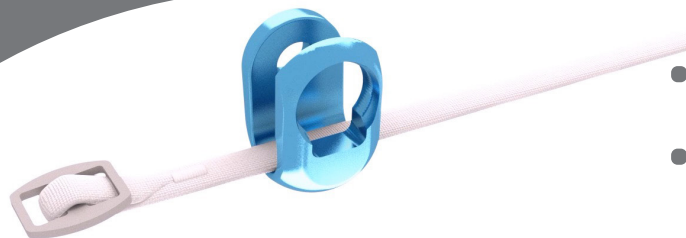


Proximal Junctional Kyphosis (PJK) can lead to Proximal Junctional Failure (PJF), a serious, early complication in adult spinal surgery that may require revision surgery.

- Risk factors include over-correction, under-correction, excessive ligament dissection, osteoporosis <sup>(13,12)</sup>
- Radiographic definition a Kyphotic angle and change between UIV and UIV+2  $>10^\circ$  <sup>(23)</sup>
- 66 % of the cases typically occur within 3 months of surgery <sup>(24)</sup>
- Up to 40% of ASD surgery patients affected by PJK <sup>(12)</sup>



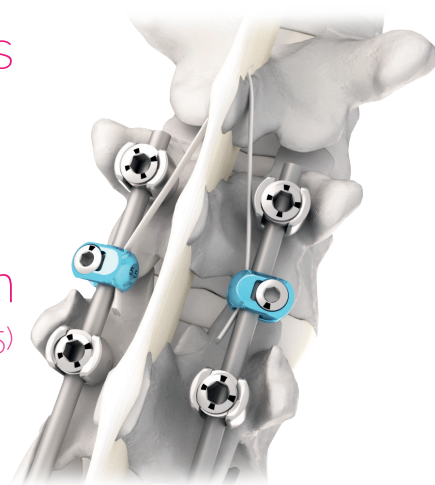
## Soft landing of spinal posterior constructs

Safe <sup>(1)</sup> and proven Jazz™ band technology, removes the abrupt transition between the rigid fused thoracic and lumbar spine and flexible unfused vertebral segments <sup>(14)</sup>,

"Tethering augmentation is an option in mitigating the sudden stiffness change"<sup>(25)</sup>

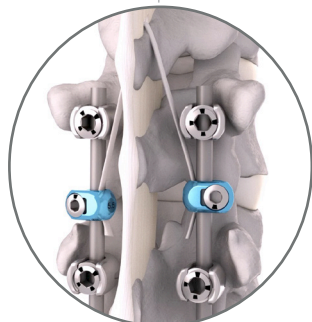
Polyester tether constructs create a gradient of stiffness, soft tissue augmentation and allow an effective distribution of range of motion at the UIV and proximal segment <sup>(25)</sup>.

Pedicle screw loads and ligament forces reduced with increasing the number of tethers used <sup>(25)</sup>. Prospective study <sup>(14)</sup> reported on the safety and positive early outcomes with Band technology for prevention of PJK.



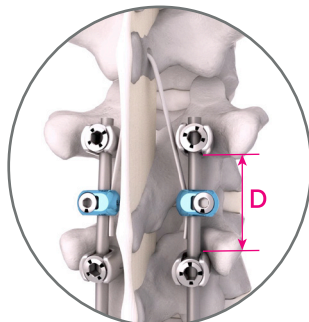
## Tethering linkage options

Inter spinous

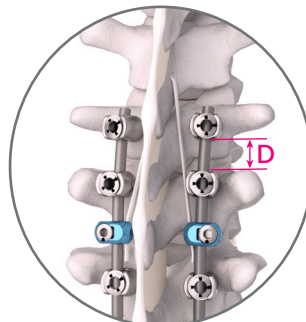


Band passage above the UIV+1 spinous process

Intra spinous

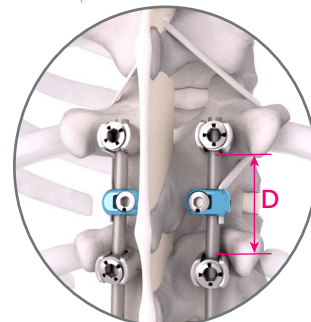


If D sufficient (  $> 15\text{mm}$  )  
Jazz™ PF connectors below UIV Screws  
Perforation of spinous process to pass the Band at UIV+1



