



# QUALITY ASSESSMENT OF COLONOSCOPY

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# Colonoscopy

- Widely used
- Screening CRC
- Increasing number

- Variation performance
- Missed lesions
- Complications / Costs
- Legal / insurance





# Quality Indicators ?

*REVIEW*

17

## **Quality assurance and recommendations for quality assessment of screening colonoscopy in Belgium**

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# Quality Indicators

**PRE**

**INTRA**

**POST**



- |                          |                          |                     |
|--------------------------|--------------------------|---------------------|
| - Appropriate Indication | - Bowel preparation      | - Documentation     |
| - Unit Facilities        | - Cecal intubation       | - Complication rate |
| - Surveillance intervals | - Withdrawal Time        | - FU pathology      |
| - Sedation / analgesia   | - Adenoma detection rate | - FU instructions   |



# Sedation / Analgesia

- Missed lesions
- Cecal intubation
- Patient comfort and satisfaction
- Deep sedation (propofol) versus moderate sedation (midazolam) ?
- Patient satisfaction better with propofol



# Bowel preparation

- (Photo) documentation
- No standardized reporting system
- Excellent – Good – Mild – Poor
- Split-dose regimen
- Adequate preparation : polyps > 5 mm

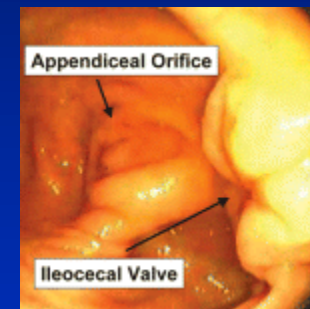
*Gupta et al. Endoscopy 2007*

*Aoun et al. Gastrointest Endosc 2005;62:213-8*

*Rex D. K., et al. AmJof Gastroenterology 2006;101(4): 873-885*

# Cecal Intubation

- Surrogate marker of `complete colonoscopy`
- Notation and photodocumentation of landmarks



- Experience - Bowel preparation - Sedation
- > 90% for all cases > 95% for screening



# Withdrawal time

- Strong association with adenoma detection rate
- $\geq 6$  min ~ higher detection rate

Any neoplasia : 28.3% vs 11.8%;  $P < .001$

Advanced neoplasia : 6.4% vs 2.6%;  $P < .005$

- Technique or Time ?
- Time cecal intubation – rectal retrovision of anal area

\* Barclay et al. *NEJM* 2006;355:2533-41

\*\* Sawhney et al. *Gastroenterology* 2008;135(6):1845-7



# Adenoma detection rate

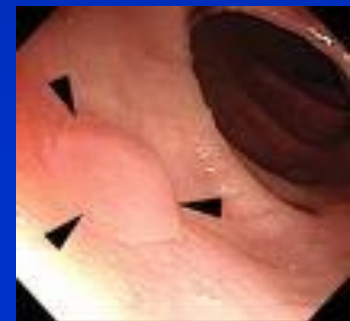
- Important quality indicator
- Adenoma Miss Rate (\*)
  - > 10 mm = 2%
  - 5 - 10 mm = 13%
  - < 5 mm = 26%
- Lower protective effect for proximal CRC (\*\*)
  - Failed cecal intubation
  - Worse bowel preparation
  - Altered Tumor biology – Flat lesions

\* Van Rijn *et al.* *Am J Gastroenterology* 2006;101:343-350

\*\* Brenner, *Gut* 2006; Singh, *JAMA* 2006; Lakoff, *Clin GastroE Hepatol* 2008; Singh, *gastrointest Endosc* 2007; Bressler, *GastroE* 2004

# Adenoma detection rate

- Demography of the patient population
- Quality of the examination
- Operator dependency
- Technical factors
- Polyp





# Adenoma detection rate

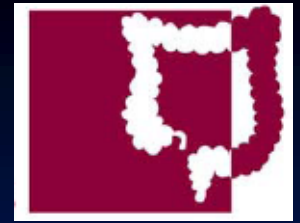
**Adenomas should be detected  
in > 25 % of men and > 15 % of women  
more than 50 years old and healthy**

**Photodocumentation**



# Complications

- **Perforation rate varies in literature**
  - 1 / 500 in higher risk
  - 1 / 1000 for screening groups
- **Technique is crucial**
- **Submucosal saline injections – clipping**
- **Bleeding is most common**



