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**ANALYSIS OF OVERWEIGHT AND OBESITY INDICATORS IN CHILDREN TREATED  
FOR NEOPLASTIC DISEASES**

*Scientific supervisors Malgorzata Sawicka-Żukowska MD, PhD*

*Department of Pediatrics, Oncology and Hematology, Medical University of Białystok*

**Introduction.** Overweight and obesity are well-known long-term side effects of anticancer therapy in children. According to numerous publications, causes of these complications are complex.

**Aim:** The aim of the study was to estimate body composition parameters in terms of fat tissue components determining overweight and obesity in children after completed antineoplastic treatment.

**Materials and methods.** The study group consisted of 140 children and young adults (male: 81; female: 59) between 4 and 26.5 year of age (mean age 14) treated for neoplastic diseases in the Department of Pediatric Oncology and Hematology, Medical University of Białystok. The control group consisted of 74 children, including cancer survivors' healthy siblings and children hospitalized with other than neoplasm diagnosis. Study group included children treated for leukemias (n=75), lymphomas (n=19), solid tumors (n=43) and hematopoiesis dysfunctions (n=3). The population was divided into two groups according to the time that passed from the end of anti-cancer therapy (group above 5 years and under 5 years from the end of the treatment). Measurements were carried out with InBody370 analyzer, using bioimpedance method, estimating patients' weight, body mass index (BMI), waist-hip ratio (WHR) and percentage of fat tissue (PBF). To determine statistical significance Mann-Whitney U Test was applied at significance level of 0.05.

**Results and discussion.** Study showed that statistically significant increased WHR and PBF was observed in cancer survivors group in comparison with control group (p=0.03662 and p=0.0198, consecutively). This trend was clearly marked in the group under 5 years from the end of the treatment. There were no statistical significances between study group and control group in terms of weight and BMI and (p=0.29372 and p=0.14156, consecutively).

**Conclusions.** Although there were no statistical significances between study group and control group in terms of weight and BMI, study showed that cancer survivors are at risk of increased PBF and WHR in comparison with healthy children. These parameters may be considered as markers of abdominal obesity in children after anti-cancer treatment. Further analysis should be performed to determine the exact group of neoplasm diagnosis, which may be at the highest risk of abdominal obesity and its consequences.