I-PROCARE: Integrated Database for Prostate Cancer Care and Research

Discipline codes:
23.10.00 Pathologie, pathologische anatomie
23.20.00 Organen en orgaansystemen
23.40.00 Gezondheidswetenschappen
23.80.00 Epidemiologie
23.44.00 Gezondheidseconomie
23.90.00 Geneeskunde, overig

Short statement regarding Investment:
The prostate cancer networks Netherlands endorsing the potential care of at least 6,000,000 Dutch male inhabitants. This is translated into the care of approximately 50% of Dutch patients with prostate cancer. In these three prostate cancer networks together, approximately 1,000 clinicians put their strongest efforts in the clinical care of prostate cancer patients including urologists, radiation oncologist, internal oncologists, pathologists, radiologists, and nuclear physicians.

At present, all these health care providers generate a large amount of data according to local hospital conditions on the diagnosis, management, and treatment of their patients with prostate cancer. Data are collected within separate electronic patient databases, radiological and nuclear medicine viewing modules, pathological viewing clouds and databases of bio-banks. Furthermore, local research teams have formed their individual datasets for their specific research questions.

Yet, communication between health care providers and research personnel on individual patients or series of patients is hampered by the presence of multiple, non-integrating and non-communicating datasets. This may result in the inability to provide high level scientific research output and subsequently in sub-optimal patient care.

The aim of the investment is to create a platform that will integrate all prostate cancer research data nationwide with the goal to enable high end prostate cancer research and care.

The platform enables nation-wide research lines such as: 1) high risk mutation screening for familial prostate cancer, 2) Artificial Intelligence for prostate cancer imaging, 3) predictive model development for recurrence and many more.

The requested investment is for 1) server platform that allows for integration of all research sources locally and nationally, 2) platform management to establish clinical research cooperation, and 3) application programming interfaces (API’s) to establish automatic data harvesting from sources into the platform.
Involved researchers – consortium
- Amsterdam University Medical Center – department of Urology
  Prof. Dr. H.J. Beerlage, prof. Dr. R.J.A. van Moorselaar, Assoc. Prof. Dr A.N. Vis, Dr. D.M. de Bruin
- Netherlands Cancer Institute – department of Urology
  Prof. Dr. H.G. van der Poel, Dr. P.J. van Leeuwen
- Prostate cancer Network Netherlands (Amsterdam UMC, NKI/AVL, and partners)
  Prof. Dr. H.G. van der Poel
- Anser prostate cancer network (ErasmusMC, Maasstad Hospital and partners)
  Prof. Dr. C.H. Bangma
- Prosper prostate cancer networks (RadboudMC, Canisius hospital and partners)
  Dr. J.P. van Basten

Linkage with GWI roadmap groups:
Group health sciences:
- Health RI - Health Research Infrastructure – NFU
- DIAS - Data and AI Systems Lab – TUD
- anDREa - Accessible network Digital Research Environment alliance - EMC, UMCU, RUMC
- EPIC-NL - EPIC-NL – UMCU
- EATRIS.nl - European Infrastructure for Translational Medicine NL national node – NKI/AVL
- BBMRI.nl - Biobanking and Biomolecular Research Infrastructure - UMCU
- CCRDBC Clinical Cohorts Research Data & Biobanking Center (CCRDBC) - UMCU