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Methodology matters: characterization of glioma through advanced MR imaging

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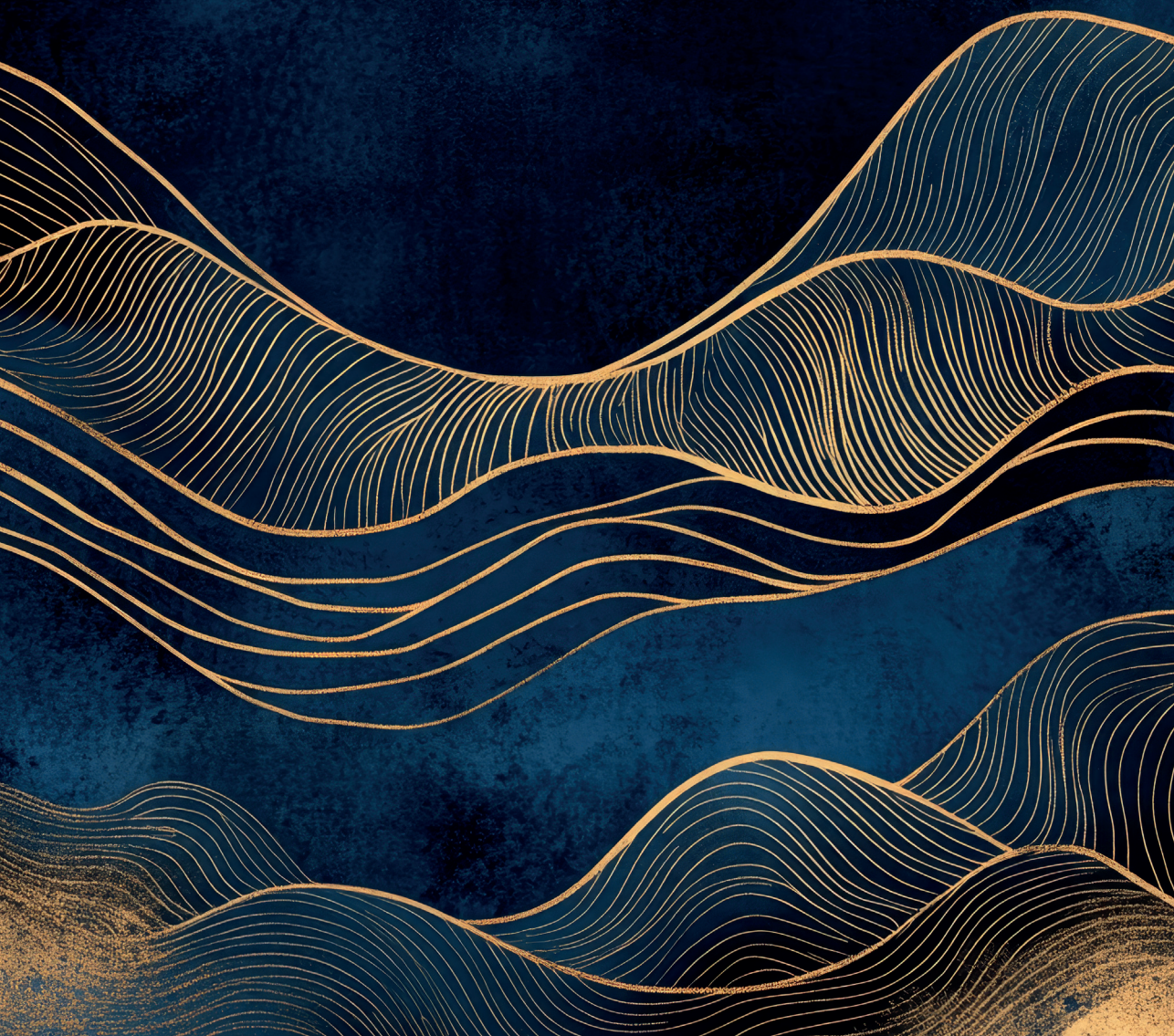
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11 List of publications

