Dosis escalatie door middel van contacttherapie met de Papillon - de OPAXX trial en STARTREC-3 studie

Themadag 05-03-2026

An-Sofie Verrijssen

Radiotherapeut-oncoloog

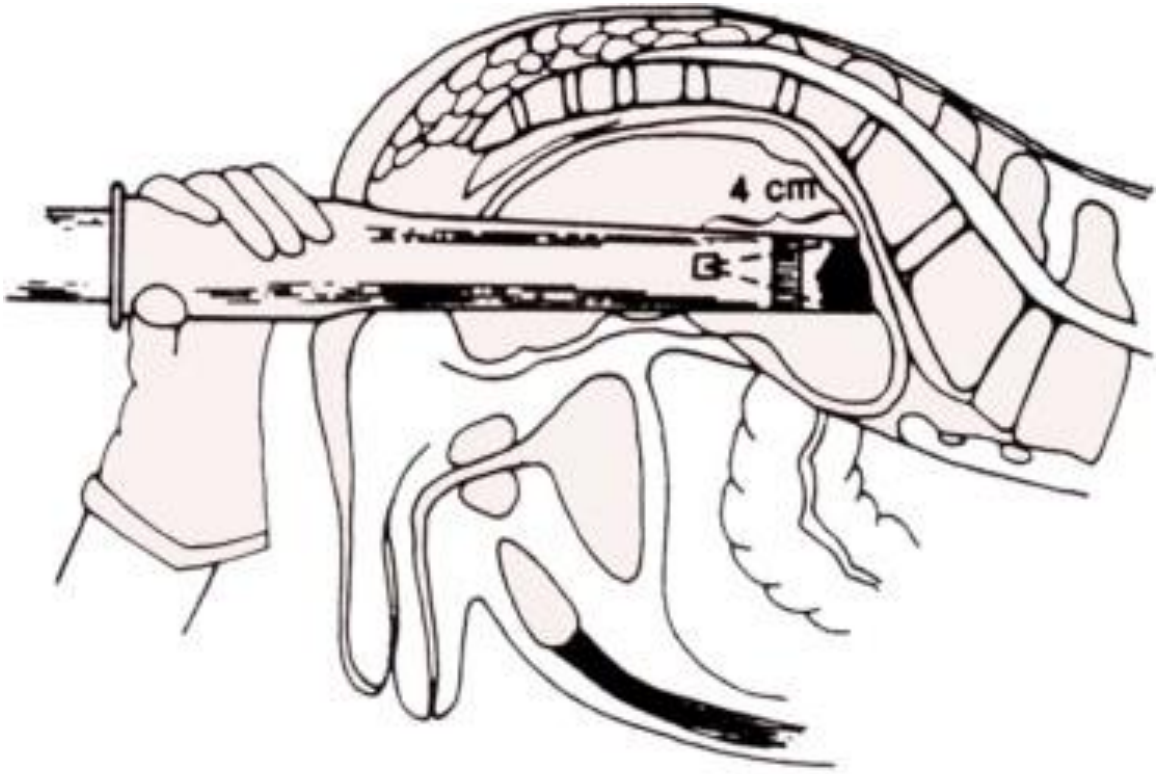
Catharina Ziekenhuis

Gedreven door het leven.

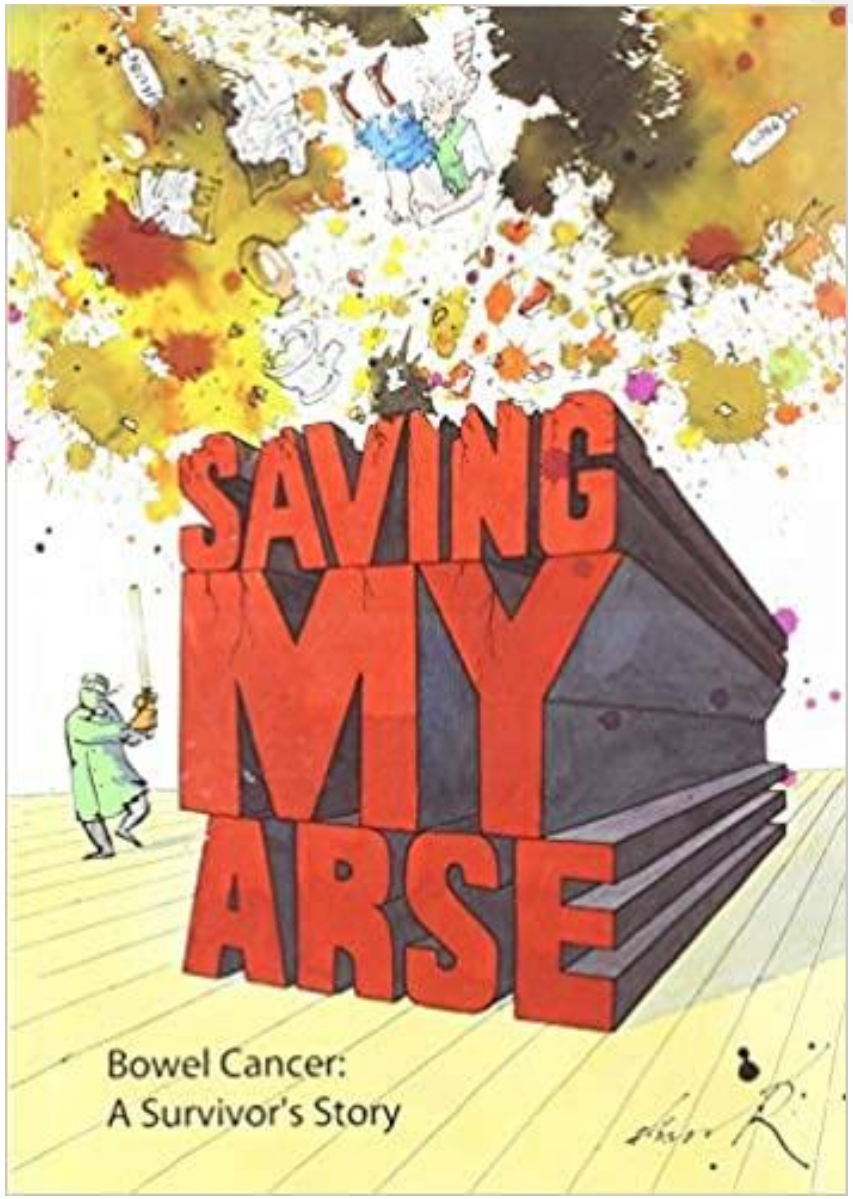
Indeling

- Achtergrond
- Evidence
- Studies
- Kwetsbaren/ouderen
- Casuïstiek

Achtergrond

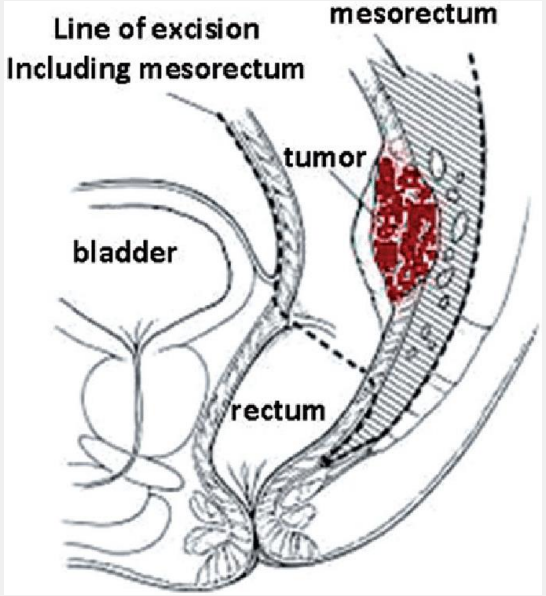


PAPILLON TECHNIQUE (De Vita 1986)

