THE ROLE OF PRIMARY CARE IN POPULATION BASED COLORECTAL CANCER SCREENING:

CURRENT SITUATION AND FUTURE PROSPECTS

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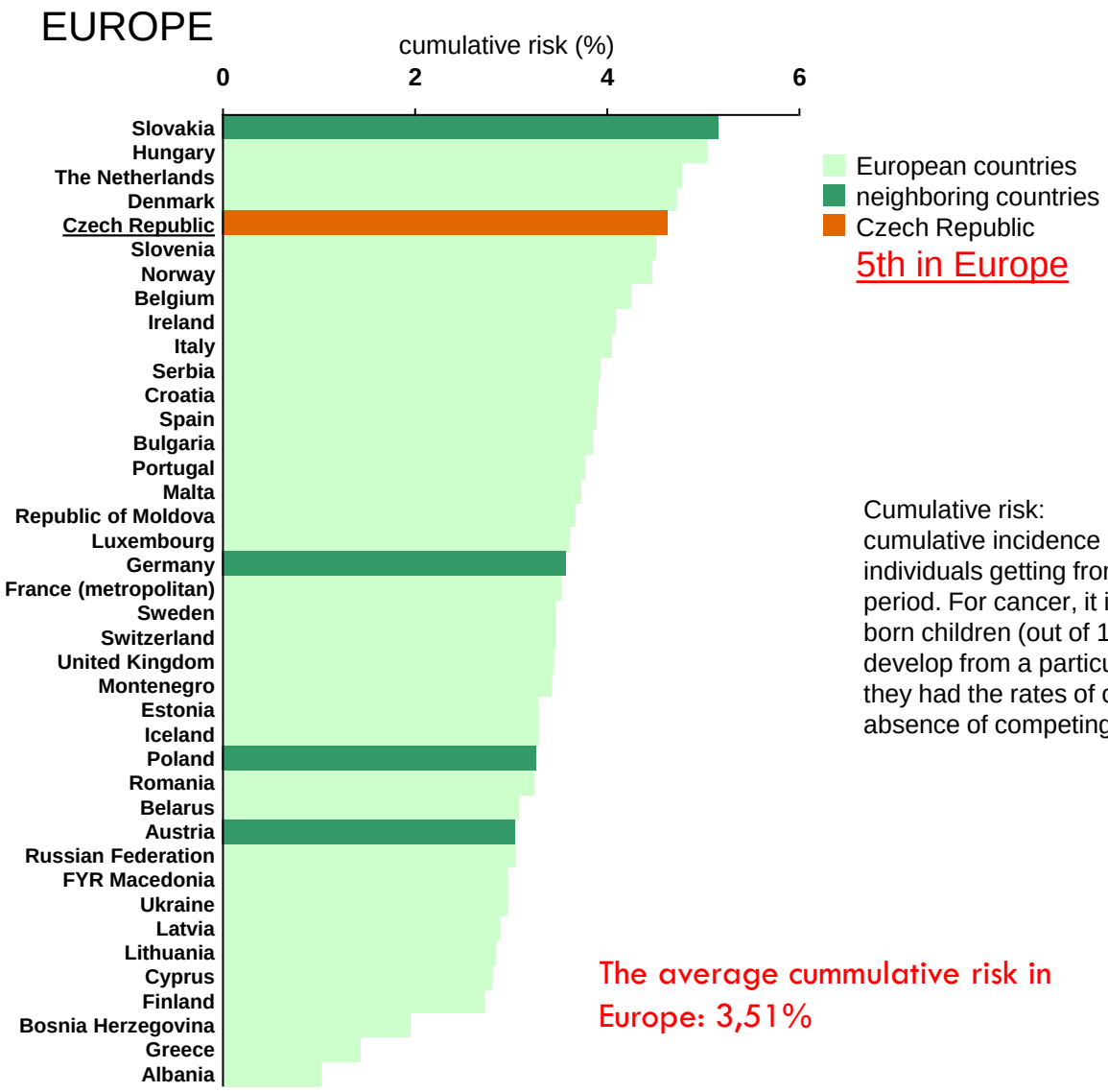
Special interest in colorectal cancer screening

- A member of a Foundation which initiated colorectal cancer screening in the Czech Republic in 2000
- Representative of GPs in **Czech National Colorectal Cancer Screening Committee**

- **European Society for Primary Care Gastroenterology**
- **PAC UEG Committee**

- Research on
  - the role of primary care in CRC screening
  - population adherence to CRC screening

Cumulative incidence of colorectal cancer (C18–C21) in international comparison



Cumulative risk:
cumulative incidence is the probability or risk of individuals getting from the disease during a specified period. For cancer, it is expressed as the number of new born children (out of 100) who would be expected to develop from a particular cancer before the age of 75 if they had the rates of cancer observed in the period in the absence of competing causes.

