

# **The Effects of Nutritional Status on Treatment Outcomes of Pediatric Oncology Patients: A Systematic Review**

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## **ABSTRACT**

**Learning Outcome:** To review current research determining associations between nutritional status and treatment outcomes in pediatric cancer.

**Background:** In childhood cancer, malnutrition has been proposed to increase complication rates and reduce survival (Loeffen et al., 2014). Although research has been done to associate how treatment can cause malnutrition, understanding of the relationship between malnutrition and on patient outcomes is limited. Current literature shows that nutrition is related to mortality and morbidity within this population.

**Methods:** A systematic review was conducted using five databases: CINAHL, Health Source, Academic Search Complete, Wiley Online Library, and SpringerLink. Key Terms included were “childhood cancer,” “nutrition,” and “outcomes.” In total, over 500 articles were found. Inclusion criteria included: 2011-2021 publication, peer-reviewed articles, English publication, and focus on pediatric cancer and nutritional status. Data extraction was completed using the AND Evidence Analysis Manual.

**Results:** Eight articles were included in this review. Findings suggest that malnutrition is associated with lower survival, infections, and complications in childhood cancer patients. Some studies suggested that undernutrition associated with decreased survival. Malnutrition may also have an effect on relapse, hospital readmission, and length of stay.

**Discussion:** All eight studies were designed as observational cohort studies and two were prospective. Further research should be conducted to determine the association between nutritional status and treatment outcomes. Prospective longitudinal studies may be beneficial to improve research in this area.

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