



# E-QUALY: Polish-Norwegian project on the effectiveness and electronic quality assurance in endoscopy screening for colorectal cancer

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Main investigator – WP2 (electronic quality assurance/Gastronet)

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# E-QUALY project

- Timeline – 08.2013 – 01.2017
- Financing - 2 629 500,00 PLN
- Project Promoter - The Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Warsaw, Poland
- Project leader – Jaroslaw Regula, Warsaw, Poland
- WP2 leader – Michal Kaminski, Warsaw, Poland
- Project Partner – University of Oslo, Norway
- WP1 leader - Michael Bretthauer, Oslo, Norway

# Why is it important?

- Colorectal cancer (CRC):
  - 3rd most common cancer in men, 2nd in women worldwide
  - Rising incidence in Europe (incidence >32.2(21.8)/100,000 in NO and PL)
  - Trend towards lower mortality in Europe
- Not only curable but preventable

Globocan 2012



# CRC screening

- Different modalities:
  - Fecal occult blood testing (FOBT)
  - Primary sigmoidoscopy
  - Primary colonoscopy
- NO – pilot FOBT and primary sigmoidoscopy screening
- PL – primary colonoscopy screening (roll-out in 2024)

# Goals of E-QUALY

- Evidence for CRC screening effectiveness (WP1)
  - NordICC trial
- Improve quality of colonoscopy (especially screening)(WP2)
  - Guidelines
  - Understand factors associated with pain
  - Improve feedback from patients

# NordICC trial (WP1)

- Population-based randomised trial (94,959 participants) in PL, NO, Sweden and Netherlands
- Recruitment 2009-2014
- Answer for colonoscopy screening effectiveness in 2024

Original Investigation

## Population-Based Colonoscopy Screening for Colorectal Cancer A Randomized Clinical Trial

JAMA Intern Med 2016  
IF 14.00

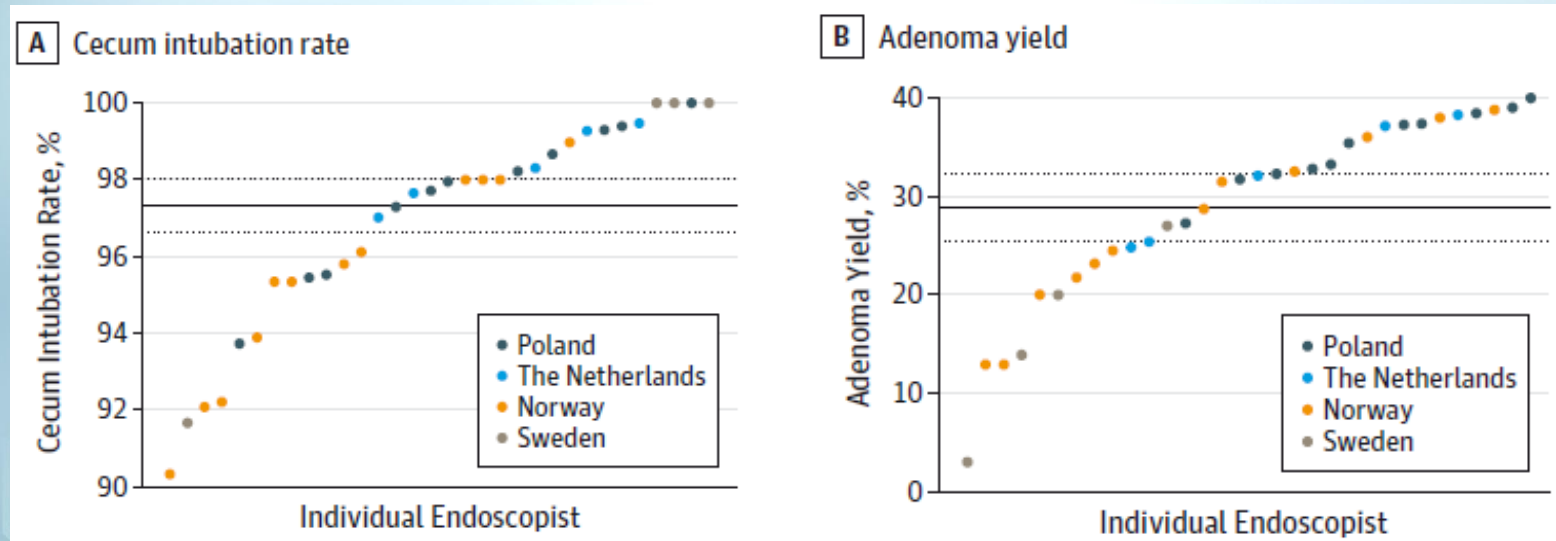
Michael Bretthauer, MD; Michal F. Kaminski, MD; Magnus Løberg, MD; Ann G. Zauber, PhD; Jaroslaw Regula, MD; Ernst J. Kuipers, MD; Miguel A. Hernán, MD; Eleanor McFadden, MA; Annike Sunde, MSc; Mette Kalager, MD; Evelien Dekker, MD; Iris Lansdorp-Vogelaar, PhD; Kjetil Garborg, MD; Maciej Rupinski, MD; Manon C. W. Spaander, MD; Marek Bugajski, MD; Ole Høie, MD; Tryggvi Stefansson, MD; Geir Hoff, MD; Hans-Olov Adami, MD; for the Nordic-European Initiative on Colorectal Cancer (NordICC) Study Group