The average cummulative risk in Europe: 3,51%

Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray, F. – GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer; 2013. Available from: http://globocan.iarc.fr, accessed on 08/06/2017.

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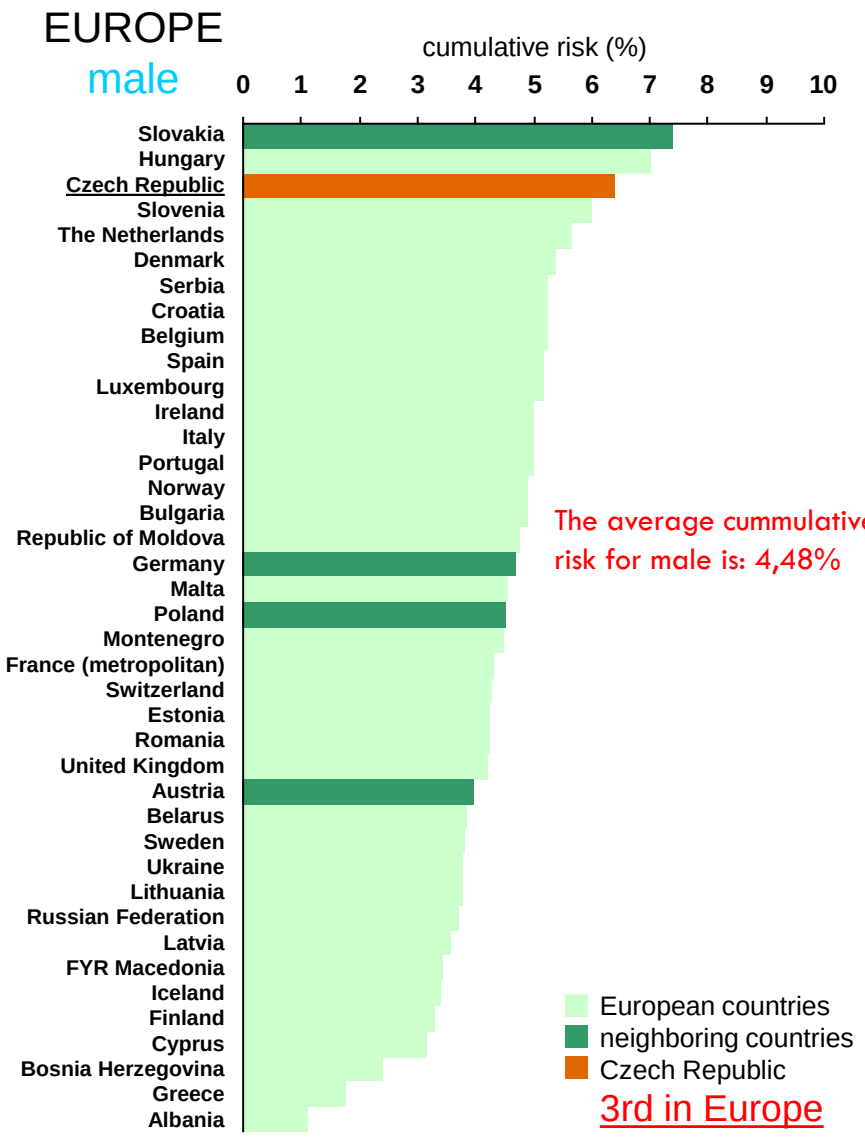

