



Universiteit
Leiden
The Netherlands

Conducting pituitary care: innovation and standardization in a rare disease

Vries, F. de

Citation

Vries, F. de. (2026, April 2). *Conducting pituitary care: innovation and standardization in a rare disease*. Retrieved from <https://hdl.handle.net/1887/4300457>

Version: Publisher's Version

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

Downloaded from: <https://hdl.handle.net/1887/4300457>

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

Conducting Pituitary Care

Innovation and standardization in a rare disease

Friso de Vries

Conducting Pituitary Care - Innovation and standardization in a rare disease

© 2025 Friso de Vries

The work described in this thesis was performed at the department of Medicine, division of endocrinology and the department of Neurosurgery, Leiden University Medical Center, Leiden, The Netherlands

The printing of this thesis was supported by The Pituitary Foundation.

Cover design and layout:

Cover Design: Erwin Timmerman

Layout and printing: Optima Grafische Communicatie, Rotterdam

ISBN: 978-90-9042067-7

All rights are reserved. No part of this thesis may be reproduced, stored or transmitted in any form or by any means without permission in writing from the author.

Conducting Pituitary Care

Innovation and standardization in a rare disease

Proefschrift

ter verkrijging van
de graad van doctor aan de Universiteit Leiden,
op gezag van rector magnificus prof.dr. S. de Rijcke,
volgens besluit van het college voor promoties
te verdedigen op donderdag 2 april 2026
klokke 11:30

door

Friso de Vries
geboren te Hilversum
in 1993

Promotores Prof. dr. N.R. Biermasz
Prof. dr. A.M. Pereira Arias

Copromotor Dr. W.R. van Furth

Leden promotiecomissie Prof. dr. N.M. Appelman-Dijkstra
Prof. dr. N. Karavitaki (Queen Elizabeth Hospital Birmingham)
Prof. dr. W.J.W. Bos
Prof. dr. P.H.L.T. Bisschop (Amsterdam UMC)
Prof. dr. T. Decramer (UZ Leuven)

TABLE OF CONTENTS

Chapter 1:	General introduction and thesis outline	9
Part 1:	Innovation and standardization in the VBHC Pituitary Care-pathway	25
Chapter 2:	Outcome Squares integrating efficacy and safety, as applied to functioning pituitary adenoma surgery	27
Chapter 3:	Non-functioning pituitary adenoma surgery outcomes reported in integrated Outcome Squares	57
Chapter 4:	Postoperative Diabetes Insipidus: how to define and grade this complication	81
Chapter 5:	Early postoperative HPA-axis testing after pituitary tumor surgery: reliability and safety of basal cortisol and CRH-test	97
Chapter 6:	Pre-operative serum inflammation-based scores in patients with pituitary adenomas	119
Part 2:	Endo-ERN, first steps in standardization of measurements and patient involvement	177
Chapter 7:	An overview of clinical activities in Endo-ERN: the need for alignment of future network criteria	179
Chapter 8:	Patients with rare endocrine conditions have corresponding views on unmet needs in clinical research	201
Part 3:	Specific examples of improved diagnostics and rare manifestations of endocrine diseases	221
Chapter 9:	Pitfalls in the diagnosis of visual field defects caused by pituitary adenomas: case series and cohort study	223
Chapter 10:	Hypophysitis: a comprehensive overview	239

Chapter 11:	Opioids and their endocrine effects: A systematic review and meta-analysis	261
Chapter 12:	Unexpected concomitant pituitary adenoma and suprasellar meningioma: a case report and review of the literature	279
Chapter 13:	Summary and general discussion	291
Chapter 14:	Appendices	303
	Nederlandse samenvatting	305
	List of publications	310
	Curriculum vitae	313
	Dankwoord	314