

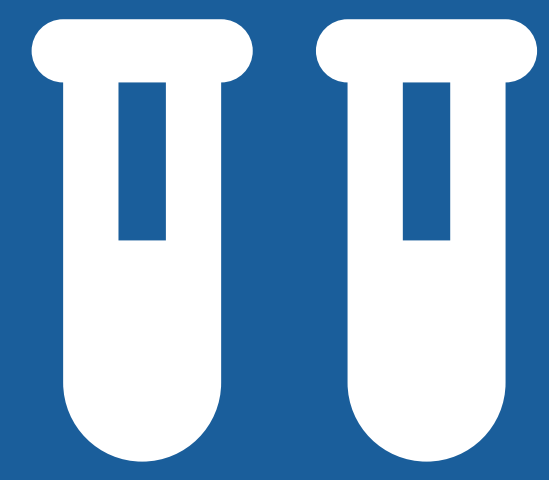
Crossing the Great Divide

Enhancing Clinical Medicine with Advanced Computing

Rudolph Pienaar, PhD

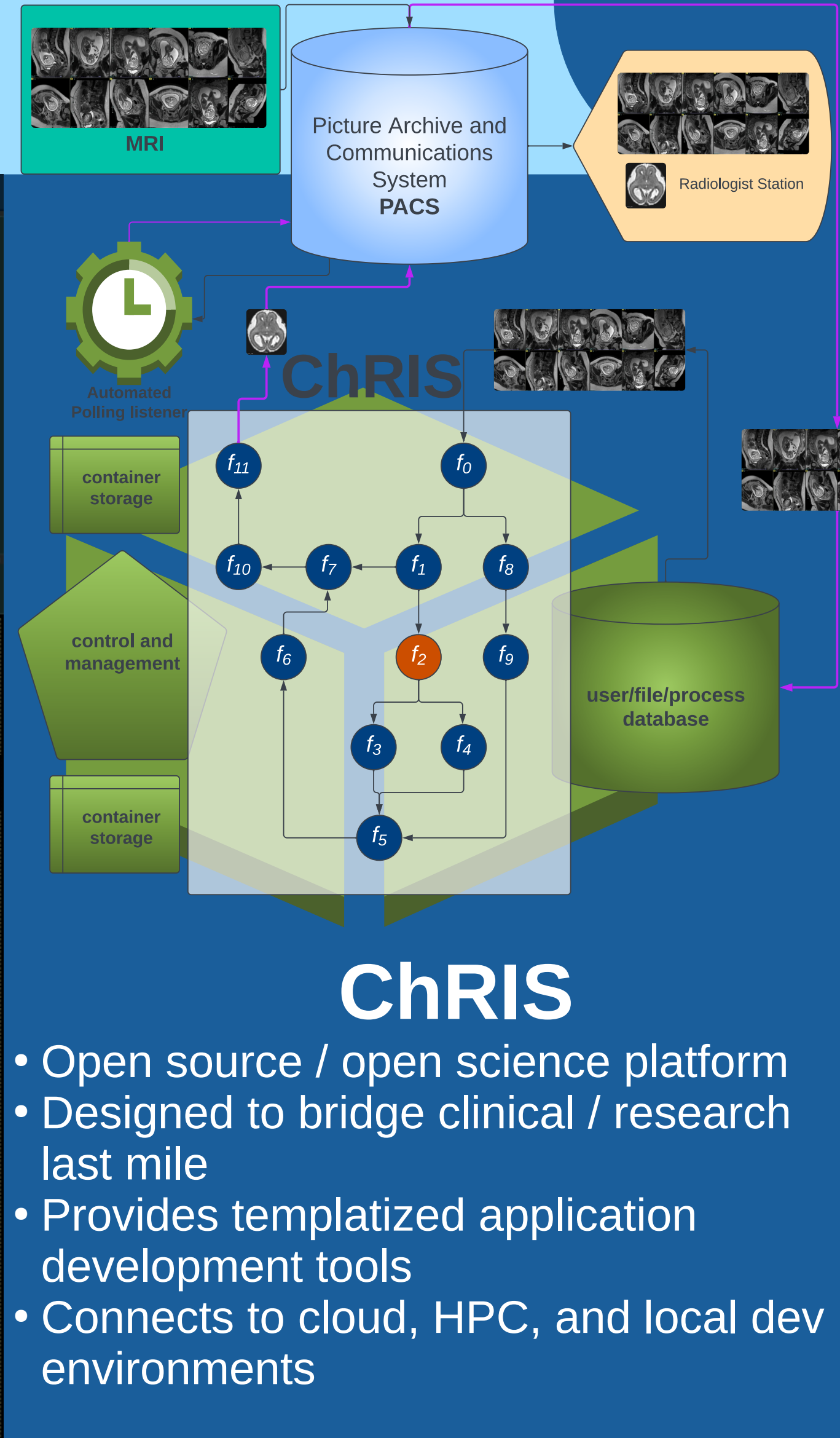
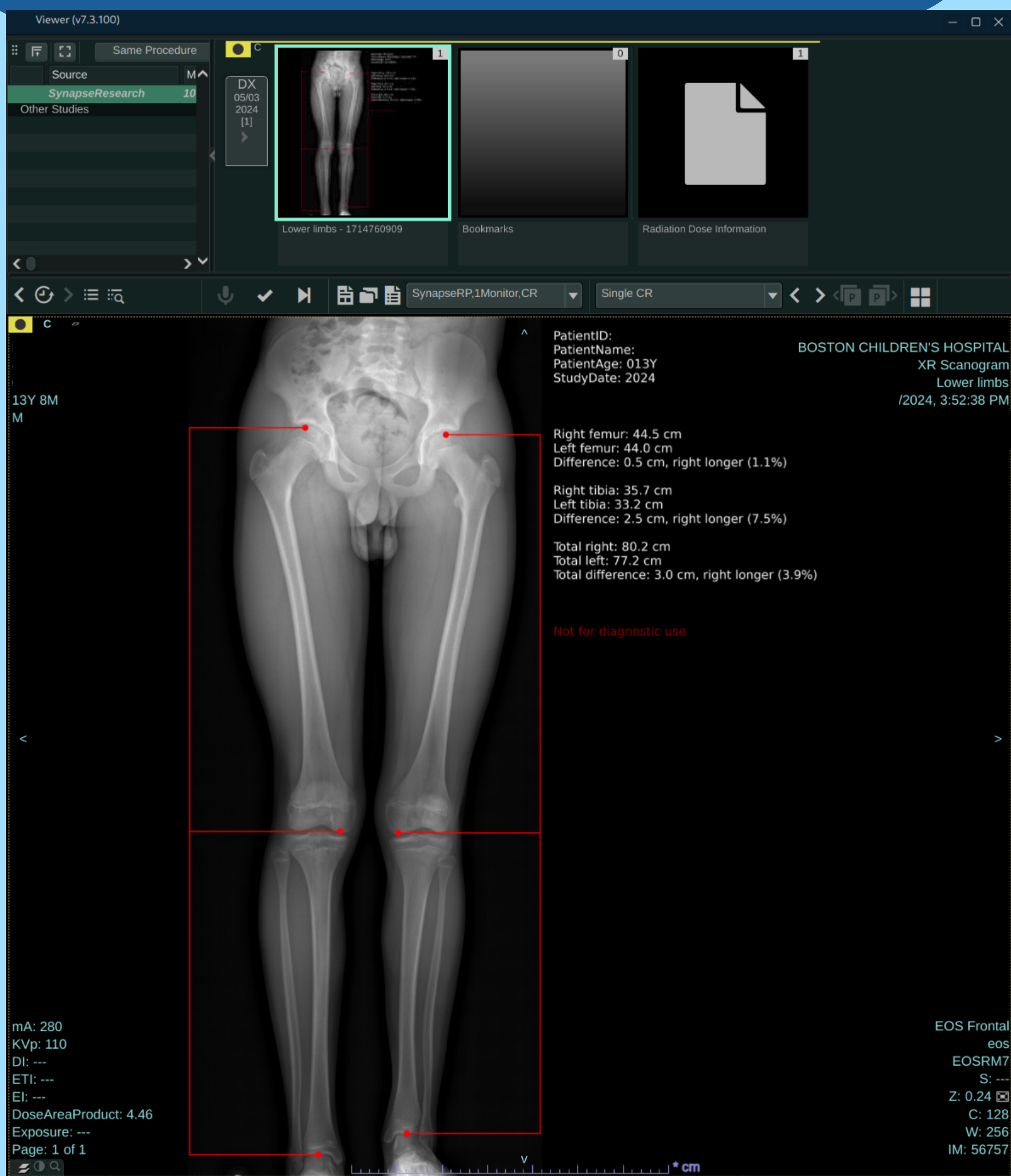