If D insufficient (  $< 15\text{mm}$  )  
Jazz™ PF connectors below UIV-1 Screws  
Perforation of spinous process to pass the Band at UIV+1

Inter spinous & subtransverse



If D sufficient (  $> 15\text{mm}$  )  
Jazz™ PF connectors below UIV Screws  
Bilateral Sub transverse at UIV + above spinous process passage of the Band at UIV+1

<sup>(1)</sup> Polirsztok E, Gavaret M, Gsell T, Suprano I, Choufani E, Bollini G, Jouve JL. Sublaminar bands: are they safe? Eur Spine J. 2015 Jul;24(7):1441-1449.

<sup>(12)</sup> Lau D, Clark AJ, Scheer JK, Daubs MD, Coe JD, Paonessa KJ, LaGrone MO, Kasten MD, Amaral RA, Trobisch PD, Lee JH, Fabris-Monterumici D, Anand N, Cree AK, Hart RA, Hey LA, Ames CP; SRS Adult Spinal Deformity Committee. Proximal junctional kyphosis and failure after spinal deformity surgery: a systematic review of the literature as a background to classification development. Spine 2014 Dec 1;39(25):2093-2102.

<sup>(13)</sup> Liu FY, Wang T, Yang SD, Wang H, Yang DL, Ding WY. Incidence and risk factors for proximal junctional kyphosis: a meta-analysis. Eur Spine J. 2016 Aug;25(8):2376-2383.

<sup>(14)</sup> Viswanathan VK, Kukreja S, Minnema AJ, Farhadi HF. Prospective assessment of the safety and early outcomes of sublaminar band placement for the prevention of proximal junctional kyphosis. J Neurosurg Spine. 2018 May;28(5):520-531.

<sup>(23)</sup> Glatte RC, Bridwell KH, Lenke LG, Kim YJ, Rinella A, Edwards C 2nd. Proximal junctional kyphosis in adult spinal deformity following long instrumented posterior spinal fusion: incidence, outcomes, and risk factor analysis. Spine 2005 Jul 15;30(14):1643-1649.

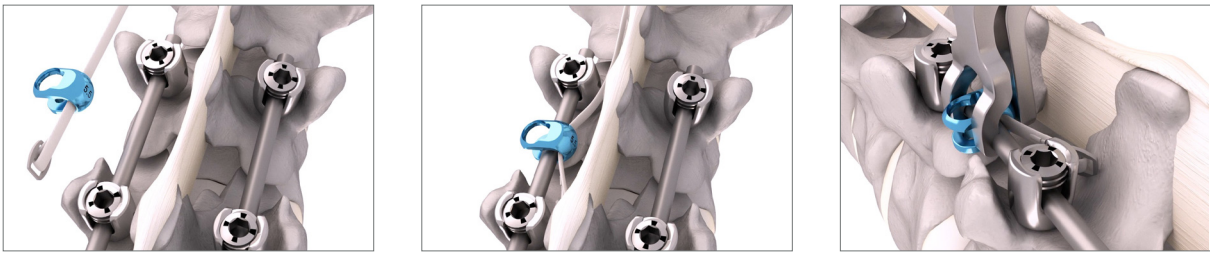
<sup>(24)</sup> Yagi M, Rahm M, Gaines R, Maziad A, Ross T, Kim HJ, Kebaish K, Boachie-Adjei O; Complex Spine Study Group. Characterization and surgical outcomes of proximal junctional failure in surgically treated patients with adult spinal deformity. Spine 2014 May 1;39(10):E607-614.

<sup>(25)</sup> Bess S, Harris JE, Turner AW, LaFage V, Smith JS, Shaffrey CI, Schwab FJ, Haid RW Jr. The effect of posterior polyester tethers on the biomechanics of proximal junctional kyphosis: a finite element analysis. J Neurosurg Spine. 2017 Jan;26(1):125-133.

