PCN117
SELECTIVE INTERNAL RADIOTHERAPY (SIRT) USING RESIN YTTRIUM-90 MICROSPHERES FOR CHEMOTHERAPY-REFRACTORY METASTATIC COLORECTAL CANCER: A UK COST-EFFECTIVENESS ANALYSIS
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OBJECTIVES: Treatment options for chemotherapy-refractory liver metastases resulting from colorectal cancer are limited. The safety and efficacy of SIRT using resin yttrium-90 microspheres was studied in this population. The objective of this analysis was to assess the cost-effectiveness of SIRT compared to best supportive care (BSC) from the perspective of the UK NHS. **METHODS:** A state-transition model was constructed, based on survival curves from a retrospective cohort study of yttrium-90 resin microspheres (SIR-Spheres; Sirtex, Sydney, Australia) *vs.* BSC in chemotherapy-refractory mCRC. The model included costs for treatment acquisition, pre-treatment work-up and delivery of microspheres, and chemotherapy received in addition to, instead of, or after, SIRT. In addition, costs of managing AEs and a cost of death were included. Costs were microcosted using NHS reference costs and the British National Formulary 64. Utility data were taken from a recent NICE economic evaluation in metastatic colorectal cancer. **RESULTS:** The results showed an increase in survival for patients receiving SIRT compared to BSC (2.09 *vs.* 0.97 years), with a corresponding increase in quality adjusted life years (1.50 vs 0.69). The associated costs were £35,487 *vs.*£12,730 for SIRT and BSC, respectively. The additional costs were due to the SIRT treatment and the cost associated with extension to life. The cost per QALY was £28,216 (cost per life year £20,323). The results were robust to alternative assumptions tested in scenario analyses; survival functions, utilities or the time spent pre- and post-progression. However, one-way sensitivity analysis showed results were most sensitive to the parameters for the survival functions. Data shown here were also consistent with published clinical studies. **CONCLUSIONS:** The analysis demonstrates that SIRT using resin yttrium-90 microspheres has the potential of being a cost-effective option in the treatment of patients with chemotherapy-refractory liver metastases resulting from colorectal cancer.

PCN118
PHARMACOECONOMIC ANALYSIS OF INTRAVENOUS TEMOZOLOMIDE FOR THE TREATMENT OF NEWLY DIAGNOSED GLIOBLASTOMA MULTIFORME IN RUSSIA
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OBJECTIVES: To perform comparative pharmacoeconomic analysis of concomitant, adjuvant and second-line intravenous temozolomide (ITMZ) for the treatment of newly diagnosed glioblastoma multiforme versus initial radiotherapy and second-line therapy with ITMZ. **METHODS:** Analysis of the published clinical trials was conducted to evaluate comparative efficacy and safety of the studied therapy options. Direct medical costs included drug therapy and hospital treatment. All prices were for Moscow region, year 2013. Expected difference in direct medical costs was calculated in Excel based model. For the cost-effectiveness analysis, survival was expressed as 2.5 years restricted mean estimates from EORTC-NCIC study. The incremental cost-effectiveness ratio (ICER) was estimated. One-way sensitivity analysis was made. **RESULTS:** According to published trials the treatment of newly diagnosed glioblastoma multiforme with ITMZ was associated with a significant improvement in overall survival. The difference in 2.5 years restricted mean survival between the treatment arms was 0.25 life-years and the ICER was 76,982.6 USD per life-year. The one-way sensitivity analysis showed that the results are more sensitive to the variations of key model parameter, such as price of ITMZ. **CONCLUSIONS:** The concomitant, adjuvant and second-line ITMZ was more effective and economically justified treatment option for patients with newly diagnosed glioblastoma multiforme.

PCN119
COST-EFFECTIVENESS OF BENDAMUSTINE VERSUS FLUDARABINE FOR FIRST-LINE TREATMENT OF CHRONIC LYMPHOCYTIC LEUKEMIA (CLL) IN COLOMBIA
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OBJECTIVES: To determine the cost-effectiveness of bendamustine versus fludarabine for first line treatment of CLL in Colombia. **METHODS:** An economic model was constructed from the Colombian health system perspective, with a 25-year (lifetime) horizon and a discount rate of 3%. The model included three health states, progression-free (PF), progressive disease (PD), and death. Clinical inputs (Kaplan-Meier curves, response rates, hazard ratios (HRs) and adverse event (AE) rates) were from a phase 3 trial comparing bendamustine and chlorambucil, and from a network meta-analysis. Resource use data were from interviews with three Colombian hematologists treating CLL. Resource use for PF patients was weighted based on treatment response. Unit costs were from ISS and SISPRO report and were expressed in 2013 Colombian Pesos. Univariate and probabilistic sensitivity analyses were conducted to determine the key drivers of cost-effectiveness, and the uncertainty around the results, respectively. **RESULTS:** The total lifetime costs for bendamustine and fludarabine were $61,982,845 and $20,432,209, respectively. Bendamustine patients accrued more LYs (7.52 vs. 6.50), QALYs (5.61 vs. 4.60), and PF LYs (3.09 vs. 1.14) compared to fludarabine patients. The ICERs were $40,530,919 (cost per LY), $41,117,127 (cost per QALY) and $21,264,817 (cost per PF LY). Univariate sensitivity analysis revealed the cost per LY ICER was most sensitive to progression-free survival and overall survival HRs for bendamustine vs. fludarabine, the number of treatment cycles, and the cost of bendamustine. Probabilistic sensitivity analysis with 1,000 iterations predicted bendamustine had a 71% chance of being cost-effective, compared to fludarabine, at a willingness to pay (WTP) of $59M per LY, rising to a plateau of about 80% from a WTP of $80M and greater. **CONCLUSIONS:** At current WTP of $59M (three times Colombian GDP per capita) bendamustine is a cost effective alternative to fludarabine.

