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The Results and Prognostic Factors of Chemo-radiation Therapy in the Management of Small Cell Lung Cancer

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Purpose : Although small cell lung cancer (SCLC) has high response rate to chemotherapy and radiotherapy (RT), the prognosis is dismal. The authors evaluated survival and failure patterns according to the prognostic factors in SCLC patients who had thoracic radiation therapy with chemotherapy.

Materials and Methods : One hundred and twenty nine patients with SCLC had received thoracic radiation therapy from August 1985 to December 1996. Seventy-seven accessible patients were evaluated retrospectively among 87 patients who completed RT. Median follow-up period was 14 months (2- 87months).

Results : The two years survival rate was 13% with a median survival time of 14 months. The two year survival rates of limited disease and extensive disease were 20% and 8%, respectively, with median survival time of 14 months and 9 months, respectively. Twenty two patients (88%) of limited disease showed complete response (CR) and 3 patients (12%) did partial response (PR). The two year survival rates on CR and PR groups were 24% and 0%, with median survival times of 14 months and 5 months, respectively ($p= 0.005$). No patients with serum sodium were lower than 135 mmol/L survived 2 years and their median survival time was 7 months ($p=0.002$). Patients whose alkaline phosphatase lower than 130 IU/L showed 26% of 2 year survival rate and showed median survival time of 14 months and those with alkaline phosphatase higher than 130 IU/L showed no 2 year survival and median survival time of 5 the months, respectively ($p=0.019$). No statistical differences were found according to the age, sex, and performance stat. Among the

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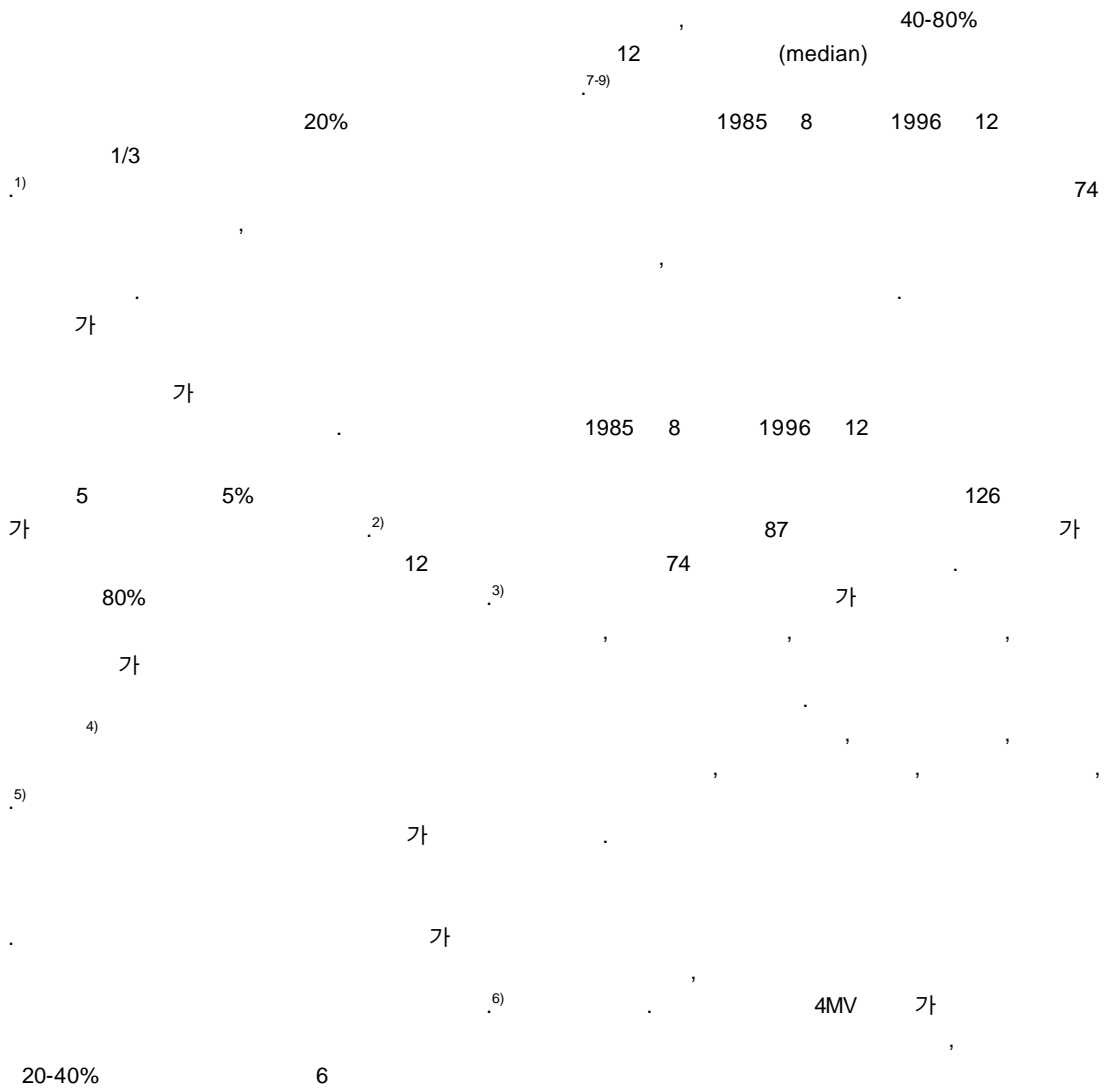
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patients with extensive disease, two year survivals according to the metastatic sites were 14%, 0%, and 7% in brain, liver, and other metastatic sites, respectively, with median survival time of 9 months, 9 months, and 8 months, respectively ($p>0.05$). Two year survivals on CR group and PR group were 15 % and 4%, respectively, with a median survival time of 11 months and 7 months, respectively ($p=0.01$).

