

hyprevention®

UNIQUE PEDICLE ANCHORAGE FOR VERTEBRAL BODY SUPPORT

 VSTRUT®

TRANSPEDICULAR
VERTEBRAL SYSTEM



A STRUTPLASTY® TECHNIQUE FOR BONE CONSOLIDATION

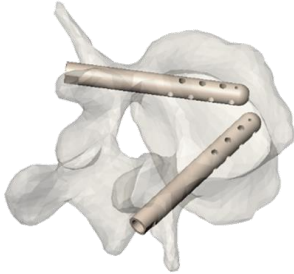
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PRODUCT & INDICATION

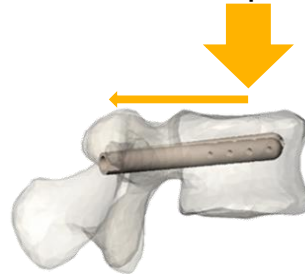
VSTRUT[®] VERTEBRAL IMPLANT is indicated for use in the treatment of vertebral fractures in the thoracic and lumbar spine from T9 to L5. It is intended to be used in combination with PMMA bone cement for vertebroplasty and kyphoplasty (*Teknimed F20[®] bone cement*).

MAIN CHARACTERISTICS

1. Implant made of PEEK Polymer
(close to normal bone)



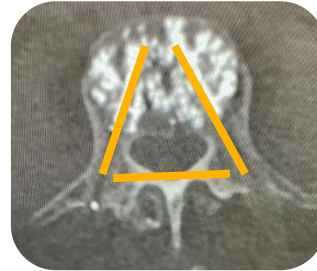
2. Pedicle anchorage to share axial loading between anterior and posterior column



3. Cement distribution control
(lateral holes in vertebral body only)

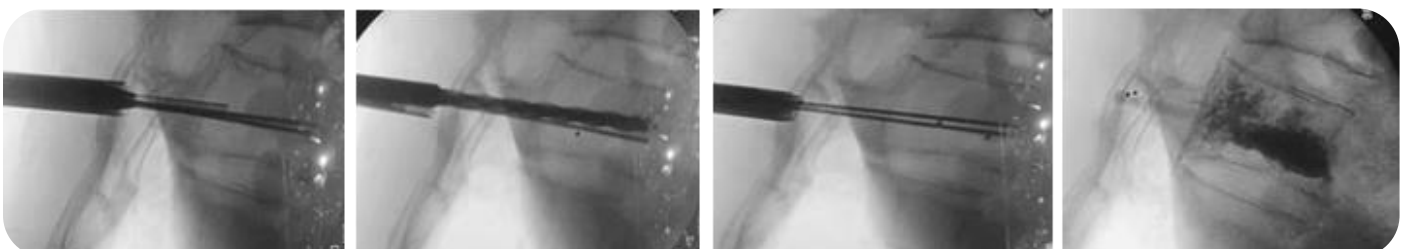


4. Full vertebrae reinforcement (not only vertebral body)



PERCUTANEOUS SURGICAL TECHNIQUE

- Transpedicular positioning of the trocar, followed by the guidewire
- Soft tissue dilation and protection tube placement
- Drilling of the implant location site
- Device implantation
- Vertebral body cementation

