1. Date of scan:
2. Equipment Selection and Requirements:

a. Magnet Strength (Choose one):

1.5T  3T  4T  7T  Other, specify:

b. Coil (Choose one):

Single Coil  8-ch  16-ch  32-ch  Other, specify:

c. Name of the scanner manufacturer:

GE  Siemens  Philips  Toshiba  Other, specify:

d. Number of different MRI scanners used:

e. Scanner software or hardware updates during study performance:

1. Echo time: (ms)
2. Repetition time: (ms)
3. Flip angle: \_\_ o
4. Number of slices:
5. Slice thickness: (mm)
6. Slice orientation:  Transverse  Sagittal  Coronal  Other, specify:
7. Timing of imaging in relation to headache:  Ictal  Inter-ictal  Peri-ictal
   1. If ictal, pain intensity at time of recordings:
   2. If ictal, duration of time since onset of headache (include units):
   3. If inter-ictal or peri-ictal, duration of time since end of last headache (include units):
   4. If inter-ictal or peri-ictal, duration of time until start of next headache (include units):
8. Was visual analysis performed while blind to clinical data?  Yes  No  Unknown
9. Metabolite:  1H  31P  23Na  13C  Other, specify:
10. Type of MRS sequence used:  SV  2D-CSI  3D-CSI  3D MRS
11. Voxel volume [mL]:
12. Voxel location:  PCing  ACing  WM  Pons  Midbrain  Other, specify:
13. Shimming procedure:  Active  Global  Interactive  Local  3D  Other, specify:
14. Was unsuppressed spectrum acquired?  Yes  No
15. Metabolite quantification procedure: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
    1. Was phantom data acquired for reference?  Yes  No
    2. Quantification tool type:  LCModel  Tarquin  jMRUI  Other, specify:

## General Instructions

This CRF contains data that would be collected when an imaging study is performed to visualize both function and anatomy in the brain.

Headache or migraine specific elements/measures that are not captured on this form but are important to the imaging analysis should be collected on other study-specific source documentation (e.g., Headache Diary, Concomitant Medications).

Important note: All elements on this CRF are considered Supplemental and should only be collected if the research team considers them appropriate for their study.

## Specific Instructions

Please see the Data Dictionary for definitions for each of the data elements included in this CRF Module.

* Date of Scan – Record the date/time according to the ISO 8601, the International Standard for the representation of dates and times ([Click here for International Standard for Dates and Times](http://www.iso.org/iso/home.html)). The date/time should be recorded to the level of granularity known (e.g., year, year and month, complete date plus hours and minutes, etc.).
* Scanner type – No additional instructions
* Echo time – Record in ms
* Repetition time – Record in ms
* Flip angle – Record in degrees
* Number of slices – No additional instructions
* Slice thickness – Record in mm
* Timing of imaging in relation to headache – report the timing of imaging in relation the headache. The precise time windows for peri-ictal and inter-ictal vary with headache type. For episodic migraine, an interval of at least 72h from the last and before the next attack is generally accepted for “inter-ictal”.
* Slice orientation – No additional instructions
* Was visual analysis performed while blind to clinical data? – No additional instructions
* Metabolite – No additional instructions
* Type of MRS sequence used: No additional instructions
* Voxel volume – Record in mL
* Voxel location – No additional instructions
* Shimming procedure – No additional instructions
* Metabolite quantification procedure – No additional instructions
* Was phantom data acquired for reference? – Choose one
* Quantification tool type – Choose one
  + LCModel – Automatic quantification of in vivo proton MR spectra. <http://s-provencher.com/lcmodel.shtml>
  + Tarquin – An analysis tool for automatically determining the quantities of molecules present in NMR spectroscopic data. <http://tarquin.sourceforge.net/>
  + jMRUI – Software package for advanced time-domain analysis of magnetic resonance spectroscopy (MRS) and spectroscopic imaging (MRSI) data. <https://bio.tools/jmrui>