Costs of Breast Cancer Prior to and Following Diagnosis

Broecke S, Den Hond E, Torfs R, D’Hooghe T, Simons S
Flemish Institute for Technological Research, Mol, Belgium, University Hospitals Leuven, Leuven, Belgium, Katholieke Universiteit Leuven, Leuven, Belgium

OBJECTIVES: This incidence-based cost-of-illness analysis aims to quantify the costs associated with female breast cancer in Flanders for the year prior to diagnosis and for each of the five years following diagnosis. METHODS: A bottom-up analysis from the societal perspective included direct health care costs and indirect costs of productivity loss due to morbidity and premature mortality. A retrospective case-control study design compared total costs of breast cancer patients with costs of an equivalent standardised population with a view to calculating the additional costs that can be attributed to breast cancer. The sample was made up of women who had undergone surgical treatment for breast cancer and who were affiliated with the Christian Health Insurance Funds. Resource utilisation data were derived from national publications, the Christian Health Insurance Funds and statistical institutes. RESULTS: The sample consisted of 20,439 breast cancer patients. Total average costs of breast cancer amounted to €107,456 per patient over 6 years. Total costs consisted of productivity loss (89% of costs) and health care costs (11% of costs). Health care costs did not vary with age at diagnosis. Health care costs of breast cancer patients converged with those of the general population at five years following diagnosis. Patients with advanced breast cancer stadia had higher health care costs. CONCLUSIONS: To reduce costs associated with breast cancer, attention needs to be focused on decreasing the productivity loss from breast cancer. The implementation of new techniques to prevent, diagnose, and treat breast cancer will not impact direct health care costs, but may influence indirect costs of productivity loss.

Costs of Advanced Gastric Cancer (AGC) in Brazil from the Public Payer Perspective

Clark O1, Santos E1, Ager G1
Evidencias Medicas, Campinas, Sao Paulo, Brazil, 1Roche Brazil, Sao Paulo, SP, Brazil

OBJECTIVES: In Brazil, 140 million citizens (-40% of the population) depend on the public health care system. Advanced gastric cancer (AGC) is the second most frequent cause of death in Brazil; 10,645 per year. This disease appears among the most costly cancers to treat. Objective was to identify the medical resource usage (MRU) to treat AGC in the public health care sector in Brazil and estimate the associated costs in the public health care sector. METHODS: A questionnaire was developed to identify the medical resource usage (MRU) of managing AGC in the public health care system. The questionnaire was applied to 20 oncologists and 20 nurses in a structured interview. MRU data were extracted according to the following stages: 1) diagnosis and staging; 2) 1st line treatment; 3) 2nd line treatment; 4) best supportive care (BSC); and 5) terminal care. Then, modified Delphi panels were conducted in the 5 largest cities of Brazil to reach a consensus on the base-case value and on possible ranges for each resource identified. A micro-costing technique was applied to 20 oncologists and 20 nurses in a structured interview. MRU data were extracted according to the following stages: 1) diagnosis and staging; 2) 1st line treatment; 3) 2nd line treatment; 4) best supportive care (BSC), and 5) terminal care. Then, modified Delphi panels were conducted in the 5 largest cities of Brazil to reach a consensus on the base-case value and on possible ranges for each resource identified. A micro-costing technique was applied to 20 oncologists and 20 nurses in a structured interview. MRU data were extracted according to the following stages: 1) diagnosis and staging; 2) 1st line treatment; 3) 2nd line treatment; 4) best supportive care (BSC), and 5) terminal care.

Total mean cost per patient were: diagnostic and staging: R$1,283 (US$377); 1st line treatment: R$9056 (US$2682); 2nd line treatment: R$9056 (US$2682); and terminal care: R$9056 (US$2682). The total mean cost per patient were therefore R$9056 (US$3773) of which chemotherapy drugs represented 37%. CONCLUSIONS: Findings suggest that the total mean cost of treating AGC per patient in the public sector in Brazil is R$9056 (US$3773).

