



## A REVOLUTION IN INTERBODY FUSION TRANSFORAMINAL LUMBAR INTERBODY FUSION DEVICE







Radiotranslucent under X-ray

Nanotopography enhances osteoblast response initiating faster fusion

Surface chemistry generates antimicrobial properties Optimal material density enables radiotranslucent and reduced artifact imaging

### IMPLANT FOOTPRINTS AND SIZES



Footprints: 10x27mm, 10x33mm Height: 7-16mm, 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 OR VISIT US AT CTLAMEDICA.COM

#### **REFERENCES:**

- 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 SiaNa surfaces compared with PEEK or titanium. Int J Nanomedicine. 2012;7:4829-4840.

