COMPARING THE COST-EFFECTIVENESS OF 3 MCG/KG Q2W DARBEPOETIN ALFA WITH STANDARD DOSE EPOETIN ALFA FOR ANEMIA MANAGEMENT IN CHEMOTHERAPY-TREATED CANCER PATIENTS IN UNITED STATES

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OBJECTIVES: A recent 12-week phase 2 randomized clinical trial evaluated the hemoglobin (Hgb) response rates (% patients with Hgb increase ≥2g/dL from baseline, in the absence of RBC transfusion) of four different dosing schedules of darbepeotin alfa administered every other week (q2w) to anemic patients with solid tumors receiving chemotherapy. A randomized group of epoetin alfa patients (40,000U/wk; dose escalated to 60,000U/wk at 6 weeks for inadequate response) was the active control. Recent literature indicates the mean duration of anemia treatment with epoetin alfa for cancer patients on chemotherapy to be 16 to 24 weeks. We designed a 20-week model to evaluate the cost-effectiveness of 3.0mcg/kg q2w of darbepeotin alfa (n = 33) compared to epo (n = 32). METHODS: Average wholesale prices (AWPs) of the 2 drugs in United States were used as the sole cost driver over the expected 20-week anemia treatment period. Response rates at week 12 were used as the efficacy measures for the 2 therapies. RESULTS: Mean cumulative 20-week doses per patient for darbepeotin alfa and epoetin alfa were estimated to be 2,100mcg (assuming mean patient weight = 70kg) and 844,800U, respectively. Compared to the estimated 20-week cost of epoetin alfa therapy, darbepeotin alfa was estimated to be $800 less per patient. For the 12-week trial duration, darbepeotin alfa was about $380 cheaper. The response rates at the end of week 12 were found to be similar (60%, with similar confidence intervals) for the 2 therapies. Smaller percent patients (3% versus 7%) required RBC transfusions in darbepeotin alfa group. Cost-effectiveness ratio (cost per % patients with Hgb response) was superior for darbepeotin alfa ($17,465 versus $18,812). CONCLUSIONS: Compared to standard practice epoetin alfa therapy, 3.0mcg/kg q2wk darbepeotin alfa provides a less expensive and cost-effective alternative to treat cancer patients with chemotherapy-induced anemia.

DERIVING A UTILITY WEIGHTED INDEX FROM CONDITION-SPECIFIC MEASURES: PRACTICAL SOLUTIONS FOR ECONOMIC EVALUATIONS

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Clinical trial health outcome data intended for the purposes of economic evaluation must be capable of being represented by a single, summary index. When benefits are to be estimated in terms of quality-adjusted life years that index needs to represent social preference weights/ utilities. However clinical trials often fail to include utility-weighted measures in their protocols. OBJECTIVE: To describe the strategic options available to the researchers’ facing the task of deriving a utility weighted index from a condition specific measure, using the FACT-L as a case study. METHODS: The FACT-L is a widely used instrument that defines health-related quality of life in terms of four dimensions: physical, social, emotional and functional well-being. As far as is known, utility weights for the items/levels within the FACT-L have not so far been published. The complexity of the FACT-L makes it impossible to estimate utility weights using traditional MAUT methods. Hence the simplification of the descriptive system is an essential prerequisite. Two separate strategies do this were adopted, based firstly on the analysis of pre-existing responses on the FACT-L, obtained in a clinical study of 431 patients with non-small cell lung cancer and secondly on the results of five qualitative interviews with oncologists experienced in the use of FACT-L were performed. RESULTS: The factor analytic approach yield limited scope for item reduction although a more efficient clustering of items within dimensions was achieved. The qualitative review produced greater scope for simplification of the descriptive system. CONCLUSIONS: An efficient subset of FACT-L items that have clinical descriptive salience can be achieved as a preliminary to the estimation of item/level utility weights.

EXAMINING PREFERENCES AND TIME-TRADE-OFF UTILITY FOR GEMCITABINE PLUS CISPLATIN IN THE TREATMENT OF BLADDER CANCER: A SURVEY USING DISCRETE CHOICE CONJOINT ANALYSIS IN THE UK

