Therapy-related chronic myelomonocytic leukemia

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Takahashi K, Pemmaraju N, Strati P, Nogueras-Gonzalez G, Ning J, Bueso-Ramos C, Luthra R, Pierce S, Cortes J, Kantarjian H, Garcia-Manero G. Clinical characteristics and outcomes of therapy-related chronic myelomonocytic leukemia. *Blood*. 2013;122(16):2807-2811.

1. Your patient is a 70-year-old male previously treated with radiation and chemotherapy for non-Hodgkin lymphoma. You are asked to see him for a presumptive diagnosis of therapy-related chronic myelomonocytic leukemia (t-CMML). Based on the case series by Dr Takahashi and colleagues, which of the following statements about clinical features of t-CMML and de novo CMML is *most likely* correct?

- ☐ Patients with CMML and t-CMML differ significantly in demographic, hematologic, and molecular alteration characteristics
- ☐ CMML is characterized by persistent peripheral blood lymphocytosis
- ☐ t-CMML only occurs in patients exposed to both cytotoxic chemotherapy and ionizing radiation
- ☐ Median latency to diagnosis of t-CMML is 6 years

2. You confirm that the patient described in question 1 has t-CMML. Which of the following statements about cytogenetic and overall risk in t-CMML is *most likely* correct?

- ☐ Approximately one-quarter of patients in the t-CMML group had intermediate- or high-risk cytogenetic abnormalities (defined by CMML-specific cytogenetic risks [Such E, Cervera J, Costa D, et al. Cytogenetic risk stratification in chronic myelomonocytic leukemia. *Haematologica*. 2011;96(3):375-383])
- ☐ The proportion of patients in the t-CMML group with intermediate- or high-risk cytogenetic abnormalities (defined by CMML-specific cytogenetic risks [Such E, Cervera J, Costa D, et al. Cytogenetic risk stratification in chronic myelomonocytic leukemia. *Haematologica*. 2011;96(3):375-383]) was not significantly different from the de novo CMML group
- ☐ The MD Anderson Prognostic Score and CMML-specific prognostic scoring system (CPSS) were used to evaluate prognostic risk in the groups
- ☐ The proportion of patients with CPSS-defined low risk in the t-CMML group was not significantly different from that in the de novo CMML group

3. Based on the case series by Dr Takahashi and colleagues, which of the following statements about prognosis in t-CMML compared with that in de novo CMML would *most likely* be correct?

- ☐ Median overall survival duration in the t-CMML group was shorter than in the de novo CMML group
- ☐ t-CMML was a significant predictor of prognosis after adjustment for the effects of cytogenetics and other covariates
- ☐ Among patients with t-CMML, overall survival was significantly worse in patients who had been exposed to cytotoxic chemotherapy and radiation than in those exposed only to radiation
- ☐ Median leukemia-free survival duration in the t-CMML group was not different from that in the de novo CMML group

Activity Evaluation (where 1 is strongly disagree and 5 is strongly agree)

1. The activity supported the learning objectives.
   1 2 3 4 5
2. The material was organized clearly for learning to occur.
   1 2 3 4 5
3. The content learned from this activity will impact my practice.
   1 2 3 4 5
4. The activity was presented objectively and free of commercial bias.
   1 2 3 4 5