

The effect of age on cancer-specific mortality in T1a stage renal cell carcinoma patients across all treatment's modalities: a SEER-based study

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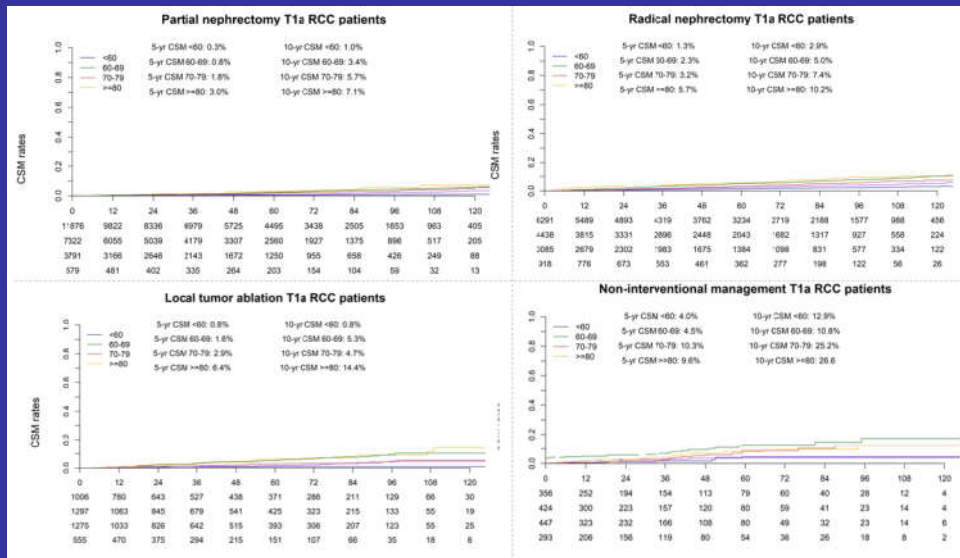
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Objectives:

To test the effect of age on CSM across all treatment modalities.

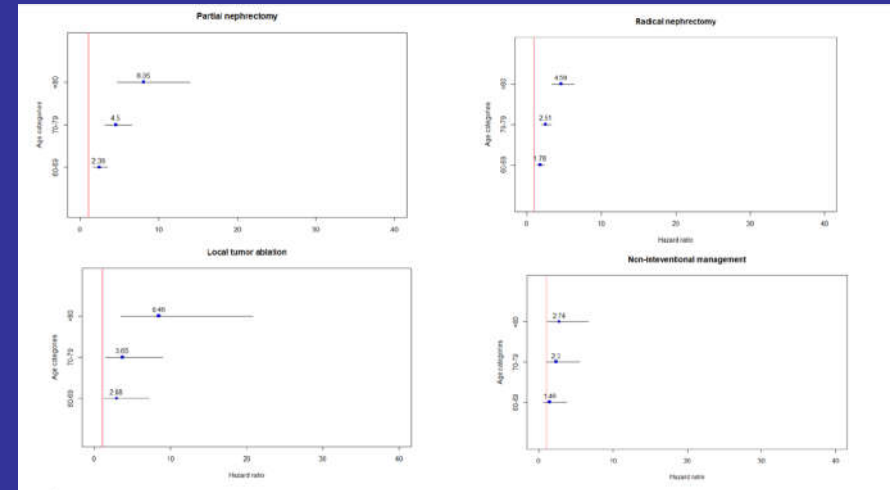
Results:

- Patient distribution was as follows: 19602 (44.4%) <60 years; 13541 (30.7%) 60-69 years; 8637 (19.6%) 70-79 years and 2367 (5.4%) ≥ 80 years. Overall, 5- and 10-year CSM rates increased with increasing of age, across all four examined treatment modalities. In MCR focusing on PN, RN and LTA, older age independently predicted CSM in a dose-response fashion where the magnitude of CSM increased with increasing age. Conversely, in MCR for NIM the dose-response effect evidenced by a gradual increase in CSM across age categories was not recorded. In MCR models focusing on NIM patients CSM was only higher in the oldest age category, relative to three younger age categories.



Methods:

- Within the Surveillance, Epidemiology, and End Results database (2004-2016), we identified 44,147 T1a nmRCC patients.
- Cumulative incidence plots and multivariable competing-risks regression analyses (MCR) model CSM.
- Separate models were fitted for each of four examined treatment modalities: partial nephrectomy [PN], radical nephrectomy [RN], local tumour ablation [LTA] and non-interventional management [NIM].



Conclusions:

We are the first examining the effect of older age in T1a RCC across all treatment modalities, which minimize the effect of selection biases. This comprehensive analysis corroborated that more advanced age is invariably associated with increasingly higher CSM in patients treated with LTA, PN and RN. Conversely, in NIM patients the association with more advanced age with CSM was only evidenced in the highest age. In consequence, older T1a RCC patients appear to harbor more aggressive RCC phenotype than their younger counterparts.