



Application number/Title: 42176 - Association between cardiometabolic health and cancer

Applicant PI: Dr Christoph Nowak

Application Institution: Karolinska Institutet (Sweden)

Keywords provided by the Applicant PI to describe the research project:

Cancer, cardiovascular, diabetes, mendelian-randomisation, metabolic, risk-prediction

Application Lay Summary:

Previous studies have shown that cancer and common non-cancer diseases such as type 2 diabetes and heart disease share several risk factors. In many cases, however, these associations have not been assessed in subgroups of the population, for example in pre- and post-menopausal women. Whether or not shared risk factors play a causal role either in cancer development or cardiovascular disease risk is also largely unknown. We will use genetic and observed data in the UK Biobank to characterise in detail the relationship between heart disease and type 2 diabetes on the one hand, and risk of the most common types of cancer (breast, prostate, gut and lung cancer). The project will take about three years and the results could not only advance our understanding of how cancer develops, but only help to prevent long-term negative cardiovascular consequences of cancer treatment. Fortunately, more people treated for cancer than ever before survive into old age and it is therefore important to identify cancer-related risk factors for cardiovascular and diabetic disease to prevent their occurrence on later life. In conclusion, our project in the intersection between common cancer and non-cancer diseases can benefit persons affected by both disease groups.