First author presentations at
international conferences

Acknowledgments

Curriculum Vitae



11.1 List of publications

Schmitz-Abecassis B, Vinogradov E, Wijnen JP, van Harten T, Wiegers EC, Hoogduin H, van Osch MJP, Ercan E. The use of variable delay multipulse chemical exchange saturation transfer for separately assessing different CEST pools in the human brain at 7T. *Magn Reson Med*. 2022;87(2):872-883. doi:10.1002/mrm.29005

Schmitz-Abecassis B, Dirven L, Jiang J, Keller JA, Croese RJL, van Dorth D, Ghaznawi R, Kant IMJ, Taphoorn MJB, van Osch MJP, Koekkoek JAF, de Bresser J. MRI phenotypes of glioblastomas early after treatment are suggestive of overall patient survival. *Neurooncol Adv*. 2023;5(October):1-11. doi:10.1093/noajnl/vdad133

Hangel G, **Schmitz-Abecassis B**, Sollmann N, Pinto J, Arzanforoosh F, Barkhof F, Booth T, Calvo-Imirizaldu M, Cassia G, Chmelik M, Clement P, Ercan E, Fernández-Seara MA, Furtner J, Fuster-Garcia E, Grech-Sollars M, Tugay Guven N, Hale Hatay G, Karami G, Keil VC, Kim M, Koekkoek JA, Kuhran S, Mancini L, Nechifor RE, Özcan A, Ozturk-Isik E, Piskin S, Schmainda KM, Svensson SF, Tseng CH, Unnikrishnan S, Vos F, Warnert E, Zhao MY, Jancalek R, Nunes T, Hirschler L, Smits M, Petr J, Emblem KY. Advanced MR Techniques for Preoperative Glioma Characterization: Part 2. *Journal of Magnetic Resonance Imaging*. Published online 2023. doi:10.1002/jmri.28663 – Only part of this publication is included in the thesis, more specifically the section on Chemical Exchange Saturation Transfer (CEST)

Hirschler L, Sollmann N, **Schmitz-Abecassis B**, Pinto J, Arzanforoosh F, Barkhof F, Booth T, Calvo-Imirizaldu M, Cassia G, Chmelik M, Clement P, Ercan E, Fernández-Seara MA, Furtner J, Guster-Garcia E, Grech-Sollars M, Tugay Guven N, Hale Hatay G, Karami G, Keil VC, Kim M, Koekkoek JAF, Kukran S, Mancini L, Nechifor RE, Özcan A, Ozturk-Isik E. Advanced MR Techniques for Preoperative Glioma Characterization: Part 1. *Journal of Magnetic Resonance Imaging*. Published online 2023:1-21. doi:10.1002/jmri.28662

van Dorth D, Jiang FY, **Schmitz-Abecassis B**, et al. Influence of arterial transit time delays on the differentiation between tumor progression and pseudoprogession in glioblastoma by arterial spin labeling magnetic resonance imaging. *NMR Biomed*. 2024;37(9):1-11. doi:10.1002/nbm.5166

van Dorth D, Croese RJL, 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 pseudoprogession in glioblastoma and its use in clinical practice. *Neuro-Oncology Practice*. 2024;(October):1-10.

Keller JA, Sigurdsson S, **Schmitz Abecassis B**, Kant IMJ, van Buchem MA, Launer LJ, van Osch MJP, Gudnason V, de Bresser J. Identification of Distinct Brain MRI Phenotypes and Their Association With Long-Term Dementia Risk in Community-Dwelling Older Adults. *Neurology*. 2024;102(7):e209176. doi:10.1212/WNL.0000000000209176

Schmitz-Abecassis B, Najac C, Plugge J, van Osch MJP, Ercan E. Investigation of metabolite correlates of CEST in the human brain at 7 T. *NMR Biomed*. 2024;37(5):1-13. doi:10.1002/nbm.5104

