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PhD in Medical Sciences  
2016-2017

INVITATION to the Public defence of

**Mathijs GOOSSENS**

To obtain the academic degree of '**DOCTOR IN MEDICAL SCIENCES**'

**Breast cancer risk and population-based cancer screening programmes.**

**Wednesday 21 June 2017**

Auditorium **P. Brouwer**, 17:00

Faculty of Medicine and Pharmacy, Laarbeeklaan 103, 1090 Brussel

How to reach the campus Jette:

<http://www.vub.ac.be/english/infoabout/campuses>

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## Summary of the dissertation

Breast cancer is an important health problem, globally it is one of the cancers with the highest mortality and it is the leading cause of cancer death in females in many Western countries. In the European Union alone, the estimated incidence and mortality for breast cancer in 2012 was 358,967 cases of breast cancer and 90,665 deaths attributable to breast cancer. Mammographic Breast Cancer Screening (MBCS) is the only breast cancer screening test with a proven capacity to reduce breast cancer mortality. However, MBCS is not perfect: besides the advantage on mortality it also has disadvantages such as overdiagnosis (and incurring overtreatment) and false-positive recall.

Flanders has an organised government sponsored MBCS programme. This PhD was written to answer questions brought forward in discussions with experts working in the MBCS programme.

In the first paper, we addressed the need for accurate cancer risk estimates appropriate for inclusion in informed decision making. In the second paper, we investigated the reasons for drop-out by quantifying independent risk factors for failing to rescreen and built a model to predict how rescreening rates change if these risk factors would be modified. In the third paper, we showed that the women who are most likely to drop out, those with a false-positive screening result, are also women who are at an increased risk for breast cancer.

## Curriculum Vitae

### Education:

Universiteit Antwerpen

Master of Science in Epidemiology 2012 – 2014

Summa cum laude

Vrije Universiteit Brussel

Bachelor & Master of Science in Medicine 1997 – 2006

Magna cum laude

### Career:

Programme manager of mammographic screening, Flanders

Centre for Cancer Detection - University Hospital Brussels. Jul 2016 – Present

Branch manager of mammographic screening programme, Flanders

Centre for Cancer Detection - University Hospital Brussels. Feb 2015 – Jun 2016

Senior Epidemiologist in unit for Healthcare Associated Infections

Scientific Institute of Public Health. Mar 2010 – Jan 2015

Scientific collaborator in mammographic screening program, Flanders

Centre for Cancer Detection - University Hospital Brussels. Aug 2006 – Feb 2010