

Marion Smits .

CURRICULUM VITÆ
FEBRUARY 2025

Marion is an internationally active professor of Neuroradiology who combines clinical work with scientific research into advanced MR neuroimaging, such as functional, diffusion and perfusion imaging. She uses these techniques to visualise the brain's function and microarchitecture, and to study pathophysiological and regenerative processes in a variety of neurological diseases. Her main focus is on neuro-oncology.

Marion combines her clinical expertise with scientific research and active participation in key international organisations, including the European Society of Radiology (ESR), the European Society of Neuroradiology (ESNR), the European Society for Magnetic Resonance in Medicine and Biology (ESMRMB), and the European Organisation for Research and Treatment of Cancer (EORTC). She uses this unique combination of affiliations to establish productive connections between relevant clinical research questions and to implement scientific innovation in clinical practice.

She disseminates knowledge and expertise through her numerous national and international teaching and mentoring activities, empowering the next generations of researchers and clinicians. By breaking barriers between disciplines, re-thinking paradigms, and embracing new technologies she strives to improve patient care, reduce patient burden, and increase accessibility to highly expert but at the same time sustainable healthcare.

CURRENT RESPONSIBILITIES AND AFFILIATIONS

Professor of Neuroradiology

Chief of Neuroradiology

Consultant Neuro- and Head & Neck Radiologist

Erasmus MC – University Medical Centre Rotterdam, Rotterdam/NL

Professor of Neuroradiology

Faculty of Applied Sciences, Delft University of Technology, Delft /NL

Medical Delta Professor, Scientific Programme Lead

Medical Delta, Delft /NL

Chair, Member of Executive Council

European Society of Radiology (ESR) Research Committee

Past Chair, Steering Committee member

- EORTC Imaging Group (Former Chair)
- EORTC Brain Tumour Group Imaging Committee (Past Chair)

Chair, Board Member

Radiological Society of the Netherlands Research Committee

Course director

Joint ESNR-ESMRMB course on advanced neuroimaging techniques

Active member [upon invitation]

- Medical Delta scientific board
- Dutch Brain Tumour Registry scientific board
- DYNAMIC 14T MRI scientific advisory board
- Dutch national guideline committees on quality of neuro-oncological care, brain metastasis, and glioma
- Dutch Cancer Society KWF, scientific assessment committee
- Erasmus MC Cancer Institute, research advisory board

- Vici €1.5M personal grant
- ESR Executive Council member
- Board member of the Radiological Society of the Netherlands
- 2022 Senior Fellow of ISMRM
- 2022 Fellow of ESMRMB
- 2021 AuntMinnie Europe Most Influential Radiology Researcher
- 2020 Honorary Member of the American Society of Neuroradiology
- President of the Dutch Society of Neuroradiology (2018-2021)
- President of ESMRMB (2020)
- Visiting Professor at Memorial Sloan Kettering Cancer Center (2018) and Johns Hopkins Medical Institution (2015)
- Young Health Council ('JongGR')
- PhD *cum laude* (2008)
- Lourens Penning Prize (2007)
- Marie Curie Fellowship (2003)

178

invited lectures

231

journal publications

10.3

average impact factor

59

H-index (Web of Science)

€4.3 million



current funding

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nationality: Dutch

medical license/NL: 79048428201

CURRICULUM VITÆ

I am ideally positioned to perform my clinically oriented research and disseminate my knowledge and expertise, due to my combined clinical and scientific appointment in the largest academic hospital in the Netherlands and my extensive national and international network.

My work consist of four inter-related and equally important pillars:

1. Clinical patient carepage 3
2. Researchpage 4
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4. Promoting neuroimaging innovations through leadership positions and public engagementpage 12

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WORKING HISTORY

Full Professor

2018-present Erasmus MC, Rotterdam/NL

- 2023-present Neuroradiology
- 2018-2023 Applied Physiological Neuroimaging

Head of department: Prof. dr. A. van der Lugt

Medical Delta Professor

2022-present Medical Delta

Chair: Prof. Dr. F.W. Janssen

Full Professor of Neuroradiology

2022-present Delft University of Technology, Delft/NL

Dean: Prof. Dr. Ir. P. Herder

Consultant Radiologist

2008-present Erasmus MC, Rotterdam/NL

Head of department: Prof. Dr. A. van der Lugt

Honorary Consultant and Reader

2014-2021 University College Hospital London/UK

Head of department: Prof. dr. X. Golay

Associate Professor

2012-2018 Erasmus MC, Rotterdam/NL

Head of department: Prof. dr. G.P. Krestin

Assistant Professor

2011-2012 Erasmus MC, Rotterdam/NL

Head of department: Prof. dr. G.P. Krestin

Neuroradiology clinical fellow

2007-2009 Erasmus MC, Rotterdam/NL

Head of department: Prof. dr. G.P. Krestin

Marie Curie European research fellow

2003-2004 Department of Radiology, University

Hospitals K.U.Leuven/BE

Principal investigators: Prof. dr. S. Sunaert, Prof. dr. P. van Hecke

PhD research: Imaging in minor head injury

2002-2008 Erasmus MC, Rotterdam/NL

Principal investigator: Prof. dr. M.G.M. Hunink

Resident in Radiology

2000-2008 Erasmus MC, Rotterdam/NL

Head of department: Prof. dr. G.P. Krestin

Resident in Neurology

1999-2000 St. Lucas/Andreas Hospital, Amsterdam/NL

Head of department: Dr. J. Vanneste

Junior/senior house officer in General Medicine/UK

1999 The North Hampshire Hospital, Basingstoke

1999 Finchley Memorial Hospital, London

1998-1999 Walsall Manor Hospital NHS Trust, Walsall

EDUCATIONAL HISTORY

Neuroradiology subspecialisation

1 April 2009 Radiological Society of the Netherlands

Doctor of Philosophy *cum laude*

25 June 2008 Erasmus University Rotterdam/NL

PhD supervisor: Prof. dr. M.G.M. Hunink

Full specialist qualification in Radiology

1 April 2008 Erasmus MC, Rotterdam/NL

Radiology certificate

13 February 2003 Radiological Society of the Netherlands

Radiation Protection for Radiologists (level 3M)
4 October 2001 IRS Leiden/NL

Doctor of Medicine *with distinction*
2 February 1998 Maastricht University/NL

Arts and Sciences

1994-1995 Maastricht University/NL
Environmental philosophy, History and philosophy of natural sciences, History of sociology, 20th Century philosophy of consciousness, Literature interpretation according to Freud and Jung, Medical ethics

electives

(Neuro)radiology
1997 University Hospital Maastricht/NL

International electives in Cardiology and Child Psychiatry
1993 McMaster University, Hamilton, Ontario (CA)

selected completed courses

Good clinical practice (GCP): Basic course on research organisation and regulation for clinical researchers (BROK)
2023, 2020, 2015, 2011 Erasmus MC, Rotterdam/NL

ESR Leadership Institute workshop
2013 Management in Radiology, Barcelona/ES

Erasmus MC Leadership Programme
2013 Erasmus MC, Rotterdam/NL

Basic teaching qualification (BKO)
2013 Individual supervision, Rotterdam/NL
2011 Teach the teacher module III, Rotterdam/NL

PhD student management
2011 Hakuna Matata, Rotterdam/NL

Female Career Development Programme
2009-2010 Erasmus MC, Rotterdam/NL

European Course cycle on Neuroradiology (ECNR)
2008-2009 Rome/IT, Tarragona/ES, Basel (CH)

Erasmus Courses CNSI, CNSII, Head & Neck
2002, 2007, 2010 Brussels/BE, London, Bruges/BE

MSc Module Memory and Attention
2005 Helmholtz Institute, Utrecht/NL

Epidemiology Summer Programme
2003, 2004, 2005 NIHES, Rotterdam/NL

Radiologic Pathology
2003 Armed Forces Institute of Pathology, Washington DC/US

Basic and Advanced Applied MR Techniques
2001, 2002 School of MRI, Paris/FR, Madrid/ES

CLINICAL PATIENT CARE

I am chief of Neuroradiology and my clinical work encompasses the full spectrum of diagnostic Neuroradiology. I use my specific expertise in neuro-oncology at the Erasmus MC Brain Tumour Centre. Nationally, I am a leading expert in the clinical application of functional MRI and DTI for brain tumour surgery.

Beyond patient care, I work on developing guidelines and procedures as well as quality assurance. I am a strong advocate for several innovations in clinical Radiology, such as structured reporting, protocol harmonisation, artificial intelligence (AI), and integrated diagnostics. Sustainability and care for the environment are topics very close to my heart.

Together with my counterparts in other disciplines, I have achieved the following:

- neuroimaging protocol harmonisation in the Southwest region of the Netherlands;
- integrating imaging, histopathology and molecular biology in the final diagnosis and implementing AI for tumour volumetric assessment within the Brain Tumour Centre.
- reducing contrast-agent use through protocol optimisation and novel sequence implementation.

The logistics for these innovations are challenging but an important goal to keep working towards.

RESEARCH LINE & RESEARCH GROUP

With my research line I aim to provide imaging markers of brain physiology and disease that are directly clinically applicable and provide equitable access to (super)specialist healthcare. My research is now primarily focused on neuro-oncology, while I previously also studied neurodegenerative disease, recovery after stroke, and traumatic head injury. I have an honorary appointment as Professor of Neuroradiology at the Delft University of Technology (TU Delft) where I closely collaborate with scientists with the aim to advance technological innovations in healthcare.

Since obtaining my PhD in 2008 I supervised 15 PhD theses, of which 1 *cum laude*, to completion. My current research group consists of 12 PhD students, 2 assistant professors, 2 post-doctoral researchers, and a variable number of MSc students. I have a very hands-on approach and am directly involved in all of my students' projects. The advancement of talents, allowing people to grow and reach their full potential, gives me immense satisfaction and is something I consider one of the greatest privileges of my position. I am proud of the diversity within my research group, which holds respect and integrity at its core. I am also honoured to participate in various mentoring programmes.

My work encompasses the full spectrum of neuroimaging research across scales from early imaging technology development to clinical effectiveness. I work closely with the MRI physics group (PI: prof. dr. J. Hernandez Tamames), the Biomedical Imaging Group Rotterdam (BIGR, PI: assoc.prof. dr. S. Klein), and the department of Health Technology Assessment at the Erasmus University Rotterdam (EUR: asst. prof. dr. B. Leeneman). I conduct this research in close collaboration with clinical and fundamental researchers locally, nationally and internationally.

GRANT ALLOCATION

TKI-LSH: €613,000

2024-2028 Gadolinium-Free Enhancement with Magnetic Resonance Imaging Synthesis: GEM (co-applicant & workpackage leader)

Medical Delta: €200,000

2024-2028 Cancer Diagnostics for Sustainable Health Care (CARES) (main applicant)

Vici: €1,499,986

2023-2029 Virtual biopsy: paving the way towards reality (main applicant, personal grant; project number 09150182210019)

NWO KIC: €1,233,247

2023-2029 Bringing tractography into daily neurosurgical practice (co-applicant; project number KICH1.ST03.21.004)

NWO-TTW Open Technology Programme: €863,196

2020-2026 Vascular Signature Mapping of Brain Tumor Genotypes (main applicant)

EU COST: €400,000

2019-2024 Glioma MR Imaging 2.0: GLiMR2.0 (co-applicant & workpackage leader; CA18206)

ZonMW Leading the Change: €589,733

2019-2024 The clinical value of perfusion MRI in primary and secondary brain tumour surveillance

(main applicant; project number 80-85009-98-2008-NVvR)

Medical Delta: €380,000

2019-2023 Cancer Diagnostics 3.0: Big data science of *in* & *ex vivo* imaging (main applicant)

TU Delft/Erasmus MC/EUR Convergence: €19,000

2022-2023 Deep Medical Imaging Flagship incentive fund (main applicant)

NWO Hestia impulse for refugees in science: €105,000

2021-2023 The Sound of flow: High-resolution brain tumour vascular signature mapping with mutually informed MRI and intra-operative microDoppler ultrasound. (main applicant)

TU Delft/Erasmus MC Convergence: €330,000

2019-2021 Quantitative susceptibility MRI: deep insights in cardio- and neuro-vasculature (co-applicant)

HollandPTC-Varian: €298,962

2018-2022 New methodology for developing biomarkers of radiation-induced toxicity in brain tumour patients based on advanced MR imaging of the microvasculature and white matter microstructure (co-applicant; project number 2018017)

