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Introduction & Objectives: Metastatic renal cell carcinoma (mRCC) represents a significant and rising burden of disease with an evolving treatment base. The role of cytoreductive nephrectomy (CN) is controversial. Since 2015, London Cancer has pursued a multidisciplinary approach in assessing suitability for surgery, which we evaluate here.

Materials & Methods: We conducted an analysis of mRCC patients managed through the London Cancer MDT. An algorithm focusing on CN in good risk patients was followed. Treatment-naïve mRCC patients seen between 01 January 2015 and 31 December 2018 were included, constituting an unselected prospective series. Patients were stratified by MDT treatment strategy as (1) CN followed by surveillance, focal intervention or systemic treatment (ST) (2) ST alone or (3) best supportive care (BSC). Pre-treatment prognostication was undertaken according to the International Metastatic Renal Cell Carcinoma Database Consortium (IMDC) criteria. The primary objective was to assess progression-free survival (PFS) in patients treated with CN, from date of nephrectomy to date of radiologically-defined disease progression.

Results: In total, 89 treatment-naïve patients presenting with mRCC prior to a potential nephrectomy were seen. 57% and 33% of patients were stratified as IMDC intermediate and poor risk respectively. 18 underwent CN, with or without systemic therapy; 43 received ST alone, and 26 were offered BSC. Of the CN subgroup, 7 patients proceeded to, and remain on, surveillance, whilst 11 patients commenced ST following surgery. Median PFS was 28.6 months (95%CI, 10.8-46.4) for patients who received CN, compared to 4.5 months (95%CI, 2.7-6.3) for patients receiving ST alone ($p<0.01$). Overall survival (OS) data remain immature for the CN group, but a median OS of 12.8 months (95%CI, 7.7-17.9) is observed in the ST group and 5.0 months (95%CI, 0.1-9.9) for BSC. Combined median OS for all patients was 12.8 months (95%CI, 5.1-20.5) whilst one-year overall survival for CN, ST and BSC groups was 77.8%, 55.8% and 23.10% respectively.

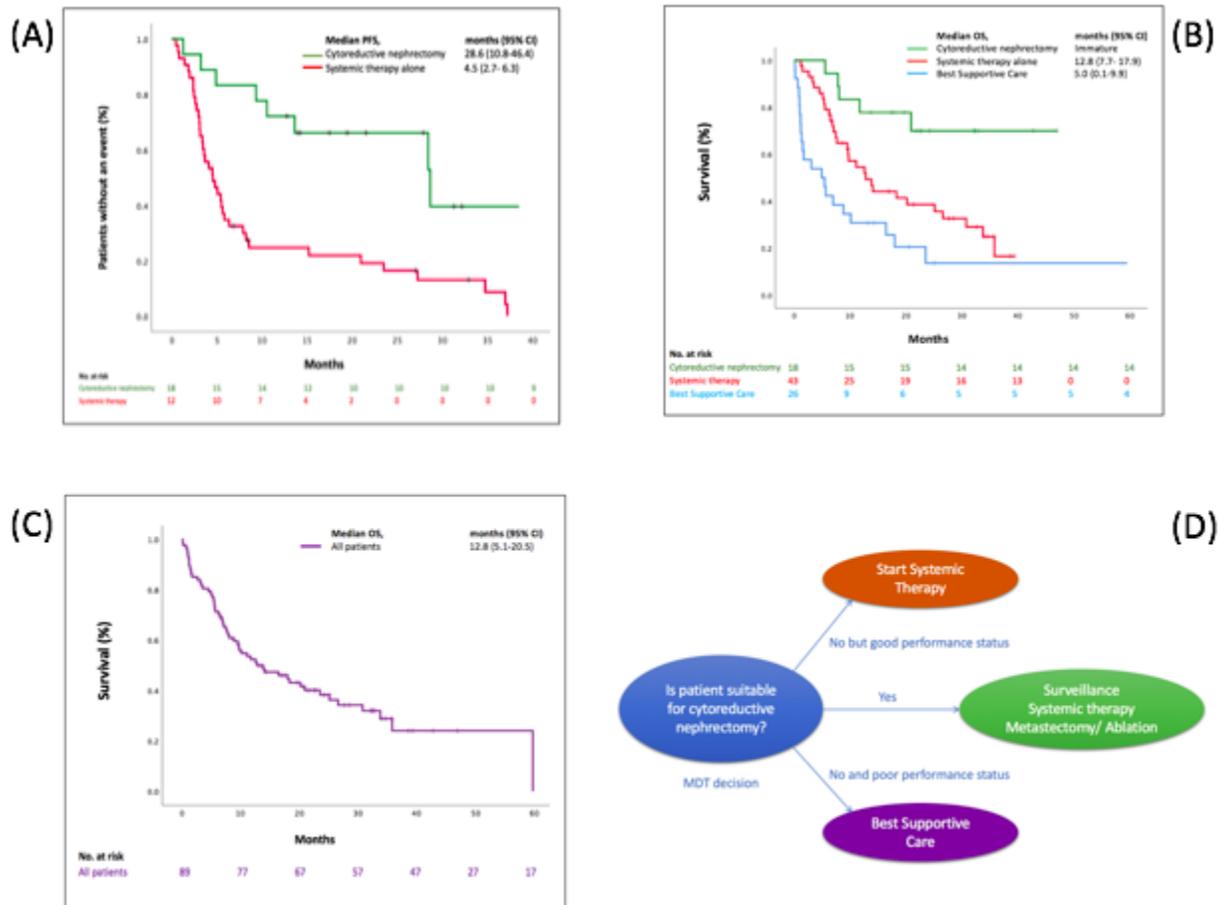


Figure 1. (A) Kaplan-Meier plot of progression free survival for cytoreductive nephrectomy vs systemic therapy alone. (B) Overall survival comparison for cytoreductive nephrectomy vs systemic therapy vs best supportive care. (C) Overall survival for all patients. (D) Proposed treatment model.

Conclusions: Our findings provide outcomes for a prospective series of patients with metastatic renal cell carcinoma, treated in a multidisciplinary setting, utilising a specific treatment algorithm. Cytoreductive nephrectomy may have a role in these selected patients, which could be conducive to further study.