

is £3665 and for EPO is £3469. The probability of economic dominance of DARB over EPO is estimated at 4.51%. The probability that EPO is more cost effective than DARB is estimated at 90.73%. When inflating the variance, these probabilities are 11.55% and 82.55%.

Conclusions Based on the currently available data, it is far more likely that EPO is more cost effective than DARB. Head-to-head trials are necessary to confirm these findings.

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POSTER

Indicators of high chemotherapy-induced nausea and vomiting treatment costs in German cancer centers

B. Ehlken¹, F. Lordick², R. Bernard³, K. Berger¹, H.G. Heichler^{4,5}, R. Deuson³, J. Thödtmann³, A. Ihbe-Heffinger³. ¹Medical Economics Research Group, Munich, Germany; ²Klinikum rechts der Isar, Technische Universität München, Third Medical Dept., Munich, Germany; ³Klinikum rechts der Isar, Technische Universität München, Dept. of Pharmacy, Munich, Germany; ⁴University of Vienna Medical School, Dept. of Clinical Pharmacology, Vienna, Austria; ⁵Merck & Co., Inc., Outcomes Research, Whitehouse Station, NJ, USA

Background: Chemotherapy-induced nausea and vomiting (CINV) remains a major adverse effect of cancer chemotherapy and has considerable economic impact.

Objective: To identify patient and treatment characteristics that were associated with high CINV costs.

Methods: Prospective, cross-sectional, cost-of-illness study conducted in 6 centers in Germany. 280 patients undergoing highly emetogenic chemotherapy were enrolled. Direct costs were evaluated from chart reviews and self-administered patients' questionnaires. The National Cancer Institute (NCI) scale was used to measure the level of emesis. Indicators of high costs were identified from a third party payer's perspective.

Results: 221 patients completed the diary and were evaluated. 26.1% and 63.0%, respectively, experienced at least one episode of vomiting or nausea. Only 35.1% reported neither vomiting nor nausea, despite antiemetic prophylaxis; 17.8% suffered from severe nausea, 3.4% from severe vomiting. 1 patient withdrew from chemotherapy because of CINV. Cost data are available for 96 patients at this time. Mean direct costs per cycle (prophylaxis and management of CINV) were Euros (E) 45.23 per patient, whether or not she/he suffered from CINV, and E 66.58 per patient who suffered from CINV. Patients on cisplatin who suffered from CINV incurred higher costs (E 87.02 per patient) than those receiving a non-cisplatin CTx regimen (E 58.00 per patient). Significantly more patients (57.1%) reported delayed than acute vomiting and/or nausea (6.3%). Patients with acute and no delayed CINV (n=6, 6%) cost less (E 26.84) compared with those experiencing no acute but delayed CINV (n=25, 26%): E 45.12 or both acute and delayed CINV (n=30, 31%): E 94.05. Patients with nausea only (n=34, 35%) incurred a cost of E 41.61, compared to those with emesis (n=29, 30%): E 97.53. Among the latter, 23 patients (23%) with NCI grades 1-2 emesis incurred cost of E 53.36 while 5 (5%) patients with NCI grades 3-4 emesis incurred costs of E 304.69.

Conclusion: Cisplatin-containing regimens, the occurrence of acute, and especially delayed CINV, and severe emesis (NCI grades 3-4 vs. grades 1-2) were strong indicators of high costs associated with CINV.

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POSTER

Cost analysis comparing brachytherapy versus surgery for carcinoma of the tonsillar fossa and/or soft palate

W. Nijdam¹, P. Levendag¹, I. Noever¹, C. Uyl-de Groot², M. Agthoven van². ¹Erasmus MC-Daniel den Hoed Cancer Center, Radiation Oncology, Rotterdam, The Netherlands; ²Erasmus MC, Institute of Medical Technology Assessment, Rotterdam, The Netherlands

Background: Using an organ function preserving protocol, in the Erasmus MC with brachytherapy (BT) or surgery (S) for tonsillar fossa (TF) or soft palate (SP) tumors, high local/regional control (LRC) rates (80%-10 years) were observed. Moreover, late normal tissue sequelae, quality of life aspects and functional outcome scores have been found not dissimilar. The major late side effect being xerostomia illustrated the need for a more selective radiation treatment technique (Intensity Modulated Radiotherapy [IMRT]). For decision-making this paper focuses on comparison of full hospital costs of the different treatment options.

