mortality rate at 5 years following treatment as well as recurrence rates following chemoradiation. 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 CIN2NET 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, which was applied to a 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 one another. Sensitivity analyses considered screening tool performance, compliance, costs, and treatments. Results were expressed for 1,000 women alive at age 40 years. Results: Our model showed that all annual screening strategies were found to be more effective than the baseline. The most aggressive annual screening scenario (40 to 74 years) saved the lives of 21 more women per 1,000 than the baseline 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 to 75 years when compared to the baseline. Cost drivers were discount rate, screening frequency, utility values, treatment and sensitivity of mammography models. Conclusions: The greatest single cost contributor in a single cost program is the mammography itself. The more screens a women receives in her life, the greater the financial cost to society. Because both the life savings and costs rise together with the number of lifetime PFS gains, 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 therapeutics has been 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 method of studies and the cost-utility ratios. Methods: We analyzed studies related to blood cancers from the Tufts Cost-Effectiveness Analysis Registry (www.careegistry.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 (a targeted agent, chemotherapy, small molecule, monoclonal antibody, and immune checkpoint inhibitors). Results: Thirty-six percent were conducted in the US. The majority (62%) used the 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 $9,427 per 1,303,259 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 Ib 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 myFla 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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Objectives: 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 utility data with the mean PFS times estimated through the survival analysis of the reconstructed individual patient data from the BOLERO-2 trial. Results: Progression-free survival (robust mean; 95% robust confidence interval) was 44.73 weeks (41.03, 48.43) for Everolimus + Exemestane and 22.98 weeks (19.98, 26.08) for Placebo + Exemestane. The QAPFS (robust mean, 95% robust confidence interval) for the treatment arms of the trial were respectively 1.67 (1.53, 1.81) for Everolimus + Exemestane and 0.78 (1.02) for Placebo + 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.