



## Nicolai Maldaner

### **Kontakt**

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### **Bereiche**

Neurochirurgie

## Publikationen (44)

Haider G, Shah V, Johnstone T, Maldaner N, Stienen M, Veeravagu A. Accuracy of predicted postoperative segmental lumbar lordosis in spinal fusion using an intraoperative robotic planning and guidance system. *J Neurosurg Sci* 2023

Ziga M, Sosnova M, Zeitlberger A, Regli L, Bozinov O, Weyerbrock A, Ratliff J, Stienen M, Maldaner N. Objective outcome measures may demonstrate continued change in functional recovery in patients with ceiling effects of subjective patient-reported outcome measures after surgery for lumbar degenerative disorders. *Spine J* 2023

El-Garci A, Zindel-Geisseler O, Dannecker N, Rothacher Y, Schlosser L, Zeitlberger A, Velz J, Sebök M, Eggenberger N, May A, Bijlenga P, Guerra-Lopez U, Maduri R, Beaud V, Starnoni D, Chiappini A, Rossi S, Robert T, Bonasia S, Goldberg J, Fung C, Bervini D, Gutbrod K, Maldaner N, Früh S, Schwind M, Bozinov O, Neidert M, Brugger P, Keller E, Germans M, Regli L, Hostettler I, Stienen M, MoCA-DCI study group. Successful weaning versus permanent cerebrospinal fluid diversion after aneurysmal subarachnoid hemorrhage: post hoc analysis of a Swiss multicenter study. *Neurosurg Focus* 2023; 54:E3.

Roethlisberger M, Aghlmandi S, Rychen J, Chiappini A, Zumofen D, Bawarjan S, Stienen M, Fung C, D'Alonzo D, Maldaner N, Steinsiepe V, Corniola M, Goldberg J, Cianfoni A, Robert T, Maduri R, Saliou G, Starnoni D, Weber J, Seule M, Gralla J, Bervini D, Kulcsar Z, Burkhardt J, Bozinov O, Remonda L, Marbacher S, Lovblad K, Psychogios M, Bucher H, Mariani L, Bijlenga P, Blackham K, Guzman R, Swiss SOS group. Impact of Very Small Aneurysm Size and Anterior Communicating Segment Location on Outcome after Aneurysmal Subarachnoid Hemorrhage. *Neurosurgery* 2022; 92:370-381.

Maldaner N, Visser V, Hostettler I, Bijlenga P, Haemmerli J, Roethlisberger M, Guzman R, Daniel R, Giammattei L, Stienen M, Regli L, Verbaan D, Post R, Germans M. External Validation of the HATCH (Hemorrhage, Age, Treatment, Clinical State, Hydrocephalus) Score for Prediction of Functional Outcome After Subarachnoid Hemorrhage. *Neurosurgery* 2022; 91:906-912.

Voglis S, Stienen M, Weyerbrock A, Bellut D, Regli L, Bozinov O, Sosnova M, Zeitlberger A, Ziga M, Maldaner N. Smartphone-based real-life activity data for physical performance outcome in comparison to conventional subjective and objective outcome measures after degenerative lumbar spine surgery. *Brain and Spine* 2022

Stienen M, Germans M, Zindel-Geisseler O, Dannecker N, Rothacher Y, Schlosser L, Velz J, Sebök M, Eggenberger N, May A, Haemmerli J, Bijlenga P, Schaller K, Guerra-Lopez U, Maduri R, Beaud V, Al-Taha K, Daniel R, Chiappini A, Rossi S, Robert T, Bonasia S, Goldberg J, Fung C, Bervini D, Maradan-Gachet M, Gutbrod K, Maldaner N, Neidert M, Früh S, Schwind M, Bozinov O, Brugger P, Keller E, Marr A, Roux S, Regli L, MoCA-DCI study group, MoCA-DCI Study Group Contributors. Longitudinal neuropsychological assessment after aneurysmal subarachnoid hemorrhage and its relationship with delayed cerebral ischemia: a prospective Swiss multicenter study. *J Neurosurg* 2022; 137:1742-1750.

Voglis S, Ziga M, Zeitlberger A, Sosnova M, Bozinov O, Regli L, Bellut D, Weyerbrock A, Stienen M, Maldaner N. Smartphone-based real-life activity data for physical performance outcome in comparison to conventional subjective and objective outcome measures after degenerative lumbar spine surgery. *Brain Spine* 2022; 2:100881.

