Macro and micro-nutrient deficiencies and diminished nutritional status are common features of pulmonary tuberculosis. To determine the association of nutritional factors with pulmonary tuberculosis treatment outcome in newly diagnosed patients. A hospital based prospective follow-up cohort study design. Two urban Directly Observed Treatment Short-course (DOTS) centers in Lucknow District of Uttar Pradesh, India. Newly diagnosed sputum smear-positive cases for Acid-fast Bacilli (AFB) before and after treatment were included in the study. Outcomes were evaluated by clinical, radiological and mycobacterial culture and drug-susceptibility testing in sputum smear positive patients. The parameters used to assess the nutritional status were body mass index (BMI) and mid upper arm circumference (MUAC). Nutrients intake was assessed by 24-hour dietary recall method. A total of 185 newly diagnosed patients with pulmonary tuberculosis were recruited. Out of these, 14 patients were lost to follow up after treatment and remaining 171 patients were analyzed. The mean (±SD) age of the study population was 29 (±12) years. Significant (p