Peri-operative Medicine for Older People under going surgery (POPS): - A developing role in Cancer Pathways

Dr Peter Robinson

Consultant in Geriatric and General Medicine

POPs Clinical Lead UHD

University Hospitals Dorset

NHS Foundation Trust

We are

- caring
- one team
- listening to understand
- open and honest
- always improving
- inclusive

* Serves a population of more than 800,000 people, reaching as far as Purbeck, the New Forest and South Wiltshire
* Regional Vascular Surgery service
* **Dorset Cancer Centre, offering surgical and oncology services for the whole of Dorset**
* Trauma unit for east Dorset, serving a population of more than 500,000 people
* Major interventional Cardiology Unit (the Dorset Heart Centre),
* Elective Orthopaedic service providing hip and knee replacements (the Derwent Unit)
* 2024 planned completion merger of Surgical Services (5th Largest single centre in UK)

NHS
Dorset HealthCare University
NHS Foundation Trust

University Hospitals Dorset

The POPS Team

NHS
University Hospitals Dorset
NHS Foundation Trust

Who are we?

- Perioperative Medicine for Older People having Surgery (POPS)
- Consultant Geriatrician and Advanced Care Practitioner team
- RBCH site only currently, Monday to Friday 08:00-16:00

What can we help with?

- Preoperative risk assessment and optimisation
- Lifestyle modification to improve perioperative/ long-term health outcomes
- Working closely with our surgical, anaesthetic and allied health professional colleagues
- Postoperative care
- Links to community services

*Clinical Frailty Scale (CFS)

	5	LIVING WITH MILD FRAILTY	People who often have **more evident slowing**, and need help with **high order instrumental activities of daily living** (finances, transportation, heavy housework). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation, medications and begins to restrict light housework.
	6	LIVING WITH MODERATE FRAILTY	People who need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.
	7	LIVING WITH SEVERE FRAILTY	**Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~6 months).
	8	LIVING WITH VERY SEVERE FRAILTY	Completely dependent for personal care and approaching end of life. Typically, they could not recover even from a minor illness.
	9	TERMINALLY ILL	Approaching the end of life. This category applies to people with a **life expectancy <6 months**, who are **not otherwise living with severe frailty.** (Many terminally ill people can still exercise until very close to death.)

How to refer:

Inter-professional referral form via EPR

Contact details:

Bleep 2450, Extension 4660

POPS office on SAU

Email: pops@uhd.nhs.uk

If urgent or out of hours please escalate to Emergency on call Medical or Surgical Teams

Who to refer?

- Surgical patients ≥65 years old *with*
- CFS* ≥5

THE ROYAL COLLEGE OF ANAESTHETISTS

PERIOPERATIVE MEDICINE

THE PATHWAY TO BETTER SURGICAL CARE

PERIOPERATIVE MEDICINE

THE CHALLENGES

£16BN

IS SPENT ON ELECTIVE SURGICAL CARE IN ENGLAND EACH YEAR

10 MILLION

PATIENTS HAVE SURGERY EVERY YEAR AND THIS NUMBER IS RISING

25%

OF THE POPULATION IN ENGLAND HAVE A LONG-TERM CONDITION

OUR POPULATION IS GETTING OLDER

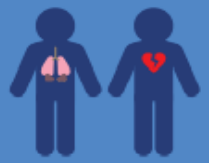
THIS IS GREAT NEWS BUT LEAVES US WITH CHALLENGES

20%

LESS THAN 1 IN 5 NON-CARDIAC SURGERY INPATIENTS ARE ADMITTED TO ICU

HIGH-RISK PATIENTS

ARE A MINORITY BUT ACCOUNT FOR 4 OUT OF 5 DEATHS AFTER SURGERY



THERE IS NO SYSTEM FOR SCREENING PATIENTS FOR LONG-TERM HARM AFTER SURGERY (E.G. HEART FAILURE OR DETERIORATING KIDNEY FUNCTION)

FUNCTIONAL DECLINE!

10-15% of all UK operations have complications

25% of high-risk patients experience postoperative complications that could have been prevented

1 in 7 regret having surgery

27% of UK adults are not physically active

15% do not go ahead with surgery if a shared decision making conversation takes place

Preparation reduces postoperative complications by **30-80%**

Centre for Perioperative Care

WWW.CPOC.ORG.UK

* Delays to definitive clinical decision making and intervention
* Poorer appreciation of pre-morbid status (comorbidities, Frailty, malnutrition)
* Poorer access to medical sub-speciality
* Greater complication rates – but particularly “non-surgical”
* **Recommendations:**
  * Routine daily input from Medicine for the Care of Older People should be available to elderly patients undergoing surgery.

The Daily Telegraph

"Pensioners enjoying more healthy years in retirement than ever before"

the guardian

"Number of older people living with cancer 'to treble' by 2040"

