All-*trans*-retinoic acid, idarubicin, and arsenic therapy for APL

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Iland HJ, Bradstock K, Supple SG, Catalano A, Collins M, Hertzberg M, Browett P, Grigg A, Firkin F, Hugman A, Reynolds J, Di Iulio J, Tiley C, Taylor K, Filshie R, Seldon M, Taper J, Szer J, Moore J, Bashford J, Seymour JF, for the Australasian Leukaemia and Lymphoma Group. All-*trans*-retinoic acid, idarubicin, and IV arsenic trioxide as initial therapy in acute promyelocytic leukemia (APML4). *Blood*. 2012;120(8):1570-1580.

1. Based on the study by Dr Iland and colleagues, which of the following statements about the acute promyelocytic leukemia (APML4) phase-2 protocol is *most likely* correct?

- ☐ Arsenic trioxide (ATO) was used only during induction
- ☐ Chemotherapy was given during consolidation
- ☐ ATO, all-*trans*-retinoic acid, and idarubicin were given during induction
- ☐ Duration of maintenance therapy was 1 year

2. Your patient is a 26-year-old male diagnosed with acute promyelocytic leukemia (APL). He has not yet received any treatment. Based on the study by Dr Iland and colleagues, which of the following statements about efficacy outcomes with the APML4 phase-2 protocol is *most likely* correct?

- ☐ Hematologic complete remission occurred in three-quarters of patients
- ☐ Eighty percent of patients who began consolidation attained molecular complete remission
- ☐ At 2 years, freedom from relapse was 97.5%, failure-free survival was 88.1%, and overall survival was 93.2%
- ☐ FLT3 mutation status affected outcomes

3. Based on the study by Dr Iland and colleagues, which of the following statements about expected safety and toxicity outcomes with the APML4 phase-2 protocol would *most likely* be correct?

- ☐ Compared with regimens associated with > 90% disease-free survival, APML4 has higher total doses of anthracycline and ATO
- ☐ The toxicity profile of APML4 precludes its use
- ☐ Five percent of patients died during consolidation therapy
- ☐ Toxicity of APML4 could theoretically be lowered by using a risk-adapted reduction in idarubicin dose during induction, incorporating oral ATO during consolidation, and possibly reducing or eliminating maintenance

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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