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Improving surgical care and outcomes in *O*lder cancer *P*atients *T*hrough *I*mplementation of an efficient pre-*Surg*ical toolkit (*OPTI-Surg*)

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Study Team

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Background

- Frail older adults are at risk for poor surgical outcomes due to conditions including malnutrition, cognitive/functional impairment, depression, and social vulnerability

- Multimodal interventions to optimize the components of frailty can decrease postop complications, reduce hospital length of stay, and increase likelihood of return to baseline function

- Most surgeons do not routinely screen for or attempt to improve these conditions prior to surgery

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Specific Aims

- Aim 1: To measure the impact of a targeted pre-surgical frailty optimization intervention on practice-level rates of postoperative morbidity and return to baseline function among at risk patients

- Aim 2: To assess the uptake and implementation of the **OPTI-Surg** package with practice level rates of 1) completion of the brief assessment for all older surgical patients; 2) subsequent referral for the indicated optimization intervention and determine practice-level structural factors associated with uptake of the **OPTI-Surg** package

- Aim 3: To document and assess barriers and facilitators to implementation and dissemination through qualitative analysis

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OPTI-Surg Toolkit

- **Design Requirement:** an efficient, validated measure of frailty that identifies distinct syndromes that are potential targets for pre-operative optimization

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The Edmonton Frail Scale

NAME : _____

d.o.b. : _____   **DATE :** _____

Frailty domain	Item	0 point	1 point	2 points
Cognition	Please imagine that this pre-drawn circle is a clock. I would like you to place the numbers in the correct positions then place the hands to indicate a time of 'ten after eleven'	No errors	Minor spacing errors	Other errors
General health status	In the past year, how many times have you been admitted to a hospital?	0	1–2	≥2
	In general, how would you describe your health?	'Excellent', 'Very good', 'Good'	'Fair'	'Poor'
Functional independence	With how many of the following activities do you require help? (meal preparation, shopping, transportation, telephone, housekeeping, laundry, managing money, taking medications)	0–1	2–4	5–8
Social support	When you need help, can you count on someone who is willing and able to meet your needs?	Always	Sometimes	Never
Medication use	Do you use five or more different prescription medications on a regular basis?	No	Yes	
	At times, do you forget to take your prescription medications?	No	Yes	
Nutrition	Have you recently lost weight such that your clothing has become looser?	No	Yes	
Mood	Do you often feel sad or depressed?	No	Yes	
Continence	Do you have a problem with losing control of urine when you don't want to?	No	Yes	
Functional performance	I would like you to sit in this chair with your back and arms resting. Then, when I say 'GO', please stand up and walk at a safe and comfortable pace to the mark on the floor (approximately 3 m away), return to the chair and sit down'	0–10 s	11–20 s	One of : >20 s , or patient unwilling , or requires assistance
Totals	Final score is the sum of column totals			

Scoring :

0 - 5 = Not Frail

6 - 7 = Vulnerable

8 - 9 = Mild Frailty

10-11 = Moderate Frailty

12-17 = Severe Frailty

TOTAL   [/17]

Administered by : _____
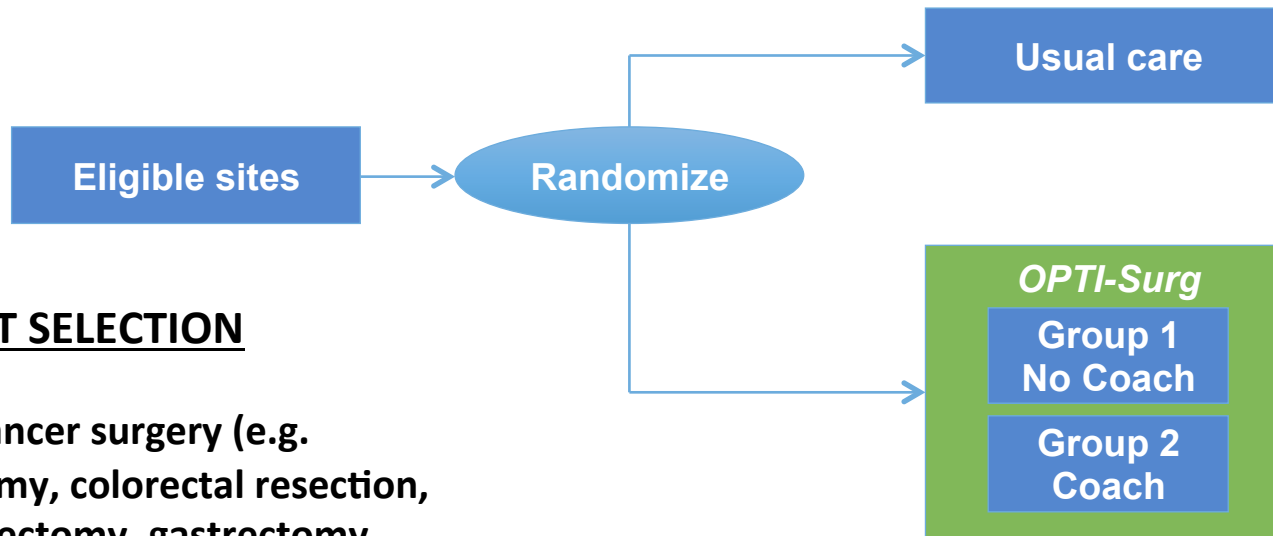
OPTI-Surg Toolkit

- **Edmonton Frail Scale**: an efficient, validated measure of frailty that identifies distinct syndromes that are potential targets for pre-operative optimization

- **Preoperative Intervention**: one of 2 options to be selected based on site-specific available resources
  - **Low intensity**
    - Printed materials/checklists
    - ACS resources/help lines
    - PCP referral
  - **High intensity**
    - Referrals: geriatrics, palliative care, occupational therapy, physical therapy, nutrition, social work, mental health provider

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Methods

- Multicenter cluster randomized trial within the NCORP CCDR surgical practices to evaluate the implementation of a pre-surgical care improvement package (**OPTI-Surg** Toolkit) that will:

  1. Identify frail patients
  2. Recommend targeted pre-op interventions aimed at improving individual vulnerabilities prior to major cancer surgery

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Study Schema

Eligible sites → **Randomize**

→ **Usual care**

→ *OPTI-Surg*
- **Group 1 No Coach**
- **Group 2 Coach**

PATIENT SELECTION
Age >64
Major cancer surgery (e.g. cystectomy, colorectal resection, esophagectomy, gastrectomy, hepatectomy, pancreatectomy, pulmonectomy)

SITE ELIGIBILITY
##

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Implementation Plan

- Implementation checklists will be used to assess the process of implementation between the sites with and without the coach
  - Check-ins with sites will be used to determine what has been done to implement **OPTI-Surg**

- Organizational Readiness to Change Assessment
  - Coach's will use the baseline results to tailor strategies for implementation

- Uptake of the **OPTI-Surg** will be assessed by tracking the number of eligible patients receiving the assessment and the subsequent referral by reviewing chart reviews

- Assessing practice-level structural factors associated with uptake

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Qualitative Methods

- Initial site visit prior to randomization to assess organizational readiness for change
  - Qualitative interviews with key stakeholders
  - Observation of selected clinic meetings
  - Readiness for change validated survey

- 2 follow-up site visits to assess implementation of **OPTI-Surg** (at intervention sites) or document secular trends (at control sites)
  - Qualitative interviews and observational protocols are repeated

- Analysis plans
  - Qualitative case studies of implementation experiences focused on barriers and facilitators to **OPTI-Surg** adoption
  - Provide context to interpret main trial results

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Discussion