Personalized Rectal Cancer Management in Senior Adults

Ponnandai Somasundar MD, MPH, Siri Rostoft MD, Thanos Karampeazis, MD, Nicole Saur MD, Isacco Montroni MD PhD, and Amy MacKenzie, MD

Poll Everywhere: pollEV.com/nicolesaur372
What is Your Professional Background?

Medical Oncologist
Radiation Oncologist
Surgeon
Geriatrician
Nurse
Physical Therapist
Other Allied Health Professional
Case Presentation

• 80 year old F with bright red blood per rectum for 2 months

  Colonoscopy

• Large (5cm) rectal mass extending to 5cm above anal verge

• Otherwise asymptomatic
H&P

• **Past Medical/Surgical History**: Hypertension, Osteoporosis, Hyperlipidemia, s/p lumpectomy for Breast cancer 1998

• **Medications**: 4 (atenolol, simvastatin, vitamin D, aspirin 81mg)

• **Allergies**: no drug allergies
Frailty assessment

- CACI (Charlson comorbidity index): 4 (age)
- G-8 (geriatric 8): 12/17
- Flemish TRST (triage risk screening tool): 2 (lives alone, gait difficulty)
- ADL 5/6 (urinary incontinence)
- No history of falls
- Mini Cog: 1/5 (recalls 1 word)
- TUG (timed up and go): 17 sec – 12 sec
- NRS (nutrition risk screening): 2 – no weight loss, low BMI
- ECOG PS (performance status): 1
- Lab: Hb 12 g/dL, Alb 4 g/dL, Crea 0.59 mg/dL
- BMI: 20

- EQ (EuroQol)5D3L (1 best – 3 worst. 2 means some problems):
  mobility 2 – self care 1 – Activities 2 – Pain 2 – Anxiety/depression 2
  VAS (visual analog scale): 50
What is this patient's fitness status?

- Fit
- Vulnerable (Intermediate)
- Frail
Frailty

• Frailty is due to a multisystem reduction of reserve capacity

• Frail patients are **vulnerable** to adverse events
  – Toxicty
  – Complications
  – Death
  – Functional decline

• Age is related to frailty, but most 85 year old patients are not frail

Abellan Van Kan 2008
Frailty

• Does not mean disqualification for further care

• **Entry point** for adapted care

• Potentially reversible

• Why is the patient frail?

Belloni & Cesari, 2019
Frailty assessment - interpretation

• **Indicates frailty:**
  • Low score on G8 (12/17 - indicates frailty risk)
  • Cognitive impairment (both memory and clock-drawing test) 1/5 MiniCog
  • Poor social support
  • Low score on overall health – poor QoL (VAS 50%)
  • Anxiety/depression and pain (indicates some problems on EQ5D3L)

• **Resources:**
  • Limited comorbidity
  • Mobility is ok (TUG 12 sec)
Selected data

• Abnormal miniCog – 26% had dementia (Malik et al, JGO 2019)

• Modifiable risk factors for poor QoL and functional decline in patients with cancer: Depression and pain (Kirkhus et al, JGO 2019)

• Low G8 score and low fTRST score are associated with mortality and functional decline (Kenis et al, JCO 2014; Chakiba et al, JGO 2019)
Frailty assessment- interventions

• Evaluate cognition more closely – able to discuss and consent?

• Cognitive impairment:
  • Organize home support
  • Repeated and written information
  • Risk of delirium - precautions

• Preferences and priorities? Risk of complications and toxicity

• Follow-up depression (low QoL, self-reported anxiety/depression)

• Treatment of pain
Points to consider if patient is frail

• Assess patient’s goals and priorities (what lies ahead?)

• What can be optimised? (be realistic)
  – Nutrition, exercise, comorbidities, depression, polypharmacy, social network

• Treatment trajectory can (always) be optimised

• Reconsider treatment strategy – alternatives?
Cognitive impairment

• Important to capture

• Does the patient understand? Remember information?

• Risk of delirium during and after treatment

• Collaborate with geriatrician/dementia champion/home nursing
Cancer specific staging

Rectal Exam: circumferential mass, 5 cm from anal verge, friable

CT scan: no distant metastatic disease

MRI: T3 N(+), extramural vascular invasion (+), threatened circumferential resection margin
What Is Your Proposed Treatment Plan For This Patient?

