incremental quality-adjusted life years (QALYs) while ESAs were administered and during a Hb "normalisation period" following cancer treatment. Incremental long-term QALYs were accrued solely through extrapolated overall survival. Short-term mortality and HRQoL associated with adverse events and RBCTs were not modelled. Costs included: ESA acquisition (list prices, British National Formulary) and administration, RBCT, additional blood tests with ESA therapy, and adverse event costs. **RESULTS:** All ESAs except epoetin beta and darbepoetin alfa were cost-effective versus using RBCT only at an upper cost-effectiveness threshold of £30,000/QALY. Incremental cost-effectiveness ratios (ICERs) ranged from £19,400/QALY (biosimilar epoetin alfa) to £35,000/QALY (epoetin beta). Probabilistic sensitivity analysis showed that biosimilar epoetin alfa was cost-effective at the lower cost-effectiveness threshold of £20,000/QALY in 50.9% of simulations. In 19.5% of simulations it was clinically effective but not cost-effective and in 31.4% of simulations it was dominated by RBCT only. Additional sensitivity analyses demonstrated that overall survival was one of the most influential and uncertain parameters. When the survival advantage of ESAs (not statistically significant) was removed, the ICERs for all ESAs were over £100,000/QALY. **CONCLUSIONS:** There is substantial uncertainty regarding the impact of ESA therapy on overall survival, which leads to significant uncertainty about the cost-effectiveness of ESAs in CIA.

PCN158

QALY WEIGHTINGS BASED ON THE BURDEN OF ILLNESS APPLIED TO A UK COST-EFFECTIVENESS ANALYSIS OF NAB-PACLITAXEL + GEMCITABINE VERSUS GEMCITABINE ALONE FOR THE TREATMENT OF METASTATIC PANCREATIC CANCER

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OBJECTIVES: To demonstrate the impact of QALY weightings based on the burden-of-illness (BoI) of pancreatic cancer on the incremental cost-effectiveness ratio (ICER) of nab-paclitaxel plus gemcitabine (NPG) versus gemcitabine (G). **METHODS:** A markov model using data from the MPACT trial plus resource use data and costs from NHS Scotland have been submitted to the Scottish Medicines Consortium. The base case ICER was £52,885/QALY based on a cost of £8,232 and a QALY gain of 0.156 (SMC DAD). QALY weightings up to a maximum of 2.5 distributed across six modifier factors, including BoI, have been proposed (NICE consultation on Value Based Assessment), with BoI measured according to proportional QALY shortfall associated with the condition. The estimated 98% loss of healthy life (proportional QALY shortfall) in pancreatic cancer (Hutchings 2014) represents an almost complete loss of life, and thus a very high BoI. A BoI weighting of 2.5 (maximum weighting allocated entirely to BoI, or BoI FULL) and an alternative BoI weighting of 1.417 (maximum weighting shared equally between six modifiers, so 1/6thof 2.5, or BoI PARTIAL) were therefore applied to the QALY gain of NPG versus G. **RESULTS:** The BoI FULL weighting gives an adjusted QALY gain for NPG versus G of 0.39 and a corresponding ICER of £21,108/QALY. The BoI PARTIAL weighting gives an adjusted QALY gain for NPG versus G of 0.221 and a corresponding ICER of £37,249/QALY. **CONCLUSIONS:** Various ways of accounting for disease severity can be considered and made workable by HTAs, including QALY weightings according to proportional QALY shortfall. The adjusted QALY gain and corresponding ICERs of NPG versus G in pancreatic cancer show that the value of medicines for life-threatening 'end-of-life' conditions with a high relative shortfall can be reflected by an appropriate system of QALY weightings.

