COST OF FIRST LINE TREATMENT OF NON-HODGKIN’S LYMPHOMA AT PRIVATE HOSPITAL EN MEXICO

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OBJECTIVES: To carry on a costing of the processes involved in first line of Non-Hodgkin’s lymphoma (NHL) at private hospital en Mexico. METHODS: In order to define resources and procedures to set the direct medical costs of treatment of NHL included treatment, following and medical support; a retrospective review of medical histories of a private hospital en Mexico. The revision of the medical files included patients treated between the fourth quarterly of 2000 and the fourth quarterly of 2006. A total of 106 patients were selected but only in 44 cases treatment’s response were reported and therefore considered for costing the disease. RESULTS: A total of 44 patients full fill the inclusion criteria, with a mean age of 35 years (12 to 85); Male 57% (25) and Female 43% (19); and a Karnofsky of 100% 8 cases, of 90% 6 cases, of 80% 7 cases, 40% 1 case and Unknown 22 cases; the initial symptomatology (numbers of cases) were: Fever; 20; Diaphoresis; 13; weight lost >10% body weight in the last 3 months; 25; The Treatment received as a first line treatment: Chemotherapy 41 and chemotherapy plus radiotherapy 3 with a mean of 2.7 (1–12) cycles. The response to the first line of treatment (numbers of cases) was: Partial response: 3, Progression: 19; Deaths 15 and Unknown: 7. Costs of Chemotherapy drugs and its application US$4,057.07 ($2,337.04–$5,777.09), hematological support US$990.97 ($533.83–$1,648.12), studies US$1,354.32 ($702.12–$2,054.52), adverse events US$5,125.59 ($1,980.12–$8,271.06), radiotherapy US$8,74.84 ($0.00–$183.27). Total cost US$11,461.76 ($6,139.30–$16,744.21). CONCLUSIONS: The Costs related to Chemotherapy drugs, its application and the presence of adverse events do the chemotherapy represents almost 79% of the total cost of first line treatment of Non-Hodgkin’s Lymphoma, which diminishes the importance of the available resources that offer a security profile in order to achieve a more efficient use of the available resources.
systematic review of randomized-comparative clinical trials was performed to determine the effects and risks associated with the degree of hemoglobin/hematocrit (Hgb/Hct) level variability outside the recommended range. Diagnostic algorithm and guides treatment adaptation were built out of a panel of experts. Resource use and costs data were obtained from the Instituto Mexicano del Seguro Social (IMSS). The costs and effectiveness were discounted annually at 3%. The threshold to define a therapy as cost-effective was fixed at USD$25,020.00 (less than three times Mexican GDP per capita) according to the recommendations of WHO’s Commission on Macroeconomics and Health. RESULTS: The clinical success rate (patients within 11–12.5 HgbHct levels) when using C.E.R.A. vs EPO-alpha showed significant difference (86.79% [95% CI, 84.70%–88.88%] vs 50.48% [95% CI, 47.38%–53.58%]) respectively, p < 0.0001. The treatment care cost per year for C.E.R.A. was USD$2,776.13 (95% CI, USD$2,811.43 vs USD$2,897.95% [95% CI, USD$2,883.27–USD$2,932.47] for EPO-Beta, p < 0.0001); and the hospitalization cost USD$57,089.74 vs USD$11,255.09 for each one. C.E.R.A. therapy reduces the cost of RA treatment in CKD at a 4.53% compared to EPO-alpha therapy and reduced in 37% the hospital stay due to HgbHct levels variation. The Cost-effectiveness plane indicates that C.E.R.A. is a highly cost-effective therapy; with a probability of 0.60 to be cost saving and 0.99 of probability of being cost effective at a USD$4,450 threshold (less than one Mexican PIB per capita). CONCLUSIONS: This result shows that the use of C.E.R.A. for the treatment of RA in patients with CKD is cost-effective.

