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OUTCOMES ASSOCIATED WITH SERUM POTASSIUM LEVEL IN PATIENTS WITH NON-DIALYSIS DEPENDENT CKD. John Hayes[1,2], Jason Payne[1,2], John Anderson[3], Sharon Turban[3], Kamyar Kalantar-Zadeh[4] and Csaba P Kovesdy[1,5] [1]VA Medical Center, Salem, VA [2]Carilion Clinic, Roanoke, VA [3]Johns Hopkins Medical Institutions, Baltimore, MD [4]Harbor UCLA, Torrance, CA and [5]University of Virginia, Charlottesville, VA The impact of serum potassium level on outcomes in patients with CKD has only been studied in dialysis patients, in whom hyperkalemia was associated with increased mortality. It is unclear if serum potassium level shows similar associations in patients with non-dialysis dependent CKD (NDD-CKD) who do not experience fluctuations of serum potassium, but in whom the effects of serum potassium on blood pressure and subsequently the progression of CKD can result in more complex effects. We examined the association between serum potassium levels and all-cause mortality in 1,215 male US veterans (age 68±10, 24% Black) with NDD-CKD (estimated glomerular filtration rate [eGFR] 37±17). Associations with mortality were examined in Cox models with adjustments for age, race, co morbidities, smoking status, eGFR, albumin, cholesterol, bicarbonate, white blood cell count, percentage of lymphocytes, hemoglobin, calcium, phosphorus, proteinuria and prescribed medications. Interactions were examined in subgroup analyses and by including interaction terms. A low-normal serum potassium of 3.5-4.5 mEq/L was associated with the lowest mortality (multivariable adjusted death hazard ratios [95% CI] for potassiums of <3.5, 4.6-5.3 and >5.3, versus 3.5-4.5 mEq/L: 1.33 [0.85-2.08], 1.21 [1.01-1.45] and 1.29 [0.96-1.74]). A significant interaction with race was observed (p=0.021 for the interaction term), with whites displaying a significant association between hyperkalemia (but not hypokalemia) and mortality, and blacks showing a significant association between hypokalemia (but not hyperkalemia) and mortality. Hyper- and hypokalemia were both associated with increased mortality in NDD-CKD. More research is needed to clarify the reasons behind the different effects of dyskalemias in whites and blacks, and to determine if interventions aimed at maintaining low-normal serum potassium can improve outcomes in this patient population.