Background: Asbestos exposure will increase the risk of lung cancer, mesothelioma and pleural disorders, including asbestosis, pleural plaques, pleural thickening, and pleural effusions. Pleural plaques are the most frequent response to asbestos exposure, appearing even with low-dose, often intermittent, exposures. Therefore, radiographic evidence of pleural plaques in lung cancer patients indicates the history of asbestos exposure.

Methods: Between 2003 and 2011 in our hospital, there were 1190 patients in whom pleural plaque was confirmed by computed tomography (CT) scanning. Among those patients, 64 were histologically diagnosed as primary lung cancer.

Results: There were 63 men. The frequent histologic types of the cancers were adenocarcinoma (23 patients) and squamous cell carcinoma (22 patients), followed by small cell carcinoma (8 patients). 16 patients had Stage1A disease, 8 patients had stage 1B disease, 3 patients had stage 2B disease, 8 patients had stage 3A disease, 6 patients had stage 3B disease and 23 patients had stage 4 disease. The median overall survival was 23.0 months and 1 year, 2 year and 5 year survival rate of all the patients were 56.0 %, 49.0 % and 23.7 %, respectively. Based on the primary treatment, 28 patients received surgery, 4 patients received radiation therapy, 5 patients received chemoradiotherapy, 19 patients received chemotherapy and 6 patients received best supportive care. The median overall survival of the patients treated by surgery, radiation therapy, chemoradiotherapy, chemotherapy, and best supportive care, were 96.0 months, 40.9 months, 63 months, 8.4 months and 3.0 months, respectively.

Conclusion: Among the lung cancer patients associated with pleural plaques alone, early stage patients showed favorable prognosis. Therefore, the early detection of lung cancer may contribute to a better outcome in the population which has pleural plaque alone, not accompanied with asbestosis.