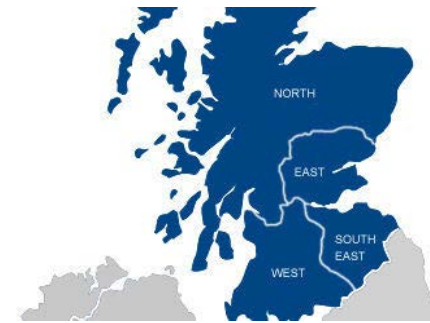




**CHIEF
SCIENTIST
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NHS RESEARCH SCOTLAND



“They tried to make me go to prehab and I said.....”

Susan Moug

RAH Surgical Research

Overview

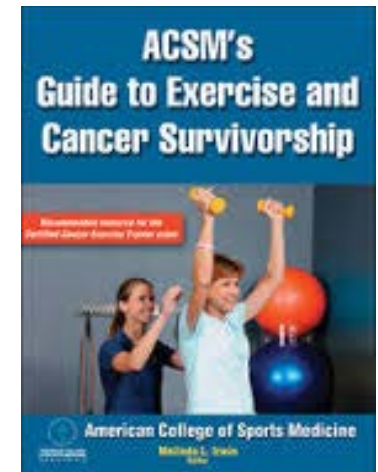
- Evidence for exercise in cancer
- Evidence for exercise in surgery
- What is Prehab?
- The REx Trial
- Over to the really important people.....



Evidence for exercise in Cancer

- Think this may have already been mentioned?
- Put ‘exercise and cancer’ into
 - Pubmed >10000 citations
 - Google >203 million results
 - » For comparison
- Google results
 - ‘Keeping active’ Macmillan
 - ‘people with cancer need more exercise’ nhs

Donald Trump 237
Hillary Clinton 128
Taylor Swift 164
The Minions 65
A.S. Anderson 25



Evidence for exercise in Surgery

- Fitter patients lower risk for complications
- Fitter patients adhere to Enhanced Recovery After Surgery (ERAS)
 - Shorter pre-op fasting times
 - Pre-op CHO drinks
 - Laparoscopic surgery
 - Good pain control
 - Eat and drink night of surgery
 - Up-to-sit night of surgery
 - Walking laps POD1



Evidence for exercise in Surgery

- Does that affect our patients?
- ERAS
 - ERAS in RAH nurse improved adherence
 - Reduced length of stay by 2 days
 - Re-admission rate reduced
- McLennan et al (draft 2015)
 - >200 patients elective CR surgery 2014-2015
 - Assessed 5 lifestyle factors on stay and complications
 - Pre-op physical activity x5 increase in comps and X3 longer hospital stay



Evidence for exercise in Surgery

- Long-term also affected
- Alexander et al (submitted 2016)
 - CRC patients undergoing curative surgery
 - 2011-2012 in GGC
 - 75% overweight/ obese
 - 10.6% smokers
 - 13.1% excess alcohol
 - 8.5% could not climb two flights of stairs
 - Overweight and physically restricted had poorer long-term survival



What is Prehab

- Wikipedia
 - A form of strength training to prevent injuries before actual occurrence
 - Nothing on cancer prehab
- Prehabilitation is defined as “[A] process on the cancer continuum of care that occurs between the time of cancer diagnosis and the beginning of acute treatment and includes physical and psychological assessments that establish a baseline functional level, identify impairments, and provide interventions that promote physical and psychological health to reduce the incidence and/or severity of future impairments.”

Silver et al. CA Cancer J Clin, 2013.

What is Prehab

- Or....
 - We could use Kerry Courneya's definition
 - 'preoperative conditioning in cancer patients'



- (32k results on Google but over 300 PubMed citations)

The REx Trial

The Feasibility of Performing a walking programme in patients with rectal cancer undergoing chemo-radiotherapy

Moug SJ, Mackay G, Barry S, Buchan C, Steele RJC,
Anderson AS, Mutrie N.

