The development of a novel metabolomic test to diagnose and quantify pancreatic exocrine insufficiency among patients with chronic pancreatitis. The DETECTION study.

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Pancreatic exocrine insufficiency is prevalent in pancreatic cancer, cystic fibrosis and chronic pancreatitis and has significant implications for quality of life and survival. The Current diagnostic tests are far from ideal, either having poor sensitivity or being time consuming and unpleasant.

Metabolomics is the study of small molecules in blood and other human tissues. The ‘food metabolome’ can be defined as ‘the part of the human metabolome directly derived from the digestion of food’. This study aims to develop a metabolomic 'fingerprint' of PEI that will form the basis for a blood test with the potential to diagnose and quantify PEI.

Blood will be taken from patients with PEI (from pancreatic cancer patients as a main study cohort and the from patients with cystic fibrosis and chronic pancreatitis as sub-studies) and from healthy controls after a fatty test meal and sent for metabolomics analysis. Plasma samples will be analysed using untargeted ultra-performance liquid chromatography-mass spectrometry allowing the detection of between 1500 and 2000 metabolites to identify metabolites most predictive of PEI.