

MASS SCREENING OF PRIMARY HEPATOCELLULAR CARCINOMA
BY ALPHA-FETOPROTEIN IN A RURAL AREA OF TAIWAN -
A DRIED BLOOD SPOT METHOD

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A prospective survey of primary hepatocellular carcinoma (PHC) was conducted in a rural area of Taiwan using a two-site enzyme immunoassay for alpha-fetoprotein (AFP) in dried blood samples collected on filter paper. Of 1,894 men over 40 years of age who were tested, 20 (1%) had AFP levels of greater than 20 ng/ml of blood on screening. Nineteen of these men received ultrasound examinations and small PHCs were detected in 4 (21%). The remaining 15 cases had other types of hepatobiliary tract diseases, and 6 (40%) also were serum HBsAg positive. They all should be closely followed up by AFP determination and ultrasound examination of the liver. In contrast to the low resection rate of PHC in symptomatic patients who were admitted through the outpatient clinic during the same period of this survey, the 4 cases with small PHC discovered by AFP screening had their tumors successfully removed (5/57 vs. 4/4, $p < 0.005$). Our preliminary results showed that this method is a simple, sensitive and convenient assay for AFP and may be used as a first line screening test in mass population surveillance programs for PHC.

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