

number of intracranial lesions, presence of extra-cranial metastases and treatment approach, no variable significantly influenced survival. However, aggressive salvage treatment with Gamma Knife radiosurgery did correlate with improved survival (Median survival 15.2 months after salvage radiosurgery, 8.2 months following palliative whole brain radiation therapy.  $P=0.03$ ).

**Conclusions:** While the overall prognosis is poor for patients presenting with NSCLC and synchronous BM, our data suggests that a cohort of patients will be long-term survivors following aggressive treatment for intracranial disease. Aggressive salvage therapy for recurrent brain metastases also plays an important role in prolonging survival. Future studies are necessary to help identify patients most likely to benefit from an aggressive approach.

P3-172 NSCLC: Radiation Posters, Wed, Sept 5 – Thurs, Sept 6

### Is re-irradiation effective in symptomatic local recurrence of non small cell lung cancer patients?

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**Purpose:** To evaluate retrospectively the effectiveness of re-irradiation in patients with non-metastatic non small cell lung cancer (NSCLC) at diagnosis who were previously irradiated with or without chemotherapy and having local recurrence during follow-up.

**Methods:** In this study, 38 NSCLC patients having clinical  $\pm$  radiological progression retreated with hypofractionated radiotherapy between April 1992 and December 2006 were evaluated retrospectively. All patients were simulated before treatment. Radiotherapy field covered the recurrent tumour with 1-2 cm safety margin. Two parallel or oblique opposite, isocentric fields were used while excluding spinal cord. The “adequate palliation” was defined as more than 50% symptom palliation and “total/near total complete palliation” as 75-100%. The Log-rank method and Kaplan-Meier method was used for statistical analysis.

**Results:** Median age was 58(33-80) years and all patients were male except 3. Median follow-up was 13.5 (4-65) months. The most frequent histology was squamous cell carcinoma (60.5%). Before reirradiation, chemotherapy was administered to 9 patients without any response. Initially, median 30 Gy was given in median 10 fractions. During reirradiation, a median total dose of 25 Gy (5-30 Gy), in median 10 fractions (1-10) is delivered. The median interval between the initial radiation therapy and reirradiation was 35 (4-189) weeks. After hypofractionated reirradiation “adequate palliation” is obtained in 62.5% of the patients with cough, in 53% of patients with dyspnea and in 50% of patients with hemoptysis and chest pain. “Total / near total palliation” was noted in 35.6% of patients. After reirradiation, the median survival time was 11(1-237) weeks. The overall survival after initial diagnosis were 57.8% at 1 year and 28.8% at 2 years and after reirradiation it was 8.7% and 5.8% respectively. In univariate analysis; age, tumour size, tumor location, interval between initial irradiation and reirradiation were evaluated for overall survival. A significant survival advantage is seen in patients having an interval of more than 35 weeks ( $p=0.000$ ). None of the patients had grade III-IV EORTC / RTOG side effects.

**Conclusion:** In non-metastatic NSCLC patients, reirradiation can provide adequate symptom relief. With 25 Gy hypofractionated reir-

radiation, total or near total palliation of symptoms can be obtained in almost one third of the patients having symptomatic local recurrence. Reirradiation of recurrent primary tumour can be used to improve the quality of life and prolong survival. Especially patients having long interval after initial radiotherapy can benefit from this approach. However, studies including more patients are needed to prove the effectiveness and economical advantages of this treatment modality.

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### Effectiveness of 45 Gy hypofractionated radiotherapy with or without cisplatin in patients with non small cell lung cancer

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**Purpose:** To determine effectiveness of hypofractionated radiotherapy with or without cisplatin in the treatment of patients with non small cell lung cancer (NSCLC).

**Methods:** In this retrospective study, including the period July 1999-September 2005, we evaluated 43 patients who were ineligible for multiagent chemotherapy with KPS  $\geq 70$  and tumour size preventing radical treatment. Radiotherapy, which involved primary tumour and metastatic lymph nodes, was given in 15 fractions over 3 weeks up to 45 Gy. Cord sparing was performed at 30 Gy (HIPO). Weekly 30 mg/m<sup>2</sup> cisplatin was concomitantly given with radiotherapy in appropriate patients (HIPOP). Kaplan Meier method was used for statistical analyses.

**Results:** Median age was 58(36-80). The most frequent histology was squamous cell carcinoma (49%). There were 1(2%);8(19%);25(58%) and 9(21%) patients with stage IIB,IIIA,IIIB and stage IV respectively. The tumour size was  $\geq 5$  cm in 79% of patients. Neoadjuvant cisplatin-based chemotherapy was given to 18 patients. There were 21 and 22 patients in HIPO and HIPOP scheme, respectively. The median follow-up was 9(1-24) months. Preradiotherapy symptoms were cough (49%), chest pain (49%), dyspnea (37%) and hemoptysis (26%). According to treatment scheme, palliation rates were: 60%/100% in hemoptysis; 71%/100% in dyspnea; 80%/91% in cough and 86%/86% in pain for HIPO/HIPOP. One-year overall survival (OS) was 67% and 45% for HIPOP and HIPO, respectively. No patients had severe RTOG grade III-IV side effects.

**Conclusion:** HIPO/HIPOP schemes seem safe and effective modalities in locally advanced NSCLC patients who are not candidates for radical treatment.

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