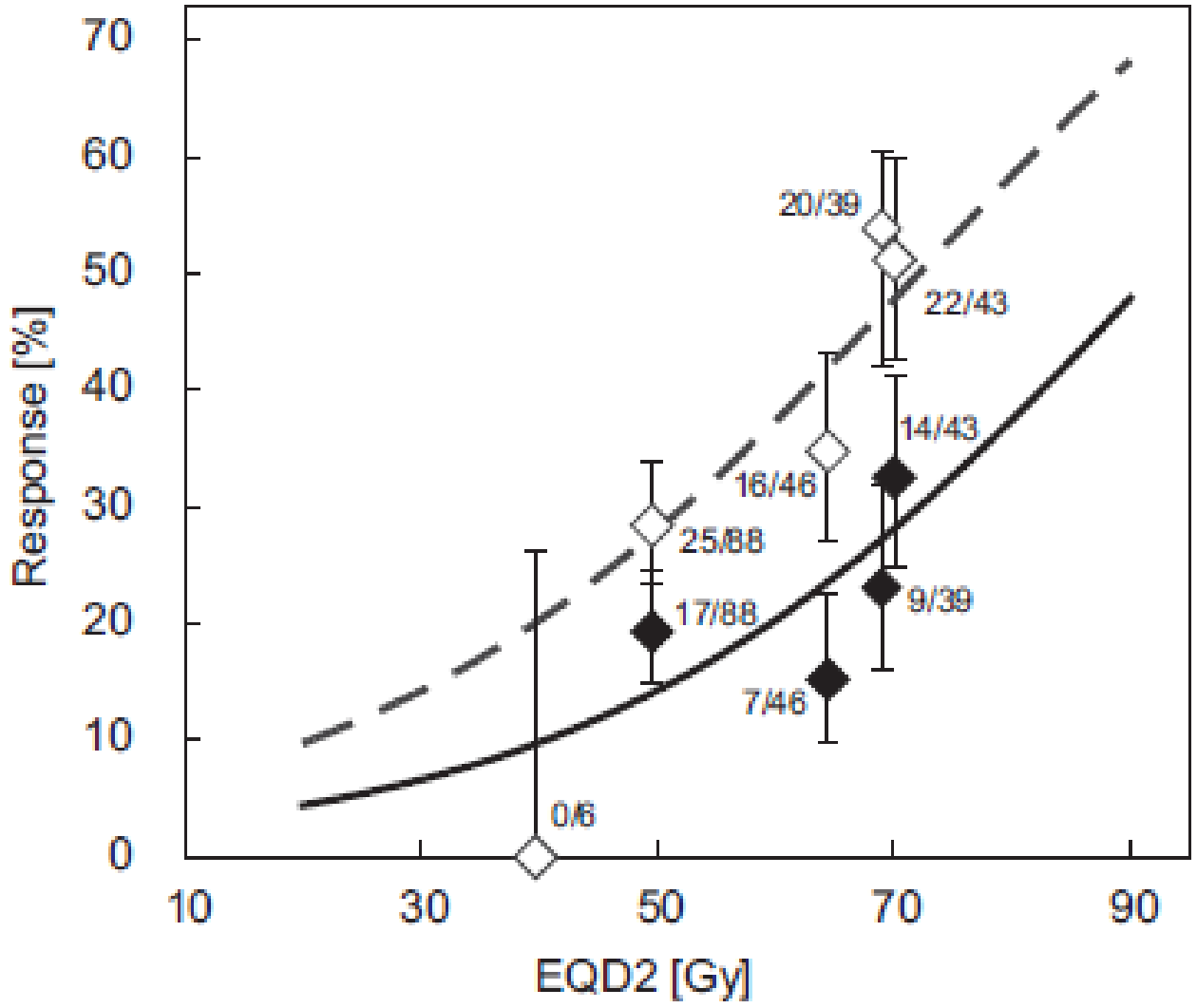

SAVING
MY
ARSE
Bowel Cancer:
A Survivor's Story

Behandeling rectumcarcinoom

- Total Mesorectal Excision (TME)
- Locally advanced tumoren: neoadjuvant (chemo)radiotherapie
  - 15-20% → complete pathologische respons
- W&W → kan veilig, salvage opties (IWWD 25% local regrowth)
- Orgaansparend “trend”
- Vroege tumoren: 60-80% orgaansparing na 1 jaar (preliminary data STAR-TREC fase 2-3 studie, ESTRO 2025)



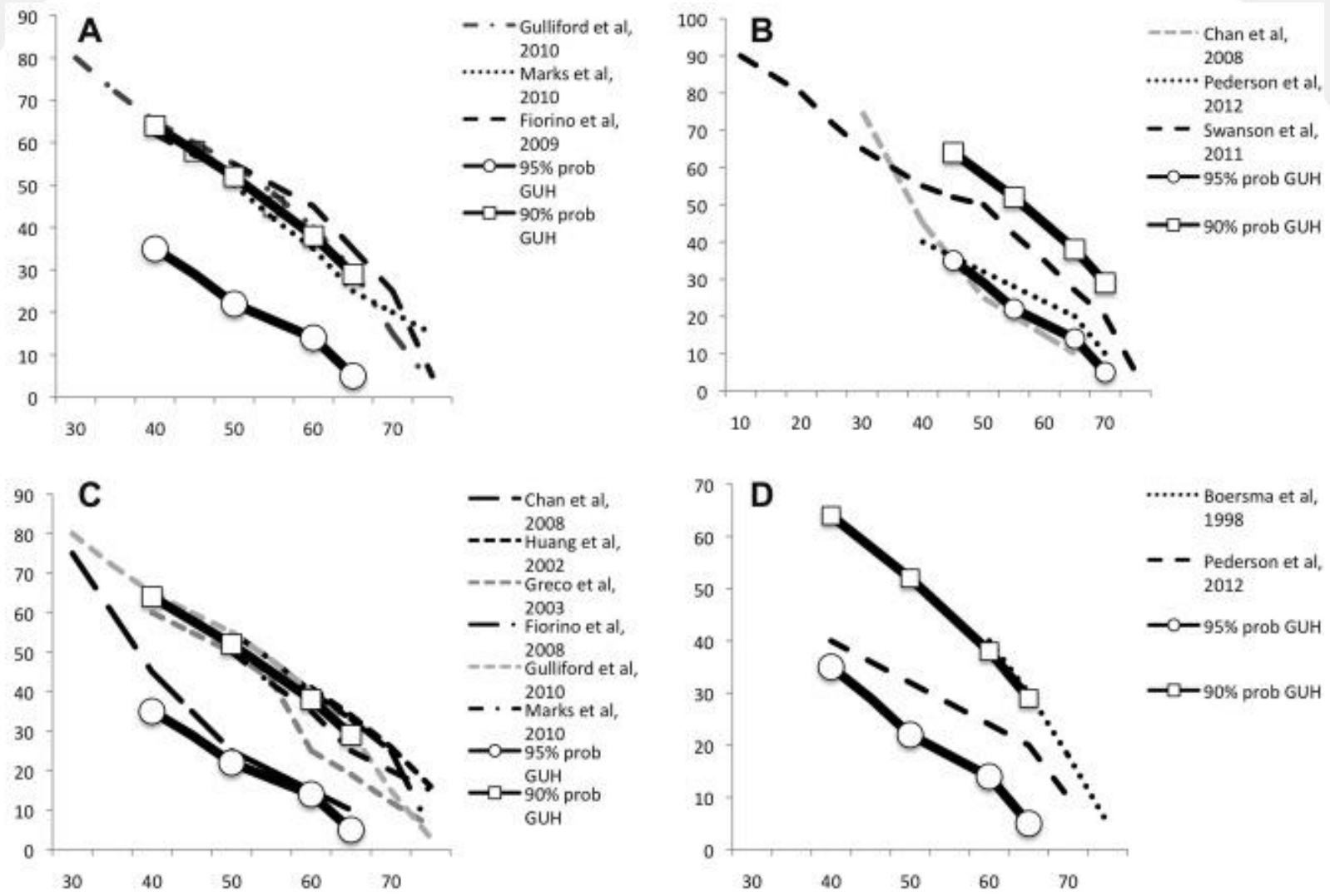
Verhogen kans op complete respons?



Dosis-effect relatie bij rectumcarcinoom!

Appelt et al. 2013

Maar…



Late graad 2 toxiciteit!
X-as: dosis op rectum
Y-as: volume rectum

Fonteyne et al.

