

## 2-CHLORODEOXYADENOSINE IN THE TREATMENT OF MULTIPLE MYELOMA

To the Editor:

2-Chlorodeoxyadenosine (2CdA) is a nucleoside analogue of adenine with significant antitumor activity against several low-grade lymphoid malignancies, such as hairy cell leukemia, chronic lymphocytic leukemia, low-grade lymphoma, and Waldenstrom's macroglobulinemia.<sup>1-4</sup> The current status and future perspectives of 2CdA were recently summarized by Piro.<sup>5</sup> Based on these

encouraging results, we administered this agent to 10 patients with multiple myeloma staged according to standard criteria<sup>6</sup>; their clinical features are shown in Table 1.

2CdA was administered at a dose of 0.1 mg/kg/d for 7 days as a continuous infusion via a central venous catheter. Courses were repeated every 4 weeks. One patient received three courses, seven patients received two courses, and two patients received one course. Aside from mild and reversible depression of granulocytes and platelets, no other side effects were observed. No patient showed any effect on myeloma protein levels or on bone marrow plasmacytosis. The median time to progressive disease was 2 months (range, 1 to 4 months). Two of three previously untreated patients responded subsequently to a standard melphalan-prednisone combination. Our experience with 2CdA in the treatment of patients with multiple myeloma differs from the positive results in the treatment of other lymphoid malignancies. Similarly negative results in multiple myeloma were obtained with the use of fludarabine phosphate, another purine analogue with activity against lymphoid tumors.<sup>7</sup> These agents appear to be more effective in specific malignancies that derive from a relatively narrow range of the B-lymphocyte maturation spectrum.

Table 1. Clinical Features of Patients

No. of patients	10
Age (median and range)	56 (43-74)
No. of males	7
Disease status (no.)	
Previously untreated	3
Primary refractory	5
Relapsing despite VAD	2
Hemoglobin (g/dL) (median and range)	9.5 (8.3-14.1)
% Marrow plasma cells (median and range)	35 (15-79)
$\beta$ 2 microglobulin (mg/L) (median and range)	4.2 (3.1-6.1)
Myeloma protein type (no.)	
IgG	5
IgA	2
Only light chain	3
Tumor mass (no.)	
High	3
Intermediate	4
Low	3

MELETIOS A. DIMOPOULOS  
HAGOP M. KANTARJIAN  
ELIHU H. ESTEY  
RAYMOND ALEXANIAN  
*Department of Hematology  
University of Texas  
M.D. Anderson Cancer Center  
Houston, TX*

### REFERENCES

1. Piro LD, Miller WE, Carrera CJ, Carson DA, Beutler E: Lasting remissions in hairy cell leukemia induced by a single infusion of 2-chlorodeoxyadenosine. *N Engl J Med* 322:177, 1990
2. Piro LD, Carrera CJ, Beutler E, Carson DA: 2-Chlorodeoxyadenosine, an effective new agent for the treatment of chronic lymphocytic leukemia. *Blood* 72:1069, 1988
3. Kay AC, Saven A, Carrera CJ, Carson DA, Thurston D, Beutler E, Piro LD: 2-Chlorodeoxyadenosine treatment of low-grade lymphomas. *J Clin Oncol* 10:371, 1992
4. Dimopoulos MA, Kantarjian HM, Estey EH, O'Brien S, DelaSalle K, Keating MJ, Freireich EJ, Alexanian R: Treatment of Waldenstrom's macroglobulinemia with 2-chlorodeoxyadenosine. *Ann Intern Med* (in press)
5. Piro LD: 2-Chlorodeoxyadenosine treatment of lymphoid malignancies. *Blood* 79:843, 1992
6. Durie BGM, Salmon SE: A clinical staging system for multiple myeloma. *Cancer* 36:842, 1975
7. Kraut EH, Crowley JJ, Grever MR: Phase II study of fludarabine phosphate in multiple myeloma. *Invest New Drugs* 8:199, 1990