PSY26
ECONOMIC EVALUATION OF THE ADDITION OF RITUXIMAB TO CVP FOR LOW-DUCILLARY LYMPHOMA IN ROMANIA
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OBJECTIVES: The addition of rituximab to cyclophosphamide, vincristine and prednisolone (R-CVP) significantly improved time-to-progression by 17 months in patients with previously untreated advanced follicular lymphoma (Marcus et al, 2008). Based on these results, we evaluated the clinical outcomes and the cost-effectiveness of R-CVP versus CVP alone from the perspective of the Romanian National Health Insurance House and Ministry of Health. METHODS: A Markov model with a 10-year time horizon was developed based on the randomized controlled trial reported by Marcus et al. (2008). Rates of disease progression were derived from the PFS Kaplan-Meier curves. Mortality rates were obtained from the Scotland-Newcastle Lymphoma Group Database and Romanian age-specific mortality tables. The duration of the treatment effect of rituximab was conservatively applied for the period of clinical trial follow-up (90 months) (hazard ratio = 0.468). Direct costs included: drug acquisition costs (CVA), hospitalization costs (CVA and Darbepoetin-A), and Darbepoetin-B. Indirect costs were calculated based on the loss of productivity. RESULTS: At 1-year, the incremental cost-effectiveness ratio (ICER) of R-CVP compared to CVP was USD$7155 and USD$22,280. The ICER for post-partum and CHF patients given IV iron compared to oral iron is estimated at USD$22,280 and USD$3,850, respectively. CONCLUSIONS: The ICER of IV iron treatment compared to relevant alternatives is modest for BID, post-partum and CHF patients and IV iron is dominant for patients with haematological cancer and CKD.

PSY27
COST-EFFECTIVENESS OF ANTIGUNGAL PROPHYLAXIS WITH POSACONAZOLE VERSUS STANDARD AZOLE THERAPY IN THE PREVENTION OF INVASIVE FUNGAL INFECTIONS AMONG HIGH RISK HAEMATOLOGICAL PATIENTS IN CZECH REPUBLIC
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OBJECTIVES: The rising incidence of invasive fungal infections (IFI), especially invasive aspergillosis, compromises therapeutic outcomes in haematologic cancer patients and in transplant recipients. The aim of our analysis was to determine the cost-effectiveness of prophylaxis with posaconazole in comparison with standard azole therapy (fluconazole or itraconazole) for risk haematologic patients in Czech Republic. METHODS: The decision-tree economic model was developed for patients with acute myelogenous leukemia (AML). The rates of IFI, IFI-related mortality, overall mortality and treatment duration were obtained from randomised controlled trials. The cost of drugs and IFI hospitalisation was obtained from panel of experts. The model estimates total costs, numbers of IFIs, and life-years gained (LYG) per patient in each prophylaxis group. Cost and health effects were discounted at 3%. RESULTS: In comparison with fluconazole/itraconazole prophylaxis, posaconazole prophylaxis was associated with significant reduction in the rates of IFI in AML patients, lower IFI-related deaths and increased life years. Accumulated cost to the Czech health care system per patient receiving the prophylactic regimen was USD$2,897 compared to USD$2,770 for fluconazole/itraconazole regimen. This results in an incremental cost of $680 per patient. Incremental life-years saved were 0.016 per patient. The corresponding incremental cost-effectiveness ratio (ICER) is USD$4,122 per LYG. Probabilistic sensitivity analysis tested numerous assumptions about the model cost and efficacy parameters and found that the results were robust to most changes. CONCLUSIONS: In addition to the proven efficacy, posaconazole appeared to be cost-effective relative to fluconazole/itraconazole in the prophylaxis of IFIs among patients with AML in the settings of Czech Republic health care.

