World Rectal Conference
on Organ Preserving Perspectives

Biopsies. When? Why?

GL Beets

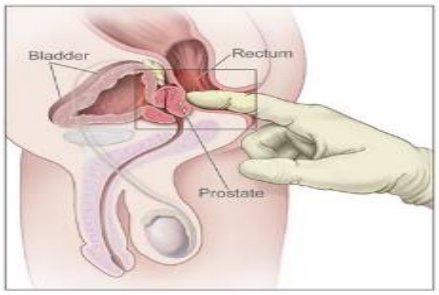
Department of Surgery
Netherlands Cancer Institute
Amsterdam, The Netherlands

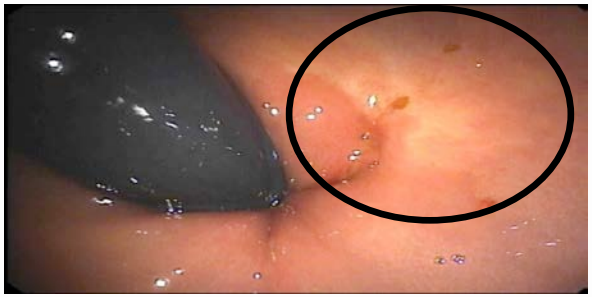
NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

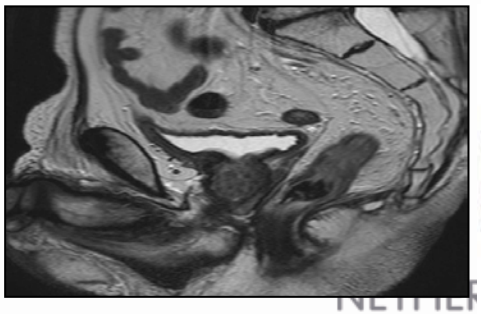
- No disclosures

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

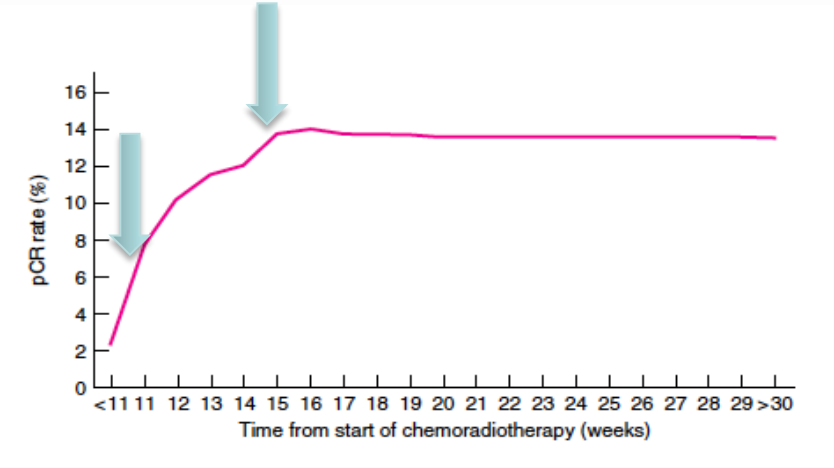
Biopsy?







- Improving the accuracy of selection



Sloothaak et al. BJS 2013

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

Role of biopsies in patients with residual rectal cancer following neoadjuvant chemoradiation after downsizing: can they rule out persisting cancer?

R. O. Perez*†, A. Habr-Gama†, G. V. Pereira‡, P. B. Lynn†, P. A. Alves*†, I. Proscurshim*†, V. Rawet§ and J. Gama-Rodrigues†

- 172 pts distal rectal cancer ChRT
  - 60 cCR: no biopsies
  - 112 incomplete responses
    - 73 obvious residual tumor: no biopsies
    - 39 significant downsizing: biopsies
      - 25 positive biopsy: all adenocarcinoma
      - **14 negative biopsy: 11 residual cancer**

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

Biopsy results

– “Nonspecific inflammatory changes”

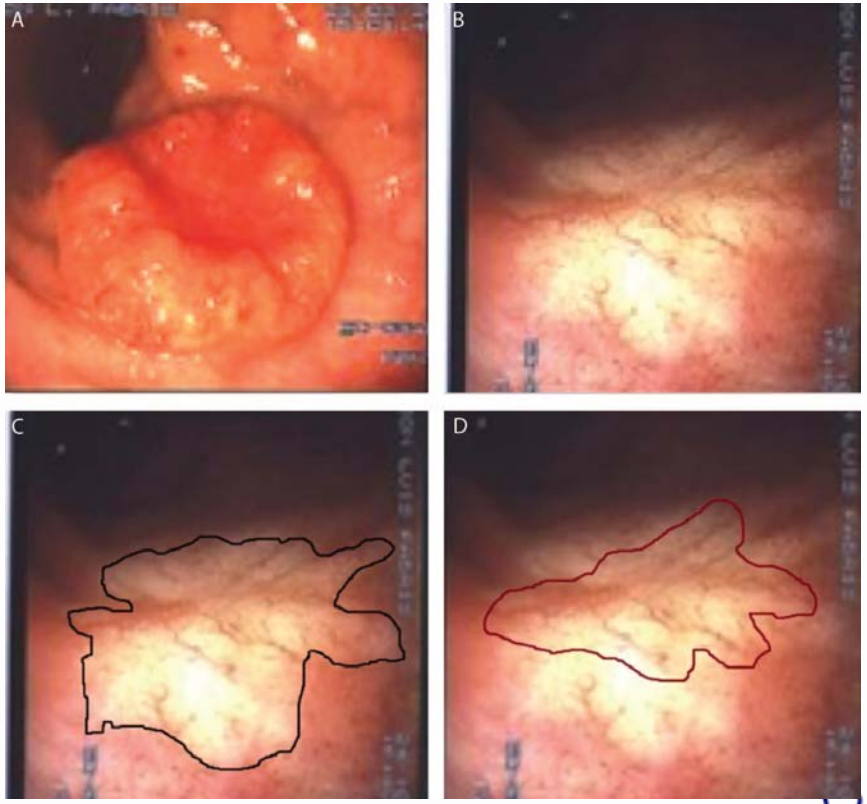
– “Adenocarcinoma”
  - False negatives
  - Occasionally false positive!