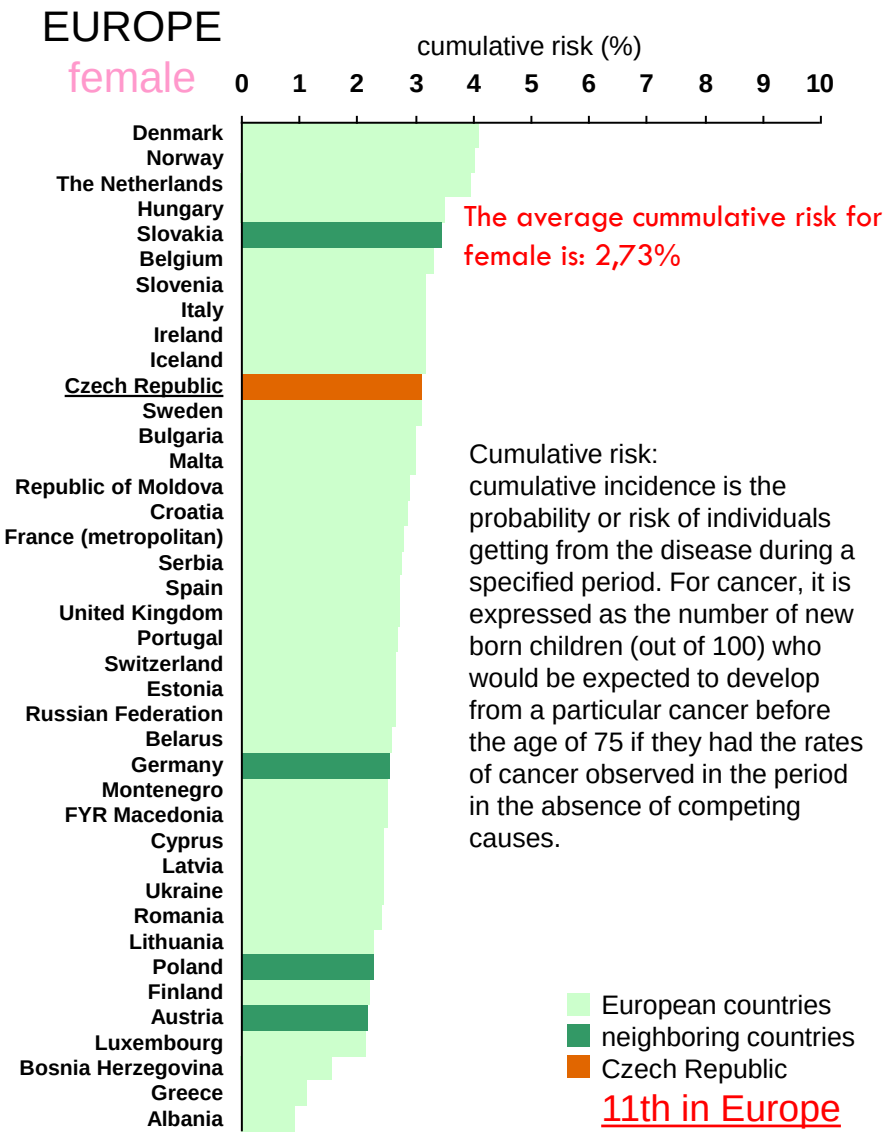

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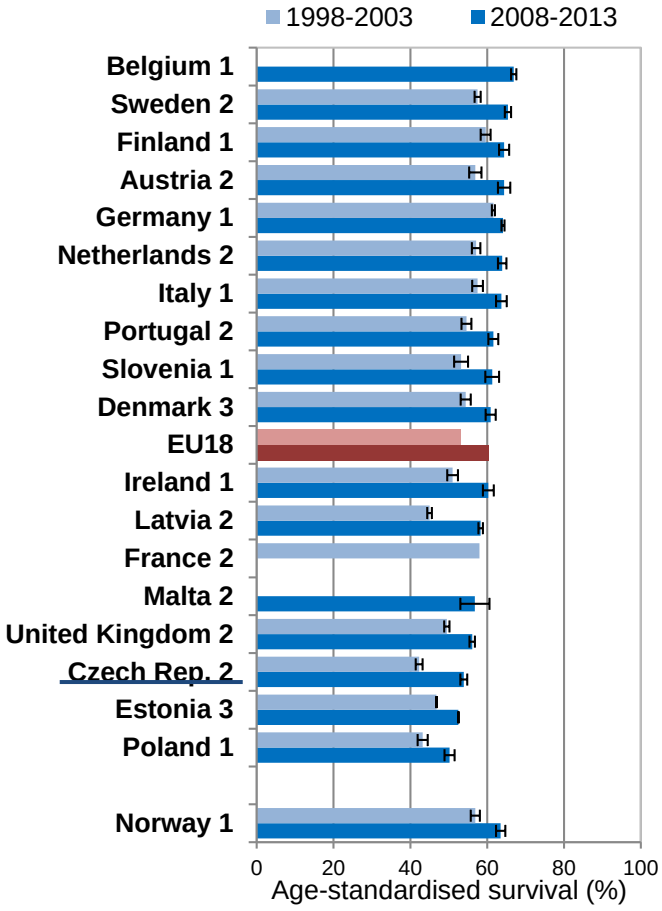
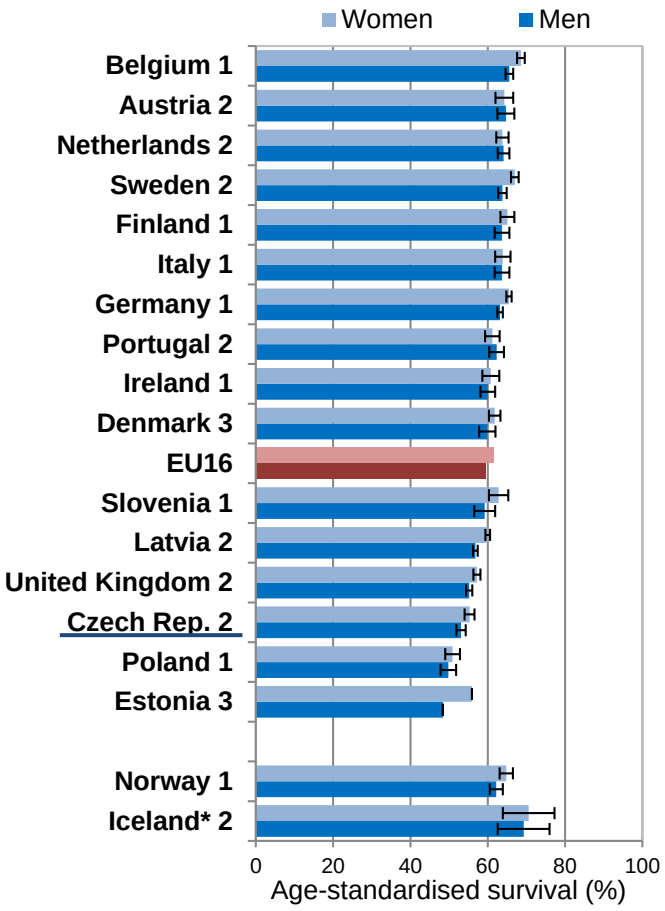
5-year relative survival of colorectal cancer (C18–C21) patients in international comparison

5-year relative survival, 1998–2003 and 2008–2013 (or nearest period)



5-year relative survival by gender, 2008–2013 (or nearest period)



1. Period analysis. 2. Cohort analysis. 3. Different analysis methods used for different years. * Three-period average.
95% confidence intervals represented by H. EU average unweighted.

GPs at the frontline of healthcare services

- **Primary prevention**

- **Early diagnostics** in symptomatic

- **Secondary prevention:**
  - screening programmes for high risk persons
  - screening programmes for average risk pers.
- **Tertiary and quartery prevention**

Secondary prevention

Identification of people with high risk

- CRC incidence in 1st degree relatives or multiple occurence in 2nd degree relatives
- IBD
- detected adenoma polyps
- women after breast, ovarial or uterus surgery
- hereditary nonpolyposis CRC syndrome
- (Diabetes 2nd type or high CV risk)

□ **Screening**

Colorectal Cancer Screening

Screening has been established in 22 out of 27 EU countries.

Programs vary in different aspects but certain trends are clear:

- **shift from opportunistic towards population based screening** with central address invitation systems (by-passing GPs)
- **shift from guajak FOBTs to immunochemical FOBTs** centrally analysed
- **screening colonoscopy** as a direct option

A shift from opportunistic to population based CRC Screening in Europe in the last decade

- Population based: **address personal invitation**
  - written systematic invitations for all
  - written systematic invitations for non-attenders
  - different strategies for invitation
  - equity in access to information
  - higher participation rate

- **Invitation + FOBT kits:** UK, The Netherlands, Finland,
- **Invitation to GPs:** France, Czech Republic
- Invitation to pharmacies: North of Italy

