provides insights into the most accepted approaches to derive and apply utility weights in immune checkpoint inhibitor oncology economic models developed for NICE appraisals. These findings may be used to inform the utility weight methodology for use in future NICE submissions and will improve consistency of checkpoint inhibitor oncology appraisals going forward.

PCN129
DISEASE BURDEN OF DIFFUSE LARGE B-CELL LYMPHOMA(DLBCL) PATIENTS WITH OR WITHOUT HEMATOPOIETIC STEM CELL TRANSPLANTATION: A CROSS-SECTIONAL ANALYSIS FROM NATIONWIDE CLAIMS COHORT DATA
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Objectives: Diffuse large B-cell lymphoma (DLBCL) is known as one of the most common lymphomas in South Korea and the patient usually receives costly treatment such as hematopoietic stem cell transplantation (HSCT). Despite the burden of disease, there is still an absence of a study on the disease burden. This study aimed to provide information on the disease burden of DLBCL patients using real-world data.

Methods: We used data from the National Sample Cohort provided by the Korean National Health Insurance Service (NHIS-NSc). Approximately 1 million Koreans were randomly selected, which accounted for 2% of the Korean population that were eligible in 2002. New cases of DLBCL between 1 January 2011 and 31 December 2015 were used to construct two groups of patients: DLBCL patients with or without HSCT. Patients were followed until the earliest day of death or end of the study period (31 December 2015). We estimated the median cost per patient per month (PPPM) and the median period until death in each group. Results: Four of eight DLBCL patients with HSCT and 59 of 179 DLBCL patients without HSCT died within the follow-up period. The median follow-up period of the patients with HSCT (524.0 days) was longer than that of the patients without HSCT (500.0 days), and the median period until death was approximately twice as long in the group with HSCT (528.5 and 230.0 days, respectively). The median PPPM was about 3.7 times higher in the group with HSCT ($2,181 USD) than in the group without HSCT ($1,681 USD). Conclusions: The economic burden of DLBCL patients with HSCT is much higher than that of the patients without HSCT, but the period until death was short. The Cost of HSCT is a major contributor to the overall costs in the group with transplantation.

PCN130
MODELING APPROACHES IN COST-EFFECTIVENESS ANALYSIS (CEA) OF FIRST-LINE (1L) IMMUNO-ONCOLOGY (IO) THERAPIES IN NON-SMALL CELL LUNG CANCER (NSCLC): A SYSTEMATIC LITERATURE REVIEW (SLR)
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Objectives: This study assessed the economic models of IO therapy as 1L treatment in advanced or metastatic NSCLC, with the objective to understand the challenges (eg, uncertainty in survival extrapolation, heterogeneity in PD-L1 testing and external validation of modeling choices) and make recommendations for future CEAs in this area. Here we report our initial step, to review and compare existing practices.

Methods: A SLR was conducted following PRISMA guidelines. MEDLINE, Embase, EconLit (Jan 2008-Jan 2020), and relevant conferences (since 2016) were searched to identify CEAs of 1L IO NSCLC treatments published in English. Technology appraisals (TAs) from England, Scotland, Canada, Australia, Germany, and France were also identified. Screening and data extraction were conducted by 2 reviewers. Results: Of 1,456 references identified, 31 publications and 18 TAs met protocol-defined criteria and were selected for data extraction. Most (n=43) compared IO monotherapy or combination therapy to chemotherapy based on head-to-head trials. Seven studies compared multiple IO treatments across trials, however none considered concordance issues across PD-L1 testing methods. Eleven studies used external real-world data for survival modeling or extrapolation validation. Nineteen studies assumed that long-term treatment benefit stopped at 3 or 5 years after initiation. Partitioned survival (n=28) and Markov (n=16) were the most frequent frameworks. Two studies used individual patient-level simulations. Utilities were modeled by progression status in 12 studies, 7 applied the time-to-death approach, and 13 explored both. Eleven studies used the observed time-on-treatment distribution from the trial, while 10 used progression-free survival for treatment duration. Twelve analyses adjusted for treatment switching/crossover, while the rest considered treatment switching/ crossover to represent clinical practice, and no adjustment was made in any studies applied cure models. Conclusions: Substantial variation was observed in modeling choices. The heterogeneity in PD-L1 testing and external validation of survival extrapolation should be considered for future CEA of IO therapies in advanced or metastatic NSCLC.