- Long Course Standard Chemoradiation followed by Surgery
- Short Course Radiation followed by Surgery
- Chemoradiation followed by Watch and Wait
- Surgery first (alone)
- Radiation alone (palliation)
- No Treatment
- Other
Neo-adjuvant radiotherapy trials in rectal cancer-age distribution

<table>
<thead>
<tr>
<th>Pre-op CRT trials</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EORTC 22921</td>
<td></td>
</tr>
<tr>
<td>FFCD 9203</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>SCPRT trials</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dutch TME</td>
<td></td>
</tr>
<tr>
<td>CR07</td>
<td></td>
</tr>
<tr>
<td>TROG- Ngan</td>
<td></td>
</tr>
</tbody>
</table>

Population data

20 30 40 50 60 70 80 90 100

40%
Radiotherapy in older patients

• Is neo-adjuvant RT necessary?

• Is it related to type of surgical treatment?
  • radical surgery/local excision/TEM

• SCPRT (5 x 5Gy) or classic CRT?
  • Modified fields?
  • Modern techniques?

• Is there a role for brachytherapy?
Long term toxicity from RT in older patients

• Faecal incontinence is often already a problem
• Urinary issues in males
• Osteoporosis and fractures
• Heart problems
• Poor mobility linked to increased fibrosis
• Impotence might not be a priority
• Second malignancy might not represent a risk
SIOG recommendations for RT in older patients

- RT (5 x 5 Gy) and immediate surgery (2–3 days) or long-course CRT with an interval of 6–8 weeks prior to surgery for cancers with no MRI-predicted threat to the mesorectal fascia (MRF) (<1 mm), based on three-dimensional imaging reconstructions.

- Preoperative long-course RT alone although less effective for local control than long-course CRT, can be used as an alternative if there are concerns over the safety of chemotherapy.

- In locally inextirpable tumors, or where MRI predicts a threat to the MRF, long-course CRT is the treatment of choice in older patients who are fit enough for this therapy.

- If shrinkage of the tumor away from the MRF is required following CRT, a sufficient interval is required to allow an adequate response. Although the optimum interval has not been determined, most consider a delay of 6–12 weeks reasonable.

- Treatment with 5 x 5 Gy with a delay of 6–8 weeks (or longer) prior to surgery is an alternative option in very old and/or frail patients.

- HDR-brachytherapy or contact therapy are promising techniques for older patients with rectal cancer but should not be used in the anal canal.
Treatment plan

Starts Neoadjuvant CT/XRT: 50.9Gy + Capecitabine

Concomitant Prehabilitation
Treatment plan

Restaging After CRT:
Incomplete Clinical Response on MRI and Endoscopy
Prehabilitation and functional recovery for colorectal cancer patients

Enrico Maria Minnella a, b, Francesco Carli a, b

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b Division of Metabolic Disorders and Complications, Research Institute, Faculty of Medicine, McGill University, 3650 Decarie Blvd, Montreal, QC, H4A 3L1, Canada.

TRIMODALITY PROGRAM

30’-50’ x 3-4/wk
# Prehabilitation

<table>
<thead>
<tr>
<th>Study</th>
<th>Functional Measure</th>
<th>Functional PreOp Change</th>
<th>Functional PostOp Change</th>
<th>Complication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kim DJ, 2009 [83]</td>
<td>$\bar{VO}_2$max</td>
<td>0.5 (4.2) mL/kg/min</td>
<td>$\bar{VO}_2$max</td>
<td></td>
</tr>
<tr>
<td>Carl F, 2010 [84]</td>
<td>6MWD</td>
<td>-10.6 (7.3) m</td>
<td>-34.4 (9.9) m</td>
<td>No difference</td>
</tr>
<tr>
<td>Li C, 2013 [85]</td>
<td>6MWD</td>
<td>42 (41) m</td>
<td>37 (70) m</td>
<td>No difference</td>
</tr>
<tr>
<td>Gillis C, 2014 [86]</td>
<td>6MWD</td>
<td>25.2 (50.2) m</td>
<td>23.4 (54.8) m</td>
<td>No difference</td>
</tr>
<tr>
<td>West MA, 2015 [87]</td>
<td>$\bar{VO}_2$AT</td>
<td>2.12 [1.3-2.9] mL/kg/min</td>
<td>2.65 [1.2-4.1] mL/kg/min</td>
<td></td>
</tr>
<tr>
<td>Gilliss C, 2015 [88]</td>
<td>6MWD</td>
<td>20.8 (42.6) m</td>
<td>18.6 (65.1) m</td>
<td>No difference</td>
</tr>
<tr>
<td>Holdens A, 2016 [89]</td>
<td>6MWD</td>
<td>9%</td>
<td>18.6 (65.1) m</td>
<td></td>
</tr>
<tr>
<td>Loughney L, 2017 [90]</td>
<td>Daily Steps</td>
<td>22%</td>
<td>20 (54) m</td>
<td></td>
</tr>
<tr>
<td>Bousquet-Dion, 2018 [91]</td>
<td>6MWD</td>
<td>21 (47) m</td>
<td>20 (54) m</td>
<td>No difference</td>
</tr>
</tbody>
</table>

