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SUPPAKIT SATTAYARATH : A STUDY ON THE OPTIMUM SIZE OF UDON THANI REGIONAL CANCER CENTER. THESIS ADVISER : ASST.PROF.CHARUMA ASHAKUL, Ph.d., SIRISAK PURIBHAT, M.D., 81 pp. ISBN 974-583-076-3

The study attempts to estimate the optimal number of beds for inpatients of Udon Thani Regional Cancer Center. The hospital serve five provinces namely Udon Thani, Sakon Nakhon, Ngongkai, Nakhon Phanom, and Leoi. Demand for beds of each site of cancer is predicted for the year 1991 to 2000. The data used in this study included 12,915 medical records of cancer inpatients of the 5 provinces between 1979 to 1990 and the length of stays of 1,162 cancer inpatients treated at the National Cancer Institute in 1990.

The morbidity rates of liver cancer and cervix uteri cancer, which were the highest in the service area between 1979 and 1990, are predicted to be the highest from 1992 to 2000. In order to forecast the morbidity rates, linear forecasting model perform well for all sites of cancer, except for skin cancer and oral cavity cancer which are better fitted by exponential forecasting model. The average length of stays of oral cavity cancer inpatients is 69.13 days which is very high comparing to the average of 41.164 days for all samples. The estimated optimal number of beds until the year 2000 ranges from 359 to 469 beds.