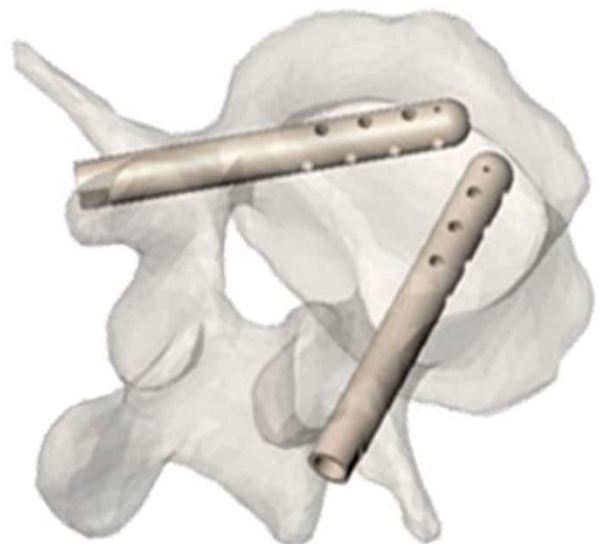


hyprevention®

UNIQUE PEDICLE ANCHORAGE FOR VERTEBRAL BODY SUPPORT

 VSTRUT®

TRANSPEDICULAR
VERTEBRAL SYSTEM



A STRUTPLASTY® TECHNIQUE FOR BONE CONSOLIDATION

www.hyprevention.com

PRODUCT & INDICATION

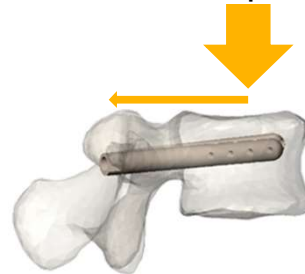
VSTRUT[®] VERTEBRAL IMPLANT is indicated for use in the treatment of vertebral fractures in the thoracic and lumbar spine. It is intended to be used in combination with PMMA bone cement for vertebroplasty and kyphoplasty (*Teknimed F20[®] bone cement*).

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)

