

URIC ACID AND LONG-TERM OUTCOMES IN CHRONIC KIDNEY DISEASE Magdalena Madero, Mark Sarnak, Tom Greene, Allan Collins, Gerald Beck, Tom Greene, John Kusek, Andrew Levey, Vandana Menon. Tufts-New England Medical Center, Boston, MA, US. Uric acid levels are increased in persons with chronic kidney disease (CKD). Less is known about the association of uric acid with all-cause and cardiovascular (CVD) mortality. We evaluated this relationship in a cohort of persons with CKD stages 3 and 4. This analysis includes 839 participants from the Modification of Diet in Renal Disease (MDRD) study with measured uric acid. Survival status and cause of death up to December 31, 2000, were obtained from the National Death Index. Cox models were used to evaluate the relationship of baseline uric acid, categorized as continuous and categorical variables, with all-cause and CVD mortality. Models were adjusted for demographic factors, CVD risk factors, measured glomerular filtration rate (GFR), proteinuria, allopurinol and diuretic use. Mean age was 52 years, 85% were white, 61% men and 5% had diabetes. Mean (SD) GFR and uric acid were 33 (12) ml/min/1.73m² and 7.63 (1.66) mg/dl respectively. During the 10-year follow-up period, 208 (25%) participants died of any cause, and 127 (15%) from cardiovascular disease. In multivariable adjusted models there was an association between uric acid with all cause mortality (HR per 1mg-dl increase 1.17; 95% CI 1.05-1.30) and CVD mortality (HR per 1 mg/dl increase 1.16; 95% CI 1.01-1.33). The table demonstrates the results by tertiles. Hyperuricemia in persons with CKD appears to be associated with increased risk of all-cause and CVD mortality.

| | <i>Tertile 1</i> | <i>Tertile 2</i> | <i>Tertile 3</i> |
|----------------------------|-------------------------|-------------------------|-------------------------|
| All-Cause Mortality | (ref) | HR, 95% CI | |
| Unadjusted | 1.00 | 1.13, 0.81-1.59 | 1.20, 0.86-1.69 |
| Adjusted | 1.00 | 1.27, 0.88-1.84 | 1.57, 1.07-2.32 |
| CVD Mortality | | | |
| Unadjusted | 1.00 | 0.88, 0.57-1.35 | 0.97, 0.64-1.48 |
| Adjusted | 1.00 | 1.05, 0.66-1.68 | 1.47, 0.90-2.39 |