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Title: CyberKnife radiosurgery for early stage nonsmall cell lung cancer

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Body: The aim of the study is to determine the effectiviness of cyberknife radiosurgery for early stage medical inoperable nonsmall cell lung cancer (NSCLC) patients and to evaluate toxicity, survival and effects of respiratory functions. Material and methods: Treatment outcomes of 25 histological proven NSCLC patients were evaluated (age range between, 51- 84). Histological suptypes were 10 of them epidermoid carcinoma (ca), 7 of them adeno Ca and 8 of them NSCLC. All patients were systematically staged with fiberoptic broncohoscopy, whole body FDG¹⁹ Pet-Ct and brain MRI. Results: Before treatment, 10 of the patients staged as T1aN0M0, 9 of them T1bN0M0 and 6 of them T2aN0M0. Median tumor diameter was 2,18mm and median Suv max 15, 7.Total dose was 60 Gy delivered 3 or 4 fractions. All patients well tolerated the radio surgery. Coughing was the the main side effect. After completing therapy control Pet-Ct is performed at 3rd month and all patients are follow up in 3 months interval regularly. Median follow up time is 5.5 month. In follow up period. Systemic cancer progression was detected in 2 patients, other patients were still alive. Conclusion: The results showed that cyberknife radiosurgery for early stage medical inoperable nonsmall cell lung cancer (NSCLC) patients is feasible and safe.