Material and Methods: From 1986-2001, T1-3 TF/SP tumors were treated by ERT to the primary and neck, followed by fractionated BT to the primary tumor. A neck dissection (ND) is performed for N+ disease (BT-group; 104 patients). If BT is not feasible, a resection with postoperative

ERT is performed (S-group; 86 patients). LRC, disease free survival (DFS) and overall survival (OS) were calculated according to Kaplan Meier. Hospital costs, FU and costs for a relapse inclusive, were calculated for the treatment groups ERT and BT ± ND (group IA,B), S followed by ERT ± ND (group II) and IMRT and BT ± ND (group IIIA,B) (see table). These costs were compared to the costs computed for group III (future strategy).

Results: LRC, DFS and OS for BT+ND vs. S+ND at 5 years were 80% and 78%, 58% and 55%, 67% and 57%, respectively. Total costs for all groups are presented in the table below.

Total costs Tonsil + Soft Palate

Group	Treatment	Relapse	5-yrs FU	Total (Euro's)
IA ERT+BT	8031,12	6080,72	626,24	14.738,08
IB ERT+BT+ND	11.342,33	4827,57	609,96	16.779,86
II S	14.753,03	3930,68	604,25	19.287,96
IIIA IMRT+BT	8.300,98	6080,72	626,24	15.007,94
IIIB IMRT+BT+ND	11.612,19	4827,57	609,26	17.049,02

Conclusion: Excellent local/regional tumor control was observed: at 10-years 80% for either modality. The total costs for BT were significantly less as opposed to S: 16.779,86 (IB) vs. 19.287,96 (II). Modality specific late side effects were not negligible (ulcer [BT], fibrosis / trismus [S]; both groups were in particular significantly affected by xerostomia). Fortunately, BT induced ulcers healed spontaneously in 88%. To reduce the morbidity of xerostomia we propose to further optimize our organ preservation protocol by implementing IMRT. This is of interest in particular given the costs of IMRT not being very dissimilar to BT: 15.007,94 (IIIA) vs. 14.738,08 (IA).

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POSTER

Economic burden of seven tumors by course of therapy and treatment failure

L. Kutikova¹, L. Bowman¹, S. Chang², S. Long². ¹Eli Lilly and Company, Global Health Outcomes Research, Indianapolis, USA; ²The MEDSTAT Group, Washington, DC, USA

Background: To evaluate economic burden associated with treatment of seven tumors of interest (TOI) by initial, secondary and palliative treatment course, and assess costs of failed treatment.

Methods: A retrospective cohort analysis was conducted using MarketScan claims databases of over 3 million US employees, spouses, dependents, and early retirees. Healthcare services utilization and treatment costs in newly diagnosed patients (pts) with TOI in 1999-2000 were analyzed. Costs standardized to monthly means were adjusted for age, gender, Charlson Comorbidity Index, region, follow-up period, and hospital mortality using ordinary least square regression. Treatment failure was defined by the need to switch regimen (secondary treatment) or palliative care following initial therapy. When assessing the costs of failure, pts receiving only palliative care and no initial therapy were excluded. Total cost of treatment failure was calculated as incremental cost between pts with initial therapy only and pts experiencing treatment failure.

Results: The study population consisted of 12,709 pts including 43% prostate, 22% colorectal, 16% lung, 5% brain, 3% ovarian, and 3% pancreatic cancer, and 8% non-Hodgkin's lymphoma (NHL). Mean length of stay per hospitalization was 3.1, 1.1 and 5.7 days for initial, secondary and palliative care, respectively. Mean monthly number of office visits was 6.1, 3.2 and 9.1 for initial, secondary and palliative care, respectively. Mean monthly costs were \$8,125, \$1,074 and \$6,140 for initial, secondary and palliative care, respectively (p<0.05). Mean length of each treatment course was 6.3 months for initial, 8.9 months for secondary, and 6.4 months for palliative care. The mean total cost of treatment failure was \$10,454 per month and \$37,662 per study period. Brain cancer, followed by colorectal and lung cancer, was associated with the greatest cost of treatment failure per month, but aggressive NHL, ovarian and brain cancer pts had highest costs of failed treatment per study period.

Conclusions: While pts utilized healthcare services most frequently during palliative care, the highest costs incurred during initial treatment. The cost of treatment failure was higher than any treatment phase alone. Opportunity exists for new interventions and therapies that prevent or delay treatment failure, and offset the large economic burden associated with failed treatment of the seven tumors.