[®] Nano
(40,000x)

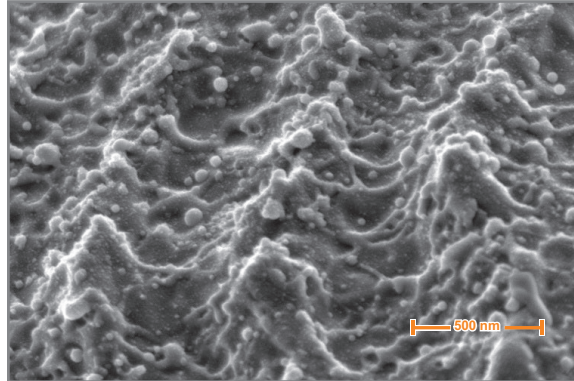


TiCell[®] Nano
(150,000x)

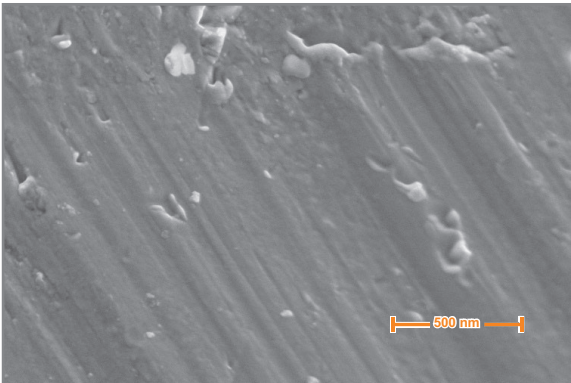
Titanium Implant Surfaces

Nano-scale comparison

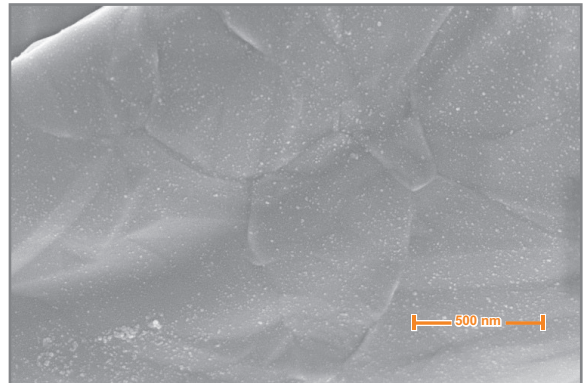
(All images 75,000X, scale bars = 500nm)



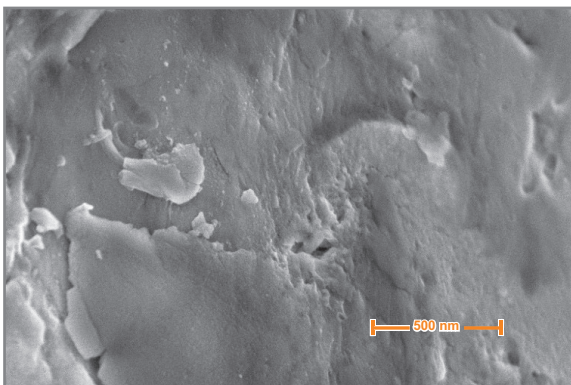
TiCell® Nano Advanced Surface Technology
(75,000x)



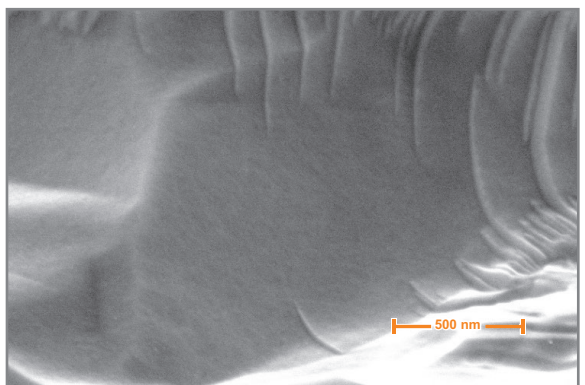
3D Printed Titanium
(75,000x)



Plasma Spray Titanium
(75,000x)



Machined Titanium
(75,000x)



Acid Etched Titanium
(75,000x)



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*Data on File at Spine Wave

**Shinya Watari et al. "Modulation of osteogenic differentiation in hMSCs cells by submicron topographically-patterned ridges and grooves" Biomaterials. 2012 January ; 33(1): 128–136. doi:10.1016/j.biomaterials.2011.09.058.