2015 Annual Report
Committee on Scientific Affairs

The Committee on Scientific Affairs (CSA), chaired by David Lomas, MD, held its inaugural meeting at RSNA Headquarters on June 16-17, 2015. The CSA is charged with oversight of strategic science initiatives of RSNA, including monitoring emerging trends, designing and implementing programs to highlight knowledge gaps in imaging science and technology development, and advising the RSNA Board of Directors on educational and communication programs to raise awareness of and promote strategies for advancing the science and technology of imaging.

The meeting provided dedicated time for activities to help identify the areas of opportunity for and risk to imaging practice, possible gaps in medicine and biology, and discuss how needs might be met. Potential new initiatives were considered in light of context and practicality.
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Suggested topic areas included:

- Integration of health records and genomics with imaging
- Precision imaging/medicine
- Population imaging
- Imaging across scales
- Looking to other fields as radiology expands, possibly through summary lectures
- Public engagement

The CSA identified five areas on which to focus its efforts and has created workgroups to begin exploration and planning. The majority of the workgroups will be making preliminary reports at the December 2nd Meeting during RSNA 2015. The areas are:

- High Quality Outcome Trials: The goal of this workgroup is to identify strategies for advancing the role of radiology in outcomes studies in a value-driven environment.

- High Value Imaging: The goal of this workgroup is to identify strategies for advancing targeted and sufficient use of imaging, particularly MR, in order to encourage faster protocols and greater value while eventually lowering cost.

- Collaborations with Neuropsychiatry/Neuroscience: The goal of this workgroup is to identify avenues for the dissemination of recent advances in imaging in psychiatric and cognitive disorders to the RSNA membership

- Science at RSNA: This group will be looking ways to improve the scientific engagement at the RSNA Annual meeting by attracting high quality/impact science, improving attendance at scientific sessions, and creating a primary venue for the presentation of new scientific data

- Big Data: This group will explore how RSNA can get involved in promoting better research use of the large amounts of imaging data that is collected and Investigate what is required and feasible in order to access and analyze digital imaging data on a large scale at reasonable effort and cost

Quantitative Imaging Biomarker Alliance (QIBA)

The RSNA was awarded a third two-year contract for ~$2.5 million, from the National Institute of Biomedical Imaging and Bioengineering (NIBIB), to support QIBA and its research activities. A portion of this funding will support groundwork projects by QIBA members to help validate specific imaging

metrics and improve reproducibility and standardization across vendor platforms. Funding will also support refinement of the Quantitative Imaging Data Warehouse (QIDW). Dr. Edward Jackson assumed the role of QIBA Chair in July; former Chair, Dr. Daniel Sullivan, remains active as QIBA Liaison for External Relations. International involvement has continued to grow with significant engagement from Europe and Japan.

Metrology
Following the acceptance of a suite of five papers within the journal of Statistical Methods in Medical Research, an overview paper has been submitted and accepted by *Radiology*.

Quantitative Imaging Data Warehouse (QIDW)
QIDW is partially supported by funds from the NIBIB contract. QIBA has seen significant increase in use over the past year, primarily for data from physical phantoms, digital reference objects (DROs), and software algorithm storage. As of October 22, 2015, the QIDW has 215 registered users and 127,500 uploaded images with associated metadata. Users include biomedical imagers, clinicians and industry research collaborators. Enhancements have been made to system functionality through the introduction of a self-registration feature and a robust management console to track user demographics and activity.

Respectfully submitted,

David J. Lomas, MD
Chair