## IMPROVED FR, NO ≠ COMPLICATIONS TIME AND COMPLIANCE TO PREHAB (?????)

Minella E, Carli F EJSO 2018
**TABLE 3. Multivariate Analysis of Disease-free Survival at All Stages and Stage III**

<table>
<thead>
<tr>
<th>Variables</th>
<th>All Stages Hazard ratio (95% CI)</th>
<th>Stage III Hazard ratio (95% CI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, per additional year</td>
<td>1.03 (1.00–1.07)</td>
<td>1.04 (0.99–1.08)</td>
</tr>
<tr>
<td>Male sex</td>
<td>1.23 (0.58–2.59)</td>
<td>1.16 (0.46–2.90)</td>
</tr>
<tr>
<td>ASA ≥3</td>
<td>0.85 (0.28–1.52)</td>
<td>0.46 (0.14–1.47)</td>
</tr>
<tr>
<td>Rectal surgery</td>
<td>0.78 (0.35–1.75)</td>
<td>1.01 (0.38–2.67)</td>
</tr>
<tr>
<td>Laparoscopy</td>
<td>0.43 (0.12–1.52)</td>
<td>0.36 (0.07–1.83)</td>
</tr>
<tr>
<td>Severe 30-day complications (Clavies-Dindo ≥3)</td>
<td>1.17 (0.15–9.24)</td>
<td>3.10 (0.34–28.19)</td>
</tr>
</tbody>
</table>

*All covariates included in the model are mentioned in the table.

**FIGURE 2.** Kaplan-Meier survival curves of 5-year disease-free survival in patients undergoing prehabilitation vs control for (A) all stages and (B) stage III disease.
Surgical Options/Implications

• Radical surgery
  • Impact of radical rectal surgery
  • Role and impact of diverting loop ileostomy
  • Role and impact of postoperative functional impairment

• Watch and Wait for Complete Clinical Response
  • Impact of Recurrence
  • Impact of Loss of Follow Up

• Personalized Adapted Care
  • Local Excision
  • Palliation
Rectal Cancer Management in Older Adults

Personalized management of elderly patients with rectal cancer: Expert recommendations of the European Society of Surgical Oncology, European Society of Coloproctology, International Society of Geriatric Oncology, and American College of Surgeons Commission on Cancer

Isacco Monzoni, Giampaolo Ugolini, Nicole M. Saur, Antonino Spinelli, Siri Rostoft, Monica Millian, Albert Wolthuis, Jan R. Daniels, Roel Hompes, Marta Penna, Alois Fürst, Demetris Papamichael, Avni M. Desai, Stefano Cascinu, Jean-Pierre Gerard, Arthur Sun Myint, Valery E.P.P. Lemmens, Mariana Berho, Mark Lawler, Nicola De Liguori Carino, Fabio Potenti, Oriana Nanni, Mattia Altini, Geerard Beets, Harm Rutten, David Winchester, Steven D. Wexner, Riccardo A. Audisio
Personalized Treatment

Montroni I et al. EJSO 2018
Life Expectancy vs Percentage of People Dying Within One Year at a Given Age

- Life expectancy
- Percentage of people dying within one year at a given age
- Percentage of people dying within one year at a given age after rectal cancer surgery - historical data
- Percentage of people dying within one year at a given age after rectal cancer surgery - modern data

Data in the figure were obtained from 3 separate publications:
2. Kankerzorg in beeld - oudere patient, chapter darmkanker by van Erning FN, Lemmens VEPP, Dekker JWT, Maas Haam, Rutten, HIT, pages 101-116, 2016 published by IKNL, the Dutch Cancer Registry
Disparity of Five-year Overall Survival Among Resected Patients with cM0 Rectal Cancer by Age and Neoadjuvant Treatment

