



Universiteit  
Leiden  
The Netherlands

## Left ventricular reconstruction in ischemic cardiomyopathy

Klein, P.

### Citation

Klein, P. (2022, December 15). *Left ventricular reconstruction in ischemic cardiomyopathy*. Retrieved from <https://hdl.handle.net/1887/3497684>

Version: Publisher's Version

[Licence agreement concerning inclusion of doctoral thesis in the Institutional Repository of the University of Leiden](#)

License: <https://hdl.handle.net/1887/3497684>

**Note:** To cite this publication please use the final published version (if applicable).

# **Left Ventricular Reconstruction in Ischemic Cardiomyopathy**

Patrick Klein

Layout and printing by Optima Grafische Communicatie  
Cover en tekeningen door S.C.D. Klein

**Left Ventricular Reconstruction in Ischemic Cardiomyopathy**

Proefschrift

ter verkrijging van

de graad van doctor aan de Universiteit Leiden,  
op gezag van rector magnificus prof.dr.ir. H. Bijl,  
volgens besluit van het college voor promoties  
te verdedigen op donderdag 15 december 2022

klokke 16.15 uur

door

**Patrick Klein**

geboren te Oegstgeest

in 1977

Promotores: prof. dr. R.J.M. Klautz  
prof. dr. J. Braun

Co-promotor: dr. M.J. Swaans

Thesis committee members: prof. dr. J.W Jukema (secretary)  
prof. dr. M. Mariani  
prof. dr. W.J.M. Suyker  
prof. dr. K. Zeppenfeld

## TABLE OF CONTENTS

### Part One: General Introduction

Chapter 1	General Introduction and outline of the thesis	9
-----------	--	---

### Part Two: Surgical left ventricular reconstruction

Chapter 2	Early and late outcome of left ventricular reconstruction surgery in ischemic heart disease.  <u>Klein P</u> , Bax JJ, Shaw LJ, Feringa HH, Versteegh MI, Dion RA, Klautz RJ.  <i>Eur J Cardiothorac Surg. 2008 Dec;34(6):1149-57</i>	35
Chapter 3	Wall motion score index predicts mortality and functional result after surgical ventricular restoration for advanced ischemic heart failure.  <u>Klein P</u> , Holman ER, Versteegh MI, Boersma E, Verwey HF, Bax JJ, Dion RA, Klautz RJ.  <i>Eur J Cardiothorac Surg. 2009 May;35(5):847-52; discussion 852-3</i>	57
Chapter 4	Management of mitral regurgitation during left ventricular reconstruction for ischemic heart failure.  <u>Klein P</u> , Braun J, Holman ER, Versteegh MI, Verwey HF, Dion RA, Bax JJ, Klautz RJ.  <i>Eur J Cardiothorac Surg. 2012 Jan;41(1):74-80; discussion 80-1</i>	75
Chapter 5	10-Year Outcomes After Left Ventricular Reconstruction: Rethinking the Impact of Mitral Regurgitation.  Petrus AHJ, <u>Klein P</u> , Tops LF, Dekkers OM, Hoogervorst LA, Couperus LE, Beeres SLMA, Klautz RJM, Braun J.  <i>Ann Thorac Surg. 2019 Jul;108(1):81-88</i>	97
Chapter 6	Left ventricular ejection fraction as criterion for implantation of an implantable cardioverter-defibrillator in heart failure patients undergoing surgical left ventricular reconstruction.  Mollema SA, <u>Klein P</u> , Heersche J, Schalij MJ, Van der Wall EE, Versteegh MI, Klautz RJ, Van Erven L, Bax JJ.  <i>Pacing Clin Electrophysiol. 2009 Jul;32(7):913-7</i>	115

### Part Three: Hybrid left ventricular reconstruction

Chapter 7	Hybrid transcatheter left ventricular reconstruction for the treatment of ischaemic cardiomyopathy  <u>Zivelonghi C</u> , <u>Klein P</u> , Swaans MJ, Agostoni P.  <i>EuroIntervention. 2018 Mar 20;13(16):1899-1901</i>	129
-----------	--	-----

Chapter 8	Transcatheter and minimally invasive surgical left ventricular reconstruction for the treatment of ischaemic cardiomyopathy: preliminary results.  <u>Klein P</u> , Agostoni P, van Boven WJ, de Winter RJ, Swaans MJ. <i>Interact Cardiovasc Thorac Surg</i> . 2019 Mar 1;28(3):441-446	141
Chapter 9	Less-Invasive Ventricular Reconstruction for Ischemic Heart Failure  <u>Klein P</u> , Anker SD, Wechsler A, Skalsky I, Neuzil P, Annest LS, Bifi M, McDonagh T, Frerker C, Schmidt T, Sievert H, Demaria AN, Kelle S.  <i>Eur J Heart Fail.</i> ; 2019 Dec;21(12):1638-1650	157
Chapter 10	<i>Left ventricular volume reduction and reshape - 'Re-STICHING' the field. Reply</i>  <u>Klein P</u> , Anker SD, Wechsler A, Kelle S.  <i>Eur J Heart Fail.</i> 2020 Jun;22(6):1053-1054	187

**Part Four: General Discussion, Summary (English) and Nederlandse Samenvatting (Summary in Dutch), Curriculum Vitae and Dankwoord**

Chapter 11	General Discussion	197
Chapter 12	Thesis Summary  Nederlandse Samenvatting (Summary in Dutch)	219 227
Chapter 13	Curriculum Vitae	235
Chapter 14	Dankwoord (Acknowledgements)	239



