

Feasibility of a screening programme for lung cancer in former asbestos workers

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BACKGROUND: Low-dose computed tomography (CT) has been found to detect more Stage IA lung cancer than chest x-ray.

AIMS: To investigate whether lung cancer screening with CT was effective and acceptable in former asbestos workers.

METHODS: CT scanning was carried out following the protocol previously described in the literature. A questionnaire was used to assess cumulative asbestos exposure. An economic analysis was also performed. Informed consent was obtained from all patients.

RESULTS: A total of 1119 male asbestos workers (58% of invited) were examined, of whom 65% were smokers or ex-smokers. Mean age was 57.1 years with mean cumulative exposure to asbestos of 123 fibres/ml x years. Pleural plaques were found in 375 workers (32%), while 338 workers (29%) were included in the radiological follow-up, which led to 25 biopsies (13 of lung, 9 of pleura, 3 of both) and five screen-detected lung cancers (0.4%), one in Stage I. Incidence rate was 149 per 105, equal to that in the male general population of similar age. The expenses for diagnosis were 1014 and 244962 Euro per screened subject and screen-detected lung cancer case, respectively.

CONCLUSIONS: Screening adherence and frequency of detection were low, while costs and radiation dose were high. In spite of a high cumulative asbestos exposure, lung cancer risk was not increased relative to the general population. The screening programme was not felt to be cost-effective from the perspective of the government as a third-party funding agency.

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