

NEW APPROACHES IN PANCREATIC CANCER

By: Gil Lederman, M.D.

Pancreatic cancer is a known devastating disease. There have been many prominent figures diagnosed and most commonly have succumbed to this malignancy. Prominent politicians adversely affected included Senator Frank Church and Senator and Vice President Hubert Humphrey.

Pancreas cancer often is not diagnosed until it is locally advanced. Often patients have vague abdominal symptoms. So vague that they are often overlooked by both patients and the medical establishment. Unlike for prostate or breast cancer there is no meaningful or early warning detection system. This means that early diagnosis is not routinely seen.

Standard treatment has included surgery, radiation and chemotherapy. Most patients are not candidates for a radical removal called "Whipple procedure." Most patients are treated with radiation and concurrent chemotherapy.

We have recently implemented a system of stereotactic body radiosurgery - pinpoint radiation - aimed at hitting cancers including that of the pancreas with higher doses with the intent of minimizing harm to the adjacent tissues. The point of higher doses is to attempt to achieve a greater likelihood of local cancer obliteration. If the primary cancer can be controlled, one would believe the patient would be more likely to be cancer-free.

Normally, standard dose radiation stops at 4500 or 5000 rad. Rad is a measurement of radiation dose. Most commonly, chemotherapy is administered concurrently or simultaneously with the radiation. Yet, the results show the marked majority of people succumb to their disease quickly after standard or no therapy.

Our radiosurgery group recently performed an analysis of our data which I report here. The local control rate, defined as cessation of growth, shrinkage or disappearance of the treated lesion, for pancreas cancer is 94%. This is superb and markedly better than even direct infusion of radioactive materials into the pancreas cancer.

In our institution we evaluated patients going through all methods of treatment. For those patients having no therapy the median survival rate was less than two months.

For those undergoing chemotherapy treatment the median survival was 9.8 months and the one year survival rate or the percentage of patients alive twelve months after diagnosis was 25%.

In contrast, the 45 patients treated with body radiosurgery and followed at least a year, showed that of all patients treated the median survival was 10.6 months and at one year 44% were alive. This is more than a 70% improvement over chemotherapy alone!

For patients with metastases the one year survival was 30% and for patients with pancreas cancer but no metastases the one year survival was 59%. Metastases are nodules of cancer away from the primary site. The presence of metastases means the cancer has traveled and the prognosis has dimmed.

We looked at outcome based upon cancer volume, that is the volume of cancer in the primary site. We broke off the volume at 60cc or cubic centimeters. The median survival was 10.4 months if cancer measured less than 60cc and 11.0 months if the cancer measured more than 60cc. Thus, our body radiosurgery program was equally effective regardless of cancer size. This is a frequent patient point of concern.

This would reflect that body radiosurgery is successful treating small as well as larger tumors. We had known from prior analyses of other cancers that size by itself is not a significant criteria. However, as the size of the cancer increases there is more surrounding tissues and this may create more irritation in the immediate area.

We also looked at patients who are deemed unresectable or unable to be operated upon by their surgeon compared to those who are resectable.

Our median survival of those who are felt to be unresectable was 9.5 months and of those patients who were resectable the median survival was 41 months. Does this mean body radiosurgery is better than radical surgery? Perhaps our ongoing data analysis will hope to answer that question.

Furthermore, 100% of our patients with resectable pancreas cancer treated with body radiosurgery were alive at 12 months. This would suggest that body radiosurgery is an effective modality of treatment for those with pancreas cancer. The benefits are greatest for those whose cancer has not traveled but yet appears to be of benefit even in those who have local spread of the cancer.

In certain situations we have treated patients whose pancreas cancer has traveled to the liver. Generally, we would recommend an initial course of chemotherapy to determine response. If the chemotherapy works, we encourage patients to continue with that approach. Most commonly, the cancer becomes resistant to the chemotherapy and at that point we get involved with consideration of body radiosurgery.

I also encourage patients to undergo cancer marker tests. These are, to the patient, relatively simple blood tests such as CEA or CA19-9. They tend to correspond to the extent of cancer in the body, higher amounts of CEA or CA19-9 tend to correspond with more active cancer while falling levels tend to correspond with controlled or shrinking cancers. Marker tests are usually effective ways of evaluating effectiveness of treatment and extent of disease.

Overall, body radiosurgery is a new method of treatment to be considered for those with pancreas cancers. It can be used for those who have gone through standard surgery, chemotherapy or radiation previously and yet have recurrent or persistent disease. The treatment is totally non-invasive.

As the years pass and our data matures it may well one day become considered the standard against which all other treatments are measured. This approach merits consideration for those with pancreas cancer. We continue to evaluate every patient who goes through our program. Accurate data analysis is critical for physician to analyze and for patients to have to assess.