Study reports adenoma detection rates are higher than current guidelines suggest in both men and women

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Researchers at Mayo Clinic in Jacksonville, Florida, report in a new study that average-risk screening adenoma detection rates (ADR) are significantly higher than current guidelines suggest for both men and women. The study found that the overall average-risk screening ADR was 33.7 percent for both genders combined. Women had a 25.4 percent risk in the study versus a 15 percent risk noted in guidelines; men had a 41.2 percent risk in the study versus a 25 percent risk noted in guidelines. Overall advanced-pathology adenoma detection was 12.2 percent for both genders combined. There was a significantly higher advanced-pathology ADR for men (15.3 percent) versus women (8.7 percent). The study appears in the April issue of *GIE: Gastrointestinal Endoscopy*, the monthly peer-reviewed scientific journal of the American Society for Gastrointestinal Endoscopy (ASGE).

Colorectal cancer (CRC) is the third most common new cancer diagnosis and cause of cancer-related death for both men and women. Although the incidence of CRC is notably higher in men, both genders have a five percent lifetime risk of developing CRC. Adenomatous polyps (growths in the colon also called adenomas) are well-recognized as precursors of CRC, and their detection and removal during colonoscopy has proven to reduce the incidence of CRC. Recent advances in imaging capability and inspection technique have resulted in overall ADRs that are much higher than current multiple medical society guidelines recommend. Current guidelines suggest screening adenoma detection rates of 15 percent for average-risk women and 25 percent for average-risk men.

"The aim of our study was to determine gender-specific average-risk screening adenoma detection rates and the prevalence of adenomas by location, size, shape, and degree of dysplasia in each gender from our prospective study on adenoma detection. Recent data in abstract form report ADRs for women exceeding 25 percent. We hypothesized that ADRs for women in our average-risk screening patients also would be at least 25 percent," said study lead author Michael B. Wallace, MD, MPH, FASGE, Mayo Clinic, Jacksonville, Florida. "The ADR in our study was higher than current benchmarks for both genders; 25.4 percent for women and 41.2 percent for men. In patients with at least one adenoma, advanced-pathology adenomas were detected equally among men and women. Although the benefits of achieving supra-benchmark ADRs are unknown, high ADRs may lead to more effective colonoscopy."

**Methods**

The objective of the study was to determine average-risk screening ADRs and the prevalence of adenomas by location, size, shape, and degree of dysplasia in each gender. Data was collected prospectively on 2,400 outpatient colonoscopies as part of the Mayo Clinic's previous study of an endoscopist quality improvement program (EQUIP). Baseline-phase procedures were completed from August 2, 2010 through December 1, 2010, and after-training phase procedures were completed from January 5, 2011 through April 12, 2011. Data collection was suspended between phases while endoscopist training was completed. All procedures were completed by 15 experienced endoscopists.

For the purposes of this study on gender trends in adenoma detection, researchers reviewed the EQUIP database and identified all average-risk patients undergoing CRC screening. Average-risk patients were defined as those without a personal history of adenomatous polyps or a family history of CRC. A total of 864 average-risk patients were
included in the study. Then researchers determined the ADR for each gender and compared them with current medical society guidelines (25 percent ADR for men, 15 percent for women). The percentages of patients in each gender with adenomas that were large, flat, contained advanced pathology, or were proximally located were compared between men and women. ADR is defined as the percentage of screened patients with at least one adenoma detected.

**Results**

The overall average-risk screening ADR was 33.7 percent for both sexes combined. Average risks for women and men were significantly higher than guidelines; women had a 25.4 percent risk in the study versus a 15 percent risk noted in guidelines; men had a 41.2 percent risk in the study versus a 25 percent risk noted in guidelines. Overall advanced-pathology adenoma detection was 12.2 percent for both sexes combined. There was a significantly higher advanced-pathology ADR for men (15.3 percent) versus women (8.7 percent). There was no significant difference between the genders when age was considered in both advanced-pathology and average-risk ADRs.

If the overall ADR is considered, adenoma detection is higher in men; therefore, logically, overall advanced pathology adenoma detection will be higher as well. These results, however, suggest that once an adenoma is present, the chance of an advanced-pathology adenoma is the same, regardless of sex. The researchers stated that this highlights the need for vigilance in identifying patients of both sexes with adenomas as a predictor of advanced-pathology adenomas and future CRC risk.

The researchers noted some important study limitations. The study was completed in a purely academic center by experienced endoscopists with high adenoma detection rates and as part of a study on improving adenoma detection. It is possible that these factors may have increased their detection. They also do not have data on how many of the patients were having first-time screening, although arguably a prior negative examination may make adenoma detection less likely and therefore lower their detection results. They also acknowledge that the small sample size of average-risk screening patients limits interpretation of their results. Despite these limitations, the researchers believe these results add valuable data toward understanding gender trends in adenoma detection by using today's technology and colonoscopy technique. Further large studies in various practice settings are needed, however, before recommendations for guideline changes can be made.

Provided by American Society for Gastrointestinal Endoscopy

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