PSY28
IRON DEFICIENCY IN SWEDEN—TREATMENT OPTIONS, COST-EFFECTIVENESS AND REIMBURSEMENT
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BACKGROUND: Iron deficiency and anemia are common in patients with chronic diseases (e.g., chronic kidney disease (CKD), cancer, inflammatory bowel disease (IBD)), and congestive heart failure (CHF) and in connection with large blood losses. One appropriate treatment options is intravenous (IV) iron. In Sweden, the Dental and Pharmaceutical Benefits Agency, TELV, decides if a medicine should be included in the pharmaceutical benefits scheme. TELV makes decisions regarding new products and reviews all pharmaceuticals given reimbursement status before 2002. There are three IV iron products in Sweden; Ferinject (feric carboxymaltose), approved for reimbursement in 2008, and two products approved before 2002: Venoter (iron sucrose) and Coferon (iron dextran). OBJECTIVES: To present health economic analyses of treatment with intravenous iron compared to relevant treatment options in different patient populations, i.e. EPO and IV iron vs. EPO and oral iron in CKD, EPO and IV iron vs. EPO without iron in cancer, IV iron vs. no iron in CHF, and IV iron vs. oral iron in post-partum and IBD. METHODS: Incremental costs and effects (ICER) of IV iron therapy are estimated by comparing relevant treatment alternatives in different patient groups. In CKD, cancer and IBD, model simulations are used. In post-partum and CHF, a piggyback approach is used. RESULTS: In patients with cancer and CHF in dialysis, treatment with IV iron and EPO is found to dominate treatment with EPO alone. In IBD patients, intolerant to oral iron, a treatment switch to IV iron generated a cost per QALY of EUR32,177. The ICER for post-partum and CHF patients given IV iron compared to oral iron is estimated at EUR22,280 and EUR3,850, respectively. CONCLUSIONS: The ICER of IV iron treatment compared to relevant alternatives is modest for BID, post-partum and CHF patients and IV iron is dominant for patients with haematological cancer and CKD.

PSY29
PHARMACO ECONOMIC EVALUATION OF TREATMENT ANEMIA WITH ERYTHROPOIETIC AGENTS IN CHRONIC KIDNEY DISEASE PATIENTS
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OBJECTIVES: To evaluate the effectiveness and economic consequences of treating anemia with original erythropoietic agents in patients with chronic kidney disease (CKD) on dialysis and not yet on dialysis. METHODS: The study is a cost-effectiveness and a cost-minimization analysis based on clinical studies derived from the systematic literature search carried Medline and the Cochrane Library. To determine the economic benefit of using recombinant human erythropoietin (EPO) agents in patients with CKD not on dialysis the comparison between EPO-α and control group was conducted. The cost of EPO-α, haemodialysis sessions, total days of hospitalization, the frequency and the cost of treatment of myocardial infarction were taken into account. Cost-minimization analysis were conducted among original erythropoietic agents (EPO-α, EPO-β and Darbepoetin-α (DARB)) to determine the one who provides the most cost savings in treatment of anemia in patients with CKD on dialysis and not on dialysis. RESULTS: This pharmacoeconomic study suggests that EPO-α therapy before dialysis may have a beneficial impact on delaying progression to dialysis, reducing hospitaltime and the frequency of cardio-vascular complications. The mean cost savings following the use of EPO-α before dialysis were EUR47,134 (€30,782.3 for June 2009) per patient per year in comparison with control group. According to pharmacoeconomic evaluation the application of EPO-α for treatment anemia leads to considerable cost savings in patients with CKD not on dialysis (EUR41,761 (€10,000) per patient per year more than DARB) and in patients with CKD on dialysis (EUR3,397 (€1918.6) per patient per year more than EPO-β and EUR66,769(€1,525.8) per patient per year more than DARB). CONCLUSIONS: Correction of anemia with EPO-α may reduce the utilization of health care resources and may lead to improved clinical and economic outcomes.

PSY30
COST-UTILITY OF INTRAVENOUS IMMUNOGLOBULIN (IVIG) COMARED WITH CORTICOSTEROIDS FOR THE TREATMENT OF CHRONIC ARTHRITIS: AN INFLAMMATORY DEMELINIZING POLYNEUROPATHY (CIDP) IN CANADA
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OBJECTIVES: Intravenous immunoglobulin (IVIG) has demonstrated improvement in chronic inflammatory demelinating polyneuropathy (CIDP) patients in placebo controlled trials. However, IVG is also much more expensive than alternative treatments such as corticosteroids. The objective of the paper is to evaluate, from a Canadian perspective, the cost-effectiveness of IVIG compared to corticosteroid treatment of CIDP. METHODS: A markov model was used to evaluate the expected costs and QALYs for over 5 years for two treatments for CIDP 1) IVIG, and 2) corticosteroids. Patients in the IVIG treatment arm could respond or not respond respond or not to treatment.