



Universiteit
Leiden
The Netherlands

Text mining real-world data to evaluate systemic anti-cancer therapy

Laar, S.A. van

Citation

Laar, S. A. van. (2023, October 12). *Text mining real-world data to evaluate systemic anti-cancer therapy*. Retrieved from <https://hdl.handle.net/1887/3643700>

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/1887/3643700>

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

Text mining real-world data to evaluate systemic anti-cancer therapy

Sylvia A. van Laar

The research presented in this thesis was performed at the department of Clinical Pharmacy and Toxicology of Leiden University Medical Center, Leiden, The Netherlands. Financial support for the publication of this thesis was provided by Afdelingsfonds Klinische Farmacie & Toxicologie.

Cover Sylvia van Laar
Layout Renate Siebes | Proefschrift.nu
Printed by Proefschriftmaken.nl | De Bilt
ISBN 978-94-6469-561-8

© 2023 Sylvia van Laar

All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means, electronically or mechanically, including photocopying, recording or in any information storage or retrieval system, without prior permission of the author.

Text mining real-world data to evaluate systemic anti-cancer therapy

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 12 oktober 2023
klokke 13.45 uur

door

Sylvia Adriana van Laar

geboren te Den Haag
in 1993

Promotor

prof. dr. H.J. Guchelaar

Copromotores

dr. J. Zwaveling

dr. K.B. Gombert-Handoko

Promotiecommissie

prof. dr. A.J. Gelderblom

prof. dr. M.W.J.M. Wouters

prof. dr. P.H. van Erp, Radboudumc

prof. dr. M. Koopman, UMC Utrecht

Contents

Chapter 1	General introduction	7
------------------	----------------------	---

PART I: Methods for real-world data collection

Chapter 2	Use of real-world data sources to evaluate cancer treatments: current practice and future perspectives <i>Review - Manuscript in preparation</i>	19
Chapter 3	An electronic health record text mining tool to collect real-world drug treatment outcomes: A validation study in metastatic renal cell carcinoma patients <i>Original research - Clin Pharmacol Ther. 2020; 108(3): 644-652</i>	39

PART II: Real-world treatment effectiveness and treatment patterns

Chapter 4	Real-world metastatic renal cell carcinoma treatment patterns and clinical outcomes in The Netherlands <i>Original research - Front Pharmacol. 2022; 13: 803935</i>	83
Chapter 5	Application of an electronic health record text mining tool: Treatment patterns and outcomes for Dutch patients with hepatocellular carcinoma <i>Original research - Manuscript in preparation</i>	101

PART III: Real-world treatment safety

Chapter 6	Application of electronic health record text mining: Real-world tolerability, safety, and efficacy of adjuvant melanoma treatments <i>Original research - Cancers. 2022; 14(21): 5426</i>	127
Chapter 7	Real-world evaluation of supportive care using an electronic health record text mining tool: G-CSF use in breast cancer patients <i>Original research - Support Care Cancer. 2022; 30: 9181-9189</i>	177
Chapter 8	Liver and kidney function in patients with Covid-19 treated with remdesivir <i>Original research - Br J Clin Pharmacol. 2021; 87(11): 4450-4454</i>	203

PART IV: General discussion, summary and appendices

Chapter 9	General discussion	215
Chapter 10	English summary	237
	Nederlandse samenvatting	242
Appendices	Curriculum Vitae	251
	List of publications	252
	Dankwoord	254