Staatjes V, Stumpo V, Ricciardi L, Maldaner N, Eversdijk H, Vieli M, Ciobanu-Caraus O, Raco A, Miscusi M, Perna A, Proietti L, Lofrese G, Dughiero M, Cultrera F, Nicassio N, An S, Ha Y, Amelot A, Alcobendas I, Viñuela-Prieto J, Gandía-González M, Girod P, Lener S, Kögl N, Abramovic A, Safa N, Laux C, Farshad M, O'Riordan D, Loibl M, Mannion A, Scerrati A, Molligaj G, Tessitore E, Schröder M, Vandertop W, Stienen M, Regli L, Serra C. FUSE-ML: development and external validation of a clinical prediction model for mid-term outcomes after lumbar spinal fusion for degenerative disease. *Eur Spine J* 2022; 31:2629-2638.

Maldaner N, Sosnova M, Ziga M, Zeitlberger A, Bozinov O, Gautschi O, Weyerbrock A, Regli L, Stienen M. External Validation of the Minimum Clinically Important Difference in the Timed-up-and-go Test After Surgery for Lumbar Degenerative Disc Disease. *Spine (Phila Pa 1976)* 2022; 47:337–342.

Zeitlberger A, Sosnova M, Ziga M, Gautschi O, Regli L, Bozinov O, Weyerbrock A, Stienen M, Maldaner N. Distance to first symptoms measured by the 6-min walking test differentiates between treatment success and failure in patients with degenerative lumbar disorders. *Eur Spine J* 2022; 31:596–603.

Maldaner N, Sosnova M, Zeitlberger A, Ziga M, Gautschi O, Regli L, Bozinov O, Weyerbrock A, Stienen M. Responsiveness of the self-measured 6-minute walking test and the Timed Up and Go test in patients with degenerative lumbar disorders. *J Neurosurg Spine* 2021

Zeitlberger A, Sosnova M, Ziga M, Regli L, Bozinov O, Weyerbrock A, Stienen M, Maldaner N. Assessment of the Minimum Clinically Important Difference in the Smartphone-Based 6-Minute Walking Test after Surgery for Lumbar Degenerative Disc Disease. *Spine (Phila Pa 1976)* 2021

Stienen M, Maldaner N, Sosnova M, Zeitlberger A, Ziga M, Weyerbrock A, Bozinov O, Gautschi O. External Validation of the Timed Up and Go Test as Measure of Objective Functional Impairment in Patients With Lumbar Degenerative Disc Disease. *Neurosurgery* 2021; 88:E142–E149.

Maldaner N, Burkhardt J, Chiappini A, Robert T, Schatlo B, Schmid J, Maduri R, Staartjes V, Seule M, Weyerbrock A, Serra C, Stienen M, Bozinov O, Daniel R, Fandino J, Marbacher S, Zeitlberger A, Sosnova M, Goldberg J, Fung C, Bervini D, May A, Bijlenga P, Schaller K, Roethlisberger M, Rychen J, Zumofen D, D'Alonzo D, Regli L. Development of a Complication- and Treatment-Aware Prediction Model for Favorable Functional Outcome in Aneurysmal Subarachnoid Hemorrhage Based on Machine Learning. *Neurosurgery* 2021; 88:E150–E157.

Sosnova M, Zeitlberger A, Ziga M, Gautschi O, Regli L, Weyerbrock A, Bozinov O, Stienen M, Maldaner N. Patients undergoing surgery for lumbar degenerative spinal disorders favor smartphone-based objective self-assessment over paper-based patient-reported outcome measures. *Spine J* 2020

Schaller K, Finkenstädt S, Dan-Ura H, Ferrari A, Bernays R, Eisenring C, Maduri R, Mostaguir K, Kulcsar Z, Maldaner N, Woernle C, Starnoni D, Z'Graggen W, Gasche Y, Sarrafzadeh A, Jakob S, Bijlenga P, Keller E, Raabe A, Beck J, Guzman R, Mariani L, Landolt H, Hildebrandt G, Levivier M, Regli L, Baumann F, Corniola M, Gralla J, Diepers M, Nevzati E, D Alonzo D, Reinert M, Marbacher S, Bervini D, Burkhardt J, Daniel R, Zumofen D, Smoll N, Fandino J, Fathi A, Stienen M, Fung C, Ahlborn P, Mendes Pereira V, Roethlisberger M, Goldberg J, Schöni D, Rohde V, Robert T, Sailer M, Perren F, Venier A, Woernle K, Weyerbrock A, Remonda L, Kerkeni H, Seule M, Schatlo B. Incidence and Outcome of Aneurysmal Subarachnoid Hemorrhage: The Swiss Study on Subarachnoid Hemorrhage (Swiss SOS). *Stroke* 2020; 52:344–347.

