cTACE strategy was estimated to be 414 days whereas that of DEB TACE strategy was estimated to be 651 days. The total costs for cTACE strategy and DEB TACE strategy were £420,529 and £3,151,105 respectively. Thus the incremental cost-effectiveness ratio (ICER) for cTACE versus DEB TACE is £3,396 per one day survival gained. The Deterministic sensitivity analysis demonstrated that survival associated by cTACE strategy and DEB TACE operation costs have the greatest effect on the results. CONCLUSIONS: Results from this study suggest that employing a cTACE strategy is cost-effective intervention compared to DEB TACE in patients with hepatocellular carcinoma based on the willingness to pay threshold stated by world health organization (3xGDP/capita) for low and middle income countries.

PCN98

COST-EFFECTIVENESS ANALYSIS OF IPILUMIMAB IN PERU

Carrijo Lecca S1, Donato BM2, Jurez-Garcia A3

1Bristol-Myers Squibb, Lima, Peru, 2Bristol-Myers Squibb Company, Wallingford, CT, USA, 3Bristol-Myers Squibb, Mexico City, Mexico

OBJECTIVES: Pricing and reimbursement is typically approached product by product, not in comparison across therapeutic areas in Peru. Within oncology, there are relatively few treatment options for advance stage cancer patients that have documented clinical benefit, and ipilimumab has been recently approved in Peru for the treatment of unresectable or metastatic melanoma. Given the rising costs of cancer care payers and physicians need to better understand the value of innovative oncology drugs for reimbursement decision making. This study assesses the cost per additional month of mean overall survival of ipilimumab and how this metric compares to other oncology agents approved in Peru in the metastatic setting.

METHODS: We selected agents that received regulatory authorization in 2016 and were listed in Peru with a primary or secondary objective. Mean OS was obtained from published literature. Drug prices were obtained from “observatorio de precios de DIGEMID” a public database. The economic value of each agent is presented per cost of additional month of mean OS from a private healthcare payer perspective. The analysis uses the costs to treat to mean progression of each agent divided by the months of mean overall survival (OS). This is estimated using its current list prices and associated adverse event costs.

RESULTS: Seventeen drugs met inclusion criteria. Of these, 26 different indications were evaluated. The average cost per mean overall survival month gained was estimated at $5,178, range $3,108 - $264,764. Ipilimumab as first and second-line treatment for metastatic melanoma was cost-effective at a willingness to pay threshold of $50,000/QALY. Higher willingness to pay thresholds were associated with a higher cost of ipilimumab treatment, with reductions in its acceptance.

CONCLUSIONS: In this cost efficacy analysis, ipilimumab’s cost per additional month of overall survival was estimated below the market average. At current private market prices ipilimumab may offer good value for money.

PCN96

LONG-TERM OUTCOMES OF HPV VACCINATION IN PREVENTION OF ANAL CANCER IN OLDER HIV-POSITIVE MEN WHO HAVE SEX WITH MEN

Deshmukh AA1, Chhatwal J1, Chiao EY1, Nytray AG2, Dau F3, Cantor SB4

1The University of Texas MD Anderson Cancer Center, Houston, TX, USA, 2Baylor College of Medicine, Houston, TX, USA, 3The University of Texas School of Public Health, Houston, TX, USA

OBJECTIVES: Recent findings show that vaccinating older men who have sex with men ( MSM) with history of high-grade anal intraepithelial neoplasia (HGINA) – a precursor stage of anal cancer – with quadrivalent human papillomavirus (HPV) vaccine was associated with 50% decrease in the hazards for recurrent or persistent HGINA. We evaluated the long-term clinical and economic outcomes of adding qHPV vaccination to routine treatment regimens in HIV-positive men with persistent HPV-related disease over 27 years.

