Closing Session

1. Use case scenario
   a. Process vs. Disease
   b. Activity/non-acute
   c. Simple/complex
   d. Top choices: Breast & cardiac top 2 (for funding etc. initiatives; does not restrict developments with anything else) (start here and expand out build a platform and add modules)
      i. HCC (liver)
      ii. CAD (cardiac)
      iii. Cancer (breast/prostate)
      iv. Trauma
      v. Stroke
   e. Goal = platform to generalize from not cure the disease!
   f. Framework/platform (tangible outcome) standard extract data EMR

2. Standards : What are the expected outcomes- just speeding up won't cut it. Improving quality of care and reducing cost of care should be the impacts
   a. Define our outcomes
      i. An outcome should not be billing codes. (costs is not an outcome)
   b. Quantitative quality imaging (accreditation)
      i. Reliability/Validity of the data- Quality of each piece of data
         1. Moving imaging data around (ACR accredited site should have a tag)
         2. Where from etc.
         3. What involved with
   c. Imaging exam names
      ==> Incorporate standardized data acquisition/ format from other initiatives
      via semantic web standardization data format(s)
      architecture of back end to framework
   d. Feedback to patient care, points etc., standardize
   e. APIs (open) that acquire "plumbing" data from disparate systems and present in standardized fashion
      cockpit information sits across institutional lines
   f. Push and Query- on demand model (FHIR)
      i. Not able to standardize the data itself but pull it out in standard way
      ii. Natural language processing to read doctor's notes-->become structured data
   g. Interface between existing lexicons etc. and disparate data
   h. Tools/standard that feeds report --> standardized info rather than the report = data source
   i. To capture holistic, longitudinal info for progression
   j. Distillation of rad report for the next user and their cockpit
   k. Association between "raw" data and output

l. Adaptive and supportive tool for diagnosis and treatment- audit data - documentation of accountability of how doctor arrived to final diagnosis
audit data -feedback but "paper trail" how got to decision

m. Workflows (improved)
pushback from doctors because they might not know how they arrived to their final decision (malpractice issue)
Audit- what information was accessed and in what order. You might not want the process exposed but it should be tracked. Machine is not making the decision, the doctor will. What is the most important data. We need to understand how AI arrived to a certain outcome- doctor is ultimately responsible

n. Quality metrics around diagnostic accuracy

o. Patient reported outcomes/provided data

3. Core Functional requirements
   a. Dashboard for tracking/feedback performance
   b. Who the user is = everyone - radiologist, other
   c. Validate information there to make diagnosis
   d. Co-registration images and data
      i. Longitudinal and current
      ii. Temporal relation between images
   e. Tailored to task/stakeholder
      i. Clear idea of end goal / care
   f. Populate report for rad final impression that accomplishes tailoring to audience
   g. Improves efficiency while maintaining improved diagnostic accuracy
      i. Triage on a daily pressure is too much pressure
      ii. Reduce stress on users -> improved care as have time to final decision
      iii. Eliminate "tedious" tasks

4. Initiatives
   a. Make all developing cockpits interoperable
   b. Starter dashboard items (APIs)
   c. Initial use case of images + data (100 cases)
   d. Certification of interoperability (different levels)
      i. Define "interoperability"
      ii. Needs external validation process
   e. IHE DICOM SEG
      i. IHE is the next connect-athon
         1. with SIM too
         2. position papers and practice guidelines (ACR-AAPM-SIIM)
   f. Funding, scale and magnitude ($10-100 million)
   g. NIH
      i. OSTP directive encourages NIH + NSF + NIST +other agencies (national initiatives)
      ii. P41
      iii. Initiative from director's office
   h. Connect-athon/hackathon
   i. Branding --> leading to RFP/mechanisms
   j. Society improvement diagnosis in medicine

k. *Before the proposing the XXX diagnostic XXX moonshot initiative we need community* ***consensus***

Rules
-no problems/challenges
-no $

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*Diagnostic
Iniative*1

(based on / starting

in imaging)