

minimisation analysis using the "societal" perspective was performed. Relevant resources were tabulated in appropriate units and the use was measured. After valuation of the resources the volumina were multiplied by the prices. Savings were compared with the savings of hospital charges.

Results: The cost of hospital care was reduced with US \$ 1320 by introducing the short stay program. There was no difference in the incidence of complications. The use of professional home care was higher for the short stay group during the first month. The number of outpatient consultations, the intensity of informal home care and patient's costs were not increased after early discharge. Total costs of care were US \$ 3062 for the short stay and US \$ 4382 for the long stay group ($p=0.0007$). The savings of hospital charges by introduction of the short stay program was \$ 2680.

Discussion: Early discharge after breast cancer surgery results in a substitution of hospital care for professional home care, but not medical care, during the first month postoperatively. The overall costs of home care are not different between the short stay and the long stay group. The shifting of care results in a potential cost saving, but this is substantially lower than the savings of hospital charges.

Bonnema J, Department of Surgical Oncology, University Hospital Rotterdam/Daniel den Hoed Cancer Center, PO Box 5201, 3008 AE Rotterdam, The Netherlands

OP7. Country-specific adaptations of a cost-utility decision model comparing chemotherapy in recurrent metastatic breast cancer

Brown RE, Hutton J
MEDTAP International Inc., London, UK

Background: Analytic models of new medical therapies provide information for health care payers and providers who frequently must make decisions before long term outcome data become available. The international focus of pharmaceutical companies necessitates that models be developed for multiple countries. To facilitate multi-country analyses, we describe a process for developing a flexible basic model to be modified for specific settings using published data, physician opinion and nurse utility scores.

Methods: A decision analytic model for recurrent metastatic breast cancer was developed for a representative patient who has failed first-line chemotherapy containing an anthracycline. The model simulates the course of treatment for the representative patient and compares outcomes, costs and utilities of docetaxel, paclitaxel and country-specific usual other chemotherapy. An expert panel of oncologists in the UK and U.S. aided in designing the basic model. Data from published and unpublished clinical trials were used to estimate the proportion of patients having complete and partial response, stable disease or progressive disease and the proportion of patients having intercurrent or cumulative toxicities. The model assumes that there is no extension of survival for any of the treatments. Resources used in the management of metastatic breast cancer patients were obtained from oncologists in the UK, U.S., Germany, Italy, the Netherlands, and Spain. Each country panel identified a most commonly used chemotherapy to compare with the two new taxoid regimens. Health economists from each country provided costing data for the resources. Between 25 and 30 oncology nurses in each country completed a standard gamble to obtain health utility scores. The health state descriptions were translated and back-translated to assure compatibility between countries. Cost-utility analyses were conducted from the perspective of the country's health care system.

Results: A generalised model for managing recurrent breast cancer was sufficiently flexible to permit country-specific adaptation to reflect local management patterns, costs and utilities. Utility scores were comparable across countries. Costs for model disease states (i.e., terminal disease, administration of chemotherapy) varied across countries and the cost utility ratios ranged between £37,000 and £120,000 per QALY.

Discussion: By carefully defining the patient population a flexible analytic model was constructed for adaptation to multiple countries. Variation in the costs for disease states may reflect actual or

methodological differences. Precise definitions of disease states and costing methods are essential for obtaining results that can be compared across countries.

Brown RE, MEDTAP International Inc., 7101 Wisconsin Avenue, Suite 600, Bethesda, Maryland 20814, USA

OP8. Economic implications of hepatic arterial infusion chemotherapy in the treatment of nonresectable colorectal liver metastases

Durand-Zaleski I, Roche B, Buyse M, Carlson R, O'Connell M, Rougier P, Chang A, Sondak V, Kemény M, Allen-Mersh T, Fagniez P-L, Le Bourgeois J-P, Piedbois P, for the Meta-Analysis Group In Cancer Hôpital Henri Mondor, Créteil, France

Background: Approximately 20% of patients with colorectal cancer die from metastases confined to the liver. A meta-analysis recently performed by our group confirmed that in these patients, hepatic arterial infusion of 5-fluoro-2-deoxyuridine improved tumor response compared to intravenous chemotherapy with fluoropyrimidines or supportive care (including palliation when necessary).

Purpose: Because of the high cost of hepatic arterial infusion we undertook a cost-effectiveness analysis which related the cost of such therapy to its medical efficacy. **Methods:** The patient population was drawn from the seven randomized clinical trials included in the meta-analysis, and included individual data from 654 patients. Of these seven trials, five compared hepatic arterial infusion and intravenous chemotherapy, and two compared hepatic arterial infusion and an ad libitum control group in which some patients could be left untreated. Patients allocated to hepatic arterial infusion were the hepatic arterial infusion group, and the others the control group. The measures of efficacy were survival and tumor response. Healthcare costs (in 1995 U.S. dollars) were computed over the duration of patient follow-up, derived from actual costs in two centers, one at Hôpital Henri Mondor (Paris France) and the other at Stanford University Medical Center (Palo Alto, California). The total cost of treatment included the initial procedure, chemotherapy cycles and main complications.

Results: The total gain in life expectancy in the hepatic arterial infusion compared with the control group was 3.2 months (standard error : 0.7 month). For patients treated by hepatic arterial infusion in Paris, the hepatic arterial infusion pump, initial hospitalization and the entire process (including follow-up and complications) cost on average \$8,400, \$15,172, and \$29,562 respectively; in Palo Alto these costs were \$4,700, \$13,784 and \$25,208 respectively. For patients in the control groups in Paris and Palo Alto the total treatment costs were on average \$9,926 and \$5,928. The additional costs of hepatic arterial infusion over control treatment were \$19,636 in Paris and \$19,280 in Palo Alto. The additional costs of hepatic arterial infusion over control were \$19,636 and \$19,280 respectively. The cost-effectiveness (i.e. the additional cost divided by the additional benefit) with respect to survival of hepatic arterial infusion group patients compared with control group patients was \$73,635 per life-year in Paris, and \$72,300 per life-year in Palo Alto.

Discussion: The cost-effectiveness of localized chemotherapy for colorectal liver metastases is within the range of accepted treatments for serious medical conditions, although it might be considered borderline by policy-makers in some countries. Prospective clinical trials should be conducted to more definitively answer this question.

Durand-Zaleski I, Santé Publique, Hôpital Henri Mondor, 51 avenue du Maréchal de Lattre de Tassigny, 94010 Créteil, France, Email: isabelle.durand-zaleski@hmn.ap-hop-paris.fr