

University of Groningen

Homologous recombination-deficient cancers: approaches to improve treatment and patient selection

Talens, Francien

DOI:
[10.33612/diss.146371913](https://doi.org/10.33612/diss.146371913)

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:
2020

[Link to publication in University of Groningen/UMCG research database](#)

Citation for published version (APA):

Talens, F. (2020). *Homologous recombination-deficient cancers: approaches to improve treatment and patient selection*. University of Groningen. <https://doi.org/10.33612/diss.146371913>

Copyright

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/taverne-amendment>.

Take-down policy

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.

Homologous recombination-deficient cancers: approaches to improve treatment and patient selection

Francien Talens

The work described in this thesis was conducted at the Department of Medical Oncology of the University Medical Center Groningen, the Netherlands.

Cover: Hein Talens, gemaakt in 1990 te Groningen
Lay-out design: Francien Talens, Nathalie van den Tempel
Printing: Gildeprint, Enschede

Printing of this thesis was supported by:
- UMCG Graduate School of Medical Sciences
- Stichting Werkgroep Interne Oncologie
- University of Groningen

Copyright © 2020, F.G. Talens

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



rijksuniversiteit
 groningen

Homologous recombination-deficient cancers: approaches to improve treatment and patient selection

Proefschrift

ter verkrijging van de graad van doctor
aan de Rijksuniversiteit Groningen
op gezag van de
rector magnificus prof. dr. C. Wijmenga
en volgens besluit van het College voor Promoties.

De openbare verdediging zal plaatsvinden op
woensdag 9 december 2020 om 11.00 uur

door

Francien Gesina Talens

geboren op 2 december 1990
te Groningen

Promotores

Prof. dr. M.A.T.M. van Vugt

Prof. dr. J.A. Gietema

Beoordelingscommissie

Prof. dr. J.W.M. Martens

Prof. dr. H.W. Nijman

Prof. dr. C.F. Calkhoven

Paranimfen

Danique Giesen

Nathalie van den Tempel

Contents

Chapter 1	Introduction and outline of the thesis	9
Chapter 2	Inflammatory signaling in genomically unstable cancers <i>Cell Cycle, 2019</i>	17
Chapter 3	Progression through mitosis promotes PARP inhibitor-induced cytotoxicity in homologous recombination-deficient cancer cells <i>Nature Communications, 2017</i>	39
Chapter 4	BRCA2 deficiency instigates cGAS-mediated inflammatory signaling and confers sensitivity to tumor necrosis factor-alpha-mediated cytotoxicity <i>Nature Communications, 2019</i>	71
Chapter 5	MYC promotes immune-suppression in TNBC via inhibition of IFN signaling <i>In preparation</i>	105
Chapter 6	Therapeutic targeting and patient selection for cancers with homologous recombination defects <i>Expert Opinion on Drug Discovery, 2017</i>	141
Chapter 7	Functional RAD51 based assay predicts in vivo PARP inhibitor response in ovarian cancer models beyond BRCA <i>In preparation</i>	167
Chapter 8	Summary, discussion and future perspectives	193
Appendices	Nederlandse samenvatting Over de auteur Dankwoord	211