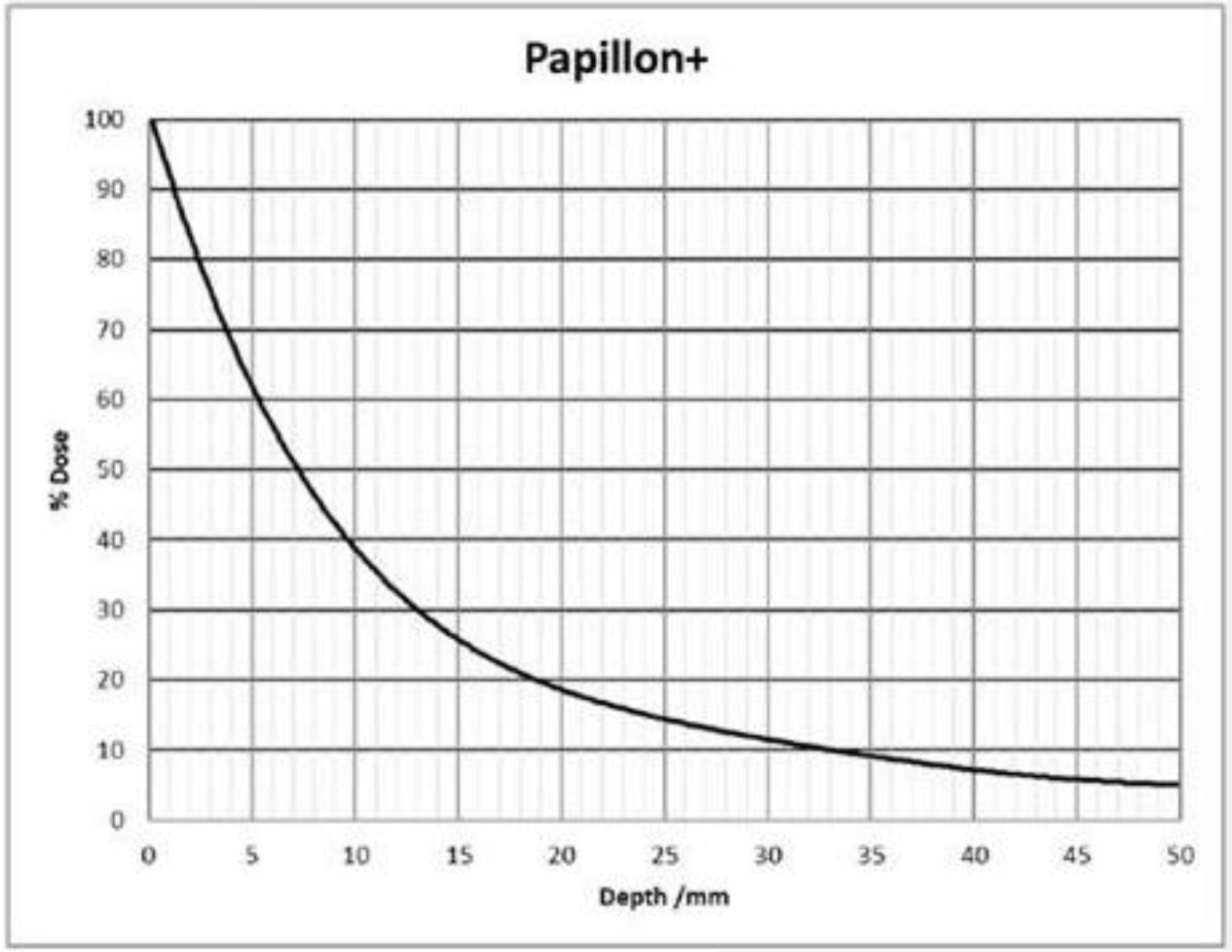
Conclusie?

Verhogen dosis op rectum kan….

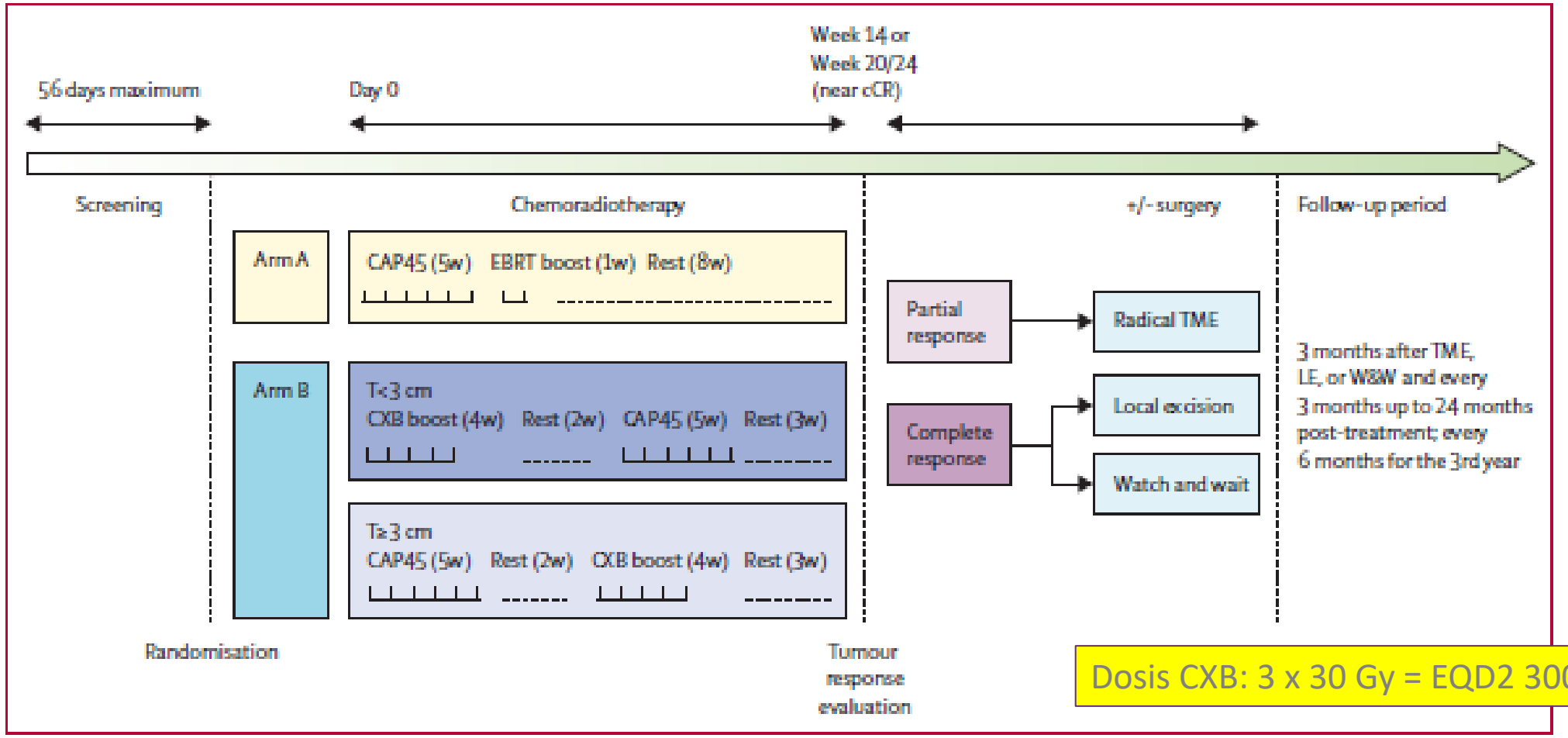
indien beperkt volume!

Papillon


Papillon+
Papillon+


Papillon+
% Dose
100
90
80
70
60
50
40
30
20
10
0
0
5
10
15
20
25
30
35
40
45
50
Depth /mm

OPERA (2022, 2025)



