to induction cost and percentage transplants. At a willingness-to-pay threshold of £30,000 per QALY gained, VTD has a 57.1% probability to be cost-effective in this setting. CONCLUSIONS: VTD induction is a cost-effective strategy for nMm patients eligible for ASCT in Germany compared to TD.

PCN101
A COST-EFFECTIVENESS ANALYSIS OF CISPLATIN PLUS Pemetrexed Doublet INDUCTION TREATMENT FOLLOWED BY Pemetrexed MAINTENANCE COMPARED WITH CISPLATIN PLUS Osimertinib PLATOS DOUBLET INDUCTION TREATMENT FOLLOWED BY BEVACIZUMAB MAINTENANCE FOR NON-SQUAMOUS NSCLC IN SWEDEN

Sveden PA1, Kumar G1, Wunfre KB2, Boyle ME1, Taipale K1, Thompson R1, Borgeke H1
1Copenhagen University Hospitals, Copenhagen, Denmark, 2Karolinska University Hospital, Stockholm, Sweden

OBJECTIVES: This study compares the cost-effectiveness (CE) of an induction and maintenance sequence of a cisplatin plus pemetrexed (cis-pem) doublet followed by bevacizumab, with that of a bevacizumab (7.5mg or 15mg) plus cisplatin plus gemcitabine (bev-cis-gem) triplet followed by bevacizumab (7.5mg or 15mg) for the treatment of non-squamous non-small cell lung cancer (NSCLC) in Sweden. METHODS: As no head-to-head trial data are available comparing these relevant regimens in the first-line induction and maintenance treatment settings, decision modelling and evidence synthesis were used to estimate CE. A series of network meta-analyses were performed to obtain hazard ratios for overall survival (OS) and progression-free survival (PFS) for each induction and maintenance comparator, and odds ratios for induction comparator, bevacizumab triplet and maintenance comparator were calculated and pooled across studies. The model was constructed to estimate direct medical costs and health outcomes (29.4 vs. 27.8 months, p<0.05) for the treatment with cytokines. A cohort study was conducted using patients with a higher median PFS, OS, total life-years gained and quality-adjusted life-years (QALYs) than the bevacizumab triplets. Total costs were €416,478/KR for the bev-cis-gem triplet induction triplet followed by bevacizumab 15mg maintenance sequence. Total QALYs were 0.73 and 0.97 for the bev-cis-gem triplet and bevacizumab 15mg maintenance sequence, respectively. The incremental cost-effectiveness ratio (ICER) of bev-cis-gem followed by pemetrexed compared with bev-cis-gem was €47,862/KR for the cis-pem doublet followed by pemetrexed maintenance sequence, and €541,677/KR for the bev(15mg)+cis-gem induction triplet followed by bevacizumab 15mg maintenance sequence. Total QALYs were 0.73 and 0.97 for the cis-pem doublet and bevacizumab 15mg maintenance sequence, respectively. The incremental cost-effectiveness ratio (ICER) of cis-pem followed by pemetrexed compared with bev(7.5mg)+cis-gem followed by bevacizumab 7.5mg was €260,831/KR (30,477EURO). The higher bevacizumab dose of 15mg was dominated by bev recurrent disease. The model examined cost-effectiveness over the patients' lifetime. A one-way sensitivity analysis support these results. CONCLUSIONS: The results of the CE analysis suggest that cis-pem doublet induction followed by pemetrexed maintenance is a cost-effective treatment sequence compared with the bevacizumab options for NSCLC in Sweden.

PCN102
A COST-EFFECTIVENESS ANALYSIS OF AXITINIB AND SORAFENIB FOR 2ND LINE TREATMENT OF ADVANCED RENAL CELL CARCINOMA AFTER FAILURE OF CYTOKINES IN THE UNITED STATES

Silliman C1, Ambavaram A2, Silva P2
1Amgen, Thousand Oaks, CA, USA, 2Amgen, Dublin, Ireland

OBJECTIVES: To assess the cost-effectiveness of axitinib compared to sorafenib from the payer's perspective. METHODS: A decision analytic model was used to estimate direct medical costs and health outcomes of patients who had received prior cytokine therapy or best supportive care) and adverse events arising from treatment. Inputs were based on published literature and costs in the NHS in England and Wales. The model compared cost-effectiveness of the patients' perspective. Sensitivity analysis was conducted. RESULTS: Using £32,500/QALY as a threshold, the cobas EGFR Mutation Test was cost-effective at an incremental cost per QALY gained of £18,394 for the target population and a 51.6% better treatment accuracy compared to Sanger sequencing. CONCLUSIONS: The cobas EGFR Mutation Test was able to correctly identify more patients with EGFR mutations (lower rate of false negatives) and more appropriately direct patient treatment than Sanger sequencing. CONCLUSIONS: The cobas EGFR Mutation Test, by correctly identifying more patients for proper treatment, can be considered a cost-effective strategy for identification of EGFR mutations in locally advanced or metastatic NSCLC patients from a UK payer perspective.

