

blood

1989 74: 889-

Amylase producing multiple myeloma [letter]

H Matsuzaki and K Takatsuki

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the polymerase chain reaction with BCR probes may further complicate the definition of cure.

One definition of cure, as Dr Pinkel indicates, is a long plateau on a semi-logarithmic graph of disease-free survival by Kaplan-Meier analysis. This type of analysis and result led us to begin using the term "cure" for patients with relapsed acute leukemia treated by marrow transplantation.² Cure is achieved when the slope of the plateau for the patients is not distinguishable from that of a matched "normal" population.

Another definition of cure is that patients live out a "normal" life span and die of another cause. In Seattle, the longest disease-free survivors are now 13 years following marrow grafting for CML.

Many marrow transplant teams are also reporting long-term survivors who are hematologically and cytogenetically normal.³ These patients will have to be followed for several decades; thus the next generation of hematologists will be in a position to decide whether or not they are cured.

E. DONNALL THOMAS
REGINALD A. CLIFT
*Clinical Research Division
Fred Hutchinson Cancer Research Center
Seattle*

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AMYLASE PRODUCING MULTIPLE MYELOMA

To the Editor:

Ectopic production of amylase has been reported in a number of tumors, especially in pulmonary and ovarian cancers. We experienced a 53-year-old man, with IgA- λ type multiple myeloma associated with salivary-type hyperamylasemia, and reported amylase production by myeloma cells.¹ Furthermore, an amylase and IgA-producing myeloma cell line (KHM-1B) was established.² Four other cases of amylase-producing multiple myeloma have been successively reported (Table 1) in the Japanese literature. In cases 1,¹ 2,³ and 3,⁴ amylase production or secretion by myeloma cells was confirmed by chemical or immunohistological methods. Amylase production by myeloma cells was strongly suspected, because of extreme salivary-type hyperamylasemia in case 6⁵ and its improvement after treatment with melphalan and prednisolone in cases 4⁶ and 5.⁷

Cytogenetic analysis of KHM-1B and its original fresh cells revealed many karyotypic abnormalities, including a translocation between 1p13 or 21, near the amylase gene locus, and 9q34, the *abl* oncogene locus. We speculate that activation of amylase gene is caused by the adjacently translocated enhancer gene or oncogene.

We are now seeking information on amylase-producing myeloma

Table 1. Individual Data for Six Patients With Amylase-Producing Multiple Myeloma

Case	Age/Sex	M-Protein	Serum Amylase (IU/L)	Isozyme	Reference
1	53 M	IgA- λ	1,600	Salivary	1, 2
2	65 F	IgG- κ	3,172 (Dye U/L)	Salivary	3
3	64 F	Non-secretory	8,790	Salivary	4
4	60 F	IgG- λ	62,200	Salivary	6
5	71 M	IgD- λ	31,070	Salivary	7
6	79 F	IgA- λ	7,760	Salivary	5

from abroad. Karyotype analysis of many other cases is important to understand the mechanism of ectopic amylase production by myeloma cells.

HIROMITSU MATSUZAKI
KIYOSHI TAKATSUKI
*The Second Department of Internal Medicine
Kumamoto University Medical School
Kumamoto, Japan*

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