Schmitz-Abecassis B, Cornelissen I, Jacobs R, Kuhn-Keller JA, Dirven L, Taphoorn M, van Osch MJP, Koekkoek JA, de Bresser J. Extension of T2 Hyperintense Areas in Patients With a Glioma : A Comparison Between High-Quality 7 T MRI and Clinical Scans. *NMR Biomed*. Published online 2025:1-10. doi:10.1002/nbm.5316

Schmitz-Abecassis B, de Bresser J, Dirven L, Taphoorn MJB, van Osch MJP, Koekkoek JAF, Ercan E. Insights into CEST contrast at 2 ppm in enhancing and non-enhancing lesions from glioma patients scanned at 7T. 2025. *Submitted to NMR in Biomedicine*

11.2 First author presentations at international conferences

Schmitz-Abecassis B, Sakai K, Toyotsuji T, Ota Y, Yamada K. Experience counts! Comparisons of ROI placement strategies for radiomics analysis of gliomas. Poster presentation. 29th Annual Meeting of the International Society for Magnetic Resonance in Medicine, 2020, Online.

Schmitz-Abecassis B, Vinogradov E, Wijnen JP, Hoogduin H, van Osch MJP, Ercan, Ece. Investigating variable delay multi-pulse chemical exchange saturation transfer (VDMP-CEST) effects from phantom and in vivo human brain at 7T. Poster presentation. 12th Annual Meeting of the International Society for Magnetic Resonance in Medicine Benelux chapter, 2020, Arnhem, the Netherlands.

Schmitz-Abecassis B, Vinogradov E, Wijnen JP, van Harten TW, Wiegers E, Hoogduin H, van Osch MJP, Ercan, Ece. Magnetization transfer (MT) removed Variable Delay Multi-Pulse Chemical Exchange Saturation Transfer (VDMP-CEST) imaging of the human brain at 7T. Poster presentation. 37th Annual Meeting of the European Society for Magnetic Resonance in Medicine and Biology, 2020, Online.

Schmitz-Abecassis B, Vinogradov E, Wijnen JP, van Harten TW, Wiegers E, Hoogduin H, van Osch MJP, Ercan, Ece. Magnetization transfer (MT) removed Variable Delay Multi-Pulse Chemical Exchange Saturation Transfer (VDMP-CEST) imaging of the human brain at 7T. Oral presentation. CEST 2020 meeting, 2020, Online.

Schmitz-Abecassis B, Vinogradov E, Wijnen JP, van Harten TW, Wiegers E, Hoogduin H, van Osch MJP, Ercan, Ece. MTC removed and exchange rate differentiated CEST using Variable Delay Multi-Pulse in the human brain at 7T. Poster presentation. 13th Annual Meeting of the International Society for Magnetic Resonance in Medicine Benelux chapter, 2021, Online.

Schmitz-Abecassis B, Vinogradov E, Wijnen JP, van Harten TW, Wiegers E, Hoogduin H, van Osch MJP, Ercan, Ece. Variable Delay Multi-Pulse CEST to evaluate MTC removed CEST pools in the human brain at 7T. Poster presentation. 30th Annual Meeting of the International Society for Magnetic Resonance in Medicine, 2021, Online.

Schmitz-Abecassis B, van Osch MJP, Dirven L, Taphoorn MJB, Koekkoek JAF, de Bresser J. T2 hyperintense regions on MRI in gliomas: a comparison between routine clinical MRI and 7T MRI. Poster presentation, 16th Annual meeting of the European Association of Neuro-Oncology, 2021, Online.

Schmitz-Abecassis B, Koekkoek JAF, de Bresser J, Dirven L, Taphoorn MJB, van Osch MJP, Ercan E. Preliminary investigation of APT- and Glutamate-weighted CEST at 7T for gadolinium-free imaging of high-grade gliomas. Oral presentation. 38th annual meeting of the European Society of Magnetic Resonance in Medicine and Biology, 2021, Online.

