Cancer immunotherapy as a first-line treatment

Oesophageal cancer cases exceeded 600,000 in 2020, with over half a million deaths, making it the 6th leading cause of cancer-related mortality worldwide. In Ireland, incidence is expected to increase by 103% in males and 60% in females by 2045. Despite improvements in treatment, five-year survival rates are approximately 20%. Many urgent unmet clinical needs remain, including identifying the best treatment options; understanding the central role of the immune system; early detection through symptom awareness and screening; and identifying lifestyle factors that play a role in increasing cancer risk. Immunotherapy, which uses the patient's immune system to fight cancer, has changed treatment prospects for cancer patients globally.

In 2021, immunotherapy, in the form of anti-PD1 immune checkpoint inhibitor, was approved as a first-line treatment for advanced oesophageal cancer. We aim to have immunotherapy approved as a first-line treatment for all stages of cancer. We do not yet know who will benefit most and how immunotherapies will interact with other treatments such as chemotherapy and radiotherapy, which can impact the immune system. The correct choice, dose and timing of treatment is crucial.

"Cancer is a complex disease driven by many underlying and external factors that can influence how a patient responds to treatment."

Dr Joanne Lysaght
Associate Professor, Cancer Immunology and Immunotherapy Group, TTMI and Trinity St James's Cancer Institute

Dr Joanne Lysaght, Associate Professor, leads a multidisciplinary group at the Trinity Translational Medicine Institute and Trinity St James's Cancer Institute. Dr Lysaght's group aims to identify new immunotherapies for oesophageal cancer patients, and investigate how and when to apply them alongside standard treatments. They also study how the tumour microenvironment affects immunotherapies. The Department of Surgery has established several tissue biobanks, which are key for this translational research. This research addresses key gaps in knowledge and will ultimately improve patient management, treatment choices and outcomes.