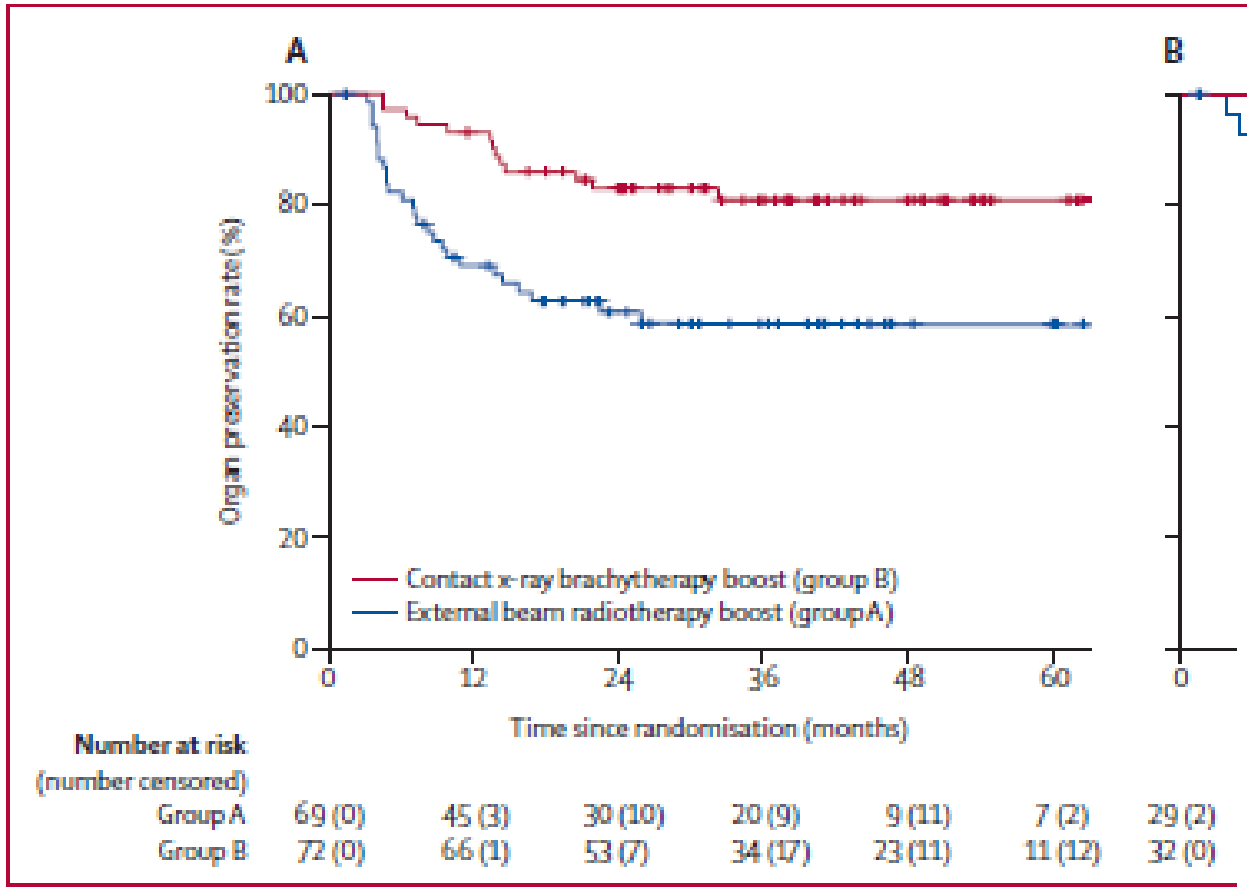


Figure 3: 3-year organ preservation rate

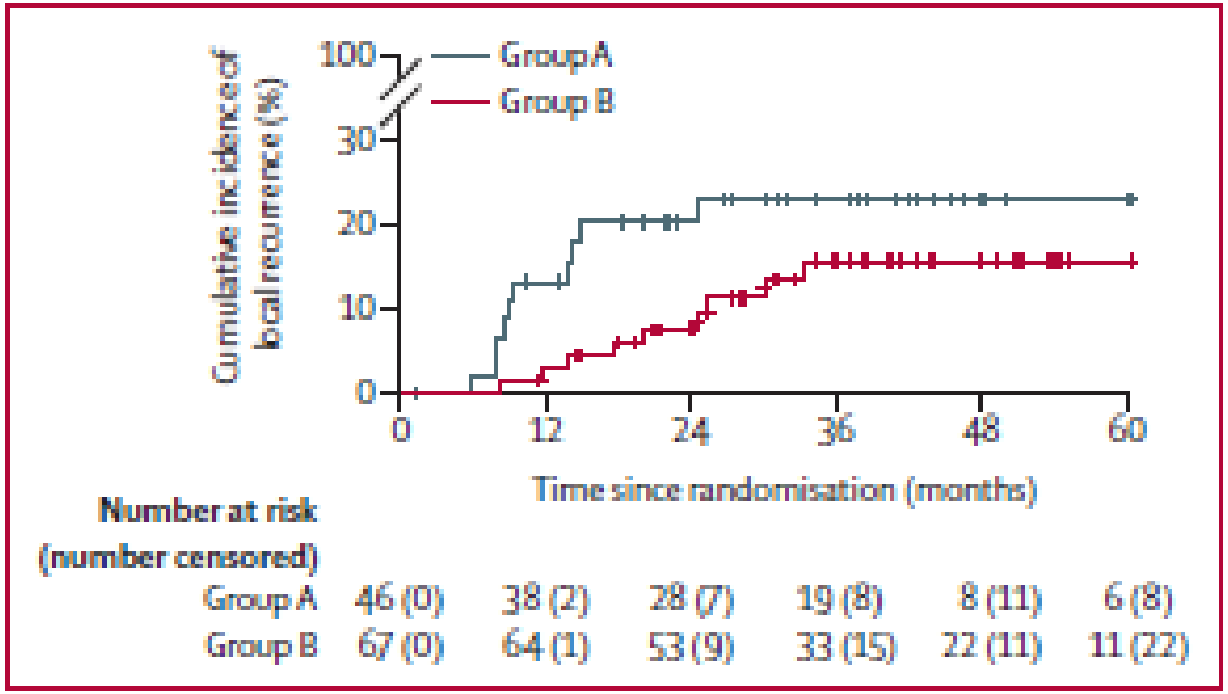


Figure 4: Cumulative incidence of local recurrence

- Local regrowth: 39% (A) vs 17% (B)

OPERA – Toxiciteit

- TME: geen verschil in ligduur A vs. B
- Toxiciteit G2-G3 = 40% (geen verschil A vs. B)
- Geen G4-G5
- LARS <30: A 79% vs. B 83% (geen verschil)
- Bloed bij ontlasting: A 12% vs. B 63%

MORPHEUS trial (2022)

cancers

MDPI

Article

MORPHEUS Phase II–III Study: A Pre-Planned Interim Safety Analysis and Preliminary Results

Aurelie Garant [1], Carol-Ann Vasilevsky [2], Marylise Boutros [2], Farzin Khosrow-Khavar [3], Petr Kavan [3], Hugo Diec [4], Sylvain Des Groseilliers [4], Julio Faria [2], Emery Ferland [5], Vincent Pelsser [6], André-Guy Martin [7], Slobodan Devic [8] and Te Vuong [9,*]

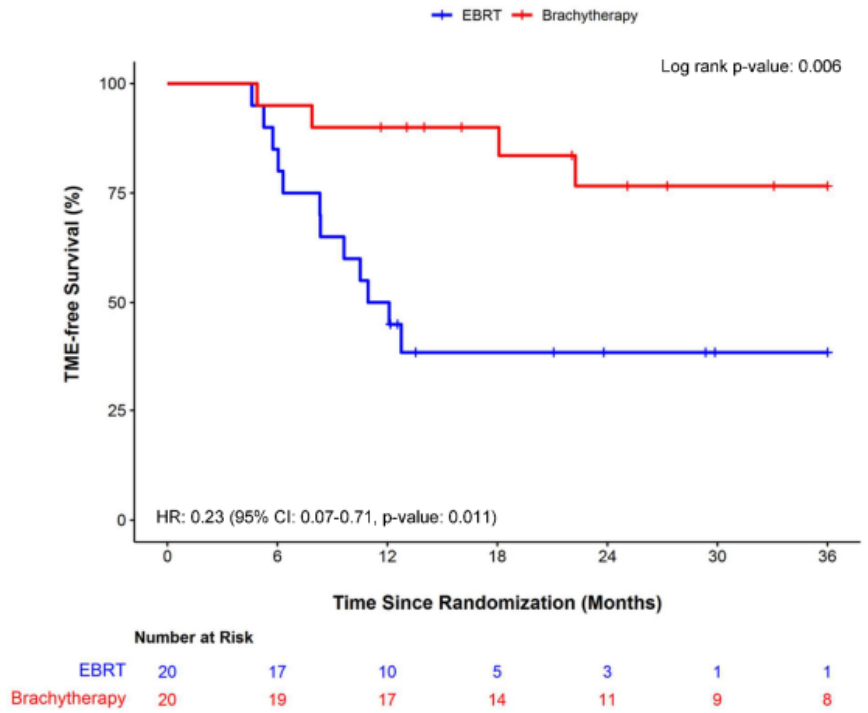
- cT2-3abN0M0 rectumcarcinoom
- <50% circumferentie, <5cm lengte, <10cm ab ano
- Chemoradiatie: 45 Gy/25 fr + Xeloda/5FU

Arm A:
EBRT Boost (9Gy/5fr)

