Washington, DC was a fantastic location for Kidney Week 2019, where I had the opportunity to meet colleagues and to review recent innovative nephrology research.

DAPA -HF outcomes were presented in the high impact clinical trials section. Dapagliflozin was compared to placebo in those without diabetes with heart failure with low ejection fraction. Dapagliflozin was shown to be as effective in reducing worsening heart failure, cardiovascular death and all-cause mortality in patients with estimated GFR<60ml/min/1.73m^2 as in patients without chronic kidney disease. However patients with estimated GFR <30ml/min/1.73m^2 were not included in this study.

Data presented from RITAZAREM showed that rituximab was superior to azathioprine as maintenance immunosuppression in those with relapsing AAV. Maintenance dosage was 1g every 4 months for 5 doses. At the end of follow up (24 months) 13% of rituximab and 36% azathioprine had relapsed.

Membranous nephropathy was discussed in a number of sessions. The discovery of PLAR2 antibody levels and publication of randomised trials showing the effectiveness and comparatively low toxicity of rituximab has altered the management of this condition. The antibody response may begin in the lungs potentially explaining the association of membranous with pollution. The use of PLAR2 antibody levels in the diagnosis and management of membranous nephropathy was discussed with emphasis placed on the importance of using ELISA levels when using it as an adjunct for immunosuppressive treatment decisions. Those with PLAR2 antibody level above 300 (ELISA) may not respond to the initial doses of rituximab and may need either further doses of rituximab or institution of an alternative agent. The results of STARMEN will hopefully provide more guidance for this particular cohort of patients.

Multiple sessions showcased research which is attempting to discover early and specific markers of acute kidney injury. Samir M Parikh was presented with the Donald W Seldin Award and he outlined the prospects of NAD+ based therapies in acute kidney injury. Recent work has shown that NAD biosynthesis may be linked to kidney development and have a maintenance role in CKD. He explained the physiology of PGc-1alpha, which is a precursor of NAD and is suppressed in injured tubular cells. However it is difficult to measure. Quinolinoic acid is also related to NAD biosynthesis, is measurable in urine and may allow a cheap and non-invasive method for diagnosing tubular injury. Levels of quinolinic acid rose many hours before serum creatinine elevation in acute tubular injury in a cohort of patients after coronary artery bypass surgery. The results from this small trial of nicotinamide acid (1g v 3G v placebo)

showed a lower risk of AKI in those on nicotinamide and the higher doses were well tolerated. Research is ongoing to clarify the usefulness of this agent.

Many thanks for allowing me to participate in Kidney week this year.

Sine Donnellan