Accepted Manuscript

Title: Evaluation of material decomposition for pulmonary function test in spectral computed tomography: A Monte Carlo simulation study

Authors: Jisoo Eom, Burnyoung Kim, Wonhyung Kim, Seungwan Lee

 PII:
 S0030-4026(18)31242-7

 DOI:
 https://doi.org/10.1016/j.ijleo.2018.08.093

 Reference:
 IJLEO 61390

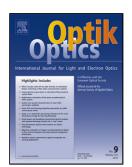
To appear in:

 Received date:
 20-6-2018

 Accepted date:
 23-8-2018

Please cite this article as: Eom J, Kim B, Kim W, Lee S, Evaluation of material decomposition for pulmonary function test in spectral computed tomography: A Monte Carlo simulation study, *Optik* (2018), https://doi.org/10.1016/j.ijleo.2018.08.093

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ACCEPTED MANUSCRIPT

Evaluation of material decomposition for pulmonary function

test in spectral computed tomography: A Monte Carlo

simulation study

Jisoo Eom^a, Burnyoung Kim^a, Wonhyung Kim^b, Seungwan Lee^{a,b*}

^aDepartment of Medical Science, Konyang University, 158 Gwanjeodong-ro, Daejeon 35365, South Korea

^bDepartment of Radiological Science, College of Medical Science, Konyang University, 158 Gwanjeodong-ro, Daejeon 35365, South Korea

Corresponding author: Seungwan Lee (slee1@konyang.ac.kr)

Tel.: +82-42-600-8443, Fax: +82-42-600-6565

ABSTRACT

Due to various factors, the number of chronic obstructive pulmonary disease (COPD) patients continues to grow. In addition, the mortality from COPD is increasing because of the difficult in the early detection of COPD. Both of radiologic and respiratory examinations should be performed for detecting COPD. But, since the conventional respiratory test uses spirometer, there is the air leakage between mouth and measurement machine, which reduces the accuracy and reproducibility of

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