mortality rate at 5 years following treatment as well as recurrence rates following chemotherapy. Cost-utility analysis comparing chemoradiation to cystectomy as primary treatment for MIBC reveals that chemoradiation is not cost-effective when compared to cystectomy.

PCN121

COST EFFECTIVENESS OF DIFFERENT DIGITAL MAMMOGRAPHY SCREENING SCENARIOS FOR BREAST CANCER IN THE CANADIAN CONTEXT

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OBJECTIVES: To determine the value of different mammography screening modalities from the societal context. METHODS: The Wisconsin CIDNET breast cancer model was adapted to reflect the Canadian context (incidence, resource utilization, and unit costs (2012 CAN$)). Predictions were made of age-specific breast cancer incidence and prevalence, and a 1:1000 birth cohort of 2,000,000 women for a number of screening scenarios varied by age bands (start at 40 or 50 years, end at 69 or 74 years), frequency (annual, biennial, triennial) from a societal perspective. Incremental cost-effectiveness and cost-utility analyses were examined for different screening scenarios compared to the basecase. Sensitivity analyses considered screening tool performance, compliance, costs, and treatments. RESULTS: Our model showed that all annual screening strategies were found to be more effective than the basecase. The most aggressive annual screening scenario (40 to 74 years) saved the lives of 21 more women per 1,000 than the basecase at an additional $3,800 per woman. Our model predicted that annual screening from age 40 to 74 years had a slightly lower incremental ratio compared to annual to 49, biennial 50 to 74 years when compared to the basecase. Cost drivers were discount rate, screening frequency, utility values, treatment and sensitivity of mammography. DISCUSSION: The greatest single cost contributor in a screening program is the mammography itself. The more screens that a women receives in her life, the greater the financial cost to society. Because both the life savings and costs rise together, the cost of a lifetime of mammography is high. The decision on how to screen is mainly related to willingness to pay and avoiding recalling too many women for further examinations after positive screens.

PCN122

VALUE OF INNOVATION IN LEUKEMIA, LYMPHOMA, AND MYELOMA: A SYSTEMATIC REVIEW

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OBJECTIVES: Analyzing the cost-effectiveness of blood cancer-related therapies has become more important as expensive drugs have been introduced. This study reviewed cost-utility analyses (CUAs) of innovative blood cancer-related interventions and examined the number and methodology of studies and the cost-utility ratios were stratified by funder and cancer type. STUDY DESIGN: We analyzed studies related to blood cancers from the Tufts Cost-Effectiveness Analysis Registry (www.cearegistry.org), a database including over 9,800 CEAs published through 2012. We focused on innovative agents and excluded hematopoietic stem cell transplant, symptom management, and supportive care. Studies that met the inclusion criteria were categorized by four cancer types (chronic myeloid leukemia (CML), chronic lymphocytic leukemia (CLL), non-Hodgkin’s lymphoma (NHL), and multiple myeloma (MM)) and nine treatment types (auro-tein inhibitors, bendamustine, bortezomib, dasatinib, imatinib, lenalidomide, rituximab alone or in combination, and thalidomide). Cost-effectiveness ratios were stratified by funder and cancer type. RESULTS: Twenty-nine studies published from 1996-2012 (including 44 cost-effectiveness ratios) met the inclusion criteria. Thirty-one percent were conducted in the US. The majority (62%) used the health care payer perspective, 24% used the recommended societal perspective. Seventy-six percent were industry-funded. In 21%, economic data were collected alongside the clinical trial. Most ratios pertained to NHL (41%) or CML (30%) and 12% were treatment with rituximab (43%), interferon (18%), or imatinib (16%). Across cancers, the median ratio was highest for CML ($55,000/QALY) and lowest for NHL ($21,500/QALY). Median ratios across time were $55,000 (1996-2002), $52,000 (2003-2006), and $22,000 (2007-2012). A majority of ratios (73%) fell below $50,000/QALY, and most (86%) fell below $100,000/QALY. The median was lower for industry-funded studies ($26,000/QALY) than others ($33,000/QALY). CONCLUSIONS: Published CUAs of these blood cancer treatments demonstrate relatively good value. While the treatments may have high unit prices, many also seem to confer considerable health benefits at reasonable overall costs.

