

Robotic Assisted vs Traditional Laparoscopic Partial Nephrectomy Peri-Operative Outcomes: A Comparative Single Surgeon Study

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Abstract : The EAU currently recommends partial nephrectomy as the preferred management for localised cT1 renal tumours, irrespective of surgical approach. With the advent of robotic assisted partial nephrectomy, there is growing evidence that warm ischaemia time may be reduced compared to the traditional laparoscopic approach. There is still no clear differences between the two approaches with regards to other peri-operative and oncological outcomes. Current limitations in the field denote the lack of single surgeon series to compare the two approaches as other studies often include multiple operators of different experience levels. To the best of our knowledge, this study is the first single surgeon series comparing peri-operative outcomes of robotic assisted and laparoscopic PN. The current study aims to reduce intra-operator bias while maintaining an adequate sample size to assess the differences in outcomes between the two approaches. We retrospectively compared patient demographics, peri-operative outcomes, and renal function derangements of all partial nephrectomies undertaken by a single surgeon with experience in both laparoscopic and robotic surgery. Warm ischaemia time, length of stay, and acute renal function deterioration were all significantly reduced with robotic partial nephrectomy, compared to laparoscopic nephrectomy. This study highlights the benefits of robotic partial nephrectomy. Further prospective studies with larger sample sizes would be valuable additions to the current literature.

Keywords : partial nephrectomy, robotic assisted partial nephrectomy, warm ischaemia time, peri-operative outcomes

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