

INTEGRATE 7.0

QUALI ‘REGOLE’ NELLA GESTIONE INTEGRATA DELLA NEOPLASIA POLMONARE?

GAMES

VERONA

13-14 OTTOBRE 2025

Il team multidisciplinare “allargato”: focus su SCLC

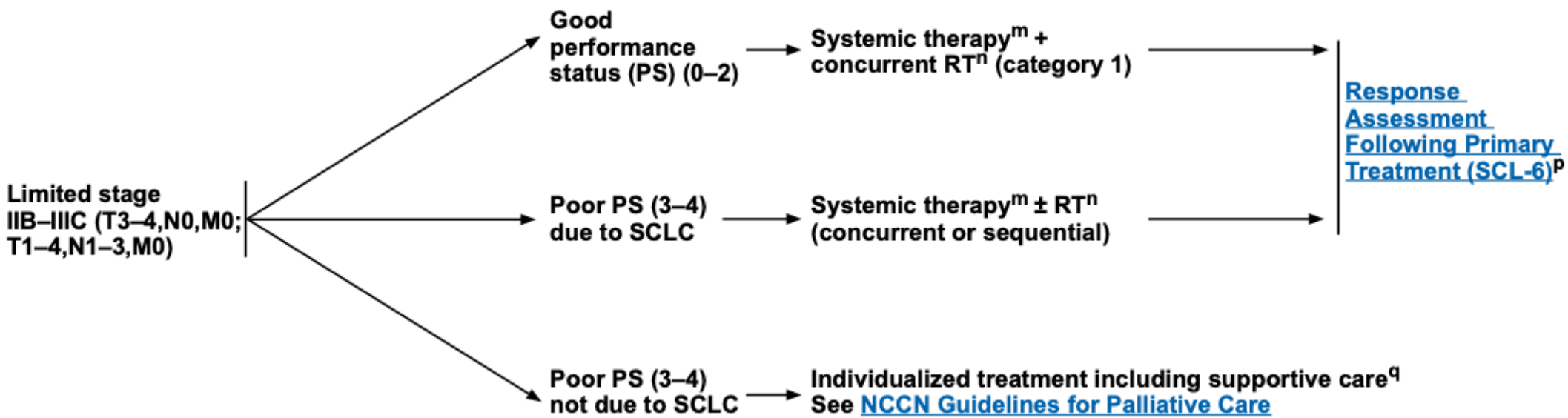
Valutazione geriatrica del paziente anziano

Giuseppe F Colloca, MD, PhD
Gemelli Art
Fondazione A Gemelli IRCCS

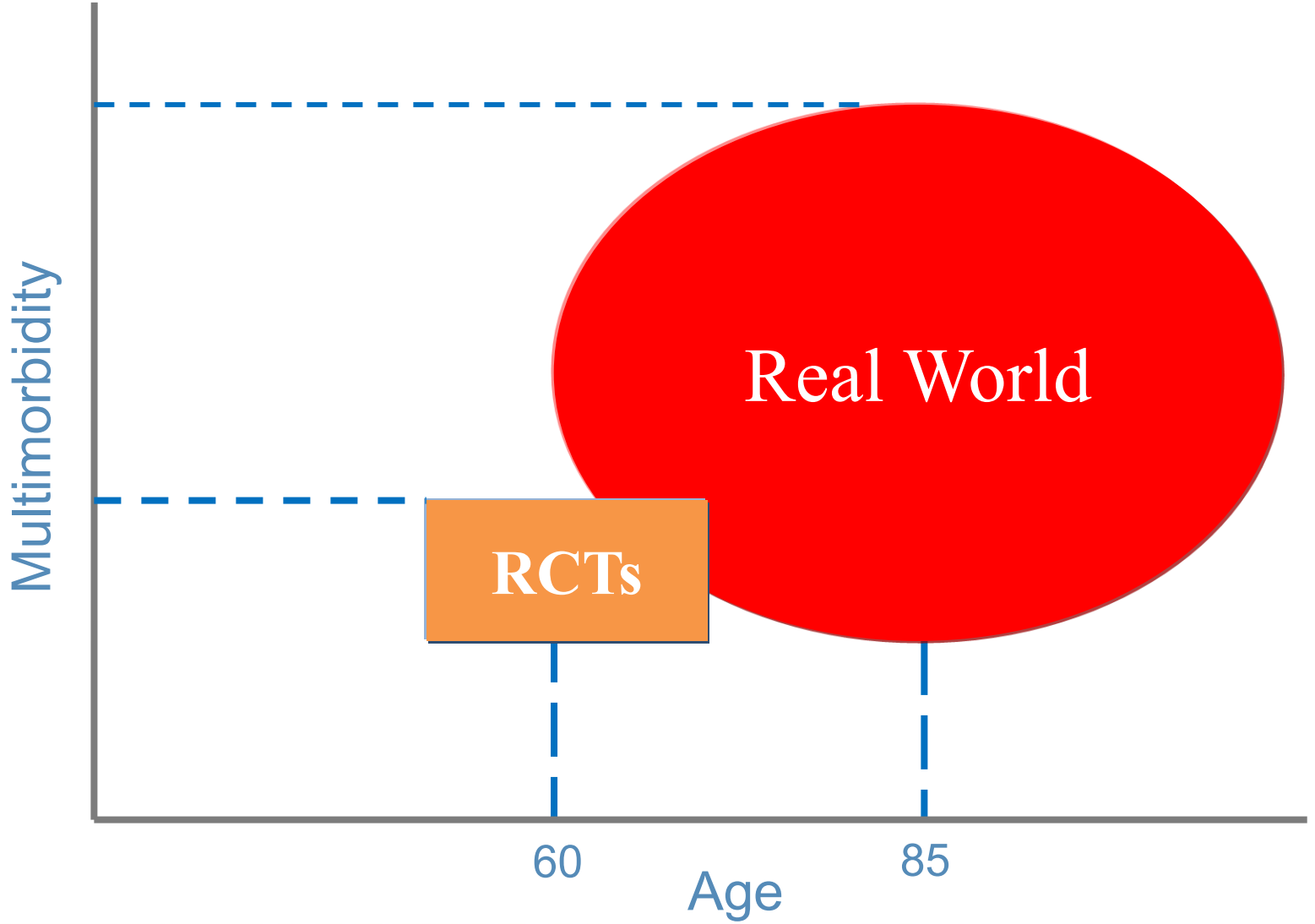


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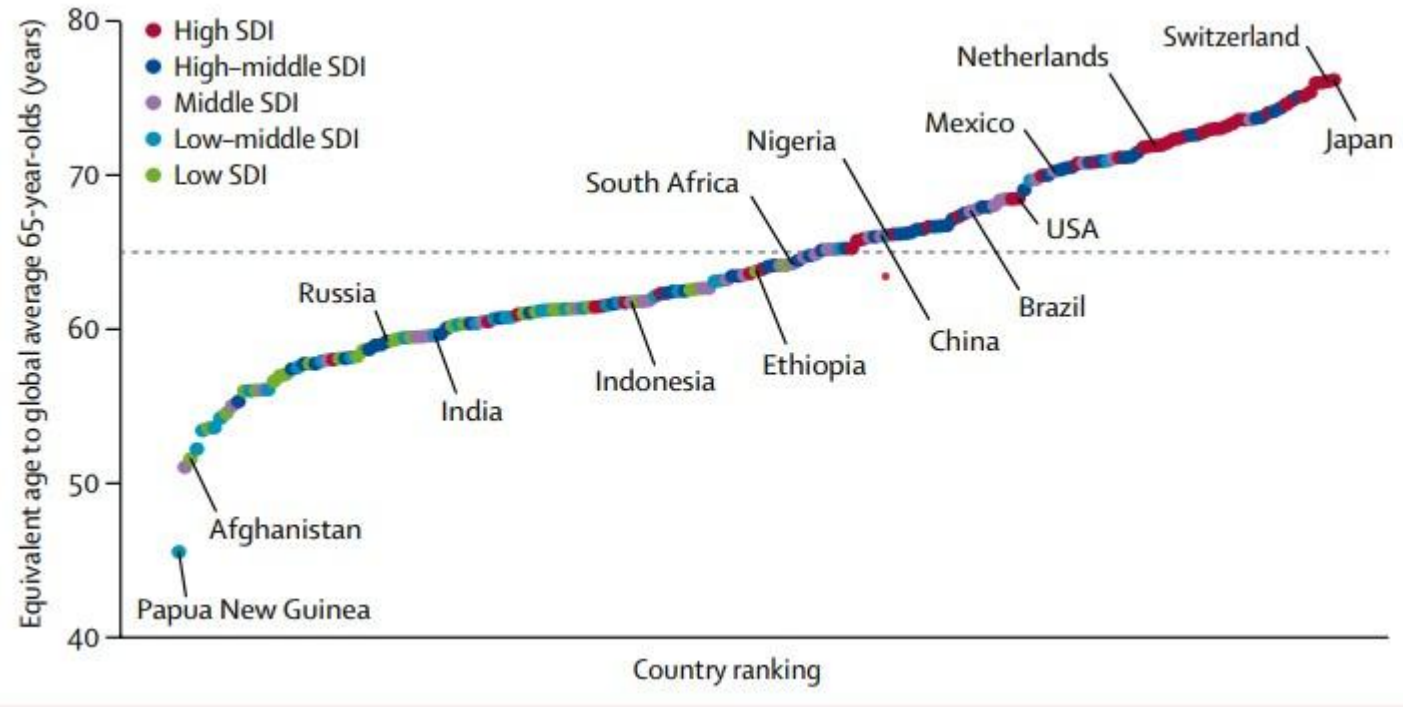
PRIMARY TREATMENT



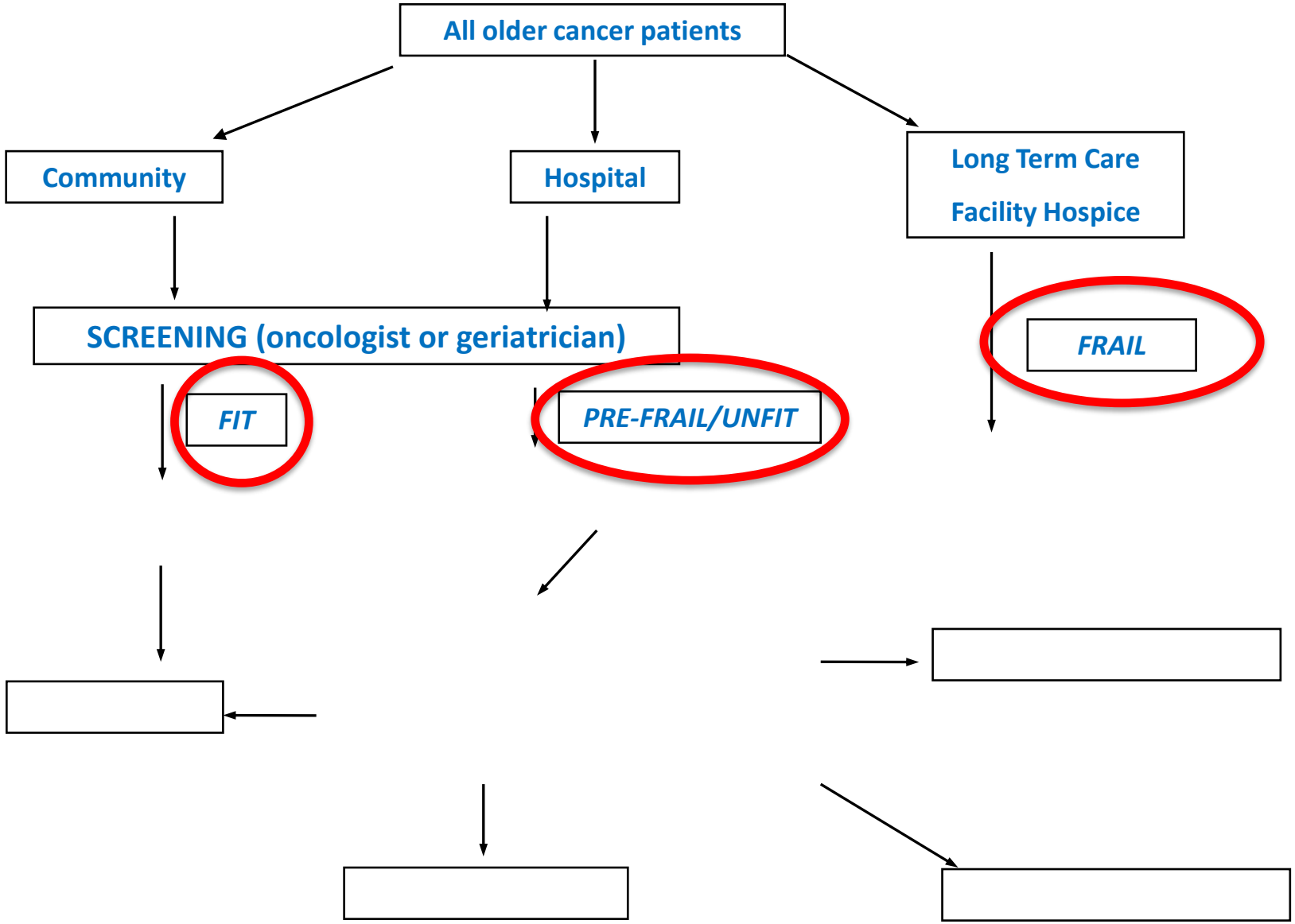
A missed target: frail and complex patient



Comparing the equivalent ages to global average 65-year-olds across countries



The dashed line indicates global average 65-year-olds. Countries and territories are colour coded by their e. SDI=Socio-demographic Index.



Balducci L, Colloca G et all. Surg Oncol. 2010 Sep;19(3):117-23

Fitness

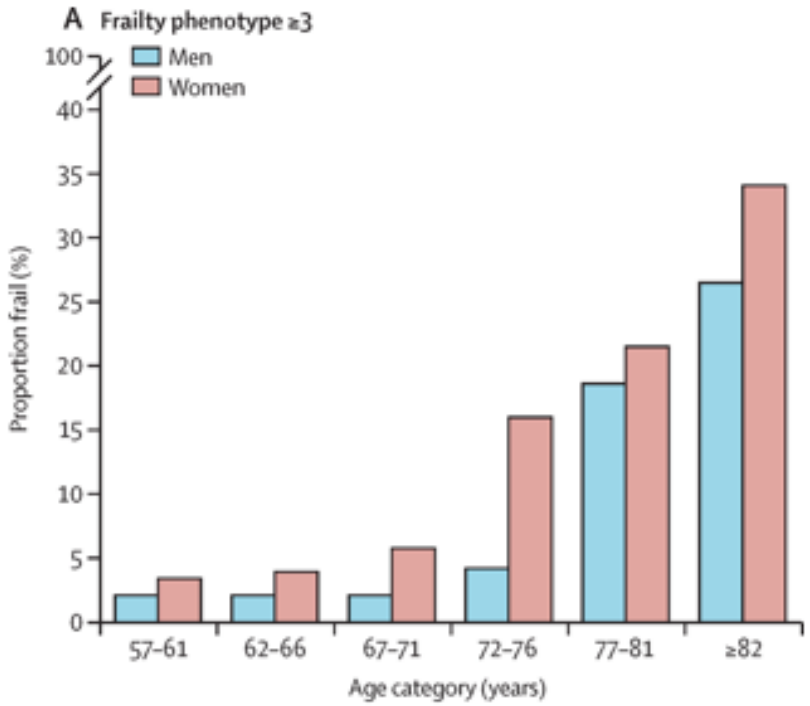
The condition of being physically fit and healthy.

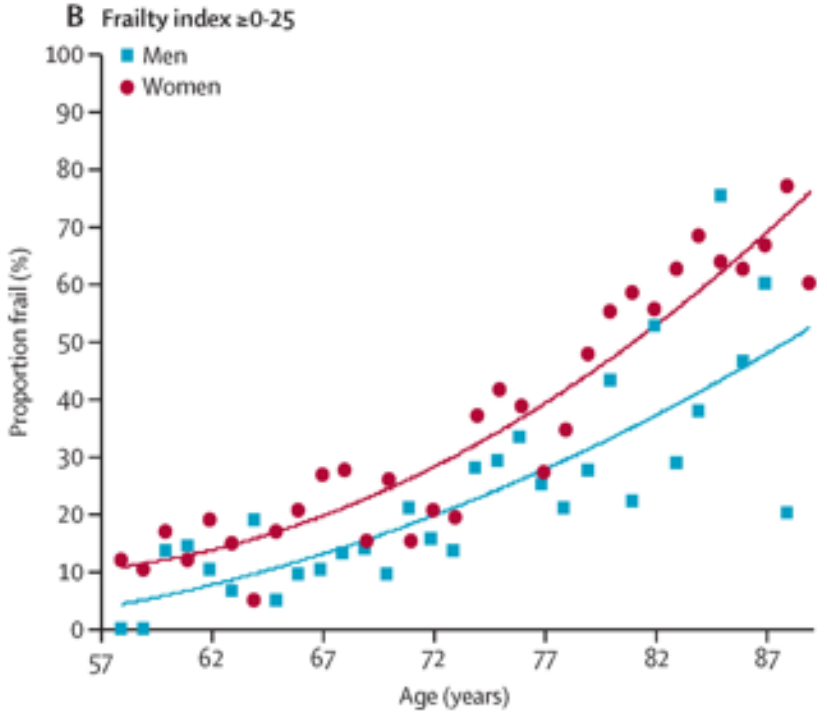
The quality of being suitable to fulfil a particular role or task

The ability to perform daily activities efficiently and effectively, while **managing stress and fatigue** and maintaining a healthy body composition. It's a holistic concept encompassing physical and mental well-being, **not just the absence of disease.**



Frailty: implications for clinical practice and public health





The Lancet 2019 3941365-1375DOI: (10.1016/S0140-6736(19)31786-6)

