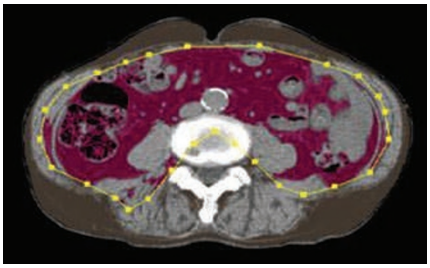
HEPATOCELLULAR CARCINOMA

Visceral fat is a risk factor for nonviral, nonalcoholic HCC recurrence

Nonalcoholic fatty liver disease is increasing in prevalence in Western countries and in Japan because of the increase in obesity, and nonalcoholic steatohepatitis (NASH) is thought to be the underlying liver disease in up to 5% of cases of hepatocellular carcinoma (HCC). Visceral fat accumulation is reported to increase the risk of HCC development in patients with chronic liver disease and, according to a new report, this factor also increases the risk of HCC recurrence after potentially curative treatment for this cancer in patients with NASH.

Ohki *et al*. enrolled 62 patients with untreated HCC and suspected NASH, who then underwent potentially curative radiofrequency ablation. CT images taken at the time of HCC diagnosis were used to measure the visceral fat area (VFA) in each patient, and the effects of VFA on



intrahepatic recurrence of HCC were analyzed.

Cumulative HCC recurrence rates in the high-VFA group (>130 cm^2 in men, >90 cm^2 in women, $n = 27$) differed significantly from those of the control group ($n = 35$): at 1, 2 and 3 years, these rates were 15.9%, 56.5% and 75.1% in the high-VFA group and 9.7%, 31.3% and 43.1% in the control group, respectively. Multivariate analysis showed that high visceral fat accumulation (risk ratio 1.08 per 10 cm^2) and older age (risk ratio 1.06 per year) were independent risk factors for HCC recurrence.

"We found that visceral fat accumulation is a stronger risk factor than BMI in recurrence of nonviral, nonalcoholic HCC", comments Haruhiko Yoshida, the corresponding author of the study. "The most important question to address now is whether reduction of visceral fat decreases the incidence of primary or recurrent HCC in patients with visceral fat accumulation", he says.

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Original article Okhi, T. *et al.* Visceral fat accumulation is an independent risk factor for hepatocellular carcinoma recurrence after curative treatment in patients with suspected NASH. *Gut* **58**, 839–844 (2009).