

Response to preoperative therapy may predict survival in pancreatic cancer patients

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Cancer of the pancreas--a glandular organ that lies behind the stomach and secretes vital enzymes and hormones--seldom is detected in early stages, making treatment difficult and survival statistics particularly grim. However, new research from Fox Chase Cancer Center finds that patients with pancreatic adenocarcinoma whose tumors respond most to preoperative chemotherapy and radiation survive four times as long, on average, as those whose tumors respond least.

The research, led by Yun Shin Chun, M.D., a surgical oncologist at Fox Chase, will be presented at the 46th Annual Meeting of the American Society of Clinical Oncology on Sunday, June 6.

Since the 1980s, Fox Chase has been committed to finding better treatments for this intractable disease. In 1986, the Center conducted the first trial in pancreatic cancer of "multimodal" preoperative therapy (the use of more than one kind of treatment, such as chemotherapy and radiation, to kill [tumor cells](#) before surgery), and a phase I trial of [gemcitabine](#) in the 1990s established the safe dosage for the [chemotherapy](#) drug, now widely used in treating the disease.

In the current study, Chun and colleagues wanted to know whether response to preoperative therapy predicts survival in pancreatic adenocarcinoma--the most common type of pancreatic cancer. "For many cancers--breast, esophagus, stomach, and colorectal liver metastases--it has been shown that survival is much better in people who have a good pathologic response to preoperative therapy--meaning that

many tumor cells are killed--than in people who do not have a good pathologic response," says Chun. "But this has not been established in pancreatic cancer; previous studies have shown conflicting results."

In hopes of clearing up the confusion, Chun and colleagues reviewed data on 135 patients who had preoperative therapy and surgery. Fox Chase pathologist Harry Cooper, M.D., examined slides of the patients' tumors and classified their response to preoperative treatment as minor, partial, or major, based on the amount of fibrosis (scarring) in tumor tissue. For patients whose tumors showed major response to preoperative therapy, the median survival was more than five years, compared to seventeen months for those who showed minor response.

Although major response is relatively rare--only 19 percent of patients in the study were so classified--the findings give researchers and clinicians important information to build upon. "Going forward, if we can identify molecular factors in tumors associated with a major pathologic response, then we can make important progress in this disease," says Dr. Chun.

Provided by Fox Chase Cancer Center

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