– “Low or high grade dysplasia”

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

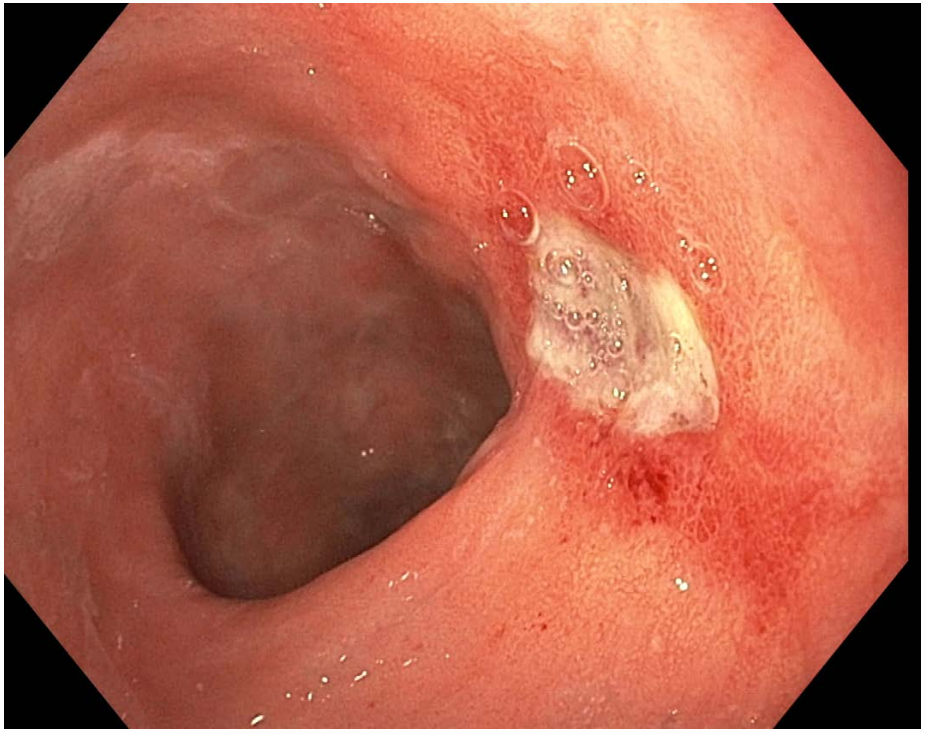
Complete clinical response

- White flat scar
  - +/- telangiectasis
- No nodule
- No ulceration
- No mass
- Subtle induration OK