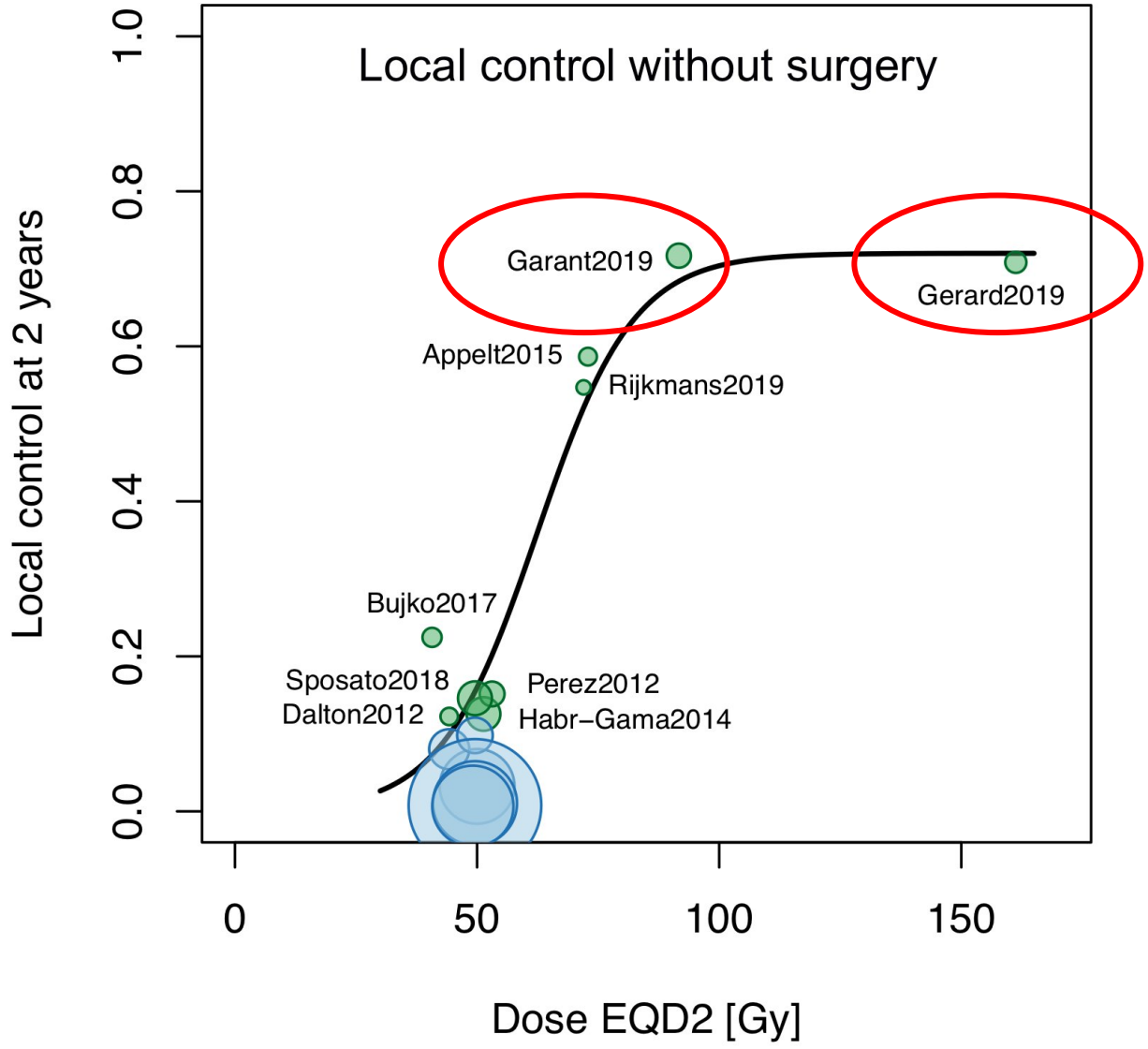
Arm B:
HDRBT Boost (30Gy/3fr)

MORPHEUS – Interim results

- 40 patiënten geïncludeerd 2017-2020
- Mediane FU 40 maanden
- cCR: Arm A: 50% (10/20), Arm B: 90% (18/20)



Dosis-respons relatie



Richtlijn

Contents lists available at ScienceDirect

Clinical and Translational Radiation Oncology

journal homepage: www.sciencedirect.com/journal/clinical-and-translational-radiation-oncology

GEC ESTRO ACROP consensus recommendations for contact brachytherapy for rectal cancer

Alexandra J. Stewart [a,b], Evert J. Van Limbergen [c], Jean-Pierre Gerard [d], Ane L. Appelt [e], Frank Verhaegen [c], Maaike Berbee [c], Te Vuong [f], Ciarna Brooker [a], Tim Rockall [a,b], Arthur Sun Myint [g,h]

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[e] Leeds Institute of Medical Research at St James's, University of Leeds, Leeds, United Kingdom
[f] Dept. of Radiation Oncology, Jewish General Hospital, Montreal, Canada
[g] Clatterbridge Cancer Centre, Liverpool, England, United Kingdom
[h] University of Liverpool, Liverpool, England, United Kingdom

Indicaties

Table 1
Inclusion and Exclusion criteria for definitive local CXB treatment in surgically fit patients.

Inclusion	
1.	Mobile non-ulcerative exophytic tumour < 10 cm from anal verge (due to applicator length)
2.	Tumour < 3 cm at the time of CXB (due to applicator size)
3.	Clinically and radiologically staged T1 or 2 or 3a/N0/M0 (unanimous consensus). T3b or N1 (limited) with good downstaging following EBRT (majority consensus)
4.	Well/moderately differentiated tumour (unanimous consensus), poorly differentiated (minority consensus to include these patients)
5.	No lymphovascular or venous invasion (majority consensus)
Exclusion	
1.	Mucinous tumours
2.	Tumour within the anal canal
3.	Patients not wanting follow-up
4.	Anterior tumour following TEMS surgery in women (potentially higher fistula risk)*
5.	Patients who cannot undergo MRI surveillance**

*relative contraindication.
**relative contraindication for older patients who could undergo CT and endorectal ultrasound imaging surveillance instead.

Indicaties

Use of CXB has been descrit
part of an active surveillance o
tients who are not medically fit
national group, ICONE (Interna
collaborates over techniques, o
ment of randomised trials to ex
Autorité de Santé (HAS) certifie
cancer stages T1-3, N0 in Octol
Institute for Health and Care Ex
for early rectal cancer in Septem
for its use in medically operable
only recommends CXB within
advanced rectal cancer [19].

1 Recommendations

Early-stage and locally advanced rectal cancer

1.1 Low-energy contact X-ray brachytherapy can be used as an option to treat early-stage and locally advanced rectal cancer:

