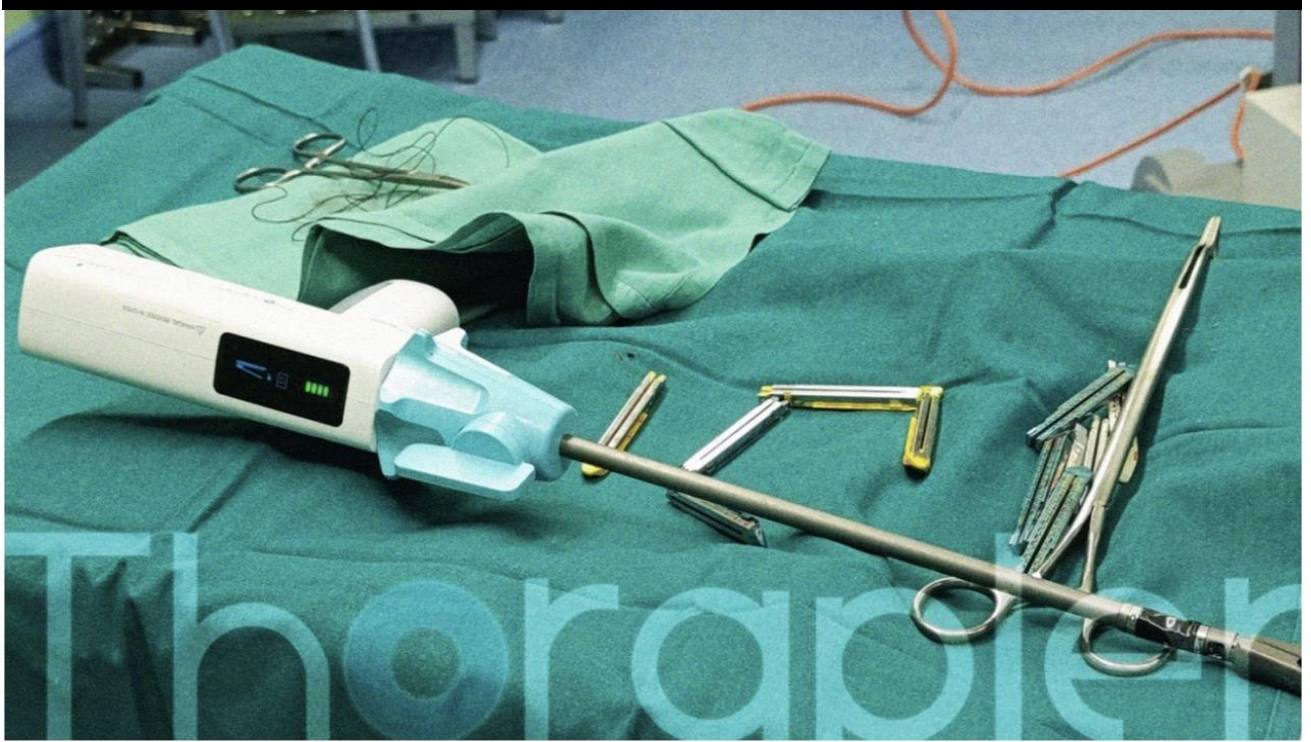




Thorapler in Single-Port VATS Segment 6 Sublobar Resection

January 28, 2026



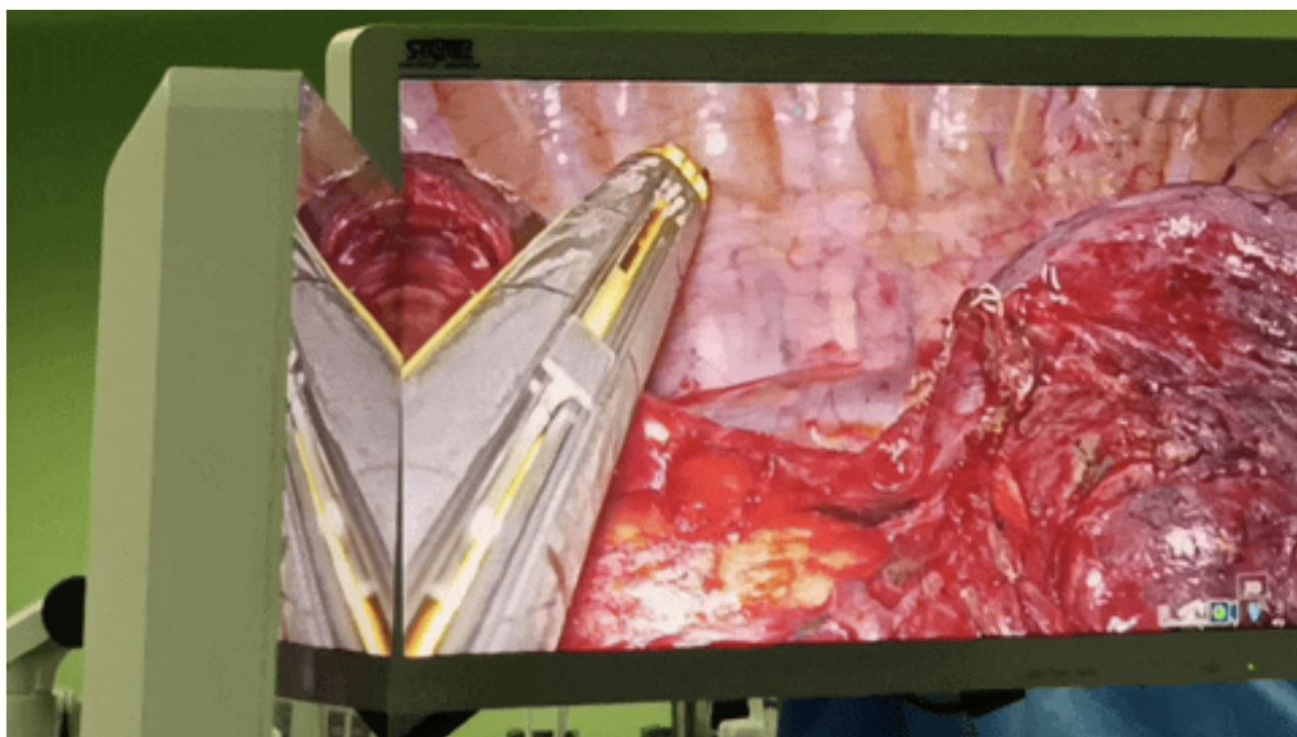
In this case, a **sublobar resection of segment 6 (S6)** was successfully performed using a **single-port video-assisted thoracoscopic surgery (VATS) approach**. The procedure was completed without intraoperative complications. Postoperatively, the patient demonstrated an uneventful recovery, achieved early mobilization, and was discharged ahead of schedule.

During the operation, Thorapler was utilized for the management of both segmental vascular structures and lung parenchyma. Under the spatial constraints of single-port VATS, the device demonstrated favorable accessibility and maneuverability. Its compact design facilitated precise positioning and safe transection within confined anatomical spaces.

