

# Surgically Removed Adrenal Metastasis from Cancer of the Rectum

## Report of a Case

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Fujita K, Kameyama S, Kawamura M. Surgically removed adrenal metastasis from cancer of the rectum: report of a case. *Dis Colon Rectum* 1988;31:141-143.

A woman was operated on for pulmonary metastasis four years after a radical resection of the rectum, and four years thereafter a solitary metastasis to the left adrenal was found. An elevated serum carcinoembryonic antigen (CEA) level indicated the lesion. Adrenalectomy was performed and the patient has been well with no further evidence of disease. [Key words: Cancer; Rectum; Adrenal; Metastasis]

ALTHOUGH CANCER OF THE colon and rectum is known to be slow growing, the patient reported here is interesting. Four years after curative surgery for rectal cancer, an isolated pulmonary metastasis was found and removed. A left adrenal metastasis was found and removed four years after the second surgery. Although an adrenal metastasis usually is found as a part of widespread metastases, it was solitary and there was no other evidence of cancer.

### Report of a Case

A 39-year-old woman underwent radical resection of a primary rectal cancer in July 1977. The tumor size was 3 cm with invasion to the muscle layer. Metastasis was found in one of the removed lymph nodes. She had been well for nearly four years when she noted bloody sputum. A coin-shaped lesion was found in her left lung. Combined with preoperative radiation, the left pulmonary segment and regional lymph nodes were removed in June 1981. Although microscopic exam-

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ination revealed adenocarcinoma, primary lung cancer was suspected at that time. Four years later the patient's serum carcinoembryonic antigen (CEA) level gradually increased to 46.05 ng/ml (normal value < 2.5 ng/ml). Screening computed tomography (CT) revealed a non-homogenous mass in the left upper abdomen suggesting adrenal metastasis (Fig. 1). Thorough examinations excluded any other metastatic lesions that might release CEA. As no other focus was found, left adrenalectomy was performed on June 3, 1985 through a left lumbar oblique incision. The tumor was 5.7 × 4.2 × 4.0 cm and weighed 36 gm. Only the head of the left adrenal gland remained normal. Histologic findings of the cancers removed from the three organs were compared, and found identical (Fig. 2). The CEA level decreased to normal and the patient has remained well with no evidence of disease for nearly ten years after the first surgery.

### Discussion

Cancer of the colon and rectum tends to recur locally. Rich *et al.*<sup>1</sup> found local recurrence in 43 of 142 patients who received potential curative surgery, and distant metastases without local recurrence were found in 23. The liver is by far the most frequently involved organ<sup>1,2</sup> and the next is the lung. The mean time to develop distant metastasis after surgery is two years<sup>1</sup> or less.<sup>3</sup> This patient developed a solitary pulmonary lesion without liver metastasis. The interval of four years between primary surgery and pulmonary metastasis suggests a slow-growing cancer.

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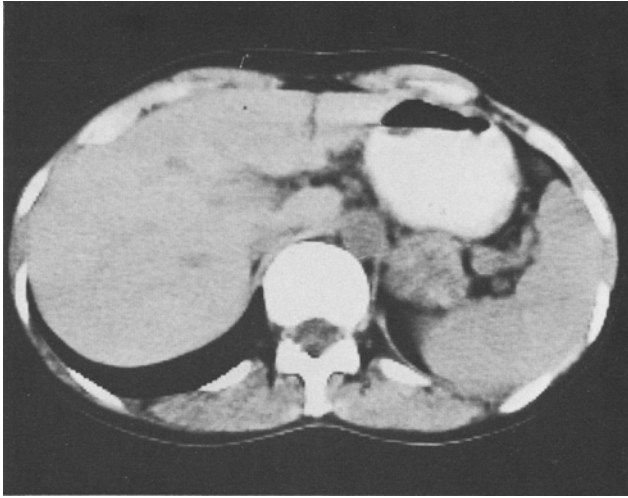


FIG. 1. CT showing solitary left adrenal mass.

The adrenal gland is one of the most frequent sites of metastasis from various organs, including the colon and rectum. At autopsies of patients with advanced cancer, 110 of 821 cases (13.5 percent) were found to have adrenal

