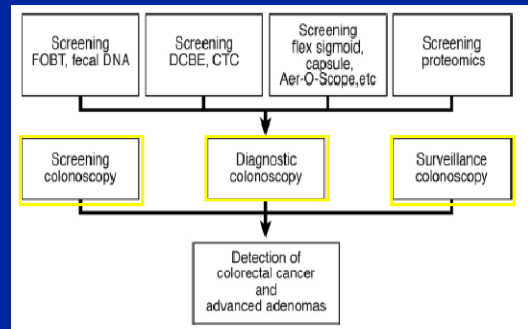


Quality assessment in colonoscopy

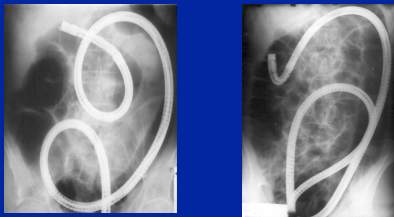
Jaroslaw Regula

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Warsaw, Poland



Rex D, Eid E, Clin Gastro Hepatol 2008

Colonoscopy is often not perfect



European guidelines for quality assurance in CRC screening. IARC (in press)

Ed. J. Patriack, N Segnan, L. Von Karsa

- **Before** (referral practices, consent, anticoagulants, bowel prep quality)
- **During** (sedation, technique, difficult polyps, safety issues)
- **After** (recovery, post-procedure questionnaire, surveillance recommendations)

Competence levels

- 0 – taking biopsies; no polypectomy
- 1 – removal of polyps <1cm
- 2 – removal of polyps <2,5cm
- 3 – removal of flat lesions <2cm, large sessile lesions
- 4 – removal of large sessile lesions and other lesions, that can also be treated surgically

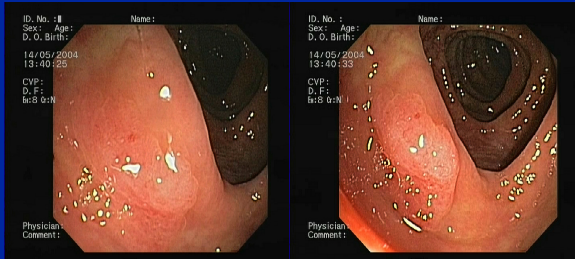
European guidelines for quality assurance in colorectal cancer screening. IARC (in press)

Quality parameters

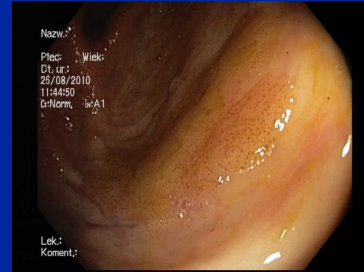
- caecal intubation rate
- adenoma detection rate (15%F, 25% M)
- bowel prep quality (to see polyps 5 mm)
- photodocumentation of caecum
- mean withdrawal time without polypectomy
- adverse events (24 hours – 30 days)

Lieberman D et al.: Gastrointestinal Endoscopy 2007;65:757

Flat adenoma detection rate?



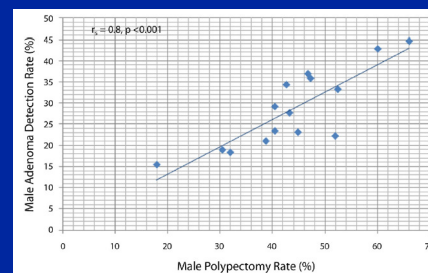
Sessile serrated lesion detection rate?



Endoscopic features of serrated lesions

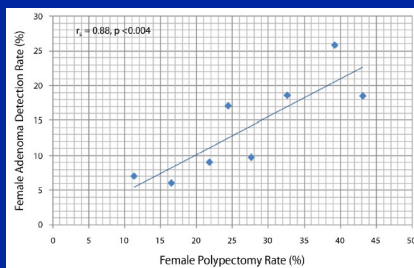
- difficult to see
- flat
- covered with brown mucus difficult to wash off
- pitt pattern suggestive of hyperplastic
- looks hyperplastic or adenomatous

ADR and Polypectomy Rate (?)



Williams JE et al. Gastrointest Endosc 2010; (epub)

