

# VU Research Portal

## Clinical outcome measures in progressive multiple sclerosis

Bosma, L.V.A.E.

2013

### **document version**

Publisher's PDF, also known as Version of record

[Link to publication in VU Research Portal](#)

### **citation for published version (APA)**

Bosma, L. V. A. E. (2013). *Clinical outcome measures in progressive multiple sclerosis*. [, Vrije Universiteit Amsterdam].

### **General rights**

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

### **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.

### **E-mail address:**

[vuresearchportal.ub@vu.nl](mailto:vuresearchportal.ub@vu.nl)

# **Clinical outcome measures in progressive multiple sclerosis**

**Libertje Bosma**

The studies described in this thesis were performed at the Department of Neurology, VU University Medical Center, Amsterdam, the Netherlands. MS research at the VUmc is organized within the MS Center Amsterdam and supported by grants from the Dutch MS Research Foundation, Voorschoten, the Netherlands.

Financial support for the printing of this thesis was kindly provided by: Novartis Pharma BV, Bayer Healthcare, BiogenIdec International BV, Merck Serono, Teva Nederland, Stichting MS Research.

**Photo cover** MJ Smets

**About the cover** The cover picture was taken in Pas-de-Calais, France.  
The wooden poles symbolize the steps of a measurement scale and their slope into the sea symbolizes the inevitable progression of the wasting disease called MS.

**Layout** Renate Siebes, Proefschrift.nu

**Printed by** XXX

**ISBN** XXX

© 2013 **Libertje Bosma, The Netherlands**

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, photocopying, or otherwise, without the permission of the author, or, when appropriate, of the publishers of the publications.

VRIJE UNIVERSITEIT

# Clinical outcome measures in progressive multiple sclerosis

## ACADEMISCH PROEFSCHRIFT

ter verkrijging van de graad Doctor aan  
de Vrije Universiteit Amsterdam,  
op gezag van de rector magnificus  
prof.dr. L.M. Bouter,  
in het openbaar te verdedigen  
ten overstaan van de promotiecommissie  
van de Faculteit der Geneeskunde  
op vrijdag 19 april 2013 om 13.45 uur  
in de aula van de universiteit,  
De Boelelaan 1105

door

**Liberta Victoria Augustine Elisabeth Bosma**

geboren te Breda

promotoren:

prof.dr. B.M.J. Uitdehaag

prof.dr. C.H. Polman