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PP18. Hospital costs of intensive chemotherapy followed by peripheral stem cell reinfusion

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Background: New therapeutic regimens in hematologic oncology are increasingly aggressive and expensive. In order to be funded, they must prove both their effectiveness and cost-effectiveness. Therefore, economic evaluation becomes increasingly important in decision making. We wanted to analyze the distribution of direct and indirect medical and ancillary costs in peripheral stem cell reinfusion.
Methods: Twelve patients were included in the study (4 leukemias, 4 lymphomas, and 4 multiple myelomas) out of a cohort of 25 patients treated in 1996. Direct and indirect medical and ancillary costs were isolated for each patient according to clinical data retrieved from the chart and cost data from the hospital cost structure. A mean cost was computed for each diagnostic category.
Results: Mean age, length of stay, and ressources consumption were as follows:

Variable	Leukaemia	Lymphoma	Myeloma	Mean	%
Patient number	4	4	4		
Mean age (yr) (range)	33 (19-49)	45 (32-53)	57 (51-65)	45 (19-65)	
Mean length of stay (range)	27.3 (20-37)	21.5 (19-26)	20.3 (19-21)	23 (19-37)	
Direct costs					
Medical	5'404	4'337	4'105	4'615	8.5
Nursing	13'087	10'815	11'477	11'793	21.8
Blood, cell processing	7'866	7'782	10'074	8'574	15.9
Drugs	10'798	8'823	8'857	9'493	17.6
Laboratory	5'352	3'851	4'812	4'671	8.6
Radiology, other serv	1'140	778	769	896	1.7
Miscellaneous serv	1'370	455	1'130	985	1.8
Material	582	389	379	450	0.8
Indirect costs					
Personal	8'145	6'426	6'053	6'875	12.7
Ancillary	6'750	5'326	5'016	5'697	10.5
Total	**60'494**	**48'982**	**52'672**	**54'049**	**100**
Cost per day	**2'216**	**2'278**	**2'595**	**2'350**	

Discussion: Costs of intensive chemotherapy followed by stem cell reinfusion for hematologic malignancies are very similar between leukemias, lymphomas and myelomas. Major centers of charges are direct costs (nursing, blood-platelets-stem cell processing, and drugs). Knowledge of the cost distribution is important in negotiating reimbursement strategies for individual institutions.

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PP19. Pharmacoeconomic evaluation of Etoposide Phosphate vs. Etoposide in small cell lung cancer: A European (five-country) study

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Background: Etoposidephosphate (Etopophost®), a water-soluble prodrug of etoposide, has recently been introduced for the treatment of small-cell lung cancer (SCLC) and other tumor types. Etoposide phosphate shows equivalent efficacy compared to etoposide (as it is converted to the active metabolite *in vivo),* but shows a better safety profile (it does not cause acidosis at high doses because of its formulation). As it can be reconstituted to a concentration of 20 mg/ml, etoposide phosphate has the added advantage of being administered in 5 minutes rather than 30 minutes to 1 hour required for etoposide. These characteristics provided a research opportunity to measure the net health economic impact of substituting etoposide phosphate for etoposide in SCLC treatment.
Methods: The objective of this study was to conduct a comparative economic evaluation of etoposidephosphate vs. etoposide in SCLC chemotherapy in five European countries- Austria, Belgium, France, the Netherlands, and the UK A modeling approach was used to assess the impact of etoposide phosphate since actual usage data was not available. An advisory panel of three practicing oncologists and one health economist was established in each participating country. Clinical practice information obtained from the oncologist panel and literature was used to develop a median treatment algorithm and a "resource utilizationmodel" for SCLC chemotherapy. This model addressed all aspects of care from diagnosis and staging to the final cycle of chemotherapy. Financial data collected from each country was used to value the resource utilization model and a "total expected cost of treatment" was computed for both etoposide and etoposide phosphate-based SCLC chemotherapy. An economic analysis was conducted to determine the net economic impact of etoposide phosphate on SCLC chemotherapy. Finally multiple sensitivity analyses were performed to evaluate the robustness of final results to changes in one or more economic or clinical assumptions inherent to the model.
Results: The results indicated that, in all five countries, the *Total expected cost of* SCLC chemotherapy is similar between an etoposide and an etoposidephosphate-based regimen. The increased agent costs associated with etoposidephosphate usage are offset by a decrease in nursing and outpatient facility costs due to etoposide phosphate's better administration profile. Also, the decrease in nursing and facility costs with etoposide phosphate are more pronounced when chemotherapy is provided in the outpatient setting.
Discussion: In addition to the safety and patient-related benefits associated with its improved administration profile, etoposide phosphate offers a similar total cost of treatment as an equivalent etoposide-based chemotherapy regimen. These results indicate that etoposide phosphate is a viable alternative to etoposide in SCLC chemotherapy, especially in the outpatient setting.

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PP20. Opportunities to reduce the cost of care for breast cancer (BC) in Canada

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Background: Statistics Canada, in collaboration with oncologists, has developed a model of breast cancer management in Canada which incorporates recent information on incidence, diagnosis, treatment, follow-up, disease progression, survival and direct costs by disease stage.
Methods: Incidence data from the Canadian Cancer Registry; staging and treatment information from provincial cancer registries and surveys of oncologists; and length of stay from a national hospitalization database. Direct costs were determined in 1995 Canadian dollars from provincial fee schedules, cancer centres and teaching hospitals.