PCN159

ECONOMIC EVALUATION OF LAPATINIB IN HER-2-POSITIVE METASTATIC BREAST CANCER PATIENTS IN EGYPT

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OBJECTIVES: The objective of the current analysis was to assess the cost-effectiveness of lapatinib plus capecitabine versus capecitabine alone in human epidermal growth factor receptor-2-positive metastatic breast cancer patients from the third party payer perspective over a time horizon of ten years. **METHODS:** A half cycle corrected Markov chain model comprising 3 health states (stable, progression and death) was developed to estimate the projected clinical and economic implications of Lapatinib. Transition probabilities were estimated based on the results from the EGF100151 clinical trial of Lapatinib. Health state utilities and major adverse events were obtained from published sources. Direct medical costs were obtained from the third party payer list. Costs (in 2013 EGP) and effects were discounted at 3.5% annually. One way sensitivity analyses were conducted. **RESULTS:** The economic evaluation of lapatinib plus capecitabine as combination therapy resulted in additional cost of 1,597,796 EGP, with an incremental positive effect of 5.7 quality adjusted life years (QALY) or an incremental cost-effectiveness ratio (ICER) of 277,169 EGP/QALY gained. The overall survival of the two arms was found to have the greatest impact on the results. **CONCLUSIONS:** Compared with our willingness-to-pay threshold stated by world health organization for middle and lower income countries, the addition of lapatinib to capecitabine is not clearly cost-effective; and most likely to result in an ICER higher than the threshold limit.

PCN160

HEALTH CARE UTILIZATION AND COSTS OF BREAST CANCER IN THE MEDICAID PROGRAM

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OBJECTIVES: To evaluate health care resource utilization and costs among patients diagnosed with breast cancer in the Medicaid program. **METHODS:** Patients diagnosed with breast cancer (International Classification of Disease, 9thRevision, Clinical Modification [ICD-9-CM] diagnosis code 174, 233.0, 238.3, 239.3) were identified using Medicaid data from January 1, 2008 through December 31, 2010. The initial diagnosis date was designated as the index date. Patients without breast cancer (comparison cohort) who were the same age, race, and gender were identified and matched. A random index date was chosen to minimize selection bias. Patients in both cohorts were required to be at least age 18 years, with continuous medical and pharmacy benefits 1-year pre- and 1-year post-index date. One-to-one propensity score matching (PSM) was used to compare health care costs and utilizations during the follow-up period, between the diseased and comparison cohorts, and adjusted for baseline demographic and clinical characteristics. **RESULTS:** After risk adjustment by PSM, a total of 19,079 patients in each cohort were matched. Significantly more breast cancer patients had inpatient admissions (23.77% vs. 12.56%, p<0.0001) and long-term care (7.77% vs. 6.60%, p<0.0001), other service (99.88% vs. 87.86%, p<0.0001) and pharmacy visits (77.80% vs. 68.85%, p<0.0001), compared to those without breast cancer. Breast cancer patients also incurred significantly higher inpatient ($2,141 vs. $1,537, p<0.0001), long-term care ($7,471 vs. $5,335, p<0.0001), other service visit ($23,592 vs. $14,780, p<0.0001) and pharmacy costs ($3,379 vs. $2,787, p<0.0001) compared to those in the comparison cohort. **CONCLUSIONS:** Breast cancer patients in the Medicaid program incurred substantially higher health care resource utilization and costs compared to those without the disease.

PCN161

NAB-PACLITAXEL OR DOCETAXEL AS ALTERNATIVES TO SOLVENT-BASED PACLITAXEL IN METASTATIC BREAST CANCER (MBC): A COST UTILITY ANALYSIS FROM A CHINESE HEALTH CARE PERSPECTIVE

