ROBOTIC VERSUS LAPAROSCOPIC SACROCOLPOPEXY
COMPARISON OF SURGERY DATA, COMPLICATIONS, RECURRENCES AND REDO SURGERIES

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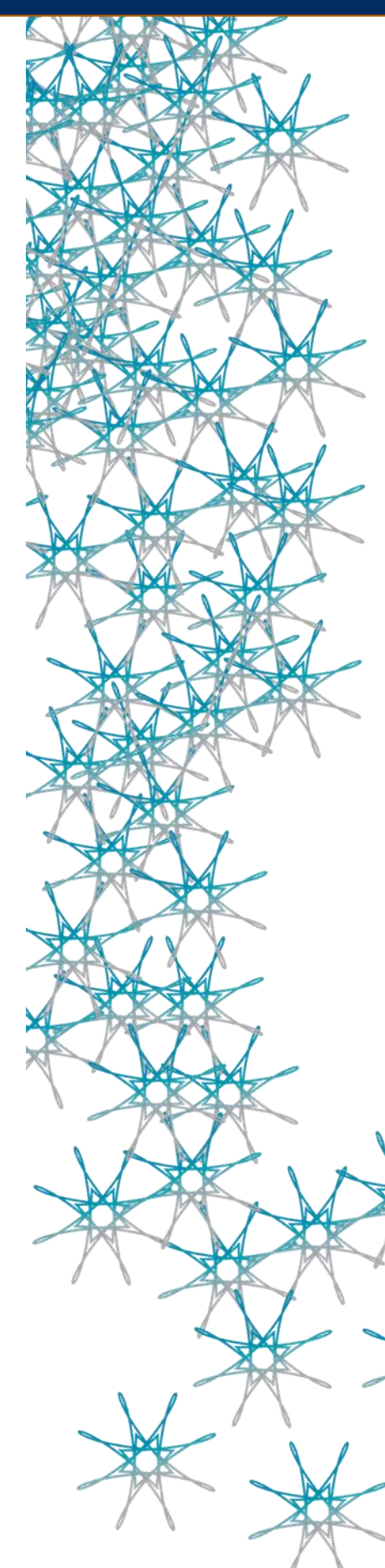
INTRODUCTION The surgical repair of pelvic organ prolapse (POP) is evolving from laparoscopic to robotic assisted surgery. Several comparative studies between laparoscopic (LSC) and robot-assisted sacrocolpopexy (RASC) have been performed before. However, the number of patients and follow-up time were small[1-4].

OBJECTIVE The objective of this study was to evaluate the difference between LSC and RASC based on surgery parameters, surgery related complications, mesh related complications, recurrences and redo surgeries.

METHODS In this retrospective cohort analysis all patients who underwent LSC or RASC between April 2010 and June 2019 were enrolled. Patient demographics, surgery parameters, complications, recurrences and redo surgeries were retrieved from the digital medical file. Parameters were compared using the chi-squared or independent t-test.

RESULTS In this study 70 patients were enrolled in the LSC group and 135 in the RASC group. In both groups 1 patient was excluded because of a conversion to vaginal surgery. The two groups do not significantly differ on patient demographics, except for previous surgery (**Table 1**). The surgery time of RSC is significantly longer (p<0.05) and the follow-up time is significantly shorter (P<0.001) than that of LSC. There is no significant difference in the amount of blood loss during surgery between the LSC and RASC groups (**Figure 1**). The number of recurrences is significantly higher in the LSC group compared to the RASC group (**Figure 2**).

CONCLUSION Despite the higher prevalence of previous prolapse surgery in the RASC group, the results suggest a decrease in recurrence rate between LSC and RASC. This might be because the robot enables the mesh to be inserted lower into the pelvic floor. However, due to the shorter follow-up time of RASC, recurrence rate might still increase. To evaluate this, a study with longer follow-up is needed.

TABLE 1 Patient demographics, operation time and follow-up time

	LSC (n=69)	RASC (n=134)
Age (years) – mean (sd)	62.5 (11.5)	64.1 (11.1)
BMI – mean (sd)	25.7 (3.2)	26.7 (4.4)
Parity – median (min, max)	2 (0, 4)	2 (0, 11)
Diabetes – n (%)	6 (8.7)	8 (6.0)
Post menopause – n (%)	60 (87.0)	118 (88.1)
Previous prolapse surgery – n (%)	31 (44.9)	90 (67.2)**
Total surgery time (min) – mean (sd)	187 (47)	207 (61)*
Follow-up time (years) – mean (sd)	7.3 (1.4)	2.8 (1.3)***

