BREAST CANCER

THE POTENTIAL IMPACT OF USING CHANGES IN SERUM HER2

OBJECTIVES: The aim of this study was to estimate the cost-effectiveness of cetuximab combined with radiotherapy compared to radiotherapy alone in patients with locally advanced squamous cell carcinoma of head and neck. METHODS: A decision-tree analysis was used to compare cetuximab combined with radiotherapy and radiotherapy alone in the treatment of patients with locally advanced squamous cell carcinoma, and neck from the perspective of the Bureau of National Health Insurance (BNHI) in Taiwan. The model was based on individual patient data extracted from an international phase III trial. The direct medical costs of care were based on the reimbursement of Bureau of National Health Insurance in Taiwan. One-way sensitivity analysis was performed by varying the costs and clinical parameters. RESULTS: The incremental cost per quality-adjusted life-year for patients receiving radiotherapy in combination with cetuximab compared to radiotherapy alone was in the range of $70,469/yr to $542,334/yr in the base-case analysis. Sensitivity analysis showed the robust results. CONCLUSIONS: This study demonstrated the Herceptin with change in therapy after 1 month based on changes in serum HER2. Serum HER-2 Increasing (20%), Not Changing, and Decreasing (20%). We constructed to simulate disease progression and therapy for MBC patients using our reports of five randomized trials. Costs include drug and administration costs, adverse events, treatment of relapses, and end-of-life costs. Utility estimates are derived from the literature. A mixed treatment comparison meta-analysis indirectly compares VMP vs. MPT. The analytical framework is based on ‘partitioned survival analysis’ that allocates survival data to be decomposed into three states: 1) alive before disease progression, 2) alive after progression; and 3) dead. The model estimates mean OS, quality-adjusted life-years (QALYs), costs and cost per QALY over a 30-year time horizon, and performs both 1-way and probabilistic sensitivity analyses. RESULTS: VMP’s mean OS is 61 months compared to 42.7 and 50.2 months for MP and MPT, respectively. Mean lifetime direct medical costs per patient are approximately SEK 1,193,000, and performs both 1-way and probabilistic sensitivity analyses. RESULTS: VMP’s mean OS is 61 months compared to 42.7 and 50.2 months for MP and MPT, respectively.

PCN86

COST-EFFECTIVENESS OF CETUXIMAB COMBINED WITH RADIOTHERAPY FOR PATIENTS WITH LOCALLY ADVANCED HEAD AND NECK CANCER IN TAIWAN

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OBJECTIVES: The aim of this study was conducted to estimate the cost-effectiveness of cetuximab combined with radiotherapy compared to radiotherapy alone in patients with locally advanced squamous cell carcinoma of head and neck. METHODS: A decision-tree analysis was used to compare cetuximab combined with radiotherapy and radiotherapy alone in the treatment of patients with locally advanced squamous cell carcinoma, and neck from the perspective of the Bureau of National Health Insurance (BNHI) in Taiwan. The model was based on individual patient data extracted from an international phase III trial. The direct medical costs of care were based on the reimbursement of Bureau of National Health Insurance in Taiwan. One-way sensitivity analysis was performed by varying the costs and clinical parameters. RESULTS: The incremental cost per quality-adjusted life-year for patients receiving radiotherapy in combination with cetuximab compared to radiotherapy alone was in the range of $70,469/yr to $542,334/yr in the base-case analysis. Sensitivity analysis showed the robust results. CONCLUSIONS: This study demonstrated the Herceptin with change in therapy after 1 month based on changes in serum HER2. Serum HER-2 Increasing (20%), Not Changing, and Decreasing (20%). We constructed to simulate disease progression and therapy for MBC patients using our reports of five randomized trials. Costs include drug and administration costs, adverse events, treatment of relapses, and end-of-life costs. Utility estimates are derived from the literature. A mixed treatment comparison meta-analysis indirectly compares VMP vs. MPT. The analytical framework is based on ‘partitioned survival analysis’ that allocates survival data to be decomposed into three states: 1) alive before disease progression, 2) alive after progression; and 3) dead. The model estimates mean OS, quality-adjusted life-years (QALYs), costs and cost per QALY over a 30-year time horizon, and performs both 1-way and probabilistic sensitivity analyses. RESULTS: VMP’s mean OS is 61 months compared to 42.7 and 50.2 months for MP and MPT, respectively. Mean lifetime direct medical costs per patient are approximately SEK 1,193,000, and performs both 1-way and probabilistic sensitivity analyses. RESULTS: VMP’s mean OS is 61 months compared to 42.7 and 50.2 months for MP and MPT, respectively.

