

## Chapter 5

### Conclusions and Discussion

This chapter the objectives of this study were to explore the temporal trends for liver cancer and creating statistic modeling in estimate incidence rate for liver cancer in Songkhla. The sample is patients with liver cancer 1,254 people in Songkhla province during 1989-2007.

#### 5.1 Conclusions

The temporal trend of the incidence rate of liver cancer is higher in males than females. The incidence rate of liver cancer having increased 2000-2007 was highest in 2007 for both genders. Within the religions grouping the incidence rate of liver cancer was highest among Buddhist. The temporal trends of the incidence rate of HCC liver cancer had a higher rate than type CCA for both gender. The highest incidences occurred in the 60+ age group than in any other age group. Hat Yai and Muang had liver cancer incidence rate higher than other districts. While results from the model adjusted for gender, topography, year, area and religion show that Hat Yai and Ratthaphum had incidence rate higher than other districts.

#### 5.2 Discussion

We found that the trend of incidence rate was higher in males. This agrees with two other studies examining gender difference in liver cancer incidence rates, in which the male to female ratios were 4:1 (Akriviadis et al, 1998) and 2.2:1 (Deerasamee et al, 1999). This result may be due to the male behavior. Liver cancer is caused by

transmission of the hepatitis B virus between people through contact with the blood or other body fluids (i.e. human milk, saliva, semen and vaginal fluid) of an infected person (Bureau of General Communicable Diseases, 2008; World Health Organization, 2008).

The incidence rate of liver cancer in Songkha increased after year 2000. This is in contrast with a study of liver cancer in Japan between 1990 and 2000 which found that a decrease after 2000 was caused by vaccination type HCV (Tanaka et al, 2008) and a study trend of liver cancer in Hong Kong between 1985 and 2004. The trend of HCC higher than CCA which agreed with a world wide study found that there was a trend of 80 to 90% of HCC. The CCA accounts for an estimated 15% of liver cancers worldwide (Nakanuma et al, 1999). For age liver cancer patients in Songkhla province, the majority where in the 60+ age group. Which agreed with the result of a liver cancer study in China, where the incidence rate of liver cancer was observed for the most part in the 40-69 age groups (Hoa et al, 2003). In Hong Kong the liver cancer patients were aged more than 60+ age group (Law and Mang, 2007).

### **5.3 Limitation and Future Research**

The findings in this thesis are subject to at least three limitations. First, incidence data in the provincial level has not detailed enough to determine national health policy. Second, from the information for this study lack of analysis of variables such as medical process and how to diagnose patients. Third, the data of these studies can not conclude the risk factors which affect the increase or decrease of liver cancer.