*p<0.05, **p<0.01, ***p<0.001
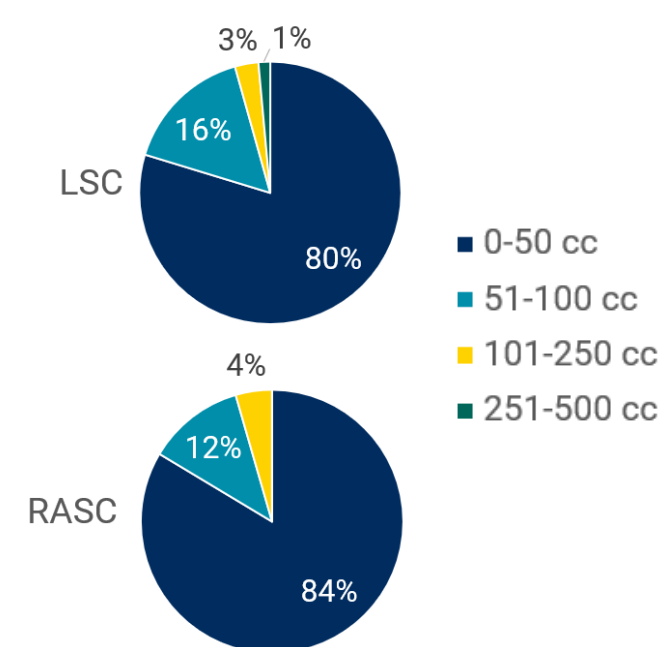
FIGURE 1 Blood loss during surgery as percentage of the total number of surgeries for both LSC and RASC.
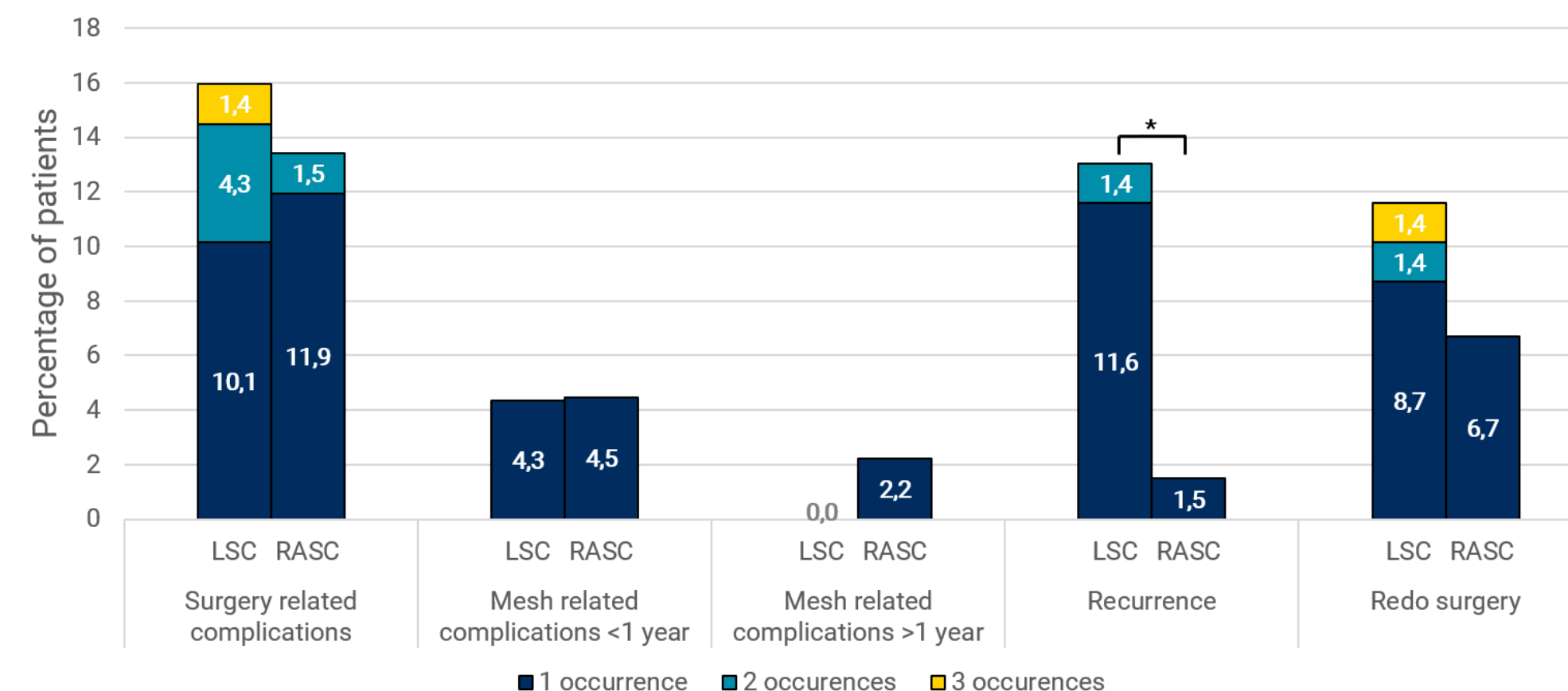
FIGURE 2 Number of complications, recurrences and redo surgeries per patient, as percentage of the total number of surgeries for both LSC and RASC.
* p<0.01

REFERENCES
[1] G. Cucinella et al., G. di Chir., May 2016. [2] N. Awad et al., Arch. Gynecol. Obstet., 2013.
[3] J. Seror et al., World J. Urol., 2012. [4] J. Tan-Kim et al., Female Pelvic Med. Reconstr. Surg., 2011.

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