HollandPTC-Varian: €279,924

2018-2022 Improving toxicity modelling, patient

selection and clinical outcome of proton therapy in low grade glioma (co-applicant; project number 2018013)

Brain Tumour Charity: €136,062

2018-2023 Making the invisible visible: In vivo mapping of molecular biomarkers in adult diffuse glioma with CEST MRI (main applicant; projectnumber GN-000540)

Koningin Wilhemina Fonds: €1,218,641

2017-2023 Glioma Longitudinal AnalySiS in the Netherlands: GLASS-NL (co-applicant & workpackage leader; projectnumber 11026)

Koningin Wilhemina Fonds: €480,000

2015-2020 Non-invasive phenotyping of molecular brain tumour profiles using novel advanced MR imaging and analysis (main applicant; projectnumber EMCR 2015-7859)

Johns Hopkins Medical Institution: \$10,000

2015 Milosh Perovitch visiting professorship (personal grant)

Tour de Rotterdam: €45,000

2015-2016 Dementia diagnosis: better and faster (main applicant)

Coolsingel Foundation: €35,000

2012-2014 The VESPA study: multivendor reproducibility of brain perfusion measured with arterial spin labeling MRI (main applicant)

Erasmus MC grant: €150,000

2011-2015 Brain plasticity of language recovery after aphasic stroke (main applicant)

Erasmus MC grant: €150,000

2011-2015 Advanced MR Neuroimaging in presenile dementia: early differentiation between Alzheimer's disease and frontotemporal dementia by multimodal analysis (co-applicant)

Coolsingel Foundation: €45,000

2010-2011 Automated digital assessment of MR imaging in dementia (main applicant)

EUR Trust Fund: €50,000

2011-2012 Uncovering synchronous neural processes associated with building and maintaining trust-based economic exchanges using fMRI-based hyperscanning (co-applicant)

EUR Trust Fund: €25,000

2011 Integrated EEG-fMRI scanning (co-applicant)

EUR Fellowship: €200,000

2009-2013 Advanced MR Neuroimaging in presenile dementia (main applicant, personal grant)

GE Healthcare Educational Funding: €6,000

2008 Regional course on radiology-anatomy correlation

Van Walree Fund: €1,250

2007 Royal Netherlands Academy for Arts and Sciences (main applicant, personal grant)

ZonMW DO (945-06-309): €125,600

2006-2008 Cost-effectiveness of CT in minor head injury (co-investigator)

Marie Curie European Research Fellowship: €10,800

2003-2004 functional MRI at the Catholic University Leuven/BE (main applicant, personal grant)

INTERNATIONAL RESEARCH POSITIONS

University College London National Hospital for Neurology and Neurosurgery 'Queen Square' - hon. Consultant and Reader (6 months on site)

2014-2021 London/UK

Johns Hopkins Medical Institution - Department of Neuroradiology - Visiting Professor (1 month)

2015 Baltimore, MD/US

K.U.Leuven Department of Radiology - Marie Curie research fellow (9 months)

2003-2004 Leuven/BE

HONOURS AND AWARDS

Fellow

2022 European Society for Magnetic Resonance in Medicine and Biology (ESMRMB)

Senior fellow

2022 International Society of Magnetic Resonance in Medicine (ISMRM)

Most Influential Radiology Researcher

2021 Aunt Minnie Europe

ASNR Honorary Member

2020 American Society of Neuroradiology

Visiting Professor for the Henry M. Selby, MD, FACR Young Investigators Lecture

2018 Memorial Sloan Kettering Cancer Center, New York, NY/US

Knowledge Ambassador City of Rotterdam

2015-present City of Rotterdam/NL

'Milosh Perovitch' Visiting Professor 2015

2015 Johns Hopkins Medical Institution, Baltimore, MD/US

Third Prize European Brain Expert Contest 2008

2008 GE Healthcare, Milwaukee, IL/US

Lourens Penning Prize 2007

2007 Section of Neuroradiology, Radiological Society of the Netherlands/NL

Nomination Dutch Radiology Conference Prize

2007 12th Dutch Radiology Conference, Rotterdam/NL

ISMRM Educational Stipend

2007 Joint annual meeting ISMRM-ESMRMB, Berlin/DE

Organisation for Human Brain Mapping Travel Award

2006 Human Brain Mapping 12th annual meeting, Florence/IT

Nomination Ernst Schering Prize

2004 9th Dutch Radiology Conference, Noordwijkerhout/NL

First prize for oral presentation

1998 10th European Conference for Students and Young Doctors, Berlin/DE

Nomination Ernst Schering Prize

1998 3rd Dutch Radiologist Radiology Conference, Veldhoven/NL

First prize for poster presentation

1998 2nd Maastricht Medical Students Research Conference, Maastricht/NL

SUPERVISION & MENTORING

PhD student supervision as 'promotor'

N. Sgambelluri

2025 *Gadolinium-free MRI.*

I. Asuzu

2025 *In silico trial of brain tumour virtual biopsy.*

R.W. Sol-Kloet

2024 *Susceptibility weighted imaging in glioma..*

M. van de Veerdonk

2024 *Bringing tractography into daily neurosurgical practice.*

A. Lavrova

2024 *Perfusion MRI in brain tumours.*

G. Mosquera Rojas

2023 *Trustworthy AI for MRI: glioma.*

K. van der Werff

2023 *Vascular signature mapping.*

J. van Leeuwen

2023 *Virtual biopsy of glioma: radiomics.*

B. Dille

2023 *Virtual biopsy of glioma: pathomics.*

L. Kemper

2023 *CEST harmonisation: the GLIMPCE study.*

P. Tang

2022 *Hitting the mark: Introducing artificial intelligence and state-of-the-art MRI techniques for precision radiotherapy of glioblastoma.*

A. Alafandi

2021 *High-resolution brain tumour vascular signature mapping with mutually informed MRI and intra-operative microDoppler ultrasound.*

C. Tseng

2020 *Improving contrast agent based cerebral perfusion assessment: Arterial input function measurement and leakage correction.*

PhD defence on 19 March 2025 at Delft University of Technology, Delft/NL.

S. Derks

2020 *Gain in the Brain: Improving diagnosis and treatment for patients with brain metastasis.*

PhD defence on 24 June 2025 at Erasmus University Rotterdam, Rotterdam/NL, now Neurologist in training.

I.J. Pruis

2019 *Theranostic PET-MRI for brain tumours.*

PhD obtained on 5 July 2024 at Erasmus University Rotterdam, Rotterdam/NL, now post-doctoral researcher.

Y. Wu

2018 *Making the invisible visible via advanced post-processing of chemical exchange saturation transfer (CEST) MRI.*

PhD obtained on 10 December at Erasmus University Rotterdam, Rotterdam/NL, now data-analyst at Rabobank.

F. Arzanforoosh

2018 *Glioma oxygenation and vasculature - in the spotlight of MRI.*

PhD obtained on 14 May 2024 at Erasmus University Rotterdam, Rotterdam/NL, now post-doctoral researcher.

K. van Garderen

2018 *Signs of progression. MR image analysis for the management of adult low-grade glioma.*

PhD obtained on 13 March 2024 at Erasmus University Rotterdam, Rotterdam/NL, now post-doctoral researcher.

W. Teunissen

2019 *Perfusion MRI for brain tumour surveillance.*

PhD obtained on 21 November 2023 at Erasmus University Rotterdam, Rotterdam/NL, now Radiologist in training.

S.R. van der Voort

2016 *Eye to AI: MR image analysis of glioma using*

machine learning.

PhD obtained *cum laude* on 26 October 2021 at Erasmus University Rotterdam, Rotterdam/NL, now assistant professor.

F. Incekara

2016 *Imaging and resection of glioblastoma in light of molecular markers.*

PhD obtained on 10 March 2021 at Erasmus University Rotterdam, Rotterdam/NL, now Psychiatrist in training and post-doctoral researcher.

R. Gahrman

2014 *MRI based response assessment and diagnostics in glioma.*

PhD obtained on 2 April 2019 at Erasmus University Rotterdam, Rotterdam/NL, now Neuroradiologist and post-doctoral researcher.

PhD student supervision as 'co-promotor'

R. Meijboom

2012 *Imaging of brain connectivity in dementia: clinical implications for diagnosis of its underlying diseases.*

PhD obtained on 31 January 2017 at Erasmus University Rotterdam, Rotterdam/NL, now post-doctoral researcher at University of Edinburgh.

E.E. Bron

2011 *Advanced MRI analysis for computer-aided diagnosis of dementia.* PhD obtained on 9 March 2016 at Erasmus University Rotterdam, now assistant professor.

R.M.E. Steketee

2009 *Advanced MR neuroimaging in early stage presenile dementia.* PhD obtained on 5 February 2016 at Erasmus University Rotterdam, now clinical informatician.

C.P. Méndez Orellana

2009 *Functional MRI of language processing and recovery.* PhD obtained on 30 June 2015 at Erasmus University Rotterdam, now associate professor at Pontificia Universidad Católica de Chile, Santiago de Chile/CL.

J. Papma

2008 *Vascular versus non-vascular MCI: the FIND study.* PhD obtained on 7 December 2012 at Erasmus University Rotterdam, now associate professor and research coordinator at Alzheimer Centre Southwest Netherlands, Rotterdam/NL.

Other research supervision

T. Abdel Alim, post-doc

2025-present *Virtual biopsy of brain tumours.*

S.E.M. Veldhuijzen van Zanten, assistant professor
2019-present *Theranostic PET imaging for the management of CNS tumours.*

E. Warnert, assistant professor

2017-present *Bench-to-bedside imaging biomarkers.*

R. Gahrman, Neuroradiologist and post-doc

2023-present *Head & Neck imaging research.*

E.E. Bron, post-doc

2016-2018 *Image analysis techniques for neurodegenerative disease.*

R.M.E. Steketee, post-doc

2016-2018 *Advanced imaging in dementia.*

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S. Stanakzai, MSc student

2025 *Longitudinal glioma assessment after high-dose radiation therapy.*

B. Monkel, MSc student

2025 *Single dose low-flip angle DSC.*

S. Salih, clinical research MSc student

2023-2024 *Non-contrast MRI follow-up of meningioma.*

A. Pons, visiting PhD student Barcelona/ES

2023 *Differentiation of IDH-mut and IDH-wt glioma.*

G. Beligi, Erasmus+ MSc student Rome/IT

2023 *Prediction of glioma progression after treatment with perfusion MRI.*

Z.S. Erdal, visiting research from Ankara/TR

2021 *Functional MRI.*

M. Rosbergen, MSc student

2021 *AI for advanced MRI in glioma.*

A. de Leeuw, MSc student

2020 *Perfusion MRI for neuro-oncology.*

A. Alafandi, clinical researcher

2020-2024 *Neuro-oncological imaging.*

A. Lavrova, ESOR Bracco fellow

2020 *ASL neuro-oncological imaging.*

J. Zhao, European School of Radiology Bracco fellow

2019 *Neuro-oncological imaging.*

G. Kapsas, European School of Radiology fellow

2017-2018 *DWI for neuro-oncology.*

M. van Riel, MSc student

2018 *Multivariate prediction of overall survival in low grade glioma.*

W. van der Loo, MSc student

2018 *Clustering algorithms for parametric mapping of brain tumour physiology.*

S. Koene, MSc student
2018 *Perfusion and diffusion radiogenomics of presumed low grade glioma.*

M.M.M.E. Habeeb, MSc student
2017 *Arterial spin labelling MRI in diagnosis of dementia: longitudinal imaging, clinical implementation, and MR sequence evaluation.*

E. Carey, MSc student
2017 *Language function assessment and white matter tract invasion in presumed pre-operative low-grade glioma patients.*

L. Ham, MSc student
2015 *Resting state functional MRI and diffusion tensor imaging in dementia.*

F. Incekara, MSc student
2014-2016 *Functional deficits of language tract tumour invasion.*

S. Detiger, MSc student
2014 *Resting state functional MRI in dementia.*

E. Gravesteijn, MSc student
2014 *Neurophysiology of hunger and satiety.*

S. Kalloe, MSc student
2013 *Cerebellar lateralisation of language in left-handers.*

R. Zuur, MSc student
2013 *Resting state functional MRI in dementia.*

J.C. Kabagema, MSc student
2012 *Resting state fMRI of brain tumour patients.*

R. Meijboom, MSc student
2012 *Functional MRI of memory and emotion recognition in dementia.*

A. Weterings, MSc student
2012 *Functional MRI of language recovery in aphasia.*

I. Boukrab, MSc student
2012 *Functional MRI of satiety in obese children.*

L. Carati, MSc student
2012 *Brain tumour response assessment on MRI in the multicentre BELOB study.*

S. Ooms, MSc student
2011 *Value of arterial spin labelling in dementia.*

R. Gahrman, MSc student
2011 *MR imaging of the brain in paroxysmal kinesigenic dyskinesia.*

R. Tjong, MSc student
2011 *DSC perfusion characteristics of high-grade gliomas.*

A. Bechan, MSc student
2010-2011 *Brain plasticity in melodic intonation language therapy after aphasic stroke.*

S. Klip, MSc student
2009 *Processing of speaking versus singing in healthy volunteers.*

D. Bos, MSc student
2007 *Optimisation of fMRI hypercapnia paradigms at 1.5T and 3.0T.*

C.P. Kralt, MSc student
2006 *Comparison of fMRI analysis software packages.*

D.A. van Rijssel, MSc student
2006 *Cost-effectiveness of selective CT in minor head injury: methodology.*

Mentoring

Mentorship programme
2024-present *Erasmus MC Cancer Institute*

T. Nunes, Neuroradiologist in Lisbon/PT
2021-present *mentoring in research activities.*

M. Zhao, postdoctoral researcher at Stanford University/US
2020-2022 *research mentoring through ESMRMB.*

E. Mesman, postdoctoral researcher
2021-2022 *mentoring for female career development programme at Erasmus MC.*

M. Offerman, associate professor
2021-2022 *mentoring for female career development programme at Erasmus MC.*

MISCELLANEOUS RESEARCH ACTIVITIES

PhD review committee

T.A. Alim ('grote commissie')
22 Oct 2024 From Mesh to Meaning (EUR, Rotterdam/NL).

