



## **2020 Gleiberman Head and Neck Cancer Center Pilot Grant**

### **Evaluating the Prevalence and Progression of Cancer Cachexia in Patients Receiving Curative Intent Therapy for Locally Advanced Head and Neck Cancer**

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#### **Scientific Abstract:**

Cachexia is a complex, multifactorial phenomenon that is prevalent among cancer patients and can negatively impact survival, functional outcomes and quality of life. The hallmark of cachexia is skeletal muscle loss, with or without additional loss of adipose tissue. Historically, surrogate markers such as weight loss or malnutrition were interchangeably used to define cachexia, resulting in limited evaluations that do not fully capture its impact. This is especially important since progressive cachexia becomes irreversible with conventional nutritional support, thus requiring early identification and intervention. This study's aim is to rigorously examine the prevalence and progression of cachexia in head and neck cancer (HNC) patients along the care continuum, utilizing an internationally recognized definition that broadly encompasses multiple variables, including fatigue, anorexia, skeletal muscle loss, low fat-free mass, muscle strength and presence of abnormal laboratory findings. Fifty patients with locally advanced HNC who are receiving curative intent treatment will be prospectively enrolled. Assessments will include a validated cachexia questionnaire, measurement of hand grip strength, completion of bioelectrical impedance analysis, and bloodwork to assess albumin, hemoglobin and C-reactive protein. These assessments will be performed at baseline and 1, 3, 6, and 12 months after. All patients will receive standard of care nutrition interventions per implemented care pathways. The results of this pilot study will better inform cancer providers on the prevalence and evolution of cancer cachexia across the HNC care continuum so that future studies may be designed to implement early, appropriate interventions that prevent or reduce the progression of cachexia.

#### **Lay Abstract:**

Cachexia is a progressive wasting condition that may be observed in cancer patients. It is a form of malnutrition that has multiple negative effects on survival, functional outcomes and quality of life. While weight loss is often used to diagnose this condition, there are important variables that are not consistently measured, potentially leading to under-diagnosis of this illness and inability to fully capture its impact. It is especially important that patients with cachexia are diagnosed timely as cachexia can progress to a point where it is no longer responsive to nutritional interventions. The goal of this study is to examine the number of patients with head and neck cancer (HNC) who exhibit cachexia at diagnosis and follow the progression of this condition throughout their treatment and recovery. Assessments will include fatigue, decreased appetite, skeletal muscle loss, strength, and altered laboratory values. Fifty HNC patients receiving curative cancer treatment will be asked to participate. Before treatment begins, these patients will be evaluated for the presence of cachexia based on previously published measures: body composition, muscle strength, bloodwork for laboratory markers of cachexia and a quality of life questionnaire. These assessments will be repeated at 1, 3, 6, and 12 months after. All patients in the study will be

closely followed by a registered dietitian, as is standard practice during cancer treatment. The results of this study will allow researchers to develop strategies to address cancer cachexia early, and prevent or reduce its negative impacts, resulting in more favorable outcomes.