Neoadjuvant radiotherapy improves hepatectomy survival

Neoadjuvant radiotherapy improves postoperative survival outcomes in patients who undergo hepatectomy, according to a recent study.

In a randomised, multicentre, open-label trial, Xubiao Wei (Navy Military Medical University, Shanghai, China) and colleagues enrolled 237 adults with resectable hepatocellular carcinoma and portal vein tumour thrombus between January, 2016, and December, 2017. After exclusion of 73 patients, the remaining 164 were randomly assigned (1:1) to either neoadjuvant radiotherapy followed by hepatectomy (n=82) or hepatectomy alone (n=82). The primary endpoint was overall survival. Disease-free survival was a key secondary endpoint.

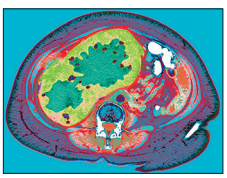
Overall survival at months 6, 12, 18, and 24 was higher in patients who received neoadjuvant radiotherapy than in those who had surgery alone, at 89·0%, 75·2%, 43·9%, and 27·4% versus 81·7%, 43·1%, 16·7%, and 9·4%, respectively (p<0·001). Disease-free survival analysed at the same timepoints was also higher in the neoadjuvant radiotherapy group than in the surgery alone group, at 56·9%, 33·0%, 20·3%, and 13·3% versus 42·1%, 14·9%, 5·0%, and 3·3%, respectively (p<0·001). In multivariable Cox regression analyses, compared with surgery alone, neoadjuvant radiotherapy significantly reduced hepatocellular carcinoma-related mortality (hazard ratio [HR] 0·35 [95% CI 0·23–0·54], p<0·001) and recurrence (0·45 [0·31–0·64], p<0·001). Surgery-related morbidity and mortality were similar between the groups.

"For patients with resectable hepatocellular carcinoma and portal vein tumour thrombus, neoadjuvant 3D conformal radiotherapy provided significantly better postoperative survival outcomes than surgery alone," explained co-author Xiu-Ping Zhang (Second Military Medical University, Shanghai, China).

"The survival benefit shown in this study with the combination of radiotherapy and surgery is clinically relevant, and may represent a new therapeutic strategy," said Lorenza Rimassa (IRCCS, Milan, Italy).

Terence Williams (James Cancer Hospital and Solove Research Institute, Columbus, OH, USA) added, "Certainly more study is needed, since it's not clear if the results should be widely adopted due to differences in worldwide practice patterns with the use of surgery for patients with portal vein thrombosis. Nevertheless, the results are quite exciting."

Elizabeth Gourd



Du Cane Medical Imaging Ltd/ Science Photo Library

Published **Online** July 18, 2019 http://dx.doi.org/10.1016/S1470-2045(19)30457-7

For the **study by Wei and colleagues** see *J Clin Oncol* 2019; published online July 8. DOI:10.1200/JCO.18.02184