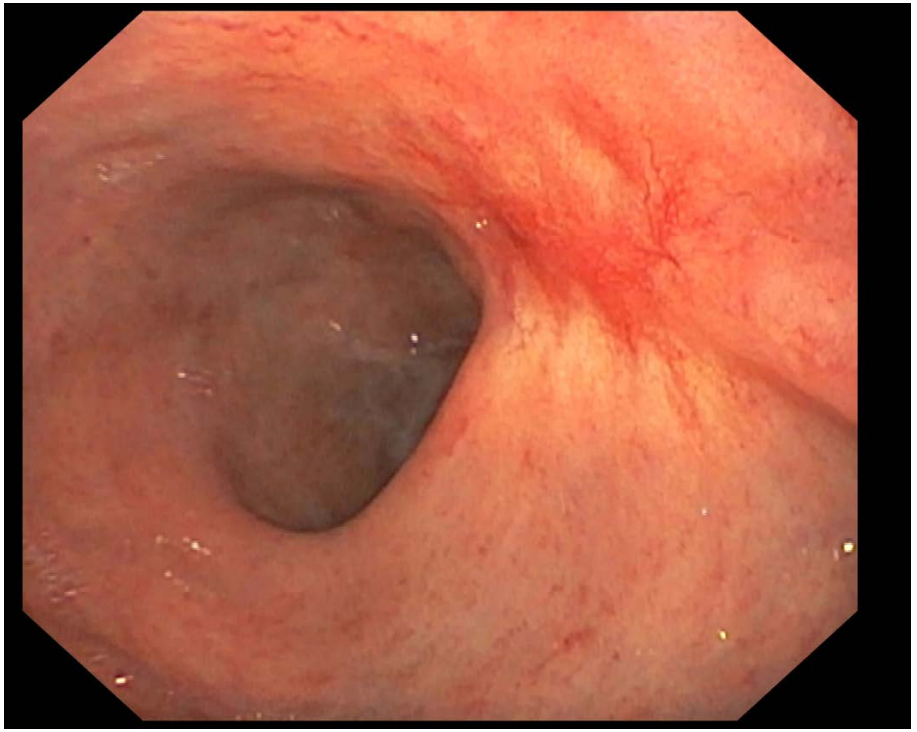


Habr Gama 2010 DCR

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK



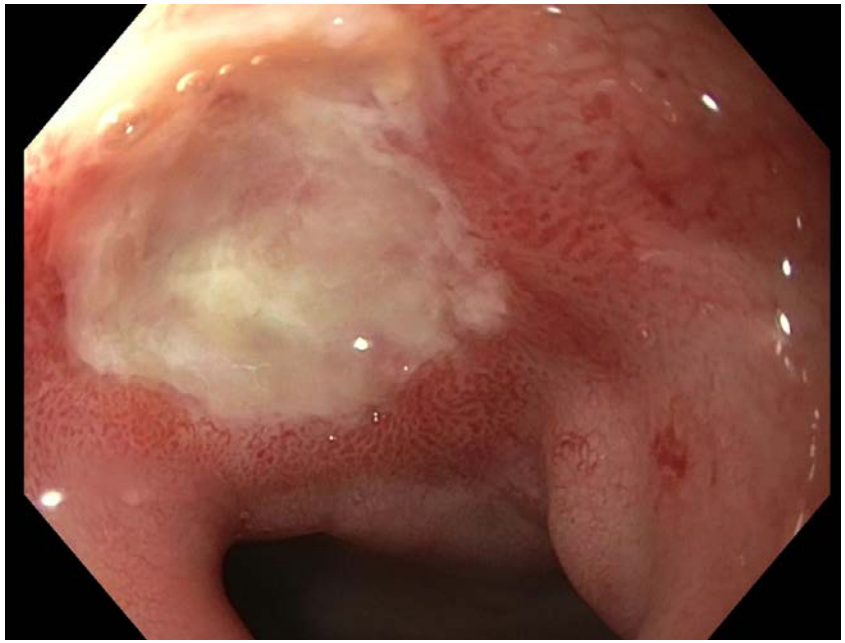
8 weeks: flat ulcer – no Bx

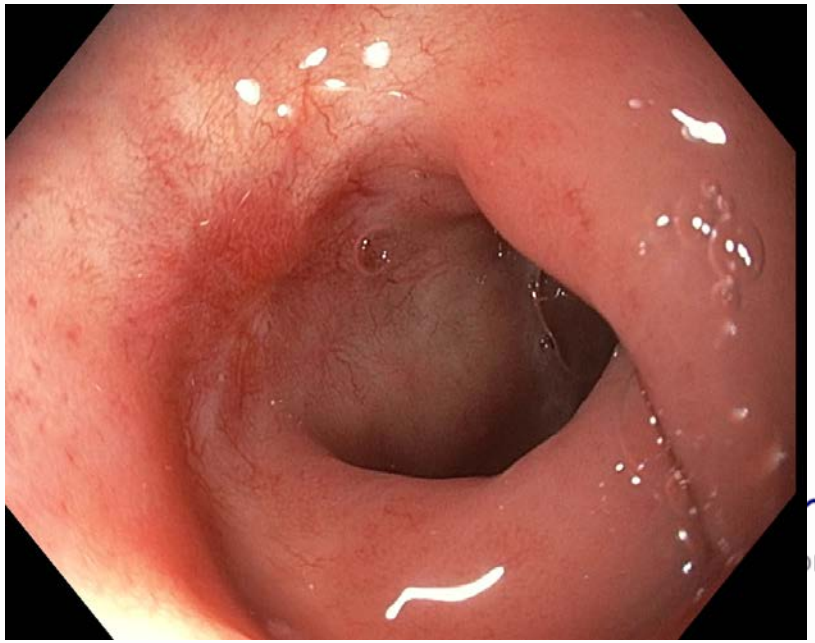


16 weeks: flat ulcer – no Bx

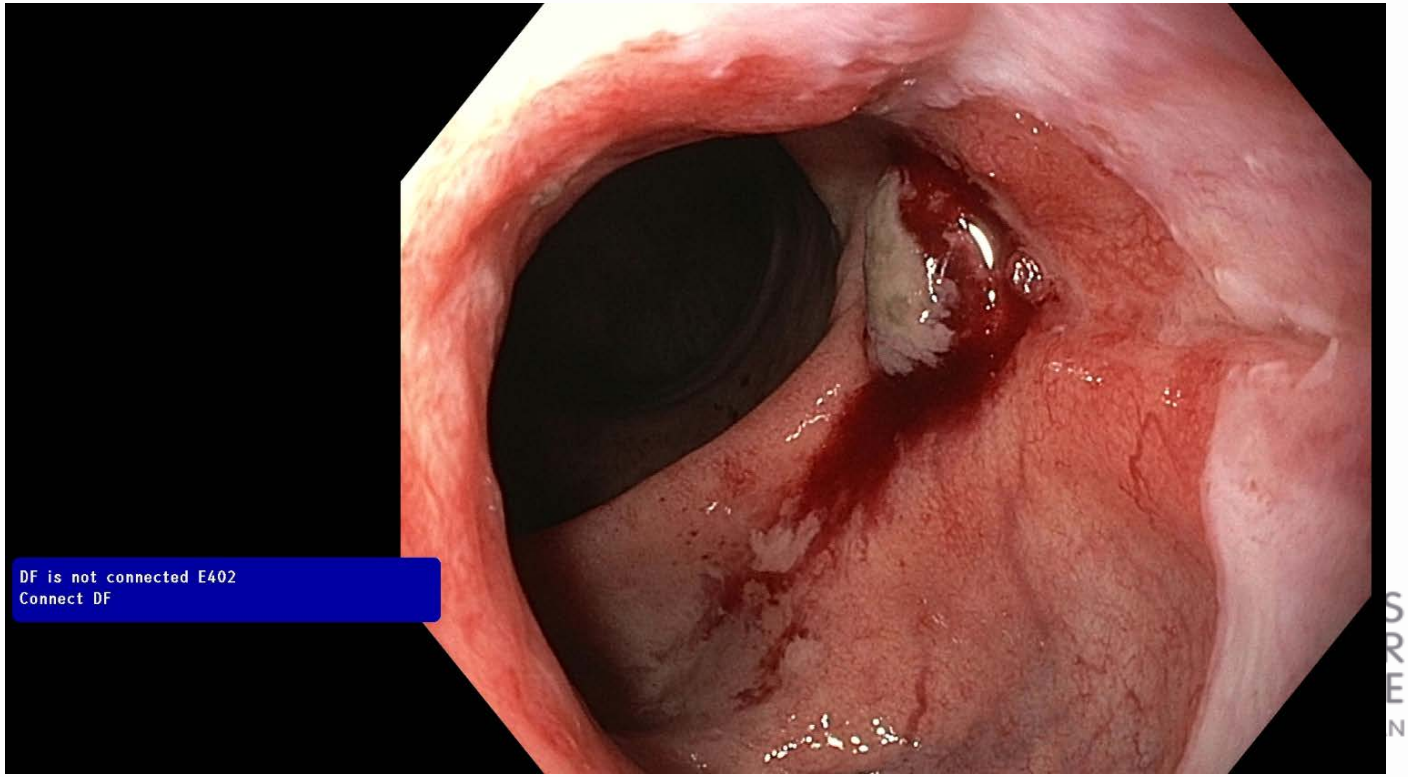
NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

- 1st assessment at 12 weeks: ulcer
  - MRI: equivocal
  - Biopsy: aspecific changes
- 2nd assessment at 20 weeks
  - MRI: only very small diffusion signal