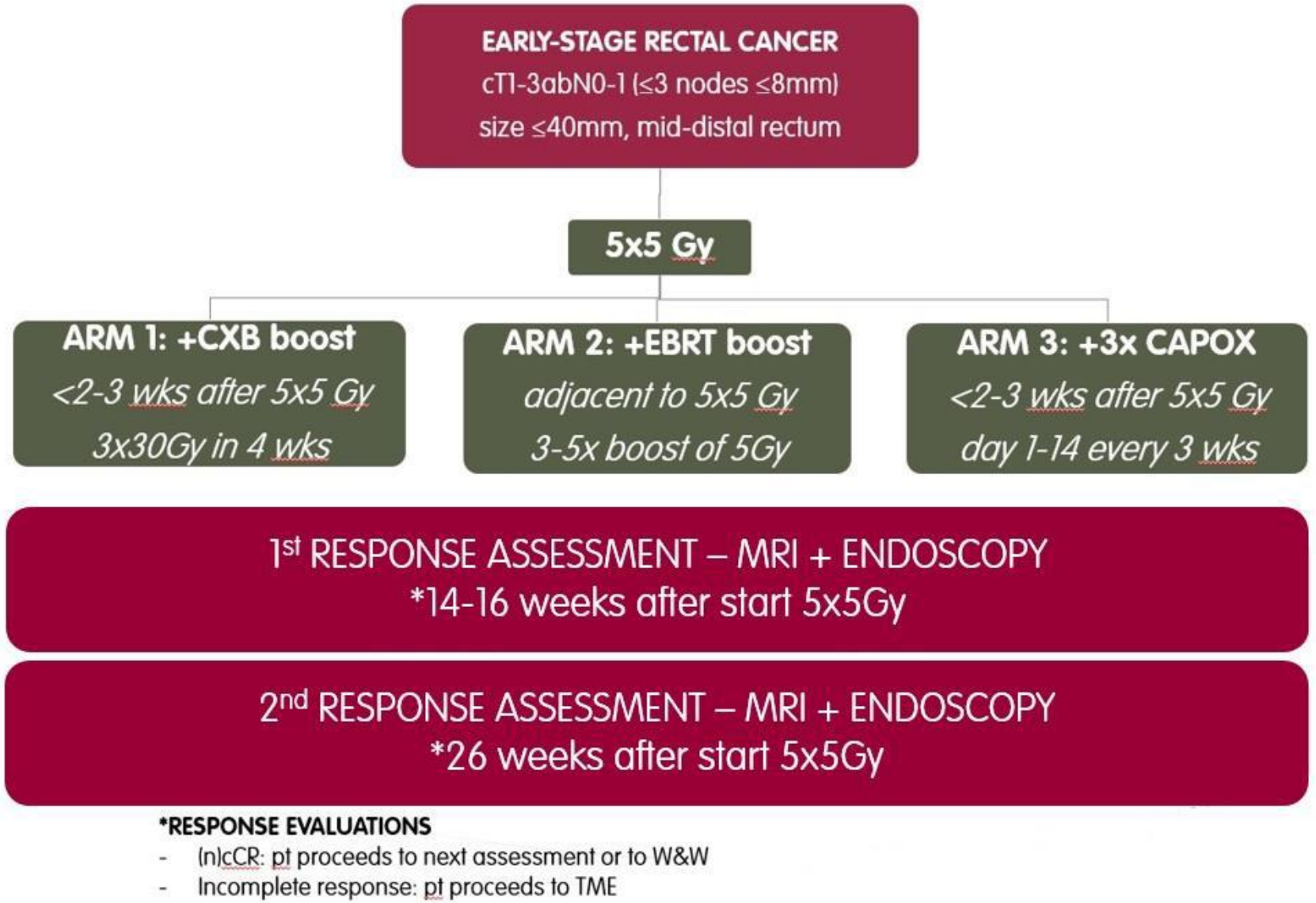
- when the tumour is 3 cm or less and has not spread beyond stage T3b N1 M0 (with limited nodal involvement), and:
  - the person chooses not to have surgery, or
  - the risks of surgery are unacceptably high.

  People with larger tumours (with limited nodal involvement) may become eligible for this procedure if neoadjuvant treatment (external beam radiotherapy with or without chemotherapy) reduces the tumour to 3 cm or less and it has not spread beyond stage T3b N1 M0.

Indicaties in NL

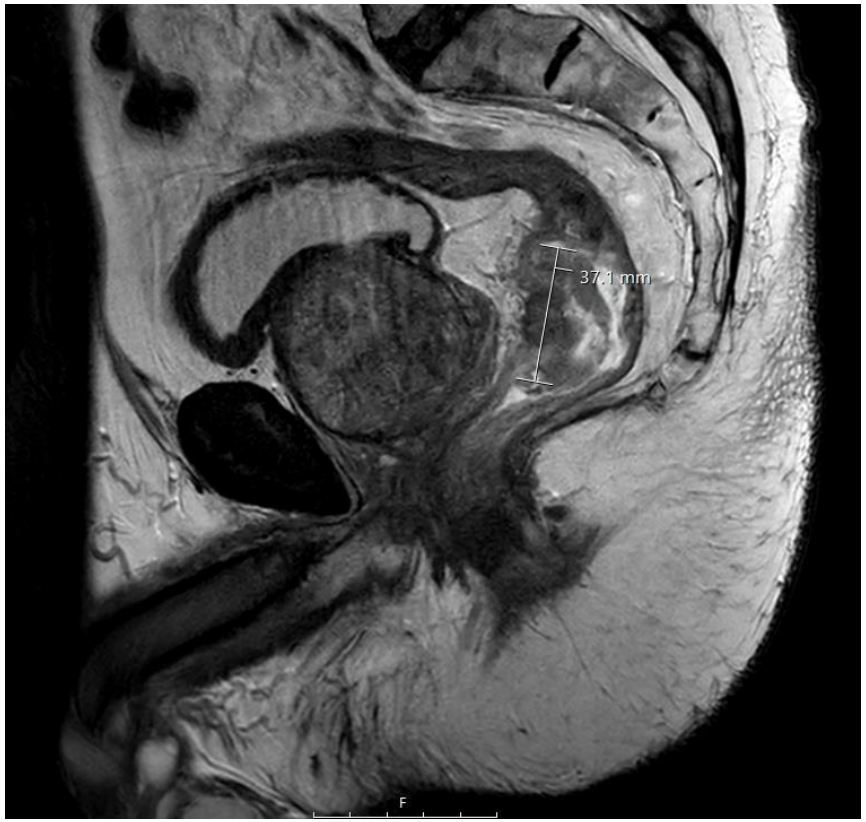
- Vroeg-intermediair rectumcarcinomen (cT1-3N0-1): **STARTREC-3**
- (Locally advanced) rectumtumoren met goede respons na (C)RT: **OPAXX**
- Inoperabele patiënten of patiënten die geen stoma/operatie willen

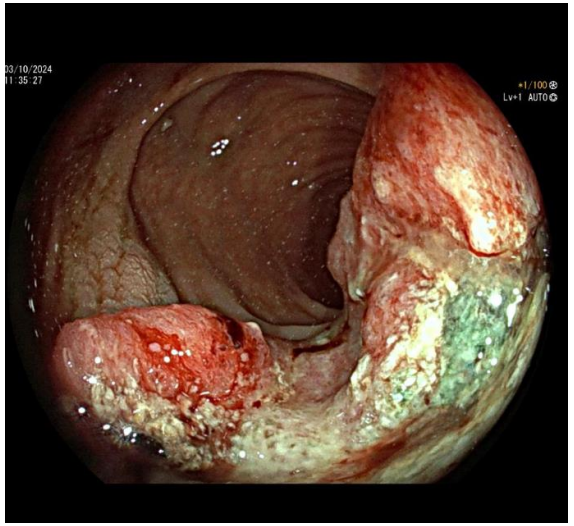
STARTREC-3 study - Can we **S**ave the rectum by watchful waiting or transanal microsurgery following shor**T**-course radiotherapy and **A**dditional local o**R** systemic **T**reatment for early-stage **RE**ctal **C**ancer?

