INTRODUCTION/OBJECTIVES

- Paraneoplastic symptoms are common but not well described in Renal Cell Carcinoma (RCC).
- Paraneoplastic syndromes (PNS) do not have a standard definition and might be associated with worsened outcomes.
- We studied constitutional symptoms and laboratory markers at diagnosis to design a novel prognostic index to predict overall survival (OS), progression free survival (PFS), and cancer specific survival (CSS) in patients with RCC.

METHODS

- A single-center retrospective analysis was utilized for analysis and validation of patients with RCC.
- Multivariable cox regression analysis was used to elucidate independent risk factors associated with OS, PFS and CSS.
- Constitutional symptoms (fatigue, unintentional weight loss of ≥10lbs, hematuria) and lab values (albumin and AST/ALT) were included to create a predictive model for oncologic outcomes.
- We scored patients on a scale of 0-5 based on presence of these variables and stratified them based on PNS scores.
- We performed Kaplan Meier analyses (KMA) to obtain OS, PFS, and CSS and utilized receiver-operating-characteristic (ROC) analysis to evaluate predictive validity.
- We analyzed 813 patients.
- Multivariable Analysis for worse OS included weight loss, hypoalbuminemia, and De Ritis ratio; for worsened PFS included fatigue, hypoalbuminemia, and De Ritis ratio; for worsened CSS were hematuria and De Ritis ratio.
- PNS scores were calculated using the following variables: hematuria, unintentional weight loss ≥10lbs, fatigue, hypoalbuminemia <3.4g/dL, and De Ritis ratio >1.25.
- Comparing patients with low, intermediate, and high scores, Kaplan Meier Analysis revealed low score had a significantly higher mean 5-year OS (86.5% vs. 71.7%, p<0.001), 5-year PFS (89.3% vs. 80.4% vs. 78%, p<0.001), and 5-year CSS (96.6% vs. 89.8% vs. 65.7%, p<0.001).
- ROC analysis for OS, PFS, and CSS revealed AUC of 0.648 (p<0.001), 0.611 (p=0.001), and 0.676 (p<0.001), respectively.

CONCLUSIONS

- To our knowledge this is the first description of a standardized paraneoplastic syndrome which provides a novel scoring index and predicts OS, PFS, and CSS after surgery.
- This standardized paraneoplastic syndrome definition may aid in risk stratification for disease progression and may be used to inform clinical decision making.