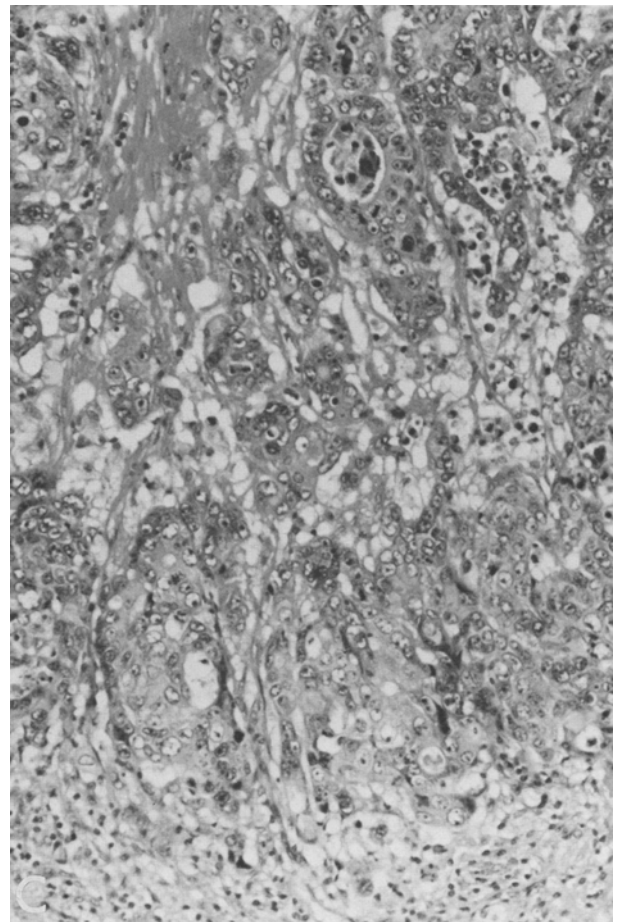
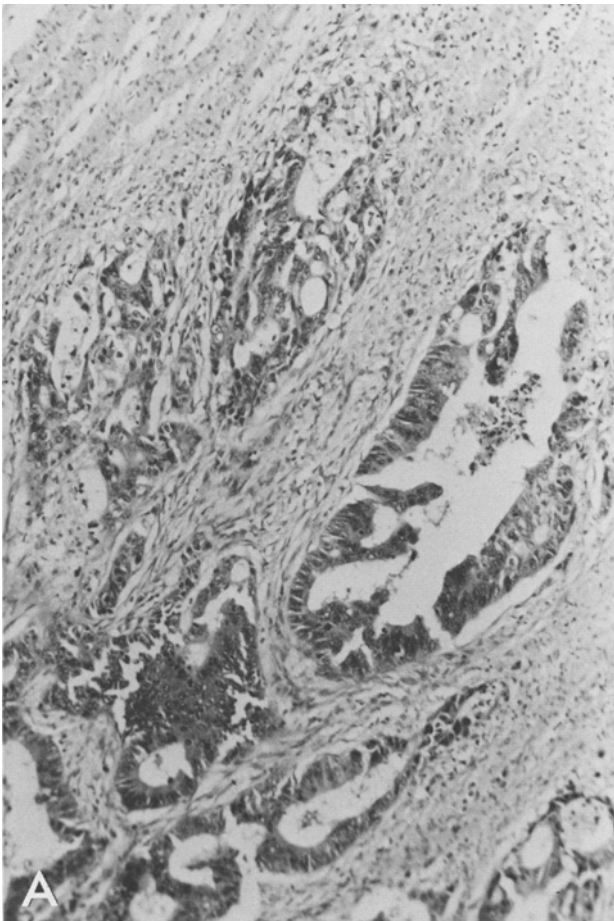
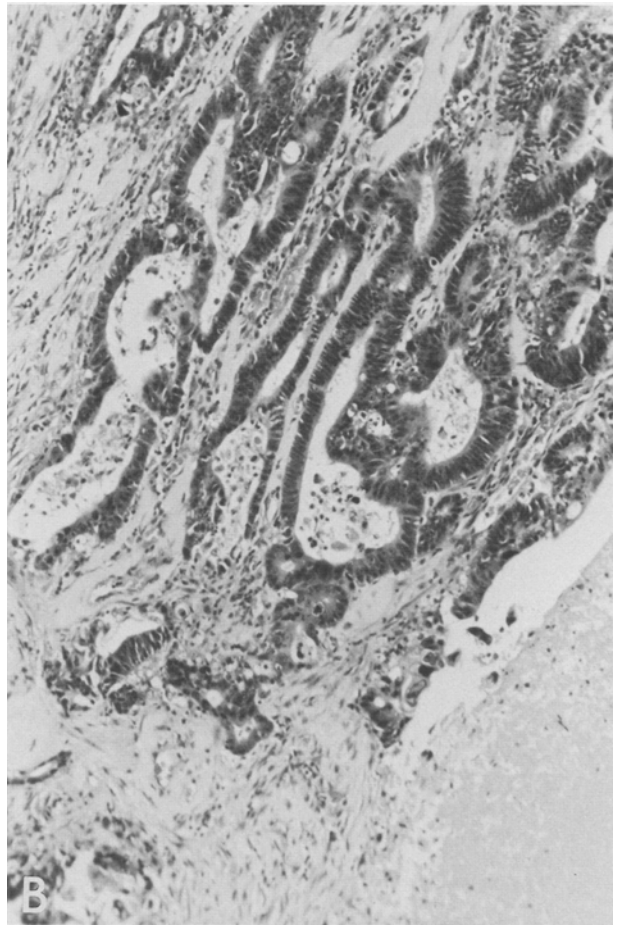


FIG. 2A-C. Histologic findings. Specimens from the rectum(A), lung(B), and adrenal(C) are identical.

metastases, the frequency being next to that of the liver and lung.<sup>4</sup> Few of them, however, are revealed before death, because the adrenal gland is a silent organ. Occasionally bilateral widespread metastases have been reported to cause adrenal insufficiency.<sup>5-7</sup> Echography, CT, and nuclear magnetic resonance imaging (NMR) have displayed asymptomatic adrenal metastasis, but it appears late in the course of the disease and usually as a manifestation of diffuse metastatic disease.<sup>8</sup>

Adrenal metastases are carried by blood and the metastasis found in this patient was suspected to result from the lung metastasis. Because the adrenal gland is commonly involved by breast and lung cancer, assessment by CT and needle biopsy is recommended as part of the initial staging evaluation of lung cancer.<sup>9</sup> The occurrence of the solitary adrenal metastasis eight years after curative surgery may be understandable when considering the route from the lung to the adrenal gland.

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