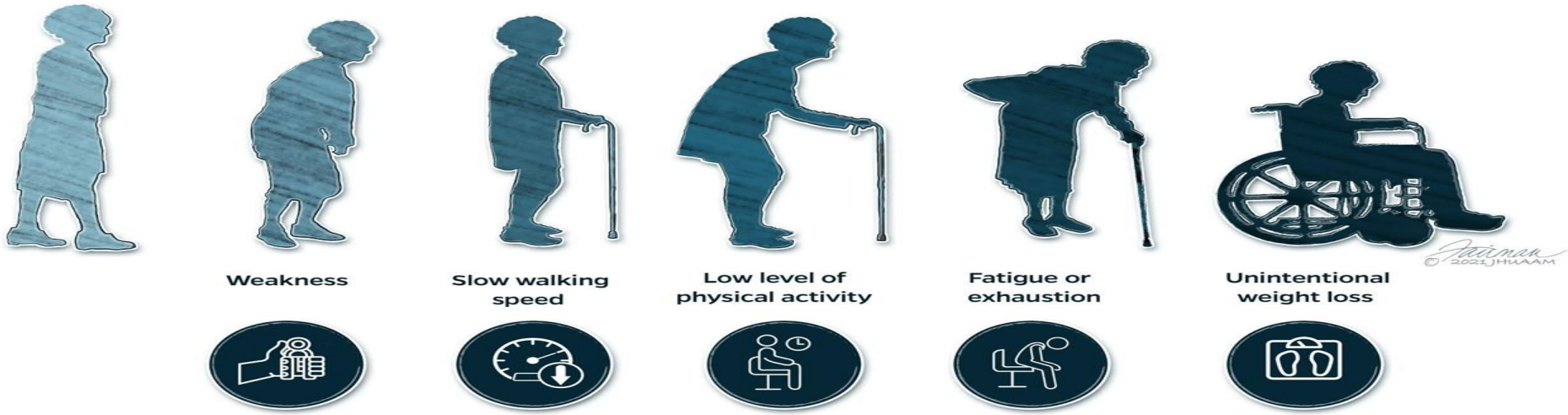


Older patients with Cancer : Focus on Frailty

Dr. Darshit A Thaker
Senior Staff Specialist, Medical Oncology
RBWH, NLCCS, CBH, MNHHS
CABOOLTURE PRIVARTE HOSPITAL
Senior Lecturer, UQ Medical School

Overview

- What is Frailty?
- Why is it important to know Frailty in older patients with cancer?
- How to measure/quantify frailty?
- What is Screening and Comprehensive Geriatric Assessment and Management (CGAM)?
- Does managing frailty help in management of older patients with cancer?
- GeriOnc program MNHHS (NLCCS/CABH)
- Shortcut of CGAM in GP consult room

Specific considerations in older people with cancer

- **Heterogeneity in health status**
  - Not adequately captured by unidimensional measures such as chronological age or performance status

- **Variable treatment tolerance**
  - Fit older patients derive similar benefits from chemotherapy as younger patients

    undertreatment → poor outcomes
  - Frail patients have increased risk of poor quality of life, functional and cognitive decline, depression, post-operative complications, chemotherapy intolerance, disease progression, hospitalisation and death

    overtreatment → poor outcome

Frailty concepts_Marije_Hamaker.pptx [Alleen-lezen] - Microsoft PowerPoint

Bestand Start Invoegen Ontwerpen Overgangen Animaties Diavoorstelling Controleren Beeld

Tekstrichting
Tekst uitlijnen
Converteren naar SmartArt
Alinea

Schikken
Snelle stijlen
Opvullen van vorm
Omtrek van vorm
Vormeffecten
Tekenen

Zoeken
Vervangen
Selecteren
Bewerken

AGEING MAKES US UNIQUE

Truus Groen 100x100

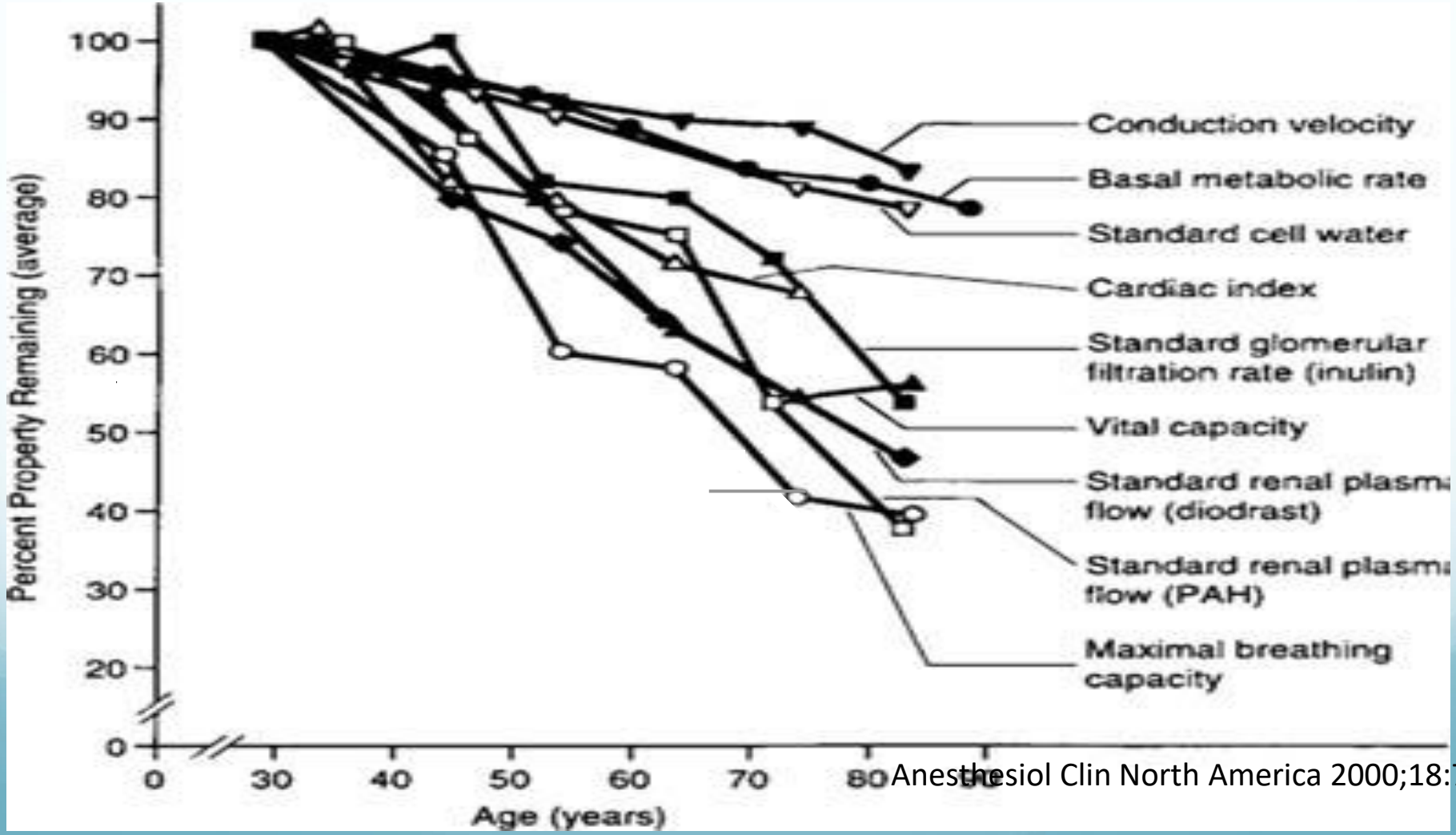
s toe te voegen

134%

What is Frailty?

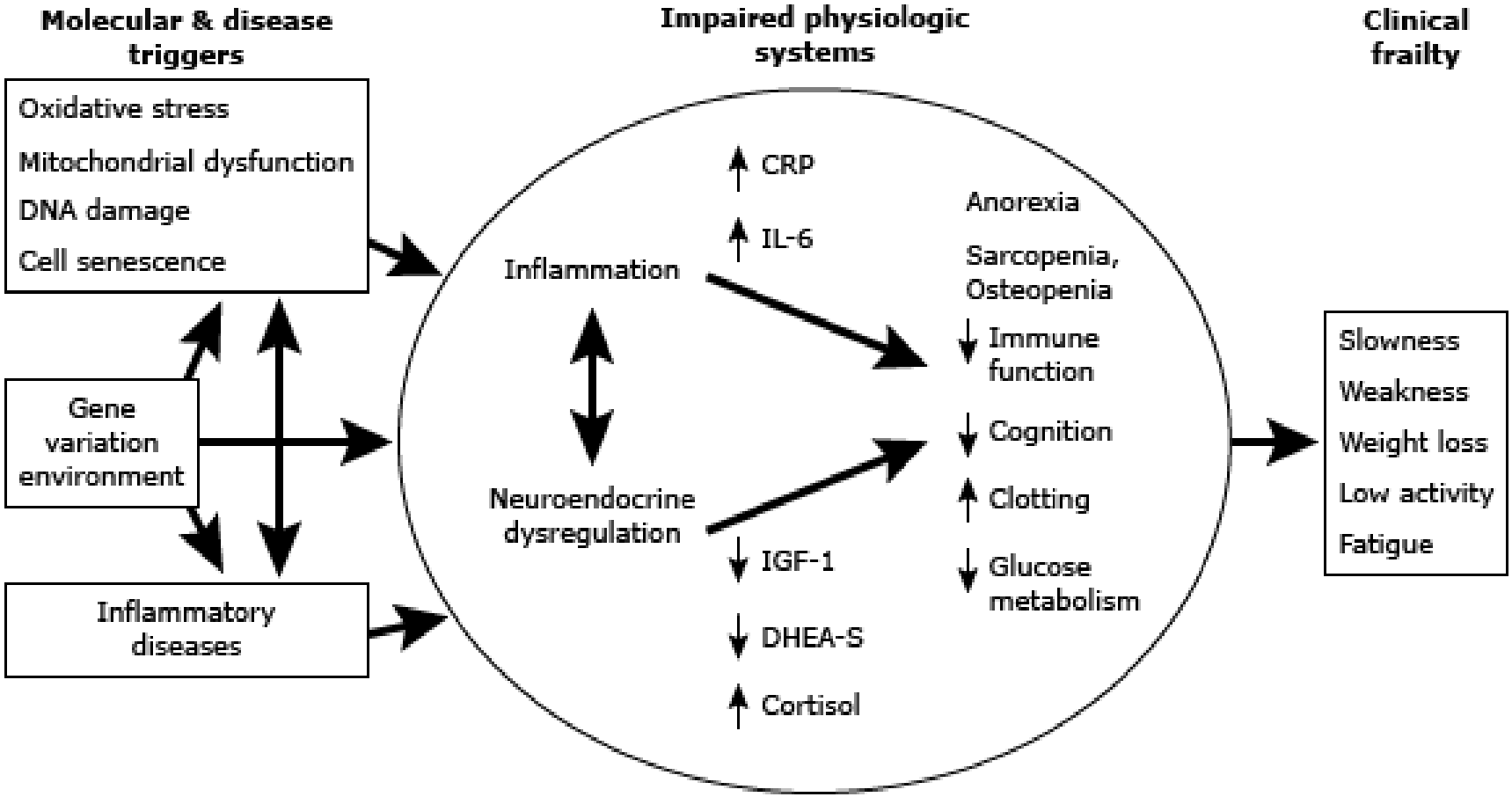
- Frailty is a state of vulnerability to stressors that leads to adverse health outcomes
- Frailty is a complex, multidimensional, and cyclical state of diminished physiologic reserve that results in decrease resilience and adaptive capacity and increase vulnerability to stressors.
- Old age itself does not define frailty.
- Many older adults remain vigorous, despite advanced age, while others have gradual functional decline in the absence of apparent disease states.

Physiological aging

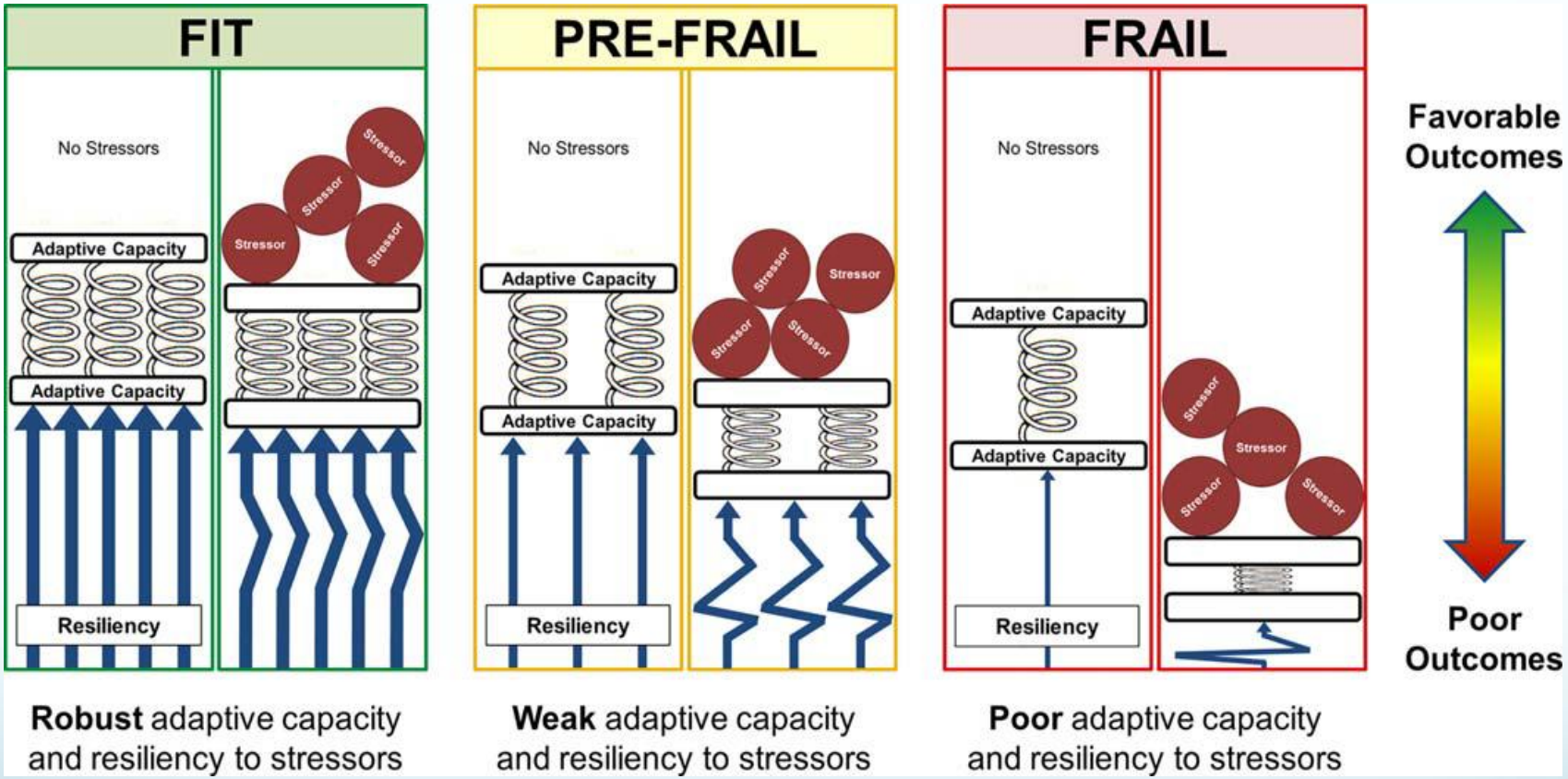


Anesthesiol Clin North America 2000;18:74

Pathophysiology of Frailty



A Model for Defining Frailty

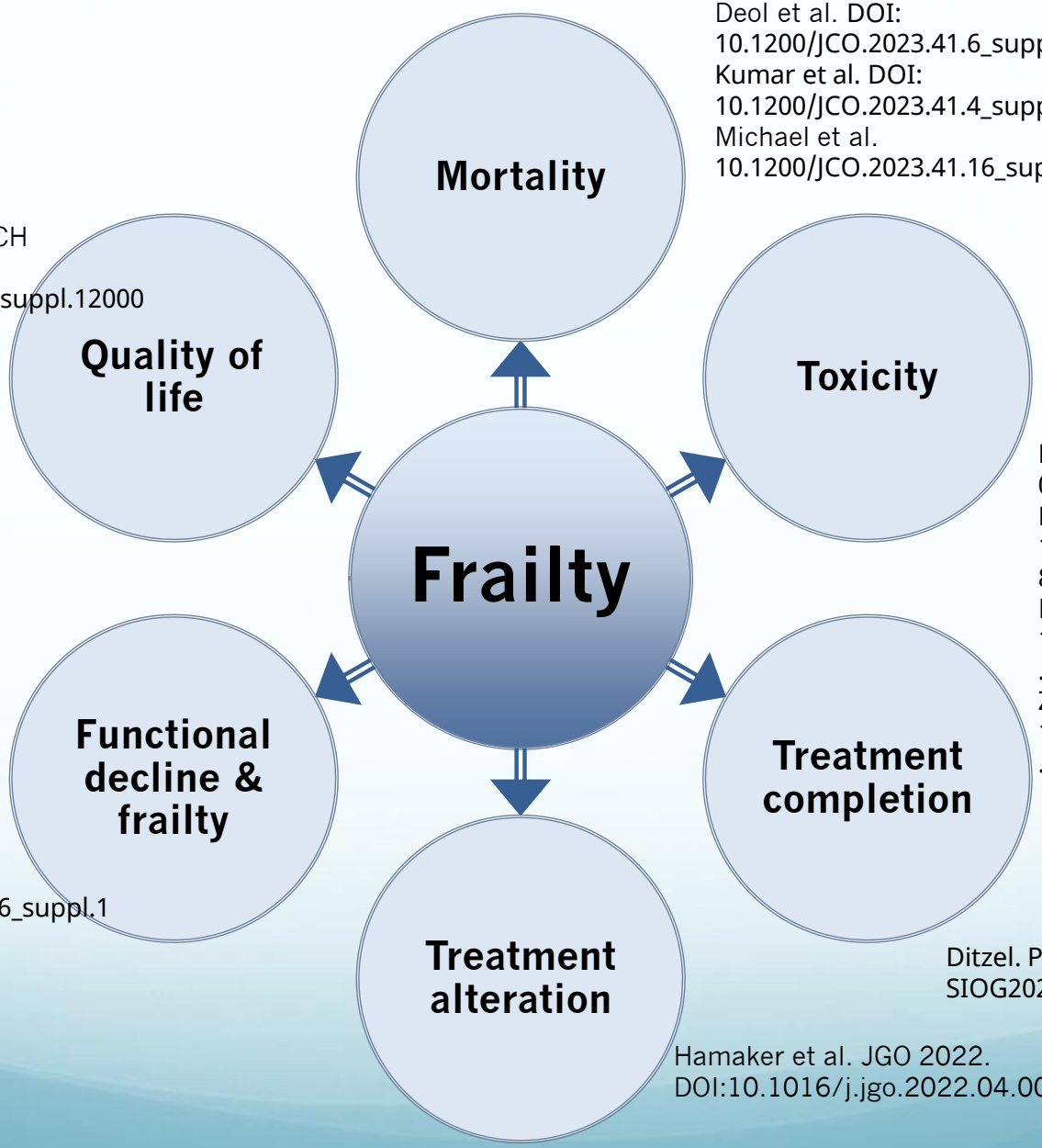


Fit patients have robust adaptive capacity and resiliency to stressors, which leads to more favorable outcomes.
Pre-frail patients have weakened adaptive capacity and resiliency to stressors.
Frail patients have poor adaptive capacity and resiliency to stressors.
Pre-frail and frail patients are at greater risk of poor outcomes following surgery, chemotherapy, and radiotherapy.
Figure adapted from: Robinson TN, Walston JD, Brummel NE, et al. Frailty for surgeons: review of a National Institute on Aging conference on frailty for specialists. J Am Coll Surg. 2015;221:1083-1092

Why is it important to know Frailty in cancer patients?

- Frailty is of particular importance in cancer.
- The elderly make up a significant proportion of patients diagnosed with cancer.
- Prevalence of frailty is around 43% in community-dwellers aged 65 and older diagnosed with cancer
- Cancer itself as well as the therapies offered can be significant additional stressors that challenge patient's physiologic reserve.

Frailty Outcomes



Deol et al. DOI: 10.1200/JCO.2023.41.6_suppl.71
Kumar et al. DOI: 10.1200/JCO.2023.41.4_suppl.699
Michael et al. 10.1200/JCO.2023.41.16_suppl.12009

Kenis et al. G-oncoCOACH DOI: 10.1200/JCO.2023.41.16_suppl.12000

Faour et al. DOI: 10.1200/JCO.2023.41.16_suppl.12053

Depoorter et al. SIOG 2022-0116
Khajoueinejad et al. DOI: 10.1200/JCO.2023.41.4_suppl.810
Klepin et al. DOI: 10.1200/JCO.2023.41.16_suppl.12010
Zhu et al. DOI: 10.1200/JCO.2023.41.16_suppl.e15642

Lee et al. DOI: 10.1200/JCO.2023.41.16_suppl.12040

Ditzel. PROGNOSIS-G8 Study. SIOG2022-0163

Hamaker et al. JGO 2022. DOI:10.1016/j.jgo.2022.04.008

J Frailty Aging 2023;in press
Published online

Original Research

Frailty Index, Not Age, Predicts Treatment Outcomes and Adverse Events for Older Adults with Cancer

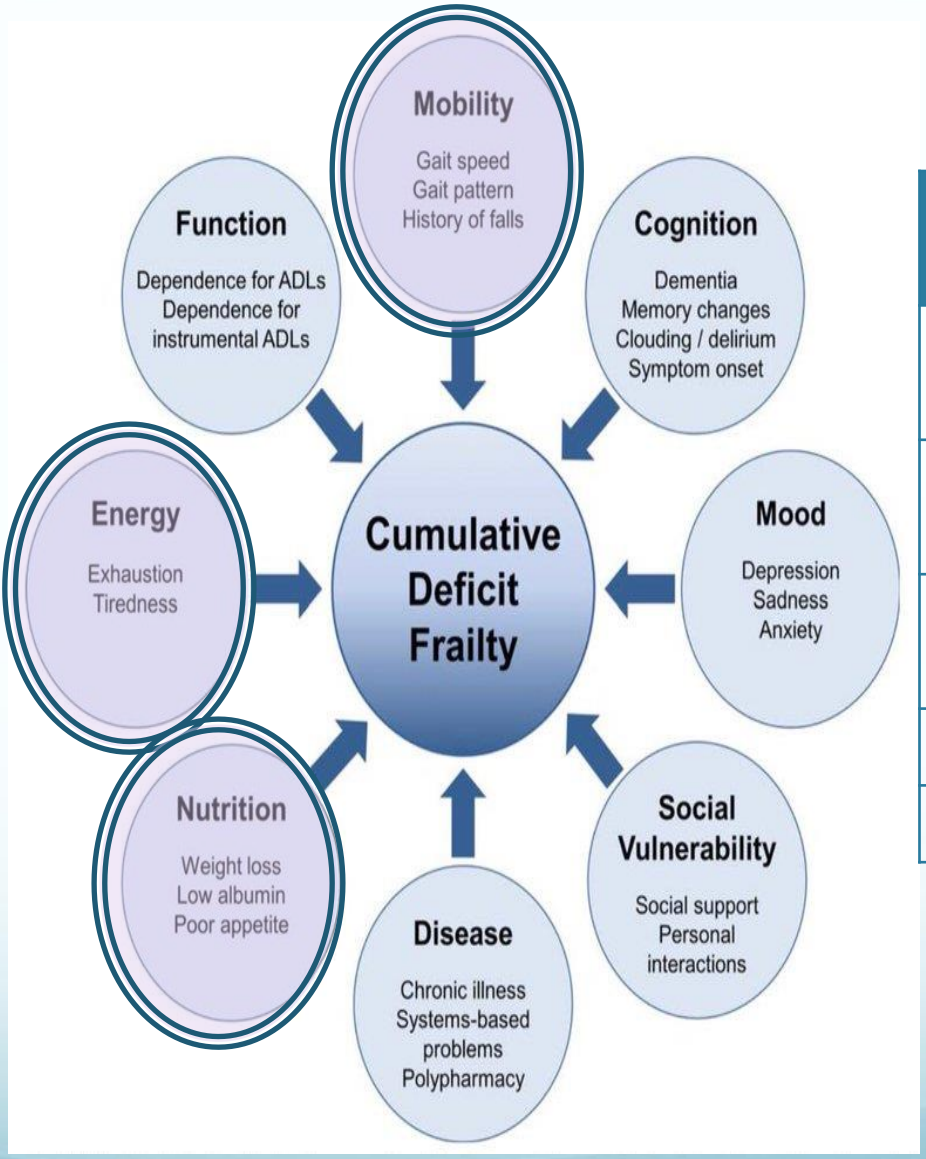
J. Fletcher[1-3], N. Reid[3], R.E. Hubbard[1-3], R. Berry[1], M. Weston[1], E. Walpole[1,2], R. Kimberley[1], D.A. Thaker[2,4], R. Ladwa[1,2]

1. Princess Alexandra Hospital, 199 Ipswich Road, Woolloongabba, Queensland 4102, Australia; 2. Faculty of Medicine, The University of Queensland. 199 Ipswich Road, Woolloongabba, Queensland 4102, Australia; 3. Centre for Health Services Research, Faculty of Medicine, The University of Queensland, 199 Ipswich Road, Woolloongabba, QLD 4102, Australia; 4. Metro North Hospital and Health Service, Queensland, Australia.

- Retrospective cohort study. Adults aged over 65 years with a solid malignancy, for consideration of systemic therapy, and had baseline frailty assessment between January 2019 and July 2021.
- Frailty had been prospectively assessed with a 58-item FI derived from Comprehensive Geriatric Assessment.
- Primary outcome: treatment completion, and secondary outcomes: treatment-related toxicity or unplanned hospital admissions, and survival outcomes.
- Univariate and multivariable regression analyses were conducted to test the association between treatment outcomes and baseline FI.
- The median FI was 0.24 (0.15-0.31) and 43% were frail (FI>0.25).
- 28% of ECOG 0-1 were frail.
- In multivariable regression analyses, each 0.10 increase in FI was associated with an increased likelihood of not completing or not receiving treatment (OR 1.37, 95% CI 1.02-1.84; p=.04), treatment-related toxicity (OR 1.60, 95% CI 1.14-2.23; p<.01) and unplanned hospital admissions (OR 1.61; 95% CI 1.16-2.25; p<.01).
- Frail patients had increased mortality (adjusted HR 2.81, 95% CI 1.42- 5.56; p<.01).
- Age did not predict treatment completion, toxicities, or survival.

Parameters to measure Frailty

Frailty Index
Accumulation of deficits
Multidimensional
Comprehensive assessment
No predefined criteria
Continuous



Frailty Phenotype
Pre-disability syndrome
Symptoms, signs
Objective measures
Criteria-based
Categorical

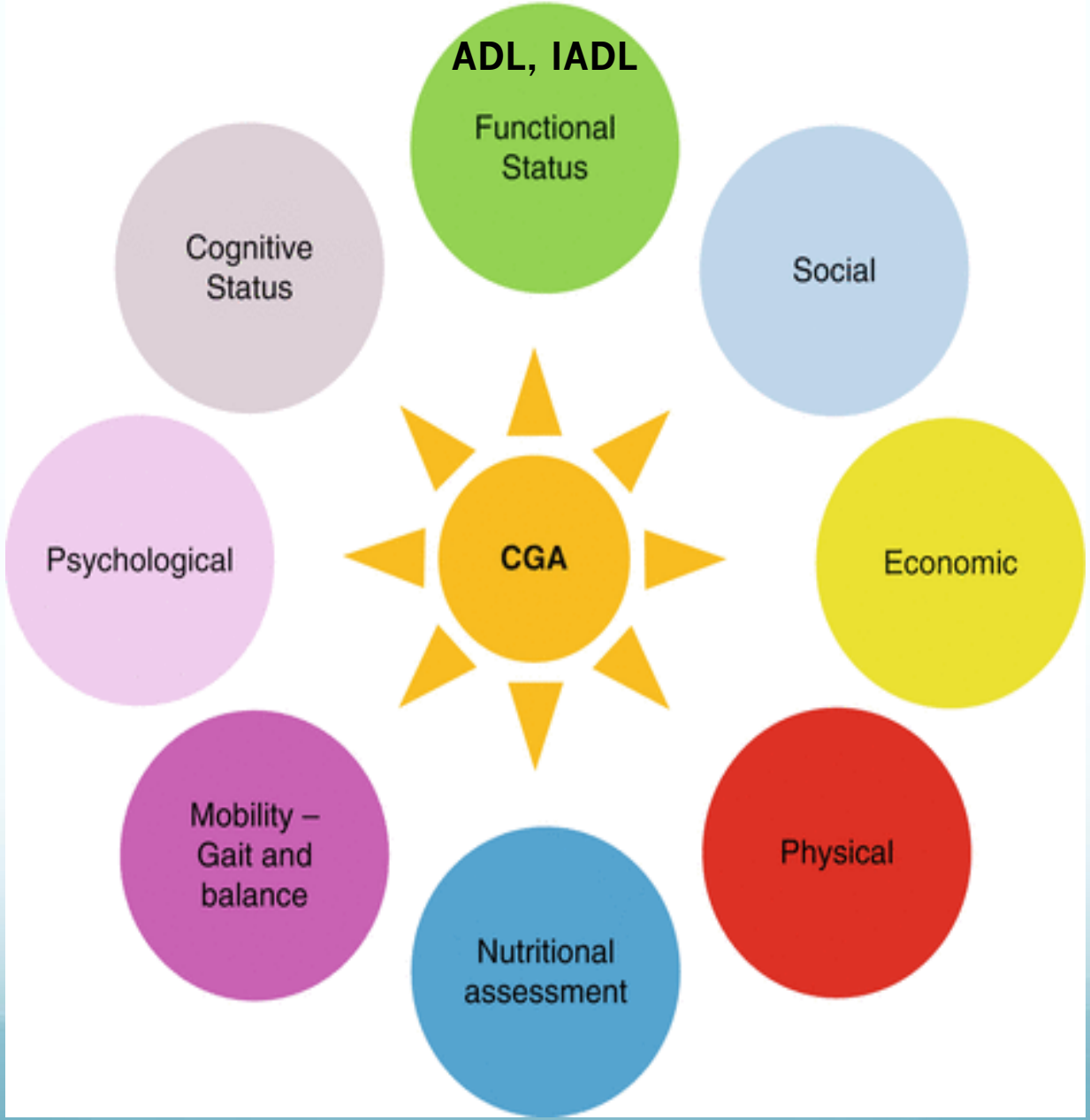
1. Adapted from Ethun CG et al. Frailty and cancer: Implications for oncology surgery, medical oncology, and radiation oncology. CA: A Cancer Journal for Clinicians. 2017;67(5):362-377. doi:10.3322/caac.21406

G8 Screening Tool

	Items	Possible answers (score)
A	Has food intake declined over the past 3 months due to loss of appetite, digestive problems, chewing or swallowing difficulties?	0 : severe decrease in food intake
		1 : moderate decrease in food intake
		2 : no decrease in food intake
B	Weight loss during the last 3 months	0 : weight loss > 3 kg
		1 : does not know
		2 : weight loss between 1 and 3 kgs
		3 : no weight loss
C	Mobility	0 : bed or chair bound
		1 : able to get out of bed/chair but does not go out
		2 : goes out
E	Neuropsychological problems	0 : severe dementia or depression
		1 : mild dementia or depression
		2 : no psychological problems
F	Body Mass Index (BMI (weight in kg) / (height in m^2)	0 : BMI < 19
		1 : BMI = 19 to BMI < 21
		2 : BMI = 21 to BMI < 23
		3 : BMI = 23 and > 23
H	Takes more than 3 medications per day	0 : yes
		1 : no
P	In comparison with other people of the same age, how does the patient consider his/her health status?	0 : not as good
		0.5 : does not know
		1 : as good
		2 : better
	Age	0 : >85
		1 : 80-85
		2 : <80
	TOTAL SCORE	**0 – 17**

- To distinguish fit versus Frail older cancer patients
- The score ranges from 17 (not at all impaired) to 0 (heavily impaired). A score lower or equal to 14 requires CGA.
- It is most often performed by a nurse or a clinical associate.
- It takes less than 10 minutes to complete this questionnaire (median: 4 min.)

Comprehensive Geriatric Assessment



Mobility and Balance: TUG

- The Timed up and Go test evaluates gait and balance.
- The physician asks the patient to get up from an armchair, walk a short distance (three meters), turn around and then return and sit down.
- Physician observes patient's movements and time the whole activity. Less than 12 secs is normal. >20 secs is considered major deficiency.
- TUG is matched with number of falls in last six months and use of walking aid.

ADL: KATZ

- This tool is a measure of functional basic activities of daily living in elderly patients.
- It explores six basic functions of everyday life: bathing, dressing, toileting, continence, transferring and feeding.
- The score ranges from 6 (patient independent) to 0 (patient very dependent).
- This questionnaire is usually administered by a nurse (with help of the family if necessary) and time to fill in is between 5 and 10 minutes.

IADL: Lawton

- A measure of more elaborate functional activities in elderly patient.
- It includes eight items: ability to use the phone, shopping, food preparation, housekeeping, laundry, mode of transportation, responsibility for own medications, and ability to handle finances.
- The score ranges from 8 (high function, independent) to 0 (low function, dependent) for women and from 5 to 0 for men (because 3 questions concern might be irrelevant: food preparation, housekeeping, laundry).
- This questionnaire is usually administered by a nurse (with help of the family if necessary) and time to fill it is below 10 min.

Cognition: MMSE

- The MMSE tool includes 30 items encompassing orientation, registration, attention and calculation, recall and language, last item asks the patient to copy a complex polygon figure.

- A score less than or equal to 23 is indicative of cognitive impairment. This questionnaire is usually administered by a nurse or physician and it takes 5 to 10 minutes to fill it in.

Nutrition: MST

- The Malnutrition Screening Tool (MST) is a two question screening tool.
- It gives a score out of five to show the level of malnutrition risk.
- Question 1: Have you lost weight in last six months without trying? No: 0, Yes: <5kg 1, 5-10kg 2, 10-15kg 3, >15kg 4.
- Question 2: Have you been eating poorly in last six months because of a decreased appetite? No: 0, Yes: 1
- • A score of 0 – 1: Low risk of malnutrition.
- • A score of 2 : Moderate risk of malnutrition.
- • A score of 3 – 5 High risk of malnutrition.

MST is matched up with BMI to assess patient's nutritional status

Mood: CESD

- The Centre for Epidemiological Studies-Depression (CES-D), is a 20-item measure that asks patient to rate how often over the past week they experienced symptoms associated with depression, such as restless sleep, poor appetite, and feeling lonely.
- Response options range from 0 to 3 for each item (0 = Rarely or None of the Time, 1 = Some or Little of the Time, 2 = Moderately or Much of the time, 3 = Most or Almost All the Time). Scores range from 0 to 60, with high scores indicating greater depressive symptoms.
- Cut-off scores (16 or greater) identify individuals at risk for clinical depression, with good sensitivity and specificity and high internal consistency.
- GDS-15 shorter version to assess low mood/depression in older patients with cancer. Can be used in the clinic while seeing patient.

MOS Social Support Survey

- Measures the availability of support, if needed, in several domains.
- It is a 19-item multidimensional, self-administered instrument developed to assess outcome of health care for patients with prevalent and treatable chronic conditions.

Scale (# of items)	Definition	Item numbers
Subscales		
Emotional/informational support (8)	Someone to confide in, to listen to you, and to provide advice and information	2, 3, 7, 8, 12, 15, 16, 18
Tangible support (4)	Some to help with daily chores, prepare meals, or drive you if needed	1, 4, 11, 14
Affectionate support (3)	Someone to show you love and affection, hug you, and make you feel wanted	5, 9, 19
Positive social interaction (3)	Someone to have a good time, do enjoyable things with, get together with for relaxation	6, 10, 17
Summary score		
Overall social support (19)	Availability of people to provide support if needed such as emotional support and tangible help	1-19

Charlson Comorbidity Index

- List of all the current comorbidities

- Any other major or minor health related problems to be documented

CGA-FI

Frailty index (FI) <7 mild frailty, 7-13 moderate frailty, >13 severe frailty

(Operationalizing a Frailty Index from a Standardized Comprehensive Geriatric Assessment David M. Jones, MSc, MD, Xiaowei Song, PhD and Kenneth Rockwood, MD)

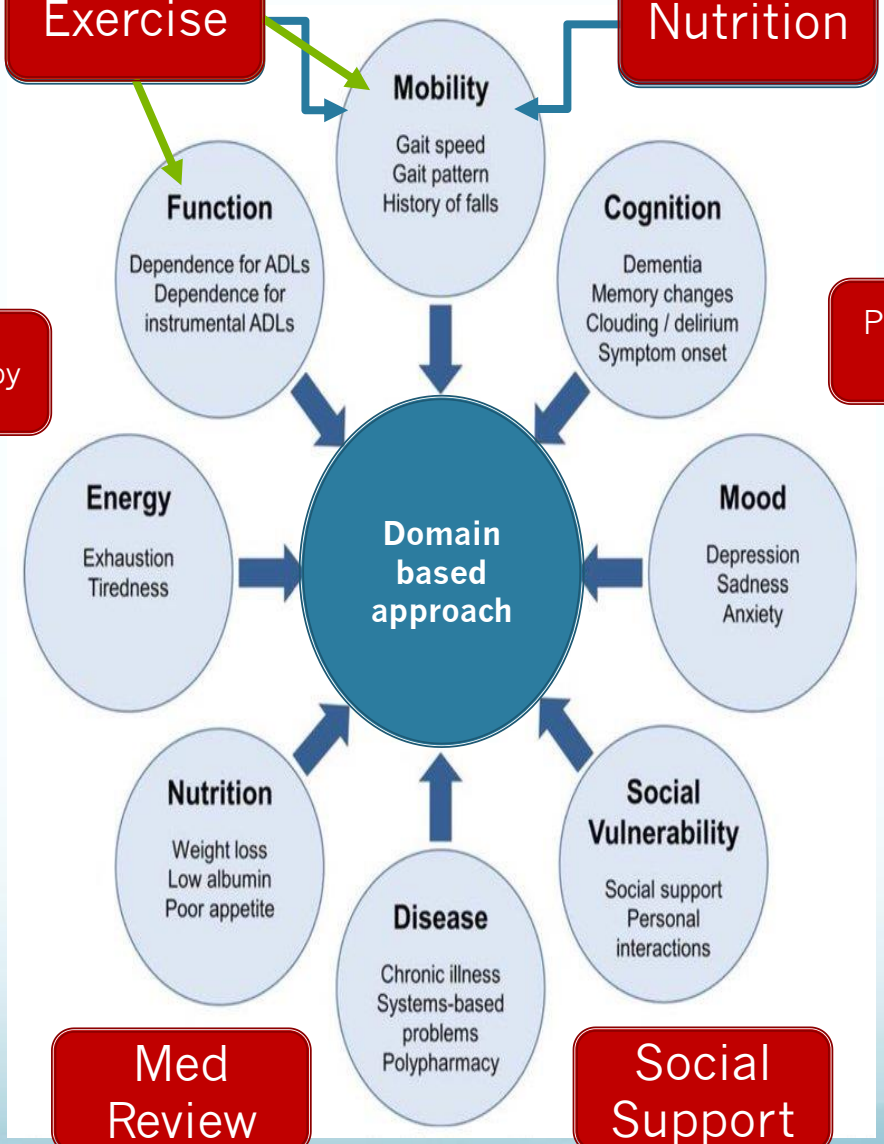
DOMAIN	Tool	No problem	Minor problem	Major problem
		SCORE = 0	SCORE = 1	SCORE =2
Cognitive	SMMSE	≥24	18-23	≤17
Mood	CES-D	<15	15-20	≥24
Communication	Most common score for hearing, vision and speech combined	No problem	Minor problem	Major problem
Mobility	TUG	<13.5secs	13.5-29secs	≥30
Balance	# falls 6/12	0	1	>1
Bowel	Self/carer report	No problem	Minor problem	Major problem
Bladder	Self/carer report	No problem	Minor problem	Major problem
iADL	Katz	6	N/A	<6
ADL	Aust Modified Lawton	>23	≤23	N/A
Nutrition	BMI	≥23	<23	N/A
	MST	<2	≥2	N/A
Social	MOSS SS SF tangible	>8	≤8	N/A
	MOSS SS SF emotional	>8	≤8	N/A
comorbidities	+ count of comorbidities divided by 2.			

Rockwood FI

(Clegg A, Bates C, Young J, et al. Development and validation of an electronic frailty index using routine primary care electronic health record data. *Age Ageing.* 2016;**45**(3):353–360.)

- More Granular and detailed assessment of Frailty
- Minimum 47 assessment outcomes of CGA are needed to calculate
- Formula: number of deficits the patient has/total number of variables assessed
- The frailty index is a continuous measure between zero (least frail) and one (most frail)
- 0 to 0.12: No frailty; >0.12 to 0.24: mild frailty; >0.24 to 0.36: moderate frailty; and. >0.36 represents patients with severe frailty.
- Current QOOL database calculates it automatically

- How to manage Frailty/Deficits?
- Does frailty management help improve management of older patients with cancer?

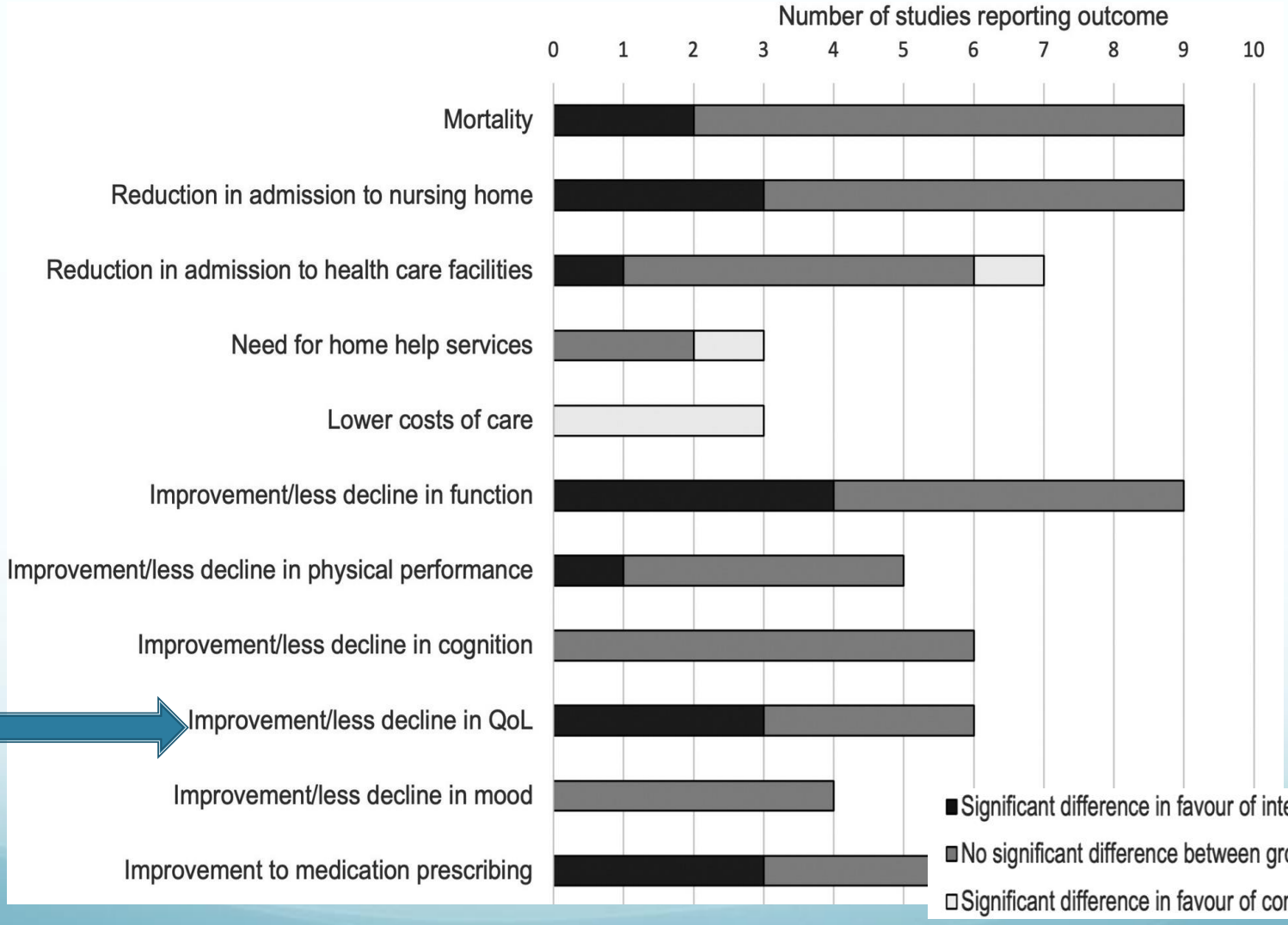


1. Adapted from Ethun CG et al. Frailty and cancer: Implications for oncology surgery, medical oncology, and radiation oncology. CA: A Cancer Journal for

Domain	Assessment Tools	Evidence	Interventions
Functional status	ADLs (ie self cares) eg. Katz ADLs IADLs (ie, managing cooking, driving) eg. Lawton IADLs	Association with chemotherapy toxicity, hospital admissions, functional decline, and mortality.	Mobility aids Physiotherapy Occupational therapy Community support
Objective Physical Performance	4m gait speed, TUG; SPPB; grip strength; sarcopenia	Prediction of mortality, treatment-related complications, and functional decline.	Structured exercise Assistive devices
Falls	Number of falls within last 6 months	Related to chemotherapy toxicity, postoperative complications, and functional decline.	Falls prevention program
Cognitive function	MMSE, MoCA, Mini-cog, and BOMC	Assessment of capacity for consent or treatment adherence and cognitive decline with treatment. Assoc. w poorer survival, chemo toxicity, and delirium.	Support during treatment Delirium prevention program Treatment reminders
Mood (depression)	GDS, HADs, and PHQ2/9	Assessment of psychologic adjustment to treatment. Association with postoperative complications, treatment tolerance, functional decline, and mortality.	CBT Medical therapy Counselling
Nutritional status	MNA, BMI, and weight loss combined.	Association with mortality, likelihood of treatment completion, and healthcare consumption.	Dietary counselling
Comorbidity	CIRS-G, CCI, and OARS comorbidity	Assessment of competing causes of mortality, survival, treatment tolerance, and hospital admissions.	Referral to organ specialist and general practitioner
Polypharmacy	List of medications, STOPP-START, and Beers criteria	Post-operative complications, chemotherapy toxicity, functional decline, and mortality.	Geriatrician or clinical pharmacist review
Social support	Focused questions regarding social support, services, etc	Association with cancer progression, chemotherapy toxicity, poorer survival, and treatment adherence.	Home nursing Transportation Social supports + groups

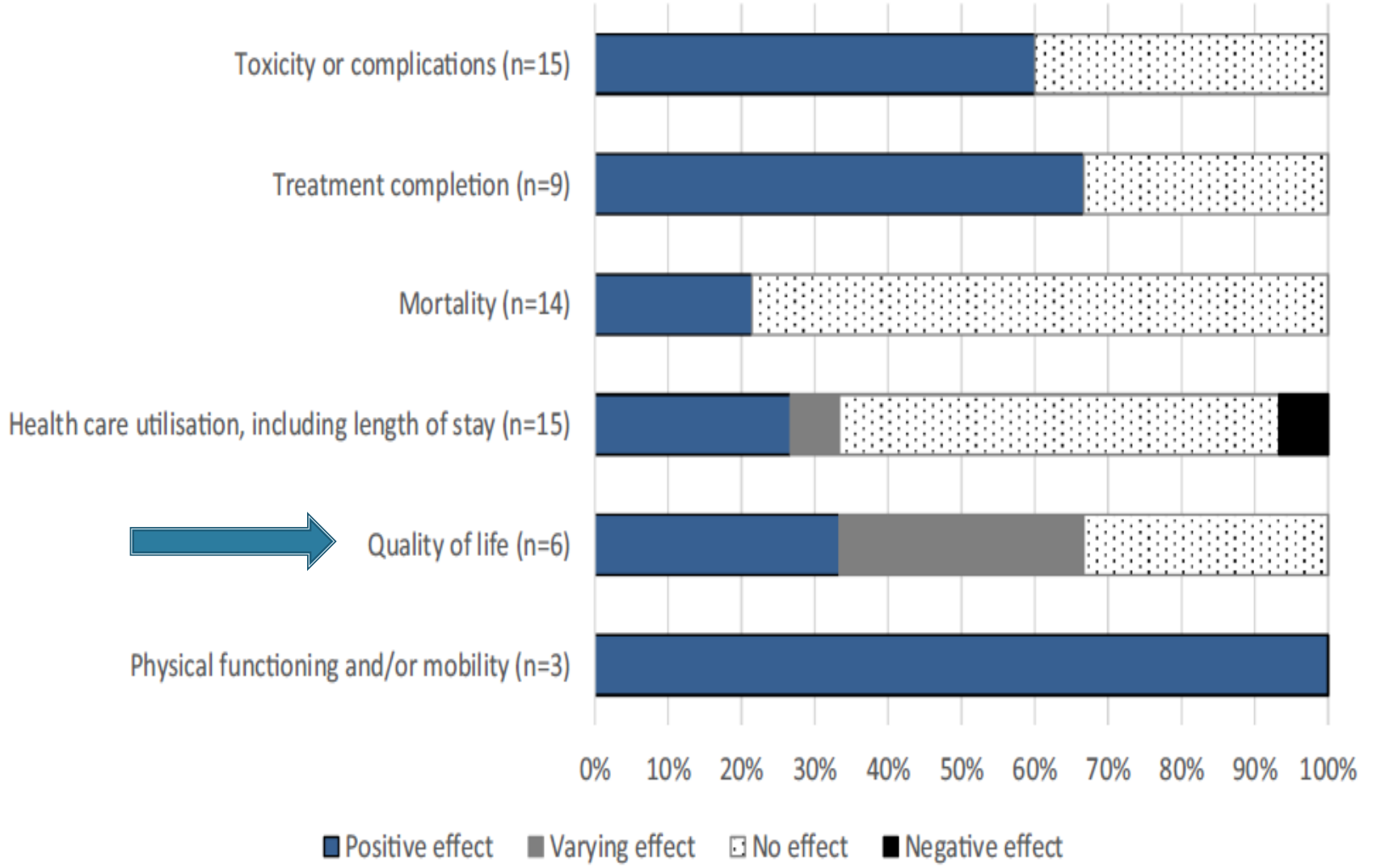
Rostoft S. et al. Geriatric Assessment and Management in Cancer. *Journal of Clinical Oncology*. 2021;39(19):2058-2067. doi:10.1200/jco.21.00089

Frailty Interventions



1. King SJ, et al. Interventions for frail older inpatients: A systematic review of frailty measures and reported outcomes in randomised controlled trials.

Now have evidence that CGAM can influence outcomes



1. Hamaker M et al. Geriatric assessment in the management of older patients with cancer – A systematic review (update). Journal of Geriatric Oncology. 2022;doi:10.1016/j.jgo.2022.04.008

GA Outcomes

	INTEGERATE	GAIN	GAP 70+	GERICO	Ørum	5C
Site, Number	Eastern Health (AUS) N=154	City of Hope (US) N=613	Cluster RCT, USA N=718	Denmark N=142	Denmark N=301	Uni Toronto (Canada) N=350
Trial population	≥70, solid ca incl DLBCL, starting chemo 80% G8≤14, 40% CFS≥4	≥65, starting chemo	≥70, adv cancer (stage 3-4), starting chemo, ≥ 1 GA domain impairment	≥70, colorectal ca, vulnerable G8 (≤14)	≥70, lung/HN/GI, prior to Tx decision, vulnerable/frail on CGA	≥70, starting chemo
Study groups	Geriatrician co-mx vs no GA	GA-driven intervention vs usual care GA	GA vs no GA	CGA vs no CGA	Tailored follow up vs baseline CGA	CGA plus geriatric follow up vs no GA
Interventionalist	Geriatrician	Geriatrician NP-led MDT	Oncologist (tailored recommendations)	Geriatrician	Geriatric MDT (geriatrician + nurse)	Geriatrician + regular nurse f/up
Timing cf chemo	Parallel	Within 2 weeks	Before	Before/days after	Before Tx decision	Most post Tx
Significant outcomes	**Better HRQOL (ELFI)** **↓unplanned hospitalisation** **↓discontinuation of planned treatment**	**↓Gd3-5 chemo tox (51% vs 60%)** **↑AHD completion**	**↓Gd3-5 chemo tox (51% v 71%)** **↓C1 chemotherapy (50% v 35%)** **↓falls in 3mo (12% v 21%)**	**↑ Tx completion (45% v 28%)** **↑QOL (mobility and burden of disease subscales)**	**Primary outcome Treatment adherence NS**	**Primary outcome EORTC QOL NS** **Gd3-5 toxicity NS (35.3v40.1%)**
Other outcomes	More benefit in middle range functional scores? No change in	No change in ED visit, chemo-related hospitalisations or ALOS	No change in survival or QOL	↓Gd3-5 chemo tox (28% v 39%) NS No change in hospitalisations, global QOL, or	↑ Tx completion (61% v 52%) NS ↓hospitalisation (47% v 55%) NS No change in	No impact global QOL, nor IADL Cost effective in curative context

North Lakes Cancer Care Centre
Geriatric Service Model of Care

- A AH/Nurse led model of care for older patients with cancer at North Lakes Cancer Care Centre and Caboolture Hospital (RBWH)
- All patients >60yrs old get G8 screening assessment
- Patient with who had G8 ≤14 referred for a Comprehensive Geriatric Assessment (CGA)
- Weekly case conference and referrals to AH as per CGA outcome

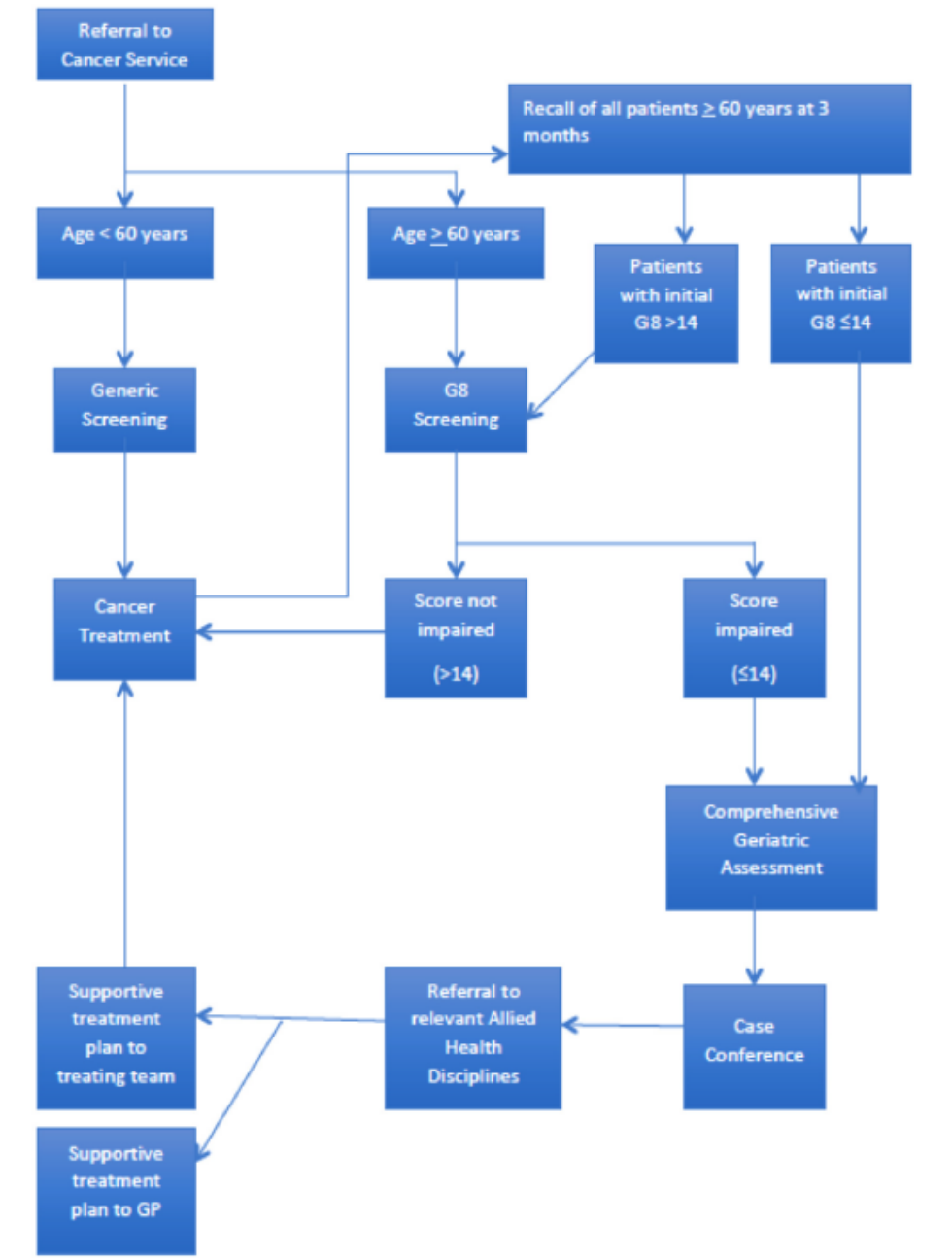


Fig. 1. The process chart of Geriatric Oncology service model.

Comprehensive Geriatric Assessment (CGA) Summary

North Lakes & Surrounds Health Partnership Precinct

UR number
First name
Last name
Date of birth 01/05/1946
Sex Male

Date 01/07/2024	Assessment Tool		Score	Comment	Referred to
Functional Status (Scored at highest level of function with aids where used.)	TUG - Timed Up and Go	⚠	17.06	moderate risk ≥11.2<20 secs	Accepted Physiotherapist
	Unstable on turning	⚠	Yes		
	Walking aid used		No		
	Falls in last 6 months		No		
	Katz ADL		6	6 = independent	
	Bowel continence aids		No	no problem	
	Bladder continence aids		No	no problem	
	Australian Modified Lawton iADL		25	>23 independent	
Cognition	SMMSE		27	24-30 good cognition	
Fatigue	FACIT-F Functional Assessment of Chronic Illness Therapy - Fatigue		29	26-39 somewhat affected by fatigue	Accepted Occupational Therapist
Nutrition	MST Malnutrition Screening Tool	⚠	2	2-3 at risk of malnutrition	Accepted Dietitian
	Body Mass Index		24.94	≥23kg/m² acceptable weight	
Co-morbidity	Charlson Co-morbidity Index Other health problems		Count = 4 Count = 2		
Medications	Number of medications		4	<5 no issue	
	Difficulty taking medications		No		
	Administration aid		Yes	Dosette	
Social Support	MOS-SF Emotional Support		15	>12 good support	
	MOS-SF Tangible support		20	>12 good support	
Mental Health	CES-D Centre for Epidemiological Studies - Depression		3	<15 not at risk of depression	
Communication (Scored at highest level of function with aids where used.)	Vision aid		Yes	no problem	
	Hearing aid		No	no problem	
	Speech aid		No	no problem	
Legal	EPOA		Yes		Accepted Information provided - Pt f/u
	Statement of choices	⚠	No		
	Advanced Health Directive	⚠	No		
Patient priorities					

Rockwood FI (Frailty Index)

FI = 0.22

<0.1	Fit
0.1 - <0.15	Well
0.15 - <0.25	Vulnerable
0.25 - <0.30	Mildly Frail
0.3 - 0.4	Moderately Frail
>0.4	Severely Frail

Frailty Index is a term widely used to denote a multidimensional syndrome of loss of reserves (energy, physical ability, cognition, health). Cumulative deficits are identified across 15 domains including comorbidity and health issues, iADL, ADL, Nutrition, Mobility, Balance, Falls, Fatigue, Communication, Cognition and Depression.

Queensland Government

Caboolture Hospital

Geriatric Oncology/Allied Health Assessment Team

Meeting Name: Geriatric Oncology Case Conference
Meeting Date: **July 10th 2024**

Dr Alexander
Ningi Doctors
1421-1423 Bribie Island Rd
Ningi, 4511

RE: Bugs Bunny: May 1st 1946: RB3178411/C334829
Dr Thaker

Bugs Bunny had a G8 completed 17/6 <14 CGA recommended.
Bugs Bunny has undergone a Comprehensive Geriatric Assessment at North Lakes cancer Care on **July 3rd 2024**.

The recommended treatment plan arising from the case conference is:

Dietitian - weight loss
Occupational Therapy - fatigue management
Physiotherapy - decreased exercise tolerance

All allied health referrals have been organised by the allied health assessment team at Caboolture hospital, unless otherwise stated. If you wish to discuss these recommendations further, please do not hesitate to contact the Geriatric Oncology CN, Carolyn Woodward on 3049 1459.

These recommendations are the opinion of the geriatric oncology/allied health assessment team case conference based on the information available at the meeting. The final management decision will be made by the treating clinician in consultation with the patient. Please notify/consult with the Geriatric Oncology Clinical Nurse or the Clinical Nurse Consultant if any changes are made to the recommended treatment.

Yours sincerely,
Carolyn Woodward (She/Her)
Geriatric Oncology Clinical Nurse
North Lakes Cancer Care Services and Caboolture Hospital

(Electronically signed)

Cancer Care Services
North Lakes Health Precinct
9 endeavour Boulevard
North Lakes QLD 4509
Email: northlakes-caboolture-geriatriconcology@health.qld.gov.au

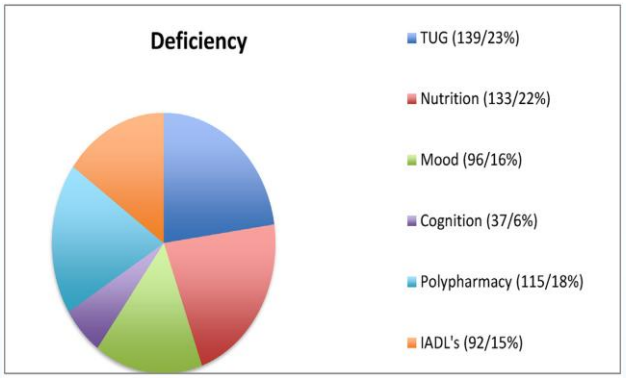
Contents lists available at ScienceDirect

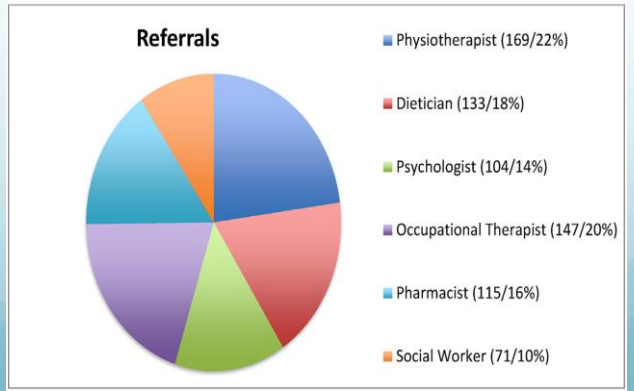
Journal of Geriatric Oncology

Our experience of nursing/allied health practitioner led geriatric screening and assessment of older patients with cancer – a highly accessible model of care

Darshit Arunbhai Thaker [a,b,*], Peter McGuire [a], Geoffrey Bryant [a], David Wyld [a,b], Justine Leach [a], Hermione Wheatley [a], Stella Snape-Jenkinson [a], Bernadette Kelly [a], Anne Bourke [a], Glen Kennedy [a,b]

[a] *Metro North Hospital and Health Service, Australia*
[b] *School of Medicine, University of Queensland, Australia*





Impact of comprehensive geriatric assessment on systemic therapy tolerability.

Dr S Pathmanathan, Dr D Thaker, Dr D Wyld - RBWH

The aim of this project was to retrospectively assess if this model of care improve the ability to administer systemic therapy in older patients

- Retrospective study for patients underwent GA between January 2018 and December 2020
- Systemic therapy delivery was compared between 3 groups:
  - Patients who had a normal G8 where CGA was not indicated
  - Abnormal G8 and underwent a CGA
  - Abnormal G8 and declined CGA.
- End points:
  - Dose reductions, Dose Delays, Dose Intensity ≥85%, ED admissions

Inclusions: Patients who underwent G8, Had solid organ malignancy, Underwent either chemotherapy or immunotherapy.

- Showed Improvement in dose intensity with less dose reductions and dose delays in patients treated with adjuvant intent.
- Did not reduce ED admissions.
- Results were presented to MOGA ASM last year
- Currently, reviewing patients data from January'21 to December'23 to add more patients in both groups to improve the power of the study and aim to publish the manuscript

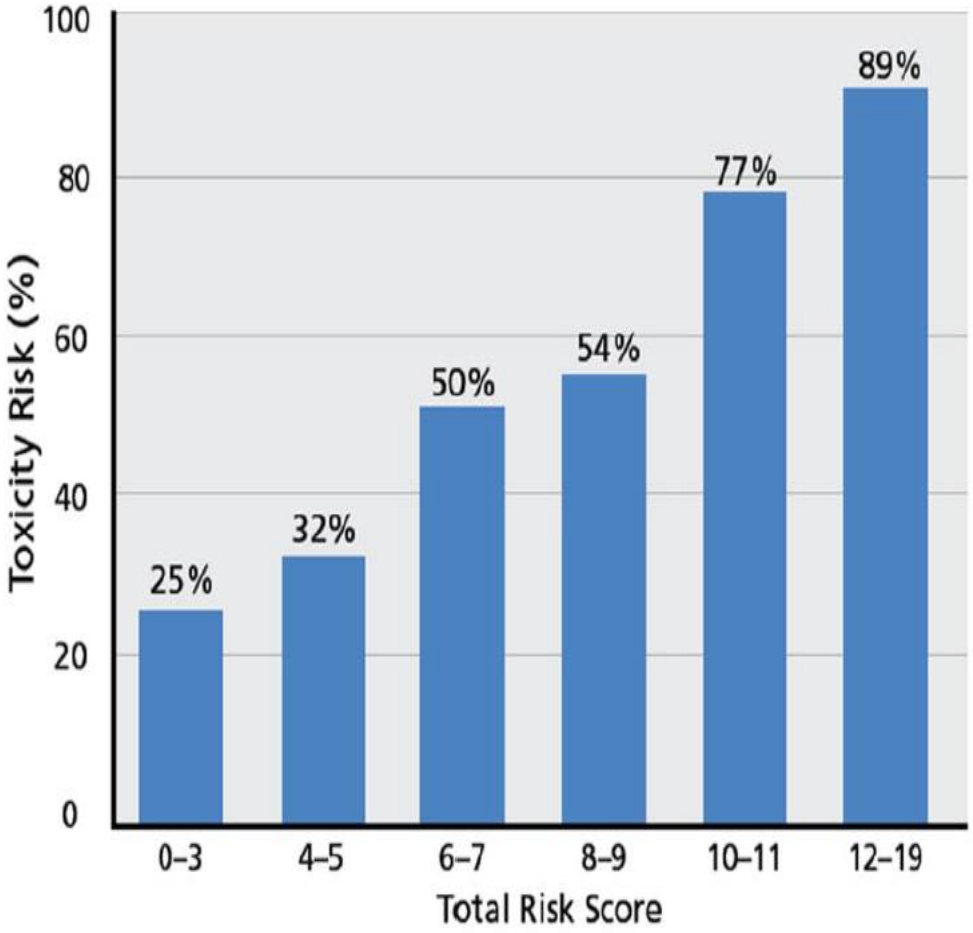
ASCO Short GA

- ASCO guidelines recommend full CGA by using validated tools in older patients with cancer who fails screening (G8/VES 13)
- The evidence supports at the least, Screening (G8) and assessment of mobility(TUG), comorbidity(CCI), falls(single question), depression(GDS), cognition (MMSE), and nutrition (unintentional weight loss/MST).
- Cancer and Aging Research Group (CARG) tool can be used to obtain specific estimates on risk of chemotherapy toxicity.

CARG: Chemo toxicity prediction

Kim J, Hurria A. Determining chemotherapy tolerance in older patients with cancer. *J Natl Compr Canc Netw*. 2013;11(12):1494-1502. doi:10.6004/jnccn.2013.0176

Risk Factor	Score
Age ≥72 y	2
GI or GU cancer	2
Standard chemotherapy dosing	2
>1 chemotherapy drug	2
Anemia[b]	3
Creatinine clearance[c]	3
Any fall in the past 6 months	3
Hearing, fair or worse	2
Limited in walking 1 block	2
Inability to take medications independently	1
Decreased socialization because of physical/emotional health	1



[a]Risk score based on association with grade 3–5 chemotherapy-related toxicity.
[b]Hemoglobin less than 11 g/dL for men and less than 10 g/dL for women.
[c]Creatinine clearance (Jelliffe, ideal weight) less than 34 mL/min.

Survival prediction: ePrognosis

Verduzco-Aguirre, H.C., Gomez-Moreno, C., Chavarri-Guerra, Y. *et al.* Predicting Life Expectancy for Older Adults with Cancer in Clinical Practice: Implications for Shared Decision-making. *Curr Oncol Rep* **21,** 68 (2019). https://doi.org/10.1007/s11912-019-0821-3

- In clinical practice and training, estimating prognosis typically receives less attention than diagnosing and treating disease.
- Because of competing chronic conditions and diminished life expectancy, careful consideration of prognosis is particularly important for clinical decision making in older patients.
- ePrognosis calculators are recommended by ASCO, SIOG and NCCN to predict non cancer related 1, 5 and 10 year life expectancy for older adults in community, nursing home and hospitalised.

ePrognosis

- Living in the Community
  - 1 year mortality: Gagne 1 Year Index
  - **4 and 10 year mortality and median life expectancy: Lee Index**
  - **5 year mortality: Schonberg Index**
  - **4, 10 and 14 year mortality and median life expectancy: Combined Lee Schonberg Index**
  - 10 year mortality: Suemoto Index
- Living in a Nursing Home
  - 1 year mortality: Flacker 1 Year Newly Admitted Revised Index
- Hospitalized patients
  - 1 year mortality on discharge: Levine Index

Outpatients with advanced cancer: Palliative Performance Scale

- Variables included for assessment:
  - Age and gender,
  - comorbidities,
  - BMI (Nutrition status) and lifestyle factors (smoking and alcohol),
  - ADLs and IADLs,
  - physical function and emotional status
  - Cognition and memory
  - self reported health.

Acceptability & willingness

West Haven Veterans Affairs

226 patients 60+: attitudes toward burden of treatment, possible outcomes, and likelihood
- Limited life expectancy (cancer, congestive heart failure, or chronic obstructive pulmonary disease)
- Burden of treatment (length of the hospital stay, extent of testing, and invasiveness of interventions)

1. Low-burden treatment (restoring participant's current state of health) vs no treatment resulting in **death**

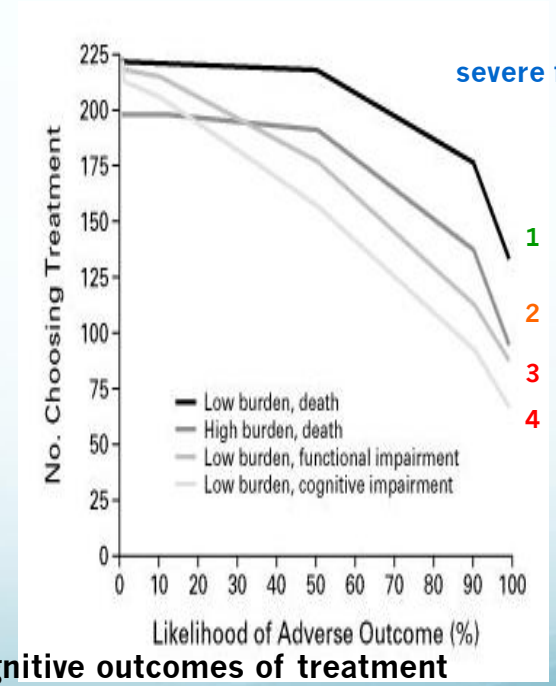
98.7% accept treatment

2. High-burden treatment vs no treatment resulting in **death**

11% decline

3 & 4. Low-burden treatment vs survival with **severe functional or cognitive impairment**

74-89% decline



The likelihood of adverse functional and cognitive outcomes of treatment requires explicit consideration in older patients

Fried NEJM 2002

SUMMARY

- Frailty affects cancer outcome
- Assessment of Frailty is vital in management of older patients with cancer
- Management of Frailty prior and during cancer treatment can improve outcomes
- Shortcut to assess Frailty: G8, TUG, Fall in last six months, MMSE, GDS, MST
- CARG chemo toxicity prediction and e-Prognosis tools good measures to check appropriateness of treatment.
- Finally, patients willingness and acceptance

Immunotherapy in Older Adults With Advanced Cancers: Implications for Clinical Decision-Making and Future Research

Authors: Ravindran Kanesvaran, MD, Raul Cordoba, MD, and Ronald Maggiore, MD

Publication: American Society of Clinical Oncology Educational Book
Volume 38

- Even among monotherapy strategies, the data on safety and efficacy of immunotherapies in older adults with cancer are limited.
- With the paucity of higher-level evidence-based data available, it seems that efficacy can be similar to that in younger patients,
- Older patients tend to have more AEs in more nationally based studies, especially those with poorer PS.
- The hypothesis that can explain such clinical differences may be related to aging-related reductions in repertoire in the T-cell subsets and the pre-existing exhausted phenotype related to immunosenescence, which can be further affected by frailty and by prior chemotherapy.
- More research is needed in the area