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Cost analysis of metastatic non-small cell lung cancer (NSCLC) after completion of chemotherapy with the introduction of Erlotinib

Rashid Ahmed

University of North Dakota, USA

Erlotinib has been funded for use as a second and third line treatment of advanced NSCLC since 2006 in Manitoba, Canada. Prior research examined, the cost effectiveness of Erlotinib across various countries, yet results may not be generalizable to the healthcare system within Canada. The present paper outlines the cost effectiveness of Erlotinib by examining population-based total costs, service utilization, and clinical outcomes of patients with metastatic NSCLC receiving Erlotinib were explored from the time they completed chemotherapy till the end of follow-up date (31 Dec 2012), death, or relocation. Metastatic NSCLC patients, who were approved for Erlotinib in Manitoba between June 2006 and 31 Dec 2012, were selected. The Manitoba Cancer Registry (MCR) and chart review were used to capture the information on treatment and clinical outcome. Service utilization information and direct cost information were extracted from the electronic health records known as ARIA, the Physicians Claims, the Hospital Discharge database, and the Drug Program Information Network. Survival rate, using the Kaplan-Meier method, was calculated from the date of the Erlotinib approval date till end of follow-up date, Dec 31, 2012, or death. The median survival rate was 40.1 weeks. The average cost per patient was CA\$ 30,503 and CA\$ 987 per patient-week for patients who received Erlotinib. Ninety percent of the cost was accounted for by hospital stays and drug costs. General demographic patterns per cost suggested that current smokers tended to incur higher costs compared to non-smokers. The results of this study appear to replicate patterns of other studies examining the cost effectiveness such that Erlotinib appears to have a high survival rate paired with lower costs related to side effect management.

Biography

Rashid Ahmed has completed his PhD in Bio-Statistics from University of Waterloo; ON; Canada. He has strong background in epidemiology and biostatistics and has experience in the development of statistical methods for the design of community-based interventions and the analysis of longitudinal health data. Currently, he is developing diagnostic measures for joint models for longitudinal and survival data in the presence of non-ignorable missing data. Currently, he is working as an Associate Dean for Research with the College of Nursing and Professional Disciplines at the University of North Dakota. He has published more than 30 papers in reputed journals and has been serving as reviewer of several journals.

rashid.ahmed@umanitoba.ca

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