DIAGNOSTIC IMAGING

A new dawn for CT scans in colon screening?

Colonoscopy is the optimal colorectal cancer screening tool in terms of sensitivity and the ability to treat areas of concern at the time of screening; however, it is an unpleasant experience and many people do not take up the offer of an appointment for this reason. Investigators led by Evelien Dekker therefore decided to determine if screening using a CT scan to perform a 'virtual colonoscopy' or colonography would have higher uptake and an acceptable sensitivity profile.

The researchers invited members of the general population to either a colonoscopy or a CT colonography appointment using a 2:1 randomization pattern. Of the 5,924 individuals invited to undergo a colonoscopy, 1,276 (22%) underwent the

procedure; this compares with 982 people (34%) who had a colonography out of 2,920 invitees.

Getting people to attend is obviously only part of the story, the screening modality also needs to be highly sensitive for the screening program to have an impact on incidence and mortality. By this measure the colonoscopy outperformed the colonography. 111 colonoscopy participants were diagnosed with advanced neoplasia (8.7 per 100 individuals), compared with 60 in the colonography group (6.1 per 100 individuals). In the population who underwent screening this difference was significant, but if we consider the whole invited population there was no significant

difference in cancer diagnosis between the two groups (1.9 and 2.1 in 100 invitees for colonoscopy and colonography).

In an independent commentary published to support the original study, Perry Pickhardt states: "the issue with screening for colorectal cancer is not related to the test efficacy *per se*, but rather to the willingness of patient participation. By offering the additional option of CT colonography for screening, overall patient outcomes will be positively affected."

It seems that CT colonography is a useful addition to a colorectal cancer screening strategy, but Dekker and her coauthors offer a note of caution: "we should keep in mind that the detection rates for advanced neoplasia might be different in subsequent screening rounds ... Additionally, other factors such as cost-effectiveness ... should be taken into account." The authors also point out that both colonoscopy and colonography have a lower take up rate than other screening methods, including the fecal occult blood test, something that should likely be considered in future studies.

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This article is modified from the original in *Nat. Rev. Clin. Oncol.* (doi:10.1038/nrclinonc.2011.189).

Original article Stoop, E. M. *et al.* Participation and yield of colonoscopy versus non-cathartic CT colonography in population-based screening for colorectal cancer: a randomised controlled trial. *Lancet Oncol.* doi:10.1016/S1470-2045(11)70283-2

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