PCN131
COST-EFFECTIVENESS MODELS AND RESOURCE USE/INPUTS FOR UNTREATED ADVANCED/METASTATIC RENAL CELL CARCINOMA: A SYSTEMATIC LITERATURE REVIEW
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Objectives: To ascertain and evaluate the availability of health economic evidence (costs, resource use, and economic evaluations), in the global published literature, for patients with previously untreated, advanced or metastatic renal cell carcinoma (aRCC). Methods: A systematic literature review (SLR) with two independent reviewers was conducted in August 2019. MEDLINE, Embase, EconLit, health technology assessments’ (HTA) databases, and National Health Service Economic Evaluation Database (NHS EED) were searched without applying time limits. Additionally, ISPOR conference proceedings and HTA agencies’ websites were hand searched. Publications of interest were restricted to economic models and studies reporting cost-benefit evaluations, costs, or healthcare resource use (HCRU) data for aRCC. Clinical trials were excluded. Results: Among 101 publications included in the review, the majority were on economic models (n=77), covering several countries and interventions. Most of the economic modeling studies were conducted in the United States (US) (n=12), Spain (n=6), the United Kingdom (n=5), Italy (n=5), and China (n=5). The top 5 most reported treatments amongst economic models were sunitinib (n=51), pazopanib (n=20), nivolumab+ipilimumab (n=13), bevacizumab+interferon-alfa (n=13), and sorafenib (n=7). Other study designs included in the SLR were 16 claims databases analyses, 6 reviews on patient medical records, and 2 registry studies. Among these, the majority were conducted in the US (n=16). These studies presented both cost and HCRU data, although most of the identified HCRU data were reported in these references (out of 14 total HCRU studies). These studies reported on fewer number and variety of treatments, with most being sunitinib (n=7), pazopanib (n=5), or unspecified targeted therapy (n=5).

Conclusions: Treatment-specific cost-effectiveness data for previously untreated aRCC patients are available in the global literature. However, more granular and local-level evidence of HCRU data in this population is needed to cover interventions and countries more broadly.

PCN132
COST-EFFECTIVENESS ANALYSIS OF RE-TREATMENT WITH 177Lu-DOTATATE VERSUS NO RE-TREATMENT WITH 177Lu-DOTATATE IN PATIENTS WITH PROGRESSIVE MIDGUT NEUROENDOCRINE TUMORS
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Objectives: To assess the cost-effectiveness of re-treatment with 177Lu-DOTATATE vs. no re-treatment in patients with progressive midgut neuroendocrine tumors (NET), who initially received peptide receptor radionuclide therapy (177Lu-DOTATATE) in a UK NHS and PSS perspective. Methods: The lifetime costs and effectiveness of treatment were simulated using a cohort-based, three-state (progression-free, progressed disease, and death) partition survival model with a 28-days cycle length. Clinical data were derived from the NETTER-1 study for patients without re-treatment and further adjusted for re-treatment based on van der Zwan et al, 2019. Cost inputs included costs for drug acquisition, concomitant medication, administration, disease monitoring and adverse events costs. Effectiveness was valued in quality-adjusted life years (QALYs), with utility weights derived from HRQoL data collected in NETTER-1 study and real world Erasmus study. Costs and effects were discounted at 3.5% per year. Uncertainty was assessed via deterministic and probabilistic sensitivity analyses. Results: At lifetime, the total cost of re-treatment with 177Lu-DOTATATE was £70,433 versus £61,559 for no re-treatment. The total QALYs for re-treatment with 177Lu-DOTATATE vs. no re-treatment were 3.84 and 2.82, respectively. The incremental cost and QALY of re-treatment was £17,874 and 1.02, respectively. The ICER for re-treatment with 177Lu-DOTATATE vs. no re-treatment was £172,532. Number of re-treatment doses of 177Lu-DOTATATE was the key driver of model results. Conclusions: Re-treatment with 177Lu-DOTATATE seems a cost-effective option vs. no re-treatment.

