The purpose of this study is to evaluate the clinical efficacy of liver SPECT (single photon emission computed tomography). The two examinations were performed in 76 cases with SOL (space occupying lesion) and the 58 normal cases. The results of the image reading by the planar image only (PS) and that of the image reading by the combination of PS and SPECT (PS+SPECT) were analyzed by ROC analysis. The ROC-curves showed that SPECT appears to reduce the number of results which were equivocal by the image reading of PS only. The detectability of SPECT for SOL in the left lobe of liver was less than that of PS without statistical significance. However, the performance of SPECT for SOL in the right lobe of liver was significantly better than that of PS.