PCN104
A CRITICAL APPRAISAL OF COST-EFFECTIVENESS ANALYSES OF HUMAN PAPILLOMAVIRUS TESTING IN CYLICAL SCREENING: MAKING APPROPRIATE COMPARISONS AND USEFULLY INTERPRETING RESULTS

O' Mahony J1, Naber S1, de Kok I2
1Trinity College Dublin, Dublin, Ireland, 2Erasmus Medical Centre, Rotterdam, The Netherlands

OBJECTIVES: To assess the cost-effectiveness of using the CE-IVD marked cobas® EGFR Mutation Test, by correctly identifying more patients for proper treatment, can be considered a cost-effective strategy for identification of EGFR mutations in locally advanced or metastatic NSCLC patients from a UK payer perspective.

PCN105
COST-EFFECTIVENESS OF EMLA-ALK FUSION TESTING AND FIRST-LINE CRITIOBITIN TREATMENT FOR PATIENTS WITH ADVANCED ALK POSITIVE NON- SMALL CELL LUNG CANCER IN A PUBLICLY FUNDED SYSTEM (ONTARIO, CANADA)

Beca J1, Hoch JS2, Krakow MD3, Tao MS4, Cuzic JC5, Leight N4
1Michaelt Hospital, Toronto, ON, Canada, 2University of Toronto, Toronto, ON, Canada, 3Toronto Health Economics and Technology Assessment (THETA) Collaborative, Toronto, ON, Canada, 4Ontario Cancer Institute, Toronto, ON, Canada, 5McMaster University, Hamilton, ON, Canada

OBJECTIVES: ALK-targeted therapy with crizotinib offers significant improvement in clinical outcomes for the treatment of EMLA-ALK fusion positive NSCLC. We estimated the cost-effectiveness of EMLA-ALK testing in combination with first-line crizotinib for ALK positive NSCLC in Ontario. METHODS: A cost-effectiveness analysis was conducted, using a Markov model from the Canadian public health (Ontario) perspective and a lifetime horizon in Stage IV NSCLC patients with non-squamous histology. Transition probabilities and mortality rates were calculated from the Ontario Cancer Registry and Cancer Care Ontario New Drug Funding Program (EGO NDF). Costs were obtained from the Ontario Cost Coding Initiative, GCO NIFT, University Health Network and the literature. Population-based ALK testing included initial IHC testing followed by FISH confirmation for positive cases. RESULTS: The strategy of genotyping testing linked to targeted crizotinib treatment gained 9.1 QALYs compared to no testing or crizotinib treatment in the advanced non-squamous NSCLC population. The incremental cost was £4,179 per patient compared to the previous standard of care without ALK testing; the incremental cost-effectiveness ratio for the base case was £392,558 per QALY. The incremental cost and ICER for crizotinib therapy in known ALK positive advanced NSCLC patients was £86,554 and £254,617/QALY. The cost of testing was less relevant to the ICER at a biomarker frequency of 7% and higher. The major drivers of cost in this analysis were drug costs and drug administration costs. CONCLUSIONS: EMLA-ALK genotyping testing in combination with crizotinib treatment for all Stage IV non-squamous NSCLC patients is not cost-effective in the Ontario setting. Model inputs included in the generation description. Modifying these key drivers will be important in improving the cost-effectiveness and accessibility to novel therapies with major clinical benefit in advanced NSCLC.

PCN106
OVERVIEW ON COST-EFFECTIVENESS RESULTS OF DECISION-ANALYTIC STUDIES FOR THE TREATMENT OF MULTIPLE MYELOMA

Boucha J1, Kornet K2, Qerimi V3, Gastl G3, Conrads-Frank A4, Willenbacher W5
1Innere Medizin, Medizinische Universität Innsbruck, Innere Medizin, 2Clinical Cancer, University of Turin, Italy, 3Department of Medicine, Weill Cornell Medicine, 4Medical Oncology, University of Chicago, Chicago, IL, USA, 5Department of Hematology, University of Innsbruck, Innsbruck, Austria

