CANCER—Cost Studies

ANALYSIS ON COST DIFFERENCE BETWEEN DAILY FILGRASTIM AND ONCE PER CYCLE PEGFILGRASTIM FOR PROPHYLAXIS AGAINST CHEMOTHERAPY-INDUCED NEUTROPENIA IN FRANCE AND GERMANY

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OBJECTIVE: To estimate the difference in total direct cost between daily filgrastim injections versus a single once-per-cycle pegfilgrastim injection over four cycles in France and Germany. METHOD: The perspective of analysis was that of the national health care services. A Markov model was used to estimate the total direct costs for neutropenia management over four chemotherapy cycles. Total costs included drug administration cost, drug acquisition cost, patient monitoring cost and febrile neutropenia (FN) management cost. Clinical data were obtained from a meta-analysis of two pivotal, randomised double-blind clinical trials comparing filgrastim and pegfilgrastim [Siena S et al. Oncol Rep 2003;10:715–24]. The drug administration cost and patient monitoring cost were estimated using a time and motion method. The per cycle drug administration cost for filgrastim and pegfilgrastim was €135 and €14, respectively, in France and €530 and €67 in Germany. The per cycle drug acquisition cost for filgrastim and pegfilgrastim was €43 and €22, compared to €31 and €15 in Germany. The cost for managing FN in France was €2439 per episode and €1816 in Germany. RESULTS: In both countries, a once-per-cycle pegfilgrastim injection was less expensive than daily injections of filgrastim. The mean total cost for neutropenia management with filgrastim and pegfilgrastim was, respectively, €6056 and €5213 over 4 chemotherapy cycles in France, and €6449 and €4850 in Germany. The difference was mainly due to a lower FN rate in the pegfilgrastim group (11% vs. 19% in the filgrastim arm (p < 0.05)) and a lower drug administration cost. CONCLUSION: Compared to filgrastim, the use of pegfilgrastim reduced the total cost for neutropenia management in France and Germany.

REPORT ON RETROSPECTIVE ANALYSIS OF HEALTH CARE COSTS OF BONE FRACTURES IN WOMEN WITH EARLY STAGE BREAST CANCER

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OBJECTIVES: The objectives of this retrospective database study were to estimate the treatment costs for bone fractures in older women (aged 65 years and older) who have early breast cancer and to compare those costs with the treatment costs for bone fractures incurred by older women who do not have breast cancer. METHODS: Direct costs for bone fractures in early breast cancer patients were evaluated using the Medicare 5% sample data (1997–1998), including the estimation of “medical treatment costs for bone fracture,” “excess treatment costs for bone fracture,” and “excess LTC costs for bone fracture.” Inpatient costs, medical treatment costs, and LTC admission rates were compared between a cohort of women with early breast cancer and bone fracture and an age-matched cohort of normal women with bone fracture, stratified by age group, status of hospitalization for bone fracture, and type of bone fracture. RESULTS: For older women with early breast cancer, the “direct cost for bone fracture” was estimated to be about $45,579, 57% of which is for treatment costs of the bone fracture (including 32% of inpatient hospital costs and 25% of non-inpatient hospital costs), 24% for other excess treatment costs, and 18% for excess long-term care costs. CONCLUSIONS: This study represents the first research on the costs of bone fracture in older women with early breast cancer. It shows that bone fracture is costly in this
group. However, there is no significant difference between the costs of bone fracture in older women with early breast cancer and older women who do not have breast cancer.

