

Clinical Risk Group at Baseline is Associated with 10 Year Outcomes in a Screening Cohort: A Longitudinal Analysis of the CSP 380 Cohort



L. Musselwhite^{1,2}, D. Lieberman^{3,4}, D. Abbott², M. O'Leary², E. Hauser^{1,2}, C. Williams², R. McNeil², B. Sullivan^{1,2}, D. Weiss⁵, Z. Gellad^{1,2} and D. Provenzale^{1,2}



¹Duke University, Durham, NC ²Cooperative Studies Program Epidemiology Center-Durham, Department of Veterans Affairs, Durham, NC ³Oregon Health and Science University, Portland, OR ⁴Department of Veterans Affairs, Portland, OR ⁵Cooperative Studies Program Coordinating Center, Department of Veterans Affairs, Perry Point, MD

Laura.musselwhite@duke.edu
Dawn.provenzale@va.gov

Background and Objective

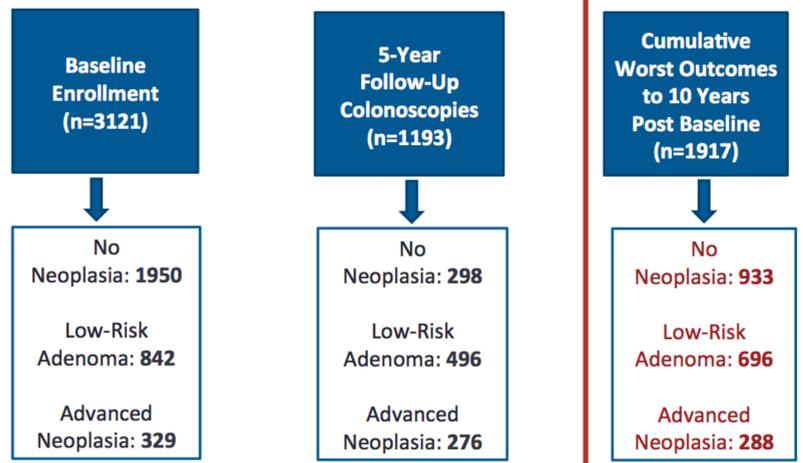
- Colorectal cancer (CRC) is the second leading cause of cancer-related death in the United States and the vast majority of deaths are preventable. Risk of CRC is derived from studies with 3-5 years follow-up while new information suggests that many patients may not need intensive surveillance
- Cooperative Studies Program (CSP) #380, Risk Factors for Large Colonic Adenomas, is an observational study of 3121 Veterans enrolled from 1994-97 at 13 VA sites for screening colonoscopy and prospective follow-up
- We report 10-year outcomes based on risk group after baseline colonoscopy

Methods

✦ **Participant data:** Asymptomatic Veterans age 50-75 who had not undergone CRC screening in the prior 10 years underwent colonoscopy and were classified into 6 risk groups by baseline colonoscopy findings: no neoplasia, 1-2 small adenomas, 3-10 adenomas, >10 adenomas, advanced adenoma (polyp ≥ 1 cm, villous histology, or high grade dysplasia), and CRC. Subjects were followed for 10 years until death or last colonoscopy

✦ **Outcomes:** We report the proportions who developed advanced neoplasia (defined as advanced adenoma or CRC) and CRC

10-Year Findings



Results

Table 1. 10-Year Outcomes by Baseline Colonoscopy Findings

Baseline (N)	Any Follow-Up Colonoscopy (N)	Advanced Neoplasia in 10-Year Period	Colorectal Cancer in 10-Year Period
Cohort (3121)	1917	150 (7.8%)	23 (1.2%)
No neoplasia (1950)	933	4.0%	0.8%
1-2 tubular adenomas <10 mm (687)	560	5.9%	0.9%
3-10 adenomas (153)	134	15.7%	0.7%
> 10 adenomas (2)	2	0%	0%
Advanced adenoma (299)	265	19.2%	1.9%
Colorectal cancer (30)	23	34.8%	21.7% (n=5)

Findings

Table 2. 10-Year Advanced Neoplasia Risk and Implications

Baseline	10-Year Risk of Advanced Neoplasia	Implications
Cancer	High	Intensive surveillance
Advanced neoplasia or >3 adenomas	High in the first 3 years, followed by a sharp decline	1) Early intensive surveillance 2) Less frequent surveillance later if no advanced neoplasia is found during surveillance
1-2 tubular adenomas <10 mm	Low – similar to patients with no neoplasia at baseline	May not need surveillance if baseline exam is high-quality

Conclusions

□ Baseline colonoscopy result is a strong predictor of 10-year outcomes of advanced neoplasia

✓ Patients with baseline CRC are at high risk for recurrence and need intensive surveillance

✓ Patients with baseline advanced neoplasia or > 3 polyps need early intensive surveillance, particularly for the first 3 years

References

- D.A. Lieberman, D.G. Weiss, J.H. Bond, D.J. Ahnen, H. Garewal, G. Chejfec. Use of colonoscopy to screen asymptomatic adults for colorectal cancer. Veterans Affairs Cooperative Study Group 380. *N Engl J Med.* 2000 Jul 20;343(3):162-8
- D.A. Lieberman, D.G. Weiss, W.V. Harford, D.J. Ahnen, D. Provenzale, S.J. Sontag. Five-year colon surveillance after screening colonoscopy. *Gastroenterology.* 2007 Oct;133(4):1077-85.

Support

This research was supported by the VA Cooperative Studies Program

Figure 1.

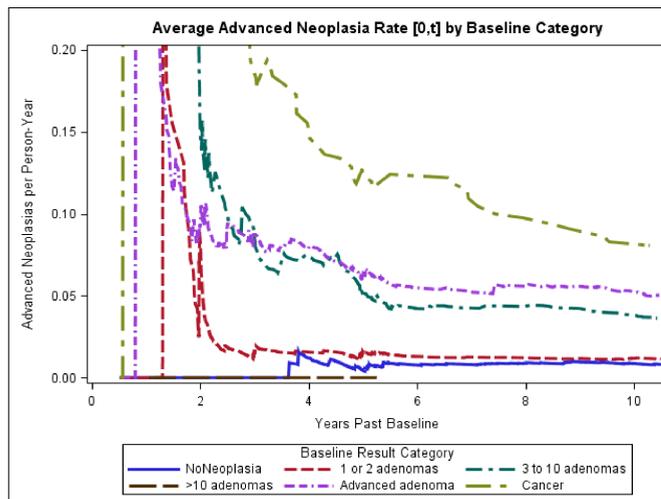


Figure 2.