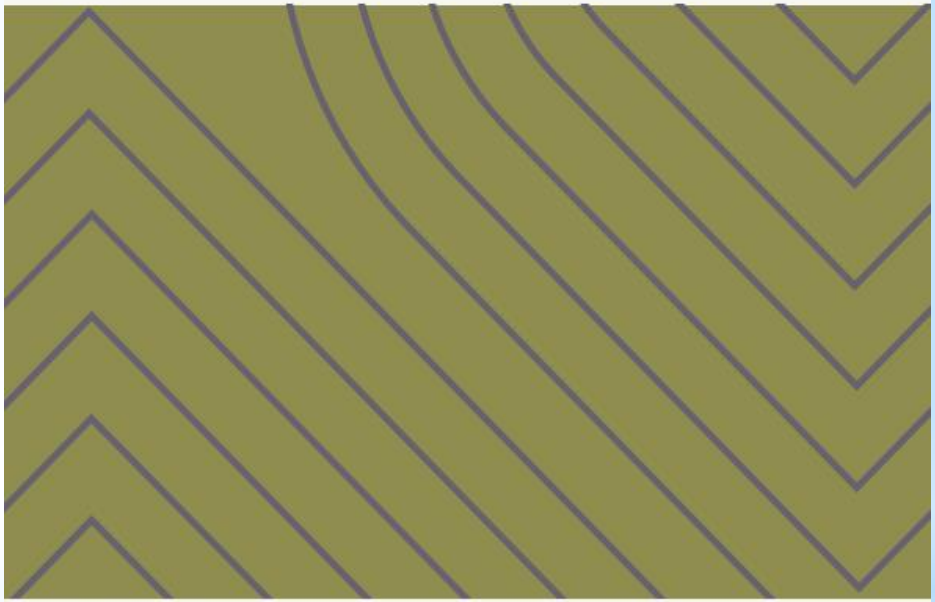
BMJ
British Medical Journal

"TREATING CANCER IN OLDER PEOPLE
ASSESSING BIOLOGICAL AGE COULD HELP AVOID UNDER TREATMENT"
BMJ August 2012;345

Royal College of Physicians

RCR
The Royal College of Radiologists

Implementing frailty assessment and management in oncology services



November 2023

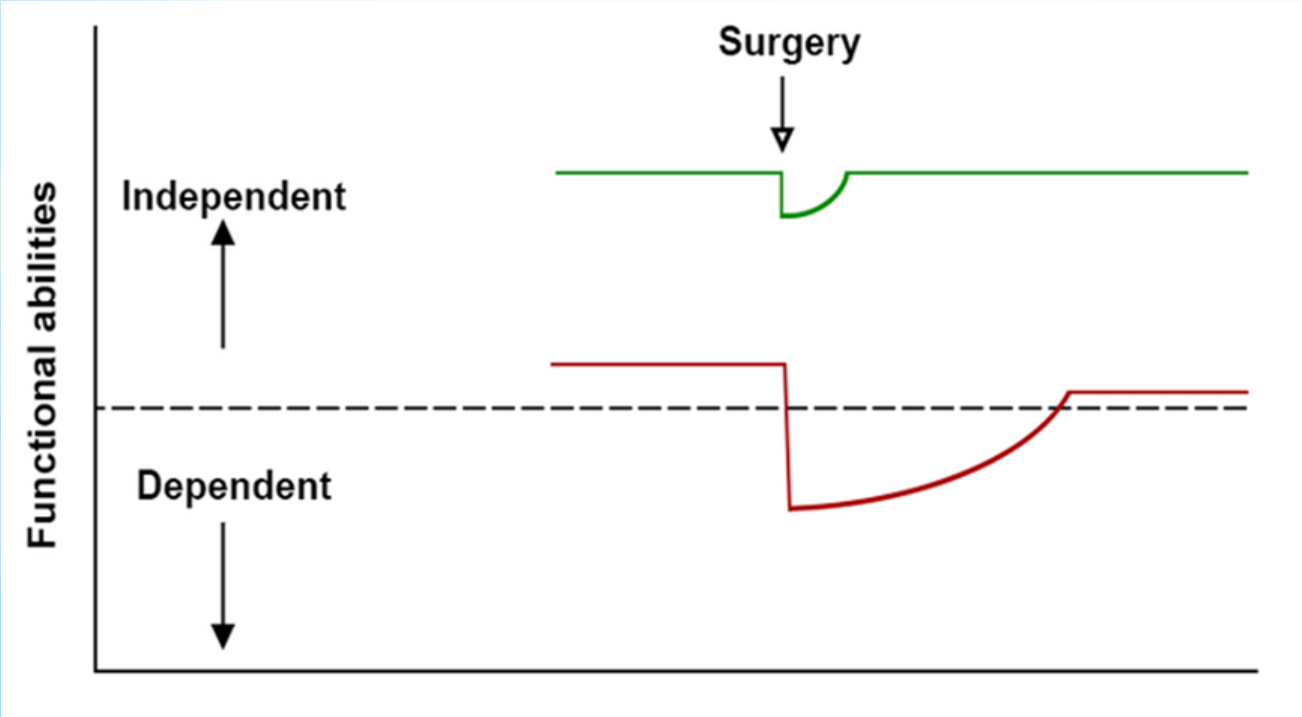
Produced in association with:

BGS
British Geriatrics Society
Improving healthcare for older people

SIOG
INTERNATIONAL SOCIETY OF GERIATRIC ONCOLOGY

MACMILLAN CANCER SUPPORT

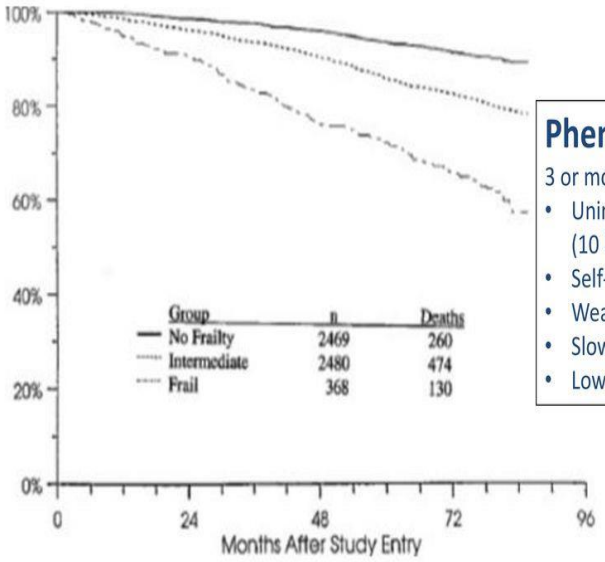
* “Frailty is a term applied to individuals who, usually as a result of the cellular and metabolic changes of ageing process, have less physiological and psychosocial reserves to cope with acute stressor events.
* These stressors, for example elective or emergency surgery, can precipitate significant changes in health status.



*Frailty

Survival curves of frailty (phenotype model)

Fried JP et al. Frailty in Older Adults: Evidence for a Phenotype. Journal of Gerontology 2001: Vol 56A, No. 3, M146–M156
http://biomedgerontology.oxfordjournals.org/content/56/3/M146.full

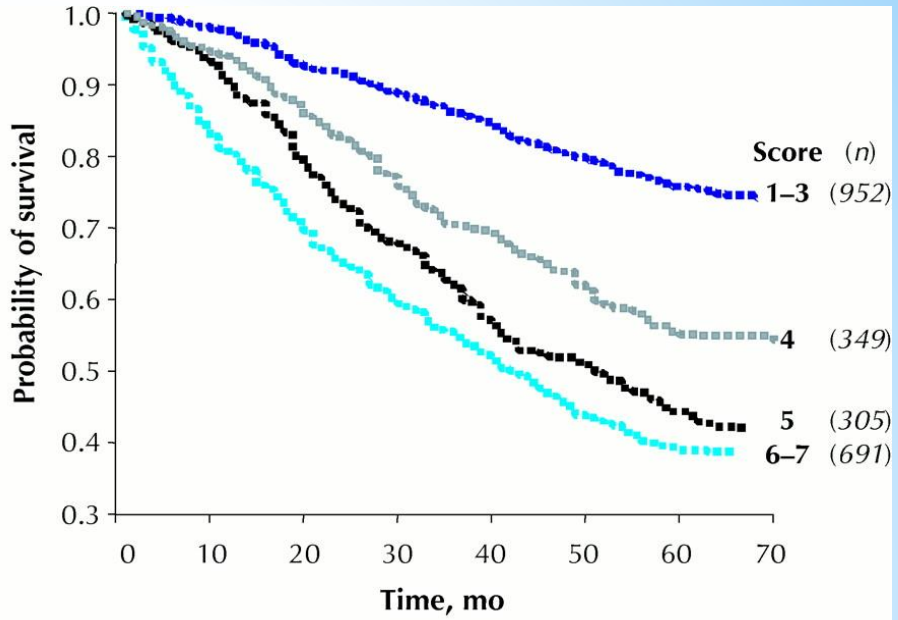


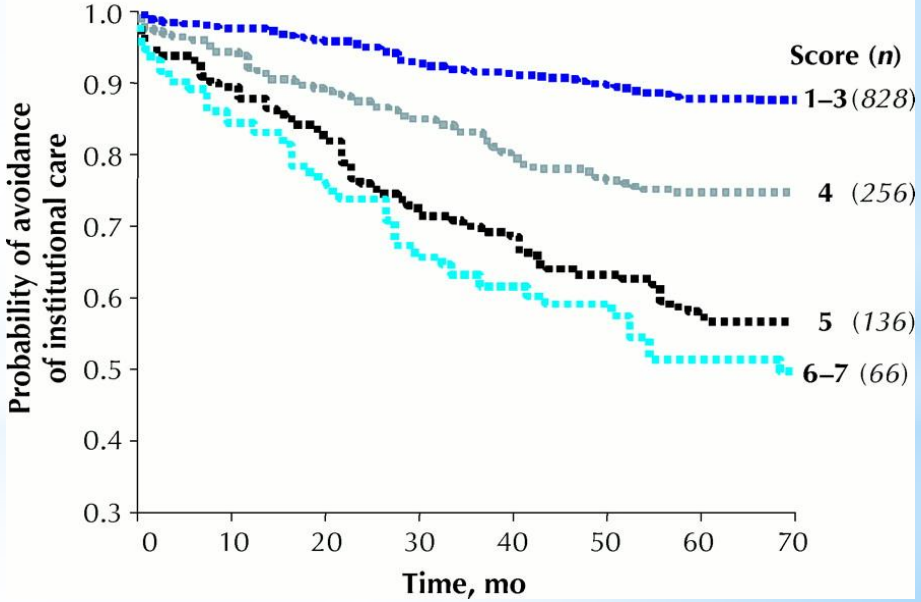
Phenotype model

3 or more ....

