

(CEA) of following two initiatives in managing CML patients in China: 1) first line treatment using TAS for newly diagnosed CML-CP patients versus GLV; 2) impact of treatment-free remission (TFR) from TAS. **METHODS:** Local clinical and cost data were collected in a top-level hospital in China. A decision-analytic model based on a previously published structure and real world evidence were applied to simulate and evaluate the long term clinical and economic outcomes associated with different CML treatments (TAS or GLV). Treatment discontinuation were followed by ELN 2013 guidelines and safety. The condition for TFR was that the patients have had at least 36 months of TKI and maintained MR4.5 for the last 12 months. TFR data were extracted from ENESTnd trial, and more cost for monitoring of molecular responses considered during TFR. The association were identified between 3-month BCR-ABL level and the long term MR4.5 accumulated rate among CML-CP patients with TKI treatment from ENESTnd trial data. **RESULTS:** TAS was a cost effective alternative of GLV when considering TFR. Different assumptions of treatment benefits and costs were taken to address uncertainties and were tested with sensitivity analyses, but didn't change the outcome. **CONCLUSIONS:** The RWE and CEA proved the physicians and payers' belief of replacing GLV by TAS, as the consequent TFR from TAS is a key contributor to better patient outcomes and less cost, hence dramatically increasing life expectancy and quality-of-life (QoL) saving for CML-CP patients.

PCN139

COST-EFFECTIVENESS ANALYSIS OF HAPLOIDENTICAL VS MATCHED UNRELATED ALLOGENEIC HEMATOPOIETIC STEM CELLS TRANSPLANTATION IN PATIENTS OLDER THAN 55 YEARS

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Due to limited donor availability, high comorbidities and cost issues, allogeneic hematopoietic stem cell transplant is not universally accessible. Haploidentical related donors can be found for almost every patient but no economic evaluation has been previously conducted to compare this alternative strategy to match sibling transplant. **OBJECTIVES:** The aim of our study was to conduct a cost-effectiveness analysis of haploidentical vs matched unrelated donor (MUD) transplant. **METHODS:** 55 patients with hematological malignancies older than 55 years who underwent haploidentical or MUD between 2011 and 2013 in Marseille (Institut Paoli-Calmettes). The ICER has been calculated using OS as effectiveness. Costs were calculated using a micro-costing strategy from the societal perspective restricted to direct medical costs with a time horizon at two years. Mean and median OS and PFS were assessed using Kaplan-Meier estimator. The confidence regions of the ICERs were calculated with the Fieller's method. Probabilistic and sensitivity analyses were performed on the incremental cost-effectiveness ratio. **RESULTS:** 29 patients underwent haploidentical transplant and 63 matched unrelated transplant. Clinical results were already published (Blaise D et al, Biol Blood Marrow Transplant. 2015). The mean OS was respectively 19.4 (1.6) months and 15.1 (1.2) months ($p=0.06$) and the mean cost was respectively 98,304 (40,872) € and 151,373 (65,742) € ($p<0.01$). In our study, HRD-SCT dominated UD-SCT with a better effectiveness at a lower cost. Sensitivity analysis showed that our results were robust to changes in expensive drug's unit costs and hospitalisation unit costs. The incremental cost-effectiveness ratio was assessed to -148,485 [-1,265,550; -64,368] € per life year gained. **CONCLUSIONS:** Our study was associated with a "real world" practice observation, with data offering good external validity characteristics. Among older patients suffering from hematological malignancies, haploidentical transplant is a promising alternative to matched unrelated transplant and first economic arguments supports its diffusion.

PCN140

THE COST-EFFECTIVENESS OF BRENTUXIMAB VEDOTIN AS CONSOLIDATION TREATMENT AFTER AUTOLOGOUS STEM-CELL TRANSPLANTATION IN PATIENTS WITH HODGKIN LYMPHOMA AND INCREASED RISK OF RELAPSE

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OBJECTIVES: To assess the cost-effectiveness of brentuximab vedotin (BV) as consolidation treatment for patients diagnosed with Hodgkin Lymphoma (HL) who have an increased risk of relapse following autologous stem cell transplant (ASCT), in a Swedish healthcare setting. **METHODS:** A Markov model with area under the curve (AUC) components, with a lifetime horizon, was constructed to compare BV to best supportive care (BSC) as consolidation treatment following an ASCT. Costs and outcomes of subsequent treatments for patients experiencing relapse were also incorporated in to the model. Clinical effectiveness for BV and BSC as consolidation treatment was based on the double blind randomized controlled phase III study AETHERA. Data on the effectiveness of subsequent treatments were collected from published data from the literature and from pivotal clinical trial results for BV in relapsed and refractory HL. Costs and epidemiological parameters were relevant to Sweden. Outcomes were measured in quality adjusted life years (QALYs). Both costs and effects were discounted at 3 % as according to Swedish guidelines. To assess uncertainty, univariate deterministic and multivariate probabilistic sensitivity analyses (PSA) were performed. **RESULTS:** The estimated incremental cost-effectiveness ratio (ICER) of BV compared to BSC was SEK 409 000 (€ 42 000). One-way sensitivity analyses showed that the results were stable when central variables were varied. The PSA also showed that the model was robust and indicated that BV, as consolidation treatment following ASCT, had a high probability of being cost-effective at the willingness-to pay thresholds accepted in Sweden. **CONCLUSIONS:** The estimated ICER was robust and below the accepted willingness-to-pay for a QALY in Sweden considering the severity of the disease. Our model indicates that consolidation treatment with BV following an ASCT is cost-effective for patients diagnosed with Hodgkin Lymphoma who have an increased risk of relapse following an ASCT, when compared to BSC in the Swedish healthcare setting.

