



University of Groningen

Booman, Marije

IMPORTANT NOTE: You are advised to consult the publisher's version (publisher's PDF) if you wish to cite from it. Please check the document version below.

Document Version Publisher's PDF, also known as Version of record

Publication date: 2008

Link to publication in University of Groningen/UMCG research database

Citation for published version (APA):

Booman, M. (2008). The role of immunoediting in lymphomas of immune-privileged sites. s.n.

Other than for strictly personal use, it is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), unless the work is under an open content license (like Creative Commons).

The publication may also be distributed here under the terms of Article 25fa of the Dutch Copyright Act, indicated by the "Taverne" license. More information can be found on the University of Groningen website: https://www.rug.nl/library/open-access/self-archiving-pure/taverneamendment.

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Downloaded from the University of Groningen/UMCG research database (Pure): http://www.rug.nl/research/portal. For technical reasons the number of authors shown on this cover page is limited to 10 maximum.

Download date: 04-06-2022

The role of immunoediting in lymphomas of immune-privileged sites

Financial support for the printing of this thesis was kindly provided by:

- Ariadne Genomics Inc.
- Groningen University Institute for Drug Exploration
- The department of Pathology, UMCG
- University of Groningen

ISBN: 978-90-367-3432-5

© Copyright 2008 Marije Booman

All rights reserved. No part of this publication may be reproduced, or transmitted in any form or by any means, without permission of the author.

Printed by PrintPartners Ipskamp BV, Enschede, The Netherlands.

RIJKSUNIVERSITEIT GRONINGEN

The role of immunoediting in lymphomas of immune-privileged sites

Proefschrift

ter verkrijging van het doctoraat in de Medische Wetenschappen aan de Rijksuniversiteit Groningen op gezag van de Rector Magnificus, dr. F. Zwarts, in het openbaar te verdedigen op woensdag 21 mei 2008 om 16.15 uur

door

Marije Booman geboren op 13 januari 1978 te Haarlemmermeer **Promotor:** Prof. dr. Ph.M. Kluin

Copromotores: Dr. E.M.D. Schuuring

Dr. D. de Jong

Beoordelingscommissie: Prof. dr. C.J.M. Melief

Prof. dr. C. Wijmenga Prof. dr. L.F.M.H. de Leij

I'm so glad that this has taken me so long 'cause it's the journey that made me so strong Snow Patrol - Warmer Climate

Contents

| Chapter 1 — Introduction | 9 | | |
|--|----------|--|--|
| 1.1 Cancer and the concept of immunoediting | | | |
| 1.1.1 Elimination | 10 | | |
| 1.1.2 Equilibrium | 12 | | |
| 1.1.3 Escape | 12 | | |
| 1.2 Human Leukocyte Antigen 1.2.1 The role of HLA in the human immune system | 13 13 | | |
| 1.2.2 Antigen processing and presentation | 14 | | |
| 1.2.3 The human HLA region at chromosome 6p21.3 | 16 | | |
| 1.2.4 Regulation of HLA expression | 18 | | |
| 1.2.5 Avoiding the immune response by downregulation of HLA expression | 18 | | |
| 1.3 Diffuse large B-cell lymphoma | 19 | | |
| 1.4 Immune-privileged site-associated DLBCL | 20 | | |
| 1.4.1 Immune privilege 1.4.2 Primary testicular DLBCL | 20 21 | | |
| 1.4.3 Primary central nervous system DLBCL | 22 | | |
| 1.5 Scope of this thesis | 23 | | |
| | | | |
| Chapter 2 | 31 | | |
| Mechanisms and effects of loss of human leukocyte antigen class II expression in immune-privileged site-associated B-cell lymphoma | | | |
| Chapter 3 | 51 | | |
| Primary testicular diffuse large B-cell lymphomas have activated B cell-like subtype characteristics | | | |
| Chapter 4 | 67 | | |
| From brain to testis: immune escape and clonal selection in a B-cell lymphoma with selective outgrowth in two immune sanctuaries | ٠, | | |
| Chapter 5 | 70 | | |
| Genomic alterations and gene expression in primary diffuse large B-cell lymphomas of immune-privileged sites: the importance of apoptosis and immunomodulatory pathway | 79 's | | |
| Chapter 6 — General Discussion | 95 | | |
| 6.1 A model of IP-DLBCL lymphomagenesis | 96 96 | | |
| 6.2 IP-DLBCL can be considered as a separate subentity of DLBCL | 99 | | |
| 6.3 Recommendations for further research | 100 | | |
| Chapter 7 — Summary | 105 | | |
| Chapter 8 — Nederlandse Samenvatting | 109 | | |
| Chapter 9 — Dankwoord | 115 | | |
| Important abbreviations | 118 | | |
| List of publications | 119 | | |