CANCER—Cost Studies

**PCN9**

COST OF MANAGEMENT VERSUS REIMBURSEMENT COST OF THE MANAGEMENT OF PATIENTS WITH SOLID TUMORS PRESENTING A FEBRILE NEUTROPENIA

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**OBJECTIVES:** Febrile neutropenia (FN) is a common side effect of cancer chemotherapy that considerably increases the total cost of management. Standard clinical practice of treating FN consists of either immediate hospitalization or ambulatory treatment depending on the patient’s risk of complications and comorbidities as evaluated by the MASCC score (Multinational Association for Supportive Care in Cancer). The objective of this study was to evaluate the budgetary impact of in-patient management of patients with FN.

**METHODS:** The study prospectively included 102 consecutive patients with a solid tumor admitted with FN to the emergency department of Institut Gustave Roussy between March and October 2006. Patients were treated according to standard clinical practice. Costs were analyzed from the hospital perspective. The cost of each stay was extracted from the hospital cost accounting system and compared to the reimbursement tariff received from Diagnosis Related Group (DRG). The observed length of hospital stay was also compared with the mean length of stay in the DRG.

**RESULTS:** Mean (SD) patient age was 50.7 ± 14.7 years and 68 patients (66.6%) were women. For all patients, FN followed the administration of chemotherapy. Fourteen (13.7%) patients were treated on an out-patient basis and were excluded from this analysis. The mean length of stay of the 88 in-patients was estimated to be 6.2 ± 7.2 days. The mean cost per stay was estimated to be €6096 (median: €3796), whereas the mean tariff reimbursement was €5125 (median: €4319).

**CONCLUSIONS:** On average, the management of in-patients with FN is in deficit by €971 per stay at Institut Gustave Roussy. Five specific patient stays were largely responsible for the global deficit, as in these cases, the duration of hospitalisation was longer than that specified in the DRG.

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BUDGET IMPACT ANALYSIS OF DIFFERENT TREATMENT PROTOCOLS FOR TRASTUZUMAB

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**OBJECTIVES:** Trastuzumab, a monoclonal antibody, is used in the adjuvant treatment of HER2+ breast cancer. Several different doses and schedules are used, but the optimal duration or dosing frequency of trastuzumab is not known. Most clinical evidence is from 1-year treatment, but shorter 9-week treatment has also been studied. The aim of this study was to evaluate the budget impact of the different treatment protocols.

**METHODS:** The perspective of the study was of a single hospital district with 250,000 inhabitants (i.e. payer), in which all trastuzumab treatment is concentrated to one hospital. Clinical experts described the current treatment, which included both short and long administration of trastuzumab. A budget impact model, which took into account the number of patients, HER2+ prevalence, length and cost of treatment, as well as effectiveness, was created. Estimates concerning distant disease free survival (DDFS) were derived from the published data of FinHer-trial. The effectiveness of both long- and short-term treatment was assumed to be equal.

**RESULTS:** In one year, adjuvant trastuzumab treatment caused a total net budget impact of €119,000 and €619,000 if all patients were treated with either short or prolonged therapy alone, respectively. The difference was around €500,000 in one year. However, in a 4-year period the impact of using long instead of short therapy was €2 million. The annual incidence of breast cancer in the area was 176 and the prevalence of HER2+ was 12%. Adjuvant treatment with trastuzumab prolongs DDFS and thus reduces the need of treatment of advanced breast cancer.

**CONCLUSIONS:** Length of treatment had a substantial influence on costs. Investments in finding optimal treatment strategy for expensive medications may appear highly cost-effective. Future trials will show to what extent the duration of trastuzumab treatment affects the effectiveness of the therapy.

**PCN11**

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