Maldaner N, Sosnova M, Zeitlberger A, Ziga M, Gautschi O, Regli L, Weyerbrock A, Stienen M, International 6WT Study Group. Evaluation of the 6-minute walking test as a smartphone app-based self-measurement of objective functional impairment in patients with lumbar degenerative disc disease. *J Neurosurg Spine* 2020:1–10.

Tosic L, Gautschi O, Regli L, Desai A, Sayadi J, Gandía-González M, Quddusi A, Eversdijk H, Gadraj P, Staartjes V, Zeitlberger A, Sosnova M, Maldaner N, Goldberger E, Stienen M. Normative data of a smartphone app-based 6-minute walking test, test-retest reliability, and content validity with patient-reported outcome measures. *J Neurosurg Spine* 2020:1–10.

Sosnova M, Zeitlberger A, Ziga M, Gautschi O, Weyerbrock A, Stienen M, Maldaner N. Longitudinal smartphone-based self-assessment of objective functional impairment in patients undergoing surgery for lumbar degenerative disc disease: initial experience. *Acta Neurochir (Wien)* 2020; 162:2061–2068.

Zeitberger A, Sosnova M, Ziga M, Steinsiepe V, Gautschi O, Stienen M, Maldaner N. Smartphone-Based Self-Assessment of Objective Functional Impairment (6-Minute Walking Test) in Patients Undergoing Epidural Steroid Injection. *Neurospine* 2020; 17:136-142.

Stienen M, Maldaner N, Sosnova M, Joswig H, Corniola M, Regli L, Hildebrandt G, Schaller K, Gautschi O. Lower Extremity Motor Deficits Are Underappreciated in Patient-Reported Outcome Measures: Added Value of Objective Outcome Measures. *Neurospine* 2020; 17:270-280.

Maldaner N, Stienen M. Subjective and Objective Measures of Symptoms, Function, and Outcome in Patients With Degenerative Spine Disease. *Arthritis Care Res (Hoboken)* 2020; 72 Suppl 10:183-199.

Maldaner N, Tomkins-Lane C, Desai A, Zygorakis C, Weyerbrock A, Gautschi O, Stienen M. Digital transformation in spine research and outcome assessment. *Spine J* 2020; 20:310-311.

Maldaner N, Desai A, Gautschi O, Regli L, Ratliff J, Park J, Stienen M. Improving the Patient-Physician Relationship in the Digital Era - Transformation From Subjective Questionnaires Into Objective Real-Time and Patient-Specific Data Reporting Tools. *Neurospine* 2019; 16:712-714.

Maldaner N, Maduri R, Daniel R, Burkhardt J, Chiappini A, Robert T, Schatlo B, Seule M, Weyerbrock A, Regli L, Stienen M, Fandino J, Marbacher S, Steinsiepe V, Goldberg J, Fung C, Bervini D, May A, Bijlenga P, Schaller K, Roethlisberger M, Zumofen D, D'Alonzo D, Swiss SOS study group. Patterns of care for ruptured aneurysms of the middle cerebral artery: analysis of a Swiss national database (Swiss SOS). *J Neurosurg* 2019:1-10.

Stienen M, Regli L, Park J, Zygorakis C, Desai A, Veeravagu A, Ho A, Sosnova M, Maldaner N, Staartjes V, Gautschi O, Ratliff J. Reliability of the 6-minute walking test smartphone application. *J Neurosurg Spine* 2019:1-8.

Stienen M, Brugger P, Keller E, Smoll N, Schlosser L, Rothacher Y, Dannecker N, Sebök M, Maldaner N, Velz J, Geisseler O, Regli L. Influence of the Intensive Care Unit Environment on the Reliability of the Montreal Cognitive Assessment. *Front Neurol* 2019; 10:734.

