survival based on a network meta-analysis which considers time-varying hazard ratios to estimate accrued quality-adjusted survival and costs over a 15-year time horizon. The analysis considered nivolumab monotherapy as the key comparator but also included ipilimumab, pembrolizumab, dabrafenib, dabrafenib + trametinib, vemurafenib + cobimetinib, and dacarbazine. Drug acquisition, administration, follow-up, subsequent therapy and adverse event costs were obtained via expert input on resource utilization and published unit prices. Adverse event frequencies were collected from the Checkmate 067 trial and published literature. Utility weights were estimated from the Checkmate 067 trial, based on UK tariffs. A 3% discount rate was applied to costs and utilities. Results were presented as incremental cost-utility ratios (ICURs) for NIVO+IPI. **RESULTS:** NIVO+IPI was projected to have the greatest accrued survival among the competing treatments with 5.47 LYs and 4.192 QALYs and also the highest total costs (2,131,095 kr). The comparison vs. nivolumab resulted in an incremental cost of 378,523 kr and 0.845 QALYs gained. Pairwise ICURs for NIVO+IPI vs. other treatments ranged from 195,344 kr per QALY (vs. vemurafenib + cobimetinib) to 591,174 kr per QALY (vs. dacarbazine) Probabilistic sensitivity analysis generated results consistent with the base case for NIVO+IPI (4.05 QALYs, 2 086 621 kr). **CONCLUSIONS:** NIVO+IPI is associated with the highest gain in quality-adjusted survival indicating for it to be a cost-effective option in the first-line treatment of advanced melanoma.

PCN127

AZACITIDINE FOR TREATING ACUTE MYELOID LEUKAEMIA: A NICE SINGLE TECHNOLOGY APPRAISAL

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OBJECTIVES: To review the evidence, submitted to the National Institute of Health and Care Excellence (NICE) by Celgene, on the clinical and cost-effectiveness of azacitidine for the treatment of acute myeloid leukaemia in adults with >30% bone marrow blasts who are not eligible for hematopoietic stem cell transplantation, as part of the NICE Single Technology Appraisal process. **METHODS:** The company's analysis was based on data from a randomized controlled trial, AZA-AML-001. The trial was conducted to determine the efficacy and safety of azacitidine against a conventional care regimen (CCR) comprised of three individual comparators: intensive chemotherapy followed by best supportive care (BSC) upon disease relapse or progression, non-intensive chemotherapy followed by BSC, and BSC alone. The primary trial end point, overall survival, was affected by treatment switching in both arms. The company's economic evaluation was based on a partitioned survival model with four states: Remission, Non-remission, Relapse/Progressive disease and Death. We critically appraised the company's submission; assessed the replicability and internal validity of their analysis using individual-patient data from AZA-AML-001; and examined the effect on incremental cost-effectiveness ratio (ICER) of crossover, and of altering model assumptions to reflect current UK practice. **RESULTS:** In the company's analysis, the base-case ICER of azacitidine vs. CCR was £20,648 per quality-adjusted life-year (QALY) gained; in their probabilistic sensitivity analysis, the ICER was £17,423. After our amendments to Celgene's model, the respective ICERs were £273,308 and £277,123 per QALY. In all our exploratory analyses, the ICER exceeded NICE's threshold range of £20,000 to £30,000 per QALY gained. The major drivers of the increase in the ICER were model corrections related to healthcare resource use, and calibration of the number of treatment cycles (for consistency with AZA-AML-001). **CONCLUSIONS:** After considering these analyses and statements from patient and clinical experts, the NICE Appraisal Committee did not recommend azacitidine for this indication.

PCN128

USE OF NET MONETARY BENEFIT ANALYSIS TO COMPREHENSIVELY UNDERSTAND THE VALUE OF INNOVATIVE TREATMENTS

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OBJECTIVES: Many countries use cost-effectiveness analysis to assess the value of new biopharmaceuticals and inform coverage decisions. To understand the full value of innovative treatments, comparing cost-effectiveness results from different perspectives is paramount. However, comparisons of the incremental-cost effectiveness ratios (ICER) are not suited to describing the increase in value resulting from an expansion of the analysis from the payer to the societal perspective. To address this limitation, we describe an alternative cost-effectiveness measure: net monetary benefit (NMB). Using NMB, we estimate payer and non-payer perspectives on the value of nivolumab, a novel immuno-oncology treatment for patients with pretreated advanced non-small cell lung cancer (NSCLC). **METHODS:** NMB is calculated as the benefit of a therapy expressed in monetary terms net of all costs. Components of value considered included: (i) direct health costs and benefits (e.g., survival improvements, treatment cost), (ii) indirect health costs and benefits (e.g., caregiver burden, productivity), (iii) patient-centered value components (e.g., value of hope) and (iv) value components for patients without NSCLC (e.g., insurance value). Only direct costs are routinely included in cost-effectiveness assessments, thus excluding important value components. **RESULTS:** NMB is positive if the ICER is below the willingness to pay threshold of a quality-adjusted life-year. When the same value components are included in both approaches, these two metrics produce consistent decision-making guides. However, in our nivolumab case study, we found that a large share of the NMB was derived from indirect, patient-centered, and non-NSCLC patient value components. **CONCLUSIONS:** The NMB approach provides a useful framework that not only summarizes a therapy's overall value, but also clearly calculates the share of a treatment's value derived from different value components. Limiting a cost-effectiveness evaluation to the traditional payer perspective may understate the true value of immuno-oncology treatments.