OBJECTIVES: This article provides an overview of the existing decision-analytic studies for multiple myeloma. METHODS: The PubMed database was searched for relevant decision-analytic studies published in the English language from 1990 to 2019. Specific examples of modelling shortcomings were selected as illustrations of what to avoid when conducting HPV-based screening. RESULTS: The review identified 29 relevant CEAs. Regarding basic errors, 11 of the 29 calculated the incremental cost-effectiveness ratios (ICERs) either partly or completely incorrectly. Ten studies failed to fully report costs and effects; either simply reporting ICERs or depicting a cost-effectiveness plane. Regarding more fundamental errors, 23 failed to include sufficient screening interval comparisons against which to meaningfully estimate ICERs; effectively leading to average cost-effectiveness ratios being mistakenly identified as ICERs. Additionally, 14 studies incorrectly assumed that the HPV screening strategy had a non-inferior QALYs gain to the CE-IVD marked cobas® EGFR Mutation Test, by correctly identifying more patients for proper treatment, can be considered a cost-effective strategy for identification of EGFR mutations in locally advanced or metastatic NSCLC patients from a UK payer perspective.
OBJECTIVES: To provide an overview on published decision-analytic models evaluating treatment strategies for multiple myeloma (MM) focusing on the cost-effectiveness results. METHODS: A systematic literature search was performed in the electronic databases PubMed, NHS EED and the Tufts CEA Registry to identify studies evaluating MM treatment strategies using mathematical decision-analytic models. To meet the inclusion criteria, models were required to compare different treatment strategies, to be published as full text articles in English, and to comprise relevant clinical health outcomes over a defined time horizon and population. We used predefined eligibility criteria to summarize the methodological characteristics of the studies and economic results. For comparability, all economic results were transferred into 2012 US Dollar. We used Purchasing Power Parity to convert the currency into US Dollar of the same year. For converting US Dollar from step one into US Dollars into Mexican Pesos. Univariate and probabilistic sensitivity analyses were conducted to further explore the uncertainty in the cost-effectiveness model. The Incremental Cost-Effectiveness Ratios (ICERs) were compared with a criterion introduced by WHO. RESULTS: The reported ICERs were between $90,118/QALY to $65,250/QALY in metastatic and adjuvant breast cancer therapy, respectively. The metastatic ICERs were 5 to 7 folds of the GDP per Capita in Iran whereas the adjuvant phase ICERs were 1.2 to 6 folds of it. Sensitivity analysis showed the results are more sensitive to discount rate, drug regimen benefits, duration of survival benefits, as well as the risk of relapse and metastasis. CONCLUSIONS: Trastuzumab therapy in metastatic breast cancer cannot be cost effective in Iran, however as adjuvant therapy it is still a challenging issue. Unlimited access to this medicine would not be cost-effective and recommendations with an approach to optimize its usage, e.g. administration in younger patients with poor prognosis and higher risk of relapse or using clean rooms to reduce drug wasting, are strongly advised.

PCN109

COMPARATIVE STUDY OF THE COST-EFFECTIVENESS OF TRASTUZUMAB IN THE TREATMENT OF BREAST CANCER IN DIFFERENT COUNTRIES

OBJECTIVES: To examine the empirical and methodological cost-effectiveness evidence of surgical interventions for breast, colorectal, and prostate cancer. METHODS: Systematic searches in PubMed, EMBASE, MEDLINE, DARE, EconLit and NSHED, research registers, the National Institute of Health and Care Excellence (NICE) website and conference proceedings was conducted in April 2012. Studies were included if they evaluated the cost-effectiveness of a surgical procedure in either breast, colorectal or prostate cancer and reported cost per quality adjusted life-year or cost per life-year results. The quality of the studies included was assessed in terms of meeting essential, preferred, and UK specific requirements for economic evaluations. RESULTS: The 17 breast-3, colorectal-7, prostate-7) studies which satisfied the inclusion criteria covered a broad range of settings with 9 set in Europe and 8 in non-European locations. Just a third (11/17) was published within the last 5 years. A majority of the essential cost-effectiveness criteria, the inclusion of disease-specific complications and comparators were generally well defined. However, very few studies were informed by the results of literature reviews or synthesised clinical evidence. Although many interventions had potential differential effects on mortality and non-mortality rates, some studies used relatively short time horizons. Although univariate sensitivity analyses were reported in all studies, less than a third characterised all uncertainty with a probabilistic sensitivity analysis. While a third of studies incorporated heterogeneity in the quality of life and adverse event probabilities, the quality of the 17 studies used social tariff values. CONCLUSIONS: There is very little recent robust evidence describing the cost-effectiveness of surgical interventions in these indications. Many of the more recent publications did not satisfy the essential methods requirements, such as using synthesising clinical evidence informed by a systematic literature review. Given the ratio of potential benefit and harm associated with surgery in cancer, there is an urgent need to conduct additional robust economic evaluations in this area.