A.J. Kortenbuit ('grote commissie')
25 June 2024 Neonatal Cerebral Blood Flow Imaging Using High-Frame-Rate Ultrasound (EUR, Rotterdam/NL).

D.H.K. van Dam-Nolen ('grote commissie')
8 May 2024 Plaques and patients (EUR, Rotterdam/NL).

S.P.R. Luijten ('grote commissie')
1 May 2024 Imaging in ischemic stroke (EUR, Rotterdam/NL).

R.W. Jansen ('grote commissie')
12 Jan 2024 MR Imaging of retinoblastoma subtypes: Aiding diagnostics, metastatic risk stratification

and molecular subtype identification (VU, Amsterdam/NL).

H.A. Galema ('kleine commissie')

5 Dec 2023 Illuminating the surgical field. Advances in intraoperative near-infrared fluorescence imaging (EUR, Rotterdam/NL).

W.C.M. Valk-Schimmel ('kleine commissie')

13 Oct 2023 The impact of radiation on cognitive functioning in patients with brain metastases (Tilburg University, Tilburg/NL).

M.J.F. Landers ('kleine commissie')

15 Sept 2023 Subcortical brain mapping of executive functions in glioma patients (Tilburg University, Tilburg/NL).

S. Soloukey Tbalvandany ('grote commissie')

13 Sept 2023 Panta rei - everything flows (EUR, Rotterdam/NL).

S. Breda ('grote commissie')

27 June 2023 Exercise therapy for patellar tendinopathy evaluated with quantitative imaging (EUR, Rotterdam/NL).

M.C.E. van der Plas ('grote commissie')

23 Feb 2023 Follow the label. Simultaneous 4D angiography and perfusion imaging by arterial spin labeling MRI (Leiden University, Leiden/NL).

H.F.E. van der Toom ('grote commissie')

22 Feb 2023 Outcome of cholesteatoma surgery: obliteration versus non-obliteration techniques (EUR, Rotterdam/NL).

E.M.J. Hartmann ('grote commissie')

25 Jan 2023 Coronary atherosclerosis. Biomechanics & Imaging. (EUR, Rotterdam/NL).

A.M. Radwan ('kleine commissie')

16 Jan 2023 Can we use resting-state fMRI and CSD fiber tracking for presurgical mapping? (KULeuven, Leuven/BE).

C. Zhang ('kleine commissie')

23 Nov 2022 Image reconstruction and motion compensation methods for fast MRI (EUR, Rotterdam/NL).

N. Samuels ('kleine commissie')

22 Nov 2022 Endovascular treatment for ischemic stroke (EUR, Rotterdam/NL).

R.M. Martens ('kleine commissie')

23 Sept 2022 Functional MRI and molecular imaging in head and neck cancer (VU, Amsterdam/NL).

J.K.W. Gerritsen ('kleine commissie')

21 June 2022 Awake brain surgery in glioblastoma patients (EUR, Rotterdam/NL).

D. Müller ('grote commissie')

17 June 2022 Improving surgical decision-making in glioblastoma (VU, Amsterdam/NL).

R. Eijgelaar ('grote commissie')

13 April 2022 Development and application of tools for large scale population based evaluation and optimization of localized glioma treatment (UvA, Amsterdam/NL).

L. Núñez González ('grote commissie')

12 April 2022 Fast multi-parametric acquisition methods for quantitative MRI (EUR, Rotterdam/NL).

P.B. Due-Tønnessen ('first opponent')

22 March 2022 Fast Evaluation of functional magnetic resonance imaging in the diagnosis of brain tumors and other brain lesions for assessment of clinical efficacy. (UiO, Oslo/NO).

S. Rigtters ('grote commissie')

14 Dec 2021 Peripheral and Central Aspects of Age-related Hearing Loss (EUR, Rotterdam/NL).

I. Compter ('grote commissie')

13 Oct 2021 Technological innovations in diagnosis and treatment of glioblastoma. (Maastricht University/NL).

I. Bones ('grote commissie')

7 Oct 2021 Technical advances paving the way for non-invasive renal perfusion MRI. (Utrecht University/NL).

V. Venkatraghavan ('kleine commissie')

8 June 2021 The symphony of cacophony. Understanding the order in neurodegenerative diseases. (EUR, Rotterdam/NL).

L. Stipdonk ('kleine commissie')

3 June 2021 Language functions of school-aged children born very preterm and their underlying brain development. (EUR, Rotterdam/NL).

S. Averina ('grote commissie')

22 April 2021 Bilateral neural correlates of treatment-induced changes in chronic aphasia. (Groningen University/NL).

M. Van der Meulen ('kleine commissie')

21 April 2021 Primary Central Nervous System Lymphoma. Diagnostic evaluation, neurocognitive functioning and health-related quality of life. (EUR, Rotterdam/NL).

C. Van den Brand ('kleine commissie')

24 Mar 2021 Traumatic brain injury, epidemiology, risk factors and decision making. (EUR, Rotterdam/NL).

M. Kerkhof ('kleine commissie')

15 Dec 2020 Antiepileptic and antitumor treatment in brain tumor patients: Impact on clinical and radiological outcome. (EUR, Rotterdam/NL).

P. Langenhuizen ('grote commissie')

18 Dec 2020 Outcome predictors for Gamma Knife radiosurgery on vestibular schwannoma. (TU, Eindhoven/NL).

L. Tap ('grote commissie')

11 Nov 2020 Age-related renovascular changes. Consequences in late life. (EUR, Rotterdam/NL).

S.R. van Tiel ('kleine commissie')

16 Oct 2020 Cellular imaging in regenerative medicine, cancer and osteoarthritis. (EUR, Rotterdam/NL).

R.A. Feis ('grote commissie')

14 Oct 2020 Neuroimaging biomarkers in genetic frontotemporal dementia: towards a timely diagnosis. (LUMC, Leiden/NL).

M. Visser ('grote commissie')

25 Sep 2020 Accurate quantification of glioma on MRI. (VU, Amsterdam/NL).

I.M. Groenendijk ('kleine commissie', secretary)

16 Sep 2020 Bladder dysfunction in the context of the bladder-brain connection. (EUR, Rotterdam/NL).

E.M. Delhaas ('grote commissie')

31 May 2020 Intrathecal Baclofen administration in severe spasticity. (EUR, Rotterdam/NL).

N. Verburg ('kleine commissie')

23 Jan 2020 Advanced imaging for glioma therapy. (VU, Amsterdam/NL).

S. Dávid ('grote commissie')

16 Jan 2020 Impact of data processing on diffusion MR image exploration and understanding. (UU, Utrecht/NL).

K. Foks ('kleine commissie', secretary)

18 Dec 2019 Acute Management of Minor Head Injury. (EUR, Rotterdam/NL).

L. Vaclavu ('grote commissie')

20 June 2019 Haemodynamic MRI in Sickle Cell Disease. (UvA, Amsterdam/NL).

M. Wijnenga ('kleine commissie', secretary)

28 May 2019 Prognostication and surgical management of diffuse gliomas in the era of molecular diagnostics. (EUR, Rotterdam/NL).

A. van Oppbroek ('grote commissie')

6 June 2018 Transfer learning for medical image segmentation. (EUR, Rotterdam/NL).

R. Schiller ('grote commissie')

29 May 2018 The vulnerable brain. Neurodevelopment after neonatal critical illness. (EUR, Rotterdam/NL).

X. Zhang ('kleine commissie')

31 January 2019 Expanding the capabilities of Arterial Spin Labeling MRI (Leiden University, Leiden/NL).

C.D. Langen ('kleine commissie' secretary)

18 April 2018 Short circuit: How brain connectivity and disconnectivity relate to brain function (EUR, Rotterdam/NL).

L. Blanken ('kleine commissie' secretary)

9 November 2016 The neurobiology of childhood psychiatric symptoms in the general population (EUR, Rotterdam/NL).

E.G.P. Dopper ('kleine commissie')

4 September 2015 Familial frontotemporal lobar degeneration: phenotypical characterization of presymptomatic and clinical disease stages (EUR, Rotterdam/NL).

V. Verlinden ('grote commissie')

18 March 2015 Epidemiology of gait and daily functioning (EUR, Rotterdam/NL).

M. Luijten ('kleine commissie')

23 November 2012 Neurocognitive insights in nicotine addiction (EUR, Rotterdam/NL).

M. Michielsen ('grote commissie')

18 June 2012 Reflections on mirror therapy after stroke: Mechanisms and effectiveness for improving hand function (EUR, Rotterdam/NL).

editorial board

2023-present Guest editor for Insights into Imaging thematic series 'Translating radiological research into practice - from discovery to clinical impact'.

2021-present Magnetic Resonance Materials in Physics, Biology and Medicine: MAGMA.

grant review

ZonMW Health Care Efficiency Research Programme/NL, ZonMW Veni Programme/NL, The Brain Tumour Charity/UK, Research Foundation Flanders/BE, Swiss National Science Foundation/CH, Wellcome Trust/UK, Medical Research Council/UK, KiKa/NL, Dutch Cancer Society KWF/NL.

TEACHING

Teaching is a key part of my work to advance neuroimaging by bringing new techniques into clinical practice. I was chair of the Neuroradiology fellowship programme at Erasmus MC 2018-2023, and still apply my passion for training the next generation of radiologists in Neuroradiology in the Netherlands.

I frequently teach for several professional societies in the international Radiology community, at training courses, invited lectures, and conferences. I am permanent faculty member of the two most important European courses in Neuroradiology (ECNR) and MRI techniques (ESMRMB School of MRI). I have furthermore organised numerous European courses for the Neuroradiological and Neuroscientific community.

TEACHING ACTIVITIES

Local & national teaching

see also page 44.

Neuroradiology

2017-present national Neuroradiology subspecialist education ('differentianten'), Society of Radiology of the Netherlands, Utrecht/NL

Neuroanatomy and Neuroradiology

2008-present Regional Radiology specialist education ('aios'), Erasmus MC Rotterdam/NL

MR neuroimaging: technique and protocols

2011-present Regional Radiology specialist education ('aios'), Erasmus MC Rotterdam/NL

Imaging in dementia

2016 Clinical Technology, Erasmus MC Rotterdam/NL

Imaging of neurodegenerative disease

2008, 2010, 2011 Geriatrics/Neurology specialist education, Erasmus MC Rotterdam/NL

MR neuroimaging

2009, 2010, 2011 Rehabilitation specialist education, Rijnland Rotterdam/NL

Introduction to Radiology

2001-2008 Medicine (5th year), Erasmus MC Rotterdam/NL

Advanced neuroimaging in aphasia

2005, 2007 Postgraduate education for speech therapists, Erasmus MC Rotterdam/NL

Epidemiology and medical decision making

2003-2006 Medicine (5th year), Erasmus MC Rotterdam/NL

Medical decision making practicals

2006 Medicine (4th year), Erasmus University Rotterdam/NL

Validation of decision rules for the use of CT in minor head injury

2006 NIHES Summer Programme, Rotterdam/NL

International teaching

see also page 44.

