

# Improved results of a follow-up system of a high-risk group for liver cancer in the Department of Ultrasonography

Satoshi KAWABATA<sup>1</sup>, Nobuko TAGAMI<sup>1</sup>, Norikazu OBANE<sup>1</sup>, Asako YONEZAWA<sup>1</sup>, Nanae SENZAKI<sup>1</sup>, Kohei MORI<sup>1</sup>, Juna UENO<sup>1</sup>, Shigehito YAMAGATA<sup>2</sup>, Mika KUROKAWA<sup>3</sup>, Akira YAMADA<sup>3</sup>

## Abstract

We constructed a management system aimed at the early discovery of liver cancer in high-risk patients. Herein, we report the results of this system. The subjects were mainly hepatitis virus-positive patients with chronic hepatitis and liver cirrhosis. In this system, the date of abdominal ultrasonography (US) was traced, and the attending physicians were encouraged to perform US in patients who had not been examined by US, abdominal CT or abdominal MRI 6 months or more after the previous examination.

US was performed in a total of 9,898 cases in 1,805 patients between January 2006 and December 2012. Abdominal imaging was not performed for 6 months or more in 1,445 cases (14.6%), and therefore, we contacted the attending physicians of these cases.

Initial liver cancer was discovered in 104 cases over the 7-year study period. These were divided into 65 and 39 cases in which the most recent US was performed less than (f/u group) and more than 7 months (non-f/u group) before the discovery of liver cancer, respectively.

The mean tumor diameters were  $16.55 \pm 5.81$  and  $32.95 \pm 22.68$  mm in the f/u and non-f/u groups, respectively ( $p < 0.05$ ). In 45 patients, at more than 5 years after the liver cancer discovery (30 and 19 in the f/u and non-f/u groups, respectively), the 5-year survival rate was significantly higher in the f/u than in the non-f/u group (69.3% vs. 31.6% ( $p < 0.05$ )).

Our management system may be useful in the early discovery of liver cancer and allow physicians to increase the 5-year survival rate.

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## Keywords

liver cancer, chronic hepatitis, liver cirrhosis, surveillance, ultrasonography

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<sup>1</sup> Department of Ultrasonography, Sumitomo Hospital, <sup>2</sup> Surgery, Sumitomo Hospital, <sup>3</sup> Digestive Tract Internal Medicine, Sumitomo Hospital.

5-3-20, Nakanoshima Kitaku, Osaka City, JAPAN

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