



### **Pulmonary Metastectomy in Sarcoma – The West of Scotland Experience**

Claire Paterson, Sophie Barrett, Jeff White, Fiona Cowie, Alan Kirk  
The Beatson West of Scotland Cancer Centre  
[Claire.paterson2@ggc.scot.nhs.uk](mailto:Claire.paterson2@ggc.scot.nhs.uk)

#### Aims

Sarcomas commonly metastasize to the lungs. There are no UK guidelines regarding best treatment in this situation. It is generally accepted however that surgical resection of lung metastases is the only potentially curative option in this setting. It is important to identify the correct group of patients who will benefit from this intervention. Prognostic markers have been identified from retrospective series and should be taken into consideration when deciding if a patient is suitable for resection. We were keen to examine our practice to compare outcomes in the West of Scotland post metastectomy with published results from other centres, and to assess the criteria used for surgical referral.

#### Methods

Patients with a diagnosis of sarcoma who had undergone resection of pulmonary metastases were identified and their clinical notes and pathology reports reviewed. The following information was recorded: age at surgery, co-morbidity, time from presentation to metastases, site initial sarcoma, histology, tumour grade, number of metastases, unilateral or bilateral disease, type surgery, complete pathological resection, post-operative morbidity, next relapse, date of death.

#### Results

11 patients with soft tissue or osteosarcoma who underwent resection of pulmonary metastases were identified from 1996-2007. Mean age at time of surgery was 39.9 years with range 14-74 years. Performance status was 0 in 6 patients, 1 in 1 patient and not documented in 4 patients. Only 1 patient had significant co-morbidity in the form of a previous CVA, the rest had no past medical history of note. Histological sub-type was as follows: Osteosarcoma 4; Liposarcoma 1; MFH 2; Chondrosarcoma 1; Synovial Cell Sarcoma 1; NOS 2.

The site of initial sarcoma was lower limb in 7 patients, upper limb in 1, thorax in 2 and testis in 1. 3 patients who had lung metastases at presentation underwent resection; the median disease free interval from first diagnosis to development of lung metastases was 23 months (95% CI 10.5-36.2 mths). The number of metastases resected was as follows: 1 metastasis in 7 patients, 2 metastases in 1 patient, 3 metastases in 1 patient, 8 metastases in 1 patient and >10 metastases in 1 patient. 3 patients had bilateral disease while 8 had unilateral disease. The 11 patients underwent 14 surgical procedures in total, 5 of these operations were lobectomy and 9 were wedge resections.

The mean progression free interval from metastasectomy to recurrence is 58.7 months (95% CI 35.3 - 82.2mths, median not yet reached). Mean overall survival post-operatively was 65.4 months (95% CI 45.5 – 85.4 mths, median not yet reached).

#### Discussion

Our series of patients with soft tissue or osteosarcoma who underwent resection of pulmonary metastases demonstrates that this is a feasible and potentially curative treatment option in selected patients. 2 of the patients who subsequently died demonstrated known poor prognostic markers – MFH and >1 metastasis. Our data suggests that referral for surgical intervention is generally made on accepted criteria in our practice although each case is subject to individual discussion in the multi-disciplinary team meeting.