Definitive treatment vs. active surveillance for small renal masses: Closing the preference gap

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Prior cohorts of patients on active surveillance (AS) for small renal masses (SRMs) have shown a clear "preference gap." Approximately half of patients who undergo delayed intervention choose to do so despite no clinical signs of disease progression.[1] This is often attributed to patient anxiety, with illness uncertainty about diagnosis considered to be a major driver towards treatment. One of the major criticisms of the Delayed Intervention and Surveillance for Small Renal Masses (DISSRM) Registry and similar studies is the low use of renal mass biopsy (RMB), and unknown histology hypothetically driving patients to surgery. In this issue's study by Cheung et al, every patient underwent RMB with confirmed malignancy prior to initiating AS, yet 40% still opted for treatment.[2] Clearly, the preference gap persists despite definitive histological diagnosis. The question of why remains unanswered.

The authors hypothesize that uncertainty about the safety of AS, from both the patient and physician perspective, may be the cause. A close look at the language in various guidelines offers a clue to why physicians may be reluctant to push their patients towards surveillance of SRMs. The latest American Urological Association (AUA) statement says physicians "may elect AS," and the European Association of Urology (EAU) recommends offering it to "frail and/or comorbid patients."[3,4] The National Comprehensive Cancer Network (NCCN)'s convenient flowsheet lists partial nephrectomy as preferred, though the detailed subsection does list surveillance as a recommend option for patients with "low life expectancy or significant comorbidities."[5] While select centers with expertise in AS are comfortable watching large cohorts of patients, international guidelines offer inconsistent support for the approach — typically only for patients who we deem poor candidates for extirpative surgery.

Contrast this with the guidelines on clinically localized prostate cancer. The AUA, EAU, and NCCN all recommend AS as the preferred treatment modality for *all* patients with very low- and low-risk disease, not just those unfit for surgery. The paradigm has shifted so far away from the operating room that even some intermediate-risk patients are surveilled, and there is debate on whether Gleason 6 should be re-labeled as a benign process.[6,7] Patients have behaved accordingly, and fewer than 10% on AS progress to treatment out of preference.[8]

This discrepancy helps explain why such a high proportion of renal AS patients choose surgery. As surgeons, if we are to recommend AS, we must truly believe that it is a superior option. The guidelines all acknowledge that for SRMs, the overall and cancer-specific survival is equivalent between AS and treatment, and the risk of metastasis is exceedingly low. There is even data to support AS for younger populations.[9] But until this percolates through the guidelines and becomes the norm, the preference gap will remain.

The earliest cohorts of AS for prostate cancer started in the 1990s. It took about 20 years for that data to become incorporated into the guidelines, and another decade for AS to become standard-of-care. The largest AS for renal cancer cohorts started between 2000 and 2010, and new promising results are published regularly. We are nearly midway through the information dissemination curve, one that bends away from upfront surgery. The recently published Canadian Urological Association (CUA) guideline suggests there is hope for rapid adoption of the latest data. It specifically prefers AS for masses <2 cm and puts it on par with treatment for 2–4 cm.[10] As the data matures, the guidelines will coalesce into definitive recommendations, and we are hopeful to close the preference gap with likeminded colleagues from around the world.

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References

1. Gupta M, Alam R, Patel HD, et al. Use of delayed intervention for small renal masses initially managed with active surveillance. *Urol Oncol* 2019;37:18-25. https://doi.org/10.1016/j.urolonc.2018.10.001
2. Cheung D, Frankel J, Tut P, et al. Treatment on active surveillance of small renal masses: Progression vs. preference. *Can Urol Assoc J* 2022;16:97-101. https://doi.org/10.5489/cuaj.7451
3. Campbell SC, Uzzo RG, Karam JA, et al. Renal mass and localized renal cancer: Evaluation, management, and followup: AUA guideline: Part II. *J Urol* 2021;206:209-18. https://doi.org/10.1097/JU.0000000000001912
4. Ljungberg B, Albiges L, Abu-Ghanem Y, et al. European Association of Urology guidelines on renal cell carcinoma: The 2019 update. *Eur Urol* 2019;75:799-810. https://doi.org/10.1016/j.eururo.2019.02.011
5. Network NCC. Kidney Cancer (Version 4.2022). Available at: https://www.nccn.org/professionals/physician_gls/pdf/kidney.pdf. Accessed February 14, 2022.
6. Carter HB, Partin AW, Walsh PC, et al. Gleason score 6 adenocarcinoma: Should it be labeled as cancer? *J Clin Oncol* 2012;30:4294-6. https://doi.org/10.1200/JCO.2012.44.0586
7. Knuchel R. Gleason score 6 — prostate cancer or benign variant? *Oncol Res Treat* 2015;38:629-32. https://doi.org/10.1159/000441735
8. Marzouk K, Assel M, Ehdaie B, et al. Long-term cancer-specific anxiety in men undergoing active surveillance of prostate cancer: Findings from a large, prospective cohort. *J Urol* 2018;200:1250-5. https://doi.org/10.1016/j.juro.2018.06.013
9. Metcalf MR, Cheaib JG, Biles MJ, et al. Outcomes of active surveillance for young patients with small renal masses: Prospective data from the DISSRM registry. *J Urol* 2021;205:1286-93. https://doi.org/10.1097/JU.0000000000001575
10. Richard PO, Violette PD, Bhindi B, et al. Canadian Urological Association guideline: Management of small renal masses - Full-text. *Can Urol Assoc J* 2022;16:E61-75. https://doi.org/10.5489/cuaj.7763

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