Chemotherapy Prior to Surgery Improves Pancreatic Cancer Survival

People who received preoperative gemcitabine and Teysuno lived 10 months longer.

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People with operable pancreatic cancer who received chemotherapy before surgery had better overall survival than those who underwent surgery right away, according to study findings presented at the 2019 Gastrointestinal Cancers Symposium this week in San Francisco.

Although this study evaluated a chemotherapy regimen that is not used in the United States, the results demonstrate the promise of neoadjuvant or presurgery therapy for this difficult to treat cancer.

Pancreatic cancer is often detected at a late stage, when it is hard to treat. About 56,700 people will be diagnosed with pancreatic cancer and about 45,700 people die from it this year, according to the American Cancer Society.

If detected early, pancreatic tumors can sometimes be surgically removed (resected), but recurrence is common. Adjuvant or postsurgery chemotherapy is used to help reduce the risk of relapse, but there is little evidence regarding neoadjuvant treatment options.

Michiaki Unno, MD, PhD, of Tohoku University Graduate School of Medicine in Sendai, Japan, presented findings from the Prep-02 study, which evaluated neoadjuvant therapy using gemcitabine and Teysuno.

Teysuno—also known as S-1—is a combination therapy containing the drugs gimeracil, oteracil and tegafur, the latter of which is a prodrug of 5-fluorouracil. It is widely used in Japan to treat several types of cancer and is approved in Europe for advanced gastric (stomach) cancer, but it has not been approved by the U.S. Food and Drug Administration.

After an earlier study (Prep-01) showed that gemcitabine and Teysuno taken prior to surgery led to an improvement in overall survival, researchers designed a larger Phase II/III trial (Prep-02) to confirm the findings.

Prep-02 enrolled 364 previously untreated patients in Japan with localized pancreatic ductal adenocarcinoma who were considered eligible for potentially curative surgery. Just over half were

men and two thirds were over 65.

Participants were randomly assigned to receive neoadjuvant gemcitabine and Teysuno for two cycles followed by surgery or else upfront surgery without prior chemotherapy. Both groups received adjuvant Teysuno for six months after surgery.

The Phase II part of the study showed that the rate of successful resection was high after neoadjuvant chemotherapy—93 percent—enabling the Phase III part of the trial to proceed.

In the Phase III analysis, the likelihood of undergoing resection and the rate of surgical complications was similar in the neoadjuvant therapy and upfront surgery groups.

The median overall survival duration of 36.7 months in the neoadjuvant chemotherapy group was significantly longer than the median 26.7 months in the upfront surgery group. The two-year overall survival rates were 63.7 percent and 52.5 percent, respectively.

People treated with neoadjuvant chemotherapy were significantly less likely than those in the upfront surgery group to have evidence of cancer in their lymph nodes (59.6 percent versus 81.5 percent). The likelihood of local cancer recurrence was statistically similar in both groups (27.3 percent versus 22.9 percent, respectively), but metastasis to the liver occurred significantly less often in the neoadjuvant therapy group (30.0 percent versus 47.5 percent).

Severe adverse events were common among people who received neoadjuvant gemcitabine and Teysuno (49 percent grade 3 and 24 percent grade 4), especially white blood cell deficiencies. Nonetheless, the researchers concluded that neoadjuvant chemotherapy was “safe and feasible.”

Based on these findings, Unno said, “neoadjuvant therapy could be a new standard for patients with resectable pancreatic ductal adenocarcinoma.”

Commenting on the study, Andrew Zhu, MD, PhD, of Harvard Medical School, said that neoadjuvant gemcitabine and Teysuno is a “viable option” for patients with resectable pancreatic cancer in Japan, but the findings are unlikely to change treatment in the United States and Europe, where different chemotherapy regimens are used.

Thus, the best neoadjuvant chemotherapy regimen and optimal duration remain unanswered questions, Zhu concluded. Studies are under way to evaluate neoadjuvant or perioperative treatment with regimens commonly used in the United States such as the FOLFIRINOX combo or gemcitabine plus nab-paclitaxel (Abraxane).

Click here to read the study abstract.

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