

## Liver Metastases From Lung Cancer: Is Surgical Resection Justified?

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Resection of the liver for metastatic lesions has largely been done for secondary colorectal or neuroendocrine tumors, and there is little information of its value for other lesions. Recent improvements in hepatic surgery have made resection of metastases a safe procedure and it should certainly be considered whenever there is an isolated lesion. We report the case of a successful resection of an isolated secondary hepatic lesion from a lung primary tumor, which was resected approximately 4 years beforehand. A review of the literature demonstrates that although early reports of similar procedures were not favorable, more recent reports reinforce the value of an aggressive approach in favorable cases.

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**L**iver resections for metastases are commonly performed for colorectal primary tumors and are poorly documented for noncolorectal tumors. Several authors suggest that liver resection of noncolorectal secondaries, unless from Wilms tumor, should be discouraged [1], whereas others take the view that selected patients are candidates for hepatic resection [2]. Few cases of resected liver metastases from lung cancer are present in the literature. The aim of this study is to report a patient operated on for isolated liver metastasis from lung cancer and review the literature.

A 69-year-old woman had a lobectomy for an adenocarcinoma of the lung in June 1995, which staged well. Four years later at routine follow-up, she was found to have a 5-cm lesion in the liver located in segment VII (Fig 1). The patient remained in good health and neither a gastroscopy or colonoscopy showed evidence of an occult primary. Total body scintigraphy demonstrated no other

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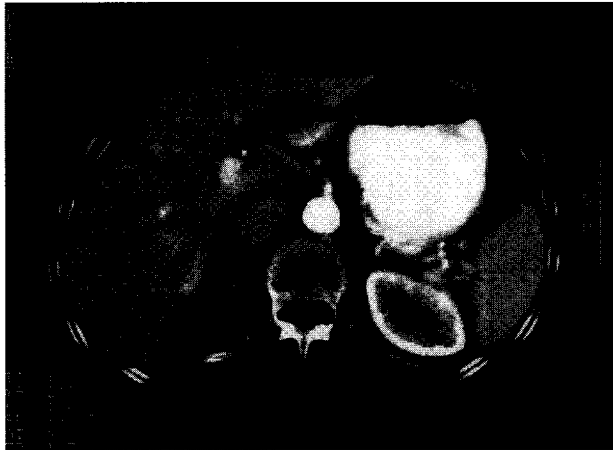


Fig 1. Computed tomographic scan showing isolated liver metastasis from the lung, located at segment VII.

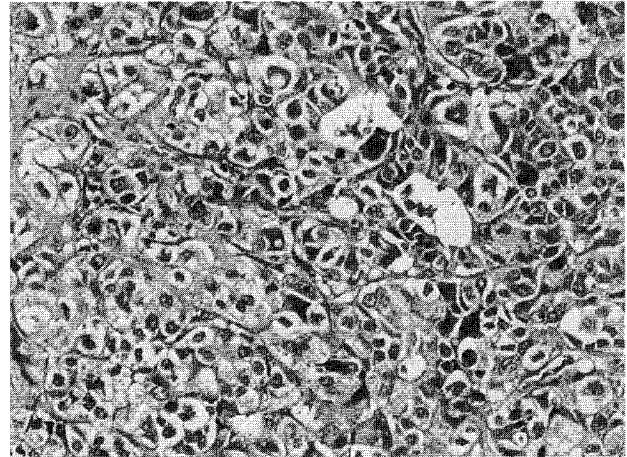


Fig 2. Liver metastasis showing focal glandular differentiation.

metastatic lesions. Serum markers including  $\alpha$ -fetoprotein and carcino-embryogenic antigen were normal, and in view of the patient's good health and the long period of time from the original operation, surgical resection was advised.

At operation no other lesions were demonstrated and a limited resection was performed without difficulty. The postoperative course was uneventful, and the patient was discharged 5 days later. Pathologic examination of the lesion confirmed a metastatic adenocarcinoma of the lung (Fig 2). The patient had now been followed-up for 3 years with no evidence of any recurrence or other problem.

**Comment**

Resection of metastases in the liver from a colorectal primary is now well established and has been shown to improve survival. Favorable factors are the single metastasis, rather than the multiple metastases; the grading and staging of the primary tumor; and the length of time between removal of the primary tumor and appearance of the metastases, with greater length of time being more favorable [3, 4].

Surgery for secondary metastases in the liver is also

accepted for neuroendocrine, testicular, and renal primaries and has been reported in certain sarcomas, breast, and gynecological cancer and melanoma[5]. However, there have not been many reports of resection after treatment of a bronchogenic carcinoma, although generally this is one of the most common cancers [6].

We have reviewed the literature and found 12 reports of metastases from the lung, frequently combined with some other rare metastases from different origins. Unfortunately several of the reports really give insufficient information for adequate analysis (Table 1). However, it is clear that reports published before 1988 did not consider that resection of metastases was worthwhile [7, 8]. More recent reports have been more favorable and this probably reflects the improvements in liver surgery that have since taken place.

Although we appreciate that the situation of our patient is unusual for bronchogenic carcinoma, the fact that nonsmall cell carcinoma of the lung is relatively resistant to cytotoxic chemotherapy makes surgery worthwhile.

We were naturally suspicious that the lesion in the liver may well have been a metastasis from an occult abdominal primary tumor, but extensive investigation failed to reveal any indication of this. As yet, we do not have access to positron emission tomography, but reports in the literature suggest that this modality will be helpful

Table 1. Main Characteristics of Patients Operated On for Liver Metastases From Lung Cancer Reported in the Literature

Authors (reference)	Number of Cases	Pathology of the Primitive Tumor	Type of Hepatic Resection	Survival (mo)
Berney et al [4]	3	No showed	No showed	No showed
Cobourn et al [7]	1	No showed	No showed	No showed
Foster et al [8]	2	No showed	No showed	No showed
Hamy et al [6]	1	Epidermoid tumor	Minor resection	13
Lindell et al [2]	1	Bronchial carcinoma	No showed	185
Schwartz [5]	2	No showed	No showed	>60
Stehlin et al [1]	1	No showed	Major resection	9
Tomas-de la Vega et al [3]	1	No showed	No showed	No showed
Personal report	1	Adenocarcinoma	Minor resection	36

in similar cases in ruling out occult primaries or other unexpected secondary lesions.

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