A anatomical study examines the feasibility of a novel full-endoscopic uniportal technique with a transthoracic retropleural approach for decompression of the anterior thoracic spinal canal. Operations were performed on three fresh adult cadavers. The endoscope used, from RIWOspine, Germany, has a shaft cross-section of 6.9 × 5.9 mm and a 25° view angle. It contains an eccentric intraendoscopic working channel with a diameter of 4.1 mm. A transthoracic retropleural approach was used. The anatomical structures were dissected and the anterior thoracic epidural space was decompressed. The planned steps of the operation were performed on all cadavers. The transthoracic retropleural approach allowed the target region to be accessed easily. The anatomical structures could be identified and dissected. The anterior thoracic epidural space could be decompressed sufficiently. Using the uniportal full-endoscopic operation technique with a transthoracic retropleural approach, the anterior thoracic epidural space can be adequately reached. This is a minimally invasive method with the known advantages of an endoscopic technique under continuous irrigation. The retropleural approach allows direct access. The instruments are available for clinical use and have been established for years in other operations on the entire spine [1)].

1)
Ruetten S, Hahn P, Oezdemir S, Baraliakos X, Godolias G, Komp M. Decompression of the anterior thoracic spinal canal using a novel full-endoscopic uniportal transthoracic retropleural technique-an anatomical feasibility study in human cadavers. Clin Anat. 2018 Mar 25. doi: 10.1002/ca.23075. [Epub ahead of print] PubMed PMID: 29577428.