Multitarget sDNA Increases Colorectal Cancer Screening among Previously Non-compliant Patients: the USMD Physician Experience

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Abstract LB-296

Background

Colon cancer is a major cause of death in men and women in the United States.1 Despite the longstanding availability and recent broad third party coverage of screening tests like stool occult blood, sigmoidoscopy, and colonoscopy, a large percentage of Americans are not up to date with colorectal cancer screening.2 Given the reluctance of some patients to have an invasive structural screening test like sigmoidoscopy or colonoscopy, high sensitivity noninvasive screening tests could provide an alternative to increase the percentage of Americans screened for colon cancer. USMD is an integrated health system in Dallas/Fort Worth, Texas and is focused on preventive care to improve population health. Physicians at USMD Health System began offering mt-sDNA to patients in October 2014 in an effort to improve colorectal cancer screening among previously non-compliant patients.

Cologuard® is an FDA approved noninvasive, multi-target stool DNA test (mt-sDNA) which has documented superior sensitivity for colorectal cancer, high grade dysplasia, advanced adenoma, sessile serrated adenoma/polyps and non-advanced adenomas compared to fecal immunochemical testing (FIT) alone, with somewhat lower specificity.3 Mt-sDNA included in the American Cancer Society colorectal cancer screening guidelines and covered by Medicare at three year intervals. Mt-sDNA is included as an alternative in the draft statement on colorectal cancer screening of the United States Preventive Services Task Force.

Patient compliance with colorectal cancer screening is a quality metric for USMD primary care physicians and is documented within our electronic health record (EHR). Despite repeated efforts by providers, some patients continuously refuse colonoscopy and have not collected stool for occult blood. We evaluated mt-sDNA in non-screening compliant average risk Medicare patients age 50-85 and assessed compliance with mt-sDNA screening and with diagnostic colonoscopy usage on positive cases. We correlated positive mt-sDNA results with colonoscopy findings. High risk patients (symptomatic or with a significant personal or family history of colorectal neoplasia or inflammatory bowel disease) were not included.

Methods

We performed a HIPAA compliant retrospective EHR based medical records review (October 2014 - September 2015) to identify mt-sDNA use in average-risk Medicare patients treated by USMD Physician Services (Dallas, Texas) who were not previously compliant with colon cancer screening. We offered mt-sDNA to patients who were either >10 years since last colonoscopy and/or >1 year since last fecal occult blood test. Follow-up colonoscopy was advised for all patients with a positive result. Positive mt-sDNA results prompted tabulation of colonoscopy and pathology findings with patient classification based on the most significant pathology finding (index lesion). Histologic classification, size, location and total number of adenomas and non adenomatous polyps were tabulated.

Results

Over 12 months, 77 providers ordered 393 mt-sDNA studies with 347 completed (88.3% compliance). Patient mean age was 69.8 (50-85) and patients were 64% female. Mt-sDNA was negative in 85.3% (296/347) and positive in 14.7% (51/347). Follow-up colonoscopy was performed in 46 positive patients (90.2% colonoscopy compliance) with 3 patients refusing colonoscopy and two patients lost to follow up. Index findings included: colon cancer (4/46, 8.7%), advanced adenomas (21/46, 45.6%), non-advanced adenoma (9/46, 19.6%), and negative results (12/46, 23.0%). The positive predictive value for advanced colorectal lesions was 54.3% and for any colorectal neoplasia was 73.9%.

Conclusions

The availability of mt-sDNA provided significant medical benefit to our previously screening noncompliant Medicare population. Patients with clinically critical advanced colorectal neoplasia were identified as a result of high compliance with both mt-sDNA screening and subsequent follow-up diagnostic colonoscopy.

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References