



# CRC screening

## State of the art in Western Europe

Monique van Leerdam,  
Gastroenterologist , Netherlands Cancer Institute,  
Amsterdam, The Netherlands

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# Conflicts of interest

- None

# CRC incidence

- 447,000 new cases of CRC in the EU in 2012 (13% of all cancers)
- Overall incidence rate: 68 per 100,000 population.

White book 2014, Ferlay Eur J Cancer 2013



# European Parliament resolution May 2010

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Promote the adoption of CRC prevention programmes by any means

Encourage member states to allocate further resources to primary CRC prevention and early diagnosis through screening



# Screening programs in the EU

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## Organized screening; (IARC)

- Explicit policy with specified age, screening method and interval
- Defined target population
- Team responsible for implementation, care and FU
- Quality assurance/ monitoring
  
- IT system/ dataware house/ cancer registry

# Screening programs in the EU

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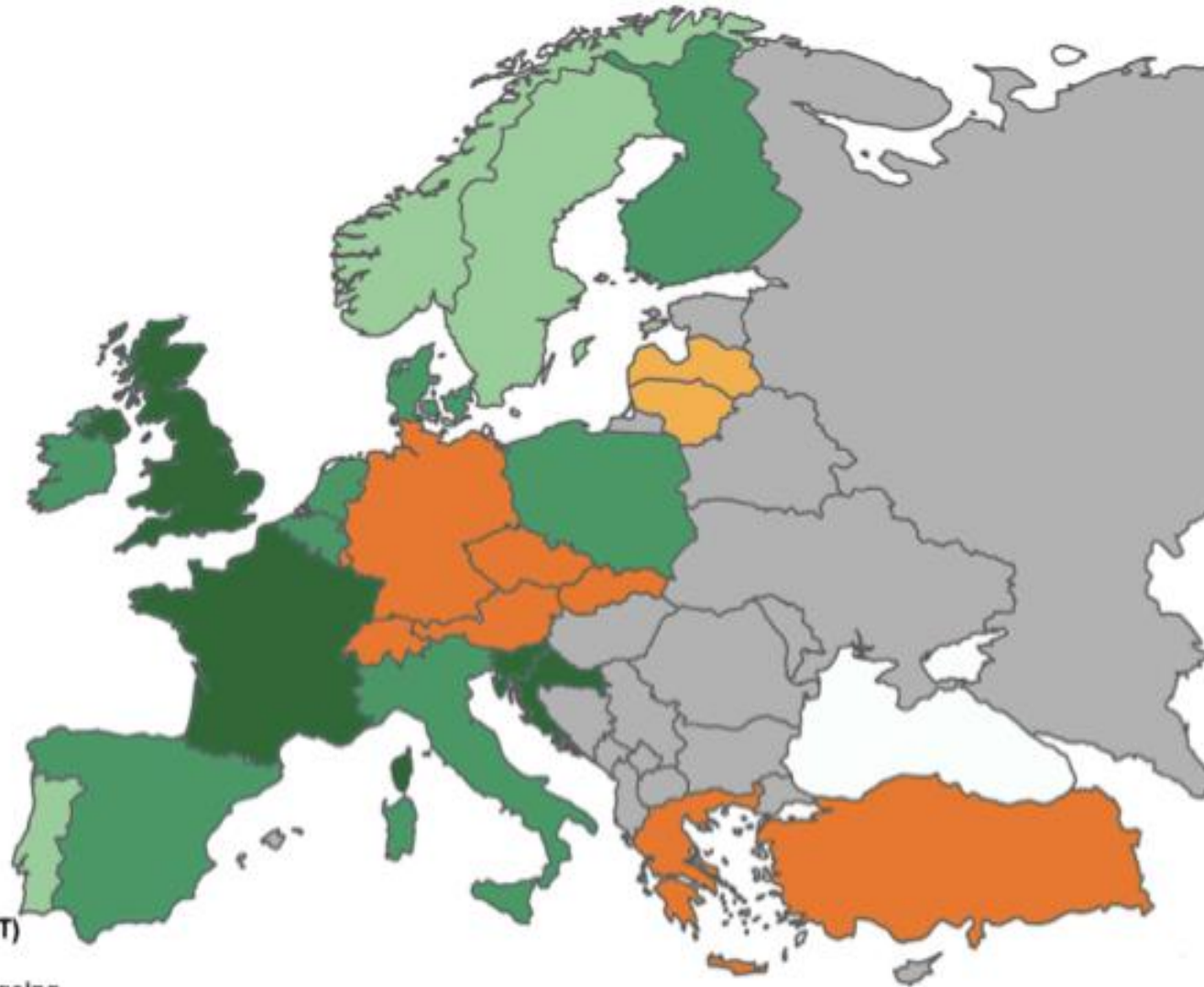
Opportunistic screening;

- No invitation system/ no control system
- IT system/ dataware house missing

2015



- No screening or unknown
- Opportunistic: gFOBT/FIT-based
- Opportunistic: colonoscopy (+gFOBT/FIT)
- Population-based organised, pilot
- Population-based organised, roll-out ongoing
- Population-based organised, roll-out complete



Schreuders Gut 2015 (WEO),

# No population based screening programs

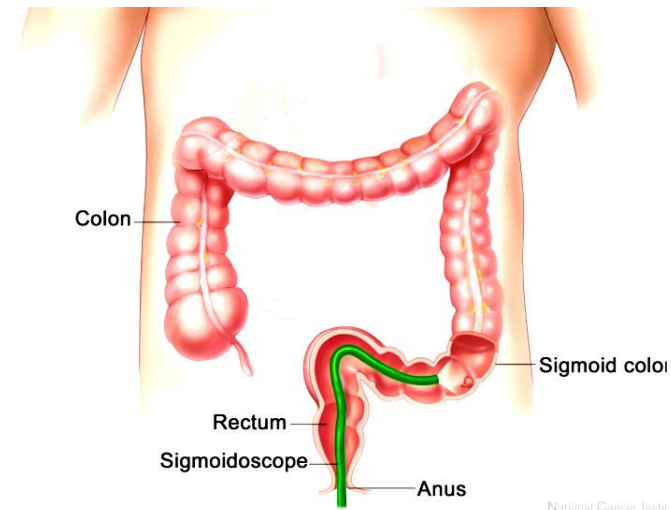
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All countries in western Europe do have a CRC screening program!



# Rolled out organised screening programs

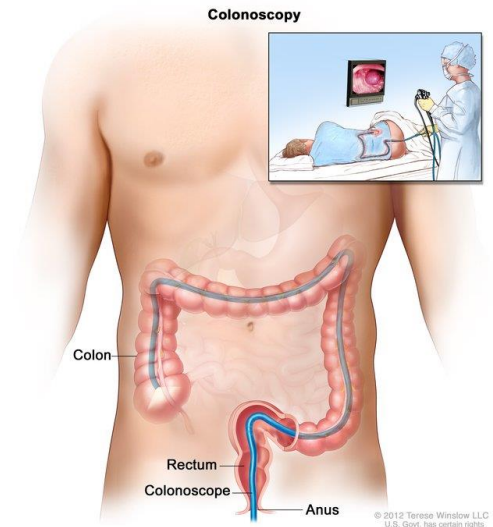
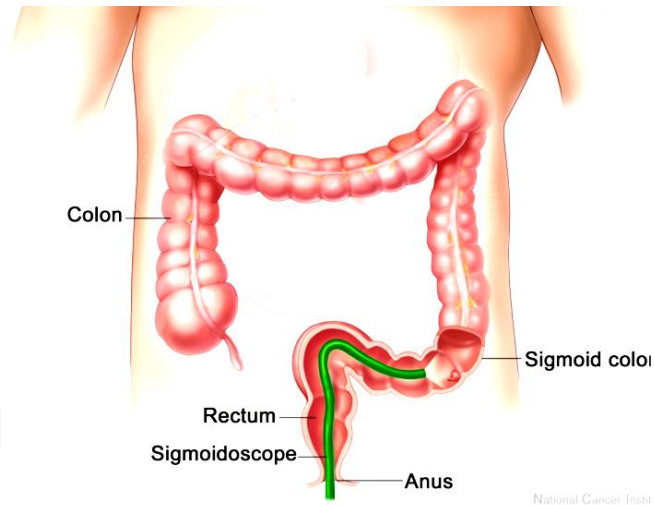
Finland, France, UK



Schreuders Gut 2015, Altobelli WJG 2016, White book 2014

# Started with organised screening programs

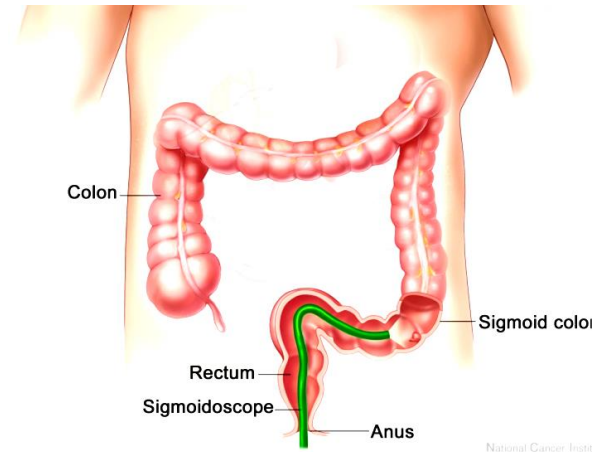
Belgium, Netherlands, Denmark, Ireland, Italy, Malta, Cyprus, Spain, Luxembourg, Iceland\*



Schreuders Gut 2015, Altobelli WJG 2016, White book 2014,

# Opportunistic screening programs

Austria, Germany, Greece, Switzerland



Schreuders Gut 2015, Altobelli WJG 2016, White book 2014

# Pilot screening programs

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Norway, Portugal, Sweden (regional)

Montenegro until 2011, Switzerland

# CRC screening

Population based FIT screening program in Luxembourg;  
first FITs have been sent out; first colonoscopies  
**November 1<sup>st</sup> 2016!**



Personal communication

# Iceland

Decision to adopt CRC screening programme in 2008

Postponed due to the economic crisis

Due to start with biannual FIT



# France (2003)

Fully implemented national program in 2009 with gFOBT

Invitation via GP

Uptake 40% (low despite campaign)

Open cohort study among 200,000 people during 4 rounds of gFOBT; Uptake decreased across all rounds from 53% - 47%



# United Kingdom

Comparative pilot study within the BCSP;  
41,000 FIT instead of gFOBT

- Uptake increased by 7% (59% - 66%)
- Uptake among non-responders increased by 50% (12,5% - 24%)
- PR 7.8% vs 1.7%
- Detection of cancer increased 2-fold and detection of advanced adenomas 5-fold

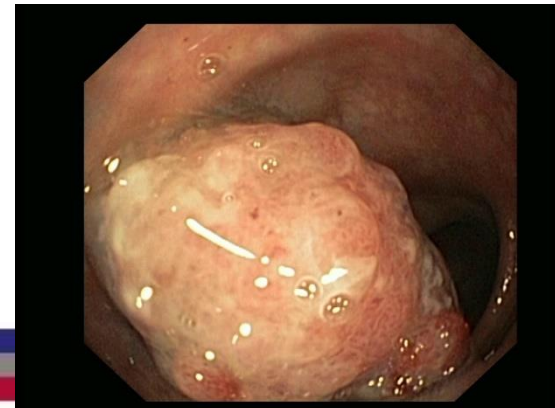




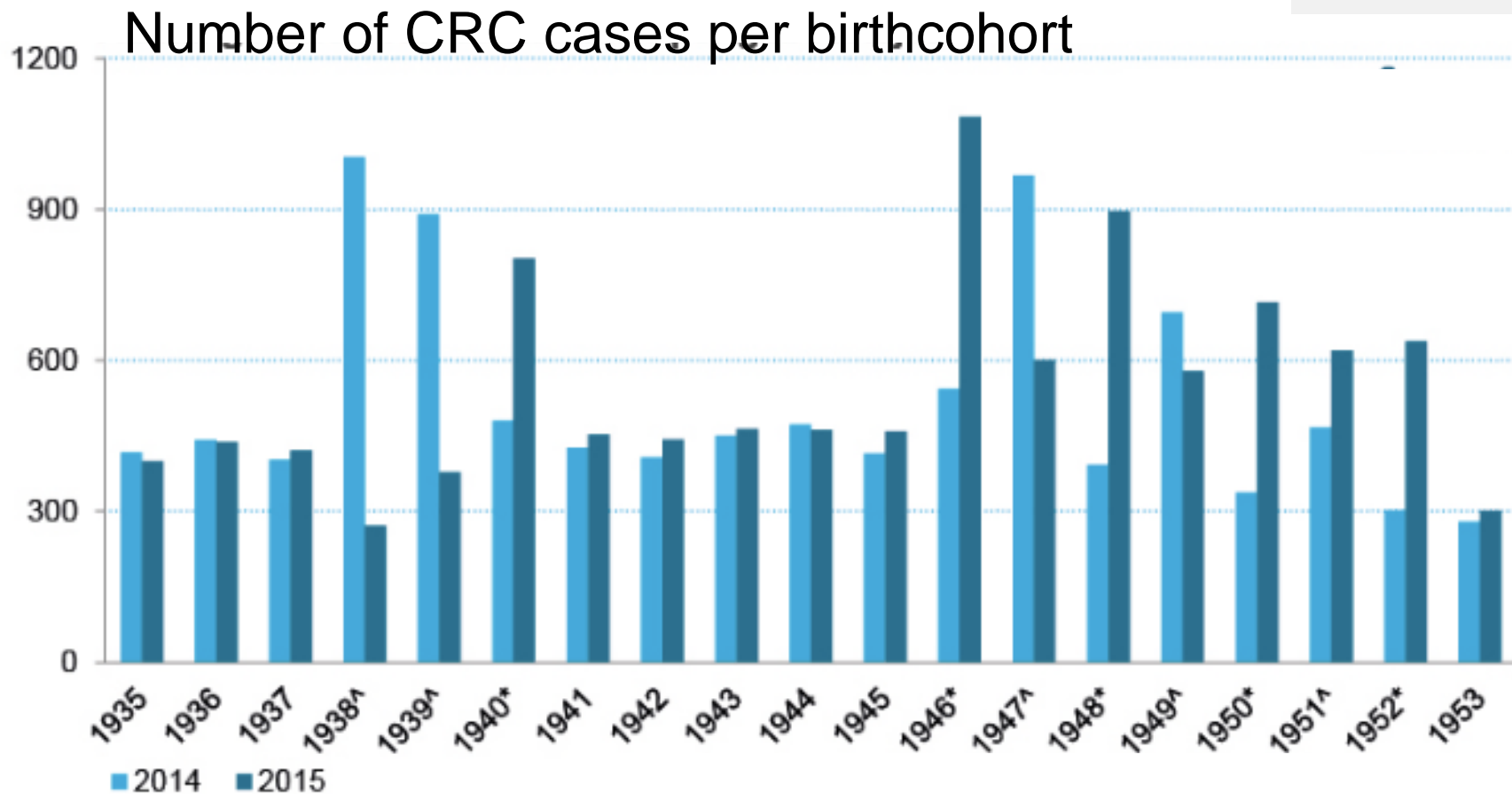
# CRC incidence

- 447,000 new cases of CRC in the EU in 2012 (13% of all cancers)
- Overall incidence rate: 68 per 100,000 population.
- With the start of screening programs we will see an increase in incidence initially

White book 2014, Ferlay Eur J Cancer 2013

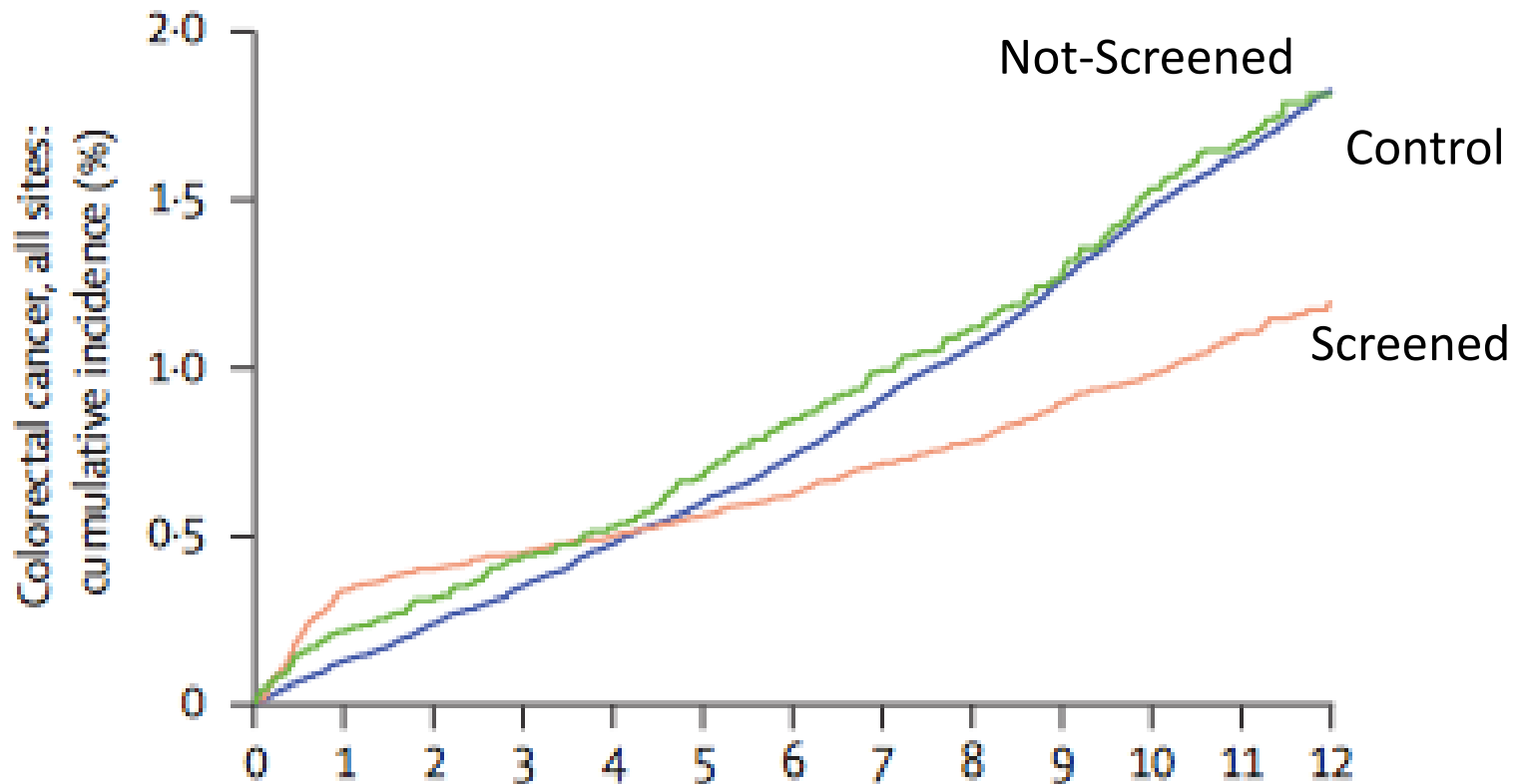


# Increase in CRC incidence



# CRC screening; proven effect on incidence

ITT 23%  
PP 33%



## Number at risk

Control	112939	111113	108951	106363	103470	99629	18553
Screened	40621	40129	39547	38820	37962	36720	7131
Not screened	16478	15982	15559	15073	14539	13877	2328

# CRC mortality

- CRC is the second most common cause of cancer related death in Europe
- 215,000 cases in 2012 (12-13% of all cancer deaths)  
28 per 100,000 population
- With screening programs we will see a shift in stage and on the long term in mortality

White book 2014, Ferlay Eur J Cancer 2013



# Shift in CRC stage

UK gFOBt program; 49% of screen-detected CRC pT1/T2N0



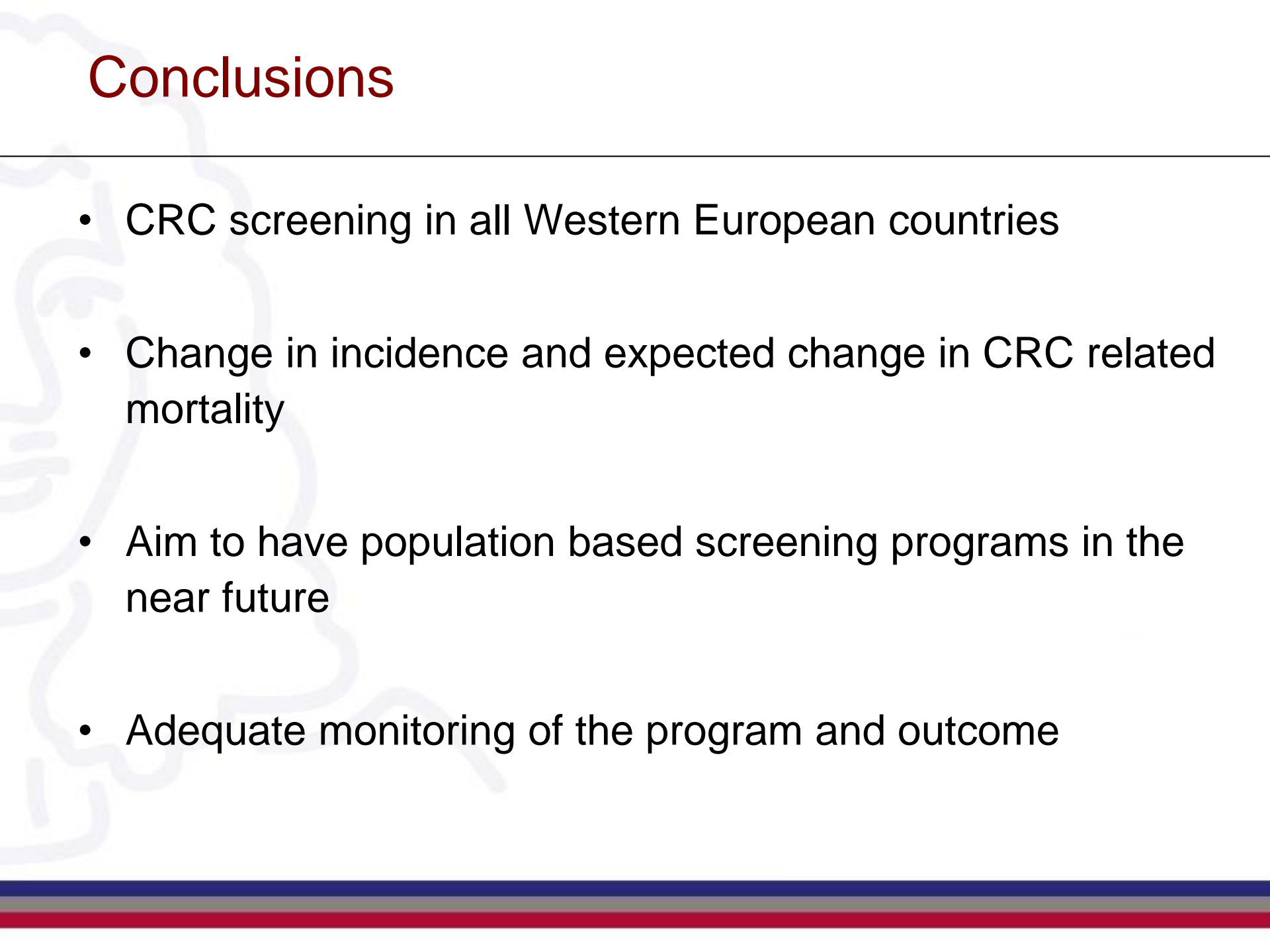
German colonoscopy screening program; 43% of screen-detected CRC pT1/T2N0



UK Colorectal Cancer Screening Pilot Group. BMJ 2004; Bokemeyer, Eur J Gastro&Hepato 2009;

# Conclusions

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- CRC screening in all Western European countries
  - Change in incidence and expected change in CRC related mortality
  - Aim to have population based screening programs in the near future
  - Adequate monitoring of the program and outcome
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# Italy (2003)

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Nationwide screening programme, but major disparities in uptake and provision (7-71% access)

Free of charge

Three screening methods; quality assurance



# Netherlands (2014)

Nationwide screening program

Biennial FIT (Cut-off 88 ng/ml=15 ug Hb/g feces)

High quality (cancer) registry

Lack of specialist endoscopy capacity- increase of cut-off



# Germany (1971/2002)

Operates on voluntary registers, lack a formal policy or invitation to participate

Annual FOBT > 50yr

Coloscopy every 10 yr > 55 yr

Biennial FOBT > 55 yr

Payments are reimbursed by health insurance

Uptake; 50% of females and 30% of males

Endoscopist > 200 procedures