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Robotic surgery, Primary ventral hernia, Incisional hernia, Inguinal hernia

# Emerging modular robotic platform: 100 abdominal wall repair, short and long term outcomes from a robotic hub hospital.

**V. Nicastro**, B.D.A. Alampi, L. Morini, M. Migliorini, V. Roncaccia, J. Marin
Division of General Surgery, Minimally Invasive and Oncologic Surgery Department, Niguarda Hospital, Milan, Italy.

## Aim

Robot-assisted approach in abdominal wall hernia repair (AWHR) is constantly spreading, increasing minimally invasive procedures and sublay or extraperitoneal mesh placement. Few evidences about robot-assisted approaches are available in literature, especially looking at new emerging robotic platforms. The aim of this study is to prospectively report our initial monocentric experience of robotic AWHR performed with a modular robotic platform (1).

## Material & Methods

All consecutive patients, undergoing robotic AWHR with a modular robotic platform (1), between February 2023 and December 2025, were considered. Data of patients were retrieved from a prospectively collected database. Clinical and demographic characteristics, short and long term outcomes were analyzed. All patients received a follow-up at one week, 1,3 and 6 months from surgery.

## Results

Hundred patients underwent robotic AWHR: 35 underwent bilateral inguinal hernia repair with transperitoneal approach (TAPP), 65 patients underwent robotic transabdominal retromuscular (R-TARM) or extended totally extraperitoneal (eTEP) repair for ventral hernia. Mean operating time was 160 min. Three intervention were concluded laparoscopically due to arms conflicts. No major intra- and post-operative surgical complications were observed. The mean post-operative hospital stay was 1.14 days

## Conclusions

The role of robotic surgery for AWHR is being defined. We can conclude that robotic AWHR for inguinal and ventral hernia is feasible and safe with CMR Versius. In fact, sublay ventral hernia repair is encouraged by robotic approach, rather than intraperitoneal onlay mesh placement. Emerging platform and inguinal hernia repair as entry point can help spreading of robotic approach and its advantages especially for more complex defects.

## References

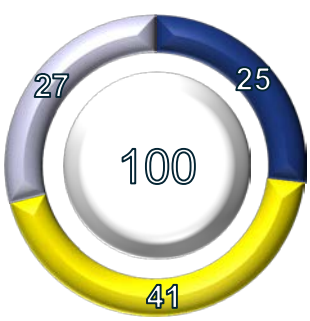
1. CMR Versius surgical platform.

### Inguinal Hernia

| Preoperative | | | | | Intraoperative | | | Postoperative | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Age | BMI | ASA ≤ 2 | Gender (M/F) | Primary/ Recurrent | Op. time (min) | Set up time (min) | Conversion/intraop. complication | LOS (day) | Chronic pain | SSO | Recurrence |
| 56,3 (13,7) | 25,1 (3,5) | 90% | 28/7 | 30/11 | 110 (40,1) | 8,3 (2,1) | 0 | 1,1 (0,3) | 0 | 2 | 0 |

### Ventral Hernia

| Preoperative | | | | | | | Intraoperative | | | Postoperative | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Age | BMI | ASA ≤ 2 | M/F | Primary/ Incisional | W1/ W2 | Diastasis recti | Op. time (min) | Set up time (min) | Conversion/ intraop complication | LOS (day) | Chronic pain | SSO | Recurrence |
| 52,4 (11,6) | 27,8 (4,8) | 85% | 8/7 | 11/4 | 12/3 | 15 | 151,4 (40,1) | 8,3 (2,1) | 3 | 1,7 (0,7) | 0 | 2 | 0 |




- R-TARM
- Bilateral Inguinal Hernia
- eTEP

1.14 Lenght of stay

0 Recurrence at 6 months

4 SSO at 6 months

3 Conversion to laparoscopy

vincenzo.nicastro@ospedaleniguarda.it