

POSTER ABSTRACTS

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An Automated Data Algorithm to Distinguish Screening and Diagnostic Colorectal Cancer Endoscopy Exams

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Background: The Healthy People 2010 report designated increasing colorectal cancer screening a public health priority. Colorectal cancer screening exams include fecal occult blood test, sigmoidoscopy, colonoscopy, and barium enema. Increasing screening rates and determining which exam to use in a given situation requires accurate data. Automated data provide opportunities to examine screening in large populations, but questions about accuracy and validity have not been addressed adequately. For example, health maintenance organizations use automated data to calculate quality measures despite the lack of indication information for the exams.

Methods: We developed a preliminary automated data algorithm to distinguish between screening and diagnostic colorectal cancer endoscopy tests and then assessed the algorithm's ability to correctly classify the exams using paper medical records as the gold standard. The algorithm used diagnostic codes to identify the indication of the endoscopies.

Results: The algorithm's ability to correctly classify the indication varied by endoscopy type. For sigmoidoscopy, the algorithm and medical record agreed for 62% of exams classified as diagnostic and 81% of exams classified as screening. For colonoscopy, agreement increased to 75% in the diagnostic classification, but agreement decreased to 64% for the screening classification.

Conclusions: Our findings suggest studies relying solely on automated data may overestimate screening rates if indication is not considered. Automated algorithms may be efficient tools to determine the indication of endoscopies; however, with future improvements, the preliminary algorithm may better differentiate screening from diagnostic exams.