

Alberta Family Physician Electronic Endoscopy Study (AFPEE) – FIT Sub-study Results

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INTRODUCTION

- In Canada, Fecal Immunological Testing (FIT) is the recommended screening test for average risk patients 50-75 years old or starting at 40 years for patients with a first degree relative diagnosed with colorectal cancer > 60 years of age.
- FIT positive (+) cases should have definitive testing (like colonoscopy) to determine the etiology of the positive result.
- Tertiary care studies demonstrate that about 1/18 FIT + cases have colorectal cancer (CRC) and 60% of cases have an adenoma.

OBJECTIVE: To determine the endoscopic findings of FIT positive cases where the colonoscopy was performed by Alberta Family Physician endoscopists.

METHODS

- Post-hoc analysis of colonoscopies performed in Alberta Family Physician Electronic Endoscopy (AFPEE) study where a positive FIT was the indication for the colonoscopy.
- AFPEE study was the largest prospective multi-centre observational study of colonoscopies by Family Physicians. Colonoscopy data was collected in real time using a tool developed by the study team and managed in REDCap™.
- A hierarchy method involving pathological verification (for cancers, adenomas) and/or optical diagnosis (e.g. hemorrhoids) to determine the most responsible diagnosis for colonoscopy performed for FIT+ indication.
- According to Canadian guidelines Screening Window included patients ≥40yo and ≤75yo. This age range was the focus of this analysis.

PRIMARY OUTCOMES: the most responsible diagnosis of FIT + colonoscopies.

DEMOGRAPHICS

Participating Hospitals: n = 11

Bonnyville
Camrose
Daysland
Lac La Biche
Peace River
Ponoka
Taber
Vermillion
Whitecourt

AFPEE Family Physician Endoscopists: n = 9

Total Colonoscopies performed in AFPEE: n = 1769

• Total FIT +: n = 422 (23.9% of total)

Data collection period: July 2015 – Feb 2016



RESULTS

Table 1. Characteristics of FIT+ patients

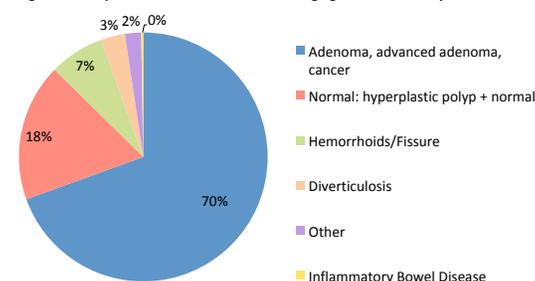
Variable:	Outside Screening Window (age <40) (n=2)	Within Screening Window (age ≥40, ≤75) (n=380)	Outside Screening window (age >75) (n=40)
Age, mean (SD)	39 (0.00)	61.93 (7.83)	78.95 (2.67)
Male, No. (%)	2 (100.00)	221 (58.16)	25 (62.5.0)
First time colonoscopy, No. (%)	2 (100.00)	274 (72.11)	22 (55.00)

Table 2. Analysis performed on those within screening age window 40-75yo

FIT + Findings	n = 380
Adenoma	132 (34.7%)
Advanced Adenoma*	126 (33.2%)
Normal	46 (12.1%)
Hemorrhoids / Fissure	27 (7.1%)
Hyperplastic Polyp	22 (5.8%)
Diverticulosis	12 (3.2%)
Cancer	6 (1.6%)
Other	5 (1.3%)
Lesion not biopsied, not removed	3 (0.8%)
Inflammatory Bowel Disease	1 (0.3%)

*Advanced Adenoma: adenoma >1cm or with high grade dysplasia or villous components.

Figure 2. Composite outcomes within screening age window 40-75yo



DISCUSSION

- Almost 1 in 4 colonoscopies performed by Family Physicians in this study, in rural Alberta, are for positive FITs.
- 90% of FIT+ colonoscopies were performed on patients within recommended screening age range of 40-75 years.

For FIT + patients between 40-75yo:

- 69.6% will have a screening detected neoplasia (cancer, advanced adenoma, adenoma).
- 7.1% will have perianal disease.
- 17.9% will have a normal colonoscopy.
- ~40% of patients undergoing average risk screening colonoscopy had a normal colonoscopy.

CONCLUSIONS

- Most FIT positive colonoscopies in the AFPEE study are performed on patients within the appropriate colorectal cancer screening age.
- 7 out of 10 FIT positive patients will have a screening detected neoplasia (SDN).

LIMITATIONS

- Hierarchical determination of most responsible diagnosis resulted in only one diagnosis per colonoscopy.
- Pathological verification required for screening detected neoplasia. Some lesions (polyps, cancers) were not biopsied (sent directly for surgery) and therefore did not contribute to data results.
- Unable to ascertain the extent to which a patient's medications (e.g. anti-platelets, anti-coagulants) contributed to a FIT + result, especially with normal colonoscopy.

FUTURE

- Include ultimate diagnosis of patients to which lesions not biopsied (i.e. sent directly to surgery) in results.
- Determine the proportion of FIT + normal colonoscopies in which patients were taking anti-platelets or anti-coagulants.
- Widespread data collection to compare FIT results across health regions and endoscopy groups.

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