

Chapter II

4

NASOPHARYNX
ICD-10 C11

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Incidence

The age standardized incidence rate of nasopharyngeal cancer (NPC) in Thailand is 2.8 and 1.4 per 100 000 in males and in females respectively (Figure 2.4.1). Chiang Mai has the highest incidence rate of 3.8 for males and 1.6 for females. The lowest incidence rate occurs in Prachuab Khiri Khan, the new registry site as shown in Figure 2.4.2. The sex ratio of male to females is 2:1. It is not rare in the young age group. The incidence begins to rise after the second decade in both sexes and reaches peak in the sixth decade for men. In women, the peak age is at 50 years old. The percent of morphological verified of cases is over 83% except for Prachuab Khiri Khan that is 41.7%. So far our ability to diagnose the localized disease is quite low and the unknown stage is high.

Risk factors

Geographical distribution of NPC suggests a multifactorial pathogenesis of genetic susceptibil-

ity, environmental factors and oncogenic virus infection. Early dysplastic changes are related with allelic loss on chromosome 3 and 9 resulting in the inactivation of tumor suppressor genes p14 , p15 and p16 (Lo, *et al.*, 2000). The ethnic group that has the highest risk is Southern Chinese. People in South East Asia has moderate incidence. The highest incidence rate in the world is in Hongkong which is 21.4 for males and 8.3 for females (Parkin, *et al.*, 2002). In Thailand, the highest incidence is found in Chiang Mai which 14% of their population are hilltribers (www.chiangmaipol.net/webeng/webchiangmai). These hilltribers are said to migrate from South China.

Latent infection by Epstein-Barr virus (EBV) is important in progression to severe dysplasia of the nasopharynx (Chan, *et al.*, 2002). High level of IgA-VCA to EBV in NPC patients reflects break of host cells during replication of the virus. In Thailand, we found high titer of this antibody in 86.28%

