costs. In a health care system like Ontario's, which treats 2800 new breast cancer patients per year, this may represent a significant reduction in operation cost. These savings should be considered in context of how much resource investment is required to reduce waiting.

**PCN68**

## COST-EFFECTIVENESS OF CETUXIMAB (ERBITUX™) FOR THE FIRST LINE TREATMENT OF SQUAMOUS CELL CARCINOMA OF THE HEAD AND NECK (SCCHN) IN CANADA

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**OBJECTIVES:** Squamous cell carcinoma of the head and neck (SCCHN) can be a devasting disease. Cetuximab has recently been shown to improve locoregional control (LRC) and reduce mortality in locally and regionally advanced disease. The objective of the study is to estimate the incremental cost-utility of cetuximab plus radiotherapy (CxRT) versus cisplatin plus radiotherapy (CsRT) among platinum eligible patients and versus RT alone in platinum ineligible patients in Canada. **METHODS:** A lifetime transition model was developed with four health states: 1) acute treatment phase; 2) LRC; 3) disease progression and 4) death. Adverse events were accounted for in the first two states. Efficacy of treatment (LRC and overall survival) was obtained from the literature. Based on network meta-analyses, CsRT and CxRT were assumed to have equal efficacy. Resource use was obtained from published literature and clinical expert opinion. The perspective adopted was that of a provincial ministry of health or cancer agency. Utilities were obtained from a previous study of UK oncology nurses. Costs (CDN$2008) and outcomes were discounted at 5% annually. Incremental cost-effectiveness ratios (ICERs) were reported with one-way and probabilistic sensitivity analyses performed to assess robustness of results. A priori sub-group analyses were carried out by baseline Karnofsky Performance Scores (KPS). **RESULTS:** Among all patients (KPS 60–100), the ICERs comparing CxRT to RT were $19,740/QALY (95% CI: $11,122 to $695,295) among platinum ineligible patients and for CxRT vs. CsRT, $99,147/QALY (95% CI: $75,998 to $148,951) among platinum eligible patients. ICERs decreased with increasing KPS scores. At a willingness-to-pay of $50,000 among platinum-ineligible patients and $100,000 among platinum-eligible patients, the likelihood that CxRT is cost-effective is 90% and 45% respectively. Sensitivity analyses indicated that time horizon and assumptions about CsRT effectiveness had the largest impact on results. **CONCLUSIONS:** Cetuximab is an economically attractive option for SCCHN patients.

**PCN69**

## COST-EFFECTIVENESS OF FIRST-LINE COMBINATION TREATMENT WITH BEVACIZUMAB PLUS FOLFIRI VERSUS FOLFIRI IN PATIENTS WITH METASTATIC COLORECTAL CANCER: A UK PERSPECTIVE

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**OBJECTIVES:** To determine incremental costs and life expectancy of adding bevacizumab (bev) to an irinotecan plus infusional 5-fluorouracil/leucovorin (5-FU/LV) regimen (FOLFIRI) for the first-line treatment of patients with metastatic colorectal cancer (MCRC) in the UK. **METHODS:** We performed a decision analysis with a THREE-health-state area under the curve model to explore the effects of adding bev treatment to an existing FOLFIRI-based regimen. The model structure was based on a published model by National Institute of Technology Excellence (NICE), UK. Progression-free (PFS) and overall survival (OS) data were derived from clinical trials comparing bev+irinotecan and 5-FU/LV (IFL) with IFL alone. The impact on OS for bev+FOLFIRI was included through an indirect comparison of hazard ratios (HRs) between bev+mIFL versus bev+FOLFIRI (HR for death: 1.79; 95% CI: 1.12–2.88). Treatment effect for bev+FOLFIRI was maintained during the 40-month clinical follow-up. The FOLFIRI PFS was created by applying the HR from IFL versus FOLFIRI (HR for progression or death: 1.51, 95% CI: 1.16–1.97) to the IFL PFS. Outcomes included life years, QALYs, direct costs and incremental cost-effectiveness ratios (ICERs). A life-time horizon (8 years) was used. Cost and outcomes were discounted by 3.5% per annum. Both deterministic and probabilistic sensitivity analyses were performed. **RESULTS:** The estimated discounted life expectancy for bev+FOLFIRI-treated patients was 2.62 years (undiscounted: 2.77 years) versus 1.58 years (undiscounted: 1.63 years) in the FOLFIRI arm. The discounted costs in the 2 arms were ≤49,798 and ≤23,698, respectively. The discounted ICER was ≤25,045 per life-year gained and ≤40,532 per QALY gained. Sensitivity analysis on key variables showed that assumptions of size (HR) and duration of treatment effect were the most influential factors for the ICER. **CONCLUSIONS:** Bev+FOLFIRI versus current FOLFIRI-based treatment regimens for MCRC increases survival for these patients and is a cost effective treatment option.

