ECONOMIC EVALUATION OF BIOLOGIC THERAPIES FOR MODERATE TO SEVERE PSORIASIS: ETANERCEPT COMPARED TO ADALIMUMAB AND INFlixIMAB

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OBJECTIVES: To assess the cost-effectiveness of flexible dosing with etanercept compared to once-a-week dosing of adalimumab or infliximab in patients treated with severe psoriasis.

METHODS: An economic model was constructed to estimate the incremental cost per quality adjusted life year for each therapy compared with no systemic therapy (NST). Patients met UK criteria for biologic treatment, which require both moderate to severe disease and failed conventional treatment. The patients were followed up to 52 weeks. The model was populated with clinical evidence and cost data from UK sources with the exception of costs related to the treatment of drug-related adverse events which were modelled using cost data from a 2008 US study. The model estimated total cost per treatment failure avoided (TPFA) and incremental cost-effectiveness ratios (ICERs) for etanercept compared with adalimumab and infliximab treatment. Base-case results are presented for a 25 kg and 31 kg patient, and sensitivity analyses were conducted for different patient risk levels and different willingness to pay values.

RESULTS: Etanercept was dominant compared to adalimumab and infliximab for 25 kg and 31 kg patients, with TPFA of £9,608 and £12,600 respectively, and ICERs of £25,735 and £27,020 per QALY respectively. The ICER for etanercept compared with infliximab was £68,025 per QALY. Sensitivity analyses found that the results were robust to changes in patient risk levels, treatment efficacy, and cost parameters.

CONCLUSIONS: Etanercept is a cost-effective alternative to infliximab given a willingness to pay of £25,735 per QALY. Possible avenues for future research include exploring the cost-effectiveness of alternative treatment strategies and the impact of treatment adherence on costs and outcomes.