PCN123

COST-EFFECTIVENESS OF USING A PROGNOSTIC TEST TO GUIDE TREATMENT DECISIONS IN EARLY STAGE NON-SMALL CELL LUNG CANCER (NSCLC)

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OBJECTIVES: Limited guidance exists for health care providers deciding when to treat patients with adjuvant chemotherapy (ACT) in early NSCLC. This leads to high-cost, untreated patients that could benefit, and low-risk patients who could avoid the toxicity and cost, from ACT. This study examined the cost-effectiveness of the prognostic test myPlan Lung Cancer vs. current standard of care (SoC) in directing ACT treatment decisions in stage I, II NSCLC. METHODS: A Markov model was constructed to examine costs (2011 US$) and effectiveness (quality-adjusted life years [QALYs]) from a US third-party payer perspective over a lifetime horizon. Patients were classified as high or low risk based on a prognostic score derived from stage and an expression signature based on cell cycle progression. The probability of receiving ACT was estimated from a physician survey. Benefit of ACT treatment was based on stage and prognostic score. Other model inputs were literature-derived or assumption-based. Costs and QALYs were discounted at a 3% annual rate. One-way and probabilistic sensitivity analyses examined the relative impact of model inputs. RESULTS: In the base case scenario 44% of patients received ACT using the prognostic test vs. 38% based on SoC. Total costs were $4,867 for 1,255,594 and total QALYs gained were 5.33 and 5.16 for the prognostic test and SoC, respectively. The incremental cost-effectiveness ratio (ICER) for the prognostic test was $34,055/QALY gained. One-way sensitivity analyses indicated the probability of receiving ACT for high-risk, stage IIb patients and the ACT treatment benefit were the largest drivers of cost-effectiveness. The probabilistic sensitivity analysis ICER was $44,196/QALY gained. The prognostic test was cost-effective in 51.1% of the simulations at a willingness-to-pay threshold of $50,000/$ QALY gained. CONCLUSIONS: The results of this study suggest that using myPlan Lung Cancer to guide ACT decisions is cost-effective compared to a SoC approach according to globally accepted thresholds.

PCN124

ESTIMATION OF THE QUALITY ADJUSTED PROGRESSION FREE SURVIVAL OF THE TREATMENT ARMS OF THE BOLERO-2 TRIAL

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OBJECTIVE: The Breast Cancer Trials of Oral Everolimus-2 (BOLERO-2) is a double-blind, phase 3 trial that compared Everolimus plus Exemestane (n = 485) versus placebo plus Exemestane (n=293). Postmenopausal women with advanced hormone receptor positive breast cancer (ABC) were included in the study. The trial demonstrated that Everolimus plus Exemestane significantly prolonged progression-free survival (PFS). PFS as an outcome measure to compare treatment strategies for ABC is incomplete as it fails to account for the quality of life of patients living in that disease state. To address this issue, researchers can estimate the quality adjusted progression free survival (QAPFS) of treatments as an effectiveness measure. This study aims to estimate the QAPFS of the treatment arms of the BOLERO-2 trial. METHODS: For each treatment arm of the trial, QAPFS was estimated by multiplying the overall health-time by the quality-adjustment factor (QAF). RESULTS: Overall health-time was 72.7 weeks for the treatment arms of the trial were respectively 1.67 (1.53, 1.81) for Everolimus plus Exemestane and (0.78, 1.02) for Placebo plus Exemestane. CONCLUSIONS: Using QAPFS as the outcome measure provides a better assessment of the benefit induced by the treatment arms of the BOLERO-2 trial. The benefit of Everolimus + Exemestane over Placebo + Exemestane observed in the trial was maintained in this analysis. The estimates obtained as part of our analysis can be used in future cost effectiveness studies.

PCN125

WITHDRAWN

PCN126

COST-UTILITY ANALYSIS OF ENZALUTAMIDE FOR PATIENTS WITH PREVIOUSLY TREATED METASTATIC CAstration-RESISTANT PROSTATE CANCER (mCRPC)

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