**PCN70**

## MODELLING THE COST EFFECTIVENESS OF FIRST-LINE COMBINATION TREATMENT WITH BEVACIZUMAB PLUS IRINOTECAN AND INFUSIONAL FLUOROPYRIMIDINES VERSUS IRINOTECAN AND INFUSIONAL FLUOROPYRIMIDINES IN METASTATIC COLORECTAL CANCER PATIENTS IN SWEDEN

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**OBJECTIVES:** To model expected mean incremental costs and life expectancy of adding bevacizumab (bev) to an irinotecan plus infusional 5-fluorouracil/leucovorin (5-FU/LV) regimen (FOLFIRI) for the first-line treatment of patients with metastatic colorectal cancer (MCRC) in Sweden. **METHODS:** A 3-health-state model explored the effects of adding bev treatment to an existing FOLFIRI-based regimen. The model structure was based on one published by National Institute for Health and Clinical Excellence (NICE) UK, which applies to guidelines established by the Swedish Pharmaceutical and Dental Benefits Board. Progression-free (PFS) and overall survival (OS) data are derived from clinical trials comparing bev+irinotecan and 5-FU/LV (IFL) with IFL alone. The impact on OS for bev+FOLFIRI was included through an indirect comparison of hazard ratios (HRs) between bev+mIFL versus bev+FOLFIRI (HR for death: 1.79; 95%CI: 1.12–2.88). Treatment effect for bev+FOLFIRI was maintained during the 40-month clinical follow-up. The FOLFIRI PFS was created by applying the HR from IFL versus FOLFIRI (HR for progression or death: 1.51, 95%CI: 1.16–1.97) to the IFL PFS. Outcomes included life years, QALYs, direct costs and incremental cost-effectiveness ratios (ICERs). A life-time horizon (eight years) was used. Cost and outcomes were discounted by 3% per annum. **RESULTS:** The estimated mean life expectancy for bev+FOLFIRI-treated patients was 2.64 years (discounted; 2.77 years undiscounted) versus 1.58 years (discounted; 1.63 years undiscounted) in the FOLFIRI arm. The discounted costs in the 2 arms were 525,404 SEK and 245,775 SEK, respectively. The discounted ICER was 264,689 SEK/life-year gained and 428,519 SEK/QALY gained. Sensitivity analysis on key variables showed that assumptions of size (HR) of treatment effect and duration of treatment effect were the most critical factors for the ICER. **CONCLUSIONS:** Bev+FOLFIRI versus current FOLFIRI-based treatment regimens for MCRC is predicted to increase survival for these patients and also be a cost-effective treatment option in Sweden.

**PCN71**

## COST-EFFECTIVENESS (CE) ANALYSIS OF ERBB2-TARGETED THERAPIES IN WOMEN WITH TRASTUZUMAB (TZ)-REFRACTORY ERBB2+ METASTATIC BREAST CANCER (MBC) AND LIMITED EXPOSURE TO PRIOR CHEMOTHERAPY (CT)

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**OBJECTIVES:** In EGF100151, lapatinib plus capecitabine (L+C) improved time to progression (TTP) vs C-only (Median 27.1 vs 18.6 wks, HR = 0.57, p < 0.001) in women with ErbB2+ MBC who had received prior CT with TZ, anthracyclines, and taxanes. In GBG26, TZ plus capecitabine (TZ+C) improved TTP vs C-only in ErbB2+ MBC patients with prior TZ and ≤1 prior courses of palliative CT (n = 74 vs 77, median 36.9 vs 24.3 wks, HR = 0.69, p = 0.034). Because >50% of EGF100151 patients had received ≥4 prior lines of CT, results of EGF100151 and GBG26 are not directly comparable. The objective of this analysis was to evaluate (1) the CE (cost per quality-adjusted life year [QALY] gained) of TZ+C vs C-only in GBG26 and (2) the CE of L+C vs C-only in a subgroup of comparable EGF100151 patients (<3 CT, n = 31 vs 37, TTP: Median 49.4 vs 19.7 wks, HR = 0.37, p = 0.0059, OS: Median 87.3 vs 55.1 wks, HR = 0.51, p = 0.0140). **METHODS:** Trial-based survival analyses were conducted of GBG26 patients and of EGF100151 patients with <3 CT, with progression-free survival (PFS) and OS for each treatment arm estimated by fitting Weibull survival functions to failure-time data. A UK National Health Service perspective was employed. Costs and utilities were estimated using data from EGF100151 and the literature. **RESULTS:** The increase in QALYs for L+C vs C-only among EGF100151 patients with <3 CT is 0.462; for TZ+C vs C-only in GBG26, 0.167. The increase in costs for L+C vs C-only among EGF100151 patients with <3 CT is ≤24,094; for TZ+C vs C-only in GBG26, ≤23,198. CE with L+C vs C-only among EGF100151 patients with <3 CT is ≤52,152/QALY; for TZ+C vs C-only in GBG26, ≤138,910/QALY. **CONCLUSIONS:** In TZ-refractory ErbB2+ MBC patients with limited CT exposure, CE of L+C vs C-only may be more favorable than CE of TZ+C vs C-only.

**PCN72**

## COST-UTILITY ANALYSIS OF GEFITINIB VERSUS DOCETAXEL IN A MEXICAN PUBLIC INSTITUTION

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**OBJECTIVES:** Calculate life expectancy and quality of life of gefitinib versus docetaxel in the treatment of non-small-cell lung cancer in a Mexican public institution (ISSSTE). **METHODS:** A Discrete Event Simulation model was designed to emulate probabilities of having one or more adverse events at the same time when in treatment for