



MAASTRO: Maastricht Radiation Oncology, is a co-operation of the University of Maastricht (UM), the Maastricht University Medical Center (MUMC), and the research institute GROW. The objective of MAASTRO clinic is to provide care to oncology patients in the broadest sense of the word, in particular by means of radiotherapy. There are three main science divisions within Maastrro, i.e. Maastrro Clinic, Maastrro Physics, and Maastrro Lab.

Atrium MC: Health care in Heerlen (and the rest of the Parkstad Limburg) is provided by Stichting Gezondheidszorg Oostelijk Zuid-Limburg (G.O.Z.L.). Atrium Medisch Centrum Parkstad (Atrium Medical Center Parkstad), is the name of the different hospitals in the Parkstad, and is part of G.O.Z.L. Atrium Medisch Centrum Parkstad location.

At this moment MAASTRO and the Atrium MC have a vacancy for a:

PhD student

Background in (technical) medicine, (bio)medical engineering, (medical) physics, or equivalent with an interest in imaging

Your project will focus on the use of advanced image analysis for optimizing radiotherapy of esophageal cancer patients using repeated PET/CT imaging, hypoxia PET imaging and bio-reductive drugs in a clinical setting.

The main objective of this project is two-fold: 1) to develop and validate predictive models of outcome allowing adapting the treatment of esophageal cancer patients and 2) to test two innovative therapeutic initiatives in a clinical trial setting to increase the efficacy of the treatment: a) dose escalation with radiation and b) targeting of tumour hypoxia with a bio-reductive drug. The project is a mix of retrospective analysis of treatment data including blood, tissue and imaging data; advanced image analysis ('radiomics'); designing new radiotherapy treatment plans for dose-escalation of esophageal tumours; assessment of the added value of new molecular imaging techniques for quantification of hypoxia using PET/CT imaging; and targeting hypoxia in a phase I clinical trial using a bio-reductive drug combined with hypoxia imaging.

This research is funded both by MAASTRO clinic and the Atrium MC. A more detailed project description is available upon request.

Your position is embedded within the research group of MAASTRO clinic that consists of a mix of experts including radiation oncologists, (medical) physicists, PhD students and researchers. Furthermore you will collaborate with the colleagues and investigators at the Atrium MC. You will find yourself working with experts in the field of imaging, image analysis, (radiation-)oncology and biostatistics.

We are looking for a candidate who has (almost) completed a Masters (or equivalent) degree in (technical) medicine, (bio)medical engineering, (medical) physics, or equivalent technical training. Experience with imaging techniques (e.g. CT, MRI, PET) and image analysis is a plus but not a prerequisite. Programming experience (obtained by training or internships) in Matlab or equivalent programming environment is also beneficial for the project. You feel comfortable working in a multidisciplinary team of physicians, physicists, computer scientists and other (non-)medical personnel. You have an independent and practical personality and you are able to take initiatives. We are looking for a positively minded scientist motivated to learn new approaches and ready to work hard to build a scientific career. Furthermore, you possess fluent communication skills in English, both in writing as in speech.



Conditions of Employment and salary are based on the Dutch Collective Labour Agreement for Hospitals (CAO-Ziekenhuizen). You will receive a fulltime contract (36 hours/week) for an initial period of one year, with the intention for extension up to 4 years. Your salary will be according to the salary scale for scientific researchers of MAASTRO clinic level 4 (minimum of € 2.249,- and maximum of € 3.871,- on fulltime basis, depending on your relevant experience). Furthermore the Collective Labour Agreement offers an extended package of secondary conditions, among others an 8%-holiday bonus, a 8.33% yearly bonus and excellent pension and health insurance arrangements.

Further information will be gladly given by prof. dr. Philippe Lambin (philippe.lambin@maastro.nl) or dr. ir. Wouter van Elmpt dpt. of radiation oncology (wouter.vanelmpt@maastro.nl), dr. Meinder Sosef (m.osef@atriummc.nl) dpt. of surgery, or drs. Wendy Schreurs (wendyschreurs@atriummc.nl) dpt. of nuclear medicine, telephone number: +31-(0)88 44 55 666. Also have a look on our websites: www.maastro.nl; www.atriummc.nl.

Your application letter, Curriculum Vitae and letters of recommendation from 2 references (previous employers, supervisors, etc.) can be sent before the 15th of September 2013 to MAASTRO CLINIC, human resource department, mentioning the vacancy ID: '20130915', P.O. Box 3035, 6202 NA Maastricht, or by e-mail to: jobs@maastro.nl.