Re: Cost-Effectiveness of Computed Tomographic Colonography Screening for Colorectal Cancer in the Medicare Population

Although we could argue at length over various key input assumptions in the cost-effectiveness analysis of computed tomographic colonography (CTC) screening in the Medicare population (1) that may spuriously affect the results (eg, the [un]natural history assumption for diminutive lesions) and may explain differences with our own modeling (2,3), this brief correspondence is not an ideal forum for such an exercise. Instead, we would like to focus on the two main conclusions of this modeling analysis because we believe that both conditions may be easily met, thus rendering any further arguments moot. The authors concluded that CTC would be a cost-effective screening option in their models if either 1) the cost was substantially less than colonoscopy or 2) a large proportion of otherwise unscreened individuals were to undergo CTC.

When dealing with costs or charges of medical tests, we agree that reporting results in terms of absolute dollars is problematic and makes comparison with other studies difficult. As such, it is perhaps more useful to consider relative costs. Knudsen et al. (1) used a “threshold cost percentage” for CTC relative to colonoscopy, which they compared with values from previously published analyses, which were generally within the 40%–80% range for all included studies. At our institution, the charge (and ultimate reimbursement) for colonoscopy is three to five times that for CTC, which fits well within this threshold.

In addition to the cost-effectiveness study by Knudsen et al., a number of editorials, publications, and coverage determinations have echoed the notion that there is currently no evidence that adding CTC to the menu of available screening options would increase overall adherence. Nonetheless, Knudsen et al. found that CTC would be a cost-effective screening option (at the base-case estimate cost of $488) in the Medicare population if its availability would entice 25% of otherwise unscreened individuals to undergo screening with CTC. Emerging data from the few CTC screening programs in existence suggest that this condition may be easily met. Survey data from the largest CTC screening experience in the United States indicate that nearly 40% of individuals screened by CTC would have foregone screening if CTC had not been an available option (4). In a separate study, more than 80% of a nonadherent urban cohort said that they would be willing to undergo CTC (5). Our own experience shows that colonoscopy screening volumes are not negatively impacted by parallel CTC screening (6). These findings are of particular relevance to the Medicare population, in which a large study found that overall adherence rates were less than 30% (7), making the goal of a 25% CTC-related increase in screening appear to be easily met. Given the central importance of adherence rates to cost-effectiveness for colorectal cancer screening, it appears that such evidence may be the “missing link” needed to clear the way for Medicare coverage of CTC screening.

In summary, although Knudsen et al. concluded that CTC would be a cost-effective option if either of the above-mentioned criteria was satisfied, it appears that both the study cost and screening adherence stipulations can be met, suggesting that CTC would be an attractive addition to the existing screening options for Medicare beneficiaries.

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Notes
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