

**Potential for qualitative diagnosis of tumors and tumorous lesions  
in the liver with Tc-99m-GSA SPECT  
—Correlation with pathological evaluation and MRI findings—**

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To evaluate the effect of technetium-99m-labeled DTPA-galactosyl human serum albumin (Tc-99m-GSA) SPECT imaging for qualitative diagnosis of hepatic lesions.

The subjects were 29 patients with pathologically confirmed hepatic lesions (21 malignant and 8 benign lesions). SPECT data were obtained at about 30 minutes after injecting 185 MBq (5 mCi) of Tc-99m-GSA. The GSA SPECT findings were compared with those of pathological evaluation and T2-weighted MR images (T2WI).

Of 29 lesions, 17 showed decreased accumulation, and three exhibited increased accumulation. The other nine lesions were undetectable. The malignant lesions which showed increased accumulation were all well differentiated hepatocellular carcinomas (HCCs). One of the eight benign lesions exhibited increased accumulation. The three lesions which showed increased accumulation of GSA exhibited hypointensity on T2WI, whereas the malignant lesions which showed decreased accumulation of GSA exhibited hyperintensity on T2WI.

The GSA SPECT findings correlate well with those of T2WI. GSA SPECT may be useful for qualitative diagnosis of focal liver lesions. If a lesion is suspected of being HCC, increased accumulation may indicate well differentiated HCC.

**Key words:** liver, SPECT, MRI, hepatocellular carcinoma, Tc-99m DTPA-galactosyl human serum albumin