

BOLD fMRI Dictation Guidelines
American Society of Functional Neuroradiology
BOLD fMRI Standards and Practice Subcommittee
of the ASNR Clinical Practice Committee
March 3, 2011

Committee Members: Kirk M. Welker, M.D., Jeffrey R. Petrella, M.D., Scott H. Faro, M.D., Feroze B. Mohamed, Ph.D., Jay J. Pillai, M.D.

The following elements should be included as part of a complete and comprehensive report for a clinical BOLD fMRI preoperative surgical mapping exam. The specific order that these elements appear in the report may be modified to suit the individual practice.

Indication: Brief statement of the clinical situation and reason for obtaining the exam.

Patient handedness: Right, left or ambidextrous.

Technique and analysis methods: Brief statement of scan technique and analysis methods, e.g., “Multiple EPI-GRE time series were acquired and statistically analyzed using the general linear model.”

Patient Training: Brief statement attesting that the patient was trained in the fMRI tasks prior to scanning. This should state that the physician or neuroscientist performed the training if this was the case.

fMRI Tasks (Paradigms): Briefly describe each fMRI task employed.

Data Quality Analysis: Include information for each task, as applicable and available, to document fMRI data quality. Examples of such items include:

1. Head motion measurements
2. Accuracy rates and response times
3. Direct observations of patient task performance
4. Observations made using “real time” scanning software
5. Patient comments during post-scan interview regarding performance of covert tasks
6. Physiology data such as heart and respiratory rate
7. Magnetic susceptibility artifact assessment

Anatomic Imaging Findings: A standard report of MRI findings derived from anatomic imaging obtained at the time of the fMRI exam. Compare with earlier exams as applicable.

Other Functional Imaging Findings (if available):

Diffusion Tensor imaging: A summary of any concurrent diffusion tensor imaging obtained describing the relationship of pathology to white matter structures.

Perfusion and Cerebrovascular Reactivity Data: A summary of any concurrent perfusion imaging and/or cerebrovascular reactivity imaging (CO_2 or breath hold) and the implications this data has on potential sites of neurovascular uncoupling or magnetic susceptibility related BOLD “black-out” areas.

BOLD fMRI Findings: A summary of the clinically important fMRI task induced BOLD activations and their spatial relationship to pertinent pathology within the brain. Particular mention should be made of activations within one gyrus of the anatomic lesion.

Impression/Conclusion: Summarize the key findings of the exam.