Performance of the Thorapler 3D Two-Row Stapling System

Parenchymal Transection Using Gold and Green Cartridges

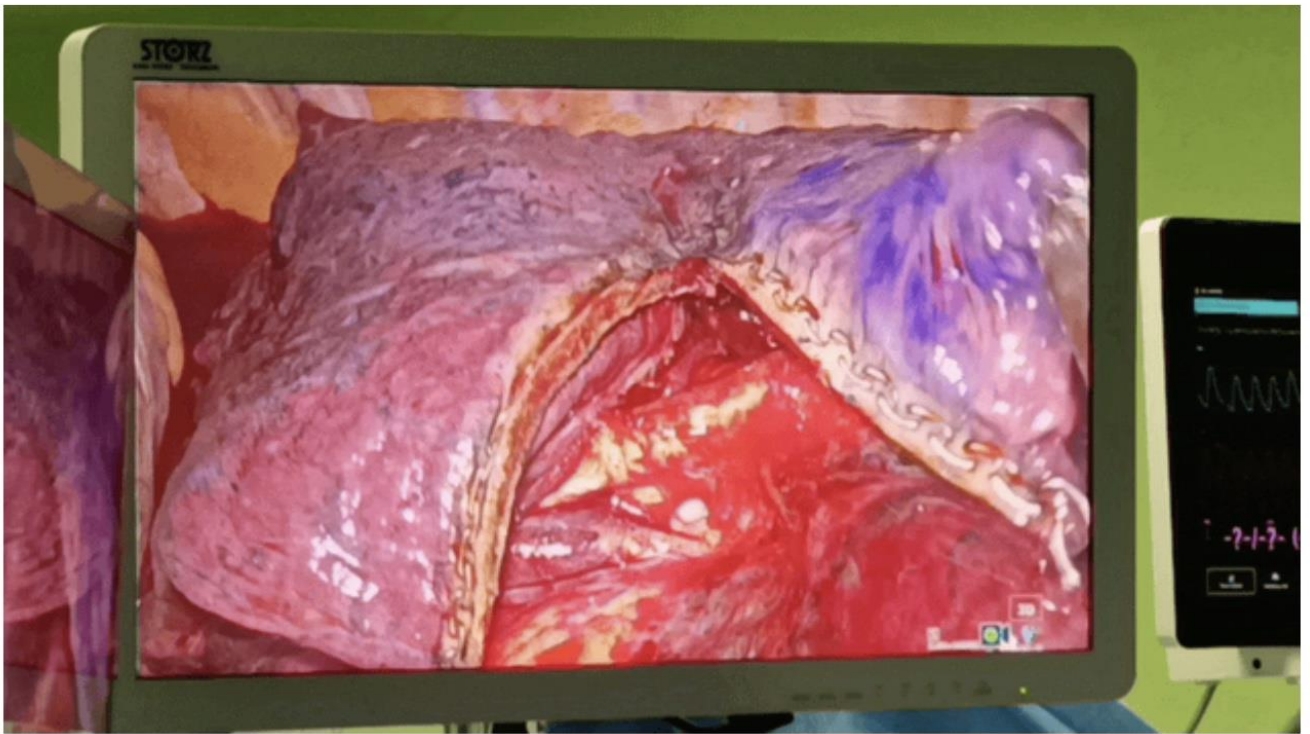
During segmental parenchymal division, Thorapler cartridges designed for lung tissue (**gold and green**) were selected according to tissue thickness and compliance.



Parenchymal transection using Thorapler gold cartridge

[CLICK !\[\]\(339a16584d5da0f0a3ca4e9ec17bf6a1_img.jpg\) to watch the full procedure video](#)

- Uniform and stable compression across standard lung parenchyma
 - Stable firing within a confined single-port field
-



