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**Title:** High protein dietary supplement improves nutritional status and recovery in children with Burkitt's lymphoma: a non-randomised controlled study

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Each step of the cancer continuum from diagnosis to recovery poses nutritional challenges. In children with cancers, poor nutritional status will lead to faster disease progression, slower recovery and poorer survival. The effect of nutritional intervention using a soya milk powder (SMP) supplement on nutritional status, recovery and mortality among children undergoing chemotherapy for Burkitt's lymphoma (BL) was studied. Sixty-four subjects were recruited for this non-randomised controlled intervention study. The intervention group was provided the supplement measured to provide 80% RDA for protein and was followed for 6 months, taking measurements at the 0, 3 and 6-months follow-up. Baseline characteristics of the study population were similar except for haemoglobin and prealbumin. SMP supplementation was associated with reduced prevalence of malnutrition (<2 sd BMI-for-age) from 50% baseline up to 0% six months after the intervention (p=0.005). Likewise, the SMP improved anaemia status (100%, 76.9% and 15.8% anaemia between baseline, 3-months and 6-months follow up respectively), serum zinc deficiency (87.5%, 50% and 52.6%, p=0.004) and reduced glutathione deficiency (GSH) (21.9%, 0 and 0, p=0.045). Same cannot be said in the non-intervention group. Recovery from BL 1 year after the intervention was 47% compared with 16% in the non-intervention, whereas mortality was 19% versus 28% between the intervention and non-intervention groups respectively. Dietary supplementation using a high protein-based SMP improved nutritional status, recovery and survival in children with BL hence the need for larger studies to assess the efficacy of nutritional intervention as non-conventional treatment of childhood cancers in limited resource settings.