

<u>TITLE</u>	Lung Metastases of a Giant Cell Tumor of the right Os metatarsale I
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<u>KEYWORDS</u>	Giant Cell Tumor, Lung Metastases, Survival
<u>DIAGNOSIS</u>	Lung Metastases of a Giant Cell Tumor
<u>SUMMARY</u>	<p>This 22 year old man noted pain and a circumscribed swelling of the right os metatarsale I. A biopsy revealed a giant cell tumor , and a complete tumor resection of the 1st and 2nd bone of the middle foot was undertaken. The diagnosis of a giant cell tumor was confirmed. A postsurgical thrombosis of the right vein was treated with heparin. Three years later multiple solid nodules of the lung were noted, and treated by 30 wedge resections. The metastases were classified as metastases of a giant cell tumor with partial osteoid differentiation resembling to an osteoid sarcoma grade 1 – 2. Until today no recurrent tumor masses could be noted.</p>
<u>CASE REPORT</u>	<p>This 22 year old man developed pain of the right fore foot. X rays displayed a highly vascularized destructive lesion which was biopsied and diagnosed as giant cell tumor with multiple capillaries and missing mitoses. The two bones of the middle foot were resected, and reformed by autologous bone transplant. Three years later multiple solid densities within both lungs were detected. Lung surgery was performed, and 30 wedge resection were done. A total of 18 metastases were excised. The postsurgical course was unsuspecting, and the patient is still alive without indications of tumor recurrent.</p>

PATHOLOGY

The surgical specimens of the lung displayed a yellowish-hemorrhagic tumor which was strictly separated by normal lung parenchyma ([Fig. 1](#)).

Microscopically, the tumor was composed of spindle-shaped tumor cells with moderate amount of cytoplasm, and small nucleoli within the nuclei. No or only hard-to-detect mitoses, moderate (neo)-vascularization, nearly no inflammatory response of host tissue ([Fig. 2](#), [Fig. 3](#)). Multiple giant cells with multiple nuclei were seen. These were scattered randomly within the tumor mass; however, a loose aggregation to the tumor boundary was noted ([Fig. 4](#)).

DISCUSSION

Giant cell tumor of the bone is a rare and distinct clinopathologic entity. It is defined radiologically by a destructive bone lesion with/without swelling and occur usually in younger patients of both sexes. Although they are basically benign lesions, there are several reports of lung metastases [1-7]. These occur after a time period of 12 - 48 months at average [1,3,4], and usually multiple lung lesions were noted [3,4]. The clinical presentation of the primary tumors with/without lung metastases are indistinguishable in respect to age, gender or location [1-7]. The therapy of the lung lesions includes radiation, chemotherapy, and surgery, or even no intervention [3]. The prognosis of patients with lung metastases is not poor compared to that of patients with primary lung cancer or metastases of malignancies of other origin or histology [1-7]. Its median can be estimated to 8 – 10 years after clinical detection of lung metastases. Our patient fits into the general scheme of the reported cases: a young man suffering from a benign – looking bone tumor with the characteristic histological appearance. It has been completely resected, and the pulmonary metastases were detected 36 months after the cure of the primary.

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