

CBCT Brain Perfusion: Digital Simulator and Physical Phantom

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Goals:

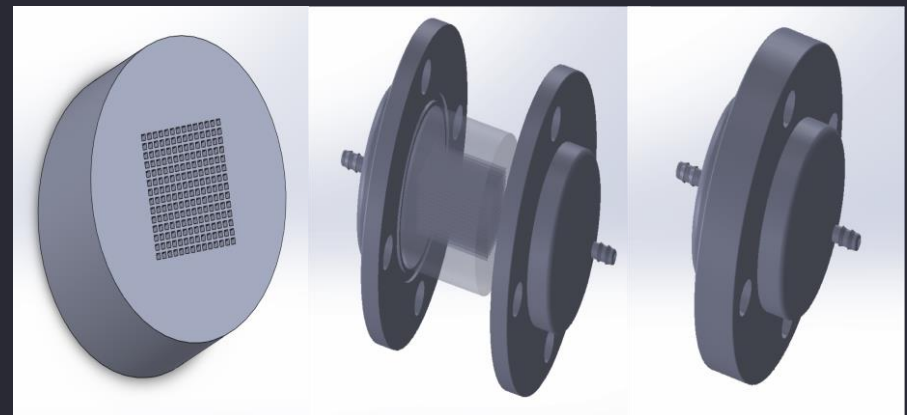
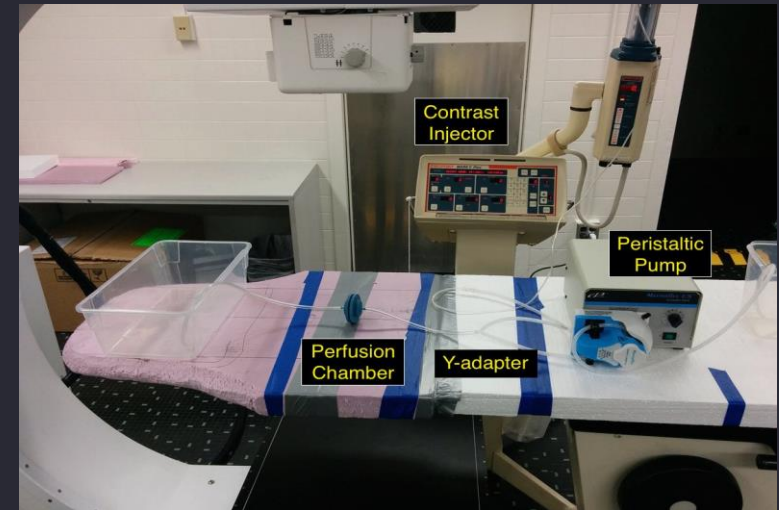
- Develop physical brain perfusion phantom and digital simulator

Significance:

- Allows evaluation of perfusion imaging with new, portable CBCT scanner.
- Validation of perfusion imaging techniques in detection of ischemic stroke.

Results:

- 10-fold speedup in forward projection implementation
- Fabricated physical phantom is ready for CT image testing



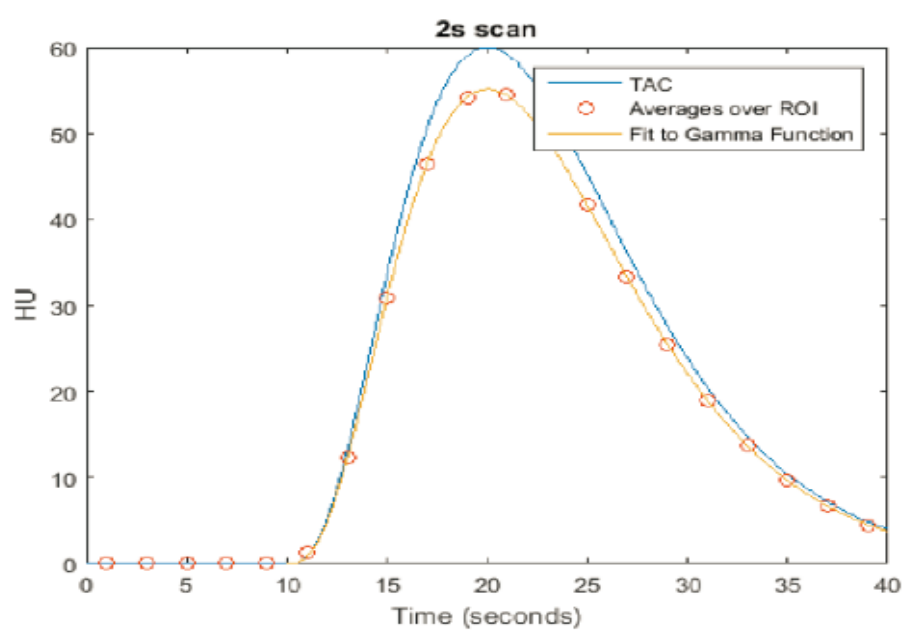
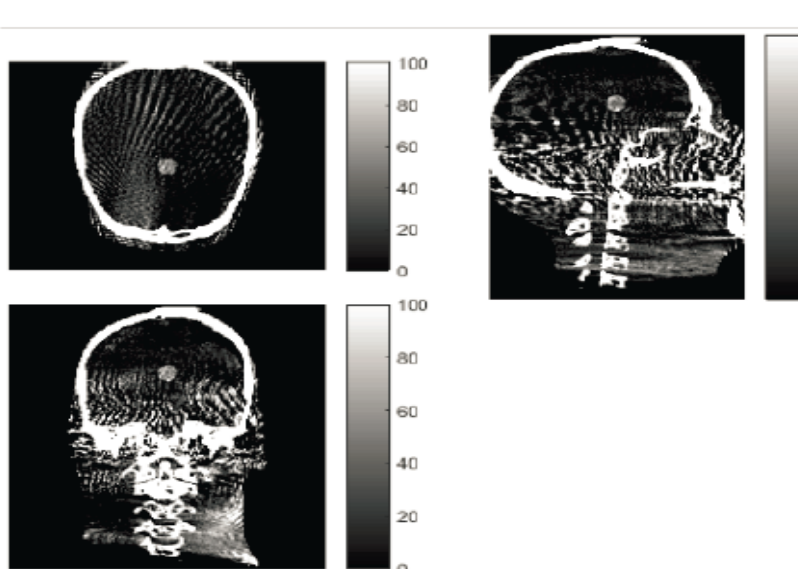