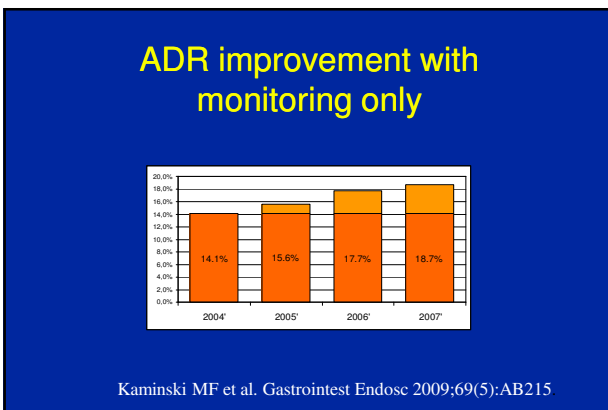
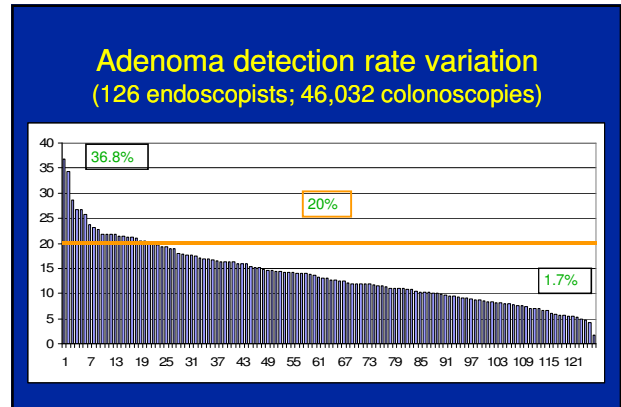
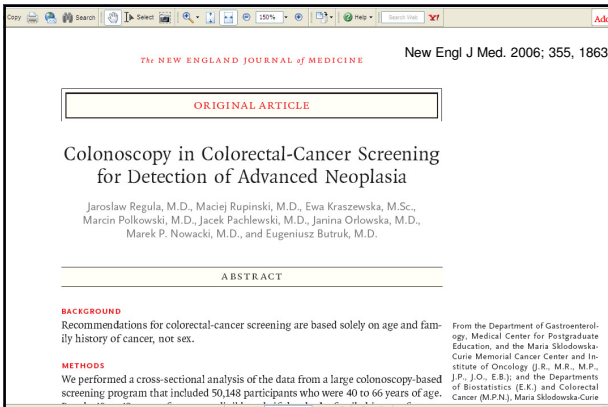
ADR and Polypectomy Rate (?)



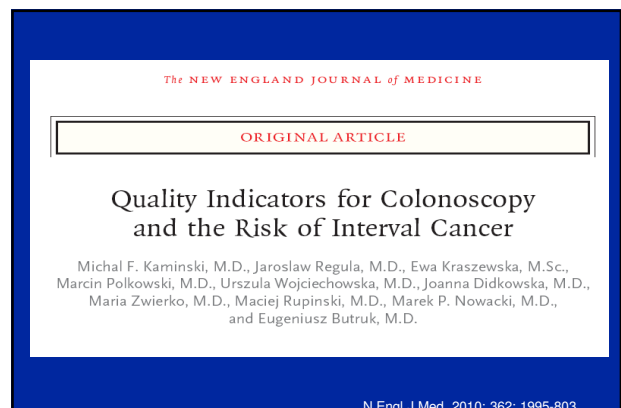
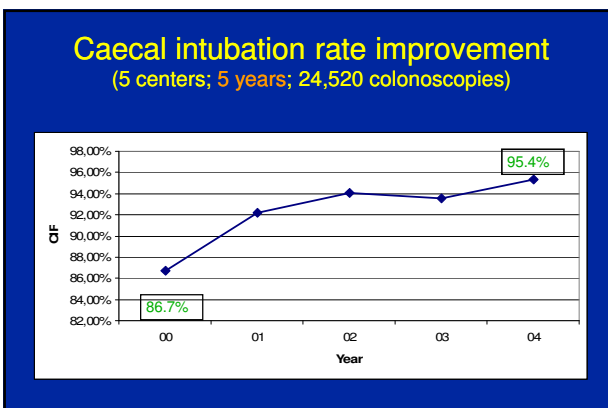
Williams JE et al. Gastrointest Endosc 2010; (epub)

Adenoma detection rate

- needs histology to be calculated
- includes all (also small, irrelevant) adenomas but
- based on hard data (histology)
- measures precision of inspection of the whole large bowel mucosa



- ### Cecal intubation rate in large studies
- Bowles et al. 04' – UK 76,9%
 - Aslinia et al. 06' – USA 85.1%
 - Shah et al. 07' - Canada 86.9%
 - Regula et al. 06' - Poland 91.1%
- Target**
- > 90% for routine colonoscopies
 - > 95% for screening colonoscopies



Video-recording improves quality

	Pre-awareness score Mean (s.d.)	Post-awareness score Mean (s.d.)	P value
Overall quality index (1 to 5)	2.9 (0.9)	3.8 (0.7)	<0.0001
Fold examination (1 to 5)	2.5 (1.0)	3.5 (0.8)	<0.0001
Luminal distention (1 to 5)	3.4 (1.0)	4.2 (0.7)	<0.0001
Cleanup (1 to 5)	3.0 (0.8)	3.9 (0.7)	<0.0001
Adequacy of inspection time (1 to 5)	2.6 (1.0)	3.7 (0.8)	<0.0001
Measured inspection time (min)	4.9 (2.2)	7.3 (1.8)	<0.0001

Rex DK et al. Am J Gastroenterol 2010;105:2312

Are new technologies helpful?

- wide-angle colonoscopy
- cap-fitted colonoscopy
- colonoscopes for retroflexion
- third-eye retroscope
- chromoendoscopy
- high definition
- NBI
- autofluorescence

How to improve human performance?

- Showing the problem
- Teaching proper techniques
- Constant monitoring
- Audits
- Elimination of poor performers

Existing national quality control systems

- Norway – Gastronet
- UK – within screening programme
- Poland – within screening programme

Summary

- **Quality** of colonoscopy is a problem !
- Ensuring high quality examination has become the **main task of endoscopic societies**
- Adenoma detection rate (**ADR**) is a **validated** quality indicator
- **Monitoring of quality** in each endoscopic unit should be required