Schmitz-Abecassis B, Najac C, de Bresser J, Dirven L, Taphoorn MJB, van Osch MJP, Koekkoek JAF, Ercan E. A preliminary investigation into the contribution of Amines to the CEST contrast at 2 ppm and 3 ppm in glioblastomas at 7T. Poster presentation. 14th Annual Meeting of the International Society for Magnetic Resonance in Medicine Benelux chapter, 2022, Maastricht, the Netherlands.

Schmitz-Abecassis B, Najac C, de Bresser J, Dirven L, Taphoorn MJB, van Osch MJP, Koekkoek JAF, Ercan E. A preliminary investigation into the contribution of Amines to the CEST contrast at 2 ppm and 3 ppm in glioblastomas at 7T. Poster presentation. 31st Annual Meeting of the International Society for Magnetic Resonance in Medicine, 2022, London, United Kingdom.

Schmitz-Abecassis B, Ercan E, de Bresser J, Dirven L, Taphoorn MJB, van Osch MJP, Koekkoek JAF. Amine CEST contrast in gliomas to measure metabolic treatment effect at 7T. Poster presentation. 17th Annual meeting of the European Association of Neuro-Oncology, 2022, Vienna, Austria.

Schmitz-Abecassis B, Najac C, Plugge J, van Osch MJP, Ercan E. Optimization and validation of Creatine- and Glutamate-CEST weighted imaging in the human brain at 7T. Poster presentation. 15th Annual Meeting of the International Society for Magnetic Resonance in Medicine Benelux chapter, 2023, Brussels, Belgium.

Schmitz-Abecassis B, Dirven L, Jiang J, Keller JA, Croese RJJ, van Dorth D, Kant IMJ, Taphoorn MJB, van Osch MJP, Koekkoek JAF, de Bresser B. Brain MRI phenotypes of glioblastomas are suggestive of overall patient survival. Poster presentation. 32nd Annual Meeting of the International Society for Magnetic Resonance in Medicine, 2023, Toronto, Canada.

Schmitz-Abecassis B, Najac C, Plugge J, van Osch MJP, Ercan E. Optimization and validation of metabolite weighted CEST contrast at 7T. Poster presentation. 32nd Annual Meeting of the International Society for Magnetic Resonance in Medicine, 2023, Toronto, Canada.

Schmitz-Abecassis B, Dirven L, Jiang J, Keller JA, Croese RJJ, van Dorth D, Kant IMJ, Taphoorn MJB, van Osch MJP, Koekkoek JAF, de Bresser B. Brain MRI phenotypes of glioblastomas early after treatment are suggestive of overall patient survival. Poster presentation. 18th Annual meeting of the European Association of Neuro-Oncology, 2023, Rotterdam, the Netherlands.

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11.4 Curriculum Vitae

Bárbara Schmitz Abecassis was born in Lisbon, Portugal, on the 20th of April 1995. She attended Escola Secundária de Cascais for secondary school, following the Sciences and Technology curriculum, and graduated in 2013. That same year, she moved to Maastricht, the Netherlands, to pursue a bachelor's degree at the Maastricht Science Programme, graduating in 2016 with a concentration in human biology and neuroscience.

After a gap year, Bárbara followed a master's in Biomedical Sciences with a focus on Imaging Techniques. In her second year she participated in a double-degree program at Kyoto Prefectural University of Medicine, living in Kyoto, Japan, and interning at the university hospital's Department of Radiology under the supervision of Dr. Koji Sakai and Dr. Kei Yamada.

In September 2019, she began her PhD under the supervision of Dr. Ir. Matthias J. P. van Osch, Dr. Johan A.F. Koekkoek, and Dr. Martin J.B. Taphoorn, researching advanced imaging of gliomas. She also collaborated with Dr. Ir. Ece Ercan on optimizing and implementing CEST imaging.

During her PhD, her passion for sports, balanced nutrition and a healthy lifestyle grew, dedicating significant time to sports, in particular running. Bárbara has since decided to switch careers and recently started studying to become a dietitian, with the goal to combine it with scientific research.

