



**Performance of colonoscopy
in case of positive faecal immunochemical test
Results on 181 patients
in routine practice in France**

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Rationale and aim of the study

- Little is known about colonoscopy results in case of positive faecal Immunochemical test (FIT) in routine practice especially in non-academic centers
- This is of importance in order to define quality benchmarks in colorectal cancer screening programs
- To prospectively determine the results of colonoscopy in case of positive FIT regarding :
 - Adenomas per colonoscopy (APC)
 - Polyp detection rate (PDR)
 - Adenoma detection rate (ADR)
 - Large polyp detection rate (≥ 1 cm) (LPDR)
 - Neoplasia detection rate (NDR)

Patients and Methods

- **Data:**

- Patients characteristics : age, gender, indication for colonoscopy
- Colonoscopy characteristics : caecal intubation rate, complications, quality of preparation (Boston scale), withdrawal time, number and size of polyps
- Polyps characteristics : histopathology

- **Definitions :**

- Polyp was defined as adenoma, sessile serrated adenoma/polyp or hyperplastic polyp located above the rectum and sigmoid colon
- Neoplasia was defined as grade 4 or 5 of the Vienna classification :
 - 4: non-invasive high grade neoplasia (high grade adenoma/dysplasia, non-invasive carcinoma and suspicion of invasive carcinoma)
 - 5: invasive neoplasia (intramucosal carcinoma, submucosal carcinoma or beyond)

Patients and Methods

- **2567 colonoscopies were performed between 01/01/2016 and 31/05/2016**
- **181 were performed for a positive FIT**
- **Comparison will be given with the whole population of 2083 patients aged of 50 or more**

Results

- **181 patients : female 86; male 95**
- **Median age of 61 (range; 50 – 75)**
- **Preparation was considered as sub-optimal in 5.5 % of cases**
 - **Boston scale score < 6 or at least one sub-score < 2**
- **241 polyps or lesions were detected in 115 patients**
 - **215 adenomas and cancers**
 - **18 serrated adenomas and 3 hyperplastic polyps**
 - **5 other histology**

Results

- **Adenoma Per Colonoscopy 1.33**
- **Polyp Detection Rate 63.5 %**
- **Adenoma Detection Rate 60.8 %**
- **By comparison, PDR and ADR in the whole population were 40.4 % and 38.4 % respectively**

Results

- **68 polyps \geq 1 cm were detected in 55 patients**
 - **Large polyp detection rate (LPDR) : 30.4 %**
 - **as compared to 10.8 % in the whole population**
- **31 neoplastic lesions were detected in 27 patients**
 - **Neoplasia detection rate : 14.9 %**
 - **as compared to 5 % in the whole population**

Results

Males

- **APC : 1.72**
- **ADR : 74.7 %**
- **NDR : 22.1 %**

Females

- **APC : 0.97**
- **ADR : 48.6 %**
- **NDR : 9.0 %**

Results

- In univariate analysis, a positive FIT was significantly associated with a high ADR, a high LPDR and a high NDR (all, $p=10^{-5}$) in comparison with other indications
- In multivariate analysis, a positive FIT was significantly associated with
 - a high ADR (OR 3.7; $p=10^{-5}$)
 - a high LPDR (OR 6.5; $p=10^{-5}$)
 - a high NDR (OR 16.7; $p=10^{-5}$)

Conclusions

- In case of positive FIT, colonoscopy detects medically-relevant polyps in about 2/3 of patients and ¾ of Male patients
- In addition, we found a very high rate of neoplastic lesions especially in Male patients
- These results :
 - Are higher than those of the Slovenian national cohort (positive predictive values for cancer : 4.8%, high-risk adenoma : 23.3%, all adenoma : 38.2%)
- Are in agreement with the highest quality benchmarks recently proposed in case of positive FIT

Tepes B et al., J Clin Gastroenterol 2016 Aug

Hilsden RJ et al., Am J Gastroenterol, 2016 Oct

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Ongoing Results up to 31/08/2016

- 276 patients (Female 136, Male 140)
- APC : 1.31
- PDR : 61.2 %
- ADR : 60.5 %
- LPDR : 30.4 %
- NDR : 14.1 %

Guaiac test : Hemoccult II®

- Positivity : 1.5 - 2.5 %
- Sensitivity for CRC : 35– 50 %
- Specificity : 98 - 99 %
- Positive predictive value
 - 10 % for cancer
 - 30 % for adenoma

Kronborg O et al., Lancet 1996

Hardcastle JD et al. Lancet 1996

Faivre J et al., Gastroenterology 2004

FIT : OC-sensor®

- Cut-off : 150 ng Hb/mL
- Positivity : 4 %
- Sensitivity for CRC : 60 - 65%
- Specificity : 96 - 97%
- Positive predictive value :
 - 35% (large adenoma or cancer) ?
 - 45 % adenoma ?

Denis B et Guittet L, Hépatogastro et Oncologie Digestive 2015

Vart G et al. Prev Med 2012

Van Rossum LG et al., Br J Cancer 2009