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OBJECTIVES: The National Institute for Clinical Excellence in the UK encourage provision of health-related quality of life (QoL) evidence for their assessments and recently their guidance has flagged the importance of patient preference in therapy selection. Gemcitabine plus cisplatin (GC) displays comparable efficacy to the methotrexate, vinblastine, doxorubicin plus cisplatin (MVAC) regimen in treating advanced bladder cancer but shows significant advantage in terms of tolerability and serious adverse events. Therefore a UK study was conducted to examine patient value associated with the toxicity profile of GC, compared with MVAC. METHODS: A novel application of discrete choice conjoint analysis was employed to quantify preference and time-trade-off utility differences providing sensitive strength of prefer-
encause measures and utility values for individual treatment attributes. Differential toxicity attributes, that were patient relevant and clinically significant, were identified from head-to-head trial data. Attributes identified were: alopecia, weight loss, mucositis, diarrhoea, and febrile neutropenia/neutropenic sepsis. Fourteen oncologists and 16 oncology nurses served as patient proxies given the sensitive nature and ethical difficulties associated with the patient population. Respondents considered an orthogonally designed series of pair-wise choice scenarios representing incidence levels for individual toxicity attributes (treatment features) with trade-offs in life-expectancy. A logistic regression was utilised to analyse the stated scenario pair preferences against the individual attribute levels. Potential confounders were analysed. RESULTS: Survey results indicate a strong preference for GC treatment and a clear willingness-to-trade-time for tolerability benefits. Analysis of strength of preference for individual attributes shows strong support for treatment features that impact directly on QoL. CONCLUSIONS: UK respondents displayed a clear preference for GC treatment with superior toxicity offering a highly valued health related QoL gain. These results provide encouragement for further exploration, possibly by extension to the European setting. Discrete choice conjoint analysis is a promising instrument in the outcomes assessment of cancer therapies.

**CANCER—Clinical Outcomes**

**IS THERE DIFFERENCE BETWEEN GEMCITABINE BASED NSCLC TREATMENT AND OTHER PLATINUM BASED COMBINATION FOR RESPONSE RATES AND TOXICITY?**

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OBJECTIVE: This analysis attempts to highlight the differences in response rates and toxicity between Gemcitabine combined with a platinum-based therapy and other combinations of platinum-based chemotherapy in the treatment of non-small-cell lung cancer (NSCLC). METHODS: This pooled analysis used summary statistics from clinical trials published up to December 2001. The analysis pooled odds ratios (OR) and associated confidence intervals (CI) using a fixed-effects model. The efficacy outcomes considered are responses (both partial and complete) and progressive disease. Grade 3 and 4 toxicities are considered using the WHO criteria for the following adverse events: alopecia, nausea and vomiting, anaemia, neutropenia, thrombocytopenia and neuropathy. RESULTS: Patients receiving Gemcitabine combined with a platinum therapy are more likely to experience a response to treatment than patients receiving other platinum based combinations. The OR for complete and partial responses is 2.68, (CI 1.53–4.67) and is 0.44 for progressive disease (CI 0.32–0.59). Gemcitabine patients experienced fewer cases of alopecia (OR 0.15, CI 0.10–0.22) and neutropenia (OR 0.6, CI 0.47–0.77). In contrast, Gemcitabine patients experienced a greater number of grade 3 or 4 anaemia (OR 1.92, CI 1.41–2.61) and thrombocytopenia (OR 6.76 CI 4.95–9.23) incidences. For neuropathy and nausea and vomiting there was no evidence for any of the chemotherapies having fewer patients experiencing toxicities. CONCLUSIONS: The implications of this analysis at the patient level is that if response is of primary importance, then on a purely clinical basis Gemcitabine should be the treatment of choice. Gemzar based chemotherapy had a higher number of responses and fewer adverse events for alopecia and neutropenia. To validate these results, a meta-analysis should be conducted with stratification for key variables using patient level data.

**CANCER CHEMOTHERAPY AT HOME: FEASIBILITY, PATIENT OUTCOMES, AND HEALTHCARE SYSTEM IMPLICATIONS**

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OBJECTIVES: At the Quebec Health Technology Assessment Agency (AETMIS) in Canada we assessed whether home chemotherapy for cancer was effective, safe, and satisfactory to patients, and examined the cost, organizational, and ethical implications, in order to make policy recommendations. METHODS: We carried out a systematic review of the scientific literature using the PubMed (MEDLINE 1980–present) and CancerLit (1975–present) bibliographic databases. We supplemented this review with 16 semi-structured interviews with service providers, including oncology nurses, physicians, and home care coordinators, in 2 provinces with different organizational structures for cancer care (Quebec and Ontario). RESULTS: Clinical effectiveness of home cancer chemotherapy appears similar to that in non-home settings. Home treatment can be delivered safely if patients are carefully selected and trained. Patient eligibility criteria relate to learning capability, suitability of the home environment, and geographic accessibility. Improvements in patient quality of life at home have not been well documented in the literature. Patient preference and satisfaction with home therapy is supported, although mostly among self-selected groups. Cost studies show that home chemotherapy is less expensive than inpatient treatment from a hospital perspective. When home treatment is used as a substitute for outpatient therapy, the result tends to be a cost shifting from hospitals to home care organizations. Effects on costs to patients/families require more study. Interviews with service providers showed variable delivery, with greater patient load capacity and uniformity of services where hospital oncology departments or regionalized centres