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National Trends in the Incidence of Sporadic Malignant Colorectal Polyps in Young Patients (20-49 Years): An 18-Year SEER Database Analysis

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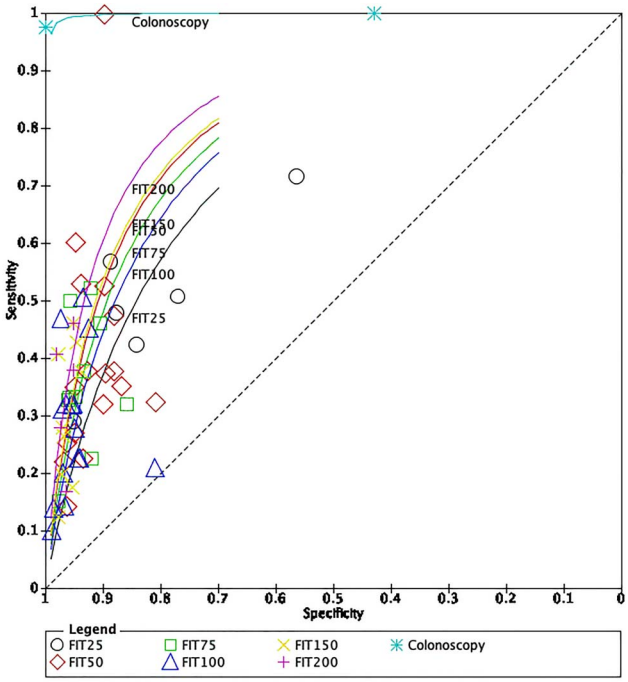

[0326] **Figure 1.** SROC of diagnostic accuracy of colonoscopy and different cut-offs of FIT.

[0326] **Table 1. Diagnostic test accuracy of FIT for most used cut-off.**

Cut-off	*Number of studies*	*Sensitivity*	*Specificity*	*Area under curve*	*Positive LR*	*Negative LR*	*DOR*
25 ng/mL	6	0.48 (0.37-0.59)	0.84 (0.73-0.91)	0.69 (0.65-0.73)	3.0 (2.1-4.3)	0.62 (0.54-0.71)	5 (4-7)
50 ng/mL	17	0.35 (0.30-0.42)	0.93 (0.91-0.94)	0.78 (0.74-0.81)	4.8 (3.8-6.0)	0.70 (0.64-0.76)	7 (5-9)
75 ng/mL	10	0.36 (0.29-0.43)	0.94 (0.92-0.96)	0.79 (0.75-0.82)	5.9 (4.5-7.8)	0.69 (0.62-0.76)	9 (6-12)
100 ng/mL	15	0.27 (0.20-0.34)	0.96 (0.95-0.97)	0.85 (0.82-0.88)	7.1 (6.0-8.5)	0.76 (0.70-0.83)	9 (8-12)
150 ng/mL	9	0.29 (0.21-0.39)	0.96 (0.96-0.97)	0.92 (0.89 - 0.94)	7.9 (6.7-9.4)	0.72 (0.65-0.82)	10.9 (8.3-14.2)
200 ng/mL	5	0.37 (0.30-0.46)	0.96 (0.95-0.97)	0.87 (0.84-0.90)	10.0 (7.8-12.9)	0.65 (0.58-0.73)	15 (12-21)

time gap from FIT to colonoscopy (P=0.09) and risk of bias (high or unclear as compared to low) criteria in diagnostic accuracy of FIT (P=0.82).

Conclusion: Sensitivity of FIT might have been overestimated in previous studies focusing on colorectal cancer as compared to advanced neoplasia and it seems to be independent of age, location of neoplasia or cut-offs contrary to some previous studies. Lowering the cut-off will reduce diagnostic odds ratio by increasing specificity but without any effect on sensitivity.

S327 Presidential Poster Award

National Trends in the Incidence of Sporadic Malignant Colorectal Polyps in Young Patients (20-49 Years): An 18-Year SEER Database Analysis

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Introduction: Recent changes in the USPSTF guidelines recommend that CRC (Colorectal Cancer) screening in average-risk patients should commence at 45 years with the intent of finding sporadic premalignant or malignant polyps, allowing early endoscopic interventions to improve clinical outcomes. This study aims to find the incidence of sporadic malignant polyps in adult patients < 50 years of age) from the National Cancer Institute's SEER (Surveillance Epidemiology and End Results) database over a period of 18 years.

Methods: We interrogated the SEER database (2000-2017) on patients aged 20-49 years diagnosed with at least a single malignant sporadic colorectal polyp. Data extraction was performed through a case listing session using SEER*Stat v8.3.9 on combined SEER 18 incidence registries using specific codes for CRC polyps with cancer (Table). Microsatellite instability (MSI-H) high lesions and adenomatous polyposis coli (APC) were excluded from the analysis. Descriptive statistical analysis was performed using SPSS v27 for Mac.

