Comparison of survival analysis and palliative care involvement in patients aged over 70 years choosing conservative management or renal replacement therapy in advanced kidney disease

Presented by: R. Xing (PGY1 Internal Medicine), March 2, 2016

Reference: Hussain JA, Mooney A, Russon L, Comparison of survival analysis and palliative care involvement in patients aged over 70 years choosing conservative management or renal replacement therapy in advanced kidney disease. Palliative Medicine 2013;27(9):829-839.

Rationale: Little is known about the survivorship of elderly patients with CKD on renal replacement therapy versus conservative management. This study aims to address this and other important outcomes. **Study design:** A retrospective cohort study of elderly patients with ESRD. Patients self-selected for either renal replacement therapy (RRT) or conservative management (CM). Outcomes of survival, access to specialist palliative care services, and number of acute medical admissions were assessed in each group using intention to treat analysis and standard statistical methods (t-test, Chi-squared, Kaplan-Meier and log rank as appropriate). **Population:** Patients aged >70 attending a pre-dialysis clinic in West Yorkshire UK with progressive decline in renal function and eGFR-Cr <20mL/min (MDRD). Exclusion criteria: presentation with stage 5 CKD or rapid decline in renal function. Patients referred to pre-dialysis clinic from Sept 2006 to Dec 2010. Data collected from retrospective chart review in Jan – May 2011. N=172 CM, N=269 RRT, N=80 excluded from analysis. **Treatment differences:** Monitoring in pre-dialysis clinic with same medical management until symptomatic uremia at which point RRT group received dialysis and CM group received supportive care under a specialist palliative medicine consultant. **Results:** RRT confers a 2.4 year median survival advantage for the study population ($p<0.0001$). Statistically significant risk factors for death: age >80 ($p=0.005$), CCI score>8 ($p=0.0001$), WHO performance score>2 ($p<0.0001$), not living independently ($p=0.01$). Subgroup analysis in the 80+ age group shows no statistical difference in survivorship up to 6 years of follow up especially when followed at eGFR<12ml/min. Also a reduction in survivorship benefit at CCI 8+ and WHO 3+ though still statistically significant in CCI 8+ subgroup analysis favoring RRT. 100% of patients choosing CM were reviewed by a palliative care specialist vs. 11% of those choosing RRT. Patients choosing RRT had a relative risk of hospital admission of 1.6 (95% CI 1.14-2.13).

Strengths: Clinically relevant question in an understudied population with reasonably large study population. Efforts made to eliminate lead-time bias and patients received similar medical follow up until time of dialysis start.

Weaknesses: Retrospective nature of trial does not allow for full assessment of important variables such as symptoms, quality of life, full assessment of co-morbidities, and functional status. Some potential confounding variables have not been measured and cannot be corrected for. Single geographic region and CKD program limits generalizability.

Relevance to palliative care: This study identifies risk factors for patients less likely to benefit from RRT from a survivorship perspective and may help in patient discussions around the decision to pursue dialysis. It also identifies an area in which palliative care services are under-accessed. This study raises questions as to whether there exist any differences in adequacy of symptom control and quality of life between the two groups.