# The impact of chest computed tomography and chest radiography on clinical management of cystic fibrosis lung disease. 

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## Study design (if review, criteria of inclusion for studies)

Randomized cross-over design

## Participants

Patients aged 8-18â $€^{-}$years, randomly selected from two CF centres in The Netherlands.

## Interventions

36 web based clinical vignettes (i.e. case simulations) were designed using clinical data from patients. In a randomized cross-over design, clinicians assessed eight vignettes and suggested therapeutic/diagnostic management on two occasions, with a ten-week interval. Radiological information (CT or CR) was included at only one of the two assessments, in random order.

## Outcome measures

Any differences in management could be attributed to information from CT or CR, and were compared by McNemar analysis.

## Main results

44 European and Australian clinicians completed a total of 143 CT vignette pairs and 167 CR vignette pairs. CT was associated with a significant increase in antifungal treatment (Risk Ratio (RR) 2.8 (1.3-6.0, pâ€ $=a ̂ €^{-} .02$ )), bronchoscopies (RR 1.6 (1.1-2.5, pâ€ ${ }^{-}=\hat{\ell^{-}} .04$ )), mycobacterial cultures (RR 1.3 (1.0-1.5, pâ€ ${ }^{-}=\hat{€^{-}} .02$ )), and 'need for hospitalization' (i.e. intravenous antibiotics and/or bronchoscopy) (RR 1.4 (1.0-1.9, pâ $\epsilon^{-}=\hat{€^{-}} .03$ )). CR led to a significant increase in inhaled antibiotics only (RR 1.3 (1.0-1.6, pâ€ $=$ â $€^{-} .04$ )).

## Authors' conclusions

CT but not CR, at routine biennial follow-up was associated with several changes in treatment and/or diagnostic testing, including the need for hospitalization.
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## See also

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## Keywords

computed tomography; non pharmacological intervention - diagn; diagnostic procedures; Respiratory System Agents;