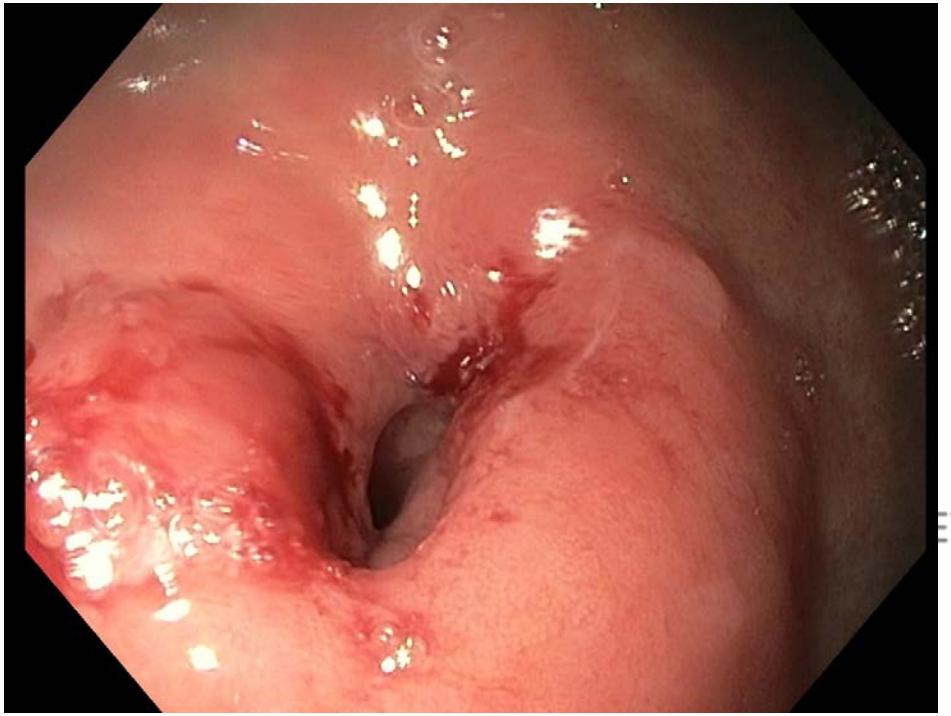


– 1st assessment 2 mths outside: ulcer Bx-
– 2nd assessment 4 mths NKI
  - Bx adenocarcinoma



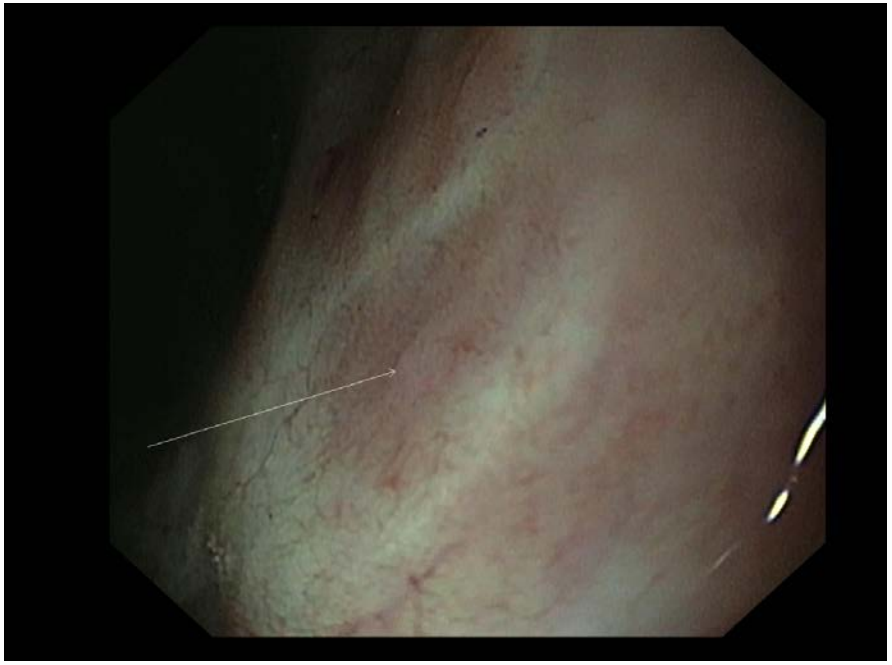
– Rectal cancer with synchr liver mets
– M1 schedule and Liver first
– Assessment elsewhere: cCR?

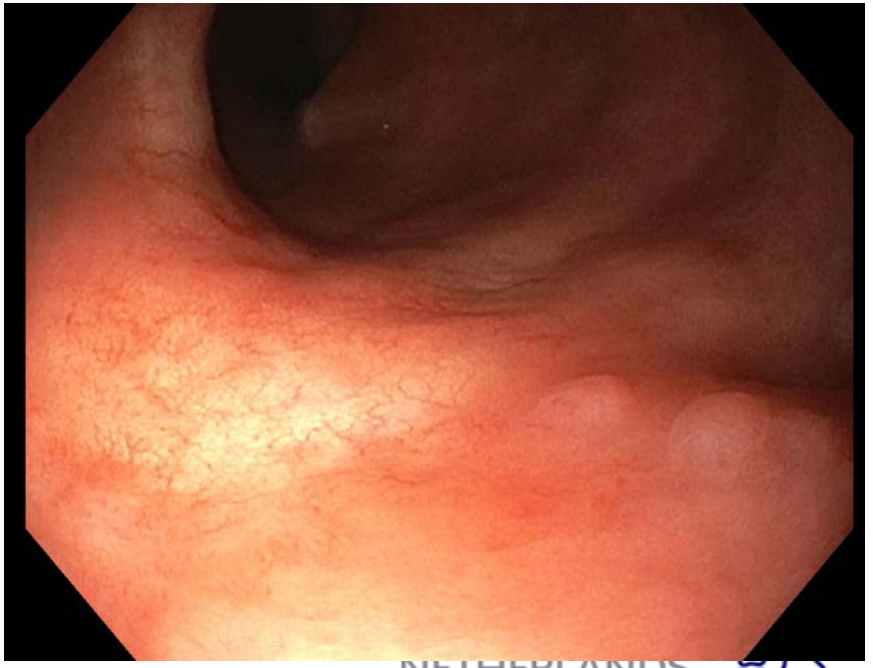
– Biopsy: at least high grade dysplasia



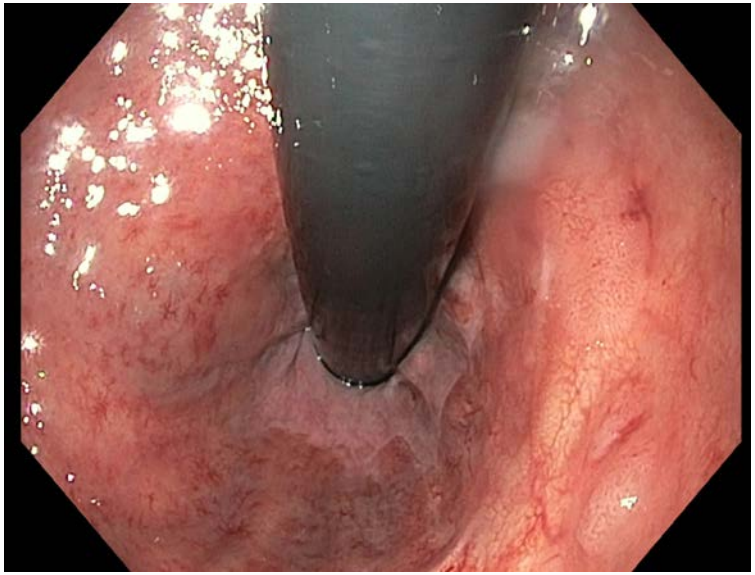
ETHERLANDS
CANCER
INSTITUTE
ANTONI VAN LEEUWENHOEK

Biopsy?