# Quality Project On Colonoscopy VVGE

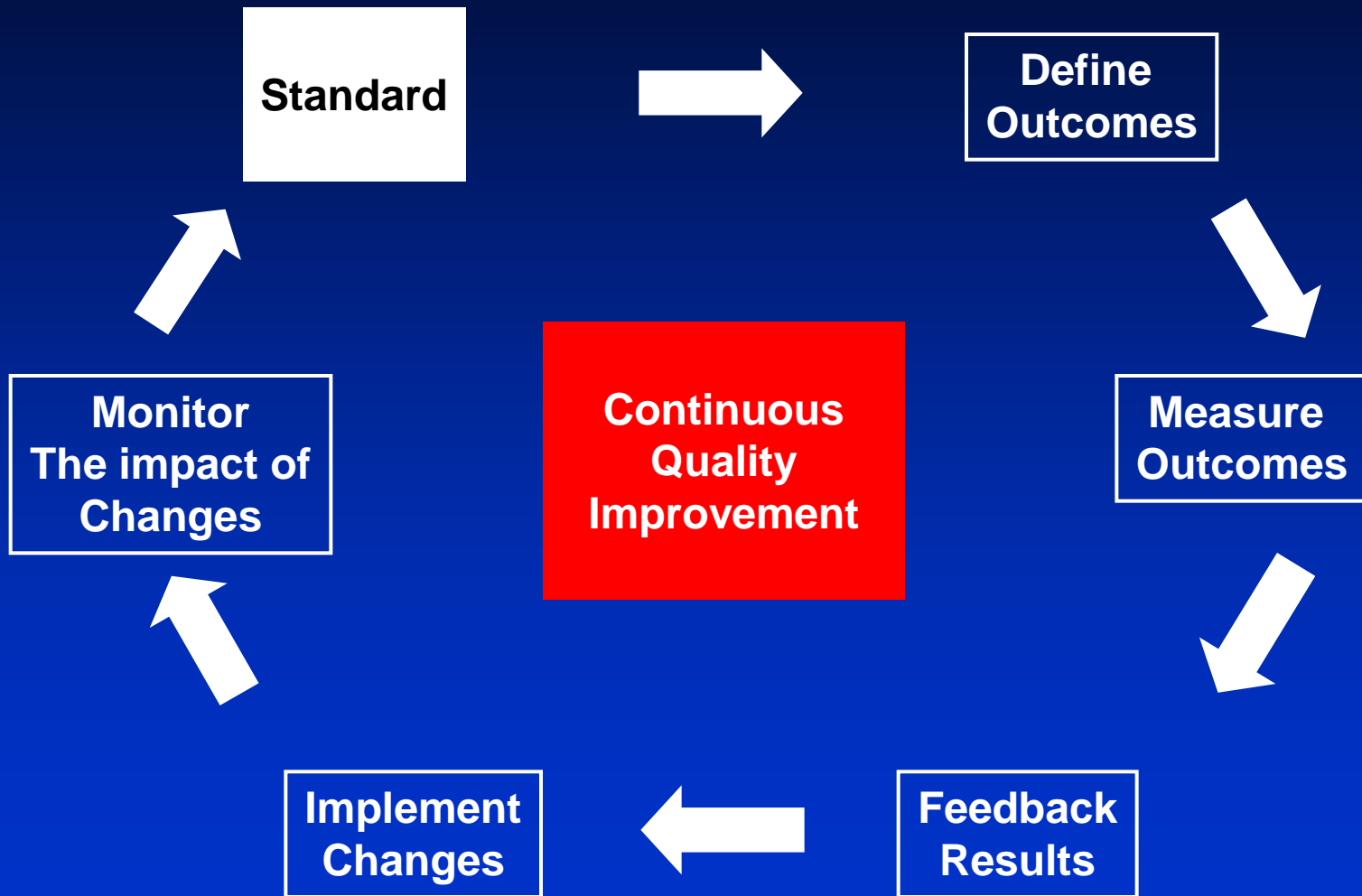


# Aim

- 1/ **To assess** actual quality of colonoscopies
  - 2/ **To improve** quality for individual colonoscopists
  - 3/ **To develop** guidelines
- ➔ Flemish population screenings program for CRC



# Aim





# Method

- **Duration : 9 months**
- **Participation during 3 consecutive months**
- **Voluntary and anonymous**
- **Registration relevant aspects of colonoscopy**
- **Individual confidential feedback**



# Method

**Invitation**  
All VVGE members



**Documents**



**Registration**

**Voluntary !**

Participation form  
Questionnaire  
Agreement Local EC

3 consecutive months  
First of each month



# Data registration

- **Online**

link

password / login

- **Parameters**

## **Patient characteristics**

**preprocedure** : sedation, facilities, type/place preparation

**Intraprocedure** : quality preparation, cecal intubation,  
withdrawal time

**postprocedure** : surveillance interval, FU, therapy



# Additional Data

- Informed Consent
- Photo documentation
- APO report
- Patient satisfaction forms



# Information

[www.vvge.be](http://www.vvge.be) :

**New Items :** Quality project colonoscopy

KWALITEITSPROJECT COLONOSCOPIES IN VLAANDEREN		
DOCUMENTEN	PROCEDURE	LITERATUUR
§ Protocol	§ STAP 1	Acta, Macken et al. 2009, 72, 17-25
§ Deelname formulier	§ STAP 2	
§ Vragenlijst Centrum	§ STAP 3	
§ Informed Consent	§ STAP 4	
§ Tevredenheidskaart	§ Flowchart	
§ Verzekeringsattest UZA		
§ Gunstig advies Centraal EC UZA		
§ Benodigde documenten voor locale Ethische Commissie		Contact: <a href="http://www.kwaliteitsprojectvvge@gmail.com">www.kwaliteitsprojectvvge@gmail.com</a>



# Conclusions

- **Quality assurance for colonoscopy**
- **Quality improvement program**
- **Quality parameters**
  - Sedation
  - Bowel preparation
  - $\geq 6$  min withdrawal time
  - $\geq 95$  % Cecal intubation
  - 15 – 25% adenoma detection rate