Invitations – GPs - uptake
Let´s look at the evidence

- Involvement of GPs in the invitation process lead to a greater uptake

  (van Roon2011, Tinmoth 2011, Steele 2010, Zajac 2010, Senore 2010)

- Direct mailing FOBT kit with instruction together with invitation letter and the information leaflet increases participation. The direct mailing reduces physician barriers to screening (no effort)

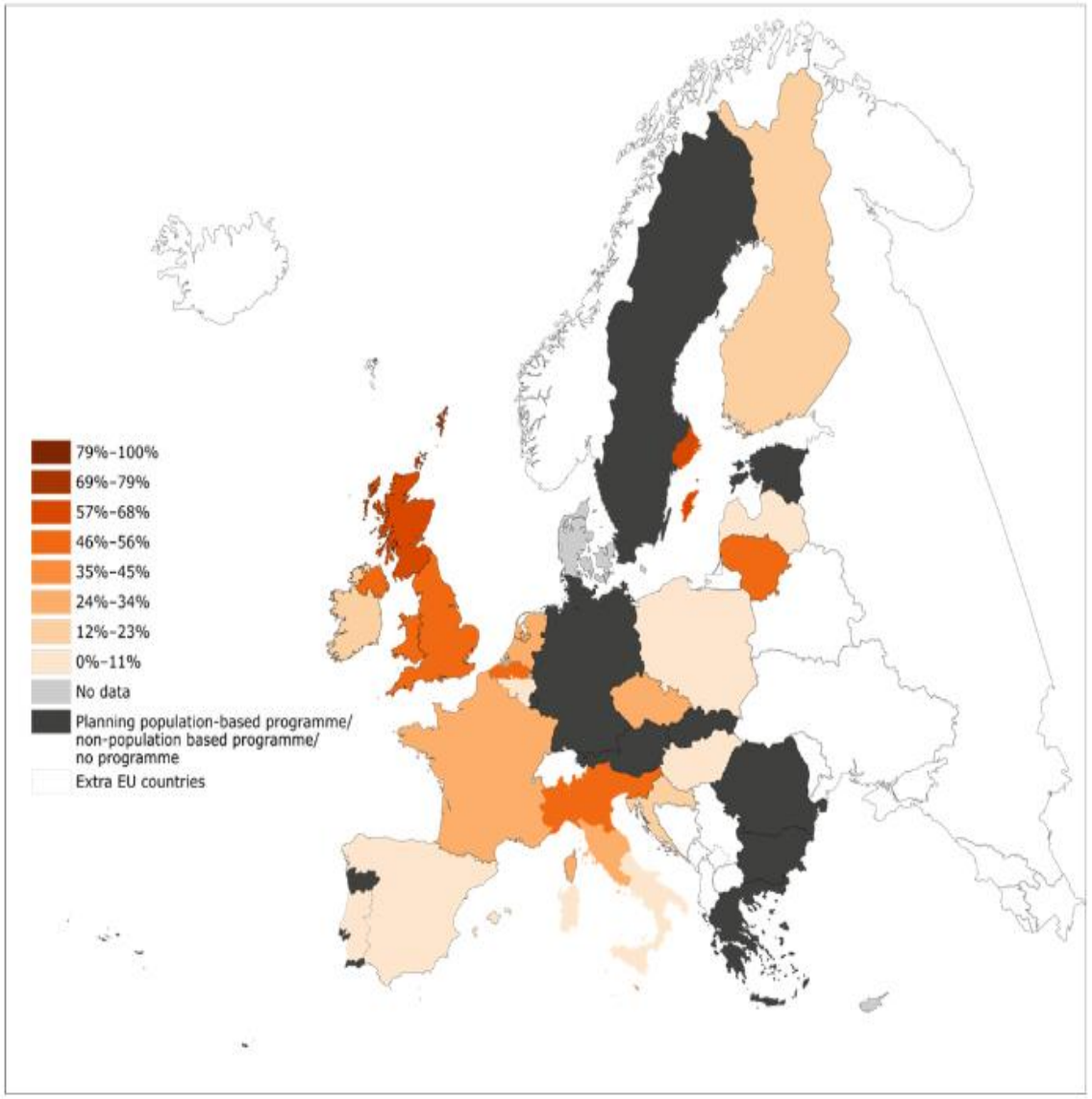
  USA: Church 2004, Mahon 1995

- Only slight difference between direct mailing and distributing the kits in GP office.

