Questionnaire European Low Grade Glioma Network

Type of Hospital:

☐ academic ☐ communal ☐ private (including private practice)

What is the total amount of diffuse low-grade gliomas (dLGG) in your practice per year?

Country of practice:

Do you have a dedicated „LGG-program" in your practice?

☐ Yes ☐ No

When do you discuss a case in a dedicated interdisciplinary board (tumor-board)?

☐ Never ☐ Before every surgery ☐ After every surgery
☐ If adjuvant treatment is advocated

Which specialities are present in your interdisciplinary (tumor-) board?

☐ Neurosurgery ☐ Neurology (Neurooncologists) ☐ Medical Oncology
☐ Radiation Oncology ☐ Nuclear Medicine ☐ Neuroradiology
☐ Neuropathology

In your routine practice, do you use external imaging?

☐ No, we always scan our own protocol. ☐ Yes, if the imaging was done in a neuroradiology center (University Hospital) ☐ Yes, we use any recent MRI

What is contained in your standard imaging protocol?

☐ T1 with / without Gd-contrast ☐ T2 ☐ TIRM
☐ FLAIR ☐ 3D-Flair ☐ T2*
☐ Susceptibility weighted Imaging (SWI) ☐ Perfusion weighted Imaging (PWI) ☐ Diffusion weighted Imaging (DWI)
☐ ADC ☐ Perfusion ☐ single voxel 1H-spectroscopy
☐ multivoxel 1H-spectroscopy ☐ fMRT ☐ resting stare fMRT

Do you always use the identical MRI scanner for one patient during follow-up investigations?

☐ Yes ☐ No ☐ Mostly yes
☐ Mostly no

Do you always use a 3T scanner?

☐ Yes, always ☐ If available, we use a 3T scanner ☐ No, 1,5 T is acceptable

What is the standard imaging slice thickness for T1 imaging in LGG?

☐ <1.5 mm ☐ 1.6 - 3 mm ☐ 3 mm

What is the standard imaging slice thickness for T2 imaging in LGG?

☐ <1.5 mm ☐ 1.6 - 3 mm ☐ 3 mm

Do you obtain 1H spectroscopy of both hemispheres?

☐ Yes ☐ No

Do you perform amino acid PET in suspected low-grade glioma?

☐ Yes ☐ No

If the initial amino acid PET was negative, do you perform follow-up amino acid PET imaging?

☐ Yes ☐ No

For assessment of treatment response and progression you use?

☐ MRI only ☐ amino acid PET only (if initial PET was positive) ☐ always MRI + aaPET (if initial PET was positive)
☐ always MRI + aaPET (regardless of initial PET)

Questionnaire European Low Grade Glioma Network   [Fortsetzung]

How do you detect anaplastic transformation?

☐ T1 w/o contrast   ☐ Perfusion weighted imaging   ☐ 1H spectroscopy
☐ FET-PET   ☐ other

If other, please specify

> [blank box]

How do you rate the following combination of characteristics in your department: (1) a decrease of the area of non-enhancing lesion on T2 or FLAIR imaging between 25% - 50% compared with baseline; (2) no new lesions, no new T2 or FLAIR abnormalities apart from those consistent with radiation effect, and no new or increase enhancement; and (3) patients should be on a corticosteroid dose that should not be greater than the dose at time of baseline scan, and should be stable or improved clinically.

☐ Complete Response   ☐ Partial Response   ☐ Minor Response
☐ Stable Disease   ☐ Progression

Do you analyze DTI for 3D-fiber tracking in every patient?

☐ Yes   ☐ No

What software do you use for analysis of DTI?

> [blank box]

Which mathematical model do you use for analysis?

☐ Unknown

☐ Probabilistic approach (including the uncertainty of the estimation, which results in probability maps representing the likelihood of a voxel being part of a fiber and provides the multiple possible fiber directions emanating from each seed)

☐ Deterministic approach (Deterministic tractography aims to model the data and, in practical terms, can be thought of as generating/reconstructing one fiber from each seed)

☐ Atlas based

If you do fMRI, is it only for clinical answers or research?

☐ clinical only   ☐ research only   ☐ both clincal and research
☐ for didactic purpose

Which fMRI paradigms do you use routinely?

☐ motor paradigm (i.e. finger tapping)   ☐ somatosensory stimulation   ☐ speech - word generation / naming task
☐ speech - synonyms / odd one out   ☐ speech - semantic comparison ☐ other

If other, please specify

> [blank box]

Do you routinely analyze resting state fMRI?

☐ Yes   ☐ No

If you would have to choose between fMRI, navigated transcranial stimulation (nTMS) and direct cortical stimulation (DCS), what would you prefer?

☐ fMRT   ☐ nTMS   ☐ DCS

If you do navigated transcranial magnet stimulation (nTMS), is it only for clinical answers or research?

☐ clinical only   ☐ research only   ☐ both clinical and research

How does your decision on nTMS influence your daily practice?

☐ more awake surgery   ☐ more intraoperative monitoring   ☐ more resective surgery
☐ less resective surgery or biopsy ☐ less awake surgery   ☐ less intraoperative monitoring
☐ doesn't influence at all

Do you use the exact RANO criteria (van den Bent, Wefel et al. 2011) for LGG?

☐ always   ☐ mostly   ☐ almost never
☐ never

Do you always assess follow-up imaging by:

☐ volumetric analysis (segmentation)   ☐ volumetric analysis (approximation)   ☐ linear measurement in 3 axes of the MRI

☐ deformation of the lesions / changes in shape

Questionnaire European Low Grade Glioma Network   [Fortsetzung]

Who does the measurements?
☐ Neurosurgeon   ☐ Neurooncologist   ☐ Neuroradiologist
☐ All members of the team

Are measurements always done by the same investigator?
☐ Yes   ☐ No

What is your imaging interval in weeks in cases of diffuse low-grade glioma (without suspected transformation) with:
no remnant

[   ]

10ml tumor remnant

[   ]

11 - 15ml tumor remnant

[   ]

> 15ml remnant

[   ]

unresectable LGG

[   ]

Does this interval vary according to the growth rate?
☐ Yes   ☐ No

Do you perform longitudinal fMRI study (e.g. before and after surgery) to investigate neuroplasticity?
☐ Yes   ☐ No

Do you combine different methodologies to increase the reliability of functional imaging - as for example fMRI or TMS and DTI?
☐ Yes   ☐ No

Do you use a databank of all MRIs in DICOM format?
☐ Yes, on hospital PACS   ☐ Yes, on Harddrive   ☐ No

Do you use magnetoencephalography (MEG) in your center?
☐ for language mapping   ☐ for language lateralization   ☐ for motor mapping
☐ we have one but do not use it   ☐ we don't have a MEG

What is your opinion on MEG in general:
☐ we currently try to get one   ☐ I don't see any value for neuro-oncology   ☐ It is a crucial technique for clinical decision making
☐ It is nice to have but you don't really need it   ☐ It is clinically not relevant but scientifically interesting, even for neuro-oncology

Beyond clinical considerations, do you work with a research team involved in neuroimaging?
☐ Yes, Biostatisticians   ☐ Yes, Bioinformaticians   ☐ Yes, Physicists
☐ Yes, Mathematicians   ☐ No

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Bibliography
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Vogelbaum, D. R. Macdonald, D. A. Reardon, P. Y. Wen, S. M. Chang and A. H. Jacobs (2011). "Response assessment in neuro-oncology (a report of the RANO group): assessment of outcome in trials of diffuse low-grade gliomas." The Lancet Oncology 12(6): 583-593.