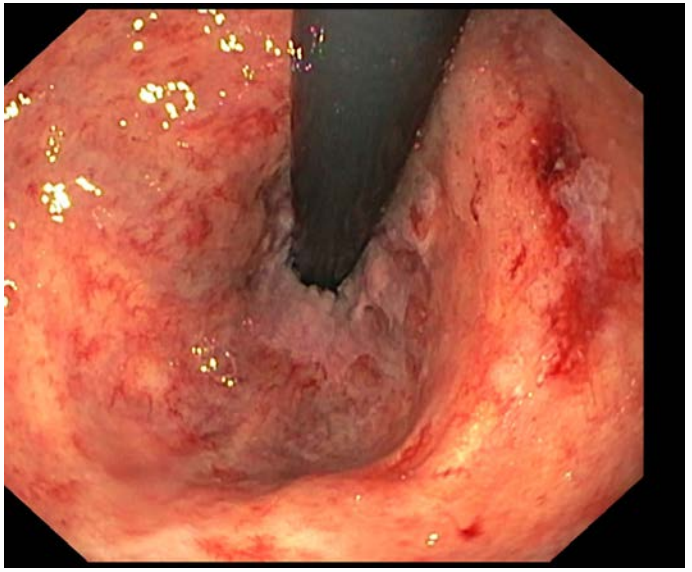




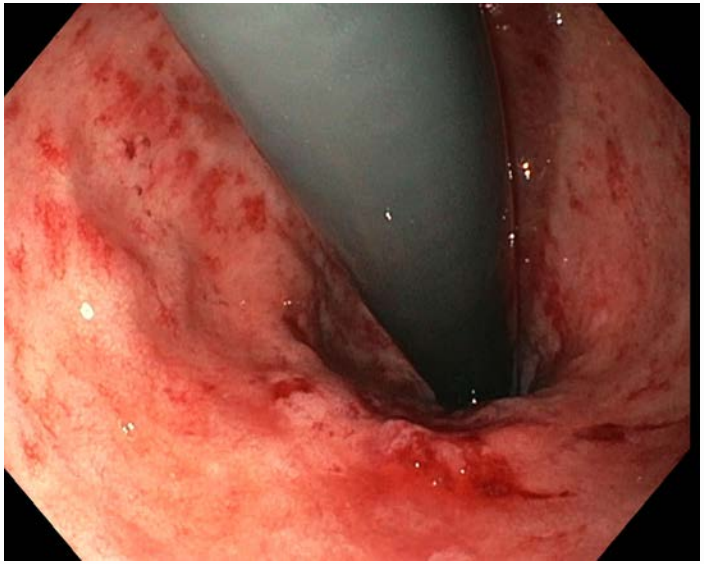
NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK



5 months: Bx adenoma HGD

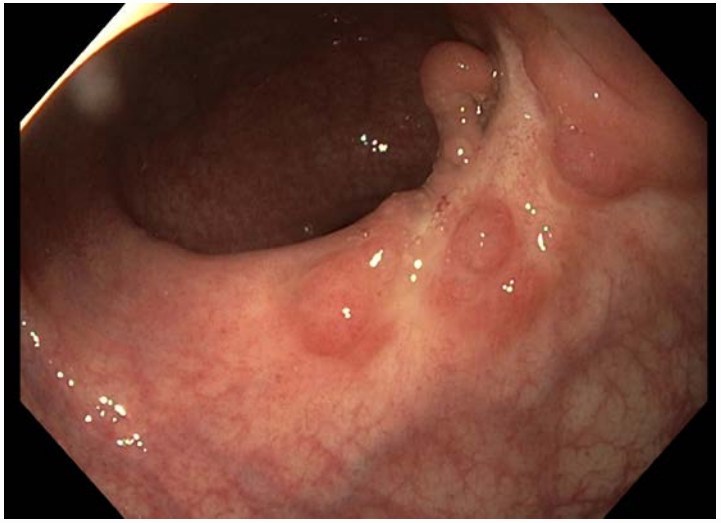


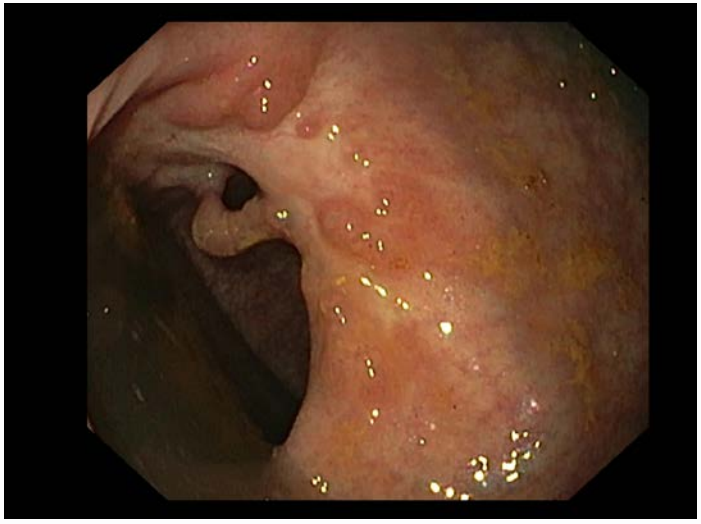
8 months: proctitis

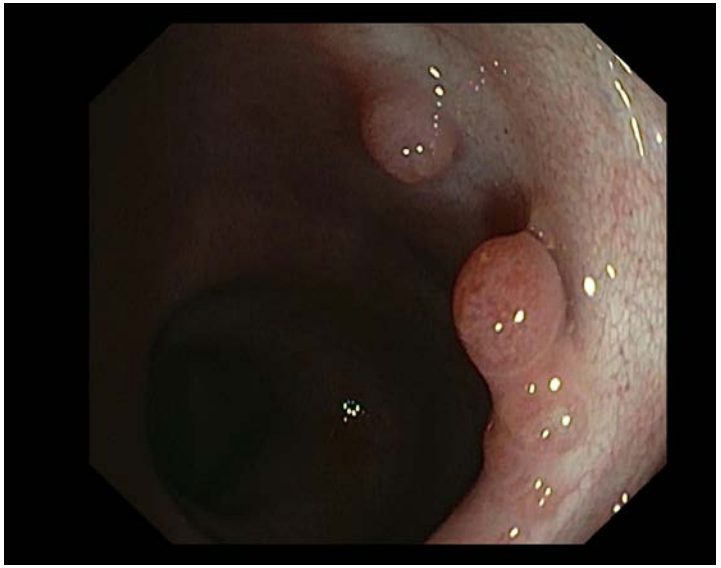


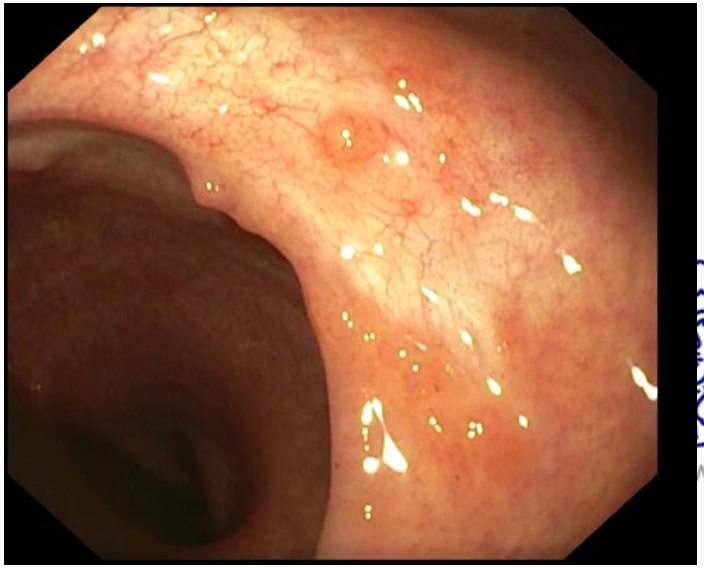
11 months: Bx adenoca. TEM T1sm3

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK









WENHOEK

Rationale LE after ChRT

- Diagnostic
  - Confirm pCR
  - Informed decision W&W

- Therapeutic
  - Excise local residual disease / regrowth
  - Avoid LAR or APR
  - Adenomatous regrowth

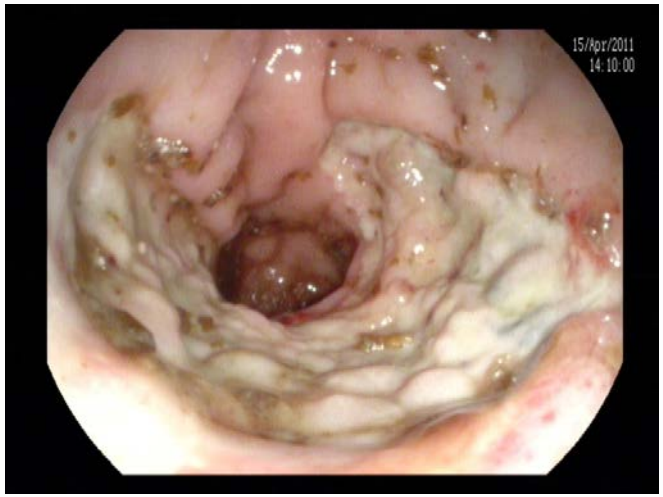
NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK

Cost of local excision

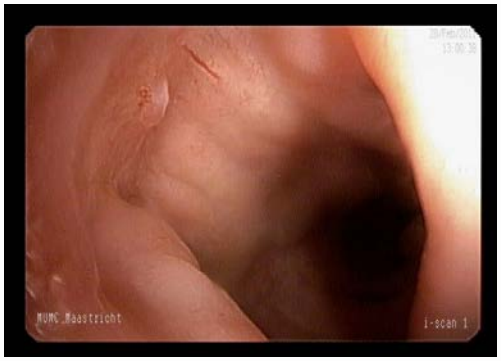
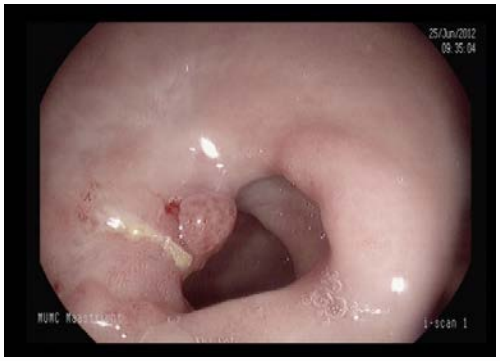
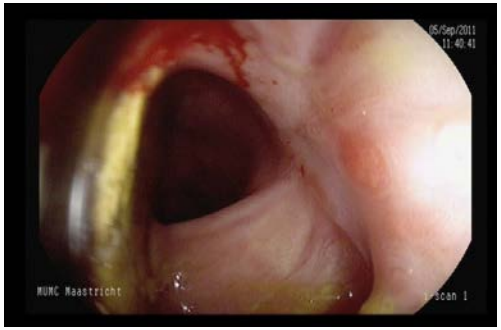
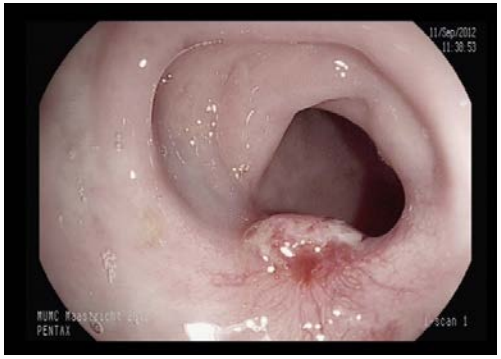
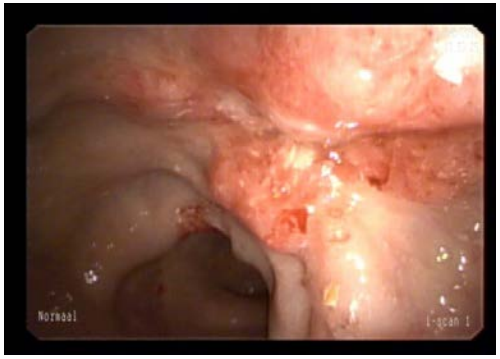
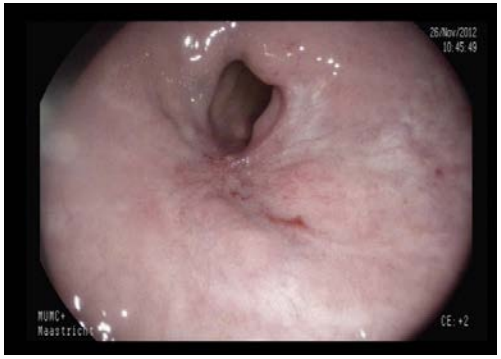
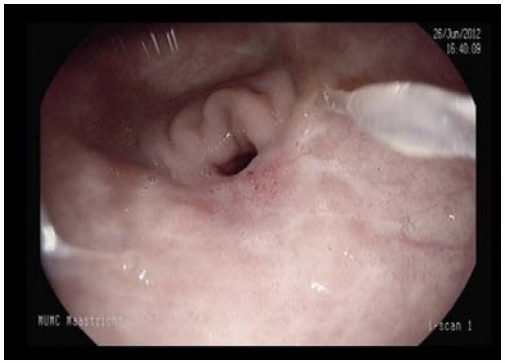
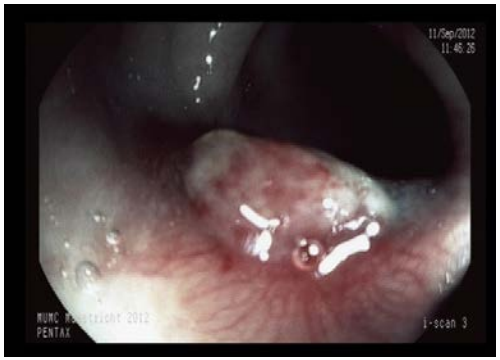
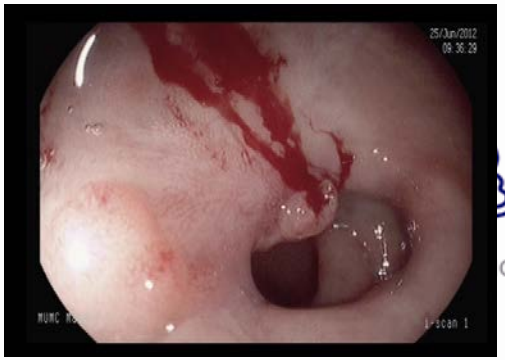
- Higher incidence complications
  - Wound dehiscence 70% vs 23%
  - Readmission 43% vs 7%
  - Pain, bleeding
  - CARTS 8% reoperation
  - ACOSOG 4-8% gr ¾

