

## 鹿児島県における肺癌集団検診の評価 —検診目的達成度の検討—

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## An Evaluation of Mass Screening for Lung Cancer in Kagoshima Prefecture, Japan

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### Abstract

The purpose of this research is to evaluate the precision of mass screening program for lung cancer in Kagoshima Prefecture by examining the resection rate, the complete resection rate, the proportion of stage I lung cancer, the detection rate, and the standardized detection ratio (ratio of detected to expected number of lung cancer cases).

The numbers of people taking mass screening for lung cancer in Kagoshima Prefecture were 43,751 between 1987 and 1989 (first period), 404,258 between 1990 and 1995 (second period), and 604,114 between 1996 and 2001 (third period). In the third period (1996-2001), 10.1% of the 40 and older population of Kagoshima Prefecture took the mass screening program for lung cancer, and the proportion of people actually taking the mass screening among the municipalities that had the screening program was 19.1%.

During the study periods, 544 cases with lung cancer were detected by the mass screening program, and the detection rate was 51.5 per 100,000 people. Over all the three study periods, the resection rate, the complete resection rate and the proportion of stage I lung cancer were 56.8%, 46.5%, and 41.0%, respectively. The standardized detection ratio was 0.28 in the second and third study periods, indicating the low detection rate of the mass screening program for lung cancer in Kagoshima.

In general, detected cases taking annual checkups show better prognosis than that of those who do not take annual screening program. In the present study, however, the survival analysis revealed that there was no significant difference in the prognosis between the lung cancer cases having annual checkups and those who did not ( $P=0.73$ ).

Low proportion of cases with clinical stage I among the detected cases having annual checkups was thought to be one of the reasons. These results indicate that the current screening program in Kagoshima Prefecture fails to detect some of the cases with early stage of cancer. Further examination by computerized tomography should be recommended to all detected cases by chest radiography and/or sputum cytology.

In summary, further efforts are needed for the improvement in the detection rate of mass screening program for lung cancer in Kagoshima Prefecture, especially for the cases with early stage of cancer.

**Key words;** Lung cancer, mass screening, Kagoshima Prefecture