- Unintentional weight loss (10 lbs in past year)
- Self-reported exhaustion,
- Weakness (grip strength),
- Slow walking speed
- Low physical activity.

Figure 4. Survival curve estimates (unadjusted) over 72 months of follow-up by frailty status at baseline: Frail (3 or more criteria present); Intermediate (1 or 2 criteria present); Not frail (0 criteria present). (Data are from both cohorts.)





*Impact on life course

Kenneth Rockwood, Xiaowei Song, Chris MacKnight, Howard Bergman, David B. Hogan, Ian McDowell and Arnold Mitnitski
CMAJ August 30, 2005 173 (5) 489-495; DOI: https://doi.org/10.1503/cmaj.050051

The ECOG PS score used in this study

ECOG/WHO score

0 Fully active, able to carry on all predisease performance without restriction

1 Restricted in physically strenuous activity, but ambulatory and able to carry out work of a light and sedentary nature (e.g. light house work, office work)

2 Ambulatory and capable of all self-care but unable to carry out any work activities. Up and about more than 50% of waking hours.

3 Capable of only limited self-care, confined to bed or chair more than 50% of waking hours

4 Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair.

5 Dead

Clinical Frailty Scale*

1 **Very Fit** – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age.

2 **Well** – People who have **no active disease symptoms** but are less fit than category 1. Often, they exercise or are very **active occasionally**, e.g. seasonally.

3 **Managing Well** – People whose **medical problems are well controlled,** but are **not regularly active** beyond routine walking.

4 **Vulnerable** – While **not dependent** on others for daily help, often **symptoms limit activities.** A common complaint is being "slowed up", and/or being tired during the day.

5 **Mildly Frail** – These people often have **more evident slowing,** and need help in **high order IADLs** (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework.

6 **Moderately Frail** – People need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.

7 **Severely Frail** – **Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months).

8 **Very Severely Frail** – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness.

9. **Terminally Ill** - Approaching the end of life. This category applies to people with **a life expectancy <6 months**, who are **not otherwise evidently frail.**

Scoring frailty in people with dementia

The degree of frailty corresponds to the degree of dementia. Common **symptoms in mild dementia** include forgetting the details of a recent event, though still remembering the event itself, repeating the same question/story and social withdrawal.

In **moderate dementia**, recent memory is very impaired, even though they seemingly can remember their past life events well. They can do personal care with prompting.

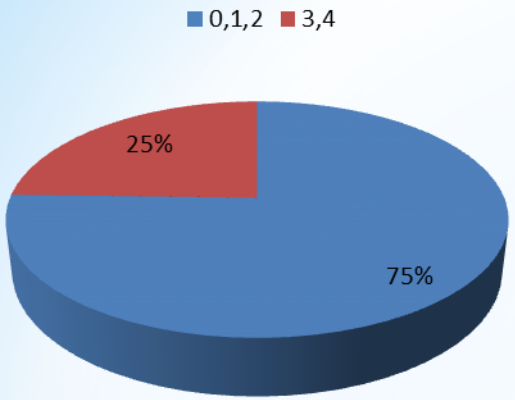
In **severe dementia**, they cannot do personal care without help.

* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

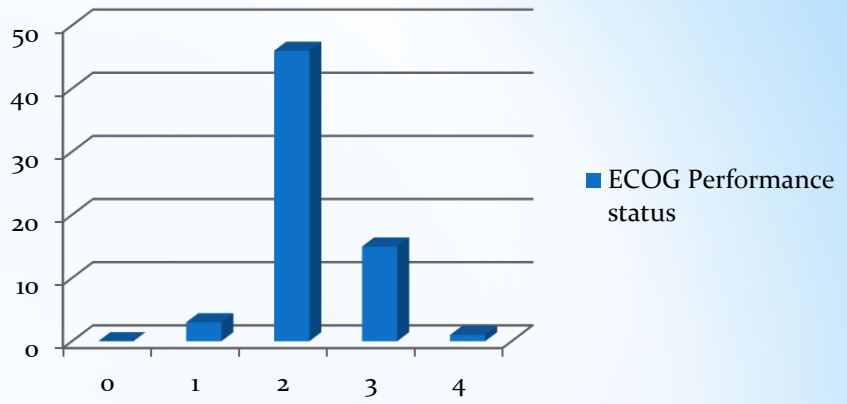
DALHOUSIE UNIVERSITY Inspiring Minds

*Performance status or Clinical Frailty Scale?

