RE: Lyden Lab MRI scans 7/20-7/21 uploaded

From: **Patrick Lyden** | plyden@usc.edu   Friday, Jul 23, 3:16 PM

To: **Karisma A Nagarkatti** | nagarkat@usc.edu, **Padmesh Rajput** | prajput@usc.edu

Cc: **Jessica Lamb** | lambj@usc.edu, **Ryan Cabeen** | Ryan.Cabeen@loni.usc.edu

Thank you Karisma. For a lot of them, the species is listed as "human". Are these the mice?

Padmesh, the field "Series description" is not picking up the filename you sued. I wonder if there is a way to deal with this.

Ryan, can you let me know if one or two of the uploads will traverse the SPAN pipeline in their current format? Don't want to waste your time, but if they run, I would like to run them all. If not, then we have to wait. We may need to look at a few together to see what is what.

Thanks,

P

> From: **Karisma A Nagarkatti** | nagarkat@usc.edu   To: **Patrick Lyden** | plyden@usc.edu   Friday, Jul 23, 11:58 AM
>
> Hi Dr. Lyden and Padmesh,
>
> This email is to notify you that the MRI scans for surgeries conducted on 7/19 and 7/20 have been uploaded into IDA.
>
> Thanks,
> Karisma

From: **Padmesh Rajput** | prajput@usc.edu   Friday, Jul 23, 3:28 PM

To: **Patrick Lyden** | plyden@usc.edu

Cc: **Karisma A Nagarkatti** | nagarkat@usc.edu, **Jessica Lamb** | lambj@usc.edu, **Ryan Cabeen** | Ryan.Cabeen@loni.usc.edu

The screenshot I am attaching shows that it has all the information in the images

```
0010,0010  Patient's Name: Lyden_4223A
0010,0020  Patient ID: 1776
0010,0030  Patient's Birth Date: 20210720
0010,0040  Patient's Sex: M
0010,1010  Patient's Age: 0
0010,1030  Patient's Weight: 0.040kg
0010,2210  ---: QUADRUPED
0010,4000  Patient Comments:
0018,0024  Sequence Name: mouse_epiDWI_0516_z_vertread
0018,0050  Slice Thickness:  0.50
0018,0080  Repetition Time: 1000.000
0018,0081  Echo Time: 0.025
0018,0083  Number of Averages: 1
0018,0084  Imaging Frequency: 298.0307
0018,0087  Magnetic Field Strength: 7.000
0018,0088  Spacing Between Slices: 0.50
0018,0091  Echo Train Length: 1
0018,1000  Device Serial Number: 1042.17.1
0018,1020  Software Versions(s): UserInterfaces v4.0.2.32
0018,1030  Protocol Name: mouse_epiDWI_0516_z_vertread
0018,1060  Trigger Time: 0
0018,1149  Field of View Dimensions(s): 15.00\10.00\ 0.50
0018,1310  Acquisition Matrix: 128 0 0 128
```

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From: **Patrick Lyden** I plyden@usc.edu   Friday, Jul 23, 3:35 PM

To: **Padmesh Rajput** I prajput@usc.edu

Cc: **Karisma A Nagarkatti** I nagarkat@usc.edu, **Jessica Lamb** I lambj@usc.edu, **Ryan Cabeen** I Ryan.Cabeen@loni.usc.edu

Karisma, can you send to Padmesh the SPAN MRI SOP so he can see how to label the files before upload.

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```
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From: **Ryan Cabeen** | ryan.cabeen@loni.usc.edu   Friday, Jul 23, 3:53 PM

To: **Karisma A Nagarkatti** | nagarkat@usc.edu, **Padmesh Rajput** | prajput@usc.edu, **Patrick Lyden** | plyden@usc.edu

Cc: **Jessica Lamb** | lambj@usc.edu

I think they will require some tweaking to go through the pipeline. We'll have to manually rename to fit the expectations of the pipeline, and if we follow the naming conventions in the SOP, then later scans should run without having to rename.

I see two other potential issues in the DWI scan: one is that the DWI is shifted laterally relative to the T2 and FSE images. The image grids are aligned though, so I think this is probably due to the details of image reconstruction and not physical motion. Should be fixable, but I will need to see if there is a constant shift, or if we need to apply a more flexible registration step. The other issue is that the SNR of the DWI seems quite low compare to SPAN data. Not sure how this will effect the pipeline, but we can visually inspect the resulting ADC maps to see.

Ryan P. Cabeen, PhD
Chan Zuckerberg Imaging Scientist
Assistant Professor of Research Neurology
Laboratory of Neuro Imaging
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2025 Zonal Ave.
Los Angeles, CA 90033
Tel: (323) 44-BRAIN
Email: rcabeen@loni.usc.edu
Web: cabeen.io
www.ini.usc.edu

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