



Spine Wave Announces Initial Surgical Procedures with the Testa™ TP Pivoting Spacer System featuring TiCell® Nano Advanced Surface Technology

SHELTON, Conn. – November 13, 2025 – Spine Wave is pleased to announce the initial surgical procedures benefiting from Spine Wave’s Testa™ TP Pivoting Spacer System featuring TiCell® Nano Advanced Surface Technology. These initial procedures were performed by Alexander R. Vaccaro, M.D., Ph.D., MBA¹ of Rothman Orthopaedics at Jefferson Health, Philadelphia, PA., and Paul C. Celestre, M.D.² of the Norton Leatherman Spine Center, Louisville, KY. The Testa™ TP Pivoting Spacer System is a pivoting interbody device for transforaminal lumbar interbody fusion (“TLIF”). It is ideal for those surgeons preferring symmetric interbody device placement with the TLIF approach. This exciting new product is Spine Wave’s first internally designed and developed non-expanding TLIF implant, and it will help the company reach the substantial number of surgeons that use non-expanding implants.

The Testa™ TP Pivoting Spacer System is loaded with innovation and is a great choice for surgeons using non-expanding TLIF implants. The 3D-printed all-titanium implant features gyroid lattice endplates allowing for boney endplate contact and communication with the copious amounts of bone graft within the implant’s large graft chamber. The implant’s unique bellowed side walls are designed to reduce implant stiffness and increase radiographic graft visibility. The Testa™ TP Pivoting Spacer System is inserted using Spine Wave’s patented Center Pivot Point Technology to help ensure easy and accurate implant placement in each case. This novel implant insertion technique allows for reliable symmetric implant placement using the simple unilateral insertion technique typical for oblique implant placement. Surgeons may opt to simplify their TLIF procedures more by using Spine Wave’s popular GraftMag® Graft Delivery System for fast, easy and safe bone graft delivery.

The Testa™ TP Pivoting Spacer System incorporates TiCell® Nano Advanced Surface Technology, which is Spine Wave’s proprietary and patented advanced surface design. The TiCell® Nano surface is produced using both nanosecond and femtosecond lasers to form a hierarchical surface structure. The nanosecond laser produces a roughened, microporous texture intended to enhance implant-to-vertebral endplate fixation, while the femtosecond laser produces sub-micron and nanoscale features designed to replicate the natural geometry within osteoclastic resorption pits. TiCell® Nano Advanced Surface Technology can be applied to any titanium implant substrate, including machined and 3D printed designs. Spine Wave’s Exceed® Biplanar Expandable Interbody Device also features TiCell® Nano Advanced Surface Technology.

TiCell® Nano Advanced Surface Technology was described in the paper entitled *Titanium-Aluminum-Vanadium Surfaces Generated Using Sequential Nanosecond and Femtosecond Laser Etching Provide Osteogenic Nanotopography on Additively Manufactured Implants* published in *Biomimetics*.³ In addition, TiCell® Nano Advanced Surface Technology and its application to spinal implants was presented and discussed in the online program entitled *The Promise of Biomimetic Implant Surfaces and Nano + Femtosecond Laser Texturing* hosted by Orthopedics This Week. A recording of the program can be seen at the Orthopedics This Week website (<https://ryortho.com/category/otw-broadcasting/>).

“The Testa™ TP Pivoting Spacer System can be reliably placed where I want it in the disc space every time.” said Dr. Vaccaro. “The system’s Center Pivot Point Technology makes fast and easy what can be tedious and difficult with other systems.” Dr. Celestre stated, “the implant’s radiographic characteristics

are striking and facilitate graft and fusion visibility. The TiCell® Nano Advanced Surface Technology is compelling because it can provide near-term implant fixation and boney fusion, long-term.”

“Spine Wave’s introduction of the Testa™ TP Pivoting Spacer System is an important company milestone because it is our first entry into the non-expanding TLIF interbody device market with an internally designed and developed product,” said Laine Mashburn, Executive Vice President of Global Marketing and Business Development. He continued, “the technology embedded in the system addresses important clinical needs, is appealing to surgeons, and is patented. Taken together, it provides Spine Wave with a promising technical platform for the development of other non-expanding interbody devices to complement Spine Wave’s strong positions in expandable device categories”.

About Spine Wave

Spine Wave is a leader in minimally invasive spine surgery and expandable interbody devices. The company is committed to offering differentiated product and procedure solutions for spine surgeons and their patients. Spine Wave offers a broad portfolio of advanced spine implant and biologic products. The company is always looking to expand and continues to recruit sales managers and independent distributors to fuel growth. For more information on Spine Wave and its products please visit www.spinewave.com.

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3. Jonathan T. Dillon; David J. Cohen; Scott McLean; Haibo Fan; Barbara D. Boyan; Zvi Schwartz, *Biomimetics* **2025**, Volume 10, Issue 8, 507