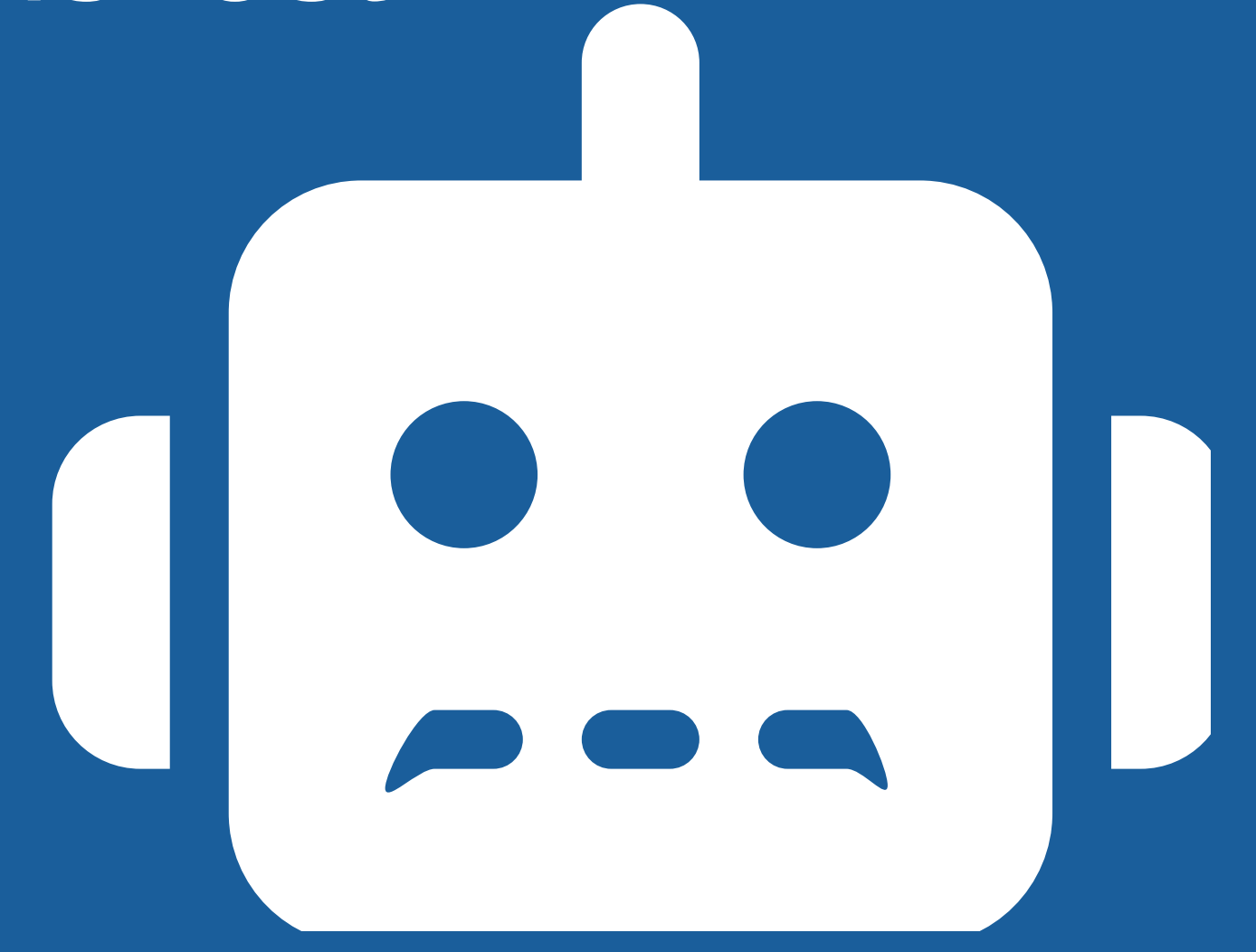
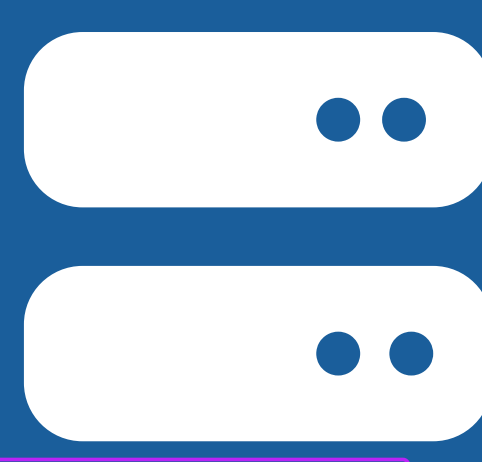
the problem...

