Treatment-Associated Leukemia Following Testicular Cancer

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Précis: Testicular cancer treatment: survival advantage far exceeds the risk of treatment-induced leukemia

Introduction
The introduction of cisplatin into therapy protocols for testicular tumors in the early 1970s has resulted in improved cure rates, with a 5-year survival rate of more than 95%. In recent decades, radiotherapy fields used to treat testicular cancer have also decreased in size, and lower radiation doses are employed. For long-term survivors, concern has been raised about the possible carcinogenic sequelae of both radiotherapy and chemotherapy. This report is of an analysis of leukemia risk following treatment for testicular cancers.

Method
In this study, the researchers reviewed data on 18,567 men who were treated for testicular cancer in 6 countries between 1970 and 1993.

Results
- 36 patients had developed leukemia.
- Radiation therapy without chemotherapy increased the relative risk of leukemia by 3 times over control subjects.
- The leukemia risk associated with radiotherapy to the abdomen and pelvis did not reach statistical significance.
- Cisplatin increased the relative risk of leukemia by 3.2 to 5.9 times over control subjects, depending on dose.

Discussion
This study demonstrated that modern radiation and chemotherapy regimens for testicular cancer were associated with a small excess risk of leukemia, which is far outweighed by the survival advantage that treatment confers. However, physicians should always be mindful of the second malignancies associated with cancer treatment. Appropriate follow-up as well as early detection and treatment of second malignancies remain critical.