PCN87

THE POTENTIAL IMPACT OF USING CHANGES IN SERUM HER2 LEVELS TO INITIATE THERAPY CHANGE IN HER2+ METASTATIC BREAST CANCER

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OBJECTIVES: The goal of personalized medicine is to identify the right treatment for the right patient at the right time. Prior to treating metastatic breast cancer (MBC) patients with Herceptin, tumors are tested for overexpression of HER2. Still for many patients with HER2+ patients (treated with herceptin), disease progression continues. It has previously been shown that for MBC changes in patients’ serum HER-2 levels during treatment is predictive of their eventual response to therapy. Through modeling and simulating we examined the potential impact of changing Herceptin therapy at the end of the planned treatment cycle for patients whose serum HER-2 levels predict an eventual lack of therapeutic response. METHODS: Markov Cycle Tree models were constructed to simulate disease progression and therapy for MBC patients using our custom simulation software, Profound. The progression of disease was dependent on the patient’s current therapy: Herceptin, Tykerb, or Pachtaxel, and model parameters were based on meta-analysis of clinical trials. Patients are stratified into three sets: Serum HER-2 Increasing (20%), Not Changing, and Decreasing (20%). We compared the following alternative treatment strategies: Paclitaxel, Herceptin, and initial Herceptin with change in therapy after 1 month based on changes in serum HER2. Patients removed from Herceptin either simply discontinued therapy or were switched to Tykerb. RESULTS: Compared with continued treatment with Herceptin, moving patients with >20% increase in Serum HER-2 to Tykerb resulted in an additional one-month life-gained. All other strategies performed worse than continued Herceptin therapy, including moving patients whose Serum HER2 levels are not decreasing to Tykerb. This highlights the importance of identifying the right subset of patients who will benefit from a change in therapy. CONCLUSIONS: A biomarker that can predict therapy failure prior to the end of treatment as part of the treatment decision-making process may extend the lives of patients.

PCN88

COST-EFFECTIVENESS OF LENOGRASTIM NEUTROPENIA DURATION IN ADULTS RECEIVING CHEMOTHERAPY FOR LEUKEMIA

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OBJECTIVES: The aim of present analysis was to assess cost-effectiveness of lenograsit in comparison with other G-CSFs—filgrastim and pegfilgrastim in Polish settings (threshold is about 100,009 PLN). METHODS: Analysis covered time horizon of one chemotherapy cycle. A public payer perspective was adopted for cost analysis. The costs included were based on Polish NHF reference costs list. Data on time to ANC recovery, number of days with fever, length of hospital stay and antibiotics use were obtained from randomized controlled trials (RCTs) identified in the conducted systematic review. These included trials on prophylactic G-CSF use as well as trials in which only patients with neutropenia were included. Equations describing costs and QALY according to neutropenia and fever length, hospital stay and antibiotic use were established. RESULTS: Estimated QALY difference between lenograsit and filgrastim is 0.0041 (CI95%[−0.0013; 0.0088]), compared to pegfilgrastim is 0.0047 (CI95%[−0.0086; 0.0086]). Total costs difference between lenograsit and filgrastim is €2,754 PLN (CI95%[−5,139; 475]), and compared to pegfilgrastim is €6,412 (CI95%[−4,045; 2,996]). Probability of lenograsit being cost-effective over filgrastim is 96.12% and over pegfilgrastim is 66.82%. CONCLUSIONS: Lenograsit is dominant over filgrastim and cost-effective in comparison with pegfilgrastim. Acknowledge: This analysis was supported by Sanofi-Aventis.

PCN89

COST EFFECTIVENESS ANALYSIS OF A CLINICAL PATHWAY FOR THE SURVEILLANCE OF HEPATOCARCINOMA IN COLOMBIA

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OBJECTIVES: The objective of this paper is an analysis of cost-effectiveness of a proposed clinical pathway for the surveillance of Services ID, Patients. 1) In Colombia compared to conventional management METHODS: Economic evaluation is performed by designing a Markov model to simulate two cohorts, one under a surveil-

PCN90

BORTEZOZIM IS COST-EFFECTIVE FOR FIRST-LINE TREATMENT OF MULTIPLE MYELOMA IN SWEDEN

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OBJECTIVES: To estimate the incremental cost-effectiveness of bortezomib plus mel-

PCN91

VALIDATION OF HEALTH OUTCOMES RESEARCH OF CANCER CHAIR

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OBJECTIVES: Validation of health outcomes research of cancer becomes critical for the quality assessment of outcomes research. In Principles of Good Practice for Decision Analytic Modeling published by ISPOR Task Force ISPOR Task Force in 2003, validation of data sources internal validation, and external validity; 3rd & predictive validation. Also, Health Technology Assessment NHS R&D HTA Pro-

Abstracts