

Editorial

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Current management of small renal masses: is there an optimal choice?

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The widespread use of imaging techniques - such as ultrasonography, CT scan, and MRI - has led to a significant increase in the detection of small renal masses. A proportion of these are renal cell carcinomas, and kidney cancer currently accounts for approximately 4% of adult cancers.

The management of these small renal masses, often referred to as incidentalomas, remains an area of ongoing debate and uncertainty. Among the available options, active surveillance has come more and more into the picture, certainly after diagnostic biopsies of small renal masses were demonstrated to be feasible, safe, and reliable. In older patients or those with significant comorbidities, active surveillance is a justified approach - not only for lesions that appear benign on imaging, but also for small, low-grade renal cell carcinomas.

Meanwhile, active treatment options have also evolved considerably. Over the years, we have witnessed significant progress in surgical technology. While open partial nephrectomy was once the standard approach for both small and larger renal tumors, the advent of minimally invasive surgical approaches - especially laparoscopic and robot-assisted procedures - has offered substantial benefits, including reduced postoperative morbidity, shorter hospital stays, and minimal postoperative pain and discomfort. Today, robot-assisted partial nephrectomy has become the preferred technique, with published case series suggesting that even larger and more complex tumors can be managed without resorting to open surgery.



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Despite these advancements, several challenges remain. The goal of this book is to explore and provide further insight into some of these persistent issues in the management of small renal masses.

One important concern related to robot-assisted partial nephrectomy is the occurrence of positive surgical margins^[1]. This risk is influenced by tumor characteristics, the nature of surgical indications (imperative vs. elective), the surgeon's experience, and the use of off-clamp techniques. Optimal strategies for follow-up and treatment in cases of positive surgical margins remain to be further investigated.

Another challenge arises in the management of patients with bilateral small renal masses^[2]. Determining what is feasible and safe in such cases is essential to achieving good oncological outcomes while minimizing post-treatment morbidity.

A third issue is the integration of new techniques, such as 3D navigation in partial nephrectomy. Current research underscores the necessity of further research in 3D navigation methods^[3].

Minimally invasive surgical techniques also continue to evolve. This volume includes a discussion on single-port partial nephrectomy^[4], a promising approach that expands the role of retroperitoneal approaches and improves postoperative recovery.

Additionally, one chapter addresses the indications and outcomes of ablative therapies for small renal masses, with a particular focus on cryotherapy^[5]. This modality has grown in popularity due to its advantages over surgery, including reduced pain, shorter hospitalization, avoidance of general anesthesia, and lower costs.

There is also a definite need to develop core outcome sets to accurately assess the clinical effectiveness of renal cancer treatments^[6]. Only by doing so can we effectively compare different surgical approaches and management strategies for renal adenocarcinoma.

Finally, to prepare the next generation of uro-oncological surgeons to adopt these emerging techniques, it is essential to optimize training models for partial nephrectomy^[7]. However, the current literature lacks well-designed validation studies to establish the optimal training models.

We are deeply grateful to all the researchers and authors who contributed to this volume. Their great enthusiasm and dedication made the coordination of this book both enjoyable and rewarding.

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