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OBJECTIVES: Paclitaxel and docetaxel are used for the treatment of MBC in China. However, one important drawback, particularly with docetaxel, is the potential for dose-limiting toxicity. To improve the side effect profile and efficacy of paclitaxel, an albumin-bound formulation (*nab*-paclitaxel) is currently available in China (Abraxane®). Clinical trials have demonstrated that n*ab*-paclitaxel is safer and more effective than both docetaxel and paclitaxel. To provide economic data for China, a cost utility analysis comparing n*ab*-paclitaxel to docetaxel, both as alternatives to paclitaxel was conducted. **METHODS:** Clinical data was obtained from a meta analysis of randomized trials comparing either n*ab*-paclitaxel (260 mg/m^2 q3wk) or branded docetaxel (100 mg/m^2 q3wk) to solvent-based branded paclitaxel (175 mg/m^2 q3wk). Health care resource use for the delivery of chemotherapy and the management of grade 3/4 toxicity was collected from a time and motion study in three Chinese cancer centers and from a survey of clinicians. Using the Time Trade-off technique, treatment preferences and utility estimates were obtained from interviewing 28 cancer patients from two centres in China. All costs were reported in 2014 $U. S. **RESULTS:** N*ab*-paclitaxel had the most favourable safety profile characterized with the lowest incidence of grade 3/4 neutropenia, febrile neutropenia, anemia and stomatitis. This translated into lower costs for managing the grade 3/4 side effects of n*ab*-paclitaxel relative to both docetaxel and paclitaxel ($21 vs. $166 vs. $81). In the preference assessment, 22 of 28 (78.6%) patients selected n*ab*-paclitaxel as their preferred agent. As an alternative to paclitaxel, the cost per quality adjusted life year (QALY) gained was more favourable with n*ab*-paclitaxel than docetaxel ($57,900 vs. $130,600 respectively). **CONCLUSIONS:** N*ab*-paclitaxel is an economically attractive alternative to paclitaxel and docetaxel in MBC, providing a substantially lower cost per QALY. Additionally in the patient preference survey, 78.6% of patients selected *nab*-paclitaxel as their preferred agent.

PCN162

THE COST-EFFECTIVENESS OF SECOND-LINE CRIZOTINIB IN EML4-ALK REARRANGED ADVANCED NON-SMALL CELL LUNG CANCER

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OBJECTIVES: Targeted therapy with ALK inhibitor crizotinib offers significant improvement in clinical outcome for treatment of EML4–ALK fusion positive non-small cell lung cancer (NSCLC) patients. We estimated the cost-effectiveness of companion EML4-ALK genetic testing in combination with crizotinib treatment in the second-line setting for advanced NSCLC in Ontario. **METHODS:** We performed a cost-effectiveness analysis using a Markov model from a Ministry of Health perspective and a lifetime horizon. Transition probabilities and mortality rates were calculated based on the data of a recent second-line randomized trial of crizotinib versus chemotherapy (Shaw et al. New Engl J Med 2013). Costs were obtained from OCCI database, public labs and Princess Margaret Hospital. All parameters were varied separately in one-way and selected two-way sensitivity analyses. Various scenarios to assess the impact of model assumptions about testing and treatment were conducted. **RESULTS:** The use of pemetrexed and docetaxel in ALK-rearranged NSCLC, based on our preliminary model, could yield as much as 0.539 QALY and 0.429 QALY respectively, assuming no crossover from chemotherapy to crizotinib. Average costs per patient based on the preliminary model are estimated at CAD $19,388 for pemetrexed and $$33,226for docetaxel, with incremental cost-effectiveness ratios of $333,595/QALY and $125,812/QALY gained respectively. The results of the one-way sensitivity analysis indicated that the primary drivers of the ICER were the utilities and cost of crizotinib treatment. The model was least sensitive to IHC and FISH genetic test costs, re-biopsy cost, probability of progression while on pemetrexed treatment and probability of re-biopsy. **CONCLUSIONS:** EML4–ALK genetic testing in combination with crizotinib treatment for all NSCLC patients eligible for chemotherapy is not economically attractive in the current setting. Lower drug costs would be required to make this strategy economically feasible.

PCN163

COST-EFFECTIVENESS OF IPILIMUMAB IN PREVIOUSLY UNTREATED PATIENTS FOR ADVANCED MELANOMA IN SWEDEN

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