

# headandneck 5000

## Genome Wide Association Study of Radiotoxicity in Head and Neck Cancer

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### Scientific Outline

#### Summary

We want to perform a meta-genome-wide association study of radiotoxicity in head and neck cancer (HNC) patients to identify genetic determinants of reaction to radiation. This will be conducted in a series of between 8 and 15 studies and the results meta-analysed. The identified associated variants, will be used to improve the performance of normal tissue complication probability (NTCP) models in HNC patients as well as they will provide a better understanding of underlying mechanisms of radiation-induced morbidity. The GWAs will be done for acute and late toxicity endpoints.

Keywords: GWAS, HNC, Radiotoxicity, Radiotherapy