

# **«A pilot study of nutrition management in the Department of Pediatric Oncology in a local district hospital in Kazakhstan »**

**\*Aigul Kaliyeva<sup>1</sup>, Mei Yen Chan<sup>2</sup>, Assiya Turgambayeva<sup>3</sup>**

<sup>1</sup> Master of Public Health, NJSC «Astana Medical University», Kazakhstan

<sup>2</sup> Preventive Medicine and Nutrition Department, NJSC «Astana Medical University»

<sup>3</sup> Head of the Department of Public Health, NJSC «Astana Medical University», Kazakhstan

## **Introduction**

Maintaining optimal nutritional status is important for children with cancer because it can affect clinical outcomes. This study aimed to prospectively study clinical practices in children's cancer departments to improve the nutritional health of children and adolescents receiving cancer treatment. Currently, there are no unified and harmonized protocols for assessing the nutritional status and nutritional support of children in pediatric wards in Kazakhstan.

## **Method**

200 children with cancer aged 6 months to 17 years (n=200) were recruited. Dietary data and other relevant anthropometric and biochemical data were collected using a data collection form validated and developed by the researchers. Data processing is still in progress. They were randomly allocated either to a treatment group or a control group (age-matched and gender matched). The treatment group received nutritional advice and support and the control group received the standard treatment.

## **Results**

A significant decrease in the intake of protein and energy with the consumed diets, which are prescribed by doctors in daily practice, was revealed, which is a risk factor for the development of severe nutritional disorders ( $p>0.5$ ).

Patients who were assigned nutritional support in addition to the General diets during the study had higher nutrient intake. Comparing week zero with subsequent weeks of nutritional support, children in the main group showed significant improvements in the thickness of the triceps skin fold ( $P<0.001$ ), the circumference of the middle shoulder ( $P<0.001$ ), and the circumference of the arm muscles ( $P<0.001$ ), showing that performing nutritional support is better for the evolution of nutrition ( $P<0.01$ ).

## **Conclusion**

Proper use of nutritional support in children with cancer can prevent the development of nutritional deficiencies and associated risks. To improve nutrition management, attention should be paid to nutrition education and assessment tools for doctors and nurses.