  Europe: Ore 2011, Segnan 2005, Rossi 2011

- **The direct mailing of kits offers only a marginal advantage in countries with developed primary care network.**

Figure 4.3. Colorectal cancer screening programmes in the EU (women and men, any test): examination coverage by programme specific age-range (table 4.14)*



*The estimates do not take into account opportunistic screening

The satisfactory examination coverage on national level:

- UK
- Netherlands, Belgium,
- France, North Italy,
- Czech Republic
- Finland

Cancer Screening in the European Union 2017. Report on the implementation of cancer screening. Health and Food Safety, European Commission

What does affect screening uptake on individual level?

Reasons for accepting screening (Chapple, 2008):

- knowing somebody with cancer
- previous positive experience of women´s screening program
- being a good citizen
- previous bowel problems
- encouragement from others

Reasons for reluctance:

- feeling healthy
- fear of outcome, fear of colonoscopy
- lack of time (procrastination)
- disgust by the idea of handling stools
- misunderstanding instructions

gFOBT ⟶ iFOBT

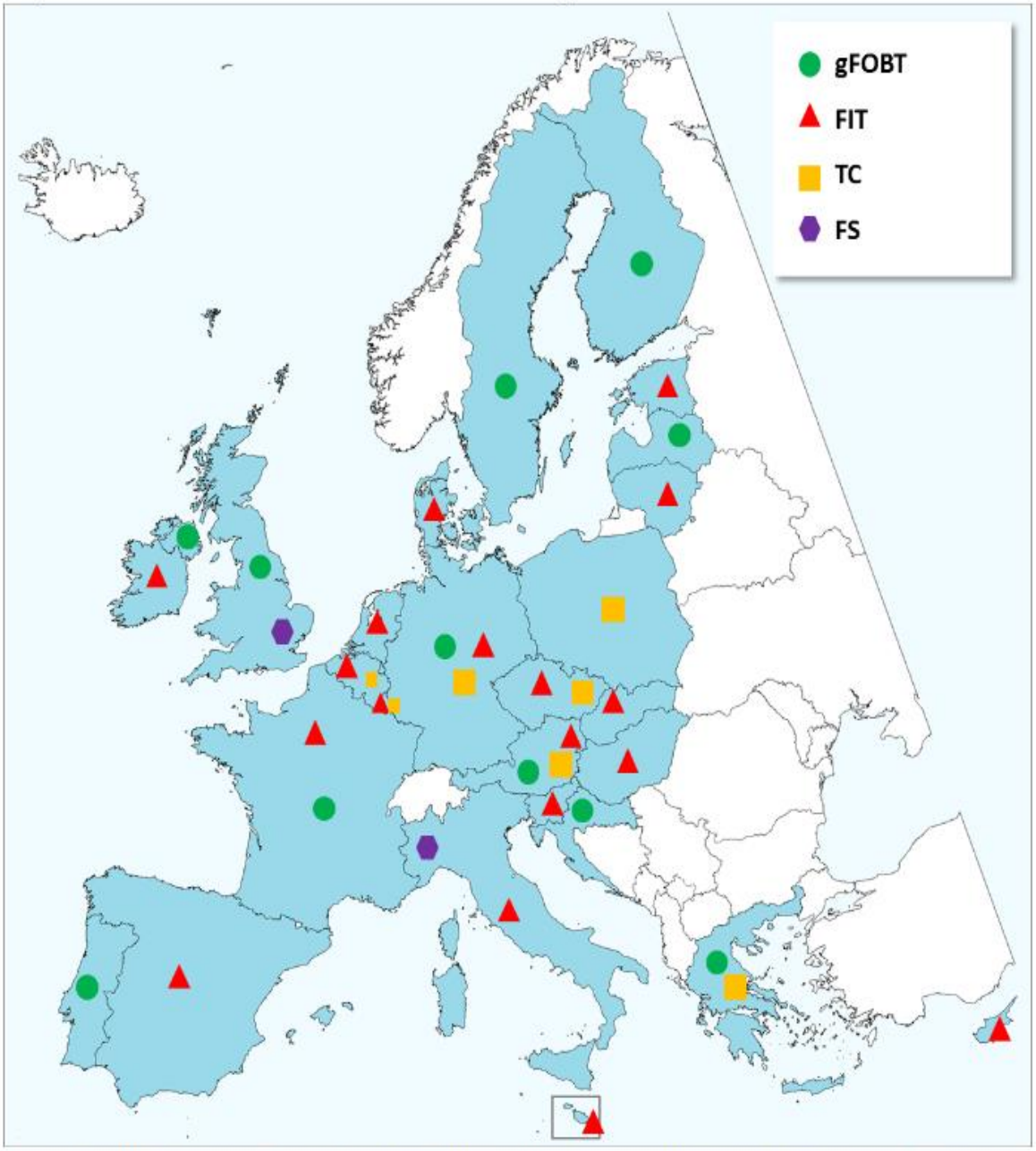
- **EBM in favour of immunochemical tests:**
- no diet limitations
- user friendly sampling
- easy anylysis
- higher accuracy, higher sensitivity

