

Dear Editor,

We commend Xing et al for their interesting comparative analysis between treatment modalities for small renal masses¹, which is clearly an important clinical question. The authors made use of propensity scored matched observational data from the SEER-Medicare database adjusted for seventeen variables to compare cancer-specific and overall survival in partial nephrectomy, radical nephrectomy, thermal ablation, and active surveillance (AS).

Propensity scores methods allow for the minimisation of baseline unbalances across treatment groups. In particular, propensity score matching generates sets of treated and untreated subjects with similar known covariates². In this study, although cancer-specific survival analyses supported partial nephrectomy and thermal ablation over AS, the effect size (i.e. absolute change in survival rates) is small even at 9 years (1.4%-2.5%). Plus, overall survival, a surrogate for general health-status, depicts large differences across all treatment options and AS (5.9%-7.7%). This sanity check supports the existence of unknown and unaccounted confounding factors that limit the validity of the results.

Observational data may be better than no data, but we must not forget that while such quasi-experimental designs are a useful exploratory tool, only randomised controlled trials will allow for the balancing of unmeasured confounders and to estimate unbiased causal treatment effects. Unfortunately, the only clinical trial to date to attempt a randomised comparison between AS and other treatment modalities, the SURAB study (comparing Ablation with active SURveillance, in the management of incidentally diagnosed small renal tumours: a feasibility study, ISRCTN31161700), failed to successfully recruit³. Alternative, pragmatic trial designs, such as cohort embedded randomised studies, are needed to offer feasible alternatives to deliver high quality unbiased evidence for the management of small renal masses.

References

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