making in prioritization of tracks for drug development. Genetic association studies may provide such a strategy when a genotype is associated with a well-defined molecular and functional phenotype. Previously an association with better survival was found in incident dialysis patients with systemic inflammation and a deletion variant of the CC-chemokine receptor 5 (CCR5Δ32). Thus, we hypothesized that pharmacological CCR5 blockade could protect against inflammation associated mortality and estimated if such a treatment would be cost-effective. METHODS: Ascertainment and treatment strategy was modelled in which patients were screened for the CCR5Δ32 polymorphism and patients with the wild-type genotype and high inflammation status were treated with CCR5 antagonists, a decision-analytic Markov model was used. Costs, utilities and clinical data on the association between CCR5 polymorphisms and mortality were all gathered from a single prospectively followed dialysis cohort (NECOSAD). Univariate and probabilistic sensitivity analyses were performed. RESULTS: Pharmacological CCR5 blockade in patients with CCR5 wild-type and high inflammation status decreased mortality (RR = 0.61) and improved the probability of renal transplantation (RR = 2.41). The cost-effectiveness of the screen-and-treat strategy was €18,557 per life-year gained and €21,896 per quality-adjusted life-year (QALY) gained. The main drivers of the cost-effectiveness were the costs of pharmacological CCR5 blockade and the reduction in relative risk of mortality. Threshold analyses were performed for these two parameters. CONCLUSIONS: Pharmacological blockade of the CCR5 receptor in inflammatory dialysis patients can be included in a potential cost-effective genetic screen-and-treatment program. This study illustrates the potential of genetic association studies in drug development programs, as a new source of Mendelian randomised evidence from an observational setting.

THE INFLUENCE OF FUTURE UNRELATED COSTS ON COST-EFFECTIVENESS ESTIMATES: TREATMENT OF HYPERPHOSPHATAemia WITH LANTHANUM CARBONATE IN PRE-DIALYSIS PATIENTS WITH CHRONIC KIDNEY DISEASE
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OBJECTIVES: A long-standing controversy in health-economics is whether future unrelated costs should be included in cost-effectiveness analyses. This discussion is relevant in Chronic Kidney Disease (CKD) for treatments that delay progression towards dialysis and prolong survival. In this study, we determined the influence of future unrelated costs on the cost-effectiveness of the non-calcium based phosphate binder lanthanum carbonate (LC) when used as second-line treatment for hyperphosphataemia in pre-dialysis patients. METHODS: Time-dependent Markov models were constructed; cohorts of 1000 patients were followed lifelong. Patients not reaching target serum phosphate (SP) levels on first-line calcium based phosphate binders (CB) were treated with LC. This strategy was compared with continued CB treatment. Patient-level data were pooled from two clinical trials, one in predialysis and one in dialysis. Reductions in SP levels delayed progression towards dialysis and prolonged survival. RESULTS: For the predialysis cohort, 544 did not achieve target SP levels (<4.6 mg/dL) on CB treatment, and 230 were eligible for LC treatment. Of these, 43 (18.8%) now responded to an 8 week trial of LC. Compared with continued CB treatment, 150 life-years and 101 QALYs were gained with LC. Considerable future unrelated costs were accrued due to prolonged survival while on dialysis. Including these future unrelated costs in second-line LC treatment increased the QALY cost-effectiveness of LC by 150% QALY. Excluding future unrelated costs, net health care cost-savings were estimated due to delayed progression towards dialysis. The net monetary benefit of LC treatment rose from £1,032 to £4558 upon exclusion of future unrelated costs. RESULTS: For the dialysis cohort, 210 did not achieve target SP levels (<4.6 mg/dL) on CB treatment, and 10 were eligible for LC treatment. Of these, 3 (1.4%) now responded to an 8 week trial of LC. Compared with continued CB treatment, 150 life-years and 101 QALYs were gained with LC. The cost-effectiveness of LC for the dialysis cohort increased less than in the predialysis cohort, although the QALY cost-effectiveness was significantly improved due to the large increase in life-years gained. CONCLUSIONS: The inclusion of future unrelated costs is important in cost-effectiveness analyses. Excluding future unrelated costs can lead to incorrect conclusions about the cost-effectiveness of chronic kidney disease treatments.

UNIRURAL/KIDNEY DISORDERS – Patient-Reported Outcomes Studies
PUK29
CHARACTERIZING THE RELATIONSHIP BETWEEN HEALTH UTILITY IN KIDNEY TRANSPLANT RECIPIENTS IN UK AND US WITH DIFFERENT LEVELS OF KIDNEY FUNCTION
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OBJECTIVES: Little data is available describing the relationship between quality of life and levels of kidney function in renal transplant patients. We sought to assess the relationship between health utility and renal impairment in US and UK kidney transplant (KTX) recipients. METHODS: Data was obtained from KTX patients enrolled at the kidney transplant facilities of the Renal Unit at the Cardiff and Wales NHS Trust in Cardiff, UK (n = 209) and Saint Louis University Hospital, St. Louis, MO (n = 233). General linear models were used to estimate adjusted EQ-5D means across CKD stages (KDOQI classification). Partial Spearman’s correlation was used to evaluate trend across CKD classes. We adjusted all models for age, gender, time since transplant and diagnosis of diabetes. We adjusted for center effect by including the variable indicating the center of enrollment and the appropriate interaction term in the model. RESULTS: Mean age of KTX recipients was 52.7 and 49.1 years and mean time since transplant was 5.6 and 3.3 years in the UK and US cohorts respectively. After adjustment, EQ-5D scores decreased as follows in UK and US samples respectively: CKD 1–2, 0.74 and 0.87; CKD 3, 0.69 and 0.88; CKD 4, 0.61 and 0.82; CKD 5, 0.39 and 0.79. The trend across CKD classes was statistically significant in both samples (UK: p = 0.024, P = 0.01; US: p = 0.19, P = 0.03). Center effect was statistically significant and mainly explained by the differences in transplant care in the EU and US. CONCLUSIONS: This study demonstrates a significant and independent relationship between levels of post-transplant renal impairment and health utility. Management strategies that maximize post transplant renal function will have important implications for patients’ quality of life.

ESA injections/pt/year, weighted by type of ESA, frequency and route of administration, ranged from 53–148. The mean uptake of C.E.R.A. Q4W across 16 centres was 29% (7–56%). The mean annual reduction in the number of ESA administrations following conversion to C.E.R.A. was 76 (41–136). Estimated observed time/year ranged from 38–319 min for ESA and 6–68 min for C.E.R.A. Assuming a 100% uptake of Q4W C.E.R.A. maintenance therapy, annual time savings/centre for frequent anaemia management tasks would be 84% (79–91%) in Germany, 78% (74–86%) in France, 88% (87–88%) in Italy, 85% (78–88%) in Poland and 77% (69–84%) in Spain. The inclusion of future unrelated costs reduced this analysis demonstrates the substantial impact of these costs on the cost-effectiveness of anaemia management-related tasks were consistently found in hemodialysis centres across five European countries with a 100% uptake of Q4W C.E.R.A. maintenance therapy. This provides the opportunity to re-focus health care resources, at a critical time point in dialysis procedure, on other important CKD care tasks in order to improve overall patient care.