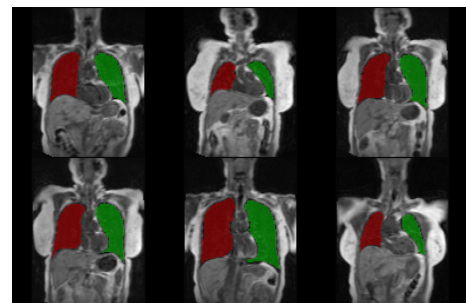
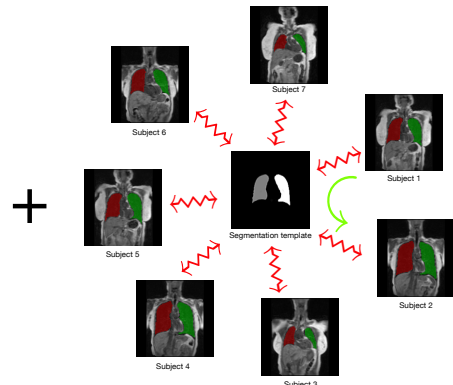


### Proton model training

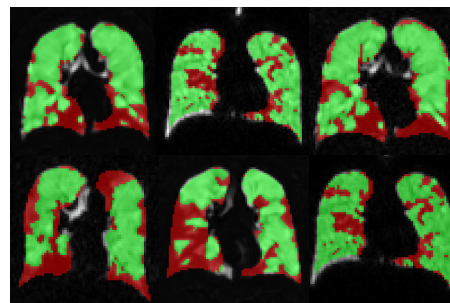


Training data

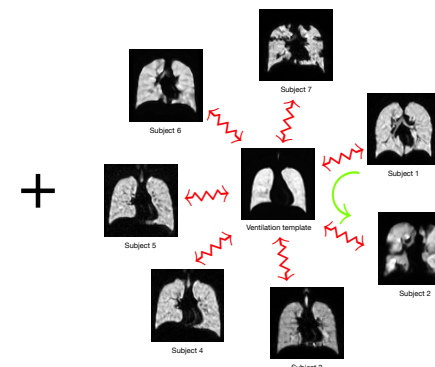


Data augmentation

### Ventilation model training



Training data

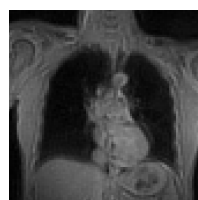


Data augmentation

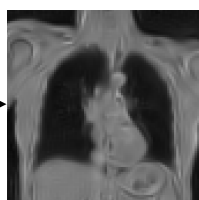
### Offline processing

### Individual subject processing

#### Preprocessing

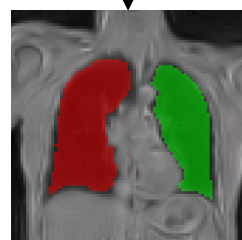


Proton MRI



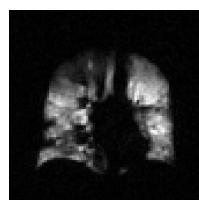
N4 + Denoising

Proton U-net  
model

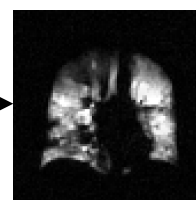


Predicted lung mask

#### Preprocessing

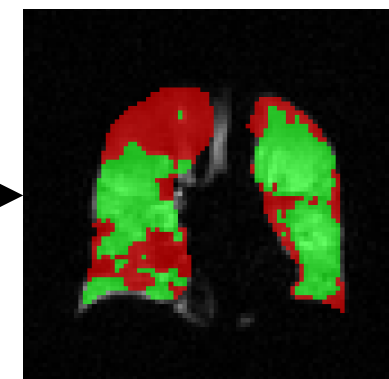


Ventilation MRI



N4

Ventilation U-net  
model



Predicted ventilation  
segmentation