



Universiteit  
Leiden

The Netherlands

## **Targets for improving patient outcomes after major gastrointestinal cancer surgery: the value of perioperative care**

Kooten, R.T. van

### **Citation**

Kooten, R. T. van. (2023, June 15). *Targets for improving patient outcomes after major gastrointestinal cancer surgery: the value of perioperative care*. Retrieved from <https://hdl.handle.net/1887/3620458>

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/1887/3620458>

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

# **Targets for Improving Patient Outcomes after Major Gastrointestinal Cancer Surgery**

The value of peri-operative care

Robert T. van Kooten

# Targets for Improving Patient Outcomes after Major Gastrointestinal Cancer Surgery

The value of perioperative care

**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 juni 2023  
klokke 15:00 uur

door

**Robert Thomas van Kooten**

geboren te Wageningen  
in 1993

## **Colofon**

**ISBN/EAN:** 978-94-93315-64-8

**Cover Design & lay-out:** Guntra || [www.proefschrift-aio.nl](http://www.proefschrift-aio.nl)

**Printing:** Proefschrift all in one || [www.proefschrift-aio.nl](http://www.proefschrift-aio.nl)

**This thesis was financially supported by:** Universiteitsbibliotheek Leiden

Copyright 2023 © Robert T. van Kooten

All rights reserved. No part of this thesis may be reproduced, stored or transmitted in any way or by any means without the prior permission of the author, or when applicable, of the publishers of the scientific papers.

**Promotores**

Prof. Dr. R.A.E.M. Tollenaar  
Prof. Dr. M.W.J.M. Wouters

**Co-promotor**

Dr. K.C.J.M. Peeters

**Promotiecommissie**

Prof. Dr. S.P. Mooijaart  
Prof. Dr. A.M. Stiggelbout  
Prof. Dr. J.F. Hamming  
Prof. Dr. G.L. Beets  
Dr. P. van Duijvendijk

Universiteit Maastricht  
Gelre ziekenhuizen

**Table of content**

<b>Chapter 1</b>	General Introduction and Thesis Outline	8
<b>Part I: Identification of Prognostic Factors for Postoperative Complications</b>		18
<b>Chapter 2</b>	Preoperative Risk Factors for Major Postoperative Complications After Complex Gastrointestinal Cancer Surgery: A Systematic Review <i>European Journal of Surgical Oncology, 2021</i>	20
<b>Chapter 3</b>	Meta-Analysis: Patient-Related Risk Factors for Anastomotic Leakage, Major Complications and Mortality Following Oncological Esophagectomy <i>Annals of Surgical Oncology, 2022</i>	64
<b>Chapter 4</b>	Conventional regression analysis and deep learning in prediction of morbidity and mortality after esophagogastric cancer surgery <i>Journal of Surgical Oncology, 2022</i>	106
<b>Chapter 5</b>	Computer Tomography-based Preoperative Muscle and Fat Measurements as Prognostic Factors for Postoperative Complications Following Colorectal Surgery <i>Journal of Surgical Oncology, 2023</i>	130
<b>Part II: Consequences of Major Gastrointestinal Surgery</b>		146
<b>Chapter 6</b>	Patient Perspectives on Consequences of Resectable Colorectal Cancer Treatment: a Qualitative Study <i>Colorectal Disease, 2023</i>	148
<b>Chapter 7</b>	The Impact of Surgical and Non-surgical Complications on Health-Related Quality of Life After Total Mesorectal Excision for Rectal Cancer <i>Clinical Colorectal Cancer, 2022</i>	166
<b>Chapter 8</b>	Stoma versus Anastomosis after Sphincter-Sparing Total Mesorectal Excision for Rectal Cancer; the Impact on Health-Related Quality of Life <i>International Journal of Colorectal Disease, 2022</i>	196

<b>Chapter 9</b>	The Impact on Health-Related Quality of a Stoma or Poor Functional Outcomes After Rectal Cancer Surgery in Dutch Patients: a Prospective Cohort Study <i>European Journal of Surgical Oncology, 2023</i>	220
<b>Chapter 10</b>	Summary, General Discussion, Future Perspectives and Conclusion	240
<b>Appendices</b>	Dutch-language Summary (Nederlandse Samenvatting)	264
	List of publications	273
	Curriculum Vitae	276
	Acknowledgments (Dankwoord)	277