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Pancreas

Neoadjuvant Chemoradiotherapy Versus Upfront Surgery for Resectable and Borderline Resectable Pancreatic Cancer: Long-Term Results of the Dutch Randomised PREOPANC Trial

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PURPOSE

The benefit of neoadjuvant chemoradiotherapy in resectable and borderline resectable pancreatic cancer remains controversial. Initial results of the PREOPANC trial failed to demonstrate a statistically significant overall survival (OS) benefit. The long-term results are reported.

METHODS

In this multicenter, phase III trial, patients with resectable and borderline resectable pancreatic cancer were randomly assigned (1:1) to neoadjuvant chemoradiotherapy or upfront surgery in 16 Dutch centers. Neoadjuvant chemoradiotherapy consisted of three cycles of gemcitabine combined with 36 Gy radiotherapy in 15 fractions during the second cycle. After restaging, patients underwent surgery followed by four cycles of adjuvant gemcitabine. Patients in the upfront surgery group underwent surgery followed by six cycles of adjuvant gemcitabine. The primary outcome was OS by intention-to-treat. No safety data were collected beyond the initial report of the trial.

RESULTS

Between 24 April 2013, and 25 July 2017, 246 eligible patients were randomly assigned to neoadjuvant chemoradiotherapy (n = 119) and upfront surgery (n = 127). At a median follow-up of 59 months, the OS was better in the neoadjuvant chemoradiotherapy group than in the upfront surgery group (hazard ratio, 0.73; 95% CI, 0.56 to 0.96; P = .025). Although the difference in median survival was only 1.4 months (15.7 months v 14.3 months), the 5-year OS rate was 20.5% (95% CI, 14.2 to 29.8) with neoadjuvant chemoradiotherapy and 6.5% (95% CI, 3.1 to 13.7) with upfront surgery. The effect of neoadjuvant chemoradiotherapy was consistent across the prespecified subgroups, including resectable and borderline resectable pancreatic cancer.

CONCLUSION

Neoadjuvant gemcitabine-based chemoradiotherapy followed by surgery and adjuvant gemcitabine improves OS compared with upfront surgery and adjuvant gemcitabine in resectable and borderline resectable pancreatic cancer.