Parenchymal transection using Thorapler green cartridge

CLICK



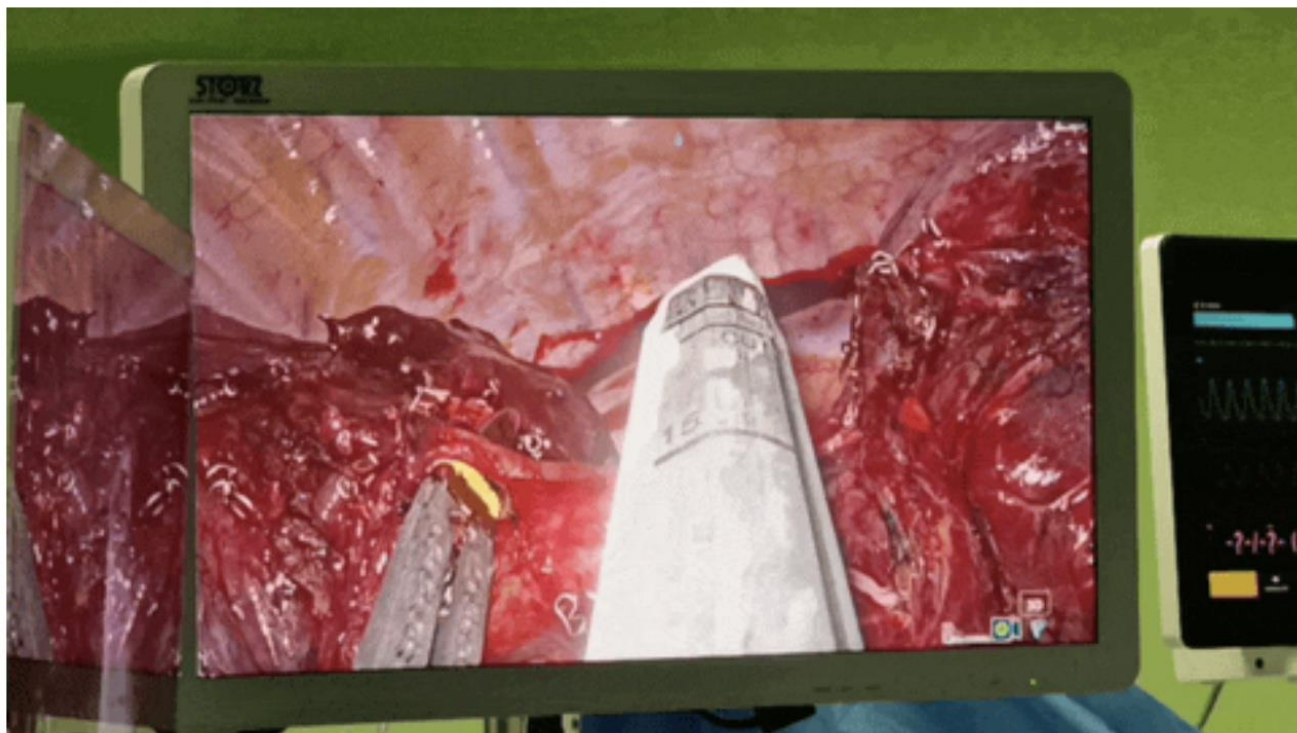
to watch the full procedure video

- **Controlled compression adapted to increased tissue thickness**
- **Consistent 3D two-row staple geometry despite heterogeneous tissue resistance**

The intraoperative videos visually demonstrate the three-dimensional two-row stapling architecture adapting to heterogeneous lung parenchyma. The staggered two-row configuration provided uniform compression across the tissue plane, contributing to consistent staple formation and effective sealing while minimizing tissue stress. The compact stapling profile was particularly advantageous in reducing instrument crowding during single-port VATS.

Vascular Transection Using White Cartridge

The white cartridge was specifically designed for thin tissue applications, such as segmental pulmonary vessels.



Vascular transection using Thorapler white cartridge

CLICK



to watch the full procedure video

In thin vascular structures, such as segmental pulmonary vessels, stable and evenly distributed compression supports reliable staple apposition and effective hemostasis, thereby reducing the risk of intraoperative bleeding under the spatial constraints of single-port VATS.

Discussion

This case highlights two tissue-specific mechanisms of risk control enabled by 3D two-row stapling.

In lung parenchyma, air leak risk is primarily associated with pressure variability along the staple line. **Uniform 3D compression** reduces local pressure heterogeneity and limits potential air leak pathways, **supporting stable parenchymal sealing across variable tissue thickness.**

In vascular structures, bleeding risk is governed by fluid leakage pathways. Evenly distributed compression provided by the **3D stapling configuration** minimizes low-resistance regions along the staple line, **contributing to stable and hemostatic vascular closure, particularly in thin tissue.**

Conclusion

Thorapler enabled safe and efficient parenchymal and vascular transection during single-port VATS S6 segmentectomy. Its 3D two-row stapling design and 8mm ultra-slim shaft contributed to reliable tissue handling and favorable clinical outcomes, as demonstrated by both operative performance and postoperative recovery.

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