Abstract: Chronic pancreatitis (CP) and pancreatic adenocarcinoma (PDAC) are the most common diseases of the pancreas. Cachexia—weight loss exceeding 10% of stable body weight—is present in up to 80% of patients with PDAC. Because the mechanisms of cachexia are not well known, this provides a possibility to compare clinical courses of benign and malignant cachexia. In this study, 382 patients-242 with a PDAC stage UICC II/140 with CP-were documented regarding the prevalence of cachexia and its influence on perioperative morbidity and mortality with a special interest to postoperative weight gain and survival. Cachexia was present in 41.4% of CP and 31% of cancer patients. We could demonstrate more pronounced systemic effects of cachexia in patients with PDAC. Weight loss was faster in PDAC patients, the amount of weight loss did not differ significantly between the groups. Cachexia had a significant impact on survival and the postoperative course in patients with PDAC and tumor resection. The development of cachexia is faster in patients with a malignant disease and the systemic effects are more pronounced. Therefore, tumor cachexia should be considered as a different entity than cachexia in benign diseases.