COST-EFFECTIVENESS OF ALISKIREN AS ADD ON TO LOSARTAN AND OPTIMAL ANTIHYPERTENSIVE THERAPY IN PATIENTS WITH TYPE 2 DIABETES, HYPERTENSION AND NEPHROPATHY IN THE UK SETTING

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AVOID (Aliskiren in the Evaluation of Proteinuria in Diabetes) was a multicentre, randomized, double-blind, 6-month study designed to assess the effect of adding aliskiren, an oral direct renin inhibitor, to losartan and optimal antihypertensive therapy (excluding ACE inhibitors), on the reduction in urinary albumin to creatinine ratio (UACR) in patients with hypertension, type 2 diabetes, and nephropathy with residual proteinuria. A cost-effectiveness model was developed to estimate the progression to end-stage renal disease (ESRD) and to project the associated costs and clinical outcomes of aliskiren in the UK setting.

A published model was adapted to incorporate treatment effects from AVOID, where aliskiren reduced mean UACR by 20% (p=0.0009). Transition probabilities from AVOID were used until patients reached UACR >1,900µg/g, with probabilities from IDNT (Irbesartan in Diabetic Nephropathy Trial) used thereafter. Short-term therapy benefits associated with aliskiren were projected to increase life expectancy by 0.0983 years, improve quality-adjusted life expectancy by 0.0878 quality-adjusted life years (QALYs) and reduce the cumulative incidence of ESRD by 2.51% compared to placebo. An incremental cost-effectiveness ratio of £12,073 per QALY gained was calculated for aliskiren, which is well below the willingness-to-pay threshold of £30,000 per QALY gained.

The additional renal protection provided by aliskiren would be considered cost-effective in the UK setting in the patient group studied.