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COST-EFFECTIVENESS OF TRIFLURIDINE/TIPIRACIL FOR THE TREATMENT OF METASTATIC COLORECTAL CANCER IN PORTUGAL

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OBJECTIVES: Colorectal cancer is the second cause of cancer related deaths in Europe. Approximately 75% of patients with colorectal cancer will present metastasis. After two treatment lines, the prognosis is poor and the average survival is about 4-6 months with best supportive care (BSC). Nonetheless, one third of metastatic colorectal cancer (mCRC) patients are still in a good condition and willing to receive further therapy. This study aimed to assess the cost-effectiveness of trifluridine/tipiracil (TAS-102) for third-/fourth-line treatment of mCRC in Portugal. **METHODS:** A partitioned survival model was developed to represent the natural history of mCRC, considering a lifetime horizon. BSC was set as comparator. Efficacy and safety derived from a pooled analysis of phase II (J003) and III (RECOURSE), multicentre, randomized trials. Parametric survival analyses were performed and the best fitting survival function was selected using Akaike's Information Criterion. Costs were retrieved from public sources. A 5% annual discount rate was adopted for costs and effects. Results were expressed in incremental costs per life year (LY). **RESULTS:** On average, trifluridine/tipiracil is expected to increase mCRC patients' undiscounted life expectancy by 0.27 LYs relative to BSC (11.1 versus 7.8 months). Trifluridine/tipiracil is expected to augment overall treatment costs by 9,899€/patient (discounted) mainly related to higher drug costs and higher patients' survival, corresponding to an incremental cost-effectiveness ratio (ICER) of 39,487€/LY. The sensitivity analysis performed for costs and effectiveness parameters revealed low variation, with LYs gained and ICERs ranging between 0.24-0.26 and 37,489-41,508€/LY. The probabilistic sensitivity analysis confirmed that trifluridine/tipiracil is estimated to present an 80% probability of being cost-effective at a threshold of 50,000€/LY. **CONCLUSIONS:** In this later line setting with limited treatment options, trifluridine/tipiracil is expected to provide a clinically meaningful life expectancy increase at an incremental cost per life year gained within an acceptable range.

PCN142

TECHNICAL CHALLENGES IN COST-EFFECTIVENESS ANALYSIS FOR ONCOLOGY TREATMENTS: IDENTIFYING FREQUENT ISSUES IN MODELLING FROM NICE PERSPECTIVE

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OBJECTIVES: As of today the value for money through economic models remains a significant challenge in the field of oncology. The aim of this study is to identify hurdles and causes of uncertainty in the cost-effectiveness models submitted to the National Institute for Clinical Excellence (NICE) for oncology treatments. **METHODS:** Since 2000, 25 oncology products (in 40 indications) received marketing authorisation by EMA. Out of the 40 indications, NICE only performed an HTA for 31 of them. A retrospective analysis of NICE technical committee's published recommendations and comments was conducted to identify frequent technical issues in modelling. **RESULTS:** Overall, 45% partition-survival models (PSM), 39% Markov models, 13% semi-Markov models, were submitted and only 3% of the submissions comprised of discrete event simulations (DES). Out of the 14 submitted PSM, 43% failed to present an acceptable incremental cost-effectiveness ratio (ICER) due to biased curve-fitting/extrapolation, incorrect time horizon, inaccurate utility or survival estimates. The use of Markov models led to an underestimation of ICERs as 33% of the submissions were not recommended. Moreover, NICE pointed out the insufficient quality of data inputs. Despite the positive recommendations for the remaining submissions, DES was perceived too complex and not in line with the statistical framework expected by the technical committee. Furthermore, overall survival was not modelled accurately when semi Markov models were used. **CONCLUSIONS:** Our findings suggest that NICE found that the most commonly used methods (e.g. PSM, Markov model, semi-Markov model) often lack precision. In particular most complex methods (e.g. DES) lacked transparency which ultimately undermines the ability to demonstrate cost-effectiveness.

PCN143

A LITERATURE REVIEW OF HEALTH ECONOMIC ASSESSMENTS, HEALTH CARE RESOURCE UTILIZATION (HCRU), AND HEALTH RELATED QUALITY-OF-LIFE (HRQL) IN PATIENTS WITH GASTRIC CANCER (GC)

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OBJECTIVES: To review the published evidence on health economic assessments/modelling, cost of illness/HCRU, and HRQL/utility studies of pharmacological treatments in unresectable, advanced or recurrent GC. **METHODS:** Three targeted literature reviews (TLRs) were completed with searches performed in PubMed and Embase (restricted to the last 10 years), key international health technology assessment websites and databases, and recent relevant conference websites. Searches were not restricted by treatment line. **RESULTS:** In total, 65 studies were found (economic modelling [21], HCRU and costs [25] and HRQL [19], of which 8 reported utility data). Twenty economic modelling studies were evaluations of first-line (1L) or second-line (2L) treatments. Where third-line (3L) modelling was performed, data was mostly taken from earlier lines. Thirteen studies were cost-effectiveness studies, mostly reporting three-state Markov models; 8 were cost-minimisation studies. HCRU and costs were mostly reported for 1L/2L settings and were not uniform across regions. Where information was reported, increase in treatment line appeared to increase length of inpatient stays and to reduce treatment duration. Utility studies reported mainly baseline utilities (0.70 - 0.75). Few studies reported