

## Serum thymidine kinase, a possible marker for monitoring the effect of bone marrow transplant treatment in early recovery phase

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We measured serum thymidine kinase (TK) activity with a radioenzyme assay system employing [I-125]-iododeoxyuridine as the tracer on serial specimens from five bone marrow transplant (BMT) patients before and after transplantation. The serum level of TK activity in the 4 patients with effective BMT treatment ranged from 3.0 to 16.9 U/L (mean, 7.80 U/L) before transplantation and from 27.3 to 236.1 U/L (mean, 82.95 U/L) after the BMT treatment. Mean serum TK activity increased 13.17-fold (range, 1.68 to 29.14-fold). In contrast, the activity in the patient with ineffective BMT treatment was not significantly different during, before, or after BMT treatment. In addition, serum TK activity in BMT patients was well correlated with the change in the number of leukocytes before and after BMT treatment [ $r = +0.709$  ( $p < 0.01$ ),  $y = 0.012x + 0.87$ ]. We conclude that the determination of serum TK activity in BMT patients is very useful in monitoring the course of bone marrow transplantation in the early recovery phase.

**Key words:** serum thymidine kinase, bone marrow transplantation, marker, radioenzyme assay