Abstracts

PCN 1 2

COST-UTILITY ANALYSIS COMPARING PACLITAXEL TO DOCETAXEL IN THE TREATMENT OF METASTATIC BREAST CANCER

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Cost-utility analysis is rapidly becoming the standard pharmacoeconomic measure in oncology. OBJECTIVE: To compare paclitaxel (pac) and docetaxel (doc) in the treatment of second line or greater metastatic breast cancer using a cost-utility analysis. METHODS: Utilities we collected from 45 patients using eight modified Markov modeled health states (Pharmacoeconomics, 1996; 60:504) describing metastatic breast cancer; the standard gamble procedure was utilized to obtain utility. Costs were collected prospectively from 31 patients in a single outpatient center. Direct medical costs were collected (e.g., all medications, physician/clinic/laboratory visits, ER, hospitalizations, home health care, consultations, special procedures, transfusions, phone calls, and miscellaneous) and costs were defined using Medicare reimbursement rates and AWP for drugs. Sensitivity analyses are currently underway. RESULTS: The average cost per cycle of chemotherapy was \$4,298 and \$2,869 for doc and pac respectively. The mean utility score obtained from patients was .78 and .76 for doc and pac respectively. The utility scores suggest that doc offers 7.3 days of perfect health when compared to pac. However, the incremental cost-utility analysis (cost of doc - cost of pac/QALY of doc – QALY of pac) indicates that the use of doc costs \$71,450 per Quality Adjusted Life Year (QALY) when compared to pac. Another way to view these results is that it costs \$195.75 more per Quality Adjusted Day (QAD) to treat a patient with docetaxel. CONCLUSIONS: Our results indicate that docetaxel is more expensive (\$4,298/cycle vs. \$2,869/cycle) than paclitaxel, and that metastatic breast cancer patients do not perceive the drugs as being different (utility scores .76 for pac and .78 for doc). This cost-utility analysis suggests that the use of docetaxel over paclitaxel may not be justified in the treatment of metastatic breast cancer.

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COST OF THROMBOCYTOPENIA-RELATED **BLEEDING AMONG PATIENTS WITH CANCER** Elting LS, Martin CG, Hamblin L, Chau Q

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OBJECTIVE: Chemotherapy-induced bone marrow toxicity is expensive because of the cost of managing complications of pancytopenia. Growth factors minimize these complications. Economic analyses of growth factors typically focus on common, less serious outcomes, rather

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rent 20%) in the population. CONCLUSIONS: The model suggests that annual PSA screening of male population for prostate cancer is extremely cost-effective, given current data. Further research into outcomes of prostate cancer is needed to estimate cost-effectiveness of screening in various subpopulations. In particular, given the long clinical progression of prostate cancer, more research is required into outcomes and cost-effectiveness in relatively healthy patients versus those burdened by serious co-morbidities.

ECONOMIC EVALUATION OF LIPOSOMAL DOXORUBICIN VS TOPOTECAN FOR RECURRENT OVARIAN CANCER IN THE UK

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OBJECTIVES: To conduct an economic evaluation of an open label, phase III randomized trial involving centers in North America and Europe. METHODS: There were 239 and 235 patients in the liposomal doxorubicin (50mg/m2 every 4 weeks) and topotecan (1.5mg/m2 for 5 days every 3 weeks) arms, respectively. Overall median survival was 420 days and 397 days for liposomal doxorubicin and topotecan, respectively (hazard ratio = 1.12 (90% CI 0.92, 1.37; p = .34)). Because the outcomes were not clinically different for the 2 groups, a cost minimization analysis was performed. Costs included were: study drug; drug administration; and management of adverse events. Actual mg of drug administered and frequency and severity of adverse events were obtained from the clinical trial. Expert opinion was used to estimate the resources used in the treating adverse events, and unit costs were based on UK practice data. Further validation of the expert opinion is currently underway. RESULTS: Severe (Grade III/IV) toxicities were more frequent for liposomal doxorubicin versus topotecan in terms of palmar-plantar erythrodysesthesia (PPE) (n = 64 vs. 0), and stomatitis/pharyngitis (n = 64 vs. 0)32 vs. 2) but less frequent for thrombocytopenia (n = 3vs. 238), anemia (n = 19 vs. 146), neutropenia (n = 55vs. 764) and fever (n = 2 vs. 13). The average cost per patient was estimated to be EUR16,230 (95% CI 14,780 to 17,680) and EUR20,554 (95% CI 18,764 to 22,344) for liposomal doxorubicin and topotecan, respectively. Per patient cost for drug + administration were similar between the two groups, (EUR14,974 and EUR15,073); the main differential in cost was management of anemia (EUR407 and EUR2,219) and neutropenia (EUR57 and EUR1,454) for the liposomal doxorubicin and topotecan groups, respectively. CONCLUSIONS: In settings where the current standard of care for platinum refractory or resistant ovarian cancer is topotecan, liposomal doxorubicin offers the potential for savings through reduction in cost of adverse event management.

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