



headandneck 5000

Epstein-Barr virus specific antibody and RNA signatures in nasopharyngeal cancer

Principle Applicant: Dr Tim Waterboer

Co-Applicants: Dr Julia Butt (serology), Dr Daniela Höfler (tumour RNA analyses),

Prof Andy Ness (epidemiology)

Scientific Outline

Summary

Epstein-Barr virus (EBV) is causally associated with the development of nasopharyngeal carcinoma (NPC). We will utilize a recently developed 14 antibody panel (Coghill et al., Clin Cancer Res 2018) to measure EBV antibodies in the $^{\sim}100$ Head and Neck 5000 NPC cases, and correlate this data with molecular tumour status as assessed by EBER ISH, and/or EBV RNA RT-qPCR in FFPE material.

Together with available data from the Human papilloma virus serology, this will allow us to describe the attributable fractions of EBV, HPV, and lifestyle factors in NPC in Head and Neck 5000, by means of molecular epidemiology.