Figure 3. Simulator results from a 2 second scan

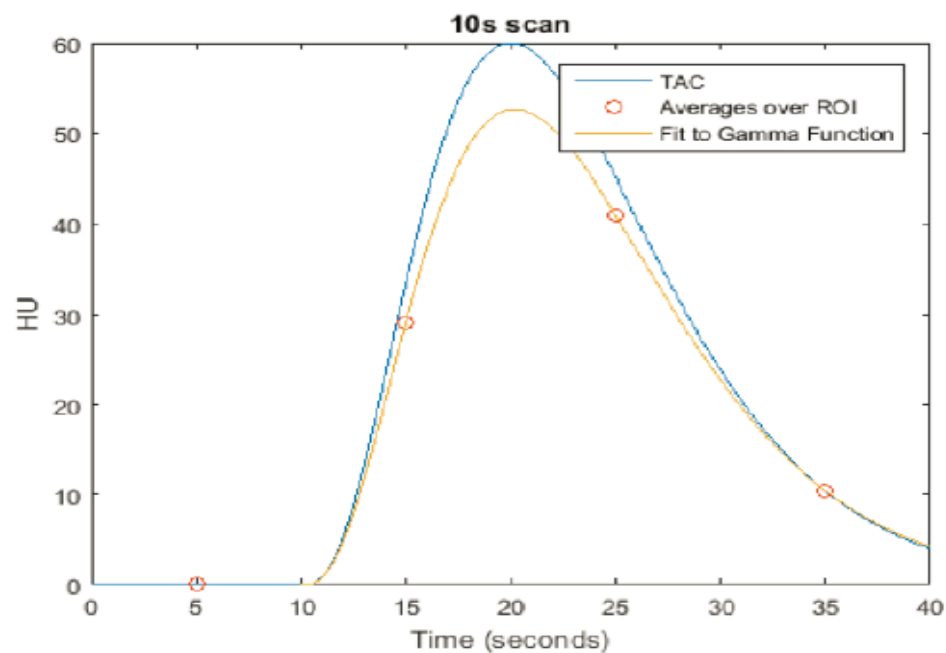
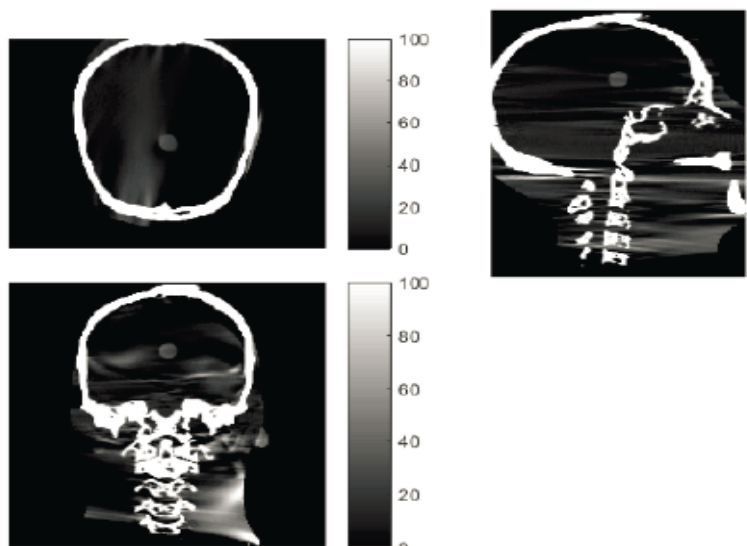


Figure 4. Simulator results from a 10 second scan