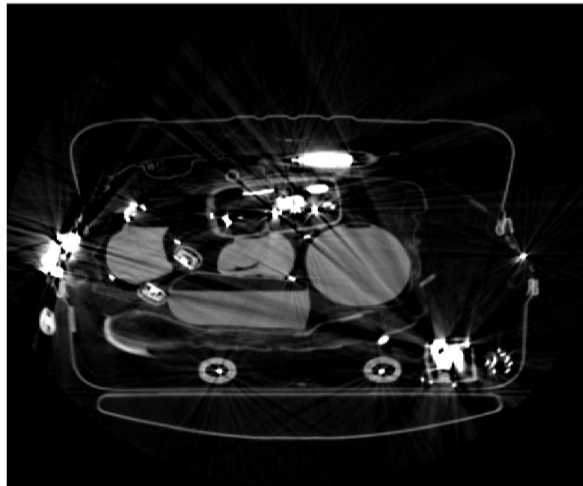# Simultaneous Iterative Reconstruction and Segmentation
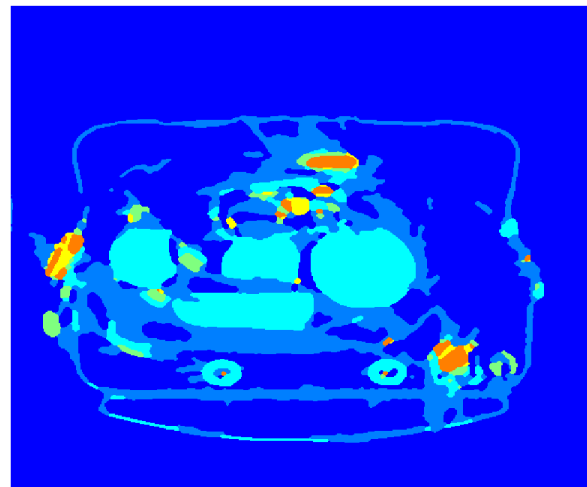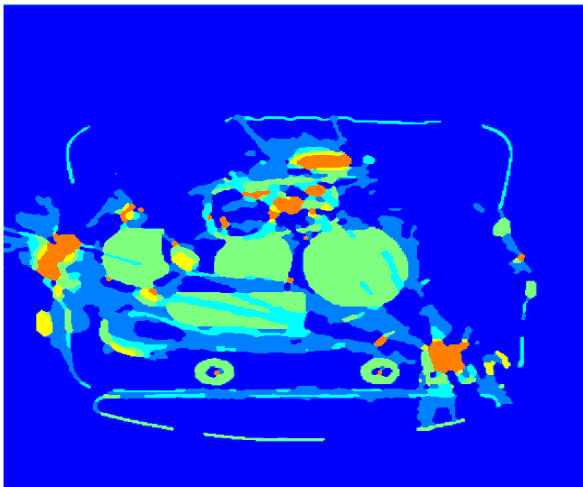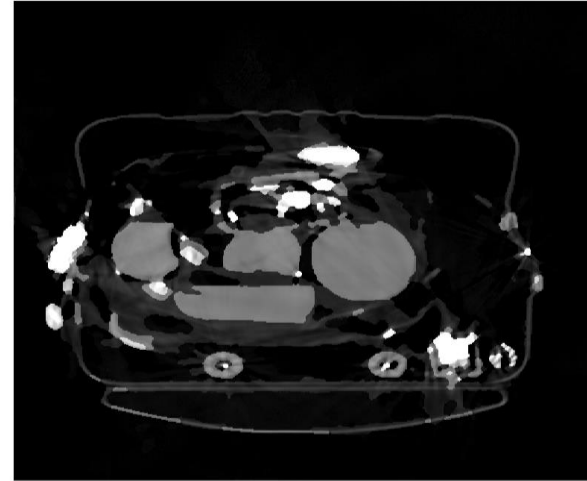
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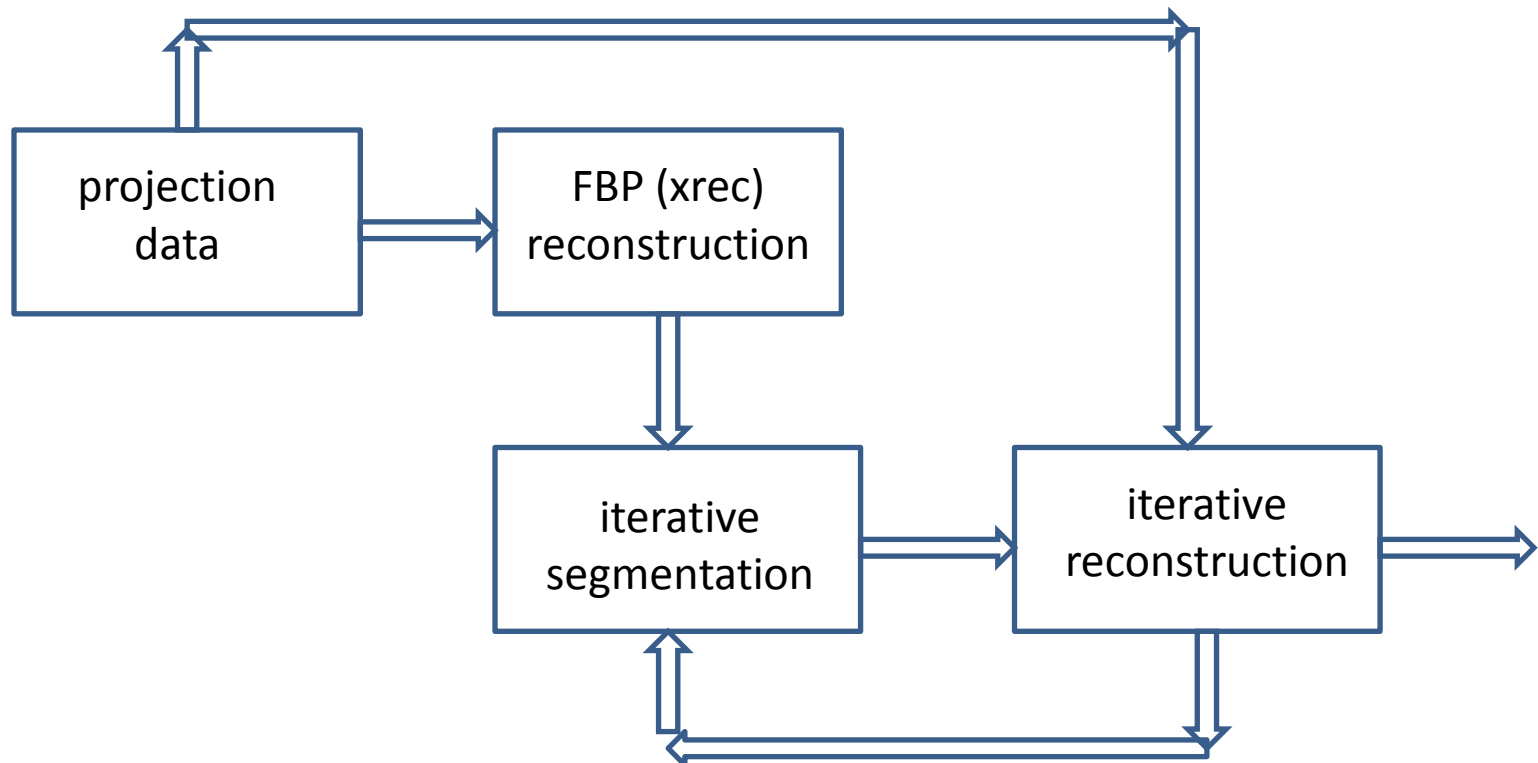(unfunded participant)

Results

XREC

New Recon + Segmentation

Method

- Objective: use segmentation to improve recon and vice versa

- Iterative implementation: alternating between segmentation and reconstruction

Limitations and Next Steps

- Limitations
  - Projection model: only considered Poisson noise
  - Image model: also relatively simplistic
  - Segmentation: needs to know the number of classes
- Next steps
  - Incorporate other artifact models (e.g., beam-hardening)
  - Improve image model
  - Determine the number of classes from data
  - Process additional cases and apply cloud metrics

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