# NordICC trial – quality (WP1)

- Very low adverse event rate (0.56%)
- Overall quality good (adenoma detection rate 30.7%, caecum intubation rate 97.2%)
- significant differences



# Improving quality – guidelines (WP2)

## The European Society of Gastrointestinal Endoscopy Quality Improvement Initiative: developing performance measures



### Authors

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### Institutions

Institutions are listed at end of article.







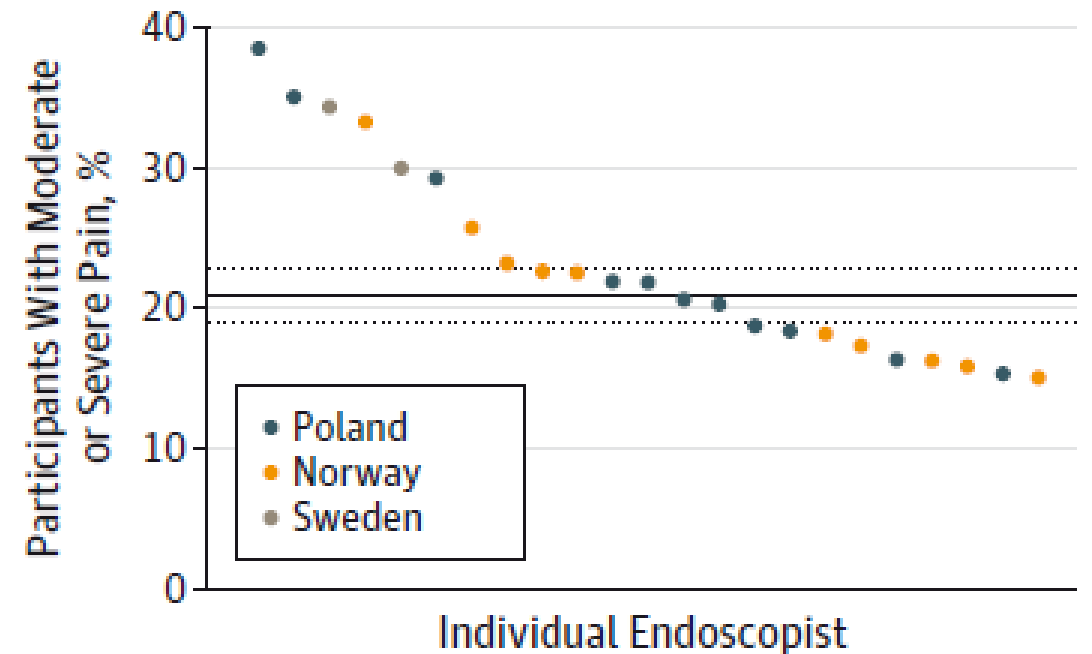
# Improving quality – guidelines (WP2)

- Adequate bowel preparation
- Time slot for colonoscopy
- Indication
- Caecal intubation rate
- Adenoma (polyp) detection rate
- Withdrawal time
- Polypectomy technique & advanced imaging
- Complications & patient experience
- Post-polypectomy recommendations

# Improving quality – pain (WP2)

- Colonoscopy  $\neq$  pain!
- Endoscopist?
- Other factors!