PCN120
COST-EFFECTIVENESS OF CABAZITAXEL IN MHRPC IN TURKEY
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OBJECTIVES: To determine the cost-effectiveness of cabazitaxel, based mainly on the TROPIC trial in 2nd line treatment of mHRPC relative to the standard of care at the time of launch of the drug. **METHODS:** A Markov model was developed to comprise set of different health states each associated with costs, effects and probabilities of moving to other state. In simulation, a cohort of defined patients are run through the model during the time period of choice, it's assumed that transitions between states only occurs at equidistant time-points and the interval is called a cycle. Because of the relatively short survival time of mHRPC patients, cycle length in the model was set at 3 weeks, corresponding to the length of one chemotherapy administration cycle. Transition rates between different states representing mHRPC disease progression were estimated based on progression of disease and survival rates from the TROPIC trial. **RESULTS:** According to the approved labeling in Turkey, a subgroup of patients with ECOG PS 0-1 and measurable disease at baseline was identified on TROPIC results with a secondary analysis. The result of this analysis shows a similar OS outcomes with decreased death rates. Cabazitaxel was cost-effective compared mitoxantrone with cost per LYG of TRY66,862 given the threshold of TRY68,409 per LYG for the subgroup of the patients at ECOG PS 0-1 and with measurable disease at baseline. Although there has been no formal threshold for the cost-effectiveness ratio in Turkey, a threshold of TRY68,409 per LY gained was assumed based on WHO-CHOICE criteria (3xGDP percapita). **CONCLUSIONS:** It is difficult for the results of the analysis to be interpreted because there is no official cost-effectiveness threshold in Turkey. However, from the WHO perspective; results showed that cabazitaxel is a cost-effective treatment with all ICER values compared to mitoxantrone, below TRY68,409.

PCN121
EVALUATING THE COST EFFECTIVENESS OF GENE EXPRESSION PROFILING AND IMMUNOHISTOCHEMISTRY TESTS
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OBJECTIVES: Gene expression profiling (GEP) and expanded immunohistochemistry (IHC) tests aim to improve decision-making relating to adjuvant chemotherapy for women with early breast cancer (EBC) at intermediate or high risk of recurrence following primary surgery. **METHODS:** A probabilistic model was developed to evaluate the cost effectiveness of treatment guided using the OncotypeDx and IHC4 tests compared with current clinical practice in England and Wales. Analysis was undertaken for women with oestrogen receptor positive (ER+), lymph node negative (LN–), and HER2– EBC from a NHS perspective. In the comparator arm, cancer registry data was used to inform the proportion of patients receiving chemotherapy under current practice. In the intervention arm (new test in addition to current practice) patients were classified into different risk categories based on the result of the new test. The likelihood of receiving chemotherapy was dependent on this classification. The natural history of breast cancer was then simulated using a state transition Markov model, taking into account the reduction in the risk of recurrence associated with chemotherapy. **RESULTS:** The economic analysis suggested that treatment guided using IHC4 has the most potential to be cost-effective at a threshold of £20,000 per QALY gained; however the evidence base to support IHC4 needs further research to confirm the analytical validity of the test and to clarifiy the cost of the test in clinical practice. OncotypeDX has a more robust evidence base, but further evidence on the impact on decision making in the UK and the predictive ability of the test in an ER+, LN-, HER- population receiving current treatment regimens is needed to confirm whether or not it constitutes a cost-effective option in the UK. **CONCLUSIONS:** GEP and IHC tests have the potential to constitute a cost effective option in the UK, but further research is needed to confirm this finding.

PCN122
PHARMACOECONOMIC ANALYSIS OF USING APREPITANT PLUS STANDARD ANTIEMETIC THERAPY FOR PREVENTION OF NAUSEA AND VOMITING ASSOCIATED WITH HIGHLY AND MODERATELY EMETOGENIC CANCER CHEMOTHERAPY IN RUSSIA
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OBJECTIVES: To perform comparative pharmacoeconomic analysis of aprepitant plus standard antiemetic therapy – 5-hydroxytriptamine-3 antagonist and corticosteroid - for prevention chemotherapy-induced nausea and vomiting (CINV) versus standard antiemetic therapy. **METHODS:** Analysis of the published clinical trials was conducted to evaluate comparative efficacy and safety of three-drug combination. Cost-effectiveness analyses was performed. Direct medical costs of treatment with studied drugs were considering for each option: cost for 1-cycle and 6-cycle cancer chemotherapy (CCT) with highly emetogenic drugs and for 1-cycle and 4-cycle CCT with moderately emetogenic drugs for 1 patient. The calculation of costs was based on drugs' prices from the List of Vital and Essential Drugs in Moscow region. The incremental cost-effectiveness ratio (ICER) was estimated. One-way sensitivity analysis was made. **RESULTS:** According to published trials the using aprepitant plus standard antiemetic therapy in patients receiving highly and moderately emetogenic chemotherapy was associated with a significant improvement in control of CINV. The ICER was 593.7 USD per 1-cycle and 2906.6 USD per 6-cycle CCT with highly emetogenic drugs for 1 patient. The ICER was 852.7 USD per 1-cycle and 4570.1 USD per 4-cycle CCT with moderately emetogenic therapy. The one-way sensitivity analysis showed that the results are more sensitive to the variations of