Cost Per Disease Stage of Advanced Gastric Cancer in Brazil from the Private Payer Perspective

Clark O1, Santos E1, Ager G1
Evidencias Medicas, Campinas, Sao Paulo, Brazil, 1Roche Brazil, Sao Paulo, SP, Brazil

OBJECTIVES: Gastric cancer is the second most frequent cause of cancer death worldwide. Approximately 22,000 new cases are expected in Brazil annually. Our aim was to estimate the cost per disease stage of advanced gastric cancer in Brazil in the private health care sector. METHODS: A questionnaire was developed to identify the medical resource usage (MRU) of managing gastric cancer in the private health care system. The questionnaire was applied to 40 experts (20 oncologists and 20 nurses) who represented different Brazilian regions. MRU data were extracted according to the following stages: 1) diagnosis and staging; 2) 1st line treatment; 3) 2nd line treatment; 4) best supportive care (BSC), and 5) terminal care. Then, modified Delphi panels were conducted to reach a consensus on the base-case value and on possible ranges for each resource identified. A micro-costing technique was then applied to calculate costs. Financial values were translated into USD based on the exchange rate of R$2.40 = US$1.0. RESULTS: The most used diagnostic procedures were upper digestive endoscopy, abdominal computed axial tomography (CAT) and thoracic radiography. SUT/Ipilimumab-based chemos was the oncologics first choice for both 1st and 2nd line treatment (48% and 42%, respectively). Most commonly used resources in the BSC/terminal care stages were medical visits and blood analyses. The mean cost per patient were diagnostic and staging: R$1,283 (US$377); 1st line treatment: R$3,072 (US$910); 2nd line treatment: R$6,406 (US$1,907); BSC: R$5,833 (US$1,739); and terminal care: R$5,743 (US$1,739). The total mean cost per patient were R$45,768 (US$19,070), of which chemotherapy drugs represented 66%. CONCLUSIONS: The findings indicate that the most expensive stage in treating advanced gastric cancer in the private sector in Brazil is the 1st line treatment. Further studies are recommended to explore the results.

The Economic Evaluation of Sunitinib and Sorafenib in Patients with Metastatic Gastric Cancer (mGC) in the Czech Republic

Demlova R1, Ondrackova B2, Kominek J1
Masaryk Memorial Cancer Institute, Brno, Czech Republic, 1Masaryk University, Brno, Czech Republic

OBJECTIVES: Sunitinib and sorafenib, the multikinase inhibitors, launched into the Czech market in the mid-2006 as a second-line treatment of metastatic renal cell carcinoma (mRCC) and were not yet economically evaluated in real clinical practice. The aim was to assess direct medical costs in mRCC patients treated in comprehensive cancer centre from a health care payer perspective. METHODS: Between May 2006 and May 2009 11 mRCC patients were treated with sorafenib after previous cytokine therapy failure (mean age 52 years; 23 men). The progression of disease and costs (including concomitant medication, examination, check-ups, hospitalization) were assessed each two-months of therapy. Cost of cycle to progression, cost of cycle after progression and the structure of costs were determined. (1€ = 26.8CZK) RESULTS: Seventeen patients started therapy with sunitinib, 8 of which were converted to sorafenib after progression. 3 patients finished sunitinib therapy due to adverse events (AE). Fourteen patients started with sorafenib therapy, 2 of which were converted to sunitinib due to AE, other 2 patients were converted to sunitinib after progression. The main AE were skin toxicity, oedema, arthralgia and other pain. The dose was reduced in 10 patients due to AE. Median number of two-month progression free cycles was 4; mean cost of one cycle was €7546. Cost of medication formed 95.4% (sunitinib=849€, sorafenib 94.3%), investigations and check-ups 4.42% and hospitalizations 0.18% of total costs. Median two-month cycles after progression was 2 with mean cost €4840. Sunitinib and sorafenib formed 90.5%, investigations and check-ups 6.2%; and hospitalizations 0.8% of total costs. Patients died. CONCLUSIONS: The analysis of direct medical costs in patients with mRCC confirmed high costs concerns with multikinase inhibitors’ therapy. Since data on the economic burden of oncology treatment in the Czech Republic is limited it is essential to start with cost-of-illness studies to enable pharmacoeconomic analyses for drug reimbursement.

Cost of Renal Cell Carcinoma Treatment in Patients Treated with Interferon-Alpha

Purunnen T1, Vuorenrii R1, Kajaja V2, Pirhonen S1, Kallokompa-Lehtinen P1
1University of Kuopio, Kuopio, Finland, 2University of Turku, Turku, Finland

OBJECTIVES: Renal cell carcinoma (RCC) accounts for three percent deaths in Finland. However, information on treatment modalities and the cost of treatment in different hospitals is scarce. The aim of the study was to clarify the current situation