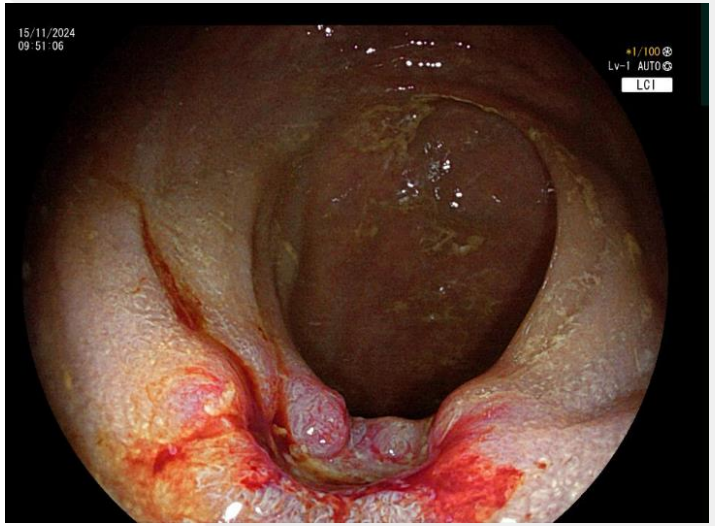


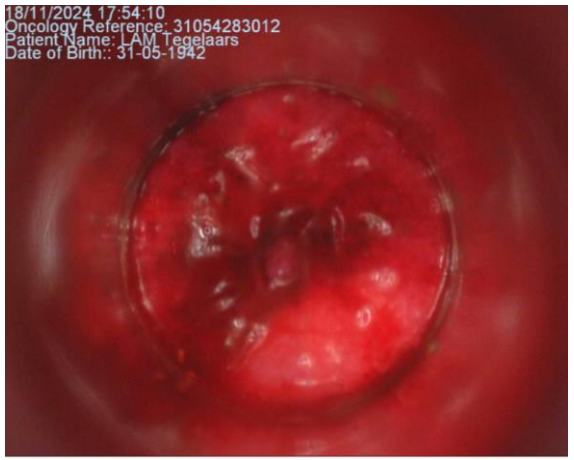
baseline

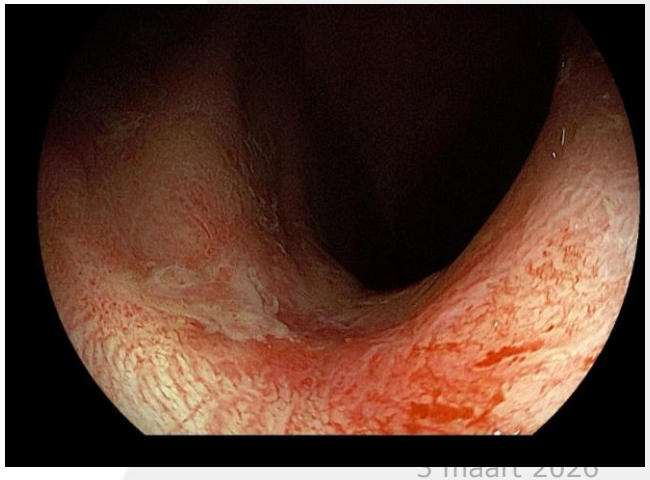
2-3 wks after 5 x 5 Gy









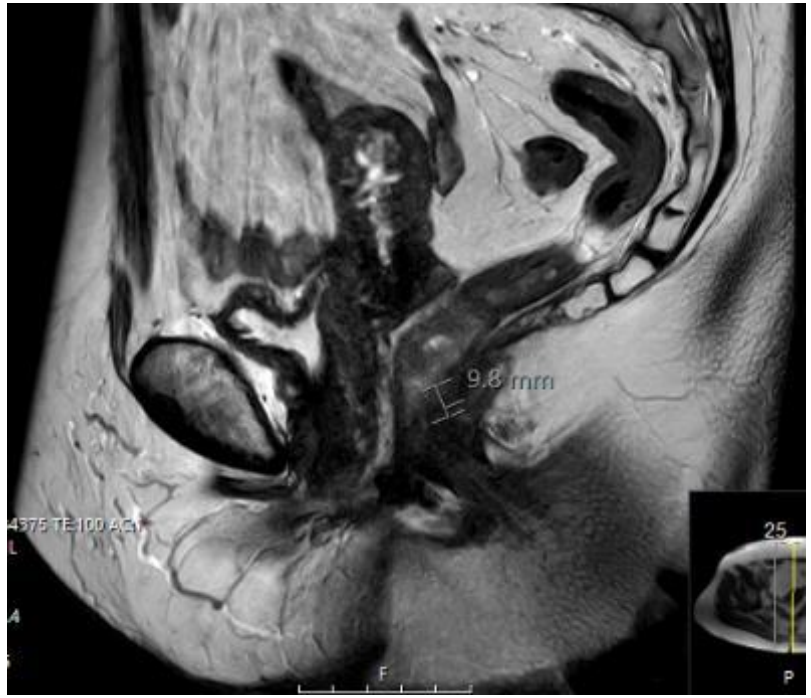


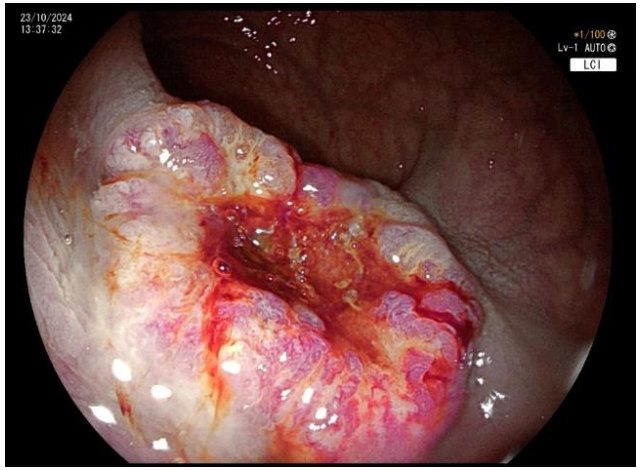
During CXB

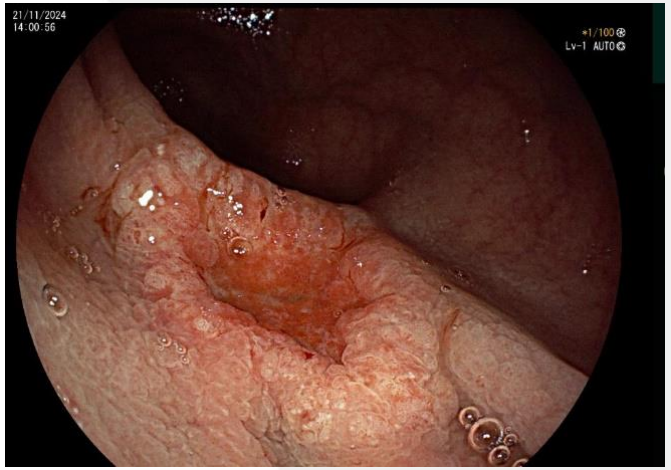
6 wks after CXB

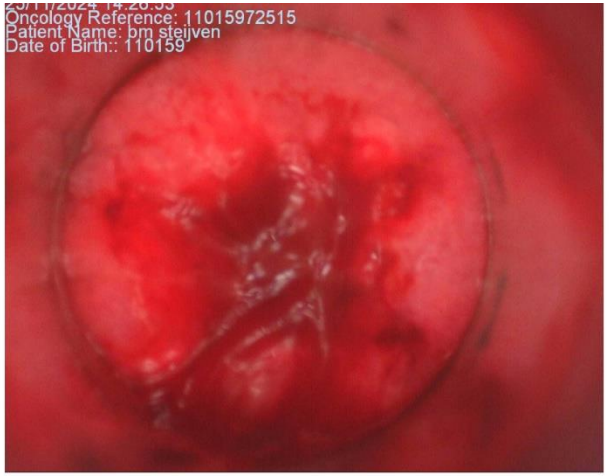
baseline

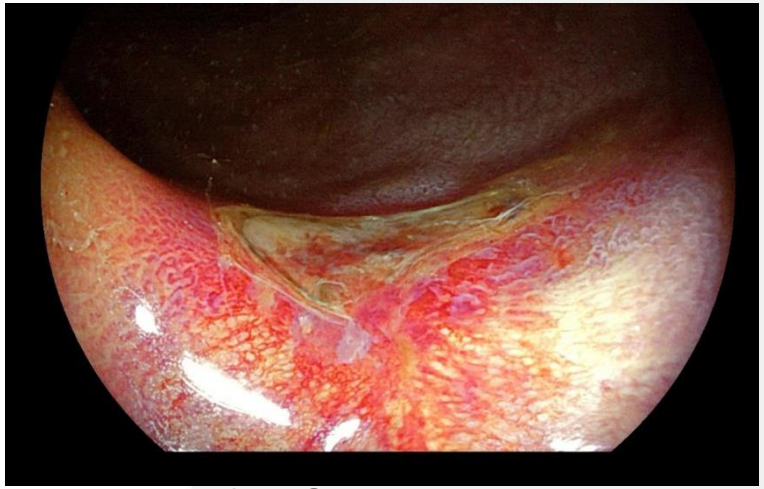
2-3 wks after 5 x 5 Gy









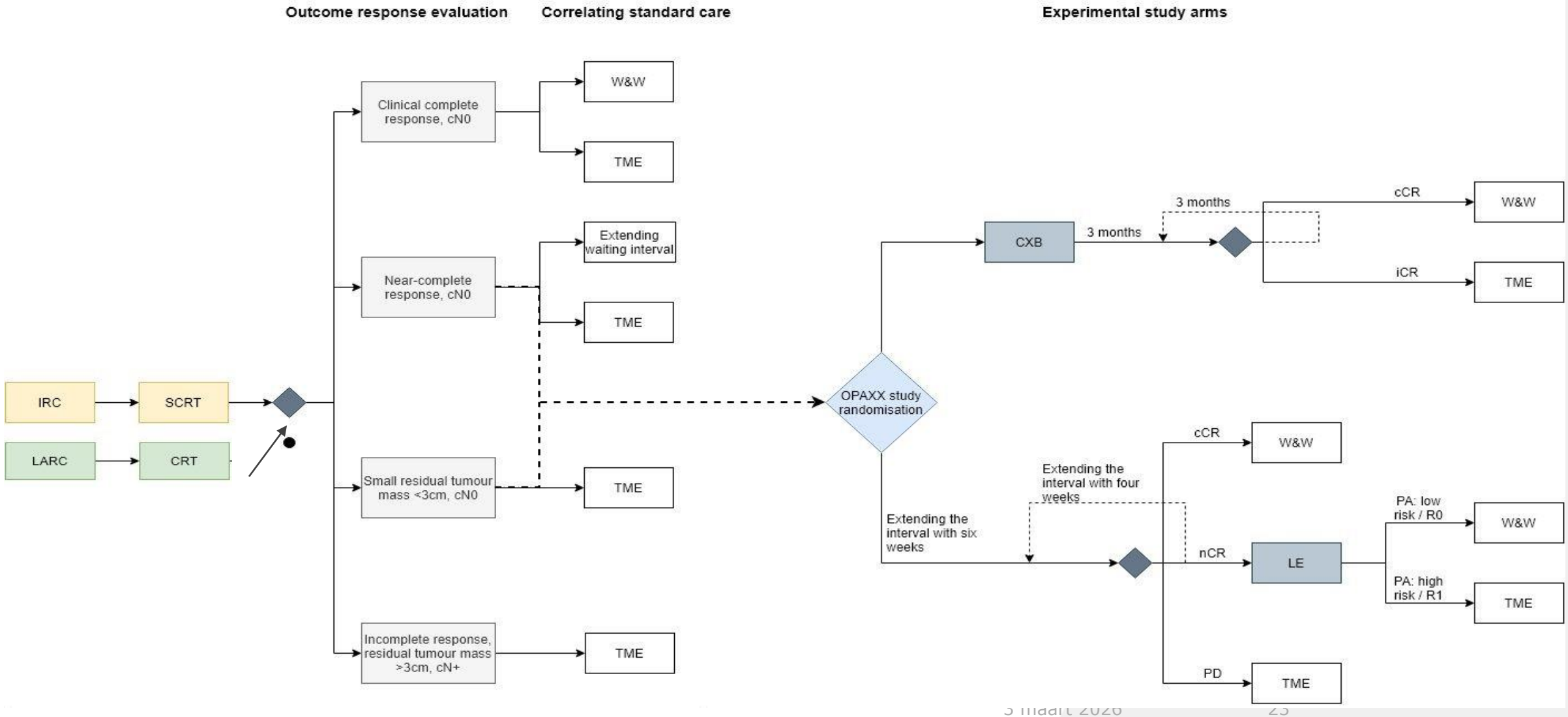


During CXB

6 wks after CXB

OPAXX studie

OPAXX - orgaansparende behandeling rectumcarcinoom



Voorbereiding patiënten

- Dag van tevoren 10mg Bisacodyl

- Dag zelf, 30 min voor bestraling:
  - Microlax Klysma
  - 1000mg PCM
  - 5mg Diazepam
  - (Abstral 100ucg)

- Inbrengen lidocaïne gel in anus

Contact therapie

- 3 fracties van 30 Gy, 2 weken tussen elke fractie
- 2cm, 2.5cm of 3cm buis
- Maximaal 10-12cm ab ano
- Proctoscoop met camera, dan applicator in proctoscoop schuiven

Contact therapie – bijwerkingen

- Goed verdragen
- Ulcus
- Radiatieproctitis/LARS
  - Cave tumoren tegen anale sfincter → meer klachten
- Rectaal bloedverlies

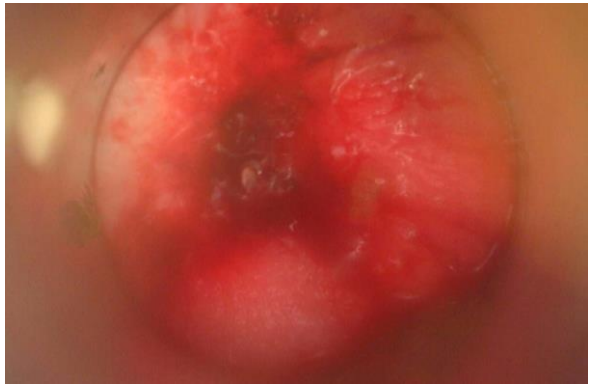
Kwetsbare ouderen zorgpad

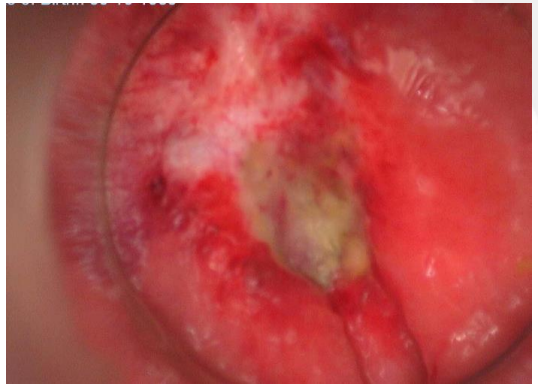
