

Colorectal cancer screening for average- and high-risk individuals: beyond one-size-fits-all

Breekveldt, E.C.H.

Citation

Breekveldt, E. C. H. (2024, June 5). *Colorectal cancer screening for average-and high-risk individuals: beyond one-size-fits-all*. Retrieved from https://hdl.handle.net/1887/3759760

Version: Publisher's Version

Licence agreement concerning inclusion of doctoral

License: thesis in the Institutional Repository of the University

of Leiden

Downloaded from: https://hdl.handle.net/1887/3759760

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

Colorectal cancer screening for average- and high-risk individuals

Beyond one-size-fits-all

Emilie Christine Henriëtte Breekveldt

© 2024, Emilie Christine Henriëtte Breekveldt

ISBN: 978-94-6506-039-2

Cover: Jasmijn Verhoef

Drukwerk en layout: Ridderprint | www.ridderprint.nl.

The printing of this thesis was financially supported by the Netherlands Cancer Institute.

This research was financially supported by the National Institute for Public Health and the Environment and partly by the Dutch Digestive Foundation.

Colorectal cancer screening for average- and high-risk individuals

Beyond one-size-fits-all

Darmkankerscreening voor gemiddeld- en hoog-risico individuen

Proefschrift

ter verkrijging van

de graad van doctor aan de Universiteit Leiden,

op gezag van rector magnificus prof. dr. ir. H. Bijl,

volgens het besluit van het college voor promoties

te verdedigen op woensdag 5 juni 2024

klokke 16:15 uur

door

Emilie Christine Henriëtte Breekveldt

geboren te Velsen

in 1993

PROMOTIECOMMISSIE

Promotores: Prof. dr. M.E. van Leerdam

Prof. dr. I. Lansdorp-Vogelaar EMC

Copromotor: Dr. E. Toes-Zoutendijk EMC

Overige leden: Prof. dr. O. M. Dekkers

Prof. dr. P. Snaebjornsson NKI-AVL

Prof. dr. M. E. Numans

Dr. M. van der Vlugt AUMC

CONTENTS

General introduction					
Chapter 1	General introduction and outline of the thesis	9			
Part I. Evaluat	Part I. Evaluation of the Dutch colorectal cancer screening program				
Chapter 2	Colorectal cancer incidence, mortality, tumour characteristics, and treatment before and after introduction of the faecal immunochemical testing-based screening programme in the Netherlands: a population-based study Lancet Gastroenterology & Hepatology 2022	23			
Chapter 3	Advanced-stage CRC incidence patterns following the phased implementation of the CRC screening programme in the Netherlands European Journal of Cancer 2023	45			
Chapter 4	Differences in treatment strategy of stage I CRCs: a population-based study of CRCs detected within and outside screening Endoscopy 2024	65			
Chapter 5	Advanced serrated polyps as a target of screening: detection rate and positive predictive value within a fecal immunochemical test-based colorectal cancer screening population Endoscopy 2023	89			

Part II. Towards personalized colorectal	cancer screening for average-risk
individuals in the Netherlands	

Chapter 6	Factors associated with interval colorectal cancer after negative FIT: results of two screening rounds in the Dutch FIT-based CRC screening program International Journal of Cancer 2023	111
Chapter 7	Personalized colorectal cancer screening: study protocol of a mixed-methods study on the effectiveness of tailored intervals based on prior f-Hb concentration in a FIT-based colorectal cancer screening program BMC Gastroenterology 2023	141
Chapter 8	Personalized colorectal cancer screening strategies: information needs of the target population Preventive Medicine Reports 2023	165

Part III. Colorectal cancer in testicular cancer survivors treated with platinum-based chemotherapy

Chapter 9	Somatic hits in mismatch repair genes in colorectal cancer among non-seminoma testicular cancer survivors British Journal of Cancer 2022	191
Chapter 10	Prevalence of neoplasia at colonoscopy among testicular cancer survivors treated with platinum-based chemotherapy International Journal of Cancer 2024	213
Chapter 11	Platinum retention in plasma, urine and normal colonic mucosa in cisplatin-treated testicular cancer survivors Submitted	235

Discussion		
Chapter 12	General discussion and future perspectives	257
Appendices		
	Summary	296
	Summary in Dutch / Nederlandse samenvatting	302
	List of publications	310
	PhD Portfolio	314
	Dankwoord	316
	Curriculum Vitae	322