**MAGNON – Implementation and Contribution of Lublin Criteria and quantitative MRI-Analysis for daily clinical routine of MS Patients**

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**Background**: The revised Lublin criteria (Lublin et al. 2014) provide a detailed definition of individual patient status in secondary progressive multiple sclerosis (SPMS), where patients are assessed annually based on progression and activity (MRI and/or relapse). So far, the revised criteria were applied to SPMS patients only in a small number of studies (Perez et al. EP1344 ECTRIMS 2017). The same is true for quantitative and standardized MRI analyses, which are often implemented in clinical trials, but are not part of standard routine care in patient management, although projects like QUANTUM clearly showed a benefit of quantitative and standardized MRI analysis in routine care (Schippling et al. P508 ECTRIMS 2018).

**Objective**: MAGNON aims to evaluate if access to standardized quantification of MRI data and assessment of MS patients based on the Lublin criteria provides additional benefit for neurologists working in day-to-day MS patient management.

**Methods**: Approximately 3.600 MRI studies of patients with transitioning relapsing remitting MS (RRMS) or SPMS will be provided by 100 centers in Germany. Physicians are asked to categorize their patients according to the revised Lublin criteria. Standardized MRI data (3D T1 gradient-echo sequence and 2D/3D FLAIR) are analysed by means of a centralised automatic processing pipeline (Biometrica MS®, jung diagnostics GmbH). The analysis comprises a volumetric quantification of brain and thalamic volumes as well as T2 lesion volume and number. Percentage brain volume change is computed (using an optimized SIENA pipeline) when follow-up scans are available. The results are visualised and provided to the participating physicians as a report. The value of standardized MRI analysis and the impact on patient assessment, including potential changes in Lublin classification, will be evaluated.

**Results**: MAGNON will start in the first half of 2020 and design of MAGNON as well as first baseline data will be shown.

**Conclusion**: In the near future, an increasing implementation of Lublin criteria and quantitative MRI analysis in routine clinical practice is expected. Quantification of lesion volume as well as brain and thalamic atrophy on routine MRI may facilitate the individual assessment of disease activity and progression according to the Lublin criteria and provide additional information for individual patient management.

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