

# RADIATION TO THE LIVER FOR PALLIATION

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A long-standing belief is that cancer spread to the liver is difficult to treat and is an ominous prognostic sign. Of course, once cancer is metastatic, the prognosis is diminished. That, however, does not mean the situation is hopeless or patients are helpless.

Data has shown effective treatment for liver metastases over the years. For those with isolated liver metastases thought to be surgically resectable, a good share of patients does indeed remain alive disease-free beyond five years after therapy. Radiation oncologists have published data showing improvement from symptoms for those with metastatic cancer to the liver.

Now, an article just published by Mohiuddin et al in [The Journal of Clinical Oncology](#) - the official journal of the American Society of Clinical Oncology - has evaluated the role of chemotherapy and radiation for those with cancers spread to the liver from colon or rectal malignancies.

Why is it an important issue? The majority of patients with uncontrolled cancer from those sites will have liver involvement. Furthermore, liver metastases can cause symptoms including nausea, fatigue, pain and abdominal distention.

A recent study from the University of Kentucky and Jefferson University evaluated 45 patients with liver metastases treated with chemotherapy and radiation. Twenty patients had unsuccessful chemotherapy before the liver was irradiated.

Patients were separated into two groups - those who received additional or higher dose radiation compared to standard whole liver radiation. Doses up to 6000 rad were administered. Rad is a measurement of radiation.

Most patients were said by the authors to have an extensive replacement of the liver by cancer as determined by CT scans. About 90% of the patients were symptomatic. Patients ranged in age from 42 to 76.

Radiation was given mainly with linear accelerator treatment and 43 of 44 patients received chemotherapy concurrently with radiation. The most chemotherapeutic agent administered was 5-Fluorouracil (5FU). Sixteen patients received 5-FU and Cis-platin while others received drugs including Mitomycin, Leucovorin, Doxorubicin and Methotrexate.

The patients were evaluated by their symptoms. This was assessed by patients themselves as well as the physicians.

Seventy-seven percent had improvement in pain as determined by a decrease in the need for pain medications. Sixty-seven percent had a decrease in distention of their abdomen and the size of liver and 40% had less nausea and vomiting as well as anorexia after treatment.

The patients receiving the standard dose of radiation had a 71% improvement rate as compared to a 100% improvement rate in those receiving additional or boost dose of radiation. Similarly, the enlarged liver decreased in 59% of patients having the standard dose of radiation as compared to 89% in the higher dose radiation group.

The authors noted that 35% of patients in the standard group had improvement in all their symptoms while 90% of patients had improvement in the boost dose group. "No patient died as a

result of treatment. No cases of radiation-induced hepatitis or nephritis were documented." Hepatitis is irritation to the liver and nephritis is irritation to the kidney.

Side effects related presumably to the chemotherapy included 17 patients or 38% having some suppression of their blood counts.

The authors concluded that "Liver irradiation, including a boost dose in patients with a better performance status, is a highly effective treatment option and should be considered for symptomatic patients with unresectable liver metastases, and even after they fail to respond to initial palliative therapy with chemotherapy."

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