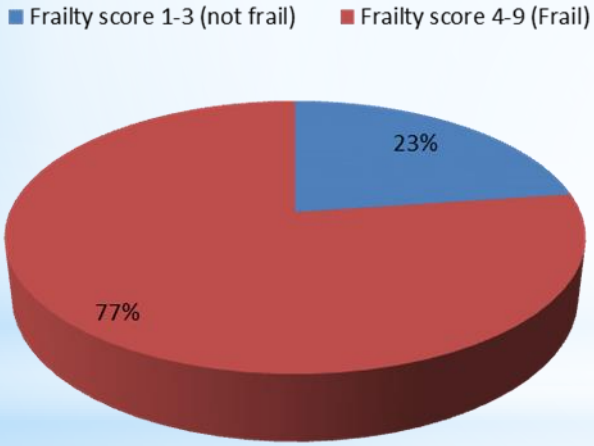
ECOG Performance status n=66



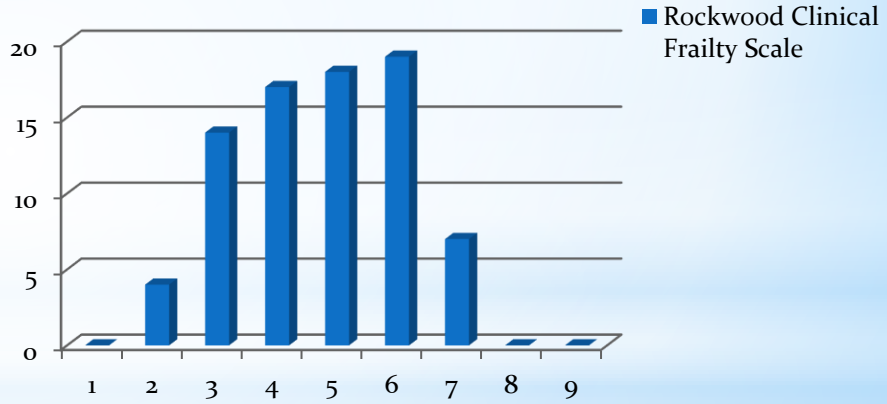
ECOG Performance status



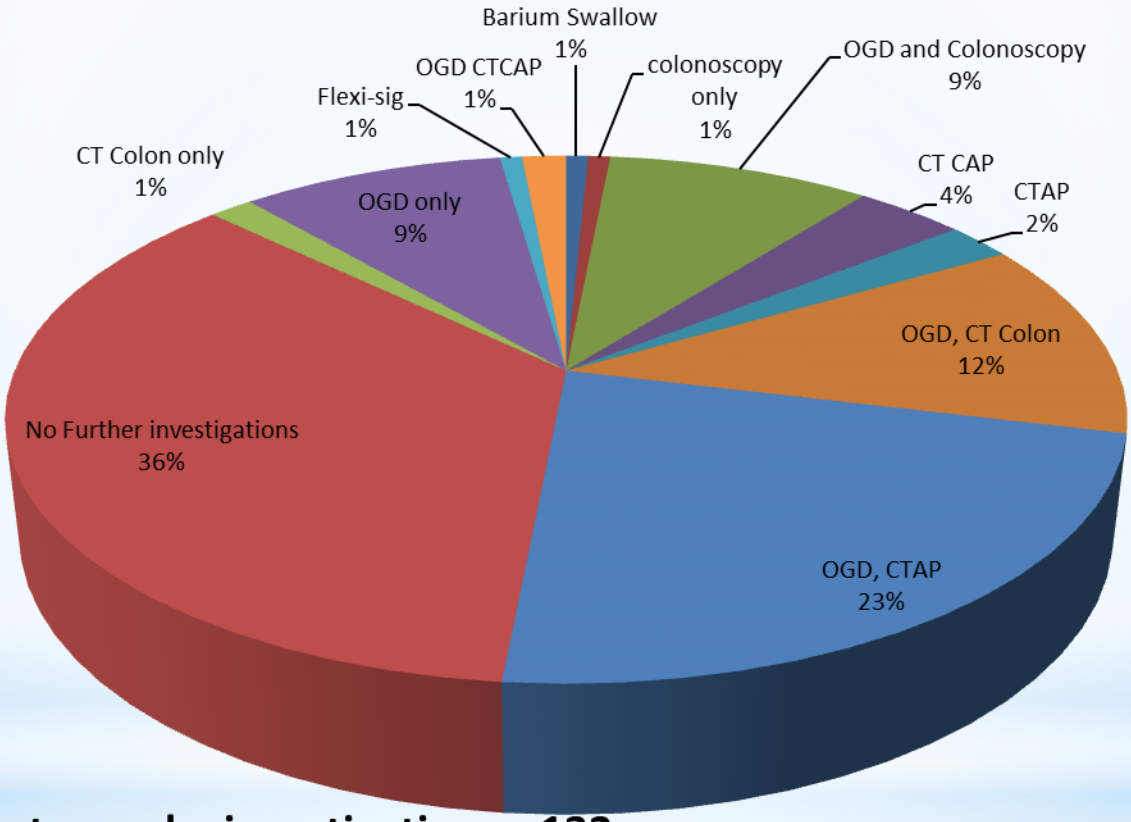
Clinical Frailty scale n=79



Rockwood Clinical Frailty Scale



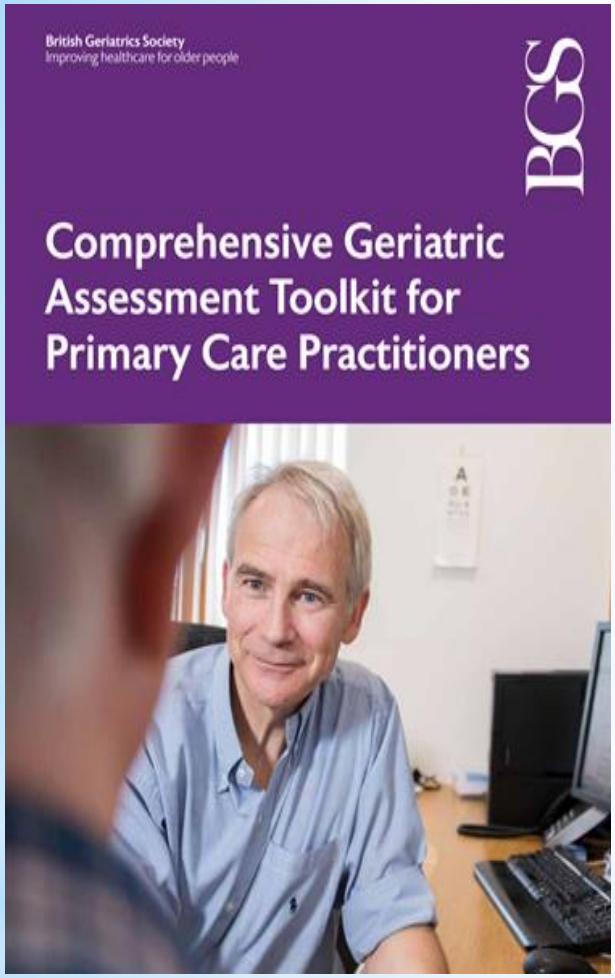
* Iron Deficiency Anaemia screening for Frailty

