Subsolidの肺結節は男性よりも女性におけるがんリスクを増大させる (SSA04-02)

CTスタディの結果、すりガラス状結節を有する女性はこれを有する男性よりもより綿密な追跡が必要であることが示唆された

CT study suggests that women with ground glass nodules may need closer follow-up than men

肺がんスクリーニングCT検査においてあるタイプの肺結節を有する女性は同様の結節を有する男性よりも肺がんリスクが高い、と2015年Radiological Society of North America年次集会で発表された。研究者らはNational Lung Screening Trial（NLST）のCTスキャンの結果をレビューした。CTで検出された4～30mmの結節全てを硬度で特徴付け、各々の硬度サブタイプの肺がん発症相対リスクを計算した。参加者26,455人のうち9,994人、つまり37.8%がトライアル中の1以上の時点においてスクリーニング陽性であった。すりガラス状結節を有する女性は同様の結節を有する男性よりも肺がん相対リスクが有意に高く、part-solid noduleに関しても同様の傾向が認められた。対照的に、solid noduleの肺がん相対リスクでは性差はなかった。Part-solid noduleのがん予測能は男女ともに最大であり、solid noduleは女性においては予測能が最も低く、男性においてはすりガラス状結節の予測能が最も低かった。

Full Text

Women with a certain type of lung nodule visible on lung cancer screening CT exams face a higher risk of lung cancer than men with similar nodules, according to a new study presented at the 2015 annual meeting of the Radiological Society of North America (RSNA).

Lung nodule consistency is considered an indicator of lung cancer risk, with part solid nodules being most strongly associated with lung cancer in the screening setting.

"We know there are differences in cancer risk among different lung nodule consistencies, but we were unaware of any published reports that looked at the differences in lung cancer risk for nodule subtypes between women and men," said study lead author Phillip Boiselle, M.D., from Beth Israel Deaconess Medical Center and Harvard Medical School in Boston, Massachusetts, USA.

For the new study, Dr. Boiselle and colleagues reviewed CT scans from the National Lung Screening Trial (NLST), a large, randomized control study that demonstrated the value of CT screening in reducing lung cancer mortality. The NLST included more than 40 percent women, giving the research team a rare opportunity to look for statistically significant differences in lung nodules and lung cancer between the sexes.

The researchers characterized all CT-detected nodules measuring 4 to 30 millimeters by consistency using the NLST database and calculated the relative risk of developing a lung cancer for each nodule consistency subtype.

Out of 26,455 participants, 9,994, or 37.8 percent, had a positive screen at one or more points during the trial. Women with ground-glass nodules had a significantly higher relative risk of lung cancer than men with the same type of nodules, and a similar trend was observed for part-solid nodules. In contrast, the relative risk of lung cancer for solid nodules was comparable for both sexes.

Part-solid nodules had the highest predictive value of cancer in both sexes, whereas solid nodules had the lowest predictive value in women and ground glass nodules had the lowest predictive value in men.

"The main difference we found was that women were 50 percent more likely than men to have ground-glass nodules and, when these nodules were present, women had a substantially higher risk of developing lung cancer," Dr. Boiselle said.

Current lung cancer screening guidelines do not take into account gender differences when managing nodules of different consistencies. While more research is needed before changes are made to clinical practice, the results suggest that women with ground glass nodules may need closer follow-up than men.

"By looking at the rate at which lung cancers grow on serial CT scans, we can develop a better understanding of how often to obtain follow-up CT scans in men and women," Dr. Boiselle said.

The researchers plan to continue studying the NLST data to further understand the significance of these cancers, especially with respect to their influence on lung cancer mortality.

Co-authors on the study are Fenghai Duan, Ph.D., Stavroula Chysanthopoulou, Ph.D., Sarah DeMello, M.S., Denise R. Aberle, M.D., and Caroline Chiles, M.D.

RSNA2015特集

Cardiology
3D MRIは糖尿病患者における脳卒中リスクの早期徴候を示す

早期段階の脳疾患と心疾患とに関連が認められた

MRIにより一流ダイバーの無呼吸中の心血管系変化が示された

Oncology
Subsolidの肺結節は男性よりも女性におけるがんリスクを増大させる

乳腺密度のみではがんのリスクファクターにならない

Psychiatry
小児において親がいないことは脳の発達を遅延させる可能性がある

肥満小児において食物のにおいは脳の衝動性領域を活性化させる

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