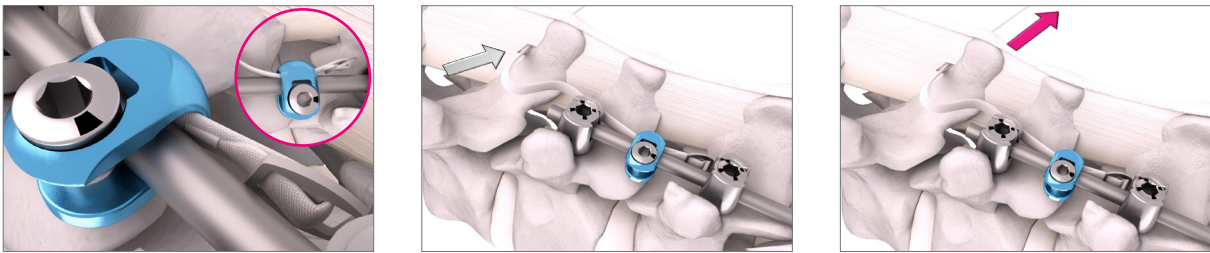
# Jazz™ PF surgical approach

## Procedure:

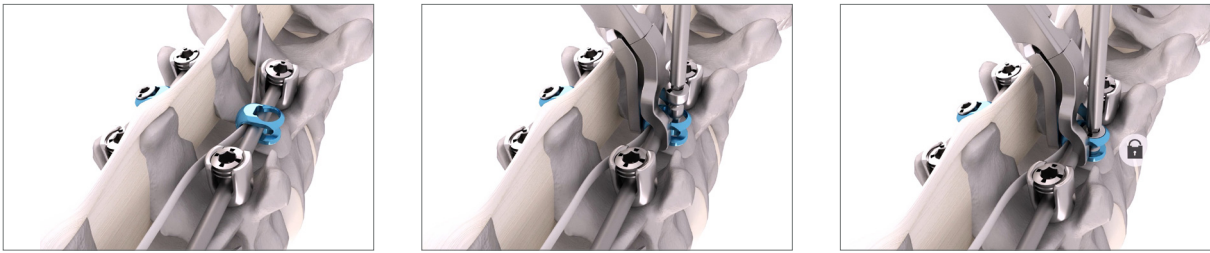
1. Jazz™ PF connector & Band connection to one rod.



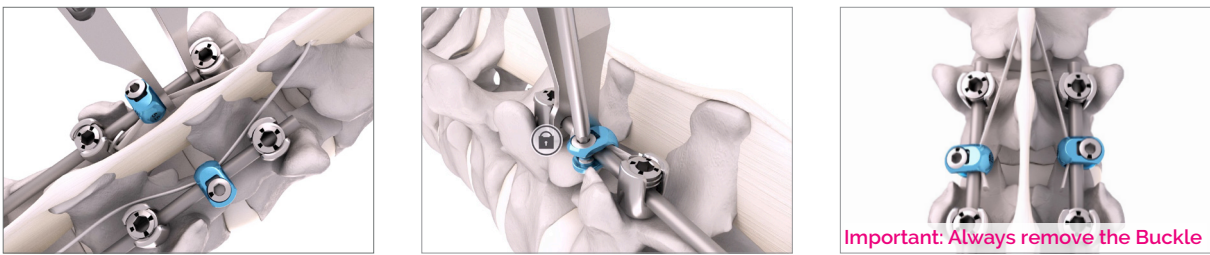
2. Pull the Jazz™ Band until the buckle splice contacts the Jazz™ PF connector. Jazz™ Band passed inter or intra spinous at UIV+1.



3. Second Jazz™ PF connector & Band connection to contralateral rod, final tightenin the Jazz™ PF screw.



4. Adjust band tension using a compressor or distractor. Final tighten the Jazz™ PF screw. Cut the remaining band 5 to 10mm caudal to the Jazz™ PF connectors.



Important: Always remove the Buckle

## References

### Jazz™ PF Connector

Reference	Designation
150758	Jazz PF - 5.5mm Connector Kit
150759	Jazz PF - 6mm Connector Kit

### Braid

Reference	Designation
150156	Jazz Band
150157	Jazz Passer Band