





## REEF TOPOGRAPHY"

Undercut macrostructures designed to promote bony interlocking<sup>5,†</sup>



### UP TO 22% MORE NanoMetalene<sup>®</sup> Endplate Surface Area\*

Endplate features place graft material in direct contact with the endplates.





### UP TO 41% MORE NanoMetalene Aperture Surface Area\*

Aperture features secure graft within the aperture during interbody placement.

# NANOMETALENE® TECHNOLOGY

### Submicron titanium layer molecularly bonded to entire PEEK implant

Titanium surfacing resists wear debris.<sup>1</sup>



Mechanical properties of PEEK unaltered, providing stiffness on par with bone.<sup>1</sup>

### Preclinical results show greater bone ongrowth on NanoMetalene<sup>®</sup> vs. PEEK<sup>3,†</sup>





Rough submicron topography encourages integration.<sup>3,4</sup>

# REEF<sup>™</sup> TO

**The SeaSpine® Reef** <sup>®</sup> **TO (TLIF Oblique) Interbody System** is designed for posterior lumbar interbody procedures and accommodates both insert and rotate and direct impact insertion techniques. Implants feature NanoMetalene<sup>®</sup> surface technology and Reef Topography<sup>®</sup> for greater titanium surface area and improved biomechanical stability while maintaining the physical properties of PEEK.<sup>1,3,†</sup>

#### **Interbody Features**

- Reef Topography and NanoMetalene surface technology
- Footprint options:
  9 x 24mm, 9 x 28mm,
  11 x 28mm and 11 x 32mm
- Height options: 7–16mm\*
- Lordotic options: 5°, 10°, 15°\*\*



### Instrumentation to allow for both open and minimally invasive techniques





T-handle

\*Note: Min./Max. heights vary by footprint. \*\*TLIF implants offer 30° offset lordosis for oblique placement

# PRECLINICAL EVALUATION

### Preclinical Evaluation of Reef Topography<sup>™</sup>

Clinically relevant endplate-sparing sheep interbody fusion model results comparing NanoMetalene<sup>®</sup> (NM) implants with and without Reef Topography.

### Endplate Undercut Macrostructures



Aperture Undercut Macrostructures





### Undercut Macrostructures results in

~3x increase in mechanical stability<sup>5,†</sup>

Ultimate Tensile Strength



REEF TOPOGRAPHY MAY DRIVE EARLIER AND IMPROVED BIOMECHANICAL STABILITY <sup>5/</sup>

### **FUSION ENGINEERED**<sup>™</sup> Deliberate Design. Driven by Science.

SeaSpine<sup>®</sup> is dedicated to providing a comprehensive portfolio of innovative, procedurally-focused products strategically designed to work together to drive fusion. The latest advancements in bone biology and materials science guide the development of in-house manufactured advanced orthobiologics and proprietary spinal implant technology engineered to address the many nuances of spinal pathology. SeaSpine products can be tailored to meet individual patient needs, delivering both clinical and economic value to patients, surgeons, and hospital systems.



#### COMPLEMENTARY TECHNOLOGIES

The combination of SeaSpine's spinal implant technologies and orthobiologics capitalizes on both the design and the science, unleashing a favorable environment for fusion.





#### SCIENTIFICALLY DRIVEN

SeaSpine is committed to relying on data to drive each facet of our technologies toward the ultimate goal of fusion.

<sup>1</sup>Preclinical testing, such as animal studies, may not be indicative of human results.
<sup>1</sup>Results from mechanical testing. Data on file. TR-0010-11-01
<sup>2</sup>Results from imaging study. Data on file. TR-0010-11-01
<sup>3</sup>Walsh, et al. The in vivo response to a novel Ti coating compared with polyether ether ketone: evaluation of the periphery and inner surfaces of an implant. Spine Journal 2018 Jul; 18(7): 1231-1240
<sup>4</sup>NanoMetalene SEM images on file. TR-0094-19-01
<sup>5</sup>Results from preclinical in vivo testing. Data on File. D0003269

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