a/o 10.31.22

2022 WORKSHOP SESSION QUESTIONS & POINTS

This working document proposes panelist questions that may be addressed during each session and enhanced by those of our Workshop Zoom attendees.

KEYNOTE: AI AND MEDICAL IMAGING – EARLY PROGRESS AND PROMISE

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Main Points:

1. Overview of AI generally and AI at Google and how that has influenced our path in medical imaging.
2. Review Google's more recent population health initiatives and what we have learned in the past few years.
3. Discuss opportunities that exist in the future generally in medicine and population health based on new advances we are seeing in AI.

SESSION TWO: POPULATION HEALTH – REIMBURSEMENT FOR AI, ENSURING QUALITY & THE ROLES OF PAYERS

Paying for AI and Quality — Link to Population Health

1. How do you see the advances in AI being applied to lung cancer screening / thoracic health?
2. Does AI have to involve higher payment? Why isn't AI just required when necessary for patient care without additional payment? For example, an alternative could be that an initial lung cancer screening would be paid less if AI were not used to report the COPD / emphysema status.
3. What links to quality or outcomes could be included to ensure that AI use in lung cancer screening / thoracic health were appropriate?
4. Would you expect the cross-licensing agreements among CT scan makers would lead to rapid dissemination of AI tools?

Innovation and Population Health: Roles of Payers and Radiology Benefit Managers

1. About 200 million Americans have commercial insurance and another 25 million are covered by private Medicare Advantage plans. What portion of those populations are affected by radiology benefit managers?
2. Do any of the panelists see much demand for lung scans from your customers?
3. If there were a Stars / HEDIS population health metric for lung cancer screening, how would it affect the RBM business?

SESSION THREE: CLINICAL IMPLICATIONS OF REPORTING "EMPHYSEMA" ON LOW DOSE CT SCANS FOR CANCER SCREENING

Update on Progress in Publication of a "Perspective" from Previous Workshops

Define Parameters of Quantitation for CT Scan Images Needed to Define Lung Injury in Meaningful Ways

1. What are the most pressing research gaps as the community engages this opportunity?
2. How do the pulmonary and primary care community agree to stratification of care—what stays with the local care provider and what gets referred for more elaborate work-up—for whatever objective reasons?
3. Can we get more engagement from smoking cessation experts if serial annual CT evaluation provided reliable quantitation of disease status relative to disease progression/regression or stability?
4. Does additional information from the annual thoracic CT encourage higher screening participation rates?

SESSION QUESTIONS & POINTS *(Continued)*

SESSION FOUR: EXPANDING SCREENING'S REACH – FROM CURRENT SCREENING PERCEPTIONS TO DEVELOPING A QUANTITATIVE IMAGING HEALTH METRIC

Lung Cancer Screening Perceptions in Both Patients and Clinicians: What Do We Know?

1. What is the perception among physician and participants regarding benefits and harms related to screening and how that might impact their willingness to participate in a screening program?
2. How do physicians and participants think about weighing benefits and harms, are they interested in more quantitative information such as the extent of the benefit for them, what their individual risk might be or how likely they are to be cured if they do have a cancer?
3. How do physicians and participants feel about lung cancer screening compared to other types of screening, as beneficial, more, less?
4. How do physicians and participants think about learning about other things such as heart disease or emphysema when entering into a screening program, do they view this as a plus, does it motivate joining or is it not a major consideration?
5. How do physicians feel about managing all of these additional findings and scheduling, is the whole process too burdensome?

Intersection of Health and Wellness Quantitation and Early Disease Management

1. What are the best measures of health and how do we envision people thinking about this topic?
2. How important a factor for health is fat distribution and, in particular, how much more valuable is a direct measure, including distribution, compared to BMI?
3. How well can we measure muscle mass and quality of muscle, does it correlate with traditional measure such as hand grip strength or possibly balance tests?
4. Can we envision a time where people learn to follow their image findings just like we might think of people following their cholesterol?
5. Are there good baseline measures for people of different ages as to what might be considered normal? Something analogous to osteoporosis scoring with a T score and a Z score?
6. Do we know about how various organs or measures of health change over time?

SESSION FIVE: EXPLORING NEW CT IMAGING & ARTIFICIAL INTELLIGENCE TECHNICAL OPPORTUNITIES

New CT Technologies: Opportunities and Challenges

1. Which photon counting technical advances are likely to significantly improve CT lung cancer screening (detector efficiency/lower dose, resolution, energy discrimination, others)?
2. What are the most promising applications of photon counting to CT lung cancer screening (risk assessment, early detection, nodule measurement)?
3. How will AI methods impact commercial CT image reconstruction and its use in CT lung screening? How will it impact small lung nodule measurement? Can it be trusted to perform well across gender and ethnicity?

Integrating AI Into the Lung Health Workflow

1. How successful has AI been in improving detection of early lung cancer in the community hospital setting?
2. What barriers remain in adoption and is anything needed to achieve wider success?
3. What are the best opportunities to add AI into the CT lung screening clinical workflow (improve productivity, improve risk assessment, improve detection accuracy, facilitate communication across caregivers)?