Radiotherapy is one of the most important treatment modalities for head-and-neck cancer patients. Unfortunately, these patients often experience side-effects from radiotherapy, such as xerostomia and dysphagia, that significantly impair their quality of life.

With proton beam therapy (PBT), the damage to healthy structures may be limited, resulting in a better quality of life for these patients. This benefit, needs to be established in clinical trials by patient-reported outcome measures, as well as imaging of the radiation damage to the salivary gland system and to the swallowing muscles.

As a postdoc you will work on a project to develop and validate MRI techniques that localize and quantify radiation-induced damage to the relevant normal structures. You will develop MRI sequences in a group of patients and healthy volunteers, and setup a prospective patient study for the clinical validation of the MRI protocol. Your research will be carried out both in the LUMC and in HollandPTC (proton therapy center) located in Delft. You will work in a multidisciplinary team, consisting of medical physicists, MR physicists, head-and-neck radiotherapists, head-and-neck radiologists and speech-language pathologists.

Interested? Read more on the website of [LUMC](http://www.lumc.nl).