Perez et al. DCR 2011

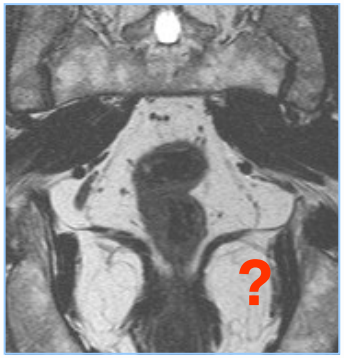
- Anorectal function?
  - Conflicting results



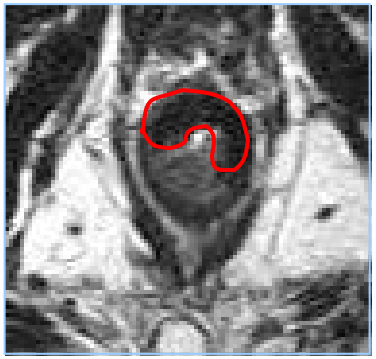
Endoscopic follow up

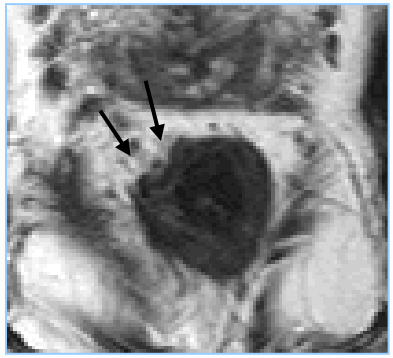
MRI follow up



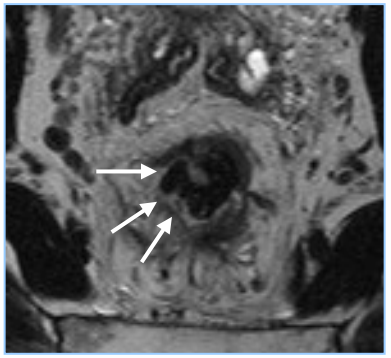
No morphology



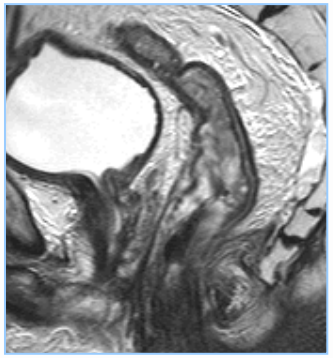
Closed-fibrosis



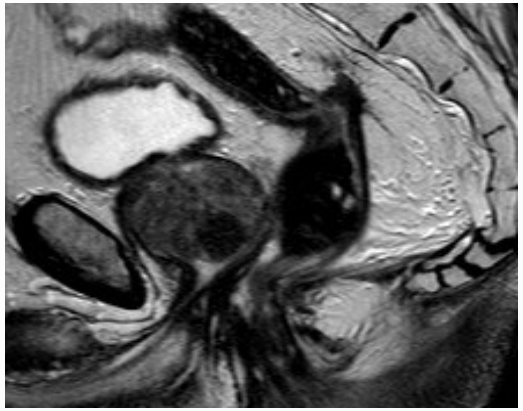
Closed-muscle



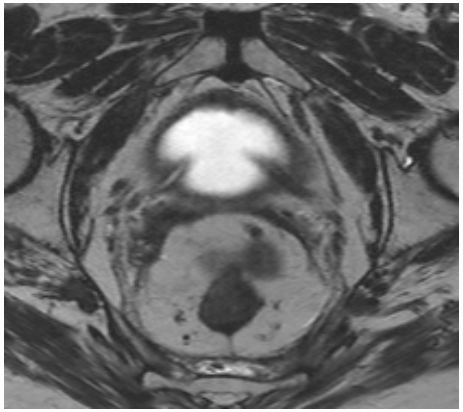
Open



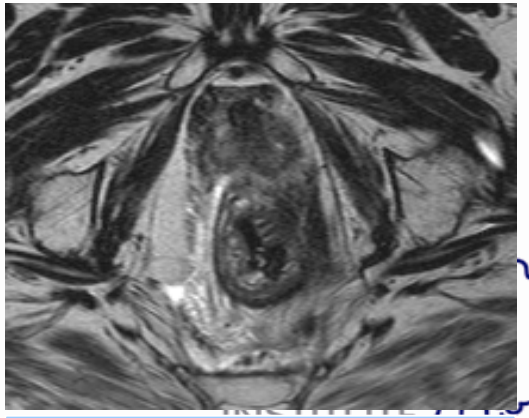
Edema



Massive-no MRF



Spicular to MRF



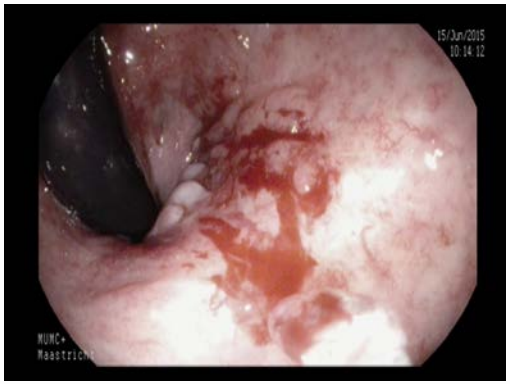
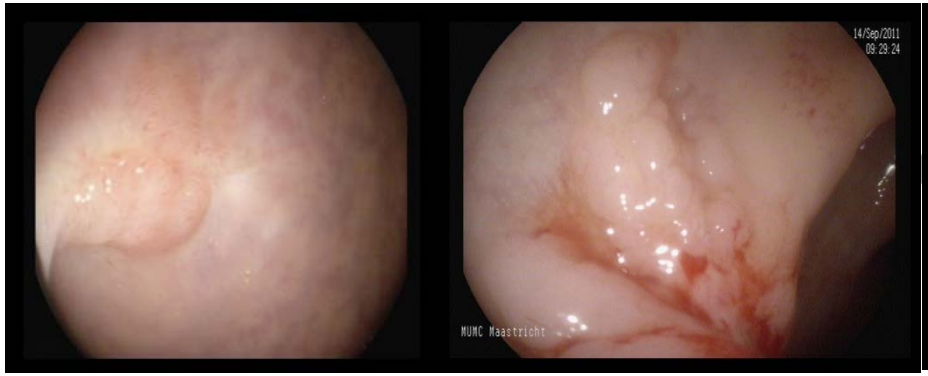
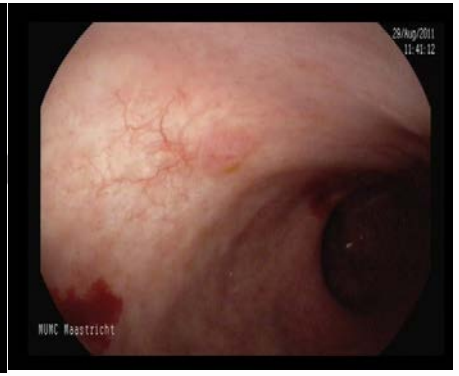
Massive to MRF

NHOEK

Adenomatous regrowth

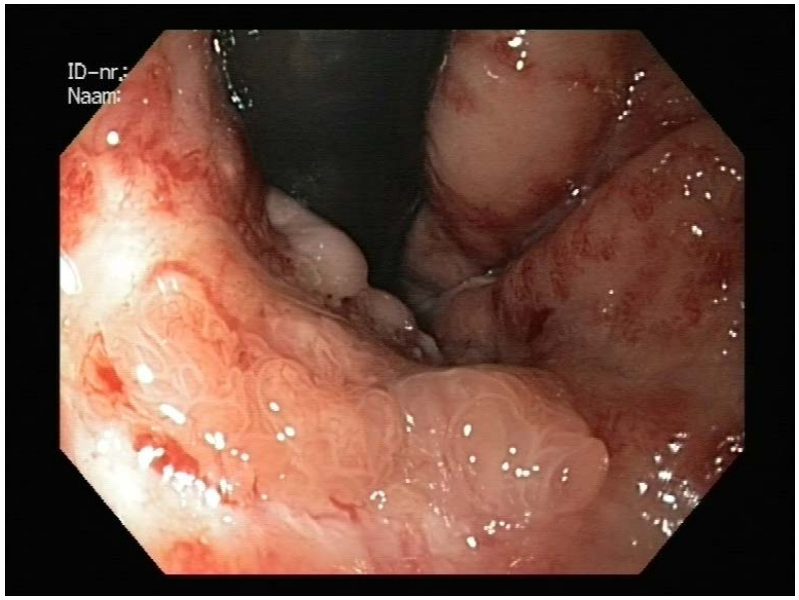
- At (re)assessment
  - Soft lesion
  - Polypoid and endoscopy
  - Biopsy: adenomatous +/- HG dysplasia
- Diagnostic – therapeutic dilemma
- Premalignant lesion

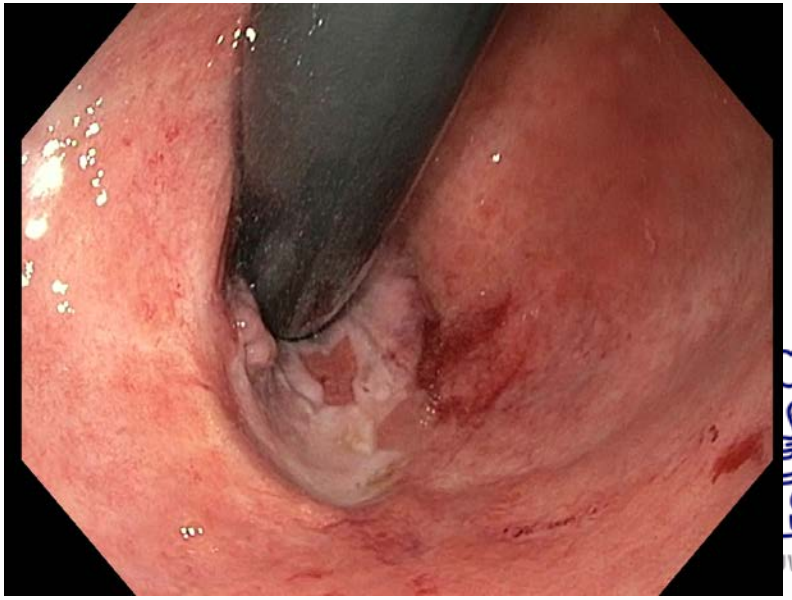
Rupinski et al. EJSO 2015

Adenomatous regrowth

- Follow up cCR 18 months
- biopsy: villous adenom LGD
- TEM: completely removed villous adenoma





Conclusion

- Biopsy not to prove a (near)cCR
  - At 8 weeks rarely helpful
- Biopsy is to prove regrowth
  - False negatives – false positives
- Local excision is therapeutic tool

NETHERLANDS CANCER INSTITUTE
ANTONI VAN LEEUWENHOEK