- clinical workflows historically have had no access to computing innovation;
- real world impact of novel algorithms is lost
- medical care and patient outcomes could suffer

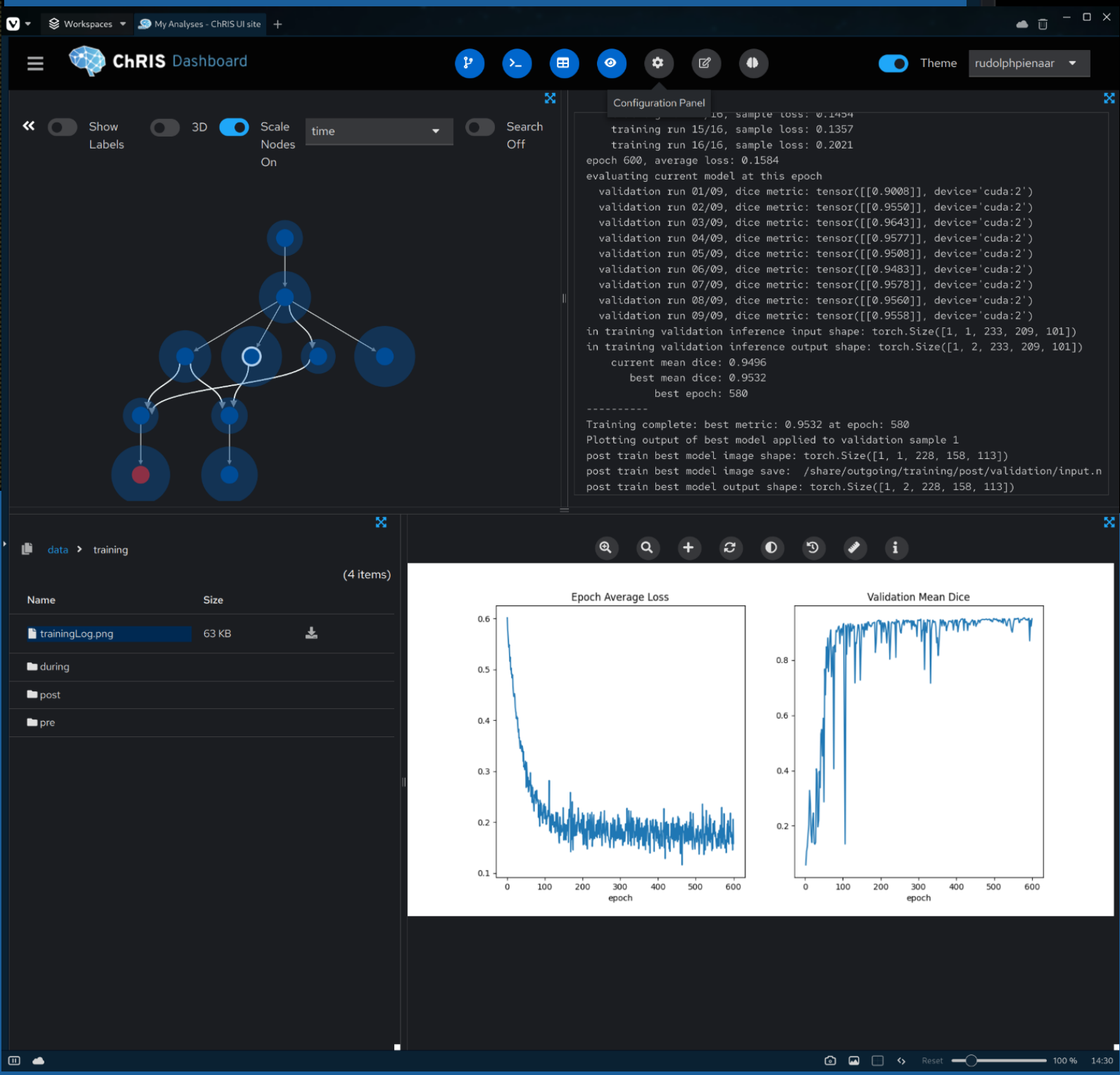
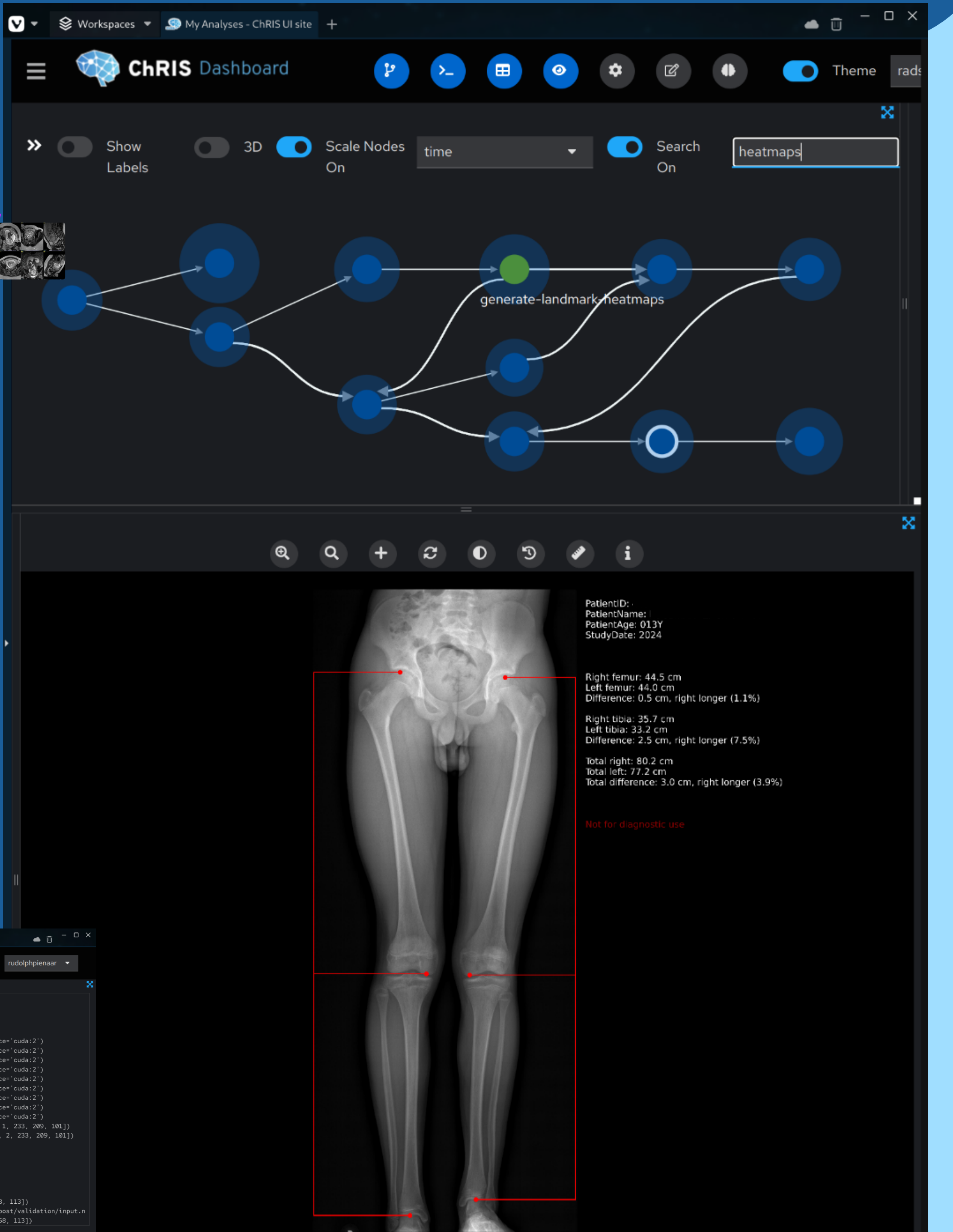


how things are...

- researchers develop new algorithms that advance the basic field;
- imagine, publish, *forget*?
- delegate/ignore the integration problem;
- cutting edge / impactful research is lost



- Open source / open science platform
- Designed to bridge clinical / research last mile
- Provides templated application development tools
- Connects to cloud, HPC, and local dev environments



- automated PUSH triggering:**
 - directly from PACS to ChRIS
 - directly from clinical scheduling system to controller service
- automated PULL polling:**
 - poll PACS for appearance of trigger images
 - initiate pull to and analysis in ChRIS

- almost any research computational tool can be run by ChRIS, including AI training and inference workflows
- core services such as DICOM anonymization
- guaranteed repeatability in computing / analysis

bridging the last mile...



ChRIS

