



PIONEER



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PIONEER's ultimate objective

Through the development of a single integrated systems medicine data and knowledge platform for prostate cancer, PIONEER aims to transform the field of prostate cancer care with particular focus on improving:

- prostate cancer-related outcomes;
- health system efficiency;
- the quality of health and social care across Europe.

PIONEER will make a meaningful contribution towards improved patient stratification, and improved identification of low- and high-risk patients, including which patients are more likely to respond to a specific treatment. PIONEER's results will improve evidence-based shared decision-making for all prostate cancer patients. Ultimately minimising inequalities between all European prostate cancer patients through the standardisation of care pathways across Europe.

PIONEER's ultimate ambition is to minimise inequalities between all European prostate cancer patients through the standardisation of care pathways across European borders.

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PIONEER

Prostate Cancer Diagnosis
and Treatment Enhancement
through the Power of Big Data in Europe

European Network of Excellence for Big Data in Prostate Cancer, consisting of 32 private and public stakeholders in prostate cancer research and clinical care from across 9 countries.

PIONEER is part of the Big Data For Better Outcomes Programme (BD4BO). BD4BO is an umbrella programme of the innovative Medicines Initiative 2 (IMI2), which is a collaboration between the European Union and European Federation of Pharmaceutical Industries and Associations (EFPIA), and is the world's largest public-private partnership in the life and biomedical sciences.

Together we can ensure that each individual patient receives the right treatment for them at the right time.

PIONEER unites academic institutions, patient organisations, clinicians and pharmaceutical companies as well as regulatory agencies, Health Technology Assessment bodies, experts in economics and ethics, and information and communication technology specialists.

24 participants from the public domain (9 countries)

8 pharmaceutical companies (EFPIA)

8 Work Packages

- WP-1** Project Management
- WP-2** Disease understanding and outcome definition
- WP-3** Data access and sources
- WP-4** Data platform
- WP-5** Data analytics
- WP-6** HTA regulator-payer integration
- WP-7** Dissemination and communication
- WP-8** Legal, ethics and governance

WHY PIONEER

There were approximately 1.3 million new cases of prostate cancer and 359,000 associated deaths worldwide in 2018, making prostate cancer the second most frequent cancer and the fifth leading cause of cancer death in men.

Prostate cancer healthcare costs were estimated at €8.43 billion per year in the EU in 2009 and accounted for 7% of all cancer costs in Europe. The socio-economic burden associated with prostate cancer is predicted to dramatically increase in the coming years due to Europe's aging population.

Critical knowledge gaps in relation to the screening, diagnosis and treatment of prostate cancer patients:

- makes clinical practice decision-making difficult and inconsistent;
- means that predicting which patients will have the best outcomes with specific treatments is currently suboptimal.

These gaps are dispersed throughout the patient's journey (from diagnosis to treatment) and they compromise the quality of care provided to patients, as well as affecting their quality of life.

PIONEER's approach - how will PIONEER achieve its goals?

Step 1: Identify critical evidence gaps in prostate cancer care through a prioritisation exercise including all stakeholders.

Step 2: Identify core outcome sets for localised, locally advanced, and metastatic prostate cancer.

Step 3: Collect, standardise and integrate existing 'big data' from prostate cancer patients across different stages of the disease into a single innovative data platform.

Step 4: Use a unique set of methodologies and advanced analytical methods to answer the research questions identified in step 1.

Step 5: Implementation of knowledge gained into clinical practice.

PIONEER's harmonised data and knowledge platform will enable PIONEER to directly answer questions regarding the natural history, cost-effectiveness and clinical utility of new and innovative interventions during the prostate cancer diagnostic and treatment pathway for all stages of the disease. It will also enable PIONEER to identify and address evidence gaps which can delay decision-making by regulatory agencies, HTA bodies and payers; compromising timely patient access to innovative treatments for prostate cancer.