Figure 2.4.1 Nasopharynx cancer in different regions, 1998-2000

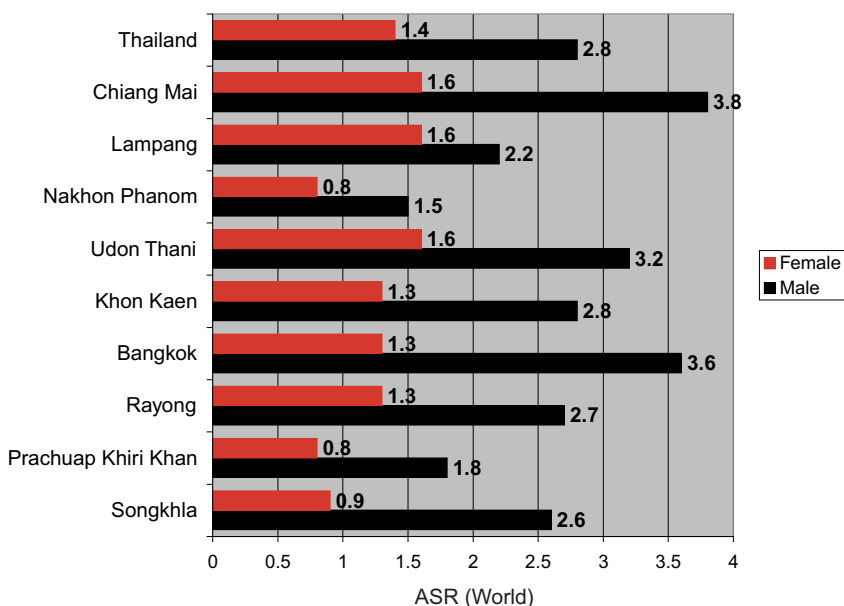
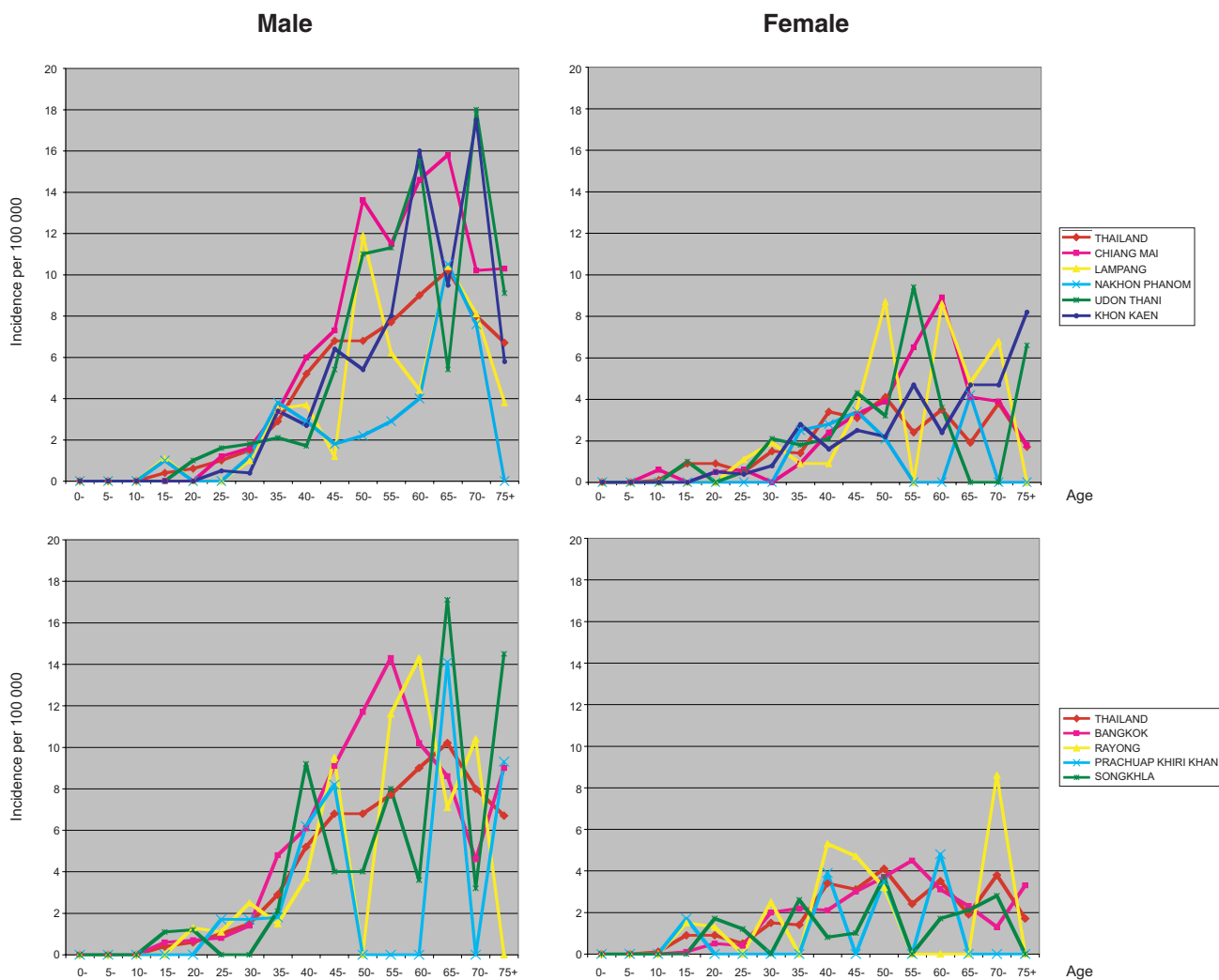


Figure 2.4.2 Age-specific incidence rates of nasopharynx cancer, 1998-2000



of our NPC patients (Sumitsawan, *et al.*, 1995). Identification of EBV genome in malignant cells in NPC is strong evidence of this viral etiology (Mutirangura, 2000).

Dietary factors have focused on preserved foods : fermented fish sauce, salted fish, salted shrimp paste, salted soybeans, salted duck

eggs, canned pickled vegetables (Yu, *et al.*, 1989). These foods are the everyday consumption for Thai people.