Presenter: Leslie Quint M.D.

Title of Abstract: Chest CT Incidentalomas: a Needs Assessment Survey of Radiologists’ Knowledge

Institution: University of Michigan

Authors: Leslie Eisenbud Quint, M.D. 1 Kuanwong Watcharotone, Ph.D. 2 James D. Myles, Ph.D. 2 Larry D. Gruppen, Ph.D. 3 Patricia B. Mullan, Ph.D. 3

Modality: CT

Organ System: Multi

Intro: Approximately 3-24% of chest CT exams show potentially significant incidental findings (incidentalomas) that require further evaluation or follow-up. The evaluation of such a large number of incidentalomas presents a huge potential burden on the health care system. The purpose of this survey-style study was to gain information about current practice patterns in the interpretation and evaluation of chest CT incidentalomas, and to compare these patterns with the best available medical evidence, in order to assess the need for in-training and continuing medical education in this arena.

Purpose: To assess practice patterns in the evaluation of chest CT incidentalomas, in order to determine the need for further relevant education.

Methods Used: A survey was given to 1600 radiologists, presenting four clinical case questions regarding the evaluation/significance of the following chest CT incidentalomas: thyroid lesion; enlarged mediastinal lymph nodes; asymptomatic, small pulmonary embolus; and small lung nodule. The respondents answers were compared with truth, as defined by the best evidence available in the imaging literature. Additional questions elicited the respondents’ demographics and comfort levels in addressing the findings. ANOVA models with a Tukey correction for post-hoc comparisons and chi square tests were used to determine if any demographic factors or comfort levels were predictive of higher correct response rates.

Results of Abstract: The overall survey response rate was 28% (445/1600). Correct case response rates ranged from 26% (115/442) to 79% (343/445). Only 6% (28/438) of respondents chose the correct answers for all cases. Up to 80% (353/440) of respondents felt comfortable in addressing incidentalomas, and only 57% (252/443) of respondents felt that they needed more training in this arena. Fellowship training in cardiothoracic radiology, working in a teaching practice, and subspecialization in abdominal or cardiothoracic radiology were predictive of higher correct response rates. Except for one case question, the comfort level was not predictive of correct response rate.

Discussion: There was considerable variability among radiologists and substantial deviation from best medical practice with regard to the interpretation/evaluation of chest CT incidentalomas, indicating that there is a significant need for further education.

Scientific and/or Clinical Significance? Our study found considerable variability among radiologists with regard to the interpretation and evaluation of chest CT incidentalomas, and there was substantial deviation from best medical practice, as defined by currently available evidence in the medical literature. Our findings indicate that there is a significant need for further medical education in this arena.

Relationship to existing work There is little information in the imaging literature with regard to practice patterns in these settings. Our findings support some published work that indicates radiologists do not fully comply with Fleischner Society recommendations for the follow-up of small pulmonary nodules.

N/A