



Universiteit
Leiden
The Netherlands

Substrate identification and treatment of right ventricular tachycardia: scar patterns and novel mapping tools

Venlet, J.

Citation

Venlet, J. (2023, September 7). *Substrate identification and treatment of right ventricular tachycardia: scar patterns and novel mapping tools*. Retrieved from <https://hdl.handle.net/1887/3638795>

Version: Publisher's Version

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

Downloaded from: <https://hdl.handle.net/1887/3638795>

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

Substrate Identification and Treatment of Right Ventricular Tachycardia:

Scar Patterns and Novel Mapping Tools

Jeroen Venlet

Colophon

The studies described in this thesis were conducted at the Department of Cardiology at the Leiden University Medical Center, Leiden, the Netherlands.

Cover: wenz iD
Lay-out: ProefschriftMaken || www.proefschriftmaken.nl
Printed by: ProefschriftMaken || www.proefschriftmaken.nl
ISBN: 978-94-6469-438-3

The printing of this thesis was financially supported by ABN AMRO bank, Abbott Medical Nederland, Canon Medical Systems Nederland and Hart Onderzoek Nederland is gratefully acknowledged.

Copyright © J. Venlet, Leiden, The Netherlands, 2023. All rights reserved. No part of this thesis may be reproduced or transmitted, in any form or by any means, without prior permission of the author

Substrate Identification and Treatment of Right Ventricular Tachycardia:

Scar Patterns and Novel Mapping Tools

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof. dr. H. Bijl,
volgens het besluit van het college voor promoties
te verdedigen op donderdag 7 september 2023
klokke 16.15 uur

door

Jeroen Venlet
geboren te Albrandswaard
in 1989

Promotor:

Prof. Dr. K. Zeppenfeld

Co-promotor:

Dr. S.R.D. Piers

Promotiecommissie:

Prof. dr. N.A. Blom

Dr. M. Bootsma

Prof. dr. J.R. de Groot (Amsterdam UMC)

Dr. A.S.J.M. te Riele (UMC Utrecht)

Prof. dr. M.J. Schalij

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

Thesis outline

Chapter 1:	General introduction, aim and outline of the thesis	7
Chapter 2:	Isolated Subepicardial Right Ventricular Outflow Tract Scar in Athletes With Ventricular Tachycardia	21
Chapter 3:	Unipolar Endocardial Voltage Mapping in the Right Ventricle: Optimal Cutoff Values Correcting for Computed Tomography-Derived Epicardial Fat Thickness and their Clinical Value for Substrate Delineation	59
Chapter 4:	The Transmural Activation Interval: A New Mapping Tool to Identify VT Substrates in Right Ventricular Cardiomyopathy	77
Chapter 5:	RV Tissue Heterogeneity on CT: A Novel Tool to Identify the VT Substrate in ARVC	97
Chapter 6:	Ablation Compared with Drug Therapy for Recurrent Ventricular Tachycardia in Arrhythmogenic Right Ventricular Cardiomyopathy; Results from a Multicenter Study	123
Chapter 7:	Summary, conclusions and future perspective	147
Chapter 8:	Samenvatting, conclusies en toekomstperspectieven	153
	List of publications	159
	Dankwoord	161
	Curriculum vitae	163