Course organiser

2021-present joint ESNR-ESMRMB European Course on Advanced Imaging Techniques (ECAIT)

Course organiser

2017, 2019 Level III ESNR course on glioma imaging, Milan/IT

Permanent faculty member

2011-present European course of Neuroradiology (ECNR)

Permanent faculty member/Course director

2009-2018 European School of MRI: fMRI & DTI in clinical practice

2012-2016 as course director

Radiology training & fellowships

2011-2014 Radiology specialist training programme (residency) selection interviewing board.

TEACHING QUALIFICATION

Basic teaching qualification ('BKO')

2013 Individual supervision, Rotterdam/NL

2011 Teach the teacher module III, Rotterdam/NL

PROMOTING NEUROIMAGING INNOVATIONS IN CLINICAL PRACTICE

The dissemination of knowledge and insight gained from my research is the crucial fourth pillar of my work. Clinical implementation of physiological MR neuroimaging proves challenging, and many techniques that have been available for decades remain only available for fundamental research.

I make a dedicated effort to break the boundaries between the research arena and clinical practice and vice versa. I hold key positions in multiple national and international professional and multidisciplinary societies and have an extensive network that I use to promote my research in clinical practice and establish collaborations. These efforts include:

- developing clinical guidelines and recommendations for - advanced - imaging techniques;
- implementing imaging standardisation in multicentre clinical trials;
- publishing book chapters and guest-editing special journal issues;
- raising public awareness of neuroimaging through (social) media and web sites;
- participating in international alliances dedicated to promote imaging techniques;
- presiding and promoting scientific meetings, the latter having resulted in my appointment as Knowledge Ambassador by the city of Rotterdam.

These activities represent many years' work on advancing clinicians' *and* public awareness of a new imaging techniques.

LEADERSHIP POSITIONS

Board member

2022-present Radiological Society of the Netherlands (NVvR): chair of the Research Committee and international relations

Executive Council member

European Society of Radiology (ESR)
2022-present Chair of Research Committee
2019-2022 Chair of Publications Committee

Chief of Neuroradiology

2019-present Erasmus MC department of Radiology & Nuclear Medicine

Chair of Neuroradiology Fellowship programme

2018-2023 Erasmus MC department of Radiology & Nuclear Medicine

(Past) Chair

EORTC Brain Tumour Group Imaging Committee

2024-present Past Chair

2018-2024 Chair

(Past) Chair

EORTC Imaging Group

2024-present steering committee member

2021-2024 Past Chair

2018-2021 Chair

2013-2018 Treasurer, Vice-Chair

Presidential tract, 2020 President

2017-2021 European Society for Magnetic Resonance in Medicine and Biology (ESMRMB)

Chair of neuro-oncology working group

2014-2020 ESNR Diagnostic committee

President

2018-2021 Dutch Society of Neuroradiology

Representative for the Netherlands

2015-2021 European Society of Neuroradiology

Representative for the Netherlands

2012-2021 UEMS Division of Neuroradiology

Congress President

2015-2018 2018 ESNR annual meeting

General Secretary of the Board

2012-2018 Dutch Society of Neuroradiology

Course director

2012-2016 ESMRMB School of MRI: fMRI & DTI in clinical practice

ESR-RSNA joint symposium committee

2012-2016 Joint symposium at annual meetings

Scientific Programme Committee Chair

2013-2015 2015 ESMRMB Annual Meeting

Executive Board member

2013-2015 ESMRMB

Young Health Council of the Netherlands member
2011-2013 The Health Council of the Netherlands
(Jonge Gezondheidsraad), The Hague/NL

Course organiser

2012 ESMRMB fMRI & DTI hands-on course, Paris/FR

Guest editor

2012 MemoRad Dutch Radiology Journal special issue:
fMRI and DTI

Scientific Programme Committee member

2013-2014 WFNR Symposium Neuroradiologicum,
Istanbul/TR 2014.

Scientific Programme Committee member

2011-2013 ESMRMB annual scientific meeting Lisbon/
PT, Toulouse/FR

Scientific Programme & Organising Committee

2011-2013 Dutch Radiology Conference, of which
chairman in 2012

Initiator and Chair

2011-2012 Radiology Junior Clinical Researchers
Group, Erasmus MC

Local course organiser

2009 ESMRMB fMRI & DTI hands-on course, Rotterdam/
NL

Editor-in-chief

2008-2010 Radiology department's journal "De
Beeldspraak", Erasmus MC

Chair

2005 MRI user meetings, Erasmus MC

President

2002-2004 Junior Doctors' Association Erasmus MC

Chair

2002, 2003 Organisation committee of the Junior
Doctors' Research Day Erasmus MC

EXTERNAL CONSULTANCY

2021-2025 Bracco B26826 phase 1 trial

2021 Consultancy for Bracco AI-project (€30,000)

2016-2019 Independent reviewer for Parexel Intl. Trial
review for EORTC-1410 (€150,000)

2015-2020 Consultancy for Quantib B.V.

INTERNATIONAL ALLIANCES

2022-2024 ISMRM Standards working group

2017-2024 Quantitative Imaging Biomarker Alliance
(QIBA) working group on arterial spin labelling

2016-2019, 2022-present European Imaging Biomarker
Alliance (EIBALL)

2014-2020 Brain Tumor Imaging Standardization

Steering Committee in the National (USA) Brain Tumor
Society

2015-2020 ISMRM MRI Value Initiative

2013-2016 European COST action for arterial spin
labelling in dementia (BM1103)

NATIONAL GUIDELINE/POLICY DEVELOPMENT

2013, 2019-present Dutch glioma guidelines

2017-present Dutch brain metastases guidelines

2015-present Dutch national registry for brain tumours

2012-present Quality criteria for neuro-oncological care
in the Netherlands

2008 MR imaging protocol for EORTC brain tumour
trials

BOOK CHAPTERS

see page 16.

GUIDELINES & RECOMMENDATIONS

Andratschke N, Heusel A, Albert NL, Alongi F, Baumert
BG, Belka C, Castellano A, Dhermain F, Erridge SC,
Niyazi M, Nieder C, Preusser M, **Smits M**, Weber DC,
Weber WA, Weller M, Williamson A, Minniti G. *ESTRO/
EANO recommendation on reirradiation of
glioblastoma*. Radiother Oncol, in press.

Albert NL, Galldiks N, Ellingson BM, Van den Bent MJ,
Chang SM, Ciccone F, De Groot J, Koh ES, Law I, Le Rhun
E, Mair MJ, Minniti G, Rudà R, Scott AM, Short SC, **Smits
M**, Suchorska B, Tolboom N, Traub-Weidinger T, Tonn
J-C, Verger A, Weller M, Wen PY, Preusser M. *PET-based
response assessment criteria for diffuse gliomas (PET
RANO 1.0): a report of the RANO group*. Lancet Oncol
2024;25:e29-e41.

Karschnia P, **Smits M**, Reifemberger G, Le Rhun E,
Ellingson BM, Galldiks N, Kim MM, Huse JT, Schnell O,
Harter PN, Mohme M, Expert Rater Panel, Von
Baumgarten L, Albert NL, Huang RY, Mehta PM, Van den
Bent M, Weller M, Vogelbaum MA, Chang SM, Berger
MS, Tonn J-C. *A framework for standardised tissue
sampling and processing during resection of diffuse
intracranial glioma: joint recommendations from four
RANO groups*. Lancet Oncol 2023;24:e438-e450.

Hasanov E, Yeboa DN, Tucker MD, Swanson TA,
BeckhamTH, Rini B, Ene CI, Hasanov M, Derks S, **Smits
M**, Dudani S, Heng DYC, Brastianos PK, Bex A,

Hanalioglu S, Weinberg JC, Hirsch L, Carlo MI, Aizer A, Brown PD, Bilen MA, Chang EL, Jaboin J, Brugarolas J, Choueiri TK, Atkins MB, McGregor BA, Halasz LM, Patel TR, Soltys SG, McDermott DF, Elder JB, Baskaya MK, Yu JB, Timmerman R, Kim MM, Mut M, Markert J, Beal K, Tannir NM, Samandouras G, Lang FF, Giles R, Jonasch E. *An interdisciplinary consensus on the management of brain metastases in patients with renal cell carcinoma*. CA Cancer J Clin 2022;72:454-489.

Weller M, Van den Bent M, Preusser M, Le Rhun E, Tonn JC, Minniti G, Bendszus M, Balana C, Chinot O, Dirven L, French P, Hegi ME, Jakola AS, Platten M, Roth P, Rudà R, Short S, **Smits M**, Taphoorn MJB, Von Deimling A, Westphal M, Soffietti R, Reifenberger G, Wick W, for the EANO Task Force on Diffuse Gliomas. *European Association of Neuro-Oncology (EANO) guideline on the diagnosis and treatment of diffuse gliomas of adulthood*. Nat Rev Clin Oncol 2021;18:170-186.

Le Rhun E, Guckenberger M, **Smits M**, Dummer R, Bachelot T, Sahm F, Galldiks N, De Azambuja A, Berghoff AS, Metellus P, Peters S, Hong Y-K, Winkler F, Schadendorf D, Van den Bent M, Seoane J, Stahel R, Minniti G, Wesseling P, Weller M, Preusser M. *EANO-ESMO clinical practice guidelines for diagnosis and follow-up of patients with brain metastasis from solid tumours*. Ann Oncol 2021;32:1332-47.

Gijtenbeek JMM, Dewit LGH, Van Elst KJA, Enting RH, Gathier CS, De Graeff A, Heessels-Smetsers J, Hendriks LEL, Jacobs-van Leur JJMG, Lagerwaard FJ, Nandoe Tewarie RDS, **Smits M**, De Vos FYFL, Zindler JD, Buddeke J. *Revision of the guideline Brain metastases; the need for multidisciplinary management [published in Dutch: Revisie richtlijn Hersenmetastasen; waarom multidisciplinair overleg noodzakelijk is.] Nederlands Tijdschrift voor Oncologie (NTvO) 2020;17:193-5.*

Boxerman JL, Quarles CC, Hu LS, Erickson BJ, Gerstner E, **Smits M**, Kaufmann TJ, Barboriak D, Huang RH, Wick W, Weller M, Galanis E, Kalpathy-Cramer J, Shankar L, Jacobs P, Chung C, Van den Bent MJ, Chang S, Al Yung WK, Cloughesy TF, Wen PY, Gilbert MR, Rosen BR, Ellingson BM, Schmainda KM. *Consensus Recommendations for a Dynamic Susceptibility Contrast MRI Protocol for Use in High-Grade Gliomas*. Neuro Oncol 2020;22:757-772.

Kaufmann TJ, **Smits M**, Boxerman J, Huang R, Barboriak DP, Weller M, Chung C, Tsien C, Brown OD, Shankar L, Galanis E, Gerstner E, Van den Bent MJ, Burns TC, Pamey IF, Dunn G, Brastianos PK, Lin NU, Wen PY, Ellingson BM. *Consensus recommendations for a standardized brain tumor imaging protocol for clinical trials in brain metastases (BTIP-BM)*. Neuro Oncol 2020;22:757-772.

Thust SC, Heiland S, Falini A, Jäger HR, Waldman AD, Sundgren PC, Godi C, Katsaros VK, Ramos A, Bargalló N, Vernooij MW, Yousry T, Bendszus M, **Smits M**. *Glioma imaging in Europe: A survey of 220 centres and recommendations for best clinical practice*. Eur Radiol 2018;28:3306-3317.

Grade M, Hernandez Tamames JA, Pizzini FB, Achten E, Golay X, **Smits M**. *A Neuroradiologist's guide to Arterial Spin Labeling MRI in clinical practice*. Neuroradiology 2015;57:1181-202.

Ellingson BM, Bendszus M, Boxerman JL, Barboriak D, Erickson BJ, **Smits M**, Nelson SJ, Gerstner E, Alexander B, Goldmacher G, Wick W, Vogelbaum M, Weller M, Galanis E, Kalpathy-Cramer J, Shankar L, Jacobs P, Pope WB, Yang D, Chung C, Knopp MV, Cha S, van den Bent MJ, Chang S, Yung WKA, Cloughesy TF, Wen PY, Gilbert MR. *Consensus recommendations for a standardized brain tumor imaging protocol (BTIP) in clinical trials*. Neuro Oncol 2015;17:1188-98.

