

BACKGROUND

- Germline pathogenic variants (PV) in *CDH1* predispose to hereditary diffuse gastric cancer and lobular breast cancer
- No data exists on colorectal neoplasia in *CDH1* PV carriers undergoing screening colonoscopy
- Current adenoma detection rate (ADR) benchmarks in average risk men and women are 30% and 20%, respectively and 25% in a mixed gender population

METHODS

Retrospective cohort at Cleveland Clinic utilizing the Cologene™ database in the David G. Jagelman Inherited Colorectal Cancer (CRC) Registry

Inclusion criteria

Asymptomatic patients with a germline *CDH1* PV who had ≥ 1 colonoscopy

Main outcomes

- 1) ADR defined as number of patients with ≥ 1 adenoma
- 2) Advanced adenoma (AA) = adenoma ≥ 10 mm, or with any villous component or HGD)
- 3) Advanced neoplasia (AN) defined as AA + CRC

AIM

Investigate the prevalence of colorectal neoplasia in carriers of *CDH1* PV undergoing screening colonoscopy

DEMOGRAPHIC CHARACTERISTICS AND COLONOSCOPY FINDINGS

Demographics	n = 34
Gender: Female	24 (70.6%)
Personal history of gastric cancer	16 (47.1%)
Personal history of breast cancer	13 (38.2%)
Family history of colorectal cancer	11 (32.4%)
Colonoscopy findings	
Age at 1 st colonoscopy, median yrs [IQR]	50.1 [46.7;57.8]
No. of colonoscopies per patient	
• 1	24 (71%)
• 2-3	10 (29%)
No. patients with polyps	18 (53%)
• Hyperplastic polyps	4 (12%)
• Tubular adenomas < 10 mm	12 (35%)
• Advanced adenomas	4 (12%)
○ Tubulovillous / villous	3 (9%)
○ High-grade dysplasia	1 (3%)
CRC (stage 1)	1 (3%)
Age at 1st adenoma, median yrs [IQR]	54.6 [47.4;63.3]
Age at 1st AA, median yrs, [IQR]	54.1 [50.4;58.0]
Age at CRC, yrs	49.2
[IQR] = Interquartile range	

RESULTS

- 61 carriers of a *CDH1* PV were identified
- 34 (56%) had colonoscopy and included [Table]
- ADR = 47%; AA = 12% and AN = 15% including 1 patient with CRC (3%)
- No patient with AN had a family history of CRC

CONCLUSIONS

- Our small cohort of mostly female, average risk, asymptomatic *CDH1* PV carriers showed a high ADR and prevalence of early-onset advanced neoplasia
- The ADR is 2 x higher when compared to national established adenoma benchmarks
- We suggest screening colonoscopy begin by age of 45 and 10 years earlier than the age of diagnosis of CRC if present in a first-degree relative
- Larger studies are required to confirm our findings

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