

**ORIGINAL ARTICLE**

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**Reassessment of quantitative thallium-201 brain SPECT  
for miscellaneous brain tumors**

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In order to reassess the value of quantitative thallium-201 brain SPECT in the differentiation of miscellaneous brain tumors, we studied a total of 89 patients—35 pre-operative patients suspected of having a brain tumor and 54 post-operative patients with a brain tumor. We came to the conclusion that quantitative Tl-201 brain SPECT was very useful in discriminating cerebral radiation necrosis from recurrent tumor, estimating residual tumor burden, and detecting tumor regrowth earlier in postoperative patients. In preoperative patients, however, Tl-201 SPECT cannot be used effectively to differentiate glioma from other intracranial tumors, although intense uptake of Tl-201 may provide evidence of glioblastoma or a hypervascular lesion.

**Key words:**  $^{201}\text{Ti}$ -chloride, brain tumor, cerebral necrosis, radiotherapy, brain SPECT