Starnoni D, Marbacher S, D'Alonzo D, Remonda L, Machi P, Gralla J, Bijlenga P, Saliou G, Ballabeni P, Levivier M, Swiss SOS group, Messerer M, Blackham K, Roethlisberger M, Maduri R, Al Taha K, Bervini D, Zumofen D, Stienen M, Schatlo B, Fung C, Robert T, Seule M, Burkhardt J, Maldaner N, Daniel R. Correction to: Ruptured PICA aneurysms: presentation and treatment outcomes compared to other posterior circulation aneurysms. A Swiss SOS study. *Acta Neurochir (Wien)* 2019; 161:1335-1336.

Roethlisberger M, Achermann R, Bawarjan S, Stienen M, Fung C, D'Alonzo D, Maldaner N, Ferrari A, Corniola M, Schöni D, Goldberg J, Valsecchi D, Robert T, Maduri R, Seule M, Burkhardt J, Marbacher S, Bijlenga P, Blackham K, Bucher H, Mariani L, Guzman R, Zumofen D, Swiss SOS group. Impact of Aneurysm Multiplicity on Treatment and Outcome After Aneurysmal Subarachnoid Hemorrhage. *Neurosurgery* 2019; 84:E334-E344.

Maldaner N, Sosnova M, Sarnthein J, Bozinov O, Regli L, Stienen M. Predicting Functional Impairment in patients with chronic subdural hematoma treated with burr hole Trepanation-The FIT-score. *Clin Neurol Neurosurg* 2019; 182:142-147.

Starnoni D, Marbacher S, D'Alonzo D, Remonda L, Machi P, Gralla J, Bijlenga P, Saliou G, Ballabeni P, Levivier M, Messerer M, Swiss SOS group, Blackham K, Röthlisberger M, Maduri R, Al Taha K, Bervini D, Zumofen D, Stienen M, Schatlo B, Fung C, Robert T, Seule M, Burkhardt J, Maldaner N, Daniel R. Ruptured PICA aneurysms: presentation and treatment outcomes compared to other posterior circulation aneurysms. A Swiss SOS study. *Acta Neurochir (Wien)* 2019; 161:1325-1334.

Maduri R, Marbacher S, D'Alonzo D, Remonda L, Machi P, Gralla J, Bijlenga P, Saliou G, Ballabeni P, Levivier M, Messerer M, Daniel R, Blackham K, Röthlisberger M, Starnoni D, Rocca A, Bervini D, Zumofen D, Stienen M, Schatlo B, Fung C, Robert T, Seule M, Burkhardt J, Maldaner N, Swiss SOS group. Correction to: Ruptured posterior circulation aneurysms: epidemiology, patterns of care, and outcomes from the Swiss SOS national registry. *Acta Neurochir (Wien)* 2019; 161:781.

Stienen M, Ratliff J, Regli L, Bellut D, Gautschi O, Desai A, Veeravagu A, Maldaner N, Staartjes V, Ho A, Park J. Objective measures of functional impairment for degenerative diseases of the lumbar spine: a systematic review of the literature. *Spine J* 2019; 19:1276-1293.

Maduri R, Marbacher S, D'Alonzo D, Remonda L, Machi P, Gralla J, Bijlenga P, Saliou G, Ballabeni P, Levivier M, Messerer M, Daniel R, Blackham K, Röthlisberger M, Starnoni D, Rocca A, Bervini D, Zumofen D, Stienen M, Schatlo B, Fung C, Robert T, Seule M, Burkhardt J, Maldaner N, Swiss SOS group. Ruptured posterior circulation aneurysms: epidemiology, patterns of care, and outcomes from the Swiss SOS national registry. *Acta Neurochir (Wien)* 2019; 161:769-779.

Stienen M, Schaller K, Weyerbrock A, Regli L, Prömmel P, Bellut D, Corniola M, Joswig H, Maldaner N, Gautschi O. Objective functional assessment using the "Timed Up and Go" test in patients with lumbar spinal stenosis. *Neurosurg Focus* 2019; 46:E4.

