Making Progress Towards a COPD and Lung Nodule Protocol

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Consideration for developing a multi-task protocol

• My view from a technical implementation perspective

• What issue should the joint protocol solve?
  
  – Clinical
    • Identify clinical conditions to accommodate
      – CPOD conditions
      – Lung nodule conditions
      – Joint conditions
      – New conditions/research exploration
    • Application area
      – Which are real-world clinical?
      – Which are research?
  
  – Measurements
    • Define QI functions/measurements to accommodate based on clinical task above
      – Set of well defined measurements
      – Radiomics approach
      – Deep learning approach
Consideration for developing a multi-task protocol

• Technical Implementation
  – Define imaging requirements
    • Answering question on previous slide will help determine imaging requirements for a single protocol
      – Or need for additional studies to determine protocol requirements
    • Is the joint protocol drive by the COPD needs, lung nodule needs or a combination?
      – If driven by one technique then this becomes less a protocol development issue and more a distribution/use issue
  – Determine the QA/QC required for each task
    • Physics measurements
    • Phantoms measurements
    • User training/qualifications