

LOW-DOSE COMPUTER TOMOGRAPHY AS A SCREENING TOOL FOR LUNG CANCER IN HIGH RISK POPULATION.

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Purpose

The aim of the study was to evaluate usefulness of a low- dose computer tomography as a screening tool for early stage lung cancer.

Methods

The study was performed with 332 individuals aged 55-70 , with at least 10 pack-years of cigarette smoking, asymptomatic with no previous cancer. Baseline and repeated LD-CT scans were performed. Pulmonary nodules were classified (on both baseline and repeat scan) according to size and morphology and the results were categorized as negative (no nodules observed), semi-positive (nodules 4mm or smaller in diameter) and positive (nodules 5 mm or larger). Based on a patient category either repeat low- dose CT, bronchoscopy with/ without biopsy or PET- CT was performed.

Result

The baseline screening showed 59 positive results. 18 patients were hospitalized, underwent further diagnostics. One of these had stage I disease and a lobectomy was performed. Three patients had stage IV disease and were referred to chemotherapy.

We described 103 semi-positive results. Only 25 of those patients had a repeat scan, because of a noncompliance. We observed no significant growth of a diagnosed nodules in a semi- positive group.

Conclusion

Low- dose CT can be used as a screening tool for early stage lung cancer. High percentage of false-positive results is observed. Difficulties to diagnose nodules in patients with post-tuberculosis changes. High rate of a noncompliance was noticed.