Alsop DC*, Detre JA*, Golay X*, Günther M*, Hendrikse J*, Hernandez-Garcia L*, Hanzhang L*, Macintosh BL*, Parkes LM*, **Smits M***, Van Osch MJP*, Wang DJJ*, Wong EC*, Zaharchuk G*. *Recommended Implementation of Arterial Spin Labeled Perfusion MRI for Clinical Applications: A consensus of the ISMRM Perfusion Study Group and the European Consortium for ASL in Dementia*. Magn Reson Med 2015;73:102-16.
*authors listed in alphabetical order.

PUBLIC UNDERSTANDING OF RADIOLOGY

More possible with MRI

15 March 2023 Interview with DOQ: <https://www.doq.nl/meer-mogelijk-met-mri/>

Federated Learning impacts medical research

16 Feb 2023 Interview with ICT&Health: <https://icthealth.nl/online-magazine/editie-01-2023/federated-learning-heeft-enorme-impact-op-medisch-wetenschappelijk-onderzoek/>

Non-invasive brain cancer diagnostics with MRI

15 Dec 2022 Medical Delta interview and movie: <https://www.medicaldelta.nl/nieuws/portret-en-video-marion-smits-ik-vind-het-belangrijk-dat-onderzoek-en-innovaties-ook-landen-in-de-praktijk>

Federated Learning

15 Dec 2022 Interview with Dutch Health Hub (~40k followers): <https://www.dutchhealthhub.nl/artikel/gefedereerd-leren/>

AI for Neuroradiology

10 Feb 2022 AuntMinnie webinar: <https://www.auntminnie.com/index.aspx?sec=vend&sub=webinars&pag=dis&itemID=135136>

‘Hart van Rotterdam’: AI for brain tumour diagnosis
26 Oct 2021 Rijnmond TV episode 21004: <https://www.rijnmond.nl/tv/programma/261/Het-Hart-van-Rotterdam/aflevering/32513>

MRI of brain tumours: challenges and opportunities
11 Sept 2021 Patient meeting of the brain tumour section of patient organisation ‘Hersenletsel’ (‘Brain injury’), Maarn/NL.

Advanced Neuroimaging in clinical practice
24 Oct 2019 GE Live TV: <https://www.youtube.com/watch?v=7dG5EdTmusE&feature=youtu.be>

Radiology of brain tumours
17 March 2018 Public patient meeting on brain tumours, Bunnik/NL

Imaging of brain tumours
2 December 2017 KWF charity event, Stolwijk/NL

Imaging of brain tumours
25 January 2015 Public patient meeting on brain tumours, Maarssen/NL

Web site explaining brain tumour imaging
2013-present www.hersentumor.nl

Advanced MRI of dementia
10 June 2013 National television: [Over leven met... dementie] ‘On living with... dementia’ (NTR)

RSNA on the Air: fMRI in brain tumour patients
2 December 2009 Radio interview broadcast by “Rural Health Today”/US with audience of ~983k

Functional MRI for the assessment of marketing skills of sales people
12 November 2006 National television: Business Class (RTL7)

Basics of MRI as part of the exhibition “Pain and Pleasure”
2005-2006 Museum of Natural History, Rotterdam/NL

MEMBERSHIP OF PROFESSIONAL SOCIETIES

2020-present European Association of Neuro-Oncology (EANO)

2012-present International Society for Magnetic Resonance in Medicine (ISMRM)

2012-present Head and Neck Radiology section of the Radiological Society of the Netherlands

2011-present European Low Grade Glioma Network

2010-present EORTC, Brain Tumour and Imaging groups

2010-present Dutch Society for Neuro Oncology (LWNO)

2010-present European Society of Neuroradiology (ESNR)

2008-present European Society of Magnetic Resonance in Medicine and Biology (ESMRMB)

2007-present European Society of Radiology (ESR)

2006-present Dutch society of Neuroradiology

2000-present Radiological Society of North America (RSNA)

2000-present Radiological Society of the Netherlands (NVvR)

2012-2015 European Institute for Biomedical Imaging Research (EIBIR) Cancer Imaging working group [upon invitation]

2000-2008 Erasmus MC Junior Doctor’s Association (president 2002-2004)

MISCELLANEOUS

2009, 2011 Judge for the BBC public speaking competition.

PUBLICATIONS

book chapters

1. Tang PYL, Warnert EAH, **Smits M**. *Conventional and advanced MRI in neuro-oncology*. In: *Advanced Imaging and Therapy in Neuro-Oncology*. Lopci E, Mansi L (eds). Springer Nature Switzerland, 2024. ISBN 978-3-031-59341-3.
2. Venkatraghavan V, Van der Voort SR, Bos D, **Smits M**, Barkhof F, Niessen WJ, Klein S, Bron EE. *Computer-Aided Diagnosis and Prediction in Brain Disorders*. In: *Machine Learning for Brain Disorders*. Colliot O (ed). Springer Science+Business Media, New York 2023. ISBN 978-1-0716-3194-2.
3. Ellingson BM, **Smits M**. *The Path Forward: The Standardized Brain Tumor Imaging Protocol (BTIP) for Multicenter Trials*. In: *Glioma Imaging. Physiologic, Metabolic, and Molecular Approaches*. Pope WP (ed). Springer Nature Switzerland, 2020. ISBN 978-3-030-27358-3.
4. Gahrman R, Arbizu J, Laprie A, Morales M, **Smits M**. *Response evaluation and follow-up by imaging in brain tumours*. In: *Imaging and Interventional Radiology for Radiation Oncology*. Beets-Tan RGH, Oyen WJG, Valentini V (Eds). Springer Nature Switzerland, 2020. ISBN 978-3-030-38260-5.
5. Garcia GCTE, Bockel S, Majer M, Ammari S, **Smits M**. *Imaging of brain metastases: diagnosis and monitoring*. In: *Central Nervous System Metastases*. Ahluwalia M, Metellus P, Soffietti R (eds). Springer International Publishing, 2020. ISBN 978-3-030-23417-1.
6. **Smits M**. *CNS involvement in non-CNS tumours*. In: *Clinical Neuroradiology*. Barkhof F, Jäger R, Thurnher M (eds). Springer, doi:10.1007/978-3-319-61423-6_61-1.
7. Nederveen AJ, Caan MWA, **Smits M**. *General Principles of Magnetic Resonance Imaging*. In: *Imaging in neurodegenerative disorders*. Saba L (ed). Oxford University Press, Oxford 2015. ISBN 978-0-19-967161-8.
8. Pizzini F, **Smits M**, Wesolowski R, Chapell M, Jäger R, Mutsaerts HJ, Hernandez-Tamames J. *Arterial Spin Labeled MRI perfusion imaging techniques*. In: *Perfusion Imaging in Clinical Practice: A multimodality diagnostic approach to tissue perfusion analysis*. Saremi F (ed). Wolters Kluwer, Philadelphia 2015. ISBN 978-1-4511-9316-9.
9. Méndez Orellana CE, Visch EG, **Smits M**. *Functional imaging of language processing: basic principles and acquired insights*. Published in Dutch in: *Het (voor)beeldig brein*. Robert E, Visch-Brink E, Beeckman A (eds). Antwerp-Apeldoorn Garant publishers 2013. ISBN 978-90-441-3026-3.

PhD thesis

Smits M. *Imaging in Minor Head Injury. Early Complications and Late Consequences*. 2008. ISBN 978-90-9022918-8.

peer-reviewed articles

	Impact Factor (2023)
	Q1 in bold (* indicates top 10%)
Median IF Marion Smits	3.7
H-index Marion Smits (Web of Science)	59
Average citations per item	52.5
Median IF subject category “neurosciences”	2.8
Median IF subject category “radiology, nuclear medicine & medical imaging”	2.1
Median IF subject category “oncology”	2.8
1 Cakmak M, Mohammadian S, Keil VCW, Schouten JW, De Witt Hamer PC, Van der Vaart T, Balvers RK, Wamelink IJHG, Barkhof F, Van den Bent MJ, Vries M, Smits M . <i>How useful is contrast-enhanced MRI in the long-term surveillance of glioma? A multicentre retrospective longitudinal cohort study</i> . Eur Radiol, in press.	4.7
2 Andratschke N, Heusel A, Albert NL, Alongi F, Baumert BG, Belka C, Castellano A, Dhermain F, Errigle SC, Niyazi M, Nieder C, Preusser M, Smits M , Weber DC, Weber WA, Weller M, Williamson A, Minniti G. <i>ESTRO/EANO recommendation on reirradiation of glioblastoma</i> . Radiother Oncol, in press.	4.9

- 3 Derks SHAE, Ho LS, Koene SR, Starmans MPA, Joosse A, De Jonge MJA, Naipal KAT, Jongen JLM, Van den Bent MJ, **Smits M**, Van der Veldt AAM. Size matters: early progression of melanoma brain metastases after treatment with immune checkpoint inhibitors. *Neurooncol Adv*, in press. 3.7
 - 4 Van Dorth D, Venugopal K, Van der Werff KN, **Smits M**, Warnert EAH, Hernandez-Tamames JA, Van Osch MJP, Poot DHJ. *Exploring the need for a preload on the estimation of permeability, vessel radius and rCBV in MR Vascular Fingerprinting (MRVF)-based Dynamic Susceptibility Contrast (DSC) perfusion imaging*. *Magn Reson Med* 2025;93:1761-1770. 3.0
 - 5 Van Dorth D, Alafandi A, Soloukey S, Kruizinga P, Venugopal K, Delphin A, Poot DHJ, Christen T, **Smits M**, De Bresser J, Hernandez-Tamames JA, Van Osch MJP. *The Road to a Realistic 3D Model for Estimating R2 and R2* Relaxation versus Gd-DTPA Concentration in Whole-Blood and Brain Tumor Vasculature*. *NMR BioMed* 2025;38:e5308. 2.7
 - 6 Hu LS, **Smits M**, Kaufmann TJ, Knutsson L, Rapalino O, Galldiks N, Sundgren PC, Cha S. *Advanced imaging in the diagnosis and response assessment of High-Grade Glioma: AJR Expert Panel Narrative Review*. *AJR Am J Roentgenol* 2024 Mar 13. doi: 10.2214/AJR.23.30612. Online ahead of print. 4.7
 - 7 Croese RJI, Van Dorth D, Jiang FY, Schmitz-Abecassis B, Taphoorn MJB, **Smits M**, Dirven L, Van Osch MJP, De Bresser J, Koekkoek JAF. *Perfusion MRI-based differentiation between early tumor progression and pseudoprogression in glioblastoma and its use in clinical practice*. *Neuro-Oncol Pract*, in press. 2.4
- 2024
- 8 **Smits M**, Rockall A, Constantinescu SN, Sardanelli F, Martí-Bonmatí L. *Translating radiological research into practice-from discovery to clinical impact*. *Insights Imaging* 2024;15:13-22. 4.1
 - 9 Pruis IJ, Van Doormaal PJ, Balvers RK, Van den Bent MJ, Harteveld AA, De Jong LC, Konijnenberg MW, Segbers M, Valkema R, Verburg FA, **Smits M**, Veldhuijzen van Zanten SEM. *Potential of PSMA-targeting radioligand therapy for malignant primary and secondary brain tumours using super-selective intra-arterial administration: a single centre, open label, non-randomised prospective imaging study*. *eBiomedicine* 2024;102:105120. 9.7*
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PRESENTATIONS

