Aim: Even today, operations which include retromuscular mesh placement are usually performed using an open approach. Thanks to advent of robotics, these technically demanding operations can be carried out using minimally invasive techniques. The objective of this investigation is to establish a novel minimally invasive surgical method as part of a feasibility study in a hospital providing specialised care.

Material and Methods: We carried out a retrospective analysis, out of all patients who were operated on a ventral hernia, using a robotically assisted totally extraperitoneal technique, during the period between September 2019 and May 2021. For evaluation we used data from our hospitals information system. All patients had given their consent, to participate in the Herniamed quality assurance study.

Results: From September 2019 to May 2021, 33 patients underwent robotic surgery on a ventral hernia, using a totally extraperitoneal approach. 23 patients had an incisional hernia (69.70%), 10 patients had a primary hernia (30.30%). We did perform a total of 3 unilateral and 2 bilateral Transversus Abdominis Releases (TAR). A lateral approach was chosen in 26 patients and a caudal "bottom-up" approach in 7 patients. There were no intraoperative complications. A conversion was not necessary. Postoperative complications did occur in 3 patients (2 Clavien Dindo 1, 1 Clavien Dindo 3a). Reoperation was not needed.

Conclusions: The eTEP technique is a promising surgical method, that can also be carried out in a hospital providing specialised care, with an acceptable risk of complications. This technique enables us, to combine the advantages of minimally invasive surgery with those of extraperitoneal mesh placement.