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P085 -Cancer history is associated with mortality but not with renal progression in Non-Dialysis Chronic Kidney Disease

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Background and aims
Cancer in chronic kidney disease (CKD) patients is an added burden to their overall morbidity and mortality. In CKD patients, a better understanding of cancer distribution and associations can aid in the proper planning of renal replacement therapy (RRT). This study aims to investigate the distribution and the association of cancer with outcomes (mortality and renal progression) in a non-dialysis CKD cohort.

Methods
The study was carried out on 2952 patients registered in the Salford Kidney Study (SKS) between October 2002 and until the end of 2016. A comparative analysis was performed between 339 patients with a history of cancer and 2613 patients without cancer at recruitment. A propensity score matched sample of 337 patients in each group was also used for analysis. Cox-regression models and Kaplan-Meier (KM) estimates were used to compare the association of cancer with mortality and end-stage renal disease (ESRD) outcomes. Linear regression analysis was used to generate the annual rate of decline in estimated glomerular filtration rate (delta eGFR). Competing risk analysis was used to estimate the cumulative probability of the competing events (death, RRT and incident cancer).

Results
13.3% of our cohort had a history of cancer at recruitment and the annual incident rate was 1.6%. Urogenital cancers were the highly prevalent cancers (46%) as would be expected from inter-specialty relationships. Over a median follow-up of 48 months, 1084 (36.7%) patients died. All-cause mortality was higher in the previous and current cancer group (49.6% vs 35%, p<0.001), primarily attributed to cancer-specific mortality. Multivariate Cox regression analysis showed a strong association of cancer with all-cause mortality (HR:1.41; 95%CI: 1.12-1.78; p=0.004). There was no difference between the groups regarding reaching end-stage renal disease or the rate of decline in eGFR (-0.97 vs -0.93 ml/min/year, p=0.93). RRT uptake was similar between the groups (17.2% vs 19.3%, p=0.49). Similar results were observed in KM estimates (figure) and competing risk analysis (5-yr mortality 36% vs 23%, p-Value=0.001).

Conclusions
Baseline cancer status proved to be an added burden and an independent risk factor for all-cause mortality. Although individual case consideration is important, overall the presence of cancer should not be a limitation for RRT provision including transplantation.