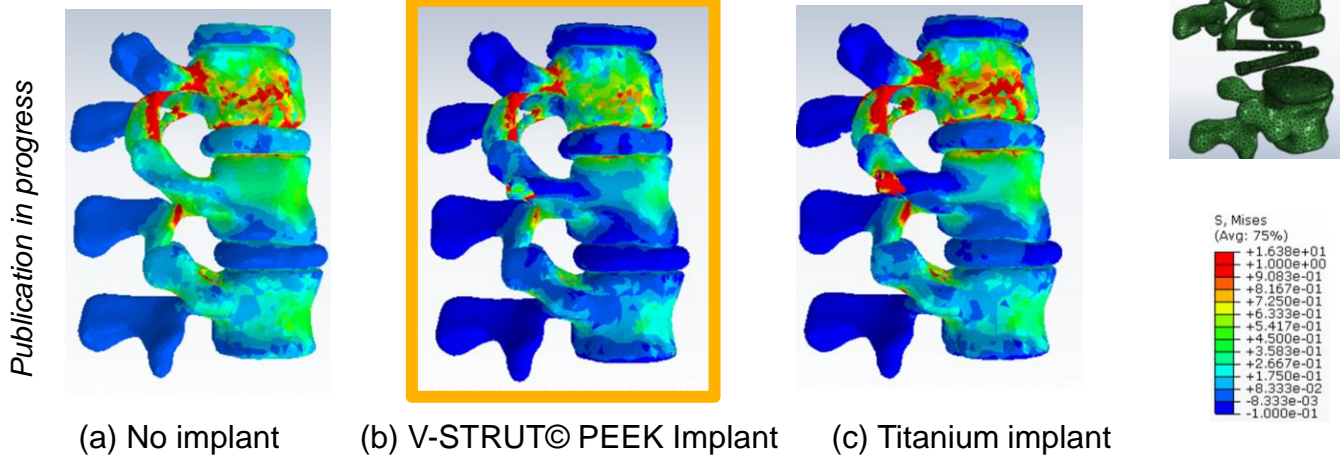


- Revision technique similar to vertebroplasty or kyphoplasty

BIOMECHANICS

Finite Elements Analysis (*osteoporotic specimen*)

- Stress reduction at treated level and adjacent levels using V-STRUT[®]



Biomechanical Testing (*osteoporotic specimen*)

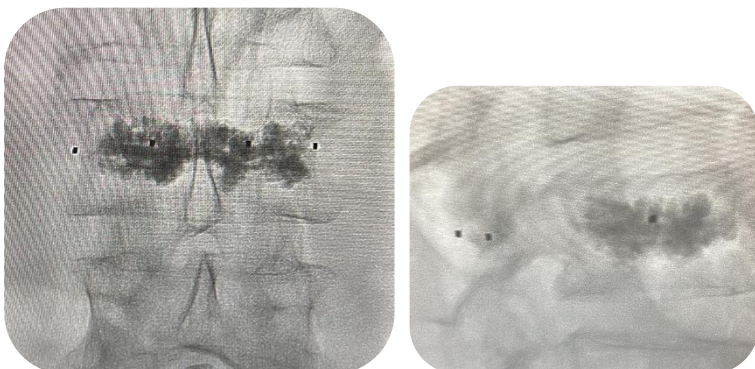
- Fracture load and energy to fracture increased using V-STRUT[®]



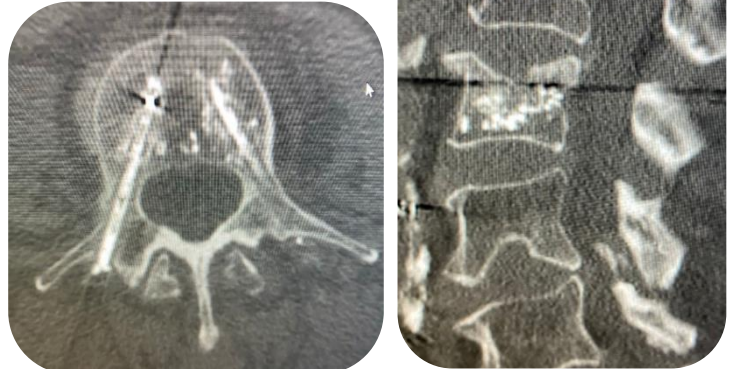
Results published in *Clinical Biomechanics* by Hambli et al. 2023⁷ and by Aebi et al, 2018⁵

CLINICAL CASES

Female, 72yo,
osteoporosis, L3



Female, 69yo,
osteoporosis, L3



If needed, vertebral height restoration can be done by patient positioning (postural correction technique)²⁻⁴ before the procedure.



TRANSPEDICULAR VERTEBRAL SYSTEM

RANGE OF SIZES



IMPLANT DIAMETER 5.5 mm

REF. 35540	L 40 mm
REF. 35545	L 45 mm
REF. 35550	L 50 mm
REF. 35555	L 55 mm
REF. 35560	L 60 mm

IMPLANT DIAMETER 6.5 mm

REF. 36540	L 40 mm
REF. 36545	L 45 mm
REF. 36550	L 50 mm
REF. 36555	L 55 mm
REF. 36560	L 60 mm

- Implant sizing rationale: similar to pedicle screws for T9 to L5 and Kyphoplasty channel access usually 5mm in diameter

REFERENCES

- Cornelis et al. Medicina 2019; 55, 426
- Ng et al. Int. J. Spine Surg. 2016; vol. 10
- Diel et al. Eur. Spine J. 2012; vol. 21, no. SUPPL. 6, pp. 792–799
- Cawley et al. J. Clin. Neurosci. 2011; vol. 18, no. 6, pp. 834–836
- Aebi et al. Clin Biomech. 2018;56:40-45
- Cornelis et al. Cardiovasc Intervent Radiol. 2021; 10.1007/s00270-020-02719-8
- Hambli et al. Clin Biomech 2023;105893

INSTRUMENTATION



- Reusable instruments

hyprevention®

www.hyprevention.com

Medical device

For more information, see the instructions for use

PATENTED

FDA CLEARED (class II)

NOT CE MARKED

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