- **higher compliance**
- **higher participation rate**

- iFOBT: qualitative (strip tests) – quantitative (automatised)
- **Quantitative:** laboratory based analysis or POCT available

- **Higher operational efficiency:** cut-off/capacity

Figure 3.4. Tests used for colorectal cancer screening in the EU member states in 2016



Legend - gFOBT: Guaiac Fecal Occult Blood Test; FIT: Fecal Immunochemical Test; FS – Flexible Sigmoidoscopy; TC – Total Colonoscopy.

Cancer Screening in the European Union 2017. Report on the implementation of cancer screening. Health and Food Safety, European Commission

GPs involvement in Colorectal Cancer Screeening across Europe

Neither Council Recommendation on Cancer Screening or European Guidelines on CRC screening do not mention the role of GPs.

GP involvement varies according to the chosen national stratégy and organization of health care:

- **Key role** in distributing (and performing) FOBTs
  - Czech R., Germany, Slovakia, France
- **Supportive role**
  - Netherlands, UK, Spain, Finland
- **Recruitment** for colonoscopic screening
  - Poland, Germany

Historical concept of involvement of GPs in a screening program in the CR

- Prevention and screening as a part of complex approach to person
- Preventive interventions need personalised care
- additional value of preventive/screening programs (CV, GYN, MAMMO, CRC)
- GP perform cheaper