invited lectures

Brain metastases: screening, imaging and follow-up

7 November 2024 ESOR Visiting Professorship Programme, Skopje/MK

Primary brain tumours

7 November 2024 ESOR Visiting Professorship Programme, Skopje/MK

Non-contrast perfusion imaging in brain tumours

20 October 2024 EANO annual meeting, Glasgow/UK

Neuroimaging of radionecrosis

19 October 2024 EANO annual meeting, Glasgow/UK

The road to independence

3 October 2024 ESMRMB annual meeting, Barcelona/ES

Eureka! Let's make science matter

21 September 2024 ESNR annual meeting, Paris/FR

What is the future of imaging for brain tumours

18 July 2024 British Neuro-Oncology Society annual meeting 2024, Cambridge/UK

Advanced MRI for individualised patient management

17 July 2024 British Neuro-Oncology Society annual meeting 2024, Cambridge/UK

MRI biomarkers in neuro-oncology

12 April 2024 Japanese Congress of Radiology, Yokohama/JP

Current brain tumour radiology - practical implementation, AI, harmonisation

7 March 2024 Society for Neuro-Oncology SubSaharan Africa (SNOSSA) Education Series, online

How to make the most of research opportunities

2 March 2024 ECR 2024 annual meeting, Vienna/AT

Brain tumours: new developments in imaging and treatment

2 March 2024 ECR 2024 annual meeting, Vienna/AT

Scales and numbers in brain tumour imaging

1 March 2024 ECR 2024 annual meeting, Vienna/AT

AI for neuroradiology: current state and look into the future

9 Nov 2023 European Course on Advanced Imaging Techniques for Neuroradiology (ECAIT), Valletta/MT

The future of glioma imaging

10 Oct 2023 Masters of Neuroradiology, Nat Hospital for Neurology and Neurosurgery Queen Square, London/UK

Brain tumour differentials and mimics

10 Oct 2023 Masters of Neuroradiology, Nat Hospital for Neurology and Neurosurgery Queen Square, London/UK

MRI phenotyping of WHO2021 glioma genotypes

9 Oct 2023 Masters of Neuroradiology, Nat Hospital for Neurology and Neurosurgery Queen Square, London/UK

Perfusion MRI: techniques, pearls & pitfalls

9 Oct 2023 Masters of Neuroradiology, Nat Hospital for Neurology and Neurosurgery Queen Square, London/UK

Imaging biomarkers and radiomics

9 Oct 2023 Masters of Neuroradiology, Nat Hospital for Neurology and Neurosurgery Queen Square, London/UK

Translational AI

7 Oct 2023 ESMRMB 2023 annual meeting, Basel/CH

European Imaging Networks

6 Oct 2023 ESMRMB 2023 annual meeting, Basel/CH

Virtual biopsy of glioma in the context of WHO2021

28 Sept 2023 BSNR 2023 annual meeting, Edinburgh/UK

Perfusion for tumour stratification and treatment evaluation

27 Sept 2023 BSNR 2023 advanced imaging masterclass, Edinburgh/UK

Wake-up cases

22 Sept 2023 ESNR 2023 annual meeting, Vienna/AT

The Need for Assessing the Quality & Reliability of AI-Based Image Reconstruction from a User's Perspective

7 June 2023 ISMRM annual meeting, Toronto/CA

Glioblastoma

14 May 2023 European Course of Neuroradiology, Berlin/DE

29 April 2019 European Course of Neuroradiology, Antwerp/BE

7 May 2017 European Course of Neuroradiology, Antwerp/BE

Career development: the future subspecialty radiologist

3 March 2023 ECR 2023 annual meeting, Vienna/AT

DOs and DON'Ts in social media

2 March 2023 ECR 2023 annual meeting, Vienna/AT

Imaging gliomas

4 Feb 2023 EANO School of Neuro-Oncology, online

Imaging phenotypes of glioma genotypes

18 Nov 2022 ESNR Advanced Diagnostic Course in Neuroradiology on Glioma Imaging, Madrid/ES

New WHO 2021 classification of primary brain tumours: what the radiologist needs to know

18 Nov 2022 ESNR Advanced Diagnostic Course in Neuroradiology on Glioma Imaging, Madrid/ES

Mapping the language system with task-based fMRI

4 Nov 2022 ESNR-ESMRMB European Course on Advanced Imaging Techniques in Neuroradiology, Valletta/MT

Debate: Imaging brain tumours - Is PET required or only a fancy option?

18 Oct 2022 EANM 2022 annual meeting, Barcelona/ES

Glioma imaging challenges

16 Sep 2022 ESNR 2022 annual meeting, Lisbon/PT

Case reading with Juniors

16 Sep 2022 ESNR 2022 annual meeting, Lisbon/PT

Radiomics: new source of biomarkers

15 Sep 2022 ESNR 2022 annual meeting, Lisbon/PT

Are molecular subtypes also radiologic subtypes? Radiogenomic mapping of brain tumours

10 Sep 2022 ESMO 2022 annual meeting, Paris/FR

Neuroimaging biomarkers

16 July 2022 ECR 2022 annual meeting, Vienna/AT

Debate: 'Imaging biomarkers: should we pay attention?'

15 July 2022 ECR 2022 annual meeting, Vienna/AT

Radiomics in brain tumor imaging

7 June 2022 Educational Webinars 'Update in Neuro-Oncology' of the Italian Society of Neurology, online

Pre- and posttreatment evaluation of gliomas

16 May 2022 meeting of the Scandinavian Neurosurgical Society, Bergen/NO

MRI perfusion: DSC, DCE, ASL

15 May 2022 meeting of the Scandinavian Neurosurgical Society, Bergen/NO

Post-treatment tumor imaging

15 May 2022 ASNR22/SNR XXII, online

Applying MRI tools to cope with the challenge of probing brain structure & physiology

11 May 2022 joint ISMRM-ESMRMB annual meeting, London/UK

Juggling without struggling – can, and should, academics do it all?

9 May 2022 joint ISMRM-ESMRMB annual meeting, London/UK

Joint Radiology grand rounds: Imaging in Neuro-oncology, case presentations

29 March 2022 Mass General Hospital and Brigham Women's Hospital, Harvard Medical School/US, online

Research dissemination

8 Feb 2022 ESR/ESOR Fundamentals of Radiological Research Course, online

Imaging in Neuro-oncology: challenges and opportunities

8 Dec 2021 Martinos Center for Biomedical Imaging, MGH, Charlestown/US, webinar

WHO2021 classification for gliomas

29 Nov 2021 RSNA annual meeting, Chicago, IL/US

Unknown film interpretation panel

29 Nov 2021 RSNA annual meeting, Chicago, IL/US

ASL, DSC, or DCE for brain tumour imaging?

14 Nov 2021 joint ESNR-ESMRMB course on advanced neuroimaging techniques, online

Brain tumours: essentials for clinical practice

4 Nov 2021 European School of Radiology (ESOR) ASKLEPIOS, online

Clinical assessment of treatment response

11 Oct 2021 IPR 2021, Rome/IT

What is the value of radiomics in neuro-oncology practice and in new molecular treatments?

1 Oct 2021 ESNR 2021, Geneva/CH

Radiogenomic approaches and advances: towards a virtual biopsy?

1 Oct 2021 ESNR 2021, Geneva/CH

Focus on biomarkers in common diseases

19 June 2021 EAN 2021, online

Money, money, money

May 2021 ISMRM 2021, online

Radiomics in glioma grading

April 2021 Hot Topics Brain Tumors, online

Consensus recommendations standardized imaging protocol and structured report

April 2021 Hot Topics Brain Tumors, online

Launching a biomarker successfully into clinical practice

7 March 2021 ECR 2021, online

How do I share my trial data

5 March 2021 ECR 2021, online

Neuroradiology education: Tumours

on demand 2021 ECR 2021, online

Radiological imaging

9 Feb 2021 Cancer Drug Development Forum, online

Roles of Imaging in Refining Prognosis and Directing Management in Molecularly-defined Brain Tumors

29 Nov-5 Dec 2020 RSNA annual meeting, online

Low grade glioma: new things you need to know

23 Sep 2020 ECR2020 Highlight week, online

Pre- and postoperative assessment of glioblastoma

12 Aug 2020 ESNR webinar

Imaging in Neuro-oncology: challenges and opportunities

10 Oct 2019 Annual meeting of the British Society of Neuroradiologists, Cardiff/UK

Imaging genomics of adult glioma

20 Sep 2019 Annual meeting of the European Society of Neuroradiology, Oslo/NO

ASL for neuro-oncology

18 Sep 2019 Annual meeting of the European Society of Neuroradiology, Oslo/NO

Keynote lecture: Imaging in Neuro-oncology: challenges and opportunities

4 July 2019 British Neuro-Oncology Society annual meeting, London/UK

Clinical application of ASL in the brain

20 May 2019 ISMRM annual meeting, Montréal/CA

Imaging patterns suggestive of different (molecular) subtypes of low-grade gliomas

3 March 2019 European Congress of Radiology, Vienna/AT

4 March 2018 European Congress of Radiology, Vienna/AT

Establishing the scientific and clinical value of advanced imaging

28 February 2019 European Congress of Radiology, Vienna/AT

Imaging phenotypes of adult glioma genotypes

25 January 2019 ESNR Advanced Course in Diagnostic Neuroradiology – Glioma Imaging, Milan/IT

Imaging in glioma: clinical practice from 220 centres throughout Europe

25 January 2019 ESNR Advanced Course in Diagnostic Neuroradiology – Glioma Imaging, Milan/IT

10 November 2017 ESNR Advanced Course in Diagnostic Neuroradiology – Glioma Imaging, Milan/IT

Imaging in Neuro-Oncology: challenges and opportunities

15 November 2018 20th annual Henry M. Selby, MD, FACR Young Investigators Lecture, Memorial Sloan Kettering Cancer Center, New York, NY/US

Physiological imaging of the vasculature: Non-contrast imaging

19 October 2018 ESMRMB Hands-on course: 3T MRI, Rotterdam/NL

CNS Metastasis: from basic science to clinical trials

13 October 2018 13th EANO Meeting and Educational Day, Stockholm/SE

Neuroradiology of brain tumours

3 October 2018 EURO-CNS course on neuropathology, Amsterdam/NL

12 October 2016 EURO-CNS course on neuropathology, Amsterdam/NL

8 June 2015 EURO-CNS course on neuropathology, Odense/DK

19 September 2012 EURO-CNS course on neuropathology, Zagreb/HR

Clinical applications of ASL perfusion imaging

25 June 2018 10th annual scientific SINAPSE meeting, Edinburgh/UK

Is ASL ready to replace contrast-agent perfusion methods in the clinic? - Yes: it is ready.

18 June 2018 joint ESMRMB-ISMRM annual meeting, Paris/FR

Physiological MR imaging of brain diseases

23 May 2018 GE Neuroscience Summit, London/UK

Arterial spin labeling (ASL) MRI of the brain: technical considerations and clinical implementation

21 May 2018 Academy of Radiology, Dubrovnic/HR

fMRI and DTI in clinical practice

21 May 2018 Academy of Radiology, Dubrovnic/HR

Non-enhancing brain tumors

3 March 2018 European Congress of Radiology, Vienna/AT

Imaging of brain metastases patients

7 October 2017 7th annual brain metastases research and emerging therapy conference, Marseille/FR

Standardized Brain tumor protocols

15 September 2017 40th annual meeting of the ESNR, Malmö/SE

Functional imaging - ASL in dementia

14 September 2017 40th annual meeting of the ESNR, Malmö/SE

Imaging of brain tumours - updated

20 & 22 June 2017 Sandwich Course of Radiology, Ede/NL

fMRI and DTI of the auditory and language systems

16 June 2017 ESMRMB School of MRI – fMRI&DTI in clinical practice, Porto/PT

17 June 2016 ESMRMB School of MRI – fMRI&DTI in clinical practice, Barcelona/ES

27 June 2014 ESMRMB School of MRI – fMRI&DTI in clinical practice, London/UK

31 May 2013 ESMRMB School of MRI – fMRI&DTI in clinical practice, Rotterdam/NL

25 May 2012 ESMRMB School of MRI – Clinical fMRI&DTI, Uppsala/SE

25 March 2011 ESMRMB School of MRI – Clinical fMRI&DTI, Leuven/BE

25 May 2010 ESMRMB School of MRI – Clinical fMRI&DTI, Milan/IT

16 October 2009 ESMRMB School of MRI – Clinical fMRI&DTI, Thessaloniki/GR

Advanced MR diagnostics in clinical neurooncology

18 May 2017 Nordic Society of Neuroradiology Meeting, Copenhagen/DK

Advanced imaging neuro-oncology

17 May 2017 Subspecialty Radiology training ('differentiatenonderwijs'), Utrecht/NL

Glioblastoma

7 May 2017 European Course of Neuroradiology, Antwerp/BE

Quantitative MR imaging markers in dementia

26 April 2017 55th annual meeting of the American Society of Neuroradiology, GE Breakfast Symposium, Long Beach, CA/US

Imaging biomarker for clinical trials in brain tumours

2 March 2017 European Congress of Radiology, Vienna/AT

Advanced MRI techniques

1 March 2017 European Congress of Radiology, Vienna/AT

Brain Trauma

1 March 2017 European Congress of Radiology, Vienna/AT

4 March 2016 European Congress of Radiology, Vienna/AT

ASL: technical considerations, brain tumour, cerebrovascular disease

1 October 2016 ESMRMB annual meeting teaching session, Vienna/AT

ASL in Alzheimer's disease

17 September 2016 39th annual meeting of the European Society of Neuroradiology, Belgrade/RS

Challenges and opportunities in Neuro MR

18 July 2016 Gordon Research Conference: In vivo MR, Andover, NH/US

Non-traumatic CNS emergencies

2 March 2016 European Congress of Radiology, Vienna/AT

2 December 2015 100th annual meeting of the Radiological Society of North America, Chicago, IL/US

5 March 2015 European Congress of Radiology, Vienna/AT

3 December 2014 100th annual meeting of the Radiological Society of North America, Chicago, IL/US

7 March 2014 European Congress of Radiology, Vienna/AT
4 December 2013 99th annual meeting of the Radiological Society of North America, Chicago, IL/US

