pcmm
a ctmm project

Center for Translational Molecular Medicine

Prostate Cancer Molecular Medicine – WP3

Authors: T. Hulsen[5],H. Obbink[5],H. van der Poel[2],I. van Oort[3],I.J. de Jong[4],E. Buskens[4],M. Wildhagen[1],E. Steyerberg[1] and C. Bangma[1]
Disease area: Oncology

Introduction

In Western countries, prostate cancer is the most frequent malignancy and one of the major causes of cancer-related death in men. The **Prostate Cancer Molecular Medicine** (PCMM) project will address two major clinical needs in prostate cancer, namely the **reduction of overdiagnosis and overtreatment** of this disease due to screening and the **improvement of therapy monitoring** of advanced disease. While work packages 1 and 2 are related to the discovery of biomarkers and the development of novel imaging approaches, work package 3 (**WP3**) is about clinical support and assessment. This work package is subdivided into three parts: biobank, assesment and decision support

WP 3.1 PCMM biobank

The four PCMM clinical centers are jointly establishing a **prospective biobank** containing blood, urine, tissue clinical- and imaging-data from the following patient groups:

- 200 men who chose to undergo a prostate biopsy on the indication of higher risk through the Prostate Risk Calculator (www.preventiekompas.nl)
- 200 men with localized prostate cancer who undergo primary treatment by radical prostatectomy
- 55 men with metastatic hormone-refractory prostate cancer who participate in a Phase I trial with therapy response monitoring by molecular imaging in WP2

The PCMM biobank will be established in collaboration with the Dutch String of Pearls (**Parelsnoer**).

The Central Medical Ethical Committee of Erasmus MC **approved** in August 2010 the protocol for the institution of a biorepository for men undergoing radical prostatectomy. The four individual clinical centres approved during January-May 2010 the standardised methods for sampling and banking of biomaterials pre- and postoperatively, standardised protocols for multimodality MRI, contrast enhanced ultrasonography (CEUS), and clinical data registration (this is: the Quality Registry for Robot Assisted Laparoscopic Prostatectomy of the Dutch Urologic Association).

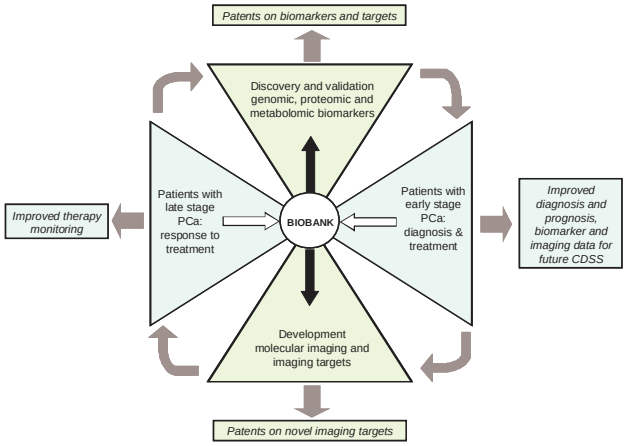
WP 3.3 Clinical Decision Support System (CDSS)

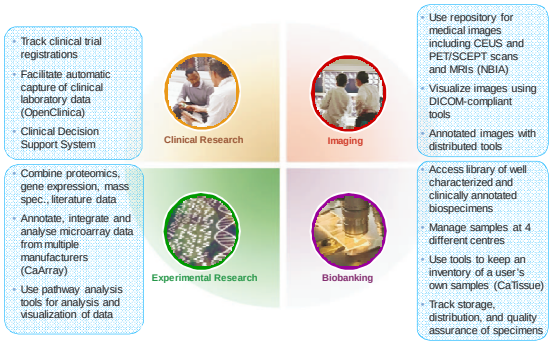
PCMM is developing an IT infrastructure to allow for the inclusion of results from novel biomarker tests and imaging tools into a CDSS for prostate cancer. Such a system will assist physicians in the selection of the **best individual treatment strategy** for their patients diagnosed with prostate cancer. As a part of this system, several applications have already been installed on a server at Philips Research, such as the OpenClinica software package and various CaBIG (Cancer Biomedical Informatics Grid) applications e.g. NBIA, CaArray, CaTissue, CaIntegrator for storing and analyzing clinical and biological data. These applications are accessible to all organizations participating in WP3.

WP 3.2 Medical Technology Assessment (MTA)

MTA experts in PCMM provide support to WP1 and WP2 to decide on the **selection** of the most promising **biomarkers** and molecular **imaging techniques** for clinical introduction.

Plan of investigation





Participants

1. Erasmus MC (coordinator)
2. Netherlands Cancer Institute
3. Radboud University Medical Centre Nijmegen
4. University Medical Center Groningen
5. Philips Electronics Nederland B.V.

Acknowledgements

This research was supported by the Center for Translational Molecular Medicine (CTMM, grant 03O-203).

ctmm pcmm a ctmm project