PCN129

COST EFFECTIVENESS OF NIVOLUMAB IN COMBINATION WITH IPILIMUMAB FOR THE TREATMENT OF ADVANCED MELANOMA PATIENTS IN ENGLAND

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OBJECTIVES: Nivolumab in combination with ipilimumab (the Regimen) is the first immuno-oncology combination treatment to demonstrate long-term clinical benefit for advanced melanoma patients in a trial setting. We evaluated the cost effectiveness of the Regimen for the treatment of advanced melanoma patients in England. **METHODS:** A Markov state-transition model was developed in Excel® to estimate the lifetime costs and benefits of the Regimen and the relevant comparators in England, including ipilimumab and pembrolizumab. At the time of the NICE submission, only progression-free survival data were available from the head-to-head Phase III trial (CheckMate 067) comparing the Regimen with ipilimumab. Therefore, covariate-adjusted parametric curves for time to progression and pre-progression survival were fitted based on patient-level data from the pivotal head-to-head trial, and post-progression survival for the Regimen and ipilimumab was assumed to be the same using patient-level data from trials including nivolumab and long-term ipilimumab survival data. Given the lack of patient-level data, an indirect treatment comparison was performed to estimate the hazard ratios of progression-free survival of pembrolizumab versus ipilimumab. Patient utilities and resource use data were based on trial data or sourced from the literature. Patients are assumed to receive nivolumab and pembrolizumab until there is no further clinical benefit, assumed to be the first of progressive disease as per RECIST criteria, unacceptable toxicity or two years of treatment. **RESULTS:** Based on the list price of nivolumab and the assumed discounted prices for other treatments in England, the Regimen is the most cost-effective treatment option, with incremental cost-effectiveness ratios of £29,218 per quality-adjusted life year, where ipilimumab is dominated by pembrolizumab. Two-year survival with Regimen estimated in this study is similar to published survival in a Phase II trial. **CONCLUSIONS:** The analyses show that the Regimen is cost-effective for the treatment of advanced melanoma patients in England.

PCN130

COST-EFFFECTIVENES OF SONIDEGIB VERSUS VISMODEGIB FOR THE TREATMENT OF PATIENTS WITH LOCALLY ADVANCED BASAL CELL CARCINOMA NOT AMENABLE TO SURGERY OR RADIOTHERAPY

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OBJECTIVES: Sonidegib was approved recently in the US and EU to treat locally advanced basal cell carcinomas (laBCCs) ineligible for curative surgery or radiotherapy. Vismodegib is the other approved targeted oral therapy for advanced BCC. Both treatments were approved on the basis of single arm trial data (sonidegib: BOLT [Migden et al., 2015]; vismodegib: ERIVANCE [Sekulic et al., 2012]). Their comparative effectiveness was demonstrated via a matching-adjusted indirect comparison (MAIC) (Odom et al., 2016), conducted to adjust for trial differences in baseline patient characteristics. The MAIC confirmed the findings from a naïve indirect comparison, showing longer progression free survival (PFS) and a greater objective response rate for sonidegib versus vismodegib. Our objective was to examine the cost-effectiveness, from a United Kingdom (UK) payer perspective, of sonidegib versus vismodegib for adults with laBCC not amenable to surgery or radiotherapy. **METHODS:** A partitioned-survival model (PFS, progressive disease, death) was developed, with PFS further partitioned by time spent with response versus stable disease. Estimates of OS were from the UK general population (mean age 63 years). Utility weights were from the literature (Shingler et al., 2013). Costs included drugs (assuming price parity per pill for sonidegib and vismodegib), adverse event monitoring and treatment, physician visits, and wound care. A lifetime horizon was employed. The model estimated expected costs, life-years (LYs), quality-adjusted life-years (QALYs), and incremental cost-effectiveness ratios (ICERs). A discount rate of 3.5% was applied to costs and QALYs. **RESULTS:** Expected total costs (discounted) for sonidegib and vismodegib were £108,037 and £129,435, respectively. Expected LYs (undiscounted) were 3.89 for both comparators. Expected QALYs (discounted) for sonidegib and vismodegib were 2.58 and 2.46, respectively. **CONCLUSIONS:** In comparison to vismodegib, sonidegib is expected to improve QALYs and reduce costs (i.e., is dominant). Sensitivity analyses demonstrated that the results were robust to parameter uncertainty and variability.

PCN131

PHARMACOECONOMIC ANALYSIS OF PEGYLATED LIPOSOMAL DOXORUBICIN VERSUS DOXORUBICIN IN PATIENTS WITH METASTATIC BREAST CANCER AT HIGH RISK OF CARDIAC EVENTS

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OBJECTIVES: the aim of the study is the pharmacoeconomic evaluation of pegylated liposomal doxorubicin (PLD) versus doxorubicin in patients with met-