

# **AGGRESSIVE NON-INVASIVE TREATMENT OF ESOPHAGEAL CARCINOMA**

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There are multiple fertile areas of investigation in the diagnosis and treatment of esophageal carcinoma. The esophagus leads between the mouth and stomach and is responsible for carrying food and liquid through the thorax on its way to digestion. Cancers that commence in this area are usually announced by difficulty or pain in swallowing. Sometimes bleeding can be the presenting symptom and on other occasions, metastatic cancers can be the presenting manifestation of this disease.

When metastatic esophageal cancer occurs, standard therapy in this country is systemic chemotherapy although radiation may be used for local symptoms.

Many patients, however, are diagnosed when the cancer appears confined to the organ of origin - the esophagus.

While surgery may seem desirable, in fact the majority of patients either have disease spread beyond the esophagus or are not surgical candidates. Even in those patients who are surgical candidates, the majority are not successfully treated using invasive surgical approaches. The reason is the high likelihood of recurrent or metastatic cancer.

Treatment protocols that were developed in the 1980s are maturing. This information allows evaluation of innovative approaches such as concurrent systemic chemotherapy and local radiation.

Early studies evaluated the use of this approach and found a number of patients with complete responses - meaning no evidence of cancer.

Subsequent treatments confirmed the potential efficacy of this approach.

There are two obvious areas of concern in treating a cancer. The first is control of the local regional area and the second is control of the rest of the body (systemic). The rationale of systemic chemotherapy is to eradicate not only the primary but as well any microscopic foci of spread. The role of surgery or radiation is to control the local site since total body radiation is seldom used in solid tumors or cancers.

The recent publication from Poplin et al of Wayne State University evaluated 26 patients with esophageal cancer. All but two had squamous carcinoma. The remaining patients had adenocarcinoma.

Patients were treated using radiation to the esophagus and drugs consisting of 5-FU and Cis-platin given concurrently with the radiation. Subsequently, Cis-platin and 5-FU followed radiation. At the conclusion of therapy, patients were evaluated with endoscopy of the esophagus and CT scans of the body. If the patients had no obvious residual disease, then three more cycles - or rounds - of chemotherapy were given. If the patients had cancer, then surgical removal or additional treatment including radiation and chemotherapy were given. If the cancer progressed despite this approach, then chemotherapy alone was offered.

Of the patients treated, ages ranged from 50 to 80 years and most patients had good performance status or function. It was noted that difficulty swallowing was either moderate or severe in most. In fact, 14 of the 26 patients had feeding tubes placed to help maintain nutrition.

All patients were evaluated and 65% had complete response meaning no evidence of cancer by endoscopy. The average patient survived 24 months. Patients who did not respond to treatment had a survival that was markedly shorter. Patients maintaining their weight or losing small amounts of weight did better than those with a greater weight loss.

Side effects were numerous. That is not unexpected for patients with a significant disease undergoing intensive treatment. Of the 26 patients, 19 required hospitalization for inflammation of the esophagus, blood clot or infection. No deaths were reported due to the cancer treatment.

The authors noted combined modality treatment "demonstrates longer survival than was demonstrated in other studies using surgery alone or radiation alone. Most combined modality treatments have in common local radiation, 3000 to 6000 cGy, and chemotherapy consisting of 5-FU and Cis-platin." Surgical removal of the esophagus was performed only in patients who did not respond to radiation and chemotherapy rather than being used routinely. Despite this, the authors noted, "Documented local regional recurrences were surprisingly few in this study."

New methods of radiation allow high doses of radiation to be placed within the esophagus minimizing irritation or damage to the surrounding tissue. The authors comment on this technique calling it "Brachytherapy Augmentation." The rationale is enhancing the dose of radiation.

Thus, innovative approaches avoiding the potential morbidity and mortality of esophagectomy (removal of the esophagus) are being developed with data presented to broad medical audiences. The rationale of this approach is obvious - to extend length of life by producing better potentially curative therapies.