METHODS: Using Markov model of anal HPV infection in HIV-positive MSM we compared two strategies: no qHPV vaccination after treatment for HGINA versus qHPV vaccination. The model simulation for HGINA regression and probability of HGINA progression was conditional on patients’ CD4 count. Model parameters, including baseline prevalence, disease transitions, costs, and utilities were either obtained from literature or calibrated using a natural history model of anal carcinogenesis. Cost per lifetime included lifetime costs, quality adjusted life years (QALYs), and lifetime risk of developing invasive cancer. Results from the healthcare perspective were presented in the forms of incremental cost-effectiveness ratios (ICERs) and decrease in lifetime risk of anal cancer. Deterministic and probabilistic sensitivity analyses were conducted on model parameters. RESULTS: Vaccination after treatment for HGINA decreased the lifetime risk of anal cancer by 63% compared to the no vaccination strategy. Vaccination resulted in the decrease in lifetime costs with increase in effectiveness by 0.16 QALYs. The predicted incidence of anal cancer after vaccination was almost one-third to that of the no vaccination strategy. The results were sensitive to the model parameters—progression from HGINA to cancer, mortality attributed to anal cancer, cost of HGINA treatment, and discount rate.

CONCLUSIONS: Vaccinating the high-risk population of HIV-positive MSM aged ≥ 27 after treatment for HGINA is a cost-saving strategy. Expansion of current vaccination guidelines to include this population should be a priority.

PCN97

CASE STUDIES OF COST-EFFECTIVENESS FOR CO-ADMINISTERED BRANDED THERAPIES IN ONCOLOGY: PERSPECTIVES FROM AN ECONOMIC MODEL

Smith NJ1, Cordina G1, Chyeel P1, Blissett D2, Beckerman R2

1CBPartners, New York, NY, USA, 2CBPartners, London, UK

OBJECTIVES: The purpose of this study was to evaluate the maximum cost-effectiveness of co-administered branded therapies (CEPS) for different oncology diseases. We assumed that the intervention was dosed to progression. This analysis highlights the utility of early economic models in evaluating potential pricing and HTA barriers early in the development process.

PCN100

A NEW APPROACH FOR IDENTIFICATION OF DISEASE-RELATED MEDICAL BILLING CODES FOR CHRONIC LYMPHOCYTIC LEUKEMIA FOR USE IN COST ANALYSES IN ADMINISTRATIVE CLAIMS DATA

Kozma C1, Slaton T2, Paris A3, Ellis L4

1C Consulting, St. Helena Island, SC, USA, 2C Consulting, West Columbia, SC, USA, 3Pickle, Victor, NY, USA, 4Kone Inc, Houston, TX, USA

OBJECTIVES: To evaluate a new empirical algorithm for selecting disease-related medical billing codes associated with chronic lymphocytic leukemia (CLL). METHODS: Patients in the SEER-Medicare database with a CLL diagnosis (2000 to 2010) were age/gender matched to a non-cancer sample. A proprietary coding algorithm based on code frequency (sensitivity, specificity precision or accuracy) and cost was used to identify procedure (i.e., CPT and HCPCS) and diagnosis (ICD-9-CM) codes that differed between the CLL and non-cancer groups. Summarized costs for claims with the empirically identified codes were compared to a traditional approach of identifying disease-related claims based on presence of a CLL diagnosis in the first diagnosis field. The code set was applied to a sample from a prior CLL study conducted with commercial claims to assess generalizability. RESULTS: The analysis evaluated 10,531 unique billing codes with total costs of $1 billion (US; CLL $58.3%; non-cancer 41.7%) for 7,050 age and gender matched SEER-Medicare subjects per group. The empirical algorithm found 333 codes that identified 25.6% of the CLL group costs as cancer-related. The traditional approach used claims that contained ≥2,001 codes and identified a much lower 14.6%. Approximately 1% of costs were potentially misidentified in the non-cancer cohort, providing further confirmation of the codes selected by the empirical method. Qualitative review of codes revealed stronger content validity with the empirical approach compared to the traditional approach. Application of codes identified in the SEER-Medicare data to the commercial claims data demonstrated ≥5% errors in costs. Conclusion: This approach underestimates costs and captures costs from procedure codes that do not appear to be cancer-related. Use of an empirical approach to identify disease-related diagnosis and procedure codes will increase content validity.