Percutaneous coronary intervention in acute myocardial infarction: from procedural considerations to long term outcomes
Delewi, R.

Citation for published version (APA):
Percutaneous coronary intervention in acute myocardial infarction:
from procedural considerations to long term outcomes
Percutaneous coronary intervention in acute myocardial infarction: from procedural considerations to long term outcomes

Ronak Delewii
Percutaneous coronary intervention in acute myocardial infarction: from procedural considerations to long term outcomes

Thesis, University of Amsterdam
Author: Ronak Delewi
Artwork cover: Carien van den Honert
Printed by: Proefschriftmaken.nl | Uitgeverij BOXPress
Published by: Proefschriftmaken.nl | Uitgeverij BOXPress

The research described in this thesis was supported by a grant of the Dutch Heart Foundation (Grant number NHS-2011T022) and the National Health Insurance Board/ZON MW (grant number 40-00703-98-11629). Moreover, this work was supported by the Netherlands Heart Institute (ICIN).

Financial support by the Dutch Heart foundation for the publication of this thesis is gratefully acknowledged.

Generous support by Osprey Medical Inc. and Svelte Medical Systems for the publication of this thesis is gratefully acknowledged.

Financial support for printing this thesis was provided by the University of Amsterdam, Abbott Vascular, Bayer Health Care, Biotronik, Chipsoft, Guerbet Nederland B.V., Pfizer, Sigma medical, Servier Nederland Farma B.V., St. Jude Medical, Stentys.

Copyright © 2015 Ronak Delewi, Amsterdam, the Netherlands. No parts of this thesis may be reproduced or transmitted in any form or by any means, without the prior permission of the author.
Percutaneous coronary intervention in acute myocardial infarction: from procedural considerations to long term outcomes

ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad van doctor
aan de Universiteit van Amsterdam
op gezag van de Rector Magnificus
prof. dr. D.C. van den Boom
ten overstaan van een door het College voor Promoties ingestelde commissie, in het openbaar te verdedigen in de Agnietenkapel
op woensdag 13 mei 2015, te 14:00 uur

door Ronak Delew
geboren te Naarden
Promotiecommissie

Promotores: prof. dr. J.J. Piek
prof. dr. F. Zijlstra

Co-promotores: prof. dr. J.G.P. Tijssen
dr. A. Hirsch

Overige leden: prof. dr. J.B.L. Hoekstra
prof. dr. S. Janssens
prof. dr. C.B.L.M. Majoie
prof. dr. R.J.G. Peters
prof. dr. Y.M. Pinto
prof. dr. A.H. Zwinderman

Faculteit der Geneeskunde
Voor mijn ouders
Het onderzoek dat aan dit proefschrift ten grondslag ligt, is mogelijk gemaakt door een subsidie van de Nederlandse Hartstichting (NHS-2011 T022) en ZorgOnderzoek Nederland - Medische Wetenschappen (ZON MW, 40-00703-98-11629).
# TABLE OF CONTENTS

## Part I  General Introduction

### Chapter 1
Radiation exposure during percutaneous coronary interventions and coronary angiograms performed by the radial compared with the femoral route. *JACC Cardiovascular interventions*. 2012;5:752-7

## Part II  Complications and radiation exposure

### Chapter 1

### Chapter 2

### Chapter 3

## Part III  Natural course and left ventricular remodeling

### Chapter 5

### Chapter 6

### Chapter 7

### Chapter 8
Chapter 9  Long term myocardial recovery after revascularization for ST-segment elevation myocardial infarction as assessed by cardiac magnetic resonance imaging. *Submitted.* 179

Chapter 10  Pathological Q waves in myocardial infarction in patients treated by primary PCI. *JACC Cardiovascular imaging.* 2013;6:324-31. 195

Part IV  Intracoronary bone marrow cell therapy

Chapter 11  Long term outcome after mononuclear bone marrow or peripheral blood cells infusion after myocardial infarction. *Heart.* 2015;101:363-8. 213


Chapter 13  Comment to “Adult bone marrow cell therapy improves survival and induces long-term improvement in cardiac parameters: a systematic review and meta-analysis”. *Circulation.* 2013;127:e547. 257

Chapter 14  Impact of intracoronary bone marrow cell therapy on left ventricular function in the setting of ST-segment elevation myocardial infarction: a collaborative meta-analysis. *European heart journal.* 2014;35:989-98. 261

Part V  Summaries and future perspectives

English Summary  284
Nederlandse Samenvatting  288

Part VI  Appendices

List of abbreviations  295
Curriculum Vitae  297
List of publications  299
Dankwoord  305