*All data provided by the Netherland Cancer Registry [https://www.cijfersoverkanker.nl]*

Montroni I et al. EJSO 2018
Impact of Radical Rectal Cancer Surgery

• Low Anterior Resection Syndrome
  • Major
  • Minor
Postoperative course

• taTME, discharged home on Post operative day #5, uneventful
• Pathology: ypT0N0, complete pathologic response
Adjuvant 5-FU chemoTx in rectal cancer
Cochrane report 2012

• n=9221
• 21 trials
  • heterogeneous (stage, treatment, setting)
  • long period
• Small but significant benefit
  • OS: HR 0.88 (0.76-0.91)
  • DFS: HR 0.75 (0.68-0.83)
“Modern” adjuvant rectal trials

- EORTC 22921 - (Bosset, Lancet Oncol 2014)
- Italian - (Cionini, Radiother Oncol 2014)
- Chronicle - (Glynne-Jones, Ann Oncol 2014)
- Dutch - (Breugom, Ann Oncol 2015)

Meta-analyses
- Breugom - (Lancet Oncol 2015)
- Bujko - (Eur J Surg Oncol 2015)

No positive trials
Addition of Oxaliplatin in rectal cancer

In pre-op CRT
- ACCORD 12/0405 PRODIGE 2 (Gerard, JCO 2010)
- STAR-01 (Aschele, JCO 2011)

In pre-op CRT and adjuvant ChemoTx
- German CAO/ARO/AIO-04 (Rodel, Lancet Oncol 2015)
  - 5-years DFS benefit
- PETACC 6 (Schmoll, ASCO 2018)

One positive trial
Guidelines
driven from data from colon cancer
Oxaliplatin-based adjuvant treatment
MOSAIC Trial

2246 pts
Stage II (40%)
stage III (60%)

5FU/LV
FOLFOX4

Primary endpoint
3-yrs DFS
Secondary endpoint
OS

<table>
<thead>
<tr>
<th>Age group</th>
<th>n=2246</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;70</td>
<td>1931</td>
<td>84</td>
</tr>
<tr>
<td>70-75</td>
<td>290</td>
<td>13</td>
</tr>
<tr>
<td>75-79</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>≥ 80</td>
<td>0</td>
<td>-</td>
</tr>
</tbody>
</table>

40% in real life
MOSAIC results for patients >70 years

2007 update

Disease Free Survival

Overall Survival

DFS Benefit lost at 5 years

No OS Benefit

Tournigand, JCO 2012
Efficacy of oxaliplatin-based adjuvant Tx in older CRC

ACCENT Database

• 7 phase III trials (1997-2009)
• 15.531 pts / 2.579 (17%) ≥ 70 years

<table>
<thead>
<tr>
<th>Study</th>
<th>No pts</th>
<th>&gt;70y (%)</th>
<th>Experimental arm</th>
<th>Stage III (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOSAIC</td>
<td>2246</td>
<td>14</td>
<td>FOLFOX4</td>
<td>60</td>
</tr>
<tr>
<td>NSABP C-07</td>
<td>2434</td>
<td>16</td>
<td>FLOX</td>
<td>71</td>
</tr>
<tr>
<td>XELOXA</td>
<td>1862</td>
<td>22</td>
<td>XELOX</td>
<td>100</td>
</tr>
<tr>
<td>X-ACT</td>
<td>1983</td>
<td>20</td>
<td>Capecitabine</td>
<td>100</td>
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<tr>
<td>NSABP C-06</td>
<td>1557</td>
<td>23</td>
<td>Uracil/tegafur</td>
<td>53</td>
</tr>
<tr>
<td>CALGB 89803</td>
<td>1263</td>
<td>24</td>
<td>IFL</td>
<td>98</td>
</tr>
<tr>
<td>PETACC-3</td>
<td>3186</td>
<td>13</td>
<td>FOLFIRI</td>
<td>71</td>
</tr>
</tbody>
</table>