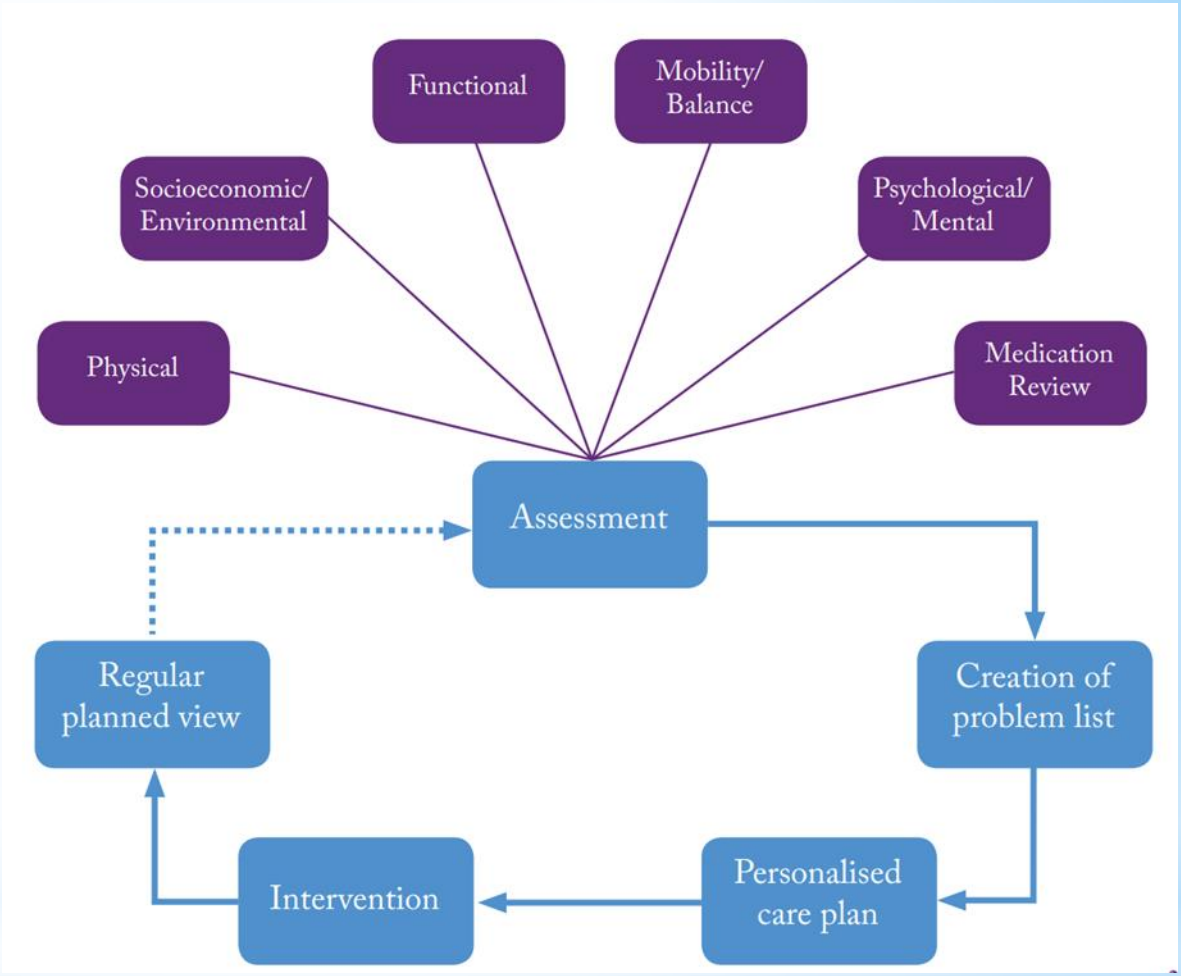


Combined Outcome by investigation n=132

*Decision not to proceed

* Frailty is common in patients with cancer and should be assessed early and proactively
* Frailty is everyone's business
* Each step in the cancer pathway is an opportunity for assessing and managing frailty.
* Frailty-informed care involves detecting frailty and considering it alongside shared decision-making
* Recognise and optimise potentially reversible frailty related e.g. poly-pharmacy and problems with nutrition
* Patients identified with frailty should be flagged for more comprehensive, multi-domain frailty assessments.





* CGA: multi-domain risk factor modification

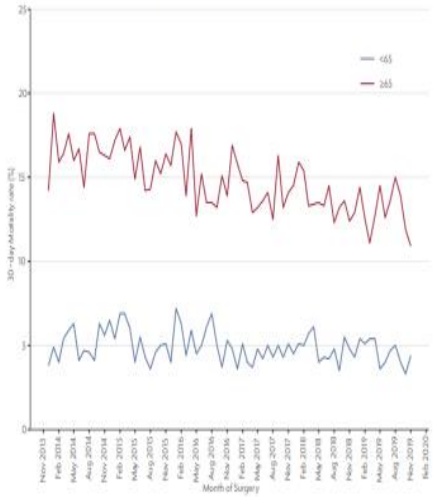
wesfit Fit4Surgery

NELA
National Emergency Laparotomy Audit

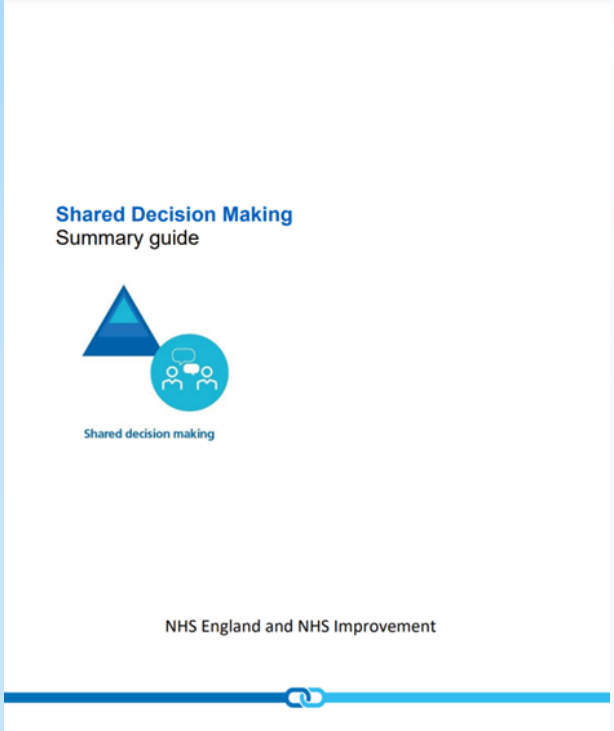
Nutrition
Exercise
Wellbeing
PREHAB 4 CANCER
GREATER MANCHESTER

Mortality – National (patients over 65)

Figure 7.1.1 Comparison of 30-day mortality in two groups of patients over time; patients over the age of 65 years and patients under the age of 65 years



*Prehabilitation+



* Comprehensive Geriatric Assessment
* The Team:
  * Physician
  * Anaesthetist
  * Dietician
  * (Pharmacist)
  * Advanced Care Practitioner (Nursing and Therapy background)
  * Health Care Support Worker
* Risk mitigation with pre-op optimisation
* Shared decision-making process

NHS
University Hospitals Dorset
NHS Foundation Trust

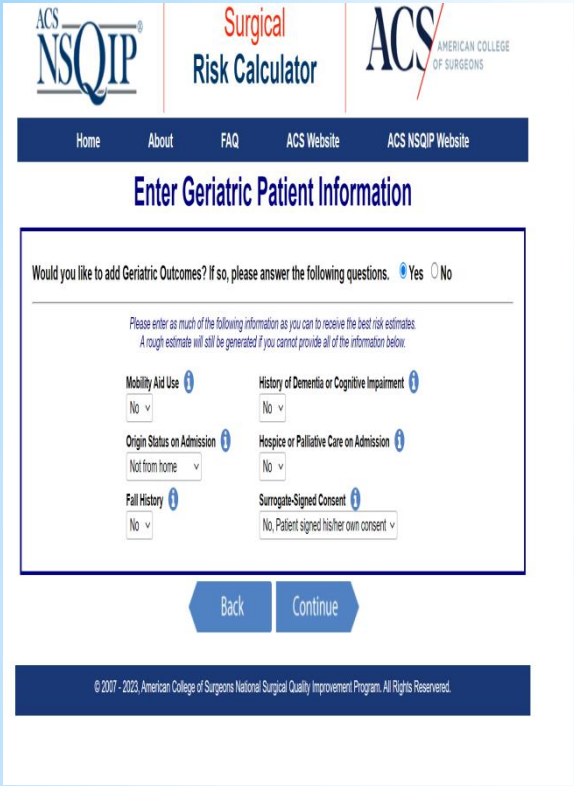
POPs Clinic

Risk Tool	Result and Comments
Function	
Rockwood Clinical Frailty Scale Barthel	
Surgical/Anaesthetic risk tool (if used):	
ASA grade ACS- NSQIP	
Cardio- respiratory assessment (if performed)	
BP/Pulse/O2 Sats Duke Activity Status Index (DASI) Pulmonary function tests Echocardiogram Creatinine Clearance: CPET (if available)	
Nutrition	
MUST Weight BMI	
Sarcopenia	
SARC-F screening tool Grip strength/kg	
Delirium Risk	
Delirium Elderly At Risk Score	
Cognitive assessment	
Screening question (YES/NO) Abbreviated Mental Test score Montreal Cognitive Assessment (MOCA) Generalised Anxiety Disorder (GAD-7) Patient Health Questionnaire (PHQ-9)	
Falls Risk	
Number of falls Timed up and Go (TUAG)	
Discharge planning	
Risk Assessment and Prediction Tool (RAPT)	

