

# Feasibility of screening for frailty, sarcopenia and nutritional status in elective surgery for colorectal cancer

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## INTRODUCTION







- Preoperative frailty is a key determinant of post-surgical outcomes, often co-existing with sarcopenia and malnutrition
- Older patients undergoing surgery for colorectal cancer are likely to be affected by these risk factors, for which multiple screening tools are available
- We aimed to assess the feasibility of certain tools in clinical practice. This included sequential urine sampling for metabolomics analysis of habitual dietary intake and psoas muscle index (PMI) calculation on staging CT abdomen

## METHODS

- Ethical approval sought - IRAS project ID 231694
- Patients ≥ 65 years undergoing planned surgery for colorectal cancer with curative intent were recruited across five UK sites
- The table below summarises the timing and types of screening measures conducted during the study period:

Preoperative:	Frailty - Clinical Frailty Scale (CFS), Groningen Frailty Indicator (GFI) Sarcopenia - grip strength, gait speed, psoas muscle index (PMI) on CT Nutrition - short-form Mini Nutritional Assessment (MNA-SF), urine metabolomics
Week 1 post-op:	Nutrition – urine metabolomics
Week 4 post-op:	Nutrition – urine metabolomics
Week 8 post-op:	As for preoperative screening, except CT analysis of psoas muscle measurement

## RESULTS

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 43 participants recruited  
 Mean age 76  
 60 % male  
 Mean length of stay 6.9 days
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 32% living with frailty
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 Sarcopenia prevalence ranged from 42% (PMI) to 67% (grip strength)
- 
 42% at risk of malnutrition (MNA-SF)  
 9% malnourished (MNA-SF)
- 
 Urine metabolomics assessment is ongoing
- 
 28 % unable to complete the in-person follow up due to ill health, poor appetite and exhaustion

## CONCLUSIONS

Preoperative screening for frailty, nutritional status and sarcopenia alongside routine clinical care in older adults undergoing surgery, is feasible.

Retaining participants in observational studies is challenging during postoperative periods of convalescence and whilst undergoing adjuvant treatment.

Home urine sampling is a viable method of dietary assessment within community settings to aid malnutrition screening.