CNS emergencies: Interactive case discussion

2 March 2016 European Congress of Radiology, Vienna/AT
2 December 2015 100th annual meeting of the Radiological Society of North America, Chicago, IL/US
5 March 2015 European Congress of Radiology, Vienna/AT
3 December 2014 100th annual meeting of the Radiological Society of North America, Chicago, IL/US
7 March 2014 European Congress of Radiology, Vienna/AT
4 December 2013 99th annual meeting of the Radiological Society of North America, Chicago, IL/US

Molecular Imaging and phenotypes of brain tumors

18 September 2015 38th annual meeting of the European Society of Neuroradiology, Naples/IT

Advanced multimodal imaging for brain tumors

17 September 2015 38th annual meeting of the European Society of Neuroradiology, Naples/IT

Imaging of metabolism and blood flow in dementia (MRI/PET)

18 May 2015 British Institute of Radiology, London/UK

fMRI and DTI of brain tumours

8 April 2015 European Course of Neuroradiology, Rhodes/GR

Brain tumours: type, grade and genetics

8 April 2015 European Course of Neuroradiology, Rhodes/GR

Standardisation of imaging in neuro-oncology

27 March 2015 EORTC-EANO-ESMO, Istanbul/TR

Optimised imaging for trials in brain tumours

7 March 2015 European Congress of Radiology, Vienna/AT

Imaging correlates of brain tumour genotypes

5 March 2015 European Congress of Radiology, Vienna/AT

Advanced MR neuroimaging techniques

4 March 2015 European Congress of Radiology, Vienna/AT
6 March 2014 European Congress of Radiology, Vienna/AT

Functional neuroanatomy: motor system, sensory system, cognition

10 November 2014 European Course of Neuroradiology, Antalya/TR

MR perfusion imaging

25 October 2014 XLIII Annual meeting of the Spanish Society of Neuroradiology, Seville/ES

DTI in clinical practice

25 October 2014 XLIII Annual meeting of the Spanish Society of Neuroradiology, Seville/ES

fMRI in clinical practice

25 October 2014 XLIII Annual meeting of the Spanish Society of Neuroradiology, Seville/ES

fMRI: BOLD and beyond

11 September 2014 XXth Symposium Neuroradiologicum, Istanbul/TR

Multimodal imaging

11 September 2014 XXth Symposium Neuroradiologicum, Istanbul/TR

Neuroanatomy of behavior and higher functions

19 April 2016 European Course of Neuroradiology, Rhodes/GR
6 April 2014 European Course of Neuroradiology, Athens/GR

Coma, vegetative persistent state, brain death

19 April 2016 European Course of Neuroradiology, Rhodes/GR
6 April 2014 European Course of Neuroradiology, Athens/GR

The use of Arterial Spin Labeling in non-vascular brain disease

6 March 2014 European Congress of Radiology, Vienna/AT

Advanced MR imaging of brain tumours

25 January 2014 Patient information day, Maarssen/NL

fMRI as a clinical and research tool

31 October 2013 Annual Congress of the NL Society of Physical and Rehabilitation Medicine, Noordwijk/NL

Diffusion tensor imaging in clinical practice

19 October 2013 ESMRMB School of MRI – Advanced Neuro Imaging, Split/HR

25 October 2012 ESMRMB School of MRI – Advanced Neuro Imaging, Antwerp/BE

Review of existing studies on ASL in dementia

1 October 2013 COST ASL Training School for physicists, Toulouse/FR

Assessing brain scans from the memory clinic

19-20 June 2013 Sandwich Course on Neuroradiology, Ede/NL

Arterial spin labelling MRI in clinical practice: current and future applications

22 May 2013 51st Annual Meeting of the American Society of Neuroradiology, San Diego, CA/US

fMRI Tips&Tricks

9-10 April 2013 European Course of Neuroradiology, Athens/GR

Advanced MR neuroimaging in multicentre trials: Experience from the EORTC Brain Tumour Group

8 March 2013 European Congress of Radiology, Vienna/AT

Functional MRI of the Brain

17 January 2013 Erasmus School of Accounting & Assurance Executive Programme, Rotterdam/NL

19 January 2012 Erasmus School of Accounting & Assurance Executive Programme, Rotterdam/NL

Functional neuroanatomy

14 December 2012 ESMRMB Hands-on Course: fMRI&DTI in Clinical Practice, Paris/FR

Diffusion tensor imaging: presurgical evaluation of white matter tracts

6 October 2012 ESMRMB annual meeting teaching session, Lisbon/PT

fMRI for the MRI-tech

6 October 2012 ESMRMB annual meeting teaching session, Lisbon/PT

Neuroradiology of brain tumours

19 September 2012 EURO-CNS course on neuropathology, Zagreb/HR

What is the proven role of perfusion weighted imaging?

7-8 September 2012 EANO 10th annual meeting, Marseille/FR

Poster highlights: Advanced neuroimaging of brain tumours

7-8 September 2012 EANO 10th annual meeting, Marseille/FR

DSC perfusion imaging in clinical practice

20 July 2012 GE Healthcare application specialist training, Paris/FR

Neurotrauma: the evidence

26 June 2012 Trauma physicians' regional meeting, Antwerp/BE

fMRI of vascular disease

24 April 2012 Dutch vascular meeting, Noordwijk/NL

Neurotrauma

3 April 2012 Siemens CT users day, Dordrecht/NL

DTI of vascular disorders

28-30 October 2011 European Course of Neuroradiology, Tarragona/ES

fMRI of vascular disorders

28-30 October 2011 European Course of Neuroradiology, Tarragona/ES

Round table discussion: "MR tractography: why DTI is not enough"

8 October 2011 ESMRMB annual meeting teaching session, Leipzig/DE

Perfusion weighted imaging: DSC, DCE or ASL?

8 October 2011 ESMRMB annual meeting teaching session, Leipzig/DE

Advanced brain tumour imaging

21, 24 June 2011 Sandwich Course Neuroradiology, Ede/NL

Perfusion imaging of brain tumours

10 June 2011 Dutch Society for Radiotherapy and Oncology, Utrecht/NL

Clinical symptoms correlated with anatomy

3 March 2011 European Congress of Radiology, Vienna/AT

Imaging in minor head injury: early complications and late consequences

19 January 2011 Benecke Annual Symposium of Neurology, Utrecht/NL

Morbus Behçet, Antiphospholipid syndrome and Susac syndrome: imaging

15 April 2010 7th International Conference Course of the Dutch Society of Neuroradiology, Groningen/NL

Clinical applications of fMRI & DTI

6 November 2009 ESMRMB Hands-on fMRI&DTI, Rotterdam/NL

Evidence based medicine in neurotrauma imaging

18 July 2009 International Symposium on State-of-the-Art Imaging, Taormina/IT

Imaging and neurovascular intervention in acute stroke

18 July 2009 International Symposium on State-of-the-Art Imaging, Taormina/IT

Neuro-applications at 3T: what can you expect?

10 March 2007 European Congress of Radiology – GE Healthcare lunch symposium, Vienna/AT

Fusion of fMRI and diffusion tensor: practical applications

23 September 2006 ESMRMB – GE Healthcare lunch symposium, Warsaw/PL

conference presentations

1. Koene S, Incekara F, Van der Voort S, Vincent A, Van den Bent M, Lycklama a Nijeholt G, Nandoe Tewarie R, **Smits M**. *Identifying molecular subtypes of non-enhancing glioma using MRI perfusion and diffusion parameters*. EANO 2018, Stockholm/SE.
2. Gahrman R, Leemans A, Van der Holt B, Vernhout RM, Bromberg J, Taal W, Vos J, De Groot JC, Hanse M, Van den Bent MJ, **Smits M**. *Minimum apparent diffusion coefficient (ADC_{min}) decrease after bevacizumab and lomustine predicts overall survival (OS) in recurrent glioblastoma*. 40th annual scientific meeting of the ESNR 2017, Malmö/SE.
3. Thust S, Yousry T, Bargallo N, Vernooij MW, **Smits M**. *Glioma Magnetic Resonance Imaging Practices in Europe: Results from the European Society for Neuroradiology (ESNR) Diagnostic Subcommittee Survey on Glioma Imaging*. RSNA 2016, Chicago, IL/US: oral presentation.
4. Gahrman R, Van den Bent M, Van der Holt B, Vernhout R, Taal W, Taphoorn MJB, De Groot JC, Beerepoot L, Jasperse B, **Smits M**. *Radiological response assessment in the era of bevacizumab: RANO or volumetry? A report from the BELOB trial*. SNO annual meeting, Scottsdale, AZ/US: oral presentation (selected as 'Daily Highlight').
5. Thust S, Yousry T, Bargallo N, Vernooij MW, **Smits M**. *Glioma Magnetic Resonance Imaging Practices in Europe: Results from the European Society for Neuroradiology (ESNR) Diagnostic Subcommittee Survey on Glioma Imaging*. ESMRMB 2016, Vienna/AT: oral presentation.

6. Incekara F, Satoer D, Visch-Brink E, Vincent A, **Smits M**. *Correlation between pre-operative cognitive deficits and language white matter tract invasion in presumed low grade glioma patients*. ESMRMB 2016, Vienna/AT: oral presentation.
7. Tjiong R, Van den Bent M, **Smits M**. *High diagnostic accuracy of dynamic susceptibility contrast (DSC) magnetic resonance (MR) perfusion imaging to distinguish radiation necrosis from recurrent tumor in high grade glioma patients*. European Congress of Radiology, Vienna/AT, 1-5 March 2012: oral presentation.
8. **Smits M**, Seelaar HC, Van Swieten JC, Van der Lugt A. *Neuroimaging in dementia: how to get your head around it*. Radiological Society of North America 96th Scientific Assembly and Annual Meeting, Chicago, IL/US, 28 Nov-3 Dec 2010: educational exhibit.
9. **Smits M**, Van den Hauwe L, Steens SC, Meiners LC. *Beware the MS mimics: Behçet's, antiphospholipid, and Susac's disease*. Radiological Society of North America 96th Scientific Assembly and Annual Meeting, Chicago, IL/US, 28 Nov-3 Dec 2010: educational exhibit.
10. Klip SHJ, Van de Sandt-Koenderman WME, Van der Meulen AC, Van der Lugt A, Visch-Brink EG, **Smits M**. *Spoken versus melodic language processing in healthy volunteers: an fMRI study*. European Congress of Radiology, Vienna/AT, 4-8 March 2009: oral presentation.
11. Michielsen ME, Selles RW, Van der Geest JN, Eckhart M, Stam HJ, Ribbers GM, Bussmann JBJ, **Smits M**. *Functional improvement and cortical reorganisation after mirror therapy in stroke patients: a randomised, controlled trial*. European Congress of Radiology, Vienna/AT, 4-8 March 2009: oral presentation.
12. **Smits M**, Dippel DWJ, Houston GC, Wielopolski PA, Hunink MGM, Van der Lugt A. *Brain plasticity of selective attention processing in patients with chronic postconcussion syndrome after complicated minor head injury*. Radiological Society of North America 95th Scientific Assembly and Annual Meeting, Chicago, IL/US, 29 Nov-4 Dec 2009: oral presentation.
13. **Smits M**, Dippel DWJ, Houston GC, Wielopolski PA, Hunink MGM, Van der Lugt A. *Brain plasticity of selective attention processing in patients with chronic postconcussion syndrome after complicated minor head injury*. European Society for Magnetic Resonance in Medicine and Biology 26th Annual Meeting, Antalya/TK, 1-3 Oct 2009: oral presentation.
14. **Smits M**, Dippel DWJ, Houston GC, Wielopolski PA, Koudstaal PJ, Hunink MGM, Van der Lugt A. *Compensatory brain activity of selective attention in patients with postconcussion syndrome one month after minor head injury*. European Congress of Radiology, Vienna/AT, 6-10 March 2009: oral presentation.
15. **Smits M**, Vincent A, Bruininks S, Wielopolski P, Van der Lugt A. *Functional MRI and diffusion tensor imaging in clinical practice: everything you need to know from acquisition to interpretation*. Radiological Society of North America 94th Scientific Assembly and Annual Meeting, Chicago, IL/US, 30 Nov-5 Dec 2008: educational exhibit.
16. **Smits M**, Houston GC, Dippel DWJ, Wielopolski PA, Koudstaal PJ, Hunink MGM, Van der Lugt A. *Microstructural white matter damage in postconcussion syndrome after minor head injury*. European Society for Magnetic Resonance in Medicine and Biology 25th Annual Meeting, Valencia/ES, 2-4 Oct 2008: oral presentation.
17. **Smits M**, Dippel DWJ, Van Rijssel DA, Dekker HM, Vos PE, Kool DR, Nederkoorn PJ, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *Cost-effectiveness of CT scanning in minor head injury: selective strategies versus scanning all patients*. European Congress of Radiology, Vienna/AT, 7-11 March 2008: oral presentation.
18. Bos D, Van der Lugt A, **Smits M**. *Optimisation of hypercapnia paradigms using cued breath holding at 1.5T and 3.0T*. European Congress of Radiology, Vienna/AT, 7-11 March 2008: poster presentation.
19. **Smits M**, Hunink MGM, Van Rijssel DA, Dekker HM, Vos PE, Kool DR, Nederkoorn PJ, Twijnstra A, Hofman PAM, Tanghe HLJ, Dippel DWJ. *Long-term outcome after complicated minor head injury*. Radiological Society of North America 93rd Scientific Assembly and Annual Meeting, Chicago, IL/US, 25-30 Nov 2007: oral presentation.
20. **Smits M**, Wielopolski PA, Houston GC, Tanghe HLJ, Van der Lugt A. *Advanced Magnetic Resonance (MR) neuroimaging at 3T: What to expect?* Radiological Society of North America 93rd Scientific Assembly and Annual Meeting, Chicago, IL/US, 25-30 Nov 2007: educational exhibit.

