

ABSTRACT

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Characteristics of Cancers in Adolescents and Young Adults Compared with Those in Adults in Their 60s: A Single-Center Experience.

Aida Y(1), Fukushima H(2), Bando H(3), Ishikawa E(4), Shikama A(5), Sekine I(1).

Author information:

(1)Department of Medical Oncology, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

(2)Department of Child Health, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

(3)Department of Breast and Endocrine Surgery, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

(4)Department of Neurosurgery, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

(5)Department of Obstetrics and Gynecology, Faculty of Medicine, University of Tsukuba, Tsukuba, Japan.

INTRODUCTION: Cancer is one of the main causes of death among adolescents and young adults (AYAs) aged 15-39 years. The improvement in overall 5-year survival in AYA cancer patients was far below than that of adult cancer patients. The purpose of this study was to clarify the features of cancer in AYAs by comparing them with those of controls.

METHODS: Patients in the cancer registry of the University of Tsukuba Hospital between 2007 and 2017 (median age, 65 years) were included in this study. We used patients between the ages of 64 and 66 years as controls. We then obtained the age at diagnosis, sex, primary site, and pathological type.

RESULTS: Among 27,281 cancer patients in the registry between 2007 and 2017, 1,947 (7.1%) patients were categorized into the AYA group, and 2,354 into the control group. Among men in the AYA group, central nervous system (CNS) tumors accounted for 22.7% of all cancers, followed by germ cell tumors, 22.5%, and hematopoietic malignancies, 12.5%. Among women in the AYA group, cervical cancer accounted for 35.9% of all cancers, followed by breast cancer, 14.6%, and CNS tumors, 11.6%. The proportion of specific cancer types relative to all cancers in the CNS, thyroid, adrenal glands, germ cells, cervix uteri, hematopoietic tissues, and sarcomas was higher in the AYA group than that in the control group.

CONCLUSION: The present results for AYAs were in sharp contrast to those for adult cancers and may be related to different modes of pathogenesis in AYAs. The identification of high-risk groups of these tumors in the AYA generation is crucial for prevention and early detection and will be a major topic for future research. While most of adult cancers are treated independently by each medical department, AYA cancers need to be treated in collaboration with experts from several departments. It is desirable to address the issues involved in applying treatments established for adult cancers to AYA cancers on a cancer-by-cancer basis.

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