Neidert M, Maldaner N, Stienen M, Roethlisberger M, Zumofen D, D'Alonzo D, Marbacher S, Maduri R, Hostettler I, Schatlo B, Schneider M, Seule M, Schöni D, Goldberg J, Fung C, Arrighi M, Valsecchi D, Bijlenga P, Schaller K, Bozinov O, Regli L, Burkhardt J, Swiss SOS study group. The Barrow Neurological Institute Grading Scale as a Predictor for Delayed Cerebral Ischemia and Outcome After Aneurysmal Subarachnoid Hemorrhage: Data From a Nationwide Patient Registry (Swiss SOS). *Neurosurgery* 2018; 83:1286-1293.

Zumofen D, Roethlisberger M, Achermann R, Bawarjan S, Stienen M, Fung C, D'Alonzo D, Maldaner N, Ferrari A, Corniola M, Schoeni D, Goldberg J, Valsecchi D, Robert T, Maduri R, Seule M, Burkhardt J, Marbacher S, Bijlenga P, Blackham K, Bucher H, Mariani L, Guzman R, Swiss SOS study group. Factors associated with clinical and radiological status on admission in patients with aneurysmal subarachnoid hemorrhage. *Neurosurg Rev* 2018; 41:1059-1069.

Stienen M, Germans M, Burkhardt J, Neidert M, Fung C, Bervini D, Zumofen D, Röthlisberger M, Marbacher S, Maduri R, Robert T, Seule M, Bijlenga P, Schaller K, Fandino J, Smoll N, Maldaner N, Finkenstädt S, Esposito G, Schatlo B, Keller E, Bozinov O, Regli L, Swiss SOS study group. Predictors of In-Hospital Death After Aneurysmal Subarachnoid Hemorrhage: Analysis of a Nationwide Database (Swiss SOS [Swiss Study on Aneurysmal Subarachnoid Hemorrhage]). *Stroke* 2018; 49:333-340.

Maldaner N, Sosnova M, Sarnthein J, Bozinov O, Regli L, Stienen M. Burr hole trepanation for chronic subdural hematomas: is surgical education safe?. *Acta Neurochir (Wien)* 2018; 160:901-911.

Roethlisberger M, Achermann R, Bawarjan S, Stienen M, Fung C, D'Alonzo D, Maldaner N, Ferrari A, Corniola M, Schöni D, Valsecchi D, Maduri R, Seule M, Burkhardt J, Marbacher S, Bijlenga P, Blackham K, Bucher H, Mariani L, Guzman R, Zumofen D, Swiss SOS study group. Predictors of Occurrence and Anatomic Distribution of Multiple Aneurysms in Patients with Aneurysmal Subarachnoid Hemorrhage. *World Neurosurg* 2017; 111:e199-e205.

Maldaner N, Bozinov O, Neidert M, Esposito G, Serra C, Daniel R, Maduri R, Marbacher S, D'Alonzo D, Zumofen D, Croci D, Bijlenga P, Bervini D, Goldberg J, Stienen M, Burkhardt J, Regli L. Decision-making and neurosurgeons' agreement in the management of aneurysmal subarachnoid haemorrhage based on computed tomography angiography. *Acta Neurochir (Wien)* 2017; 160:253-260.

Maldaner N, Sarnthein J, Bozinov O, Regli L, Neidert M. Neurosurgery in Octogenarians: A Prospective Study of Perioperative Morbidity, Mortality, and Complications in Elderly Patients. *World Neurosurg* 2017; 110:e287-e295.

**Maldaner N, Regli L, Bozinov O, Neidert M, Esposito G, Serra C, Daniel R, Maduri R, Marbacher S, Dalonzo D, Zumofen D, Croci D, Bijlenga P, Stienen M, Burkhardt J. Interrater Agreement in the Radiologic Characterization of Ruptured Intracranial Aneurysms Based on Computed Tomography Angiography. World Neurosurg 2017; 103:876-882.e1.**

## Projekte (2)

**Six-Minute Walking Test (6WT) as a measure of objective functional impairment in lumbar spinal stenosis. Validation and relationship to subjective measure of pain, function and quality of life**

*Klinische Forschung - 01.12.2019 - 01.05.2022*

*Automatisch geschlossen*

**Development of a Dynamic Outcome Prediction Model in Aneurysmal Subarachnoid Hemorrhage using Machine Learning**

*Klinische Forschung - 01.07.2019 - 01.07.2020*

*Automatisch geschlossen*

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