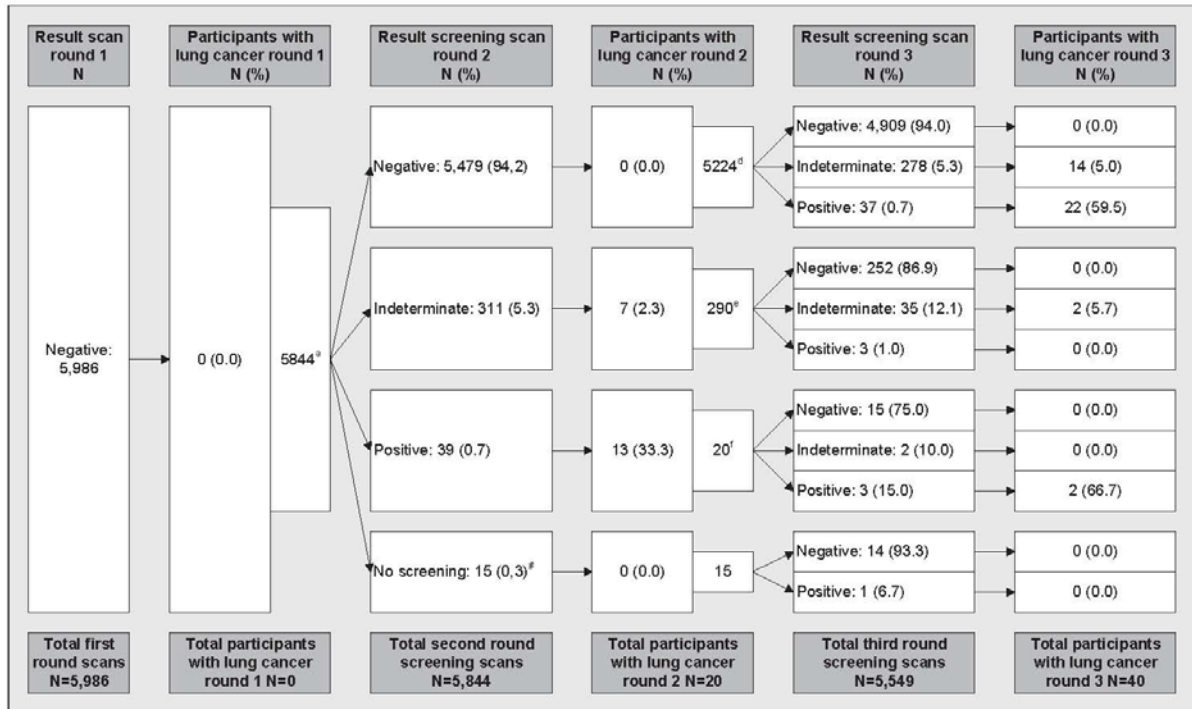
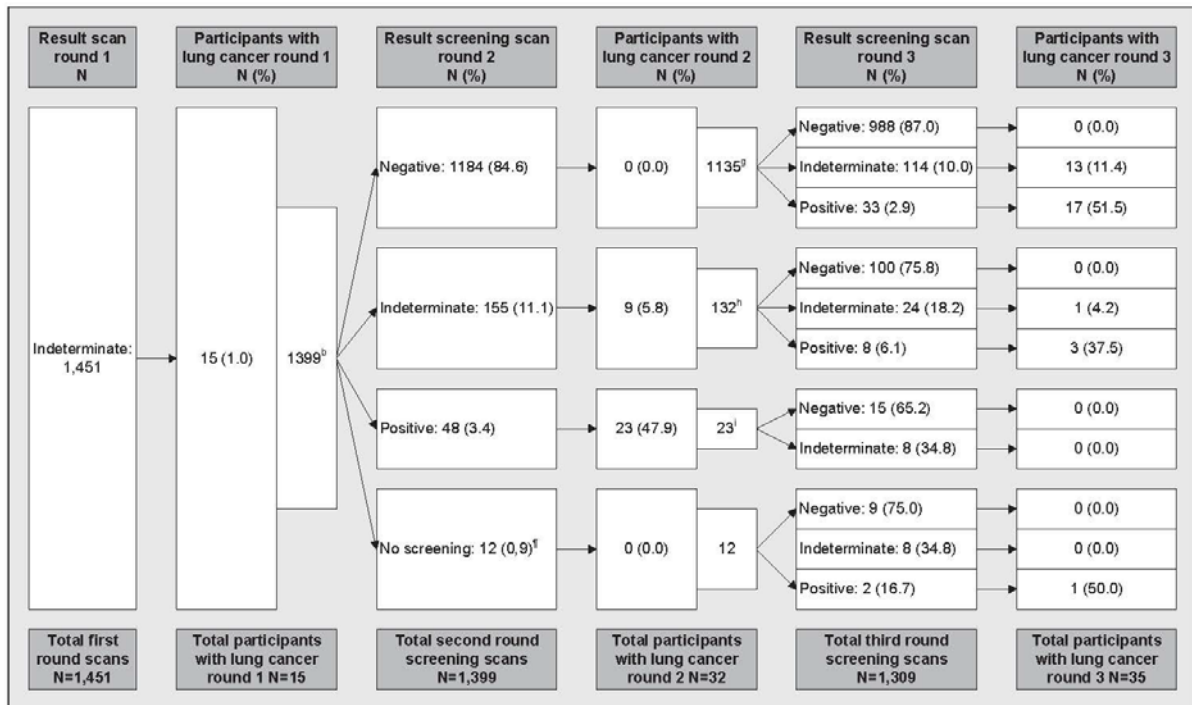