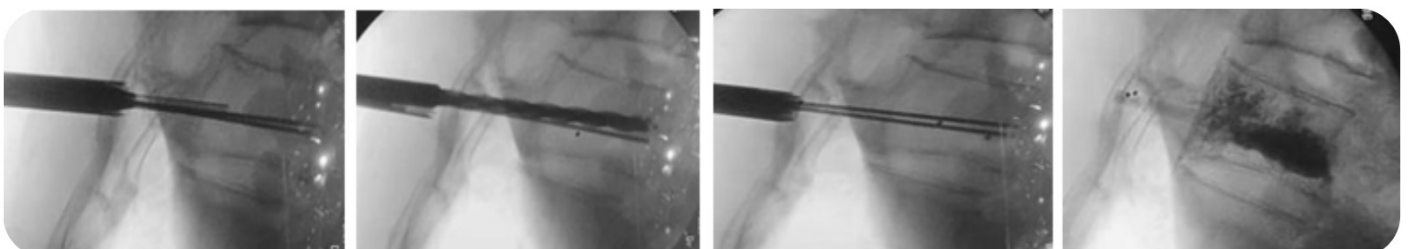


4. Full vertebrae reinforcement
(vertebral body + pedicles)



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

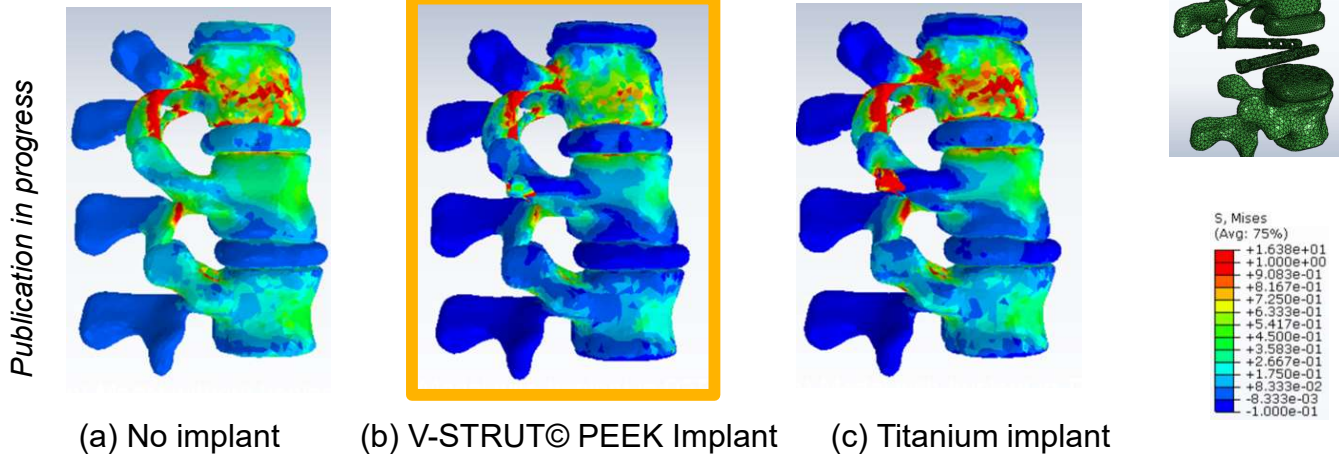


- Revision technique similar to vertebroplasty or kyphoplasty

BIOMECHANICS

Finite Elements Analysis (*osteoporotic specimen*)

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



Biomechanical Testing (*osteoporotic specimen*)

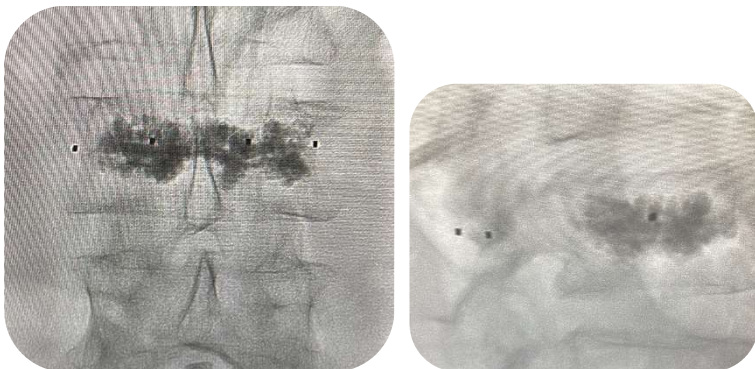
- Fracture load and energy to fracture increased using V-STRUT[®]



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

INSTRUMENTATION



IMPLANT DIAMETER 4.5 mm		IMPLANT DIAMETER 5.5 mm		IMPLANT DIAMETER 6.5 mm	
REF	Length	REF	Length	REF	Length
34525	25 mm	-	-	-	-
34530	30 mm	-	-	-	-
34535	35 mm	-	-	-	-
34540	40 mm	35540	40 mm	36540	40 mm
34545	45 mm	35545	45 mm	36545	45 mm
34550	50 mm	35550	50 mm	36550	50 mm
34555	55 mm	35555	55 mm	36555	55 mm
34560	60 mm	35560	60 mm	36560	60 mm



REFERENCES

1. Cornelis et al. *Medicina* 2019; 55, 426
2. Ng et al. *Int. J. Spine Surg.* 2016; vol. 10
3. Diel et al. *Eur. Spine J.* 2012; vol. 21, no. SUPPL. 6, pp. 792–799
4. Cawley et al. *J. Clin. Neurosci.* 2011; vol. 18, no. 6, pp. 834–836
5. Aebi et al. *Clin Biomech.* 2018;56:40-45
6. Cornelis et al. *Cardiovasc Intervent Radiol.* 2021: 10.1007/s00270-020-02719-8
7. Hambli et al. *Clin Biomech* 2023;105893
8. Hambli et al. *Medical Engineering and Physics* 124 (2024) 104100
9. Barral et al. *Canadian Association of Radiologists Journal* - 2024 DOI: 10.1177/08465371241228256



www.hyprevention.com

Medical device
For more information, see the instructions for use
PATENTED
FDA CLEARED (class II)

USA

1411 Broadway Fl 16
New York, 10018 NY
usa@hyprevention.com
T. +1 (772) 228 3218

