

PCMM Biobank, IT-infrastructure and decision support

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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 addresses 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 biobanking, the IT infrastructure and decision support.

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:

- 1) 200 men biopsied for prostate cancer (ethical approval expected this summer)
- 2) 200 men with localized prostate cancer who undergo primary treatment by radical prostatectomy
- 3) 55 men with metastatic hormone-refractory prostate cancer who participate in a Phase I trial with therapy response monitoring by molecular imaging in WP2 (clinical trial in design)

The PCMM biobank will be part of the Dutch String of Pearls (**Parelsnoer**) initiative.

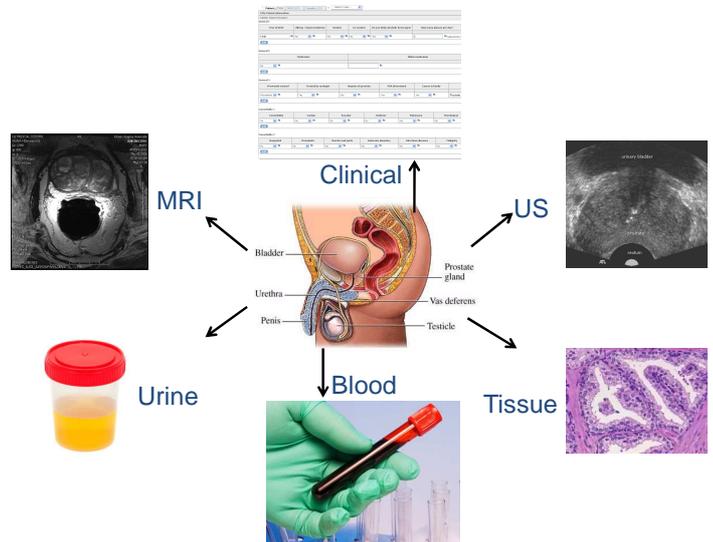
Current status

At this moment (July 2012), data from more than 130 patients of patient group 2 have been collected. This includes >275,000 MRI images and ~1600 US images, as well as clinical data (lab values, questionnaires), blood/urine/tissue data and pathology reports.

Decision Support System (DSS)

PCMM is developing an IT infrastructure to allow for the inclusion of results from novel biomarker tests and imaging tools into a DSS 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 open source applications have already been installed and are operational, such as the OpenClinica software package and various CaBIG (Cancer Biomedical Informatics Grid) applications e.g. NBIA and CaTissue for storing and analyzing clinical, imaging and tissue data. These applications are web-accessible to the authorised participants of WP3.

Data collection



Translational Research IT infrastructure

The IT infrastructure that is being set up for PCMM will also be part of the new CTMM project TraIT (Translational IT Infrastructure). The current PCMM infrastructure includes OpenClinica, NBIA and CaTissue. Overmore, a central, integrated PCMM database has been setup which contains data from all different fields.

pcmm Integrated PCMM Database
Last update: 2012-May-15

OpenClinica
Open Source for Clinical Research

NBIA National Biomedical Imaging Archive

PCMM ID	Institute	Imaging				Biobank		Reports		General 1					General 2	
		MRI	US	Pre-op	Post-op	Pathology	Year of birth	Allergy / hypersensitivity	Smoker (x-smoker)	Do you drink alcoholic beverages?	How many glasses per day?	WHO score at diagnosis	Medication	Which medication		
02.0002	NKI	1326	23			1	1949	No	No	No	Yes	2		Yes	atacand 80mg, paroxetine 20mg, lorazepam 3 mg, sotalol 80mg	
02.0012	NKI	28	30			1	1953	Yes	Yes	No	Yes	3	Asymptomatic - normal activity	Yes	paritazol	
02.0006	NKI	5328	35			1	1943	Yes	No	No	No		Asymptomatic - normal activity	Yes	losartan 50/12,5, felodipine 5 mg,	
02.0010	NKI	1348	38			1	1947	No	No	Yes	Yes	21	Asymptomatic - normal activity	No		
02.0053	NKI	1508	4			1										
02.0051	NKI	1641	5			1										
03.0007	UMC St. Radboud	952	5			1	1949	No	No	No	Yes	2	Asymptomatic - normal activity	Yes	tamsulosine	
03.0006	UMC St. Radboud	352	5			1	1956	No	No	No	Yes	1	Asymptomatic - normal activity	Yes	paritazol	

Participants

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