**MEETING MINUTES**

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| Meeting: | MRI/Imaging Leadership Call |
| Date and Time: | 14 May 2020 10:30am-11:30am PDT |
| Present: | Cenk Ayata, Joe Mandeville, Fahmeed Hyder, Basav Sanganahalli, Ryan Cabeen, Patrick Lyden, Jessica Lamb, Karisma Nagarkatti |

Agenda Items

1. Timelines
   1. Tentative Start-up: Mid-June subject to each University readiness to resume animal research. In order to meet this deadline, SPAN CC requests a number of items as listed below.
   2. Stage 1: First subject in currently planned for early September
2. Update from LONI
   1. Ryan tested data that Joe had sent, 7 out of 8 of the cases worked. There was some heterogeneity with the diffusion lesion signal. Although the automated pipeline failed, Ryan suspects that the lesion heterogeneity may be important.
   2. Dr. Lyden reminded the team that SPAN CC is very interested in supporting basic research questions. If, for example, lesion heterogeneity could reveal something important about the pathobiology of focal cerebral ischemia, SPAN can collect the data for the MRI working group.
   3. In addition, SPAN faces a translational task that requires data that can be modeled and assessed for group-level treatment effects.
   4. Ryan described two types of data will be collected: one is a mask of the lesion and the other is a confidence of that mask for the lesion. He clarified that these masks exist in 3-D space.
3. Data capture in REDCap database: SPAN needs to collect measurements i.e. volume of brain/volume of lesion/etc. focusing on 48hour and 30 day
   1. What data do you want us to store for future use?
   2. We need a few measurements for which statistics can be conducted. REDCap is a way of organizing data similar to excel spreadsheets. The images, both raw and processed, will be stored in the LONI IDA database. Output data from the automated analysis done by LONI will be recorded on a csv and uploaded into the REDCap database manually by the SPAN CC.
   3. Both the image repository and the data stored in the REDCap database should be seen as a research tool. Although the immediate translational goal of SPAN is to assess 6 interventions for their effect on ischemic lesion volume, in the end SPAN will have amassed the largest ever repository of serial MRI brain imaging in animals undergoing transient MCAo.
   4. To make the REDCap database most useful, each variable should be formatted like a data dictionary. For each variable, the SPAN CC requests:
      1. Unique variable name
      2. indicated data type (i.e. numeric or text).
      3. Length of the variable, e.g., number of digits if numeric, number of characters if text.
      4. Range of allowed values
      5. short text description of the variable
4. Dr. Ayata pointed out there will be 3 layers of data capture
   1. 1st line: Images/Raw Data – stored in the IDA account (includes imaging parameters/sequences/etc.)
   2. 2nd line of analysis, numbers pulled out of the images using segmentation (brain volume/lesion volume/etc.)
   3. 3rd layer: actual readout for decision making should have fewer read outs than the 2nd layer, e.g., total lesion volume (48 hours scans) or total compartment volumes (30 days). Interesting compartments might include cortex or white matter, as examples.
   4. MRI group agreed to discuss and send a list to the CC of data entries/metrics for the REDCap database
5. Publishing before the first milestone is released
   1. MRI group will internally decide who takes the lead on preparing a manuscript for publication
   2. This would be a methods paper because it pre-specifies the approach and the analysis.

Tasks:

1. MRI group to discuss and send a data dictionary to the CC of data entries/metrics for the REDCap database within the next 10 days.
2. MRI group to select a lead author who will coordinate the first draft of the paper. It was agreed that Ryan would serve as the corresponding author.