

# Financial Impact Of Cancer Treatment: An Empirical Study In Kuching

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**Abstract:** The financial burden of cancer treatment has a huge influence on the patients and their families. However, there is a lack of information about the financial impact of cancer treatment on cancer patients. Better planning of financial expenses for cancer treatment can improve the recovery process of the patient. Accordingly, this paper serves as a preliminary study on the direct and indirect cancer treatment costs borne by the cancer patients. By surveying cancer patients or survivors in the Kuching area, the empirical findings indicated that the cost of cancer treatment in the public hospitals is far more affordable than private hospitals. Moreover, the empirical results showed that the main expenses (cost of doctor appointments, consultation and treatment costs) are greatly affected by the financial condition of cancer patients. The factors of "additional expenses of cancer" such as cost of food, cost of household bills and cost of specialist equipment and modifications were also statistically supported as causing high financial burdens on the respondents. Daily expenses like food, groceries, and education expenses have been reduced due to finance treatment. Awareness about cancer treatment costs is important so that patients can better plan accordingly.

**Index Terms:** awareness, cancer patients, cancer treatment, direct and indirect costs, financial burden.

## 1. INTRODUCTION

MALAYSIA has a two-tiered system of healthcare services that includes the public and private sectors (Quek, 2009). The public sector services are paid for by Malaysian citizens through the general taxation of income, hence the treatment cost is heavily subsidized by the government. The treatment cost in the private sector is paid for by the patients or through an insurance company. Cancer treatments are provided by oncologists to cure and control cancer growth. However, when cancer growth is no longer curable nor controllable, advanced treatments may be given to relieve pain or ease the symptoms of advanced cancer. Unfortunately, a major problem faced by patients is the lack of preliminary information about the potential financial impact of cancer treatments, and the lack of awareness about the importance of financial planning throughout the course of their cancer treatments. This scenario harms them, as most of them are reluctant to undergo appropriate cancer treatments due to their fear of lack of financial support. Yet it is imperative that they receive cancer treatments in a timely and continuous manner. Otherwise, it is likely that their cancer growth may accelerate, which may greatly increase the chances of frequent hospitalization and more expensive cancer treatments later. Hence, initial financial planning plays an important role throughout their course of treatments.

This study intends to identify main and additional expenses of cancer that has high impact on the financial burden of the patient. It also aims to identify financial sources for cancer treatment and other expenses. In addition, this study also compares the cancer treatment costs between private and public hospitals. Specifically, the objective of this paper is to quantify the financial impact of cancer treatments in terms of

direct and indirect expenses faced by cancer patients in Kuching, Malaysia.

## 2 LITERATURE REVIEW

### 2.1 Cancer as a Worldwide Issue

Cancer is a major disease affecting the world today. The global cancer burden is expected to have increased to 18.1 million new cases and 9.6 million deaths in 2018 (Bray et al., 2018). One of every five men and one out of six women worldwide develop cancer, and one out of eight men and one out of 11 women die from cancer (Bray et al., 2018). According to the National Cancer Registry (2016), 103,507 new cancer cases and 64,275 cancer deaths were found in Malaysia, an increase of fivefold compared to 21,464 cases in 2003. Cancer is one of the top three driving reasons of death and it is estimated that one in four Malaysians will develop cancer by the age of 75 (Akhtari-Zavare et al., 2018). As reported by the National Cancer Registry (2016), the most common cancers in Malaysia are breast cancer, colorectal cancer, lung cancer, cervical cancer, nasopharyngeal cancer, liver cancer, and prostate cancer. It is reported that males comprise a total of 46,794 cases, which is 45.2% while women comprise about 56,713 cases. Most of these cancers are viewed as terminal because the treatment can only control the sickness, not cure it. Thus, when people are diagnosed with cancer, they have a 50.0% chance of survival; early detection would normally give a person a higher percentage rate of survival (DeSantis et al., 2014).

### 2.2 Financial Impact of Cancer

The costs of cancer treatment can cause financial distress for existing or newly diagnosed cancer patients and their families. According to Kantarjian and Rajkumar (2015), the reason behind the soaring cancer treatment costs is the price of cancer drugs. As Shamasundari (2016) mentioned, breast cancer treatment constitutes the highest cost among all cancers, with an estimated maximum medical cost of RM395,000. The second- and third-highest estimated maximum costs are for the treatment are rectum cancer and kidney cancer, at RM121,000 and RM98,000, respectively. The least costly estimated maximum cancer treatment is thyroid cancer, at RM22,000. The costs include diagnosis, room rate, consultation fees, surgery and therapy. The cost of

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