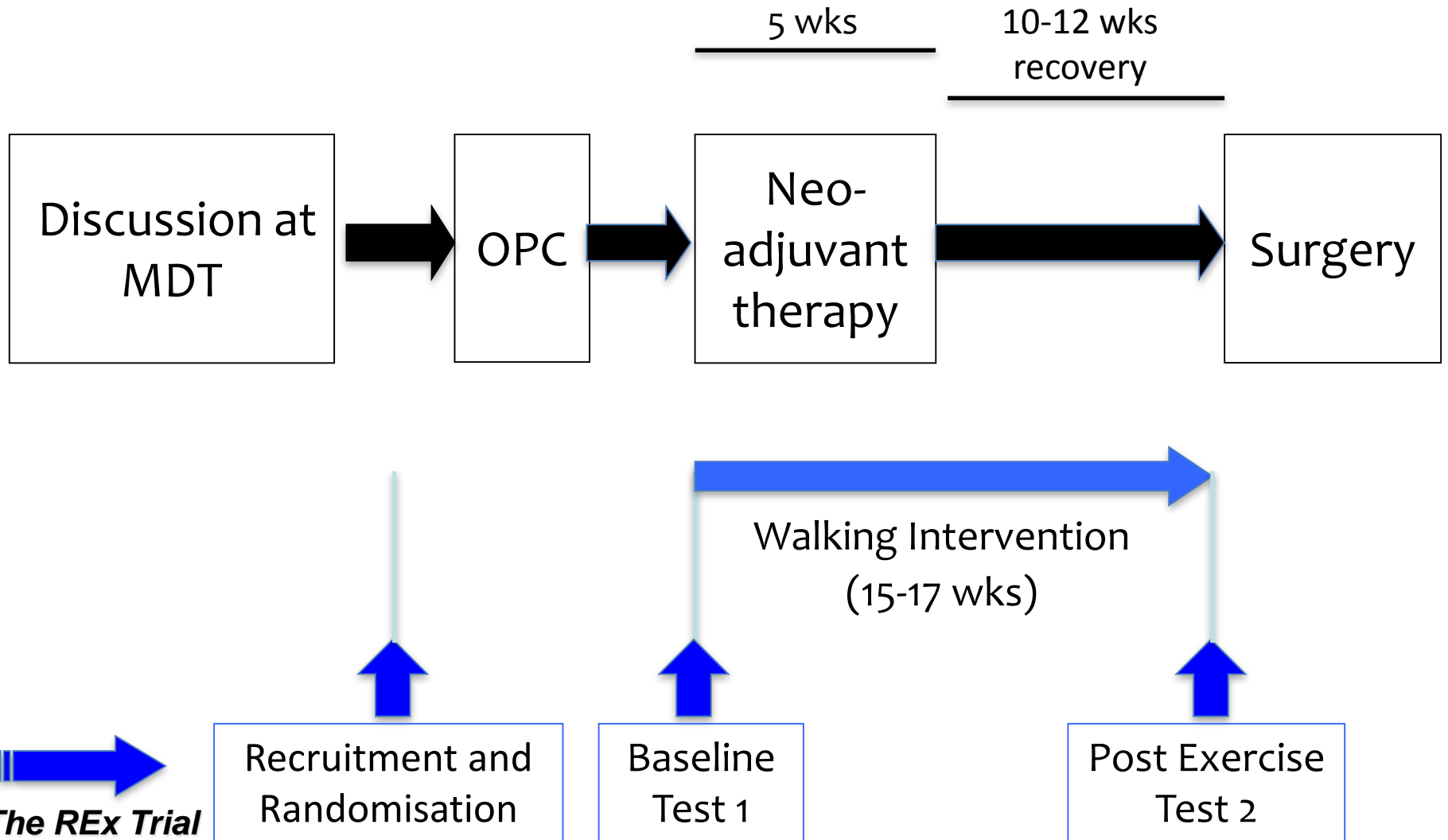
The REx Trial

- 80 patients
 - Rectal cancer – ‘low’ or ‘margin threatening’
 - Chemo-radiotherapy followed by surgery planned treatment
 - Randomise to two groups
- All sites in GGC, with extra trust opened July 2015.
- Funded by Chief Scientist Office



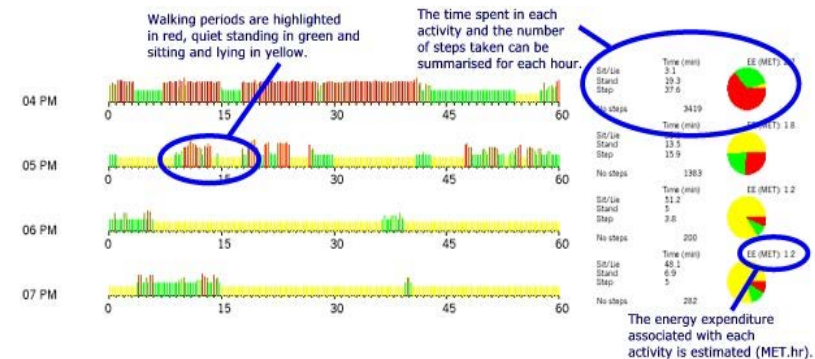
<http://www.cancerresearchuk.org/about-cancer/find-a-clinical-trial/a-study-looking-walking-programme-chemoradiotherapy-rectal-cancer-rex>

The Feasibility of Performing a Walking Intervention in Patients with Rectal Cancer: The REx Trial.



The REx Trial

- Testing
 - Sit-to-stand test
 - 6 minute walk test
 - Height, weight, hip measurement
 - Questionnaires (QLQ29/30, PANAS, FACT C)
 - Wear ActivPal for 7 days
- Walking intervention
 - Home pedometers
 - Diary to record target step count
 - Telephone calls every 2 weeks



The REx Trial

- Started August 2014
- Approx 220 patients with rectal cancer diagnosed
- 70 eligible for REx

- 41 recruited (59%)
- 4 withdrawals (10% drop out rate)
- Total completed REx = 29
- Male: female 26:15
- Age range: 45-82 years

The REx Trial

- Main reasons for not participating
 - ‘too much going on just now’
 - ‘too busy’
- Other issues
 - The influence of the nurse specialist
 - Lower than expected recruited from 2nd trust
 - No. eligible patients reduced last 2 years
- Last recruitment February 2016
- Final analysis August 2016.

... ..And now for the REALLY important people.....

“They tried to make me go to prehab and I said.....”

‘I was already doing it’

Mrs Carole Buchan

‘I said yes and I’m doing prehab right now’

Mr Michael Downie

‘I said yes and they put me in the control group!’

Ms Pene Herman-Smith