



Management of Small Renal Masses: American Society of Clinical Oncology Clinical Practice Guideline

Introduction

- The purpose of this guideline is to provide evidence-based recommendations for practicing physicians and other health care providers concerning the management of clinically localized small renal mass (SRM).
- We define SRMs as incidentally image-detected, contrast-enhancing renal tumors ≤ 4 cm in diameter that are usually consistent with stage T1a renal cell carcinoma (RCC).
- In the past 20 years, surgical treatment of SRMs has transitioned from radical nephrectomy for all renal tumors, regardless of size, to elective partial nephrectomy whenever technically feasible.
- In the past 5 years, newer approaches, including renal tumor biopsy (RTB), active surveillance for select patients, and percutaneous thermal ablation, have been increasingly used.
- This guideline provides a framework of information for clinicians and other health care providers to help provide optimal care to their patients with SRMs.

ASCO Guideline Development Methodology

The ASCO Clinical Practice Guidelines Committee guideline process includes:

- a systematic literature review by ASCO guidelines staff
- an expert panel provides critical review and evidence interpretation to inform guideline recommendations
- final guideline approval by ASCO CPGC

The full ASCO Guideline methodology supplement can be found at:

www.asco.org/small-renal-masses-guideline

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Clinical Questions

This clinical practice guideline addresses the following clinical questions:

- For patients who are diagnosed with a small renal mass (SRM), when is renal tumor biopsy (RTB) indicated and what are the contemporary accuracy and complications of biopsy?
- In patients with an SRM, is there an age limit for which active surveillance is a better option than surgical resection or thermal ablation? Is there an anticipated life expectancy for which active surveillance is a better option than surgical intervention or thermal ablation?
- Are patients with significant medical comorbidities—for example, chronic kidney disease (CKD), congestive heart failure, coronary artery disease, or chronic obstructive pulmonary disease—better treated with active surveillance than surgical intervention or ablation?
- In patients with an SRM, what are the optimal indications for partial nephrectomy (PN), radical nephrectomy, or thermal ablation? What is the impact of these procedures on renal function?

Target Population and Audience

Target Population

Patients with an SRM.

Target Audience

Medical, surgical, and radiation oncologists; interventional radiologists; urologists and urologic oncologists; nephrologists; oncology nurses; physician assistants; pathologists; general practitioners; and patients.

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Summary of Recommendations

CLINICAL QUESTION 1

For patients who were diagnosed with an SRM, when is RTB indicated? What is the contemporary accuracy and complication profile of RTB?

Recommendation 1.0

On the basis of tumor-specific findings and competing risks of mortality, all patients with an SRM should be considered for RTB when the results may alter management (type: evidence based; evidence quality: intermediate; strength of recommendation: strong).

Summary of Recommendations

CLINICAL QUESTION 2

In patients with an SRM, is there an age limit at which active surveillance is a better option than surgical resection or thermal ablation? Is there an anticipated life expectancy for which active surveillance is a better option than surgical intervention or thermal ablation? Are patients with significant and active medical comorbidities—that is, CKD, congestive heart failure, coronary artery disease, and chronic obstructive pulmonary disease—better treated with active surveillance than surgical intervention or ablation?

Recommendation 2.0

Active surveillance should be an initial management option for patients who have significant comorbidities and limited life expectancy (type: evidence based; evidence quality: intermediate; strength of recommendation: moderate).

Qualifying statement: absolute indication: high risk for anesthesia and intervention or life expectancy < 5 years; relative indication: significant risk of end-stage renal disease (ESRD) if treated, SRM (< 1 cm), or life expectancy < 10 years.

Summary of Recommendations

CLINICAL QUESTION 3

In patients with an SRM, what are the optimal indications for undergoing PN, radical nephrectomy, or thermal ablation? What is the impact of these procedures on renal function?

Recommendation 3.1

PN for SRMs is the standard treatment that should be offered to all patients in whom an intervention is indicated and who possess a tumor that is amenable to this approach (type: evidence based; evidence quality: intermediate; strength of recommendation: strong).

Recommendation 3.2

Percutaneous thermal ablation should be considered an option for patients that possess tumors such that complete ablation will be achieved. A biopsy should be obtained before or at the time of ablation (type: evidence based; evidence quality: intermediate; strength of recommendation: moderate).

Summary of Recommendations

Recommendation 3.3

Radical nephrectomy for SRMs should only be reserved for patients who possess a tumor of significant complexity that is not amenable to PN or for whom PN may result in unacceptable morbidity even when performed at centers with expertise. Referral to a surgeon and a center with experience in PN should be considered (type: evidence based; evidence quality: intermediate; strength of recommendation: strong).

Recommendation 3.4

Referral to a nephrologist should be considered for patients with CKD (estimated glomerular filtration rate [eGFR] , 45 mL/ min/1.73 m²) or progressive CKD after treatment, especially if associated with proteinuria (type: evidence based; evidence quality: intermediate; strength of recommendation: moderate).

Patient and Clinician Communication

- To begin, remember that today's empowered patient will expect a greater role in his or her care. This means taking steps to ensure the patient is well educated and informed.
- Clinicians should take the time to orient the patient to his or her care but also make available recommended sources for information, including both print materials and online information.
- The clinician should share details of test results, including pathology reports, promptly and take the time to ensure that the patient understands the information being provided.
- If the patient is a candidate for clinical trials, clinicians should take the time to explain the dual benefit of participation: obtaining access to innovative treatments, but also helping advance researchers' understanding of kidney disease.

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Health Disparities

- Although ASCO clinical practice guidelines represent expert recommendations on the best practices in disease management to provide the highest level of cancer care, it is important to note that many patients have limited access to medical care.
- Racial and ethnic disparities in health care contribute significantly to this problem in the United States.
- Many other patients lack access to care because of their geographic location and distance from appropriate treatment facilities.
- Awareness of these disparities in access to care should be considered in the context of this clinical practice guideline, and health care providers should strive to deliver the highest level of cancer care to these vulnerable populations.

Multiple Chronic Conditions

- Creating evidence-based recommendations to inform treatment of patients with additional chronic conditions—a situation in which the patient may have two or more such conditions, which is referred to as multiple chronic conditions (MCCs)—is challenging.
- Because many patients for whom guideline recommendations apply present with MCCs, any treatment plan needs to take into account the complexity and uncertainty that are created by the presence of MCCs; this highlights the importance of shared decision-making regarding guideline use and implementation.
- Practice guidelines should provide information on how to apply the recommendations for patients with MCCs, perhaps as a qualifying statement for recommended care. This may mean that some or all of the recommended care options are modified or not applied, as determined by best practice in consideration of any MCC.

Limitations of the Literature and Future Directions

- The literature on SRMs is limited to case series, observational studies, and nonrandomized comparative studies using statistical means to compensate, as best as possible, for inherent biases.
- Unfortunately, this is common in surgical literature and, in particular, with conservative management strategies that are often applied initially to vulnerable patients and those who are unfit for intervention.
- The growing body of literature on renal tumor RTB, active surveillance, and treatment of SRMs continues to suggest a risk of overtreatment.
- Given our current understanding of the natural history of SRMs, studies are required to more accurately characterize these lesions beyond histopathology such that the true metastatic potential can be appreciated and guide management decisions.

Additional Resources

More information, including a Data Supplement, a Methodology Supplement, slide sets, and clinical tools and resources, is available at

www.asco.org/small-renal-masses-guideline

Patient information is available at www.cancer.net

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