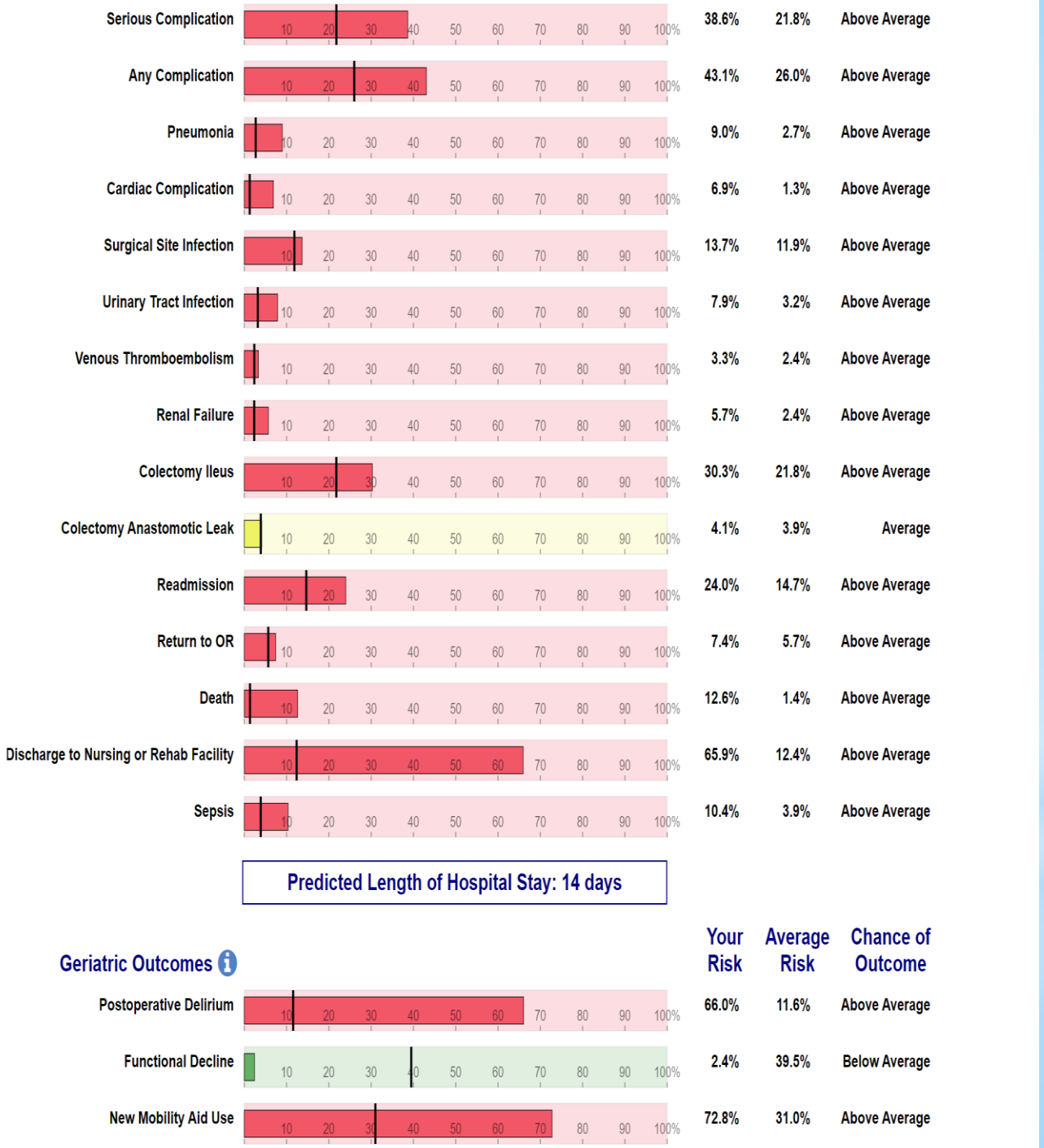
*Risk Assessment

MDT Problem List *	
Problem	Plan / Outcome
1. Vulval VIN -Premalignant lesion - risk of progression -Local irritation and contact bleeding	- Wide local excision suggested - Option 2: Local immunotherapy cream - Option 3: Best supportive management
1. Pancytopenia - probable underlying myelodysplastic disorder -Normal Haematinics	- Increased bleeding and infection risk
1. HFpEF Right heart failure with pulmonary hypertension	- Recently medication change (adding Dapagoflozin -SGLT2 inhibitor) - Hold on day of surgery and restart on discharge - Risk of fluid depletion
1. Autonomic dysfunction with Orthostatic hypotension -Regular midodrine 2.5mg	- Risk Of Orthostatic hypotension post-op
1. Atrial fibrillation -Regular anticoagulation therapy	- Hold DOAC pre-op as per guidelines (considering impaired renal function)
1. Polypharmacy with high opiate use (fentanyl patch 100mcg/hour) -Increased risk of delirium -Challenging post-op pain management	- Consider pain team review if difficult pain issues
1. Chronic kidney disease stage 4 Creat: 162 eGFR: 23 Calculated Creat clearance: 18ml/min	- Risk of Acute kidney injury - Strict fluid balance - Monitor renal function post-op - Review medication dosing with Creatinine clearance in mind -
1. Living with mild frailty (CFS: 5)	- Associated with increased risk of adverse peri-operative outcomes

