Thesis Title	The determination of beta-aminoisobytyric acid in urine of normal and cancer patients
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ABSTRACT

Beta-aminoisobutyric acid (βAIBA), a degradation product of thymine in both deoxyribonucleic acid (DNA) and transfer ribonucleic acid (tRNA), was determined in single urine specimens from 65 normal healthy subjects and 60 patients with cancer of various organs by thin layer chromatography. The normal control value from both males and females was 74.01 ± 25.81 nmol βAIBA/μmol creatinine. The excretion levels were significantly increased in patients with several tumor type studied (146.79 ± 137.64 nmol βAIBA/μmol creatinine). Increased levels of βAIBA excretion may reflect changes in DNA metabolism or increased turnover of tRNA in tumor.

Moreover, the changes of βAIBA excretion levels were also studied in cancer patients before and after radiotherapy. The levels returned to normal when they were remission but remained high in patients whose clinical conditions were not improved. The same results were also found in patients with choriocarcinoma during chemotherapy.

Therefore, the determination of urinary βAIBA level could be used as a potential biological marker for monitoring the effectiveness of therapy in malignancies.