**PCN6**

HEALTH ECONOMIC EVALUATION OF A NEW CONTRAST PRODUCT FOR LIVER MRI IN COLORECTAL CANCER PATIENTS

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OBJECTIVES: The decision to decide for operating liver metastases in colorectal cancer (CRC) patients depends largely on the performance of imaging techniques. A more sensitive and specific test is only of value when it induces a change in therapeutic decisions. This study aimed at analysing the health economic impact of Resovist®, a superparamagnetic iron oxide used in magnetic resonance imaging (MRI) for the diagnosis of hepatic CRC metastases. The selected setting was Belgium. METHODS: A medical decision tree model simulating a patient’s evolution applying a 5-year time horizon was developed using 2 scenarios; 1) current diagnostic algorithms; and 2) Resovist® added to current algorithms. Clinical data reveal that, in comparison to current diagnosis Resovist® offers an increased sensitivity (95.4 vs. 74.3 %) and a moderately increased specificity (89.4 vs. 86.2 %), and such an improved test performance would change medical management in about 30% of patients. A Delphi panel with 16 members indicated that this change in practice would be in 29% from no operation to operation and in 71% from operation to no operation. The Delphi panel also provided medical resource use data. Costs of medical resources were obtained from the public health insurance. Life expectancy in function of chosen medical action was obtained from epidemiological literature. RESULTS: Resovist® increased costs with €655.4, and adds 1.32 months to life resulting in a cost-effectiveness = €5938 per Life Year Gained, which means good value for money. Sensitivity analysis (20% up and down) on performance of the diagnostic tool, cost of treatment options and change in medical practice showed robustness of the conclusions with a maximal range from €3527 to €10,032. CONCLUSION: This medical decision tree approach showed that Resovist® has the potential to improve medical management and outcomes at a very acceptable ratio between costs and effects.

**PCN7**

ORAL VINORELBINE IN THE TREATMENT OF NON SMALL CELL LUNG CANCER

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OBJECTIVES: Since May 2001, vinorelbine has been available to be administered in oral form at home in the treatment of non-small cell lung cancer. Its efficacy is similar to that of IV vinorelbine, gastrointestinal toxicity is more frequent. The periodicity of the treatment follow up in a hospital environment is poorly defined. The aim of this study is to establish the regimen, which minimises costs whilst ensuring patient safety. METHODS: A model was constructed in order to follow the repercussions of attending hospital every 3, 6, or 9 weeks compared to purely outpatient, weekly management. The corresponding costs were compared to those of conventional treatments used in the indication: gemcitabine, docetaxel and paclitaxel. Costs were estimated from the society perspective. For hospital courses, the DRG costs were adjusted by replacing the drugs component by the actual cost of the substances. For the oral form, primary care costs are allocated values using the price of oral form and the primary care visit or an hospital specialist consultation. RESULTS: For equivalent therapeutic efficacy, oral vinorelbine appears to be the least expensive substance: its annual follow up costs per patient using specialised consultations every 3, 6, and 9 weeks were €6360, €6190, and €5940. The least expensive regimen was the regimen involving entirely home management following initial day hospitalisation: €5940. IV cytotoxic agents administered in hospital: gemcitabine, vinorelbine, docetaxel and paclitaxel had annual follow up costs of €6970, €7400, €8320, and €9440 respectively. CONCLUSION: How can patient safety and the will to keep a patient at home at the end of their life be reconciled? An economic analysis can quantify the financial repercussions of the more or less extensive interpretations which clinicians place on the principle of precaution.

**PCN8**

PHARMACO-ECONOMIC ASSESSMENT OF CAPECITABINE ORAL CHEMOTHERAPY VERSUS FUFOF MAYO CLINIC CHEMOTHERAPY IN THE TREATMENT OF COLORECTAL CANCER

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Capecitabine (Xeloda®) was the first oral oncology drug launched on the French market for the management of metastatic colorectal cancer patients. This drug gives the opportunity to caregivers to treat cancer on an outpatient basis. OBJECTIVE: Assess the economic impact of capecitabine compared with the FuFol/Mayo Clinic chemotherapy regimen in metastatic colorectal cancer from the French payer’s perspective. METHODS: A RCT (SO 14796) demonstrated an equivalent efficacy of the two therapeutic strategies. Based on this clinical data, a cost minimisation analysis was carried out. Costs were assessed for hospitalisation, chemotherapy regimen administration, management of adverse events and patient monitoring. All these costs, with the exception