

## Case Report

**19-year Survival in a Patient with Rectosigmoid Liver Metastasis**Arezoo Estakhri MD<sup>1</sup>, Iraj Fazel MD<sup>2</sup>, Sadegh Massarrat MD<sup>1</sup>**Abstract**

We present the case of an 82-year-old man diagnosed with rectosigmoid cancer and liver metastasis who survived for 19 years following treatment. At the age of 64, the patient twice experienced mucus excretion for which he underwent a colonoscopy that resulted in a diagnosis of rectosigmoid cancer the patient underwent surgery for resection of the tumor and liver metastasis. Histopathology was notable for a diagnosis of rectal adenocarcinoma that infiltrated the entire thickness of the wall, with metastasis to the liver and no lymph node involvement. Post-operative chemotherapy was administered for about four months. The patient remained asymptomatic for 19 years which at that time he presented with liver metastasis, ascites and renal failure.

**Keywords:** Colorectal Cancer (CRC), Liver Metastasis, Survival

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**Introduction**

Colorectal cancer (CRC) is a common, lethal disease. The long-term survival rate of CRC following surgery varies according to the invasiveness of the tumor. Up to 50% of patients with CRC will have colorectal liver metastasis (CLM) at some point.<sup>1</sup>

Despite surgical and medical knowledge regarding the treatment for CLM, in the absence of resection, survival is not more than three years.<sup>1</sup> Studies show that surgical resection prolongs the five-year survival rate to 25% – 51%.<sup>1</sup> Here, we present the case of a patient with rectal cancer and a small metastasis to the liver who survived for 19 years following diagnosis and resection of the primary tumor.

**Case report**

An 82-year-old man with a past history of rectosigmoid cancer was admitted to Shariati Hospital in Tehran, Iran. He underwent surgery 19 years prior, at the age of 62, for rectosigmoid cancer. A colonoscopy evaluation at that time was remarkable for a mass in the rectosigmoid region. At the time of rectosigmoid resection, a small lesion was seen on the surface of the liver, which was excised and proved to be a metastatic lesion. He received chemotherapy for about four months. The patient experienced no problems, except for occasional gonarthrosis, for which he had to use a cane when walking. He underwent two colonoscopies, at two and four years after surgery, with no abnormal findings. Two years ago he developed abdominal distension, nausea and vomiting. Exploratory surgery revealed an intestinal obstruction caused by adhesions. The surgical report indicated the presence of multiple adhesions in the small intestine and colon with no other pathologic

findings in the abdominal cavity. An endoscopy report did not show any lesions in the stomach. At that time, ultrasonography revealed a 2.6 × 2 cm hypoechoic region in the right lobe of the liver, which could have been a primary or metastatic lesion with severe ascites. A CT scan of the chest and abdomen was negative for any tumor. Colonoscopy of the left colon after this surgery revealed no macroscopic lesions. After seven months, he experienced edema in his lower extremities as a result of thrombosis in his left popliteal vein, partial thrombosis in the right popliteal vein and ascites. Additionally, he had leukopenia and anemia. Laboratory results were remarkable for: WBC (1100 cumm), RBC (2.81 mil/cumm), Hgb (9.1 g/dl), and Hct (27.7%), which necessitated in blood transfusions given monthly or every two weeks.

Bone marrow aspiration was notable for pancytopenia with the following results: Hgb (8.9 g/dl), Hct (27.7%), MCV (101.1 fl), RBC (2.74 mil/cumm) and WBC (1400 cumm). Liver function tests (LFT) as reported were: AST (13 U/L), ALT (11 U/L), alkaline phosphatase (749 U/L), LDH (208 U/L), total protein (6.7 gr/dl), albumin (4 gr/dl), BUN (26 mg/dl) and creatinine (1 mg/dl). Tumor marker results showed elevated CEA (10.1 ng/ml), CA 19-9 (105 IU/ml), and CA-125 (51.1 U/ml). Alpha fetoprotein was within normal limits. Sonography of the abdomen one month before death revealed further enlargement of the metastatic lesion in the right liver lobe (Figure 1). The final stage included bronchopneumonia, hypoxia with loss of consciousness, and demise.

**Discussion**

The survival of colon cancer depends mainly on tumor invasiveness. In stage A with no involvement of tissue around the colon wall, long-term survival is achieved. The survival rate of patients with CRC according to various studies is shown in Table 1. Only 7% – 58% survive after five years. In a literature review, we have been unable to locate any report about metastatic rectosigmoid cancer with long-term survival. There are many studies that have researched the main factors for CRC prognosis and survival. In one study, the main prognostic factors for long-term outcome

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**Figure 1.** Last image of metastatic liver mass (108×110 mm). Obtained one month before death.

