University of BRISTOL

University Hospitals Bristol NHS
NHS Foundation Trust

headandneck 5000

Body mass index at diagnosis and prognostic significance on head and neck cancer survival

Principle Applicant: Tom Dudding & Andy Ness

Co-Applicants: Stefania Boccia, Luca Giraldi, Adriano Grossi (Institute of Public Health, Università Cattolica del Sacro Cuore, Rome, Italy)

INHANCE consortium (contact: Yuan-Chin Amy Lee)

Scientific Outline

Summary: Body mass index (BMI) has been associated with HNC survival, though this issue remains open to discussion. In this project, we aim to evaluate the prognostic influence of BMI, weight and height at diagnosis in people with HNC. Nutritional deficit is one of the major complications in the treatment of people with HNC, and BMI is commonly used to evaluate it. Several studies have suggested that high BMI is associated with a better prognosis than low BMI for people with oral cavity, laryngeal and oropharyngeal cancer. High fat mass has been linked with dysregulated energy metabolism and increased levels of proinflammatory mediators, which can promote tumour cell survival, proliferation, and invasion. However, more advanced T stage may often result in partial obstruction of the upper digestive tract leading to diminished oral intake, poor nutrition, and weight loss. Accordingly, we will adjust for confounding due to advanced T stage and tumor-related weight loss by including only people with T1 or T2 tumors (or stratifying by stage). This study will meta-analyse data from approximately 15 studies belonging to the INHANCE consortium.

Keywords: Head and neck cancer, Body mass index, Survival, Prognosis, Meta-analysis