

**TCS/21/39 - PET/MRI (Positron Emission Tomography/Magnetic Resonance Imaging) to Improve Staging and Personalise Treatment for Prostate Cancer: PRISTINE Study.**

Prostate Cancer has overtaken Breast Cancer as the most diagnosed cancer in the UK. Despite significant progress in treatment, 12,000 men still die of Prostate Cancer in the UK every year. Some of these deaths occur because diagnostic tests underestimate how aggressive or advanced the cancer is, and subsequent treatment is insufficient to clear all the disease. Equally, if these tests fail to truly identify cancer that has spread beyond the boundaries of what can be cured, men may be exposed to potentially life-altering side-effects from unnecessarily extensive surgery or radiation therapy. Therefore, we urgently need better tests to help direct more aggressive treatment to the patients who need it, whilst sparing unnecessary treatment for patients where quality of life is the primary objective. The PRISTINE study aims to do this by investigating whether cutting-edge imaging technology from the only combined PET/MRI scanner in the Scotland can improve accuracy in identifying prostate cancer and using state of the art computing analysis called radiomics to improve our ability to personalise treatment and minimise side effects.