C Participants with moderate or severe pain during colonoscopy



# Improving quality – pain (WP2)

|                     | No or little pain | Moderate or severe pain |
|---------------------|-------------------|-------------------------|
| No sedation         | 77.57%            | 21.91%                  |
| Unassisted sedation | 80.12%            | 19.16%                  |
| Assisted sedation   | 97.53%            | 1.63%                   |

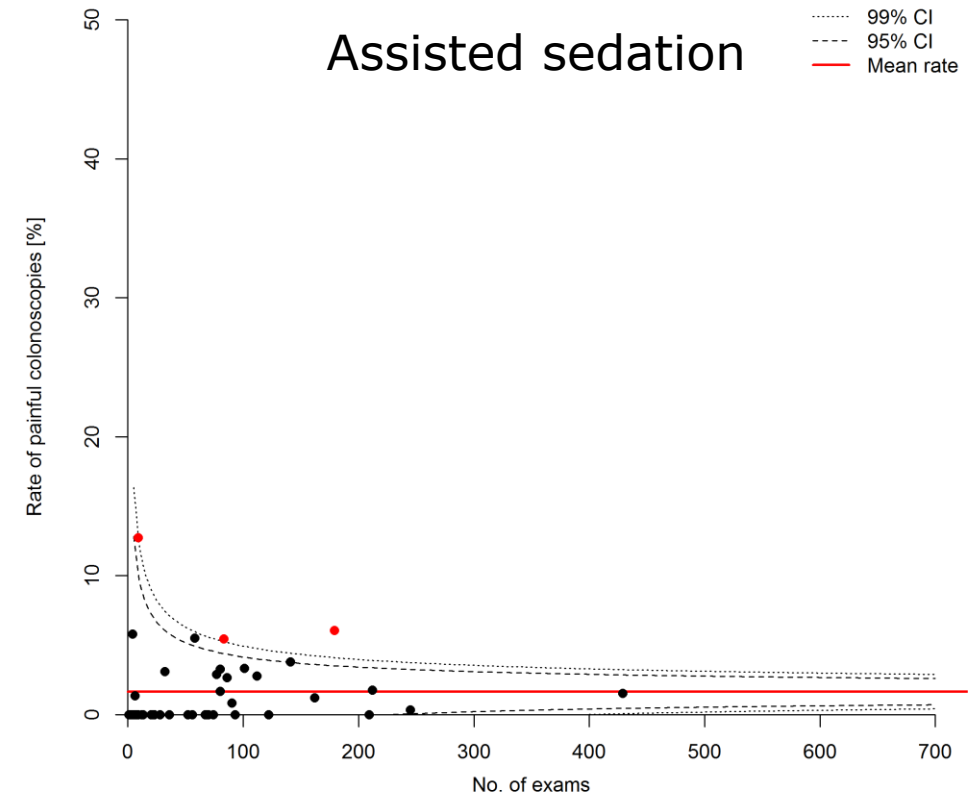
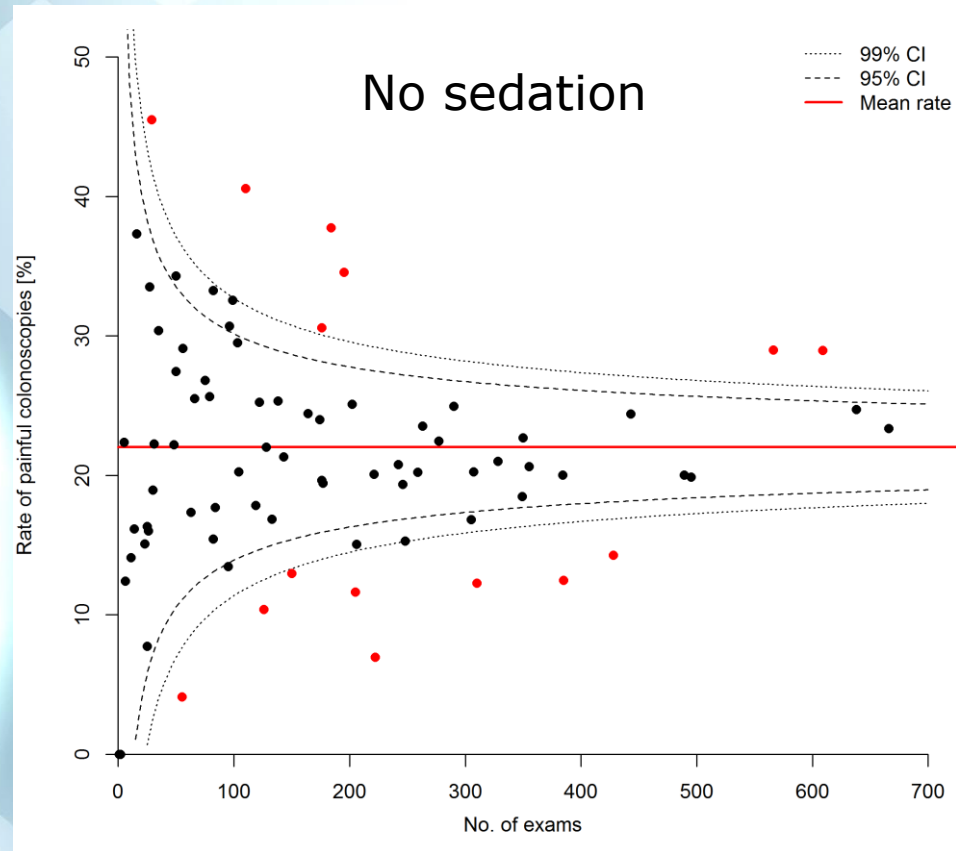




