



QUALITY IN ENDOSCOPY

ESGE / ESDO SYMPOSIUM

COLONOSCOPY &
COLONIC NEOPLASMS

Prague, Czech Republic April 17–18, 2015

The Great Debate 4

FIT vs. Colonoscopy – pro FIT

Session No. 5: Alternatives to Colonoscopy

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Military University Hospital Prague

Czech Republic



FIT x Colonoscopy



Colonoscopy:

considered as gold standard for CRC screening
superior on the first sight

... but FIT has its positive features and advantages

The image shows a screenshot of the Fight Colorectal Cancer website. The header features the logo "FIGHT COLORECTAL CANCER" with the tagline "get behind a cure." and buttons for "Sign-up" and "Donate Now". Below the header is a navigation menu with links: HOME, PREVENT IT, FIGHT IT, GET RESOURCES, DO SOMETHING, JOIN THE MOVEMENT, and ABOUT. A search bar is located to the right of the navigation menu. The main content area features a blue banner with the text "FIT BEATS ALL OTHER SCREENING FOR EFFECTIVENESS AND COST" circled in red. Below the banner, the author is listed as "By: Kate Murphy · December 2, 2010 · 5 Comments". The article text begins with "In a computer simulation, FIT — fecal immunochemical testing — done every year saved more lives and cost the least of any colorectal cancer screening method, including colonoscopy." On the right side, there is a "CATEGORIES" section with links: ADVOCACY UPDATES, ADVOCACY-BLOG, COMMUNITY-BLOG, and FIGHT CRC NEWS.

Fight Colorectal Cancer web page: <http://fightcolorectalcancer.org/>

Fecal immunochemical tests (FIT)

initial method in two-step
colorectal cancer (CRC)
screening programs:

FIT+ → colonoscopy

3 main types

qualitative

semiquantitative

quantitative



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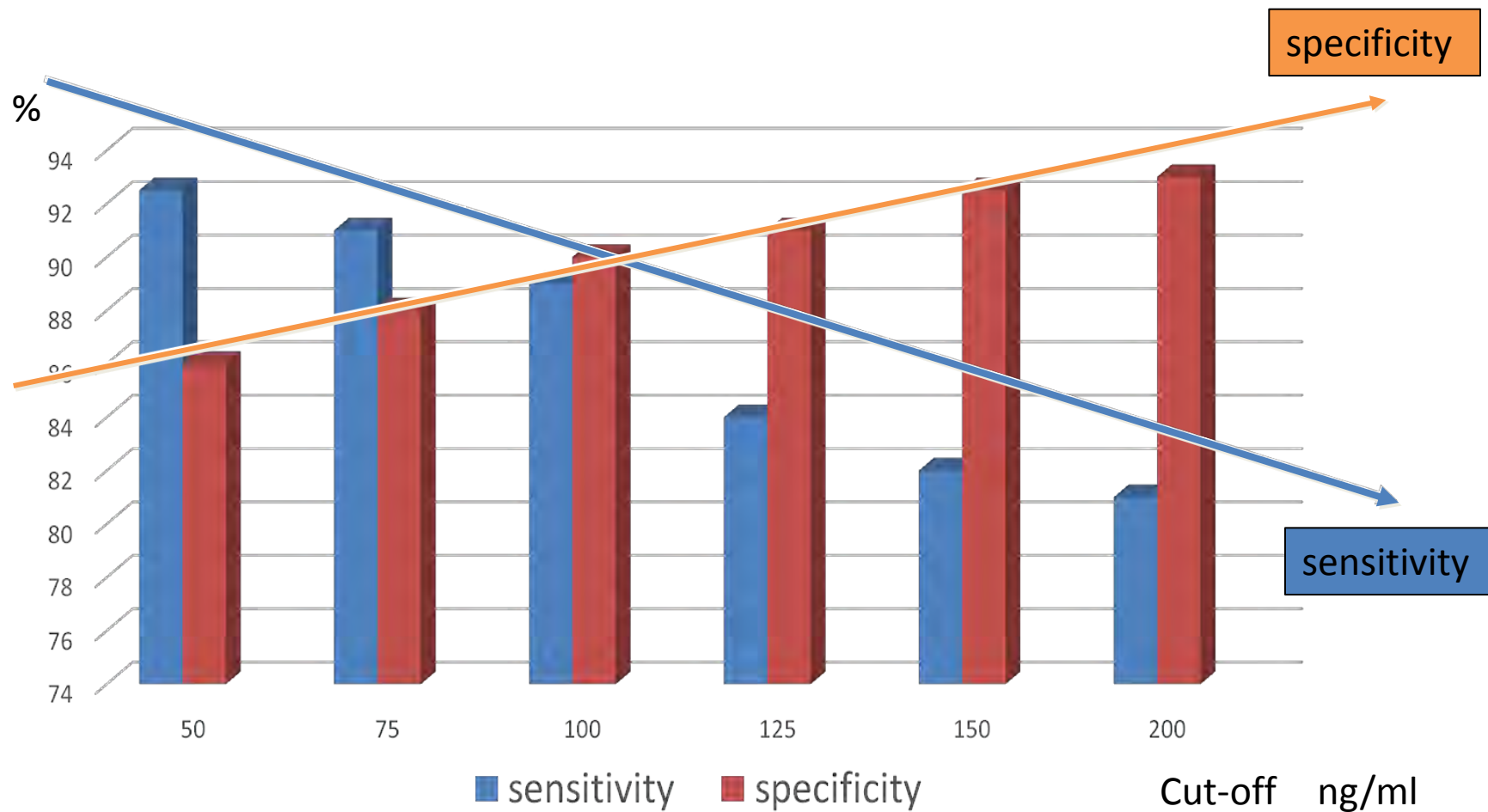
qualitative

semiquantitative

quantitative



Cut-off limits





FIT comparison to colonoscopy indicators

Participation rate

Colorectal neoplasia detection

Cost-effectiveness

Safety

side effects and complications

CRC mortality reduction

Participation rate I

Spanish multicenter randomized controlled study since 2009; 57.000 individuals, age 50 – 69

methods: one-time colonoscopy (CS) x biennial FIT (OC Sensor), 1:1 randomization

primary outcome: mortality reduction in 10 years

interim results:

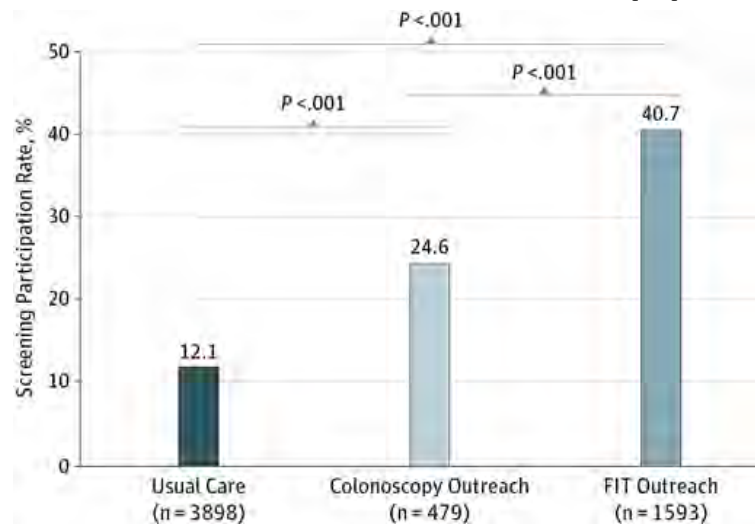
participation rate: FIT (34%) CS (25%), p 0.001

Participation rate II

USA, randomized clinical trial:

1593 FIT x 479 colonoscopy x 3898 usual care

Organized mail outreach versus opportunistic



Mail invitation superior to usual care

FIT colonoscopy

Colorectal neoplasia detection

Czech screening program results

	Year	Colonoscopy	Adenoma	Ratio	Cancer	Ratio
FIT+ colonoscopy	2013	21 970	8 755	39,8%	814	3,7%
	2014	27 449	11 127	40,5%	881	3,2%
	2015*	2 155	759	35,2%	62	2,9%
Screening colonoscopy	2013	4 964	1 361	27,4%	48	1,0%
	2014	8 693	2 370	27,3%	69	0,8%
	2015*	971	194	20,0%	13	1,3%

* interim results (March 2015)

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Cost-effectiveness

OPEN ACCESS Freely available online

PLOS MEDICINE

Colorectal Cancer Screening for Average-Risk North Americans: An Economic Evaluation

Steven J. Heitman^{1,2}, Robert J. Hilsden^{1,2}, Flora Au¹, Scot Dowden^{1,3}, Braden J. Manns^{1,2,4*}

¹ The Department of Medicine, University of Calgary, Alberta, Canada, ² The Department of Community Health Sciences, University of Calgary, Alberta, Canada, ³ Alberta Health Services - Cancer Care, Alberta, Canada, ⁴ Libin Cardiovascular Institute, University of Calgary, Alberta, Canada

Conclusions: CRC screening with FIT reduces the risk of CRC and CRC-related deaths, and lowers health care costs in comparison to no screening and to other existing screening strategies. Health policy decision makers should consider prioritizing funding for CRC screening using FIT.

Per person screened, the cost of screening and recommended cancer treatment, including biologics for stage IV cancer:

- ✓ FIT –\$1,833
- ✓ No screening — \$1,901
- ✓ High sensitivity FOBT — \$2,084
- ✓ Colonoscopy — \$2,100
- ✓ Low sensitivity FOBT — \$2,192
- ✓ Flexible sigmoidoscopy — \$2,263
- ✓ CT colonography– \$2,409
- ✓ Fecal DNA test (2nd standard) — \$2,491
- ✓ Fecal DNA (first standard) — \$2,720

Cost-effectiveness

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Safety

test performance:

no side effects or complications

false positivity:

2 – 3%

FIT positive colonoscopies complications:

perforation: 2 – 7/100.000

serious bleeding: 9/100.000

FIT: CRC mortality reduction

cluster randomization study (year 2003)

95.000 individuals

8 years follow-up, in case of FOBT+ just FS

mortality by 32% only in rectal cancer, not CRC

case-control studies (years 1995 – 2003)

different types of FIT, Japanese population

mortality by 23 – 81%

 mortality decrease only on rectal cancer not CRC

*Zheng S et al. Dis. Colon rectum 2003, Saito H et al. Int J Cancer 1995
Nakajima M et al. Br.J Cancer 2003*

Conclusion I

FIT is good test for CRC screening

has adequate sensitivity and specificity for adenomas and cancers

is widely accepted by target population

is cost-effective and safe

With respect that it is an initial test in two-step screening program

In case of FIT positivity colonoscopy should follow

Conclusion II



FIT and colonoscopy are complementary methods, strongest if joined together



Thank you for your attention