**Table 1.** Survival percentages of Rectosigmoid Liver Metastasis according to other studies

Authors	Patients (n)	Follow up (yrs)	Survival (%)
Chew et al. <sup>16</sup>	728	1999-2007	1 yr (47%); 3 yrs (10.8%); 5 yrs (7%)
Aldrighetti et al. <sup>1</sup>	297	---	1 yr (90.6%); 3 yrs (51%); 5 yrs (27.5%); 10 yrs (16.9%)
Andreoni et al. <sup>17</sup>	902	1994-2003	5 yrs (71%); 8 yrs (61%)
Laohanivij et al. <sup>18</sup>	287	---	5 yrs (38.6%)
Chew et al. <sup>19</sup>	523 (<50 yrs)	---	5 yrs (58%)
Mehrkhani et al. <sup>20</sup>	1090	1999-2002	1 yr (72%); 3 yrs (54%); 5 yrs (47%)
Pihl et al. <sup>5</sup>	978	1980	5 yrs (56%); 10 yrs (49%); 15 yrs (47%); 20 yrs (46%)

of patients with hepatic resection of metastasis of CRC were advanced age, female gender, stage and grade of differentiation of the primary tumor, lymph node metastases, and number and diameter of the hepatic lesions.<sup>1</sup> Hepatic resection for metastatic CRC was one of the prognostic factors that influenced long-term survival according to an analysis. Studies have shown the following, to be prognostic factors: differentiation grade, preoperative CEA > 5 ng/ml, diameter of the lesion > 5 cm, time from primary tumor resection to occurrence of metastasis in the liver, more than 12 months.<sup>2</sup>

The main therapy for localized rectum and rectosigmoid cancer is surgical resection and direct treatment of liver metastases prevents dissemination of the disease from the liver to other sites.<sup>3</sup> However, information about the incidence of liver metastasis from rectosigmoid cancer is scant. It has been shown that stage at the time of diagnosis is the most important prognostic risk factor for determining the risk of liver metastasis.<sup>3</sup> In some studies researchers have found a relationship between ulcerative tumors and the high risk of metastases. According to multivariate analysis, size of the primary tumor has not been determined to be statistically significant for liver metastases.<sup>4</sup> However in one study of 1061 patients it has been shown, that tumor stage had a significant relationship with survival rate. In 46% of patients, survive for 20 years with resection of the colon cancer.<sup>5</sup> Thus, in stage A the survival rate was 77%, whereas this rate for stage D was only 9% (4.5 years; median: 9 months).<sup>5</sup> No patient with macroscopic metastasis to a distant organ (stage D<sub>2</sub>) survived beyond 4.5 years (median: 11 months). In one study conducted in 1984 on 141 patients with resected hepatic metastatic lesions, the stage

of the primary lesion and female gender were significant factors for favorable prognosis following tumor resection.<sup>6</sup> Adequate resection has been the main factor not only in survival, but also in controlling local recurrence.<sup>7</sup> In a survey on survival, response to chemotherapy, physical status and metastatic involvement at the beginning of study in conjunction with a degree of weight loss six months prior to the study were major factors for survival.<sup>8</sup> Location of the rectosigmoid tumor and a single metastasis in the right hepatic lobe were the most favorable factors for survival.<sup>9</sup>

On the other hand, the prognosis of untreated hepatic metastasis has been very poor, with less than 30% of patients who survive after one year and less than 5% who survive for five years.<sup>4</sup> Chemotherapy has been very important for patient survival with non-resectable liver metastasis from CRC.<sup>10</sup> In our case, survival was very long (19 years) following four months of chemotherapy. In this respect, surgical resection of a liver metastasis is the best plan for long-term survival. In 10% – 15% of patients with liver metastasis benefit has been noted with tumor resection.<sup>11</sup>

In one study the five-year survival rate with disappeared liver metastasis has ranged from 40% to 80%.<sup>12</sup> In the current case, it is important to note the presence of liver metastasis from the beginning of this patient's illness. As the liver metastasis was small, most likely chemotherapy was effective and prevented the enlargement of the lesion.

It has been concluded that right-sided colon cancer has a worse prognosis compared to tumors of the left side [OR = 1.12].<sup>13</sup> One study on 1219 CRC patients has shown that the one to five-year survival of patients with rectal cancer was better than those diagnosed with colon cancer.<sup>14</sup> Another survey of 1283 CRC pa-

tients from Iran determined that tumors of the colon generally had worse prognosis, than the rectal location.<sup>15</sup>

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