Jackson-McCleary, JCO 2013
# Efficacy of oxaliplatin-based adjuvant Tx

**ACCENT database**

<table>
<thead>
<tr>
<th>Age, years</th>
<th>Oxaliplatin vs control</th>
<th>6-mos deaths, % (p-value)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>DFS (95% CI)</td>
<td>OS (95% CI)</td>
</tr>
<tr>
<td>&lt;70 (n=5420)</td>
<td>0.78 (0.71-0.86)</td>
<td>0.83 (0.74-0.92)</td>
</tr>
<tr>
<td>≥70 (n=1119)</td>
<td>0.94 (0.78-1.13)</td>
<td>1.04 (0.85-1.27)</td>
</tr>
<tr>
<td>Age Interaction</td>
<td>p=0.09</td>
<td>p=0.05</td>
</tr>
</tbody>
</table>

Jackson-McCleary, JCO 2013
Adjuvant Oxaliplatin in stage III CRC

Disease-Free Survival

Oxaliplatin

Overall

Experimental 5-FU/capecitabine

Hazard Ratio

Age < 70

Age >= 70

0.2 0.4 0.6 0.8 1.0 1.2 1.4 1.6 1.8 2.0 2.2
**XELOX** and **FOLFOX** are considered to be standard treatment options for the adjuvant management of stage III colon cancer, but their use is of uncertain benefit in patients aged >70 years.

In view of the potential for increased serious adverse events (AEs) associated with combination chemotherapy regimens, the choice of whether to treat older patients with oxaliplatin-containing combination therapy or fluoropyrimidine monotherapy should depend on the treating physician’s clinical judgment and the individual patient’s risk of recurrence. The gains from the addition of oxaliplatin are modest and most of the benefit is still conferred by the fluoropyrimidine.

The use of fluoropyrimidine monotherapy, either 5-FU/LV or capecitabine, is an appropriate adjuvant treatment option for many patients ≥70 years.

The benefit of adjuvant chemotherapy in the management of stage II colon cancer remains controversial for patients of all ages.
1 month Follow Up

• Subjectively independent, ileostomy output 600-800ml/d
3 Month Follow Up

**EQ 5D-3L**
- Mobility: 2
- Self care: 2 (1)
- Activities: 2
- Pain: 2
- Anxiety/depression: 3 (2)

Anxiety/depression 3 translates to *extreme problems*

**VAS**: 40 (50)

**ADL**: 5/6

**MiniCog**: 0

**BMI**: 19.6

**NRS**: 2

**TUG**: 11-12 sec

**ECOG**: 3
6 Month Follow Up (3m s/p ileostomy closure)

EQ 5D-3L mobility 2 – self care 2 (2-1) – Activities 2 – Pain 2 – Anxiety/depression 2 (3-2)
VAS : 40 (40-50)
ADL: 5/6
MiniCog: 0
BMI: 18.6
NRS: 3 (2)
TUG 11-11 sec
ECOG: 3

LARS (Low Anterior Resection Syndrome) score: **12 (minor LARS)**
WIS (Wexner Incontinence score): **4 (of 20)**, continent

Picture Courtesy of Mrs RL
Functional Recovery After Rectal Cancer Surgery

Standard functional outcomes
- Urinary and Sexual Fx
- Fecal incontinence

‘Less debated’ functional outcomes
- # pts who’ll never close their DLI
- # pts with permanent colostomy

Regain Independence
- Key indicator
- How to measure it
- Do we have actual data?

FR is not just ‘ERAS’
It deals with ‘being functional’ again in daily life
Franco Baresi’s iconic 25-day recovery after knee surgery to 1994 World Cup final

FG, 79, iconic 13-day recovery after major abdominal surgery to 50 km cycling
Urinary and Sexual dysfunction up to 60% of case w/neoadjuvant radiation therapy

Not large improvement after Lap or Robotic adoption…taTME pending,
W&W all that glitters is not gold…
Functional Recovery After Rectal Cancer Surgery

Standard functional outcomes

- Fecal incontinence

Expensive issue: US $4110 /pt /yr
NL Average cost € 2169 /pt /yr

- Age not associated to worse outcomes
- Older pts better ability to adapt

- LARS

Major LARS symptoms (W&W: 35.9% vs TME: 66.7%)
SFx: NO differences (!), W&W better UFx (22.7%)


UK 2016: B-QoL impairment

How might my bowel function affect my quality of life?

