

## THE AUTHOR'S REPLY

I deeply appreciate Dr. DeNardo's interest in my paper. This case does make a point for closer monitoring of the patient's blood following radioactive iodine therapy for carcinoma of the thyroid, especially when diffuse bone metastases are present. The paper did not contain the laboratory results due to space limitations. The following partial resumé is necessary to evaluate the course of events.

- 1-3-73. Hemoglobin was 13 gm and hematocrit, 38%.
- 1-23-73. Hemoglobin was 12.9 gm and hematocrit 35%.
- 2-1-73. Patient received 50 mCi <sup>131</sup>I ablation dose.
- 3-1-73. Patient admitted to hospital by referring physician because of weakness and dizziness. Her hemoglobin was 8.9 gm%; hematocrit, 22%; and platelets, 56,000.
- 3-8-73. After one unit of whole blood and three units of packed red cells, hemoglobin was 13.6 gm%; hematocrit, 40%; and platelets, 124,000. This was essentially unchanged on almost daily blood studies.
- 3-22-73. Hemoglobin was 13.3 gm% and hematocrit, 39.3%.
- 3-23-73. Patient received 100 mCi <sup>131</sup>I.
- 3-30-73. Hemoglobin was 6.3 gm; hematocrit, 17%; and platelets, 80,000. Patient transfused with packed red blood cells.
- 4-3-73. Hemoglobin was 11.8 gm; hematocrit 34%; and platelets, 85,000.

The blood picture remained essentially unchanged up to and after radioactive phosphorus therapy, with

## THE NAMING OF SCANS

The Naming of Scans is a difficult matter,  
 It isn't just one of your holiday games;  
 You may think at first I'm as mad as a hatter  
 When I tell you a scan must have *three different names*.  
 First are names used with routine indiscretion,  
 Like picture, image, aspect, or frame,  
 Like view or projection, slice or cross section—  
 All of them sensible everyday names.

the last recorded examination on July 5, 1973 showing hemoglobin, 10.9 and hematocrit, 32%.

The probable mechanism involved in the drop in red cell and platelet counts was the action of radioactive iodine on a hematopoietic system barely compensating for diffuse neoplastic involvement diminishing the marrow reserve. The effect was accentuated by the following conditions present in this patient.

1. *Bone metastases*. Radiation delivered to the hematopoietic system from radioactive iodine is delivered in the iodide phase and after protein-bound <sup>131</sup>I has been released. It is increased by poor uptake in metastases (1).
2. *Hypothyroidism*. Resistance of bone marrow to irradiation is less in elderly persons and in hypothyroidism (1).

The onset of the drop in red cell and platelet counts is variable and can occur within 1 week or more of the treatment dose of radioactive iodine (1). The larger and quicker drop in red cell count after a 100-mCi dose of radioactive iodine suggests a quantitative effect was present, although this could be due in part to incomplete recovery of marrow from initial treatment with 50 mCi of <sup>131</sup>I.

I have no other explanation for the drop in red cell count. I would appreciate your thoughts on the subject.

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## REFERENCE

1. WAGNER HN: *Principles of Nuclear Medicine*. Philadelphia, WB Saunders Co., 1968, pp 358, 360

There are fancier names, for your edification,  
 Some for the peer, some for the lay;  
 Like intensity matrix or isocontour presentation—  
 But all of them sensible everyday names.  
 But I tell you, a scan needs a name that's particular,  
 A name that's peculiar and more dignified,  
 Else how can the clinician keep his head perpendicular,  
 Or spread out his whiskers, or cherish his pride?