*Problem list



*Shared Decision making



Summary

Suggested GP Actions

- Please upload this document to your electronic records

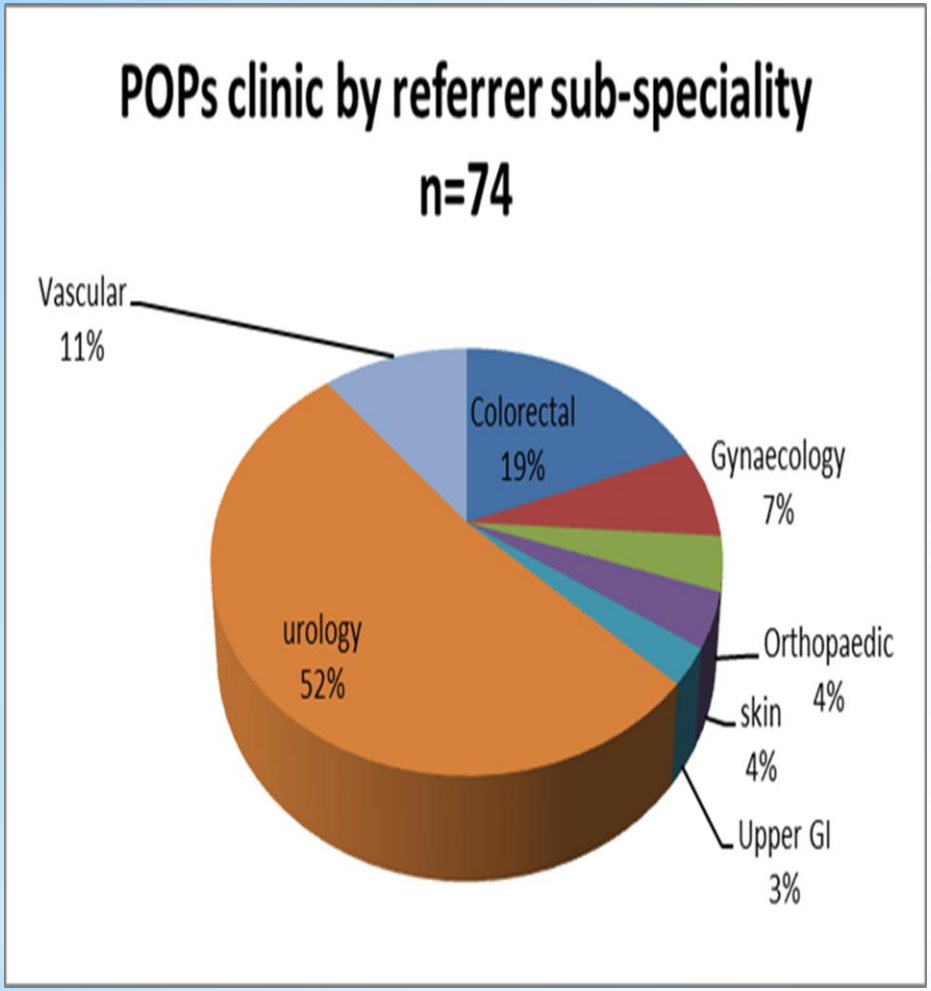
Patient Information Literature Given

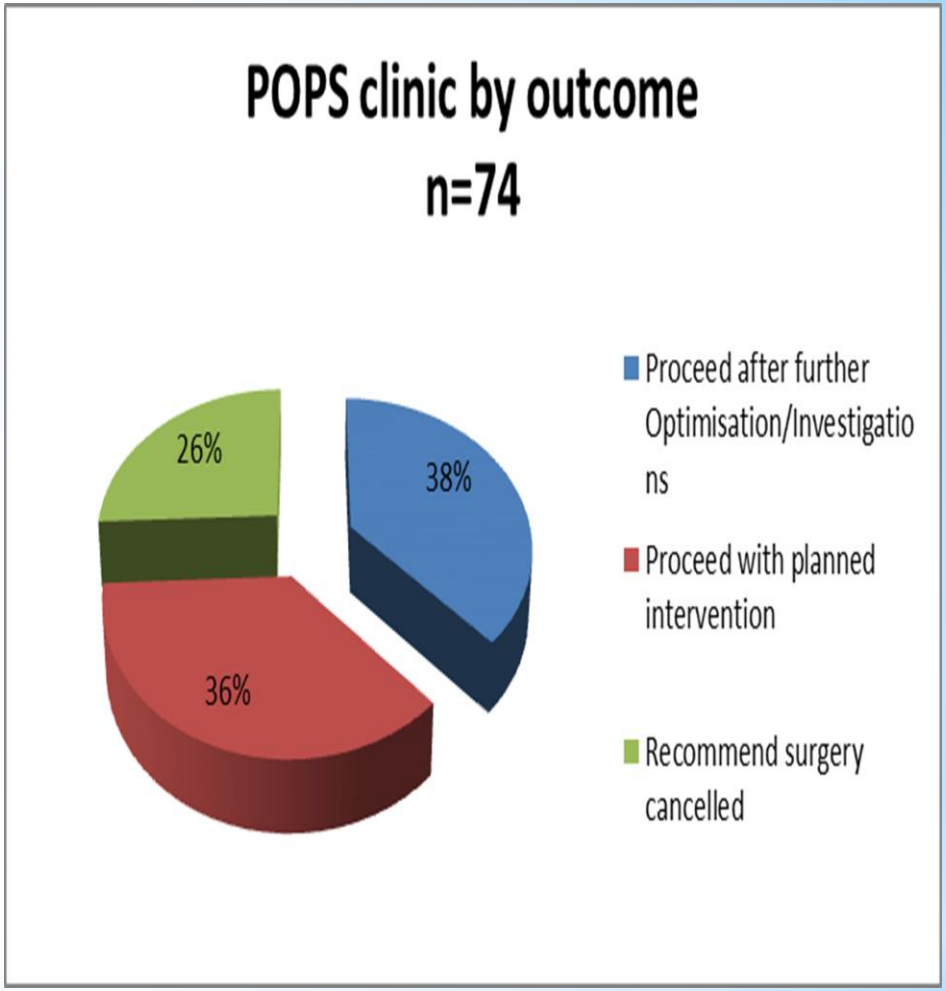
- ☐ Reducing the risk of falls in hospital
- ☐ Delirium
- ☐ A nourishing diet
- ☐ Staying active in hospital

Recommendations by POPS Team

- ☐ PROCEED WITH SURGERY
- ☐ PROCEED AFTER FURTHER OPTIMISATION / INVESTIGATIONS
- ☐ DELAY AND REFER BACK TO SURGEON FOR FURTHER DISCUSSION
- ☐ RECOMMEND SURGERY CANCELLED / PATIENT DECLINED SURGERY

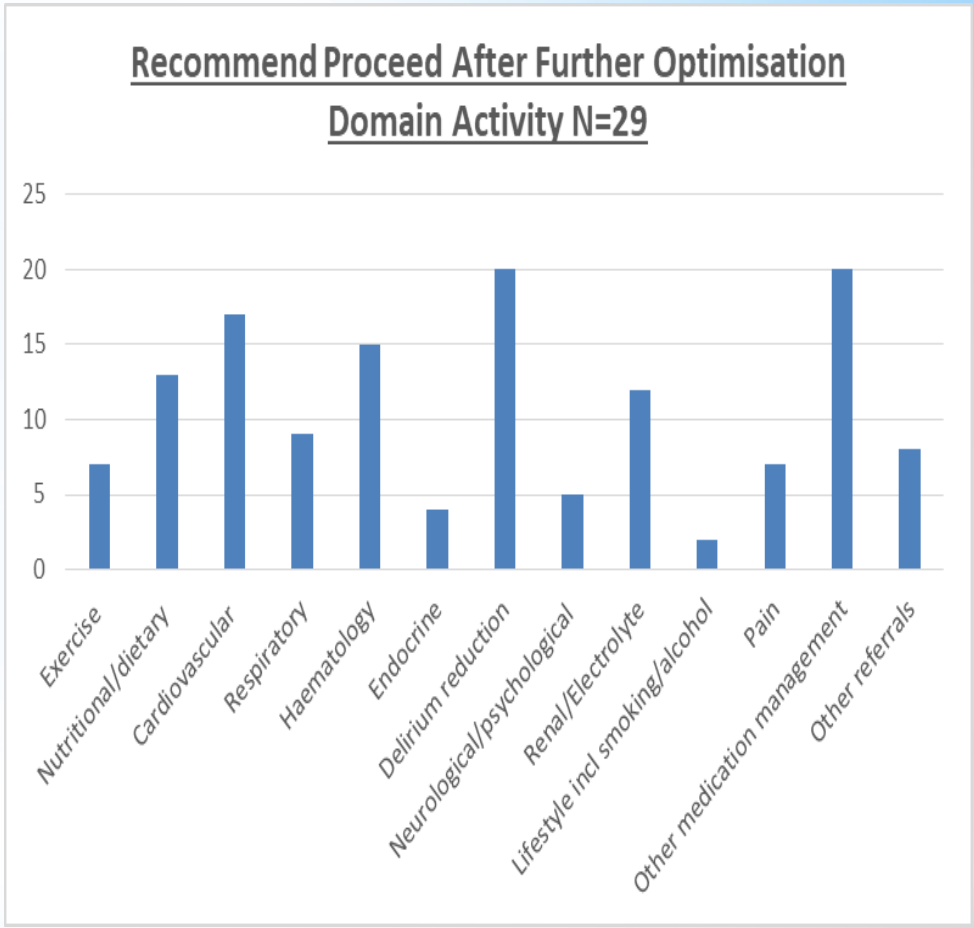
*Outcome





Audit of POPs clinic outcomes

Risk Domain	% Screening	Positive finding %
Sarcopenia	95%	48 23 (equivocal)
Malnutrition	99%	18%
Delirium	97	70
Cognitive impairment		
AMTS	84	12%
MOCA	39%	100%
Falls Risk	89%	74%
RAPT	93%	81%

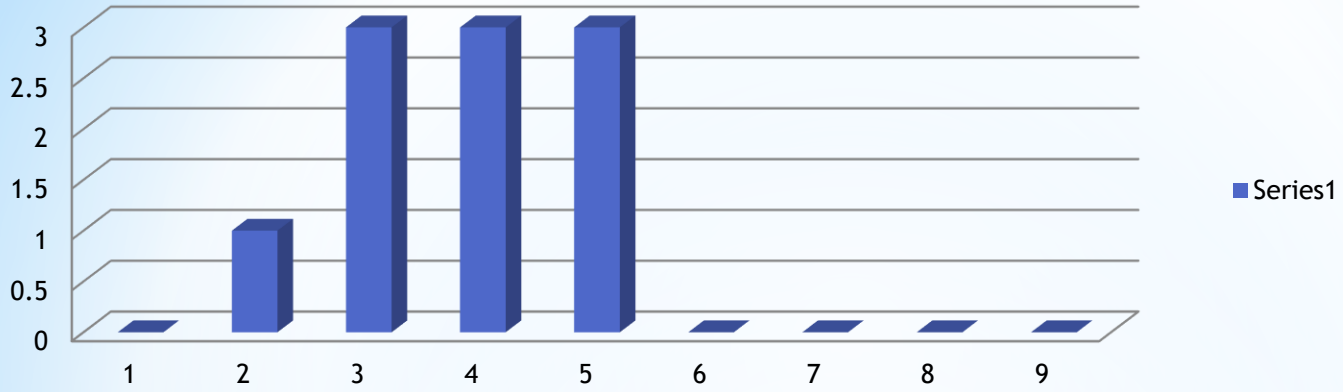


*Prevalence of modifiable risk factors

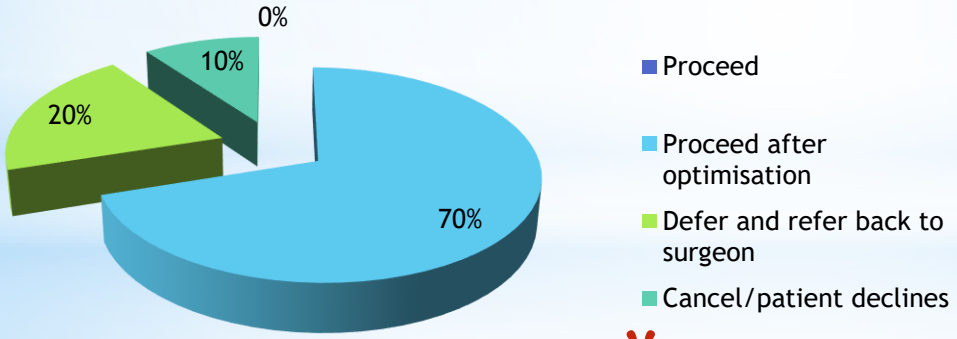
Head and Neck cancer POPS pilot

- Using grant from Wessex Cancer Alliance Oncology Personalised Care Transformation Fund 2022/23
- One session/week consultant DCC time
- September 2023 – March 2024
- Attendance at Dorset Head and Neck MDT
  - Patients over 65 focused review of electronic notes (EPR, Dorset Care Record) for any “Red flags” for significant co-morbidity and/or frailty flags
  - Frailty flags include:
    - E-frailty Index
    - Other examples: known cognitive disorder, recurrent falls and/or fragility fracture, recent admissions under Older peoples services
  - Compare with any clinical assessment available
- Outpatient clinic for further assessment

Clinical Frailty Scale
n=10



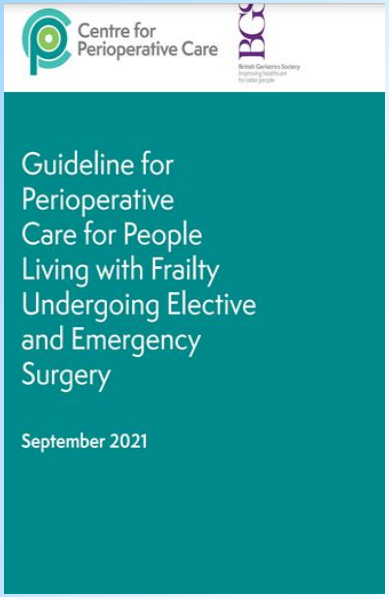
Head and Neck POPS recommended Outcomes
n=10

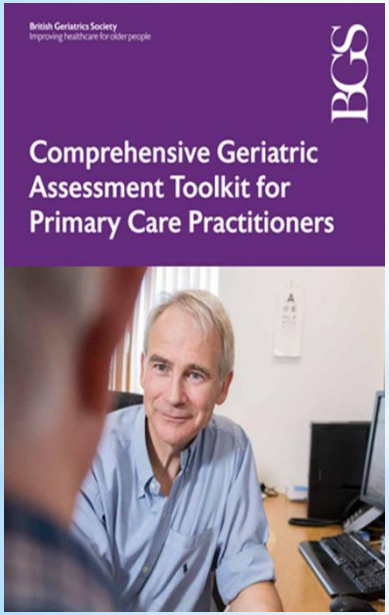


*Head and Neck Cancer POPS Clinic

Challenges

* Patient selection: more age Vs Frailty
* Time for MDT discussion
* Electronic Vs Clinical Frailty score
* When seen in patient pathway
* Interface with Peri-operative medicine
* Timely review and communication
* Access to “Prehab” Services
* No inpatient service





* Compelling case for expertise to wrap around the complex high risk older patient
* Crucial information for patient centred decision making
* Needs co-ordination across traditional care boundaries

* Summary

The POPS Team

NHS
University Hospitals Dorset
NHS Foundation Trust

Who are we?

- Perioperative Medicine for Older People having Surgery (POPS)
- Consultant Geriatrician and Advanced Care Practitioner team
- RBCH site only currently, Monday to Friday 08:00-16:00

What can we help with?

- Preoperative risk assessment and optimisation
- Lifestyle modification to improve perioperative/ long-term health outcomes
- Working closely with our surgical, anaesthetic and allied health professional colleagues
- Postoperative care
- Links to community services

5	LIVING WITH MILD FRAILTY	People who often have **more evident slowing**, and need help with **high order instrumental activities of daily living** (finances, transportation, heavy housework). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation, medications and begins to restrict light housework.
6	LIVING WITH MODERATE FRAILTY	People who need help with **all outside activities** and with **keeping house**. Inside, they often have problems with stairs and need **help with bathing** and might need minimal assistance (cuing, standby) with dressing.
7	LIVING WITH SEVERE FRAILTY	**Completely dependent for personal care**, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~6 months).
8	LIVING WITH VERY SEVERE FRAILTY	Completely dependent for personal care and approaching end of life. Typically, they could not recover even from a minor illness.
9	TERMINALLY ILL	Approaching the end of life. This category applies to people with a **life expectancy <6 months**, who are **not otherwise living with severe frailty.** (Many terminally ill people can still exercise until very close to death.)

*Clinical Frailty Scale (CFS)

How to refer:
Inter-professional referral form via EPR

Contact details:
Bleep 2450, Extension 4660
POPS office on SAU
Email: pops@uhd.nhs.uk
If urgent or out of hours please escalate to Emergency on call Medical or Surgical Teams

Who to refer?

- Surgical patients ≥65 years old *with*
- CFS* ≥5

*peter.robinson@uhd.nhs.uk