PCN110

THE COST-EFFECTIVENESS OF BENDEMASTININE-RITUXIMAB VERSUS FLUDARABINE-RTXIMAB IN PATIENTS WITH INDIFFERENT NON-HODGKIN’S LYMPHOMA (INHL) WHO HAVE PROGRESSED FOLLOWING TREATMENT WITH RITUXIMAB OR A RITUXIMAB-CONTAINING REGIMEN IN MEXICO

OBJECTIVES: To provide an overview on published decision-analytic models evaluating treatment strategies for multiple myeloma (MM) focusing on the cost-effectiveness results. METHODS: A systematic literature search was performed in the electronic databases PubMed, NHS EED and the Tufts CEA Registry to identify studies evaluating MM treatment strategies using mathematical decision-analytic models. To meet the inclusion criteria, models were required to compare different treatment strategies, to be published as full text articles in English, and to comprise relevant clinical health outcomes over a defined time horizon and population. We used predefined eligibility criteria to summarize the methodological characteristics of the studies and economic results. For comparability, all economic results were transferred into 2012 US Dollar. We used Purchasing Power Parity to convert the currency into US Dollar of the same year. For converting US Dollar from step one into US Dollars into Mexican Pesos. Univariate and probabilistic sensitivity analyses were conducted to further explore the uncertainty in the cost-effectiveness model. The Incremental Cost-Effectiveness Ratios (ICERs) were compared with a criterion introduced by WHO. RESULTS: The reported ICERs were between $90,118/QALY to $65,250/QALY in metastatic and adjuvant breast cancer therapy, respectively. The metastatic ICERs were 5 to 7 folds of the GDP per Capita in Iran whereas the adjuvant phase ICERs were 1.2 to 6 folds of it. Sensitivity analysis showed the results are more sensitive to discount rate, drug regimen benefits, duration of survival benefits, as well as the risk of relapse and metastasis. CONCLUSIONS: Trastuzumab therapy in metastatic breast cancer cannot be cost effective in Iran, however as adjuvant therapy it is still a challenging issue. Unlimited access to this medicine would not be cost-effective and recommendations with an approach to optimize its usage, e.g. administration in younger patients with poor prognosis and higher risk of relapse or using clean rooms to reduce drug wasting, are strongly advised.

PCN111

A COST-EFFECTIVENESS ANALYSIS OF USING SUNITINIB (SU) IN FIRST LINE OF METASTATIC RENAL CANCER IN ROMANIAN JURISDICTION

OBJECTIVES: To provide an overview on published decision-analytic models evaluating treatment strategies for multiple myeloma (MM) focusing on the cost-effectiveness results. METHODS: A systematic literature search was performed in the electronic databases PubMed, NHS EED and the Tufts CEA Registry to identify studies evaluating MM treatment strategies using mathematical decision-analytic models. To meet the inclusion criteria, models were required to compare different treatment strategies, to be published as full text articles in English, and to comprise relevant clinical health outcomes over a defined time horizon and population. We used predefined eligibility criteria to summarize the methodological characteristics of the studies and economic results. For comparability, all economic results were transferred into 2012 US Dollar. We used Purchasing Power Parity to convert the currency into US Dollar of the same year. For converting US Dollar from step one into US Dollars into Mexican Pesos. Univariate and probabilistic sensitivity analyses were conducted to further explore the uncertainty in the cost-effectiveness model. The Incremental Cost-Effectiveness Ratios (ICERs) were compared with a criterion introduced by WHO. RESULTS: The reported ICERs were between $90,118/QALY to $65,250/QALY in metastatic and adjuvant breast cancer therapy, respectively. The metastatic ICERs were 5 to 7 folds of the GDP per Capita in Iran whereas the adjuvant phase ICERs were 1.2 to 6 folds of it. Sensitivity analysis showed the results are more sensitive to discount rate, drug regimen benefits, duration of survival benefits, as well as the risk of relapse and metastasis. CONCLUSIONS: Trastuzumab therapy in metastatic breast cancer cannot be cost effective in Iran, however as adjuvant therapy it is still a challenging issue. Unlimited access to this medicine would not be cost-effective and recommendations with an approach to optimize its usage, e.g. administration in younger patients with poor prognosis and higher risk of relapse or using clean rooms to reduce drug wasting, are strongly advised.