(1) Background: Food insecurity (FI) is a public health and sociodemographic phenomenon that besets many cancer survivors in the United States. FI in cancer survivors may arise as a consequence of financial toxicity stemming from treatment costs, physical impairment, labor force egress, or a combination of those factors. To our knowledge, an understanding of the dietary intake practices of this population has not been delineated but is imperative for addressing the needs of this vulnerable population.; (2) Methods: Using data from NHANES, 1999-2018, we characterized major dietary patterns in the food insecure cancer survivor population: i. penalized logistic regression (logit) and ii. principal components analysis (PCA). We validated these patterns by examining the association of those patterns with food insecurity in the cancer population.; (3) Results: Four dietary patterns were extracted with penalized logit and two with PCA. In the pattern validation phase, we found several patterns exhibited strong associations with FI. The FI, SNAP, and Household Size patterns (all extracted with penalized logit) harbored the strongest associations and there was evidence of stronger associations in those moderately removed from a cancer diagnosis (2 and 6 years since diagnosis).; (4) Conclusions: FI may play an influential role on the dietary intake patterns of cancer survivors in the U.S. The results highlight the relevance of FI screening and monitoring for cancer survivors.