EXPLORING THE DERIVATION OF UTILITY VALUES USING A DISCRETE-CHOICE CONJOINT ANALYSIS METHOD—A COST-UTILITY ANALYSIS OF GEMCITABINE PLUS CISPLATIN FOR THE TREATMENT OF BLADDER CANCER

Davey P¹, Rajan N²

¹M-TAG, Sydney, NSW, Australia; ²Eli Lilly Australia Pty Ltd, Sydney, NSW, Australia

Gemcitabine plus cisplatin (GEM/cis) displays similar efficacy to methotrexate, vinblastine, doxorubicin plus cisplatin (MVAC) in the treatment of advanced bladder cancer. The main advantage of GEM/cis over MVAC is superior tolerability, as evidenced by a lower incidence of severe adverse effects.

OBJECTIVE: To determine whether GEM/cis offers value for money compared with MVAC.

METHODS: Direct medical costs were calculated for each treatment, based on resource utilisation data collected during a randomised phase III trial. Utility values were determined to capture the quality of life (QoL) differences between the two therapies. A novel methodology, involving the use of discrete-choice conjoint analysis, was employed to examine the value associated with the toxicity profile of GEM/cis compared with MVAC. Attributes included in the analysis (alopecia, weight improvement, mouth ulcers, thrombocytopenia, febrile neutropenia and length of life) were obtained from a survey of oncology nurses. Length of life was included to allow the trade-off between length of life and side effects to be determined. This approach enables discrete utility values to be calculated for each attribute.

RESULTS: Survey responses indicated a preference for GEM/cis treatment. The extra utility benefit with GEM/cis was 0.204, mostly derived from reduced risk of febrile neutropenia, mouth ulcers and alopecia. The incremental cost per quality-adjusted life-year gained was AUS$25,000 (US$50,000). This is within an acceptable range for Australia. Sensitivity analyses indicated the results were robust. Using these results, a cost-utility analysis was conducted and submitted to the Australian Pharmaceutical Benefits Advisory Committee to assist in deciding whether GEM/cis should receive public subsidy. GEM/cis gained funding for the treatment of bladder cancer.

CONCLUSIONS: GEM/cis offers comparable survival with a superior toxicity profile and QoL benefit. The study demonstrated that utility values can be derived using a discrete-choice conjoint analysis approach.