What is prostate cancer?

Prostate cancer is a malignant tumour that forms in the cells of the prostate gland. These cancers are slow-growing and are not likely to spread, but some can grow more quickly and can be very dangerous.

What are the symptoms of prostate cancer?

In its early stages, prostate cancer often has no symptoms.

As the cancer progresses, symptoms may include the following:

- passing urine more frequently
- difficulty in passing urine
- urgency to pass urine
- leaking urine
- blood in urine or semen
- difficulties in achieving or maintaining an erection

A clinical examination along with a prostate specific antigen (PSA) test may indicate prostate cancer, but further testing is necessary for diagnosis.
What is PIONEER

PIONEER serves as the European Network of Excellence for Big Data in Prostate Cancer.

PIONEER is one of the EU’s Big Data for Better Outcomes (BD4BO) disease-specific projects.

The project is using a vast amount of available data “big data” to improve screening, diagnosis and treatment of prostate cancer.

Why PIONEER

An estimated 1.3 million new cases of prostate cancer and 359,000 associated deaths were reported worldwide in 2018, making prostate cancer the 2nd most frequent cancer and the 5th leading cause of cancer death in men.

The risk of prostate cancer increases with age, especially in men over 50.

The socio-economic burden associated with it is predicted to dramatically increase in the coming years due to aging.

What we know about prostate cancer today, is that there are a number of critical knowledge gaps in relation to the screening, diagnosis and treatment of prostate cancer patients, including:

- lack of standardisation of prostate cancer outcome definitions across all stages of the disease
- insufficient knowledge of the risk factors for developing prostate cancer
- insufficient knowledge of patient characteristics, including genetic profiles
- lack of meaningful engagement with patients when defining core disease outcome sets

These gaps are dispersed throughout the patient’s journey and make clinical practice decision-making difficult and inconsistent, compromising the quality of care provided to patients, as well as affecting their quality of life.

PIioneer’s approach

PIioneer will standardise and integrate already existing “big data” collected from different sources such as clinical trials and electronic health records from diverse populations of prostate cancer patients across different stages of the disease into one single, innovative data platform.

PIioneer will result in meaningful improvement in clinical practice, prostate cancer disease related outcomes, and health system efficiency by providing evidence-based data for improving decision-making.