Conclusion : For SCLC, complete response after chemoradiotherapy was the most significant prognostic factor. To achieve this goal, there should be further investigation about hyperfractionation, dose escalation, and compatible chemo- radiation schedule such as concurrent chemo-radiation and early radiation therapy with chemotherapy.

Key Words : Small cell lung cancer, Prognostic factor, Radiation therapy



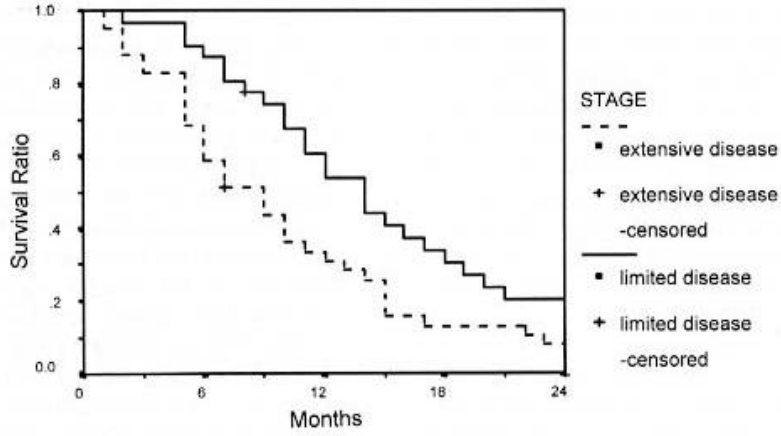


Fig. 2. Survival rate by stage for patients with small cell lung cancer.

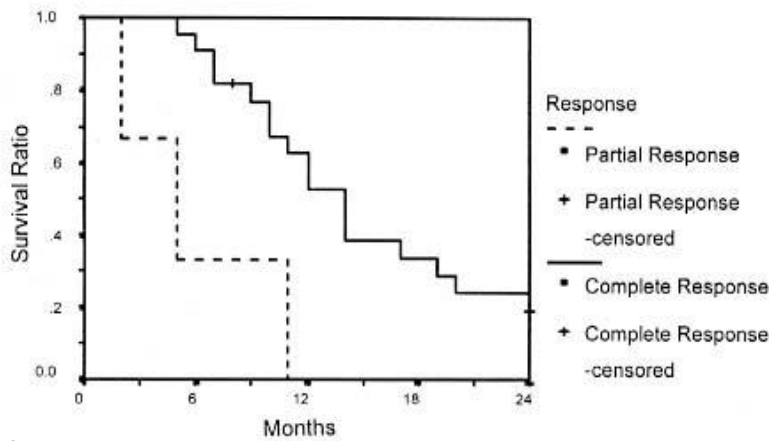


Fig. 3. Survival rate by treatment response in limited disease for patients with small cell lung cancer.

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