To the Editor:

We have read with great interest the recent article by Pui et al1 describing the prognostic value of serum lactic dehydrogenase (LDH) levels in childhood acute lymphoblastic leukemia (ALL). Their results confirm our findings.2

In our study, in addition to elevation of serum LDH levels, isoenzyme patterns of LDH were also related to the prognosis of childhood ALL. The highest concentration of LDH-3 was observed in the high-risk group at the time of diagnosis. The ratio of LDH-3 to LDH-2 was found to be greater than 1.0 in more than 70% of children in the high-risk group but in none of the patients in the standard-risk group.

We believe that in addition to serum LDH values, the determination of its isoenzymes would be helpful in the identification of a high-risk group of children with ALL.

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REFERENCES


To the Editor:

We are interested in the confirmatory finding of Hicsonmez et al that children with acute lymphoblastic leukemia (ALL) and high serum lactic dehydrogenase (LDH) levels have poor prognosis features at diagnosis. We have recently studied the isoenzyme pattern of serum LDH in 29 children with ALL. Using the identical criteria to define risk groups,1 in contrast to the findings of Hicsonmez et al, we found no difference in the distribution of serum LDH isoenzymes between high- and standard-risk patients (see Table 1). None of the patients in the standard-risk group and only one in the high-risk group had a serum LDH-3/LDH-2 ratio over 1.0 at presentation (P = 1.0 by two-tailed Fisher exact test). The reason for this discrepancy is unclear but may be related in part to our use of fresh serum samples, as opposed to frozen samples in their study.2 Although serum LDH level was found to have independent prognostic value, the pathophysiologic basis for an increase of serum LDH is poorly understood.3

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Table 1. Distribution of Serum LDH Isoenzymes According to Risk Group

<table>
<thead>
<tr>
<th>Feature</th>
<th>No. of Patients</th>
<th>Percentage (Mean ± SD) of Total Activity</th>
<th>LDH-1</th>
<th>LDH-2</th>
<th>LDH-3</th>
<th>LDH-4</th>
<th>LDH-5</th>
</tr>
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<tbody>
<tr>
<td>High</td>
<td>21</td>
<td>12.4 ± 4 42.8 ± 6 28.9 ± 7 11.1 ± 3 5.2 ± 5</td>
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<tr>
<td>Standard</td>
<td>8</td>
<td>16.0 ± 3 47.6 ± 4 22.2 ± 4 9.6 ± 3 4.6 ± 1</td>
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Serum lactic dehydrogenase isoenzyme pattern in childhood lymphoblastic leukemia [letter]

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