Coverage of target population: iFOBT + screening colonoscopy 2007-2015

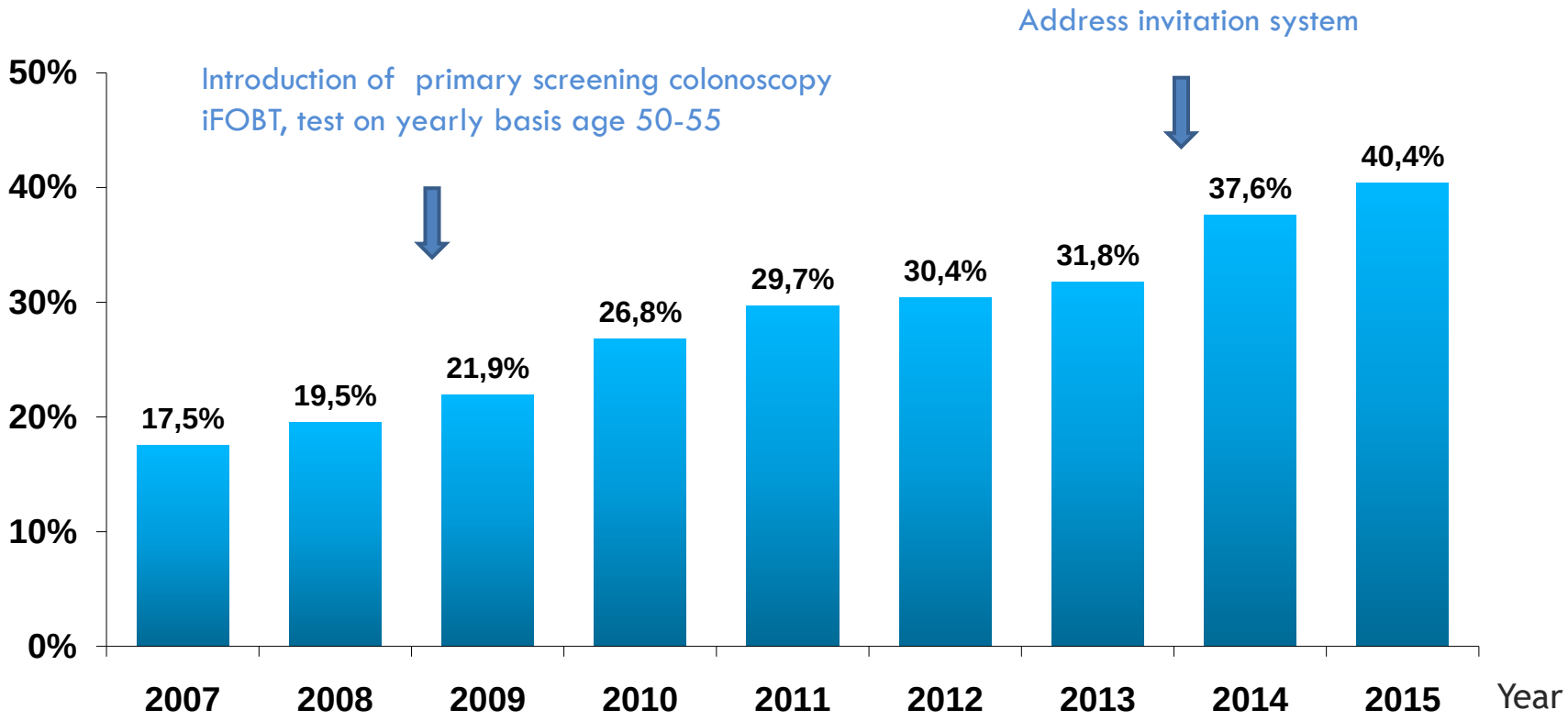
Total coverage

(men and women 55-69)

iFOBT negative + positive

Primary screening colonoscopy since 2009, age 55 and more

Source of data: IBA



Czech experience: 17 years of screening

Historically some suboptimal solutions but no blind pathways:

- **In 2000** GPs allowed to launch a screening with gFOBT.
- CRC screening became a traditional part of preventive activities in the Czech Republic.
- **In 2009**: The introduction of (qualitative) iFOBT helped to increase the uptake fundamentally
- **In 2014**: The address invitation systém established. Letters invite to GP (or gynecologist) who is the source for potential referral.

- The transition to quantitative iFOBT is agreed among disciplines with continuing key role of primary care.

GPs should be educated in order to:

- understand screening
- communicate screening

Wee 2005, Ferreira 2005

- To assess eligibility for screening
- increase participation

Harris 2000, Brawarsky 2004, Seifert 2007, Hewitson 2011

- provide balanced information for informed choice

O´Connor 1999, Jepson 2005, Wegwarth 2013

- perform FOBT if relevant
- deal with FOBT positive result, refer for colonoscopy
- support patient in surveillance program

Uptake v. balanced information

- Media campaign is often straightforward.
- Financial targets for participation.
- Paternalistic approaches

GP communication on CRC screening and ethical principles:

- provision of unbiased information
- respecting patient autonomy
- need to suit adults ranging in literacy level, minorities
- (not relying on written information)

INFORMED CHOICE = a meaningful choice made by the patient on the basis of adequate information

O´Connor, Rostom, Fiset et al, 1999

Criticism of the CRC screening

False test results

- 30% of CRC will not be detected
- 13 colonoscopies in FOBT+ to detect 1 CRC
- Interval cancers
- False positivity

Consequences:

- Negative test reduces worries and doubts (too much?)
- Positive test: anxiety, depressive feelings, physical complaints (headache, abdominal complaints)

Risk of colonoscopy

0,5% bleeding, 0,5-1,0‰ perforation

(e.g. 80 perforations a year estimated for the Dutch program)

Quality of information about CRC screening

New paradigm of screening, beside uptake, emphasizes principles such as **quality and safety of procedures, equity and quality of information and appropriate communication strategy.**

People who use CRC screening should recieve accurate and accessible information that reflects the most current evidence about CRC screening test and its potential contributions to reducing illness as well as information about its risks and limitations

European guidelines on quality assurance of colorectal screening, Segnan et al, 2010

In conclusion

Regardless of the specific role of primary care in screening

- GP office is the place where population strategies are translated into personal medicine and individual care.
- General practitioners have unreplaceable role in screening communication strategy.
- GPs should be competent in CRC screening communication and their attitudes should combine guidelines/evidence and individual approach.