- Not at all
- Very little
- Considerably

Major LARS symptoms (W&W: 35.9% vs TME: 66.7%)
SFx: NO differences (!), W&W better UFx (22.7%)
Functional Recovery After Rectal Cancer Surgery

Less debated functional outcomes

Number of pts who will never close their DLI
- Dutch Surgical Colorectal Audit group, LRC amenable for anastomosis:
  4288 pts
  1194 (27.8%) LHP, 866 (20.2%) LA, **2228 (52.0%) LA + DLI**
  - Abdominal infective complications 16.2% after LA w/o DLI, in **10.1% after LA + DI** and in **6.5% after LHP** (p<0.001)
  - AL w reintervention 12.8% of pts- LA w/o DLI, 6.3% LA + DLI
  - **71-80 yo** :1450-981 reversed DLI **67.7%**; ≥ **81yo**: 306 183 reversed DLI **59.8%**

Number of pt with permanent colostomy
- As high as 54%
- Eindhoven Cancer Registry/DK: Older patients with a stoma have comparable HRQL to older patients without a stoma

Jonker FHW, Colorectal Dis 2016
Kuryba Aj Colorectal Dis
Orsini G, Rutten HJT, EJSO 2013
Li W Tech Coloproctol 2016
Functional Recovery After Rectal Cancer Surgery

Regaining Independence • KEY INDICATOR - PROMS

The International Consortium for Health Outcomes Measurement (ICHOM) Standard set for elderly and colorectal cancer patients - 2017

Zerillo JAMA Onc 2017
Functional Recovery After Rectal Cancer Surgery

Regain of Independence 📚 How we should measure it?

**ADL**
- Bathing
- Ambulation
- Transfers
- Eating
- Dressing

**Physical Activity 📚 6MWT, TUG, CPET**

**Mental Status 📚 Mini Cog (?)**

Functional Recovery After Rectal Cancer Surgery

Multi-dimensional prospective data

What did go wrong along the way???

Ospedale di Santa Maria della Scala, Siena 1440 AD

SIOG plenary session, Milan 2016
Functional Recovery After Rectal Cancer Surgery

Multi-dimensional prospective data


FR primary endpoint
26 centers worldwide
1007 pts enrolled
90 day Functional Recovery

- **Functional Decline** (ADL+TUG+MiniCog):
  - 22.58%
- **Partial Functional Recovery** (decline in ADL or TUG or MiniCog):
  - 42.47%
- **Complete Functional Recovery** (ADL≥5 + TUG<20sec + MiniCog>2):
  - 29.10%

105 Pts with >1 complication:
- 42.47%
- 34.95%

More data to be presented during SIOG on Saturday

Unpublished data
Determinants of HRQOL

Physical Health

Social Relations

Level of Functioning

Psychological Health

Personal Beliefs
HRQoL in the general geriatric population

Positive association:
- Mobility
- Good health
- Lack of sensory deficits
- Low frequency of pain
- Intellectual well-being
- Coping skills
- Autonomy

Negative Association:
- Ageism
- Isolation
- Depression
- Environmental barriers
  - Lack of grab bars
  - Heavy doors
  - Poor lighting

Age alone is not associated with low HRQoL
Oncologic HRQoL

Older patients have been found to weigh HRQoL as more important than a gain in survival compared to younger patients

Wedding, 2007
HRQoL in Colorectal Cancer

• Questionnaires
  • Short Form-36 (SF-36)
  • EuroQol five dimension (EQ-5D)
  • Functional Assessment of Cancer Therapy-General (FACT-G)/Colon Cancer (FACT-C)
  • European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Q30 (EORTC QLQ-Q30)
The RAND 36-Item Health Survey (Version 1.0) taps eight health concepts: physical functioning, bodily pain, role limitations due to physical health problems, role limitations due to personal or emotional problems, emotional well-being, social functioning, energy/fatigue, and general health perceptions. It also includes a single item that provides an indication of perceived change in health. (Hays & Shapiro, 1992; Stewart, Sherbourne, Hays, et al., 1992).
Under each heading, please tick the ONE box that best describes your health TODAY.