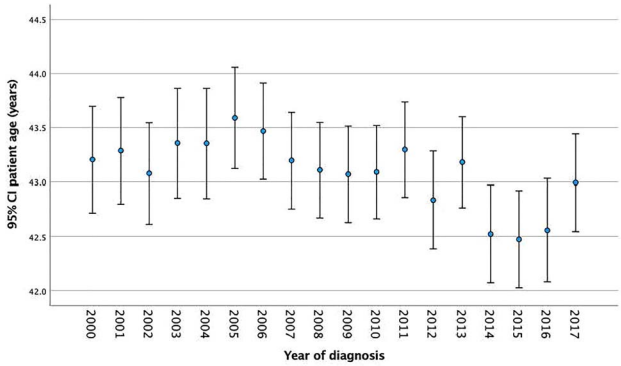

Figure 1. Age of malignant colorectal polyp incidence over time in 20 to 49 year age group

[0327] **Figure 1.** Age of malignant colorectal polyp incidence over time in 20 to 49 year age group.

[0327] **Table 1. Distribution of gender and histological trend over time (2000-2017) of sporadic* malignant colorectal polyps in patients aged 20-49 years.**

Figure: Age of malignant colorectal polyp incidence over time in 20 to 49 year age group

Year	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Female	226	236	242	242	223	235	282	307	293	329	355	315	346	332	342	315	332	340
Male	245	233	266	250	247	268	286	291	356	349	325	365	341	316	379	356	289	306
Adenocarcinoma in an adenomatous polyp (code: 8210/2/3)	169	152	191	166	184	179	230	237	245	270	247	283	281	276	309	298	280	275
Serrated adenocarcinoma in a serrated polyp (code:8221/2)	0	0	0	0	0	1	0	0	1	0	0	0	0	2	0	0	1	2
Adenocarcinoma in multiple adenomatous polyps (not FAP) (code: 8221/2/3)	1	3	2	4	3	6	1	3	1	0	2	1	3	4	2	0	1	0
Adenocarcinoma in villous adenoma (code: 8261/3, 8262/3)	108	112	101	101	91	95	93	101	101	96	91	79	72	61	64	59	49	46
Adenocarcinoma in tubulovillous adenoma (code:8263/2/3)	193	212	214	221	192	222	244	257	301	312	340	317	331	305	346	314	290	323

Results: A total of 10,742 patients with a diagnosis of colorectal polyps with a malignant component were identified. Female patients comprised 42.9% of the cohort with a mean age of any malignant polyp incidence of 43.07 years (42.91-43.23, 95% CI). The annual mean age (95% CI) of incidence of new-onset malignant polyps over time is shown in Figure 1. Approximately 50% of malignant polyps were diagnosed between 45-49 years of age, and about 25-30% were diagnosed between 40-45 years of age (Table). The incidence of malignant villous adenomas decreased, whereas malignant adenomas and tubulovillous adenomas increased over time (Table). A rising temporal trend for the total number of patients diagnosed with malignant polyps was also observed. Serrated polyps with cancer were noted to be scarce in the population studied.

Conclusion: Our results show the mean age of sporadic malignant colorectal polyp incidence occurrence at 43 years. Approximately half of the malignant polyps under age 50 occurred in patients under age 45, below the current screening threshold of 45 years. Also observed was a temporal change in the histological patterns of colorectal malignant polyps, with malignant tubulovillous and adenomatous adenomas increasing and villous adenomas decreasing with the scarcity of serrated polyps with cancer in this population. These results have profound implications for colorectal cancer screening.

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Screen for Nicotine

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Introduction: One in 5 adults in the world smoke tobacco. The association of smoking and adenoma detection rate has been well established in the literature. Early detection of adenoma can lead to early diagnosis of colorectal carcinoma (CRC) and can affect cancer-related death rate. There are few tools that one can use on physical exam to risk stratify patients at high risk for colorectal cancer. Through this study we aim to identify a physical exam finding that can guide clinicians to risk stratify their patients.

Methods: A prospective study of 975 patients undergoing colonoscopy at the Veterans Affairs Medical Center (VAMC) in Oklahoma City, Oklahoma from 2019-2020. Patient demographics, comorbidities, medications, bowel preparation score, and results of colonoscopy were extracted from the medical record. Patients completed a pre-endoscopy questionnaire asking about smoking history and tobacco usage and endoscopists completed a post-procedure questionnaire that identified any nicotine staining involving their mouth, hands, or teeth. Chi square test was used to compare variables among the three groups. A P-value < 0.05 was considered statistically significant.