Nutrition is a very important component of surgery just like blood transfusions and antibiotics. This is because; it plays a key role in the recovery process from all forms of surgical interventions. The concept of nutrition covers both the preoperative and postoperative aspects. Substantial prevalence of malnutrition in surgical patients has recently been recognized. Several studies have reported the frequent occurrence of malnutrition in hospitalized patients. Malnutrition in surgical patients has been shown to increase postoperative morbidity and mortality. A variety of biochemical, anthropometric, and clinical measurements have been used as indicators of Protein Energy Malnutrition and as a predictor of postoperative morbidity and mortality. The purpose of this study was to assess on admission and after surgery, the nutritional status of patients undergoing abdominal surgery and compare it with postoperative outcome. The study made use of a cross-sectional survey method. The data was collected using an interview schedule from 80 patients using observation checklists, laboratory tests, and anthropometric assessment methods. The data were analyzed by computer using the statistical package for social sciences (SPSS). Chi-square (x²) was used to relate variables. To measure the strength of associations between the studied variables, Pearson's Contingency Coefficient (C) was used. The data were then summarized in frequency tables. The patients in the study were aged 21-54. Age group 20-49 was over represented. They also had the best nutritional status. But at 0.05 level of significance, age was not significant with nutritional status. More males (67.5%) underwent abdominal surgery than females. But gender was not significantly related with nutritional status at 0.05 level of significance. In terms of income, most (41.3%) patients' income was between Kshs. 1000 to 5000 and they lived in mabati houses. When education level was considered, 42.6% of the patients had primary education and below. Only 6.3% had attained University education. When education was compared with nutritional status at 0.05 level of significance it was found to be significant. Half of the patients were malnourished on admission and this prevalence increased by 16% after surgery. The study found out that there was a significant relationship between preoperative nutritional status and postoperative nutritional status at 0.05 level of significance. There was a significant relationship between nutritional status and most post surgical complications. This is because most of the patients with good nutritional status had better outcomes after surgery. Nutritional support had a significant relationship with surgical outcome at 0.05 level of significance. But the study found out that preoperative nutritional support seemed to reduce the incidence of complications than did postoperative support. The study also found out that there was 82% non-compliance rate in feeding regimes, which may have rendered nutritional support useless in preventing complications that may be nutritionally related. However, preoperative nutritional support was found to be better in minimizing complications than did postoperative nutritional support. Therefore, all patients' nutritional status should be assessed on admission and during hospitalization, nutritionists should make feeding regimes and nurses should adhere to them, doctors to take a keen interest in nutrition, and nutritional support should be made an important adjunct of surgical practice in all hospitals in the republic of Kenya.