21. **Smits M**, Dippel DWJ, Houston GC, Wielopolski PA, Koudstaal PJ, Hunink MGM, Van der Lugt A. *Brain activation changes of working memory in minor head injury with functional Magnetic Resonance Imaging (fMRI)*. 12th Dutch Radiology Conference, Rotterdam/NL, 27-28 Sep 2007: oral presentation.
22. **Smits M**, Hunink MGM, Van Rijssel DA, Dekker HM, Vos PE, Kool DR, Nederkoorn PJ, Twijnstra A, Hofman PAM, Tanghe HLJ, Dippel DWJ. *Long-term outcome after complicated minor head injury*. 12th Dutch Radiology Conference, Rotterdam/NL, 27-28 Sep 2007: oral presentation.
23. **Smits M**, Dippel DWJ, Wielopolski PA, Houston GC, Koudstaal PJ, Hunink MGM, Van der Lugt A. *Working memory related differences in brain activation measured with functional Magnetic Resonance Imaging (fMRI) in patients 1 month after minor head injury compared to healthy controls*. Joint annual meeting of the ESMRMB-ISMRM, Berlin/DE, 19-25 May 2007: oral presentation.
24. **Smits M**, Dippel DWJ, Wielopolski PA, Houston GC, Koudstaal PJ, Hunink MGM, Van der Lugt A. *Brain activation changes related to working memory in minor head injury patients compared to healthy controls measured with functional Magnetic Resonance Imaging (fMRI)*. European Congress of Radiology, Vienna/AT, 9-13 March 2007: oral presentation.
25. **Smits M**, Vernooij MW, Wielopolski PA, Houston GC, Krestin GP, Van der Lugt A. *Fiber density asymmetry of the Arcuate Fasciculus in relation to functional hemispheric language lateralization in both right and left-handed healthy subjects: a combined functional MRI and DT-tractography study*. European Congress of Radiology, Vienna/AT, 9-13 March 2007: oral presentation.
26. **Smits M**, Hunink MGM, Nederkoorn PJ, Dekker HM, Vos PE, Kool DR, Hofman PAM, Twijnstra A, De Haan GG, Tanghe HLJ, Dippel DWJ. *Loss of consciousness in minor head injury: "conditio sine qua non" or just a risk factor?* European Congress of Radiology, Vienna/AT, 9-13 March 2007: oral presentation.
27. **Smits M**, Dippel DWJ, Wielopolski PA, Koudstaal PJ, Hunink MGM, Van der Lugt A. *Brain activation changes of working memory in minor head injury patients measured with functional Magnetic Resonance Imaging (fMRI)*. Radiological Society of North America 92nd Scientific Assembly and Annual Meeting, Chicago, IL/US, 26 Nov -1 Dec 2006: oral presentation.
28. **Smits M**, Dippel DWJ, De Haan GG, Nederkoorn PJ, Kool DR, Vos PE, Dekker HM, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *The Dutch prediction rule for the use of Computed Tomography (CT) in patients with minor head injury*. Radiological Society of North America 92nd Scientific Assembly and Annual Meeting, Chicago, IL/US, 26 Nov-1 Dec 2006: oral presentation.
29. **Smits M**, Dippel DWJ, De Haan GG, Nederkoorn PJ, Kool DR, Vos PE, Dekker HM, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *The Dutch prediction rule for the use of Computed Tomography (CT) in patients with minor head injury*. 11th Dutch Radiology Conference, Kaatsheuvel/NL, 17 Nov 2006: oral presentation.
30. **Smits M**, Vernooij M, Wielopolski P, Houston G, Vrooman H, Krestin G, Van der Lugt A. *Combining functional MRI and Diffusion Tensor Imaging to visualize the Corticospinal Tract: tracking the homunculus*. Human Brain Mapping 12th annual meeting, Florence/IT, 11-15 June 2006: poster presentation.
31. Vernooij M, **Smits M**, Wielopolski P, Houston G, Vincent A, Krestin G, Van der Lugt A. *Using Diffusion Tensor Imaging to assess language hemispheric dominance in the pre-operative assessment of brain tumor patients*. Human Brain Mapping 12th annual meeting, Florence/IT, 11-15 June 2006: poster presentation.
32. **Smits M**, Schraa-Tam CK, Van der Geest JN, Koudstaal PJ, Van der Lugt A. *Evaluation of working memory with functional Magnetic Resonance Imaging (fMRI): an overview of several paradigms and research and clinical applications*. European Congress of Radiology, Vienna/AT, 3-7 March 2006: educational exhibit.
33. **Smits M**, Dippel DWJ, De Haan GG, Nederkoorn PJ, Kool DR, Vos PE, Dekker HM, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *National and international guidelines for Computed Tomography in minor head injury patients: a prospective multicentre validation study*. Radiological Society of North America 91st Scientific Assembly and Annual Meeting, Chicago, IL/US, 27 Nov-2 Dec 2005: oral presentation.
34. **Smits M**, Dippel DWJ, De Haan GG, Nederkoorn PJ, Kool DR, Vos PE, Dekker HM, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *Computed Tomography (CT) in patients with minor head injury: external validation of*

two published decision rules. Radiological Society of North America 91st Scientific Assembly and Annual Meeting, Chicago, IL/US, 27 Nov-2 Dec 2005: poster presentation.

35. **Smits M**, Visch-Brink E, Schraa-Tam CK, Van der Geest JN, Koudstaal PJ, Van der Lugt A. *Functional Magnetic Resonance Imaging (fMRI) of language: an overview of easy to implement language paradigms for clinical and research purposes*. Radiological Society of North America 91st Scientific Assembly and Annual Meeting, Chicago, IL/US, 27 Nov-2 Dec 2005: education exhibit.
36. **Smits M**, Dippel DWJ, De Haan GG, Nederkoorn PJ, Kool DR, Vos PE, Dekker HM, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *National and international guidelines for Computed Tomography in minor head injury patients: a prospective multicentre validation study*. 10th Dutch Radiology Conference, Noordwijkerhout/NL, 29-30 Sept 2005: oral presentation.
37. **Smits M**, Dippel DWJ, De Haan GG, Nederkoorn PJ, Kool DR, Vos PE, Dekker HM, Twijnstra A, Hofman PAM, Tanghe HLJ, Hunink MGM. *Computed Tomography (CT) in patients with minor head injury: external validation of two published decision rules*. 10th Dutch Radiology Conference, Noordwijkerhout/NL, 29-30 Sept 2005: oral presentation.
38. **Smits M**, Kovacs S, De Ridder D, Peeters R, Van Hecke P, Sunaert S. *Lateralization of signal change in the auditory pathway in patients with lateralized tinnitus studied with functional Magnetic Resonance Imaging (fMRI)*. Radiological Society of North America 90th Scientific Assembly and Annual Meeting, Chicago, IL/US, 27 Nov-3 Dec 2004: oral presentation.
39. **Smits M**, Dippel DWJ, De Haan GG, Tanghe HLJ, Hunink MGM. *Indications for computed tomography (CT) in patients with minor head injury: validation of published decision rules and individual risk factors*. Radiological Society of North America 90th Scientific Assembly and Annual Meeting, Chicago, IL/US, 27 Nov-3 Dec 2004: poster presentation.
40. Schraa-Tam CK, **Smits M**, Van der Lugt A, Van der Geest JN. *Functional Magnetic Resonance Imaging (fMRI) of vestibular and visual interactions in caloric vestibular stimulation*. Radiological Society of North America 90th Scientific Assembly and Annual Meeting, Chicago, IL/US, 27 Nov-3 Dec 2004: poster presentation.
41. **Smits M**, Dippel DWJ, De Haan GG, Tanghe HLJ, Hunink MGM. *Indications for computed tomography (CT) in patients with minor head injury: validation of published decision rules and individual risk factors*. 9th Dutch Radiology Conference, Noordwijkerhout/NL, 16-17 Sept 2004: oral presentation.
42. **Smits M**, Kovacs S, De Ridder D, Peeters R, Van Hecke P, Sunaert S. *Lateralization of signal change in the auditory pathway in patients with lateralized tinnitus studied with functional Magnetic Resonance Imaging (fMRI)*. 9th Dutch Radiology Conference, Noordwijkerhout/NL, 16-17 Sept 2004: oral presentation.
43. **Smits M**, Kovacs S, De Ridder D, Peeters R, Van Hecke P, Sunaert S. *Lateralization of signal change in the auditory pathway in patients with lateralized tinnitus studied with functional Magnetic Resonance Imaging (fMRI)*. European Society for Magnetic Resonance in Medicine and Biology 21st Annual Meeting, Copenhagen/DK, 9-12 Sept 2004: oral presentation.
44. **Smits M**, Peeters RR, Van Hecke P, Sunaert S. *A 3T event-related functional Magnetic Resonance Imaging (fMRI) study of natural taste perception*. International Society for Magnetic Resonance in Medicine 12th Scientific Meeting, Kyoto (JP), 15 -21 May 2004: poster presentation.
45. **Smits M**, Dippel DWJ, De Haan GG, Tanghe HLJ, Hunink MGM. *Indications for Computed Tomography (CT) in patients with minor head injury: generalization of a published decision rule*. Radiological Society of North America 89th Scientific Assembly and Annual Meeting, Chicago, IL/US, 28 Nov -4 Dec 2003: poster presentation.
46. **Smits M**, Dippel DWJ, De Haan GG, Tanghe HLJ, Hunink MGM. *Indications for Computed Tomography (CT) in patients with minor head injury: generalization of a published decision rule*. 8th Dutch Radiology Conference, Noordwijkerhout/NL, 2-3 Oct 2003: oral presentation.
47. **Smits M**, Wilmsink JT, Vles JSH. *Synostotic and positional plagiocephaly: two types of skull deformity studied with 3D Computed Tomography (CT)*. 10th European Conference for Students and Young Doctors, Berlin/DE, 21-24 Oct 1998: oral presentation.

48. **Smits M**, Wilmlink JT, Vles JSH. *Synostotic and positional plagiocephaly: two types of skull deformity studied with 3D Computed Tomography (CT)*. 3rd Dutch Radiology Conference, Veldhoven/NL, 18-19 Sept 1998: oral presentation.
49. **Smits M**, Wilmlink JT, Vles JSH. *Synostotic and positional plagiocephaly: two types of skull deformity studied with 3D Computed Tomography (CT)*. 2nd Maastricht Medical Students Research Conference, Maastricht/NL, 18 March 1998: poster presentation.