PCN133
DISEASE BURDEN OF HODGKIN’S LYMPHOMA IN FRANCE: A DESCRIPTIVE STUDY BASED ON A FRENCH MEDICO-ADMINISTRATIVE DATABASE
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Objectives: Hodgkin’s lymphoma (HL) is a proliferation of lymphoid tumor cells in one organ or more. The objective of this study was to estimate the HL burden of disease in the French setting. Methods: The EGB (Échantillon Généraliste de
real-world patient heterogeneity was only explored in disease progression estimates and relating to the assessment of heterogeneity. Further, the ability of current modelling typically relies on a random sample of the population. Only 17 TAs presented subgroup analyses as part of their economic analysis. The review explored the use of subgroup analyses and real-world clinical studies and economic evaluations were reviewed for considerations of heterogeneity. The majority of models were partitioned survival models (total: 39; C: 5; L: 27; O: 7) and Markov/semi-Markov models (total: 9; C: 3; L: 4; O: 2). Health states typically reflected progression-free survival, progression and death. The impact of real-world patient heterogeneity was only explored in disease progression estimates in two models. Conclusions: The review highlights a relative paucity of information relating to assessments of heterogeneity. Further, the ability of current modelling approaches to capture patient and treatment effect heterogeneity is constrained by their limited flexibility and simplistic nature, underscoring the need to explore more sophisticated and flexible modelling methods that enable greater consideration of real-world patient and treatment effect heterogeneity.

CONSIDERATIONS OF HETEROGENEITY IN RESOURCE USE AND HEALTH UTILITY QUANTIFICATION IN ECONOMIC ANALYSES OF CANCER

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Objectives: Cancer diagnostic and treatment advances, alongside a growing emphasis on personalised medicine, have contributed to increases in patient and treatment outcome heterogeneity, inherently impacting patient resource use and health utility. The ability to model these relationships is important for accurate economic assessment. This study aims to review considerations of heterogeneity in resource use and health utility quantification in economic analyses of colorectal, lung and ovarian cancer. Methods: A systematic search of published NICE technology appraisals (TAs) conducted as part of the economic component was undertaken. Resource use component and utility estimates were summarised, and the extent to which economic evaluations capture their variation critically reviewed; reported variation between cancers was also described. Results: The search identified 49 TAs (colon: 9; lung: 31; ovarian: 9) economic analyses. Outcome heterogeneity was captured in utility estimates through stratification by disease progression status (36: 49 analyses) or use of time-varying utility functions (12: 49 analyses), and in resource use estimates through progression or treatment stratification (43: 49 analyses). Mean probabilities were estimated for colorectal cancer: 0.78 (range: 0.63-0.89); 0.70 (0.59-0.76) and 0.70 (0.69-0.74), respectively, for progressed disease. On average, analyses included 6.7 (5-9), 12.2 (1-24) and 2.5 (2-3) resource use components, representing differences across 27 different scenarios and 5 unique resource use components were described, respectively. No studies explicitly incorporated patient-level heterogeneity in resource use or health utility estimation. Conclusions: Resource use and health utility estimates are strongly influenced by patient and treatment outcome heterogeneity. However, this study highlights that resource use and health utility are typically modelled based on progression status only, underscoring a need to further explore more granular methods for accurately capturing resource use and health utility in oncology.

