



## Lost in Translation? Avoiding Post-colonoscopy Colon Cancer

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Accepted: 25 January 2023 / Published online: 5 April 2023

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The last several years have yielded data requiring that changes be made in the currently available colorectal cancer (CRC) screening recommendations. One significant change is the rolling back in the US of the initial screening age from 50 to 45 [1]. I suspect it will move back to 40 in the US sooner rather than later. Likewise, there are data invalidating the common protocol of performing screening colonoscopy every 30 min with a withdrawal time of 6 min [2, 3]. We have data [2] indicating that a 9-min withdrawal time vs. the standard 6-min withdrawal time (excluding polypectomy time) significantly reduces the adenoma miss rate (AMR; 14.6% vs. 36.6%) and the advanced adenoma miss rate (AAMR; 5.3% vs. 46.9%). Moreover, other data provide guidance for a more specific use of withdrawal time [3]. More polyps (33.2% vs. 13.7%) are found if the endoscopist interrogates the right colon over a longer time (> 2 min vs. < 2 min). The adenoma detection rate (ADR) for the proximal bowel increases for an interrogation interval of > 4 min. Though these observations apply to the average endoscopist, for the excellent endoscopist with ADRs of > 35–40%, there may be no need to advance the withdrawal time by one-third. That notwithstanding, the standard 25% ADR and 6-min withdrawal time are about as valid as the now defunct recommendation of the commencement of screening at age fifty.

In this issue of *Digestive Diseases and Sciences* the contribution by Wenxi Jiang, Linying Xin and colleagues at The First Affiliated Hospital, College of Medicine, Zhejiang University, Hangzhou, China [4] describes their institution's protocols governing the conduct of screening colonoscopy. Unlike the customary protocol for most of the world, when polyp(s) are found, they are documented but not removed. These polyp-positive patients are referred within a median of 3 weeks for polypectomy plus documentation and removal of any neoplasia missed during the initial examination. With

this format, the authors were able to retrospectively address the polyp miss rate (PMR), the AMR, and the AAMR, all measures of increased risk for patients with at least a single neoplastic lesion at initial screening. A great deal of useful data with strategic implications are made available through this well-conducted, noteworthy retrospective investigation. A total of 3695 patients and 12,412 polyps were included in this 1-year review.

Patient demographics, polyp size, number, and histologic characteristics included the PMR (26.3%); the AMR (22.4%); and the AAMR (11.0%). The proportion of missed advanced adenomas in missed polyps was 5.1%. Since the risk of cancer is related to the nature and pathology of the missed polyp(s), the results are more focused when diminutive polyps, which comprise the majority of all polyps, are excluded. The recalculated PMR, AMR, and AAMR become 16%, 15%, and 17.9%, respectively, similar to the data reported in other tandem studies that are nicely summarized and referenced in the Discussion.

The per patient results are more applicable and particularly significant. In the 3695 patients with at least one polyp identified during the first exam, 1678 (45.4%) had polyp(s) identified during the second study; though the risk of missing an advanced adenoma was more reassuring at 3.9%. These data are only applicable for the short-term since risk increases with time [5, 6]. On the other hand, when considering the 952 patients who had at least one advanced adenoma identified during the initial exam, 143 patients had additional advanced adenomas at the second colonoscopy for a per patient AAMR of 13%. Moreover, more missed lesions were identified in the “right colon” which for this study included the cecum, ascending, and transverse colon that were compared with the miss rates in the remaining “left colon.” The PMR is higher for patients with > 2–3 polyps identified during the initial exam, and for subjects who are older, male, and smokers.

The most important and universally significant conclusion is provided in the last statement of the paper: “Endoscopists should pay more attention to the risk factors of PMR to reduce the incidence of CRC.” “Pay more attention” is

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more forthrightly interpreted in the Western vernacular as “improve how we as endoscopists conduct our campaign to prevent the occurrence of CRC.” “Pay more attention” implies being familiar with the current data and acting upon it. Enhancements aimed at reducing the PMR such as artificial Intelligence (AI) reduce the PMR by twofold (15.5% vs 32.4%) though are much less efficacious in finding advanced adenomas of > 6–9 mm [7]. Also, new technology adds to healthcare costs as the authors rightly point out. The authors suggest human factors may also contribute to the PMR by stating “...endoscopists miss lesions because of a “one and done” thought process; at times endoscopists do a better job when they are ‘more attentive.’” Finally, the authors comment on the “time pressure” of the typical colonoscopy schedule. The authors are asking us all to “pay attention,” i.e., integrate changes to improve the PMR and the currently inevitable cancer that the screening colonoscopy was intended to prevent. The literature provides evidence for the changes needed.

The nuances of language are important for understanding both Chinese and Western scientific commentary. The American Gastroenterological Association states the goals of > 35% ADR and > 9-min withdrawal time are “aspirational” [8]. Synonyms for this term include dream, desire, and wishful thinking. For clinically achievable improved care and of scientific necessity, it is time to implement these advanced quality indicators as the standards-of-care in an effort to reduce the unacceptably high incidence of CRC. Without an unequivocal recommendation for change, the heartbreaking task of explaining the tragic consequences of an avoidable post-colonoscopy CRC to the patient will remain uncomfortably frequent.

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