**MOBILITY**
- I have no problems in walking about
- I have slight problems in walking about
- I have moderate problems in walking about
- I have severe problems in walking about
- I am unable to walk about

**SELF-CARE**
- I have no problems washing or dressing myself
- I have slight problems washing or dressing myself
- I have moderate problems washing or dressing myself
- I have severe problems washing or dressing myself
- I am unable to wash or dress myself

**USUAL ACTIVITIES (e.g. work, study, housework, family or leisure activities)**
- I have no problems doing my usual activities
- I have slight problems doing my usual activities
- I have moderate problems doing my usual activities
- I have severe problems doing my usual activities
- I am unable to do my usual activities

**PAIN / DISCOMFORT**
- I have no pain or discomfort
- I have slight pain or discomfort
- I have moderate pain or discomfort
- I have severe pain or discomfort
- I have extreme pain or discomfort

**ANXIETY / DEPRESSION**
- I am not anxious or depressed
- I am slightly anxious or depressed
- I am moderately anxious or depressed
- I am severely anxious or depressed
- I am extremely anxious or depressed
FACT-C (Version 4)

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

<table>
<thead>
<tr>
<th>ADDITIONAL CONCERNS</th>
<th>Not at all</th>
<th>A little bit</th>
<th>Somewhat</th>
<th>Quite a bit</th>
<th>Very much</th>
</tr>
</thead>
<tbody>
<tr>
<td>I have swelling or cramps in my stomach area</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I am losing weight</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have control of my bowels</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I can digest my food well</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have diarrhea (diarrhoea)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I have a good appetite</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>I like the appearance of my body</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Do you have an ostomy appliance? (Mark one box)</td>
<td>No</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>If yes, please answer the next two items:</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am embarrassed by my ostomy appliance</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>Caring for my ostomy appliance is difficult</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>
QOL Data

• Most from surgical literature
• Outcomes are heterogeneous (i.e., age is not a universal risk factor for better or worse HRQoL).
• Lower survival has been documented in older patients with appetite loss and low “role” dimension scores (hobbies, leisure activities)

Fournier et al, 2016
Lower Anterior Resection Syndrome (LARS)

Constellation of symptoms that arise after surgical/radiation treatment for rectal cancer
LARS

- Radiation
- Changes in colon motility
- Autonomic denervation
- Loss of rectal reservoir
- Reduction in sensitivity
Diminished Quality of Life

Incontinence

Frequency

Pain
Possible after effects of Surgery/chemoradiotherapy

- Pain
- Decline in social function
- Fatigue
- Decline in cognitive function
- Neurology
- Urinary incontinence
- Change in bowel motility
- Increased need for medications
- Frequency
Geriatric Syndromes

- Pain
- Decline in social function
- Decline in cognitive function
- Fatigue
- Neuropathy
- Incontinence
- Change in Bowel motility
- Increased need for medications
- Frequency

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Pain

Frequency

Incontinence

Decline in social function

Change in Bowel motility

Decline in cognitive function

Increased need for medications

Fatigue

Neuropathy

Frequency
HRQoL in 1 year survival

• Population of German Colorectal cancer survivors
• Stoma and non-stoma
• Local, regional, distant disease
• Age
  • <60, 60-69, 70-80
Older age is not necessarily associated with decreased functioning after treatment for colorectal cancer

Arndt et al, 2004
Watch and Wait

Does Watch and Wait preserve quality of life versus resection after neoadjuvant radiation/chemoradiation?
Length of treatment

• Short course radiation therapy: OS 75% at 1 year, 63% symptom improvement rate
• More frequent recurrence but generally better quality of life

Cummings, 2019 J Gastr Onc
• Dutch matched control study
• Mean age 64, younger patients underwent surgery more frequently
• Better quality of life for watch and wait patients
SF-36. *Significant result. PF = physical functioning; RP = role physical; BP = bodily pain; GH = general health; VT = vitality; SF = social functioning; RE = role emotional; MH = mental health; SF-36 = Short Form 36; TME = total mesorectal excision; W&W = watch and wait.
FIGURE 3. EORTC-QLQ-C30. *Significant result. A = functional scales, higher scores mean better results; B = symptom scales, lower scores mean better results; QL = global health status; PF = physical functioning; RF = role functioning; EF = emotional functioning; CF = cognitive functioning; SF = social functioning; FA = fatigue; NV = nausea and vomiting; PA = pain; DY = dyspnea; SL = insomnia; AP = appetite loss; CO = constipation; DI = diarrhea; FI = financial difficulties; EORTC = European Organization for Research and Treatment of Cancer; TME = total mesorectal excision; W&W = watch and wait.
Conclusions

• Frailty Assessment is mandatory
  • Geriatrician should be present for Multidisciplinary Team Discussion

• Rectal Cancer Care should be Personalized

• Functional Recovery and Quality of Life Outcomes are as important as Cancer-Specific Outcomes

• More Prospective Data is needed for Older Adults