COST-EFFECTIVENESS ANALYSIS OF DACOMITIB VERSUS GEFITINIB FOR THE FIRST-LINE TREATMENT OF LOCALLY ADVANCED OR METASTATIC NON-SMALL-CELL LUNG CANCER WITH EPIDERMAL GROWTH FACTOR RECEPTOR (EGFR)-ACTIVATING MUTATIONS IN PORTUGAL

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Objectives: To evaluate the cost-effectiveness of dacomitinib versus gefitinib in the first-line treatment of locally advanced or metastatic non-small cell lung cancer with epidermal growth factor receptor (EGFR)-activating mutations in Portuguese. Methods: The cost-effectiveness analysis was based on a partitioned lifetime cost model using data from ARCHER 1050 trial, a head-to-head phase III randomized controlled trial of dacomitinib versus gefitinib. The model estimated patients’ pathway through progression-free survival, post-progression and death health states. Treatment line and were derived from ARCHER 1050 using EQ-5D-3L for first line treatment and based on the literature for the remaining treatment lines and best supportive care. Portuguese-specific resource use was based on a panel of clinical experts and on Portuguese diagnosis-related group microdata. National legislation and official drug cost databases were the main sources for unit costs. The analysis was conducted from a payer’s perspective, assuming a lifetime horizon, and a 5% annual discount rate for both costs and effects. Deterministic and probabilistic sensitivity analyses were conducted to assess the robustness of the model and its results. Results: Dacomitinib increased average life expectancy by 0.45 years (LY) and 0.28 quality adjusted years (QALY). The model estimated additional costs with gefitinib (10,912€), mainly due to drug costs in both first and subsequent treatment lines. Dacomitinib was a dominant option when compared to gefitinib. Deterministic sensitivity analyses showed that results were robust in most evaluated scenarios. Despite slightly sensitive to parametric extrapolation of progression-free survival, the dominance relationship was still observed. Conclusions: The cost-effectiveness analysis of dacomitinib for the first-line treatment of locally advanced or metastatic non-small cell lung cancer with EGFR-activating mutations showed that dacomitinib was a dominant option when compared to gefitinib in the Portuguese setting.

COST-EFFECTIVENESS OF COLONOSCOPY-BASED COLORECTAL CANCER SCREENING STRATEGIES BY AGE RANGE AND FREQUENCY AMONG HIGH-RISK INDIVIDUALS IN SPAIN

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Objective: Routine colonoscopy is the gold standard method of colorectal cancer (CRC) screening among high-risk individuals. National clinical guidelines in Spain recommend regular screening between the age of 50 to 75 years at annual or biennial intervals. However, there is limited evidence of the cost-effectiveness of this approach. The objective of this study was to assess the long-term clinical and economic benefits of varying screening frequencies by age group among high-risk individuals. Methods: A Markov model simulating the natural history of individuals at high risk of CRC (N=100,000) was developed from the Spanish healthcare perspective. The model tracked patients through screening stages of CRC at diagnosis, disease progression, remission, and death. Fifteen screening strategies with varying age range and frequency were compared. Epidemiological data, clinical efficacy and cost inputs were obtained from the literature and regional public sources. Model outcomes included quality-adjusted life years (QALYs) and incremental cost-effectiveness ratio (ICER). A discount rate of 3.0% was used in the calculations. Results: Based on the net monetary benefit and a willingness-to-pay threshold of €30,000 per QALY, the most cost-effective strategy was age 30 to 75 years at 5-year intervals, with an ICER of €-58/QALY (i.e., less costly and larger gains in QALYs when compared to the current national strategy). Our analysis predicts a reduction of 43.8% mortality rate over the lifetime horizon when increasing the target age range to 30 years, compared to the current strategy. Conclusions: This study shows that the modification of the current national screening strategy could be highly cost-effective. However, there is value in screening across different ages to reduce the uncertainty around these cost-effectiveness estimates to better inform future screening policy.