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## Letter

## Lung metastasectomy for colorectal cancer in the PulMiCC randomised controlled trial

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We congratulate Osterlund and colleagues for concluding the Finnish prospective study of repeated centralized assessment of colorectal cancer metastases for resection (RAXO) [1]. The limitation of the study is that in the absence of control data it cannot determine whether the interventions improved survival.

There have been 16 randomised controlled trials (RCTs) of intensification of monitoring after primary resection. They consistently detect more patients with metastases deemed treatable and just as consistently failed to show a survival benefit [2]. The Pulmonary Metastasectomy in Colorectal Cancer (PulMiCC) study, cited by the authors, recruited 512 patients in 25 centres [3]. The local multidisciplinary teams selected 263 and 128 patients to have or not to have lung metastasectomy, 93 patients were randomised to a nested RCT.

Those selected for metastasectomy much more frequently had a solitary metastasis (69% versus 35%) and unimpaired performance scores (68% versus 36%). Other prognostically favourable characteristics—carcinoembryonic antigen assay, prior liver metastasectomy, age and lung function—all favoured the metastasectomy group. Five-years survival was 47% and 22%, a difference which could be explained by the available hazard ratios from a meta-analysis of 2925 lung metastasectomy patients [4].

In a nested controlled trial of 93 randomized patients (PulMiCC RCT) all factors were very well balanced between the two arms. There was no difference in survival at any time point (Figure 3(3)) or

in health utility [5]. RAXO is excellent and the data collection is impressive but having established a nationwide centralized process, the next step must surely be to plan RCTs to test the true effectiveness of local treatments.

## Author contributions

Tom Treasure is Chief Investigator of the PulMiCC trial and led on the literature search, study design and writing of the study and wrote the first draft and edited the final version of this letter. Norman R Williams is Deputy Director of the Surgical and Interventional Trials Unit. They worked with others on data collection, analysis and presentation and contributed equally in preparing this Letter to the Editor.

Dr. Treasure has nothing to disclose.

Dr. Williams has nothing to disclose.

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