



**CTL AMERICA**  
rethink what's possible

**valeo<sup>®</sup> VBR**

**A REVOLUTION IN INTERBODY FUSION**  
VERTEBRAL BODY REPLACEMENT IMPLANT SYSTEM



Radiotranslucent  
under X-ray

Reduced artifact  
under CT or MRI

Nanotopography enhances  
osteoblast response  
initiating faster fusion

Surface chemistry  
generates anti-  
microbial properties

Optimal material density  
enables radiotranslucent and  
reduced artifact imaging

**IMPLANT FOOTPRINTS  
AND SIZES**



Footprints: 16x12mm, 17x14mm

Height: 14-30mm, in 1mm increments

Lordosis: 6°

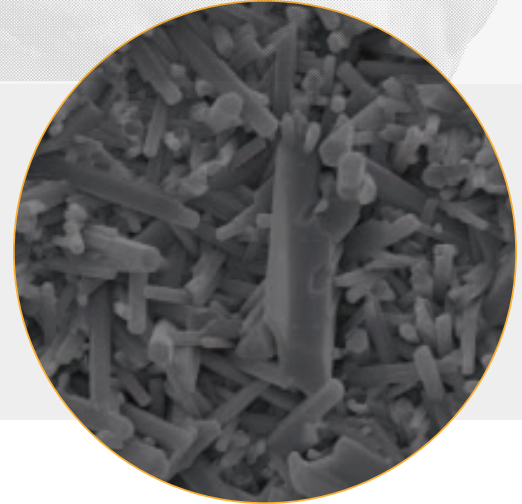
# Why keep using the same material expecting different results?



## CTL AMEDICA'S SILICON NITRIDE

Silicon nitride has the ability to achieve superior new bone growth. Along with anti-microbial properties and enhanced imaging capabilities, silicon nitride is the ideal biomaterial.

Silicon nitride's nano-textured surface at 10 microns ▼



### Faster Fusion Rates

Compared to PEEK and titanium, CTL Amedica's silicon nitride demonstrates greater new bone formation<sup>1</sup> and has an innate nanotopography and surface chemistry that provides an optimal environment for bone growth. The surface chemistry initiates bone growth, while the intrinsic nanotopography increases surface area. This combination of initiating bone growth with increased surface area enhances osteoblast response accelerating the fusion process.

### Proven Anti-microbial Properties

The negative surface charge of silicon nitride repels bacteria and prevents biofilm formation<sup>2</sup>, reducing the chance of infection. The hydrophilic surface creates a molecular water barrier preventing the adhesion of bacteria.

### Enhanced Imaging Capabilities

Silicon nitride implants are radiotranslucent with visible boundaries and produce no artifact under CT or MRI; this enables an exact view of the implant for precise intraoperative placement and post operative fusion assessment.

TO OFFER YOUR PATIENTS THE OPTIMAL IMPLANT CHOICE, CONTACT US AT [214.545.5820](tel:214.545.5820) OR VISIT US AT [CTLAMEDICA.COM](http://CTLAMEDICA.COM)

#### REFERENCES:

1. Webster TJ, Patel AA, Rahaman MN, et al. Anti-infective and osteointegration properties of silicon nitride, poly(ether ether ketone), and titanium implants. *Acta Biomater.* 2012;8(12):4447-4454. doi: 10.1016/j.actbio.2012.07.038. Epub 2012 Jul 31.
2. Gorth DJ, Puckett S, Ercan B, et al. Decreased bacteria activity on Si<sub>3</sub>N<sub>4</sub> surfaces compared with PEEK or titanium. *Int J Nanomedicine.* 2012;7:4829-4840.