Data description for Head CT Motion Correction by Diffusion Model

**Part 1: Portable CT data (for training, simulation, testing, reader study)**

**Patient list summarization:** these spreadsheets might be used in the code.

Folder is “*/mnt/camca\_NAS/Portable\_CT\_data/Patient\_list*”

Fixed CTs used for simulation: “*/mnt/camca\_NAS/Portable\_CT\_data/Patient\_list/NEW\_CT\_concise\_collected\_fixed\_static\_edited.xlsx*”

Portable CTs used for reader study

“*/mnt/camca\_NAS/Portable\_CT\_data/Patient\_list/NEW\_CT\_concise\_collected\_portable\_motion\_w\_fixed\_CT\_info\_edited.xslx*” (corresponding fixed CT info included).

DICOM data: “*/mnt/camca\_NAS/Portable\_CT\_data/IRB2022P002233\_collected\_202404*”

**Nii data**: “*/mnt/camca\_NAS/Portable\_CT\_data/nii\_imgs\_202404*” (fixed CT, portable CT)

**Simulation data**: “*/mnt/camca\_NAS/Portable\_CT\_data/nii\_imgs\_202404*”

**Part 2: Models**

**Main folder:** “*/mnt/camca\_NAS/diffusion\_ct\_motion/models/”*

EDM: “*portable\_EDM\_patch\_3Dmotion\_hist\_v1/models*”. **Use model-49.pt for real data.**

DDPM: “*portable\_DDPM\_patch\_3Dmotion\_hist\_v1/models*”. Use **model-86.pt**

**Part 3: Generated Images (motion-free images also included)**

**Main folder:** “*/mnt/camca\_NAS/diffusion\_ct\_motion/models/”*

In each model folder, “*pred\_images\_portable\_simulated*” saves the simulation study results, “*pred\_images\_portable\_real\_resample\_avg*” saves the real data study.

“pred\_images\_portable\_real” is for real data study but with interpolation resampling so please ignore.

**Part 4: Reader Study**

**Main folder:** “*/mnt/camca\_NAS/diffusion\_ct\_motion/examples/real\_data”*

Patient list (for blinded study reference): “*/mnt/camca\_NAS/diffusion\_ct\_motion/examples/real\_data/list/”*

DICOM and nii, “*/mnt/camca\_NAS/diffusion\_ct\_motion/examples/real\_data/data/”*

**Reader study (spread this to readers): “*/mnt/camca\_NAS/diffusion\_ct\_motion/examples/real\_data/randomized/”***