Patient Preferences for Colon Cancer Screening Tests

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**Specific Aims:**
- To determine if patients have preferences regarding testing options for colon cancer screening
- To determine if specific test characteristics influence patients to seek or not seek colon cancer screening, in order to better understand barriers to screening

**Hypothesis:**
- Patients have preferences with regard to colon cancer screening tests
- Patient characteristics may correlate with their preferences
- Patients who are unwilling to undergo one mode of testing may be willing to undergo another mode of testing

**Background:** Colon cancer is the third leading cause of cancer death in the U.S. Various methods for screening are available and reduce mortality. Despite this, only about half of eligible patients are screened. This may be due to patients finding a screening modality objectionable, or not understanding the importance of screening. Patient education and utilizing patient preferences in decision making may improve screening rates.

**Methods:** This is a prospective, non-randomized pilot study. We collected self-reported demographic information from 92 patients recruited from primary care clinics at a VA Hospital and a University-based clinic. We designed an educational tool and patient preference survey utilizing a computer program called Maximum Differences Scaling (Max Diff, Sawtooth Software); a tool used in consumer product preference surveys. Max Diff presents the patient with multiple series of four attributes of the different testing options, and asks the patient to choose the most important attribute in each group. The survey compared the following tests: fecal occult blood testing (FOBT), sigmoidoscopy, colonoscopy, CT colonography and colon capsule.

**Results:** A total of 99 patients were enrolled in the study. The average age was 65.3 years. 20.2% of patients were African American; 86% of patients were male. They had diverse educational backgrounds. While 85% had prior colon cancer screening, 28% had refused screening at some point in the past. Of these, 44% didn't like the test offered, 26% didn't realize screening was important, 4% said the timing was bad, 4% couldn't get a ride, and 22% had other reasons. In frequency analysis of the attributes of the tests, the sensitivity and the risk of a perforation/tear were very important to most patients. The need to have a second test (colonoscopy) was moderately important to most patients. Surprisingly, the risk of pain, the need to take a prep, and the need to have a tube in the rectum were not important to most patients. Wilcoxon analysis was applied to evaluate a link between patient characteristics and test attributes. Increasing age correlated with valuing the risk of a capsule getting stuck (p<0.0014) and the need for sedation (p<0.0014). Employed patients valued the need to miss work (p<0.0013). Married patients and patients who chose colonoscopy as a preferred test valued test sensitivity (p<0.026and p<0.0130). Patients with fair or poor health were concerned with the need to have a tube in the rectum (p<0.0249) and the sensitivity of the test (p<0.0085). Race, college education, and prior refusal of screening did not correlate with any attributes. Post-survey, 96.7% were willing to have screening if they could choose the test. Their preferences were: colonoscopy 62%, colon capsule 23.5%, CT colonography 9.2%, FOBT 4% and sigmoidoscopy 1%.

**Conclusions:** Patients have different preferences for colon cancer screening tests, and place different values on the various attributes of the screening options. Offering different options and
educating patients about the importance of screening, as well as the tests themselves, may improve screening rates.