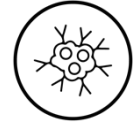


9. MALIGNANT TUMORS IN CHILDREN: EPIDEMIOLOGICAL AND EVOLUTIONARY ASPECTS



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Introduction. The spectrum of malignant tumors in children differs significantly from that of adults. Whereas adult tumors are the result of cell differentiation from a mature tissue histologically, pediatric tumors originate from certain anomalies of embryogenesis, as well as immature.

Aim of study. To study the epidemiological and evolutionary aspects of malignant tumors in children compared to malignant tumors in adults.

Methods and materials. The study is based on a review of the national and specialized literature internationally (ESMO, SIOF, Google Scholar, NCCN). The literature review was conducted in the period of 2013-2023.

Results. Pediatric tumors are rare, they represent approximately 0.5-1% of the total number of cancers. Every year, worldwide, around 400,000 children aged between 0-19 are diagnosed with cancer, this disease being considered the main cause of non-accidental death in children and adolescents in developed countries and in an increasing number in increasing numbers of developing countries. In the Republic of Moldova (RM), according to National Cancer Registry data (2023), the incidence of malignant tumors in children decreased from 13.5‰ in 2021 to 11.2‰ in 2022. Children aged between 5-14 years, with a slight predominance among boys compared to girls (11.4‰ vs. 11.0‰). The most common neoplasms in children are those affecting the hematopoietic system - leukemias or lymphomas (about 50%), as well as CNS, embryonic tumors (retino-, nephro- or neuroblastoma). Tumors in children usually have a shorter latency period, grow faster, are more aggressive, but usually respond better to treatment than in adults. Also, in the case of pediatric patients, there is great variability regarding the type of cancer and its prognosis. The survival rate worldwide, as well as in the Republic of Moldova, has increased considerably in the last 30 years, from about 20% (in 1975) to over 70% (in 2023). However, malignant tumors in children remain the most common cause of death in the 5-9 age group and second in the 10-19 age group.

Conclusion. Despite the high incidence and the evolutionary peculiarities of malignant tumors in children, the prognosis of the disease is considered better in pediatric oncology than in adults, thus about 70-80% of children are long-term survivors, if the disease is diagnosed in time and treated correctly.