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RELATIONSHIP OF ETHNICITY, AGE AND GENDER TO INCIDENCE OF BLADDER AND NASOPHARYNGEAL CANCERS IN KUCHING, SARAWAK

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ABSTRACT

Records of cancer disease in Sarawak are semi-regular, with limited information available in the National Cancer Registry of 2003, and a more detailed record in the Sarawak Cancer Registry Report of 2005. These documents largely contain information on incidence and basic descriptive statistical account of age-standardised incidence rate for each type of cancer. Efforts to link incidence records of cancers in Sarawak with susceptibility factors such as ethnicity, gender and age are lacking and published reports of such studies are rare. In this paper, we present findings from the latest incidence analysis of bladder carcinoma (bladder cancer) and nasopharyngeal carcinoma (nose and throat cancer) in Kuching, and discuss probable linkage of incidence with ethnicity, gender and age. Our data provides useful baseline information for studies targeted at correlating non-environmental factors with bladder and nasopharyngeal cancers in the Kuching population of Sarawak.

Keywords: bladder cancer, nasopharyngeal cancer, incidence, susceptibility factors

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INTRODUCTION

Based on the latest published national record, the number of cancer cases in Sarawak for the year 2003 totalled at 1,356, comprising 645 and 711 cases for men and women respectively (Lim and Halimah, 2004). This record in the National Cancer Registry 2003 lacks a detailed breakdown of the types of cancer and their incidence among the different ethnic groups in

Sarawak. It does not report the analysis of patient age and gender for each types of cancer. In a more detailed account (though not the latest) published by the Sarawak Health Department (Ooi *et al.*, 2005), the incidence of cancers in Sarawak from 1996 to 2000 is 9,666 with 4,804 and 4,862 cases in males and females respectively. This record has a listing of incidence in relation to ethnic groups and age, although lacking any description that infers ethnicity, gender and age as susceptibility factors.

To date, literature on cancer research in Sarawak that implied ethnic-associated prevalence can only be found for studies on the nose and throat cancer or nasopharyngeal carcinoma (NPC). In a study by Devi *et al.* (2004) carried out from 1996 to 1998, high incidence of NPC was found in the native population, particularly in the Bidayuh ethnic group. Their findings indicate that the risk in Bidayuh men and women is 2.3 and 1.9 folds respectively higher than the Sarawak average; and the highest incidence are found in those within the age group of 50 to 60 years old. Globally, the highest rate is found among the Chinese living in Southeast China, specifically in the provinces of Guangdong and Hong Kong (reviewed in Tao and Chan, 2007). Interestingly, studies by Devi *et al.* (2004) reveal that the Sarawak Bidayuhs have a high age-standardised incidence rate which even exceeds that of the Chinese in Hong Kong and Singapore.

In the case of bladder cancer, proper analysis of incidence in Sarawak in relation to linkage with ethnicity, gender and age factors has not been found in existing literature. Even for NPC, similar studies since the last decade are limited. As such, this paper presents current findings from a proper analysis of the incidence of these two types of cancer in relation to ethnicity, gender and age as potential susceptibility factors.

METHODOLOGY

Bladder carcinoma patient data were collected between November 2003 and January 2007 from those admitted and