- RESORT studie: A Prospective Registry of the Non-Invasive Multimodality Treatment in Inoperable Rectal Cancer Patients: Evaluating the Current Treatment Strategies in Rectal Cancer Patients Unable to Undergo TME Surgery
- Zorgpad voor kwetsbare en/of oudere patiënten
- Patiënt komt 1 dag:
  - Chirurg + Vpk specialist
  - Anesthesist
  - Radiotherapeut
  - Oncoloog
  - Geriater
- Gezamenlijk “mini-MDO” zelfde middag voor bespreking + beleid
- Bespreken beleid met patiënt

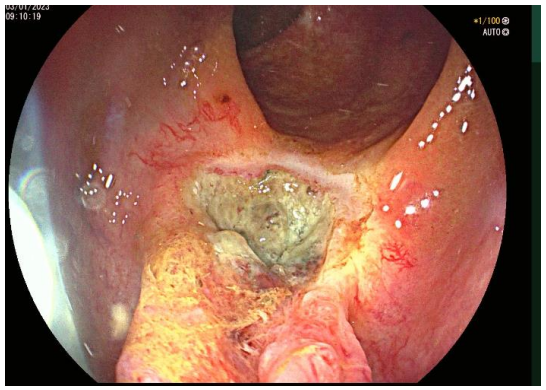
Voorbeeld casus

- Man 85 jaar
- cT2N0 rectumcarcinoom, wens tot geen operatie.
- Gezien co-morbiditeit en matige performance status (WHO 2), CRT als brug te ver beoordeeld
- 5 x 5 Gy radiotherapie

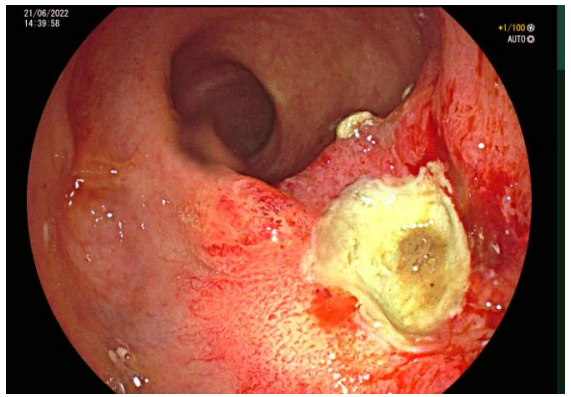
Contact therapie



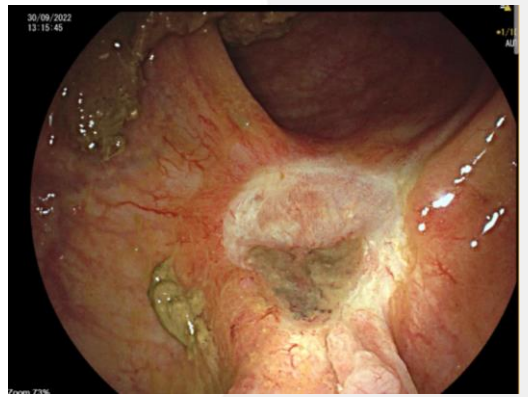




scopie na 10 weken, afwijking van 2cm, 2cm van linea dentata



Na 3 maanden



Na 6 maanden

Take-Home Message: wanneer CXB overwegen?

- “Planned organ preservation”
  - Vroeg/intermediair laag-mid rectumcarcinoom kandidaat voor behandeling incl CXB
  - Niet per se wachten op respons

- “Situational organ preservation”
  - Voor intermediate risk/locally advanced rectumcarcinoom met goede respons na CRT: Resttumor ≤3cm bij evaluatie (6-8 weken na (chemo)radiatie)
  - Wens tot orgaan sparing

- Kwetsbare / ouderen (inoperabel of wens tot niet opereren)
- Toekomst: patientselectie