

## **A Qualitative Study of a New Metric for Estimating the Risk of Early-onset Colorectal Cancer in Male Veterans**

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**Background:** Identifying patients who benefit from screening prior to ages 45 or 50 through risk-prediction models may improve the uptake and effectiveness of colon cancer (CRC) screening. “Colon Age” is a way to estimate a person’s risk for CRC in Veterans younger than age 50. The purpose of this study is to determine what patients and primary care providers think about the “Colon Age” concept in terms of its comprehensibility, acceptability, and utility for decision-making about CRC screening.

**Methods:** Veteran patients < 50 years old and primary care providers (PCPs) were recruited from the Roudebush VAMC’s outpatient clinics. Semi-structured, qualitative interviews were conducted one-on-one and included Likert-scale and open-ended questions. The estimate of colon age is based on relating a person’s individual features to the 5-year age group in the U.S. population of men with the closest risk of CRC based on Surveillance, Epidemiology, and End Result cancer incidence data.

**Results:** 19 patients and 8 PCPs were recruited. The majority of patients (68%) had a colon age below that of their biological age, while 2 of 19 (11%) had a higher colon age. PCPs identified the tool’s potential to promote screening uptake, facilitate discussion between patients and PCPs, and adhere to current practices as facilitators. Identified barriers among PCPs and patients included questions about tool accuracy and validation, patient reluctance to receive any form of screening, and limited perceived utility for patients between the ages 45-49.

**Conclusions and Potential Impact:** Using the concept of colon age to express individual patient risk for early-onset CRC was well-received among almost all veteran patients and physicians interviewed. Colon-age adapted screening tools should be incorporated into the electronic health record reminders to facilitate decision-making and screening uptake. Colon-age based personalized screening has the potential to improve cancer detection by providing individualized recommendations.