

Puglia Meeting - Professor Andy Ness

In early June, Professor Ness attended the 5th Workshop on Emerging Issues in Oncogenic Virus Research, Puglia, Italy. He gave a presentation entitled “The prevalence of human papillomavirus antibodies and survival in people with head and neck cancer: results from Head and Neck 5000”. This was similar to the presentation at the meeting in Lübeck (described in the last newsletter) but to a very different audience. The subject of the meeting was (as the picture suggests) oncogenic viruses rather than head and neck cancer with a focus on the molecular rather than the clinical. There were some epidemiological sessions on the first day but after that the sessions were much more

mechanistic. There were interesting sessions on different approaches to vaccine development and on the meaning and implications of HPV seropositivity. The meeting was set in a beautiful location close to a sandy beach and organised with a wonderful Italian sense of fun! This left plenty of time to discuss ideas and to finalise a collaboration with Massimo Tommasino at the International Agency for Research on Cancer. In addition, the conference was not far from the beautiful Baroque city of Lecce (sometimes called the Florence of the South).

The Head and Neck 5000 Follow-up Study

The follow-up study data collection has now been completed. 63 out of the 76 possible sites joined in the Follow-up Study, sadly 13 of the sites that took part in Head and Neck 5000 were unable to open due to staffing issues. We have sent out a total of 3540 questionnaires of which 2185 were completed, giving an overall questionnaire return rate of 62% which we are very pleased with. A total of 4330 Data Capture Forms have been received, only 3 were not sent in. There were 220 participants lost to follow-up and 7 who withdrew from data collection. The questionnaire and data capture form data have been entered to the study database and the final data cleaning is almost complete. We just have a few remaining data queries outstanding and some final checks to run. The follow-up study data will be included in our next data release which will be ready in the spring. We would like to thank all of the people at the study sites who have helped with the follow-up study, their input and support has been fantastic.

St Ulrich meeting - Professor Andy Ness



In October, Professor Ness returned to Germany to attend a Human Papilloma Virus Research Retreat at St Ulrich in the Black Forest. The meeting was special as it marked the retirement of Dr Michael Pawlita (though he will be returning one day per week on a student helper contract!) with a series of surprise guests from across Europe. Luckily there was some lovely

autumn weather – what Germans call a “Goldener Oktober”. Along with the interesting programme there was time for a detailed discussion of our first batch of HPV tissue analyses. And Head and Neck 5000 made it into the final summary of the meeting from Michael!

Causes of head and neck cancer - Professor Steve Thomas

The causes of cancer in the mouth throat and larynx are changing and this has implications for prevention and treatment. Twenty years ago, tobacco and alcohol consumption were considered to be the established risk factors and it was estimated that these risk factors accounted for about 75% of cases. More recently human papillomavirus (HPV) has emerged as a likely cause of oropharyngeal cancer. In this recent publication we argued that each cancer site is differentially predicted by each risk factor. We also suggested that these risk factors do not fully explain the changing pattern of disease observed in the UK. Changes in smoking, alcohol and HPV infection can explain some of the observed changes in incidence of head and neck cancer. However, divergent trends in incidence and striking differences in the risk profile for people with squamous cell cancers at each of the three sites suggest different major risk factors for each cancer. This is important because the cause may predict prognosis and response to treatment. People with HPV positive oropharyngeal cancers have better survival than those with HPV negative cancers and trials are underway to assess the impact of modifying treatment according to HPV status. Better understanding of the changing aetiology of head and neck cancer may therefore allow refinements to treatment modality and intensity and better targeted preventive efforts.

Diversity of projects and papers - Professor Andy Ness

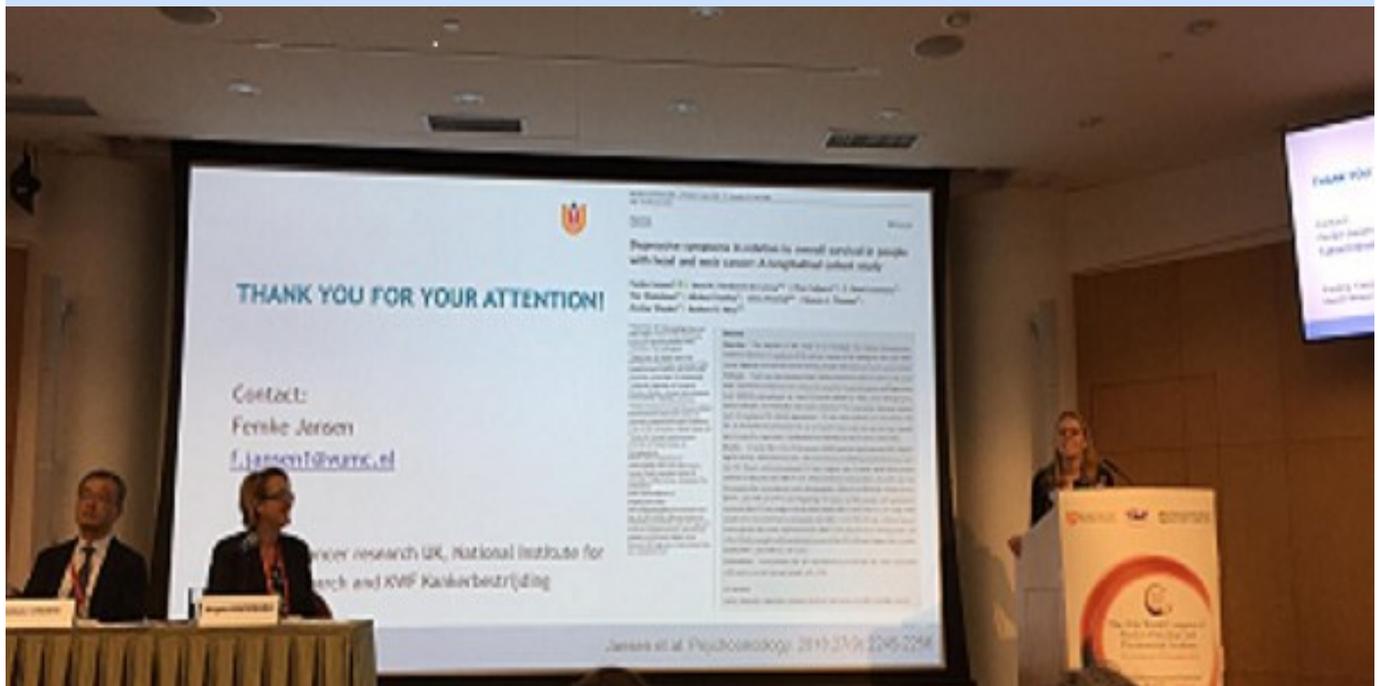
Seven papers using Head and Neck 5000 data have been published already this year and more papers are in the pipeline. Two papers led by Chris Penfold and Rhona Beynon were described in the last edition of the newsletter and findings from two papers led by Femke Jansen (who described her visit to Bristol in a previous newsletter and presented her work recently in Hong Kong) and Steve Thomas are described in this edition of the newsletter. The three other published papers have looked at genetic or epigenetic data. Tom Dudding and colleagues used data from the Genetic Associations and Mechanisms in Oncology (GAME-ON) network that included Head and Neck 5000 data. They looked at genetic variants related to vitamin D level to explore the effect of vitamin D on oral and oropharyngeal cancer risk. They concluded that it is unlikely that supplementation of the general population with vitamin D will be beneficial in preventing these cancers. (<https://onlinelibrary.wiley.com/doi/full/10.1002/ijc.31377>). Linda Kachuri and colleagues looked at the role of telomere length in the aetiology of lung and head and neck cancer. While their analysis suggested an association with lung cancer overall there was no association with squamous lung carcinoma or head and neck cancers. (<https://academic.oup.com/ije/advance-article/doi/10.1093/ije/dyy140/5061128>). Using epigenetic data generated in Bristol on a subset of people with oropharyngeal cancer Srikant Ambatipudi and colleagues produced preliminary data suggesting that systematic inflammation (derived from measures of DNA methylation) was associated with survival in people with head and neck cancer. (<https://www.sciencedirect.com/science/article/pii/S1368837518303117?via%3Dihub>).

Predictr-2 Study - Dr Miranda Pring

Head and Neck 5000 is supporting the Predictr2 study. This MRC funded, collaborative multicenter study is led by Professor Hisham Mehanna at the University of Birmingham. There is currently no way to determine which patients with oropharyngeal cancer would benefit from surgery, so treatment decisions are based on clinician preference and patient choice, rather than tumour biology. The aim of the Predictr study is to develop a biomarker classifier to help predict which patients with oropharyngeal cancer may benefit from having surgery alongside chemotherapy and radiotherapy. Using a combination of biomarkers the team will aim to validate an algorithm that will stratify patients into high and low risk groups. Head and Neck 5000 tissue samples and linked data will be used to examine the biomarker combinations, assess prognostic significance and validate the initial findings. Professor Ness and Dr Pring will attend the first meeting of the Predictr2 project management group which is planned for January 2019.

Symptoms of depression and survival -Femke Jansen

Femke Jansen, who visited Bristol from January to April 2017, presented at the 20th World Congress of the International Psycho-Oncology Society (IPOS) in Hong Kong. The conference was held from October 31th to November 2nd with over 600 researchers and healthcare professionals attending.



Femke presented findings of the study on symptoms of depression and overall survival in people with head and neck cancer, for which she used data from the Head and Neck 5000 study. The results of this study showed that people with pre-treatment symptoms of depression had a higher risk of early death compared to people without pre-treatment symptoms of depression. Also, people with persistent, recurrent or late symptoms of depression during the first year after cancer diagnosis had a higher risk of early death, compared to people who never had an increased level of symptoms of depression. People who recovered from their symptoms of depression during this first year had a comparable risk of early death compared to people who never had an increased level of symptoms of depression. This study has recently been published in Psychooncology (Jansen et al. Psychooncology 2018), and is a collaboration of Head & Neck 5000 researchers (Andy Ness, Andrea Waylen, Steven Thomas, Chris Penfold), researchers from The Netherlands (Femke Jansen, Irma Verdonck-de Leeuw, Pim Cuijpers, René Leemans) and researchers from Germany (Tim Waterboer and Michael Pawlita).