

## QIBA fMRI Subcommittee Update

Wednesday, May 5, 2010

11 AM CT

### Call Summary

#### In attendance:

Cathy Elsinger, PhD (co-chair)

Joy Hirsch, PhD (co-chair)

Bradley Buchbinder, MD

Andrew Buckler, MS

Geoffrey Clarke, PhD

Ted DeYoe, PhD

Srinivasan Mukundan, Jr, MD, PhD

Jay J. Pillai, MD

James L. Reuss, PhD

James T. Voyvodic, PhD

Domenico Zaca, PhD

#### RSNA

Fiona Miller

Susan Anderson, MLS

Joe Koudelik

#### QIBA Annual Meeting, May 25-26, 2010 (Dr Elsinger)

- Dr Hirsch to present for committee
- RSNA staff to explore possibility of one-hour t-con during QIBA mtg so other ctte members could join discussion
- There will be no ctte call on May 19 due to proximity to QIBA meeting

#### Literature search

- American Academy of Neurology Classification of Evidence used by Technology and Therapeutics Assessment process distributed to ctte and posted on wiki
- Dr Faro will supply contact name for CPT and grid for classifying fMRI literature

#### Cross-representation of QIBA and DICOM Working Group

- Dr Tucker organizing effort related to QIBA fMRI/DICOM working group

#### QIBA fMRI Profile development (Drs Elsinger and DeYoe)

- Current draft and edits are posted on QIBA wiki:
- [http://qibawiki.rsna.org/index.php?title=FMRI\\_subctte](http://qibawiki.rsna.org/index.php?title=FMRI_subctte)
- The Intended Use section reflects primarily pre-surgical mapping/pre-treatment planning but includes diagnostics and other areas
- Dr DeYoe reviewed draft with revisions to Intended Use, Claims, Protocol and Compliance Checks
  - The primary 'read-outs' are brain maps (fMRI slice images overlaid on anatomy used by physicians in the clinic)
- Section 2A provides a general description and then moves to more quantitative focus
- Ctte input requested on range of values for typical use
  - Discussion of use of voxels (changeable size) vs. microliters; absolute units needed
  - Use of voxels will be preferable in some contexts
  - Consider addition of Units Conversion table and specification of min/max voxel size
- There is no fixed statistical criterion; Profile can note the variety of methods
  - Address in Compliance Checks section
- Decision to collect information from ctte members to determine variability and approaches to workflow for 'interpretation conference'; describe examination of data, application of thresholds, etc
- Ctte members are requested to provide a workflow form (based on Sections I-L in protocol section) to inform Profile Claims development
  - Additional information from surgeons on use of fMRI findings is welcome
  - RSNA staff to compile into a single document
  - Important to reflect how a surgeon would use best interpretation of data and acknowledgement that surgeon may use intraoperative mapping in addition to quantitative pre-surgical data
- Claim C was incorporated because it is an area often overlooked
  - Consider addition of quantitative measures and ranges with narrative description
  - Some reasonable accuracy is needed

- The important point of Claim D is 'risk probability'
  - Discussion on defining a tumor margin accurately; often done with a qualitative distance metric
  - Address false-negative risk and possibilities
  - Neurovascular uncoupling is important issue
  - State Claim clearly, indicate how measurements are to be taken, add caveats of where measurements may fail
- Material from fBIRN can be located in Section 4, Compliance Checks

**Next Steps:**

- Comments and changes to Draft Profile sections on wiki encouraged  
[http://qibawiki.rsna.org/index.php?title=FMRI\\_subctte](http://qibawiki.rsna.org/index.php?title=FMRI_subctte)
- Dr Elsinger will contact Dr Faro re contact name for CPT and grid for classifying fMRI literature
- Ctte members are requested to provide a workflow form (based on Sections I-L in Protocol section of draft Profile to inform Profile Claims development
  - Additional Information from surgeons on use of fMRI findings is welcome
  - RSNA staff to compile into a single document
- Dr Faro will supply contact name for CPT and grid for classifying fMRI literature
- There will be no ctte call on May 19 due to proximity to QIBA meeting
- RSNA staff to explore possibility of one-hour t-con during QIBA mtg so other ctte members could join discussion on May 25 at 1:30-2:30 pm CDT
- Next call: June TBD, 2010 at 11 am CDT