

**Right on track: Towards improving DBS patient selection and care** Geraedts V.J.

### Citation

*Right on track: Towards improving DBS patient selection and care*. (2020, October 27). *Right on track: Towards improving DBS patient selection and care*. Retrieved from https://hdl.handle.net/1887/137982

Version:	Publisher's Version
License:	<u>Licence agreement concerning inclusion of doctoral thesis in the</u> <u>Institutional Repository of the University of Leiden</u>
Downloaded from:	https://hdl.handle.net/1887/137982

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

Cover Page



## Universiteit Leiden



The handle <u>http://hdl.handle.net/1887/137982</u> holds various files of this Leiden University dissertation.

Author: Geraedts,V.J. Title: Right on track: Towards improving DBS patient selection and care Issue Date: 2020-10-27

# **Right on Track**

## Towards improving DBS patient selection and care

Victor J. Geraedts

#### Colophon

Right on Track: Towards improving DBS patient selection and care PhD thesis: Leiden University Medical Center, Leiden 2020

The research presented in this thesis was performed at the department of Neurology and the department of Clinical Epidemiology, Leiden University Medical Center, Leiden, the Netherlands.

This work is funded by grants of the Stichting Parkinson Fonds and the Alkemade-Keuls Fonds.

ISBN: 978-94-6419-034-2 Cover design: Victor Geraedts Lay-out: Ilse Modder | www.ilsemodder.nl Printed by: Gildeprint | www.gildeprint.nl

#### © Copyright by Victor J. Geraedts, 2020

All rights reserved. No part of this thesis may be reproduced or transmitted in any form or by any means, without written permission from the copyright owner. Copyright of the articles that have been published or accepted for publication has been transferred to the respective journals.

Financial support for publication of this thesis has been provided by: Abbott Laboratories, ANT Neuro, Canon Medical Systems Nederland, Chipsoft BV, Clinical Science Systems, Ipsen Farmaceutica BV, Parkinson Vereniging, Nederlandse Vereniging voor de Klinische Neurofysiologie, UCB Pharma BV

## **Right on Track**

### Towards improving DBS patient selection and care

Proefschrift

ter verkrijging de graad van Doctor aan de Universiteit Leiden, op gezag van Rector Magnificus prof. mr. C.J.J.M. Stolker, volgens besluit van het College voor Promoties te verdedigen op dinsdag 27 oktober 2020 klokke 15.00 uur

door

Victor Jacobus Geraedts geboren te Zoetermeer in 1991

Promotor	Prof. dr. J.J. van Hilten
Copromotoren	Dr. M.F. Contarino Dr. M.R. Tannemaat
Promotiecommissie	Prof. dr. R.A.C. Roos Prof. dr. ir. M.J.A.M. van Putten (Medisch Spectrum Twente) Dr. R. Esselink (Radboud Universitair Medisch Centrum)

## Table of contents

Chapter 1	Introduction	11
Chapter 2	Selecting candidates for Deep Brain Stimulation in Parkinson's Disease: the role of patients' expectations Published in: Parkinsonism and Related Disorders, July 2019	25
Chapter 3	What predicts Quality of Life after STN DBS in Parkinson's Disease? A systematic review Published in: European Journal of Neurology, December 2019	39
Chapter 4	Intraoperative test stimulation of the subthalamic nucleus aids postoperative programming of chronic stimulation settings in Parkinson's disease Published in: <i>Parkinsonism and Related Disorders, May</i> 2019	57
Chapter 5	Stimulation challenge tests after STN DBS improves satisfaction in Parkinson's Disease patients Published in: <i>Parkinsonism and Related Disorders, October 201</i> 9	71
Chapter 6	Clinical correlations of quantitative EEG in Parkinson's Disease – a systematic review Published in: <i>Neurology, November</i> 2018	83
Chapter 7	Quantitative EEG reflects non-dopaminergic disease severity in Parkinson's Disease Published in: <i>Clinical Neurophysiology, May</i> 2018	113
Chapter 8	Automated machine Learning for EEG-based classification of cognitive performance during the DBS screening in Parkinson's Disease Under review, June 2020	131
Chapter 9	Summary	151
Chapter 10	General discussion	157

Appendices	Abbreviations	172
	Nederlandse samenvatting	174
	Dankwoord	179
	Curriculum Vitae	181
	Publications	182