# Improving quality – pain (WP2)

- Male sex and high BMI reduce odds for pain
- Previous operations increase odds for pain
- Good bowel preparation (OR 0.58 - 0.75)
- CIR  $\geq$ 95% (OR 0.74)
- Endoscopist's experience (OR 0.5 - 0.71)
- Endoscopist's specialty
- Newer endoscopes (OR 0.18 - 0.69)

# Improving quality – pain (WP2)





# Patient feedback – Gastronet (WP2)

- Validated tool for patient's experience assessment
- Developed by Norwegian Society of Gastroenterology
- Used in Poland as well
- Includes questions on pain during and after colonoscopy
- Paper version only



# Digital patient feedback (WP2)

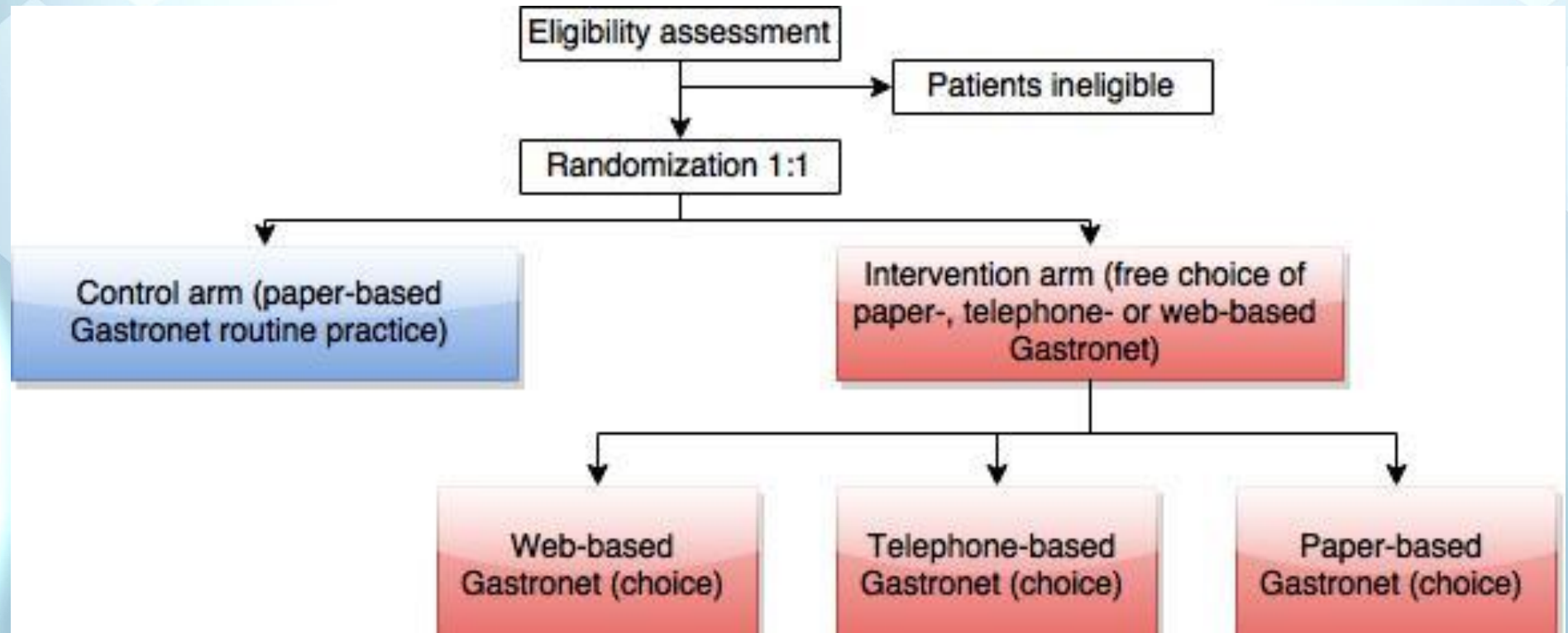
- Novelty in the field of screening
- Few examples in medicine field
- Already working in full scale in PL



# Patient feedback – Gastronet (WP2)


- Current response rate – 64.53% (PL)
- Studied ways of communication:
  - Automated telephone questionnaire
  - Email
  - SMS as an auxiliary tool
- Randomized clinical trial

# Patient feedback – Gastronet (WP2)



- Expect to improve response rate (Jan 2017)





# Patient feedback – complications (WP2)

- Automated telephone questionnaire
- Perforation and bleeding
- Improve reporting
- Analysis of each case
- Results – Jan 2017



# Publications

- Colonoscopy quality indicators: from individual performance to institutional policy. – Endoscopy 2015 (IF 5.63)
- Population-based colonoscopy screening for colorectal cancer: a randomized clinical trial – JAMA Intern Med. 2016 (IF 14.00)
- Reinvitation to screening colonoscopy: a randomized-controlled trial of reminding letter and invitation to educational meeting on attendance in nonresponders to initial invitation to screening colonoscopy (REINVITE) – Eur J Gastroenterol Hepatol 2016 (IF 2.09)

# Publications – planned

- ESGE guidelines – quality in colonoscopy (Endoscopy 2017, IF 5.63)
- Modifiable factors associated with patient-reported pain during and after screening colonoscopy (prepared for Gut 2017, IF 14.92)
- Effectiveness of electronic quality assurance (e-Gastronet) in colonoscopy screening for colorectal cancer – a randomized controlled trial (prepared for Endoscopy 2017)





# Plans for future

- 2024 – answer on colonoscopy effectiveness on CRC prevention (reduction in incidence and mortality)
- Further collaboration – EPoS trial on surveillance after polypectomy
- Randomised trial – training for painless colonoscopy
- Whole screening feedback digital – based (PL & NO)