SUPPLEMENTARY DATA: FIGURE TITLE AND LEGENDS

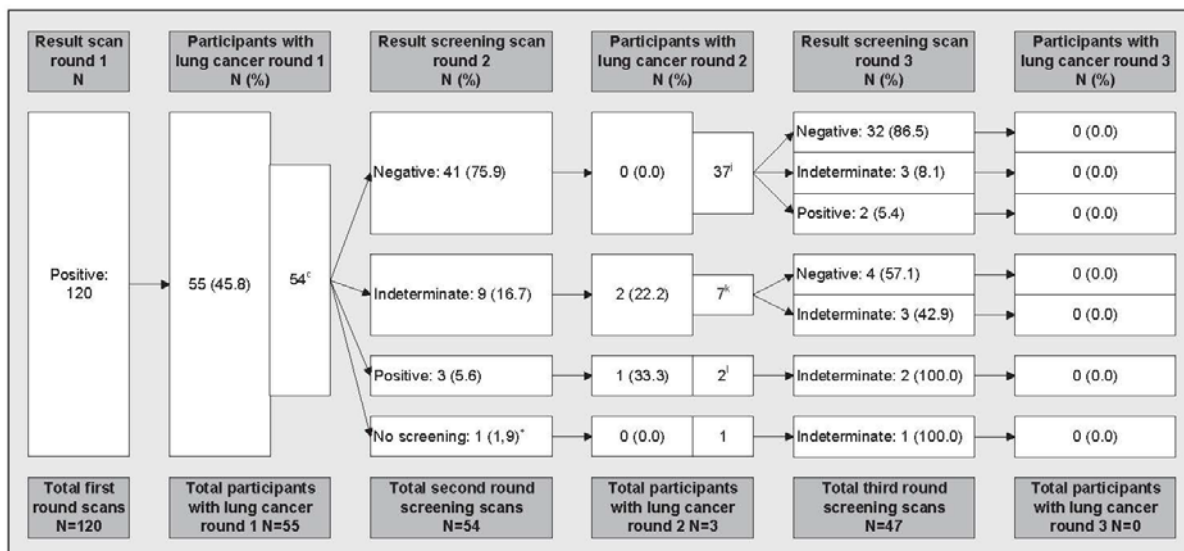
Figure 1. Overview of subsequent screening test results and lung cancer diagnoses



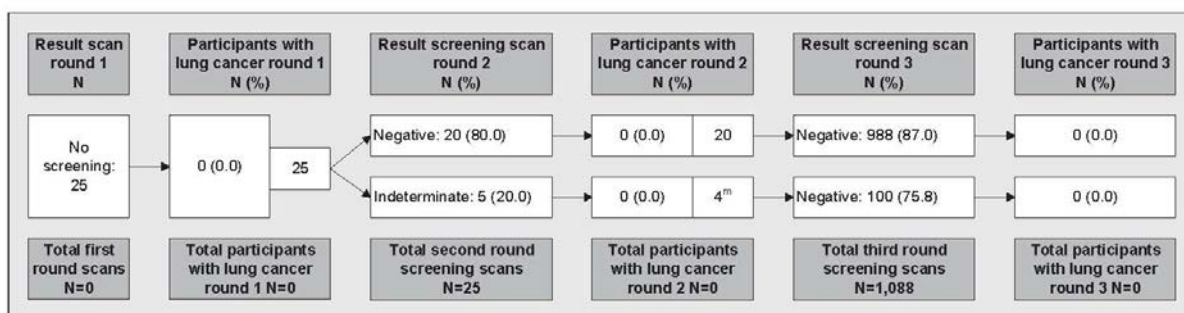
Panel A: Participants with a negative baseline scan



Panel B: Participants with an indeterminate baseline scan



Panel C: Participants with a positive baseline scan



Panel D: Participants with no baseline scan

Subscript

* 25 participants had no screening scan in the first round, because there was a delay in the returning of the informed consent.

15 participants had no screening scan in the second round because: participant declined (N=1), participant unattainable or repeatedly no show (N=14)

† 12 participants had no screening scan in the second round because: still in diagnostic work-up round one (N=2), participant declined (N=2), participant unattainable or repeatedly no show (N=4), administrative error (N=4)

* 1 participant had no screening scan in the second round because: still in diagnostic work-up round one (N=1)

- ^a 142 participants (5986 minus 5829) were not screened in the second and third round. Reasons: death (N=19), participant declined (N=81), participant unattainable or repeatedly no show (N=41), administrative error (N=1)
- ^b 52 participants (1451 minus 1399) were not screened in the second and third round. Reasons: lung cancer (N=13), death (N=7) still in diagnostic work-up round one (N=1), participant declined (N=25), participant unattainable or repeatedly no show (N=6). Cave: the other two subjects with screen-detected lung cancer did receive a second round scan because of an administrative error.
- ^c 66 participants (120 minus 54) were not screened in the second and third round. Reasons: screen-detected lung cancer (N=55), death (N=1), participant declined (N=10).
- ^d 255 participants (5479 minus 5224) were not screened in the third round. Reasons: death (N=56), participant declined (N=112), participant unattainable or repeatedly no show (N=82), administrative error (N=2), unknown (N=3)
- ^e 21 participants (311 minus 290) were not screened in the third round. Reasons: lung cancer (N=7), death (N=3), participant declined (N=9), participant unattainable or repeatedly no show (N=2)
- ^f 19 participants (39 minus 20) were not screened in the third round. Reasons: lung cancer (N=13), death (N=2), participant declined (N=4)
- ^g 49 participants (1184 minus 1135) were not screened in the third round. Reasons: death (N=16), participant declined (N=22), participant unattainable or repeatedly no show (N=10), administrative error (N=1)
- ^h 23 participants (155 minus 132) were not screened in the third round. Reasons: lung cancer (N=10), death (N=6), participant unattainable or repeatedly no show (N=2), participant declined (N=5). Cave, one participant was already diagnosed with lung cancer in de first round, but received a second round scan because of an administrative error.
- ⁱ 25 participants (48 minus 23) were not screened in the third round. Reasons: lung cancer (N=24), participant declined (N=1). Cave, one participant was already diagnosed with lung cancer in de first round, but received a second round scan because of an administrative error.
- ^j 4 participants (41 minus 37) were not screened in third round. Reasons: death (N=1), participant declined (N=2), participant unattainable or repeatedly no show (N=1)
- ^k 2 participants (9 minus 7) were not screened in the third round. Reasons: lung cancer (N=2)
- ^l 1 participant (3 minus 2) were not screened in the third round. Reasons: lung cancer (N=1)

^m 1 participant (5 minus 4) were not screened in the third round. Reasons: participant unattainable or repeatedly no show (N=1)

SUPPLEMENTARY DATA: TEXT

Lung cancer diagnoses not proven by histology

Lung cancer diagnoses in the first three rounds of the NELSON trial were based on histology or cytology in 187 of 200 (93.5%). The basis for the diagnosis in the 13 participants without histology or cytology is:

Round one:

- 1) Tumor in the right upper lobe, volume 1502mm³, PET-positive, cT1aN0M0, patient did not undergo thoracic surgery due to cardiac impairment.
- 2) Tumor in left lower lobe, volume 2687mm³, PET positive, cT1aN0M0, patient did not undergo thoracic surgery due to COPD stage IV.
- 3) Tumor in left lower lobe, volume 2792mm³, PET-positive, cT1aN0M0, patient did not undergo thoracic surgery due to COPD and renal failure.

Round two:

- 1) Tumor in right upper lobe, volume 580mm³, PET-positive, cT1aN0M0, the patient did not undergo thoracic surgery due to metastasized prostate carcinoma.
- 2) Tumor in right lower lobe, volume 2793mm³, PET-positive, cT1bN0M0, the patient did not undergo thoracic surgery due to poor pulmonary function.
- 3) Tumor in right upper lobe, volume 891mm³, PET indeterminate, cT1aN0M0, the patient died just before intended thoracic surgery due to bowel ischemia.

Round three:

- 1) Tumor in right lower lobe, volume 731mm³, PET-positive, cT1aN0M0, the patient did not undergo thoracic surgery due to poor pulmonary function.
- 2) Tumor in left lower lobe, volume 108mm³, VDT 125 days, PET-positive, cT1aN0M0, the patient did not undergo thoracic surgery because he also participated in another study and was randomised to the radiotherapy treatment arm.
- 3) Tumor in right upper lobe, volume 383mm³, VDT 289 days, PET interminate, cT1aN0M0, the patient did not undergo thoracic surgery because he refused, he was treated with stereotactic radiotherapy instead.

4) Tumor in left lower lobe, volume 1108mm³, PET positive, cT1aN1M0, the patient did not undergo thoracic surgery due to poor pulmonary function.

5) Tumor in left lower lobe, diameter 10mm, PET positive, cT1aN0M0, the patient did not undergo thoracic surgery due to poor pulmonary function.

6) Tumor in right upper lobe, diameter 13.2x11.6mm, PET positive, cT1aN0M0, the patient did not undergo thoracic surgery due to poor pulmonary function and general condition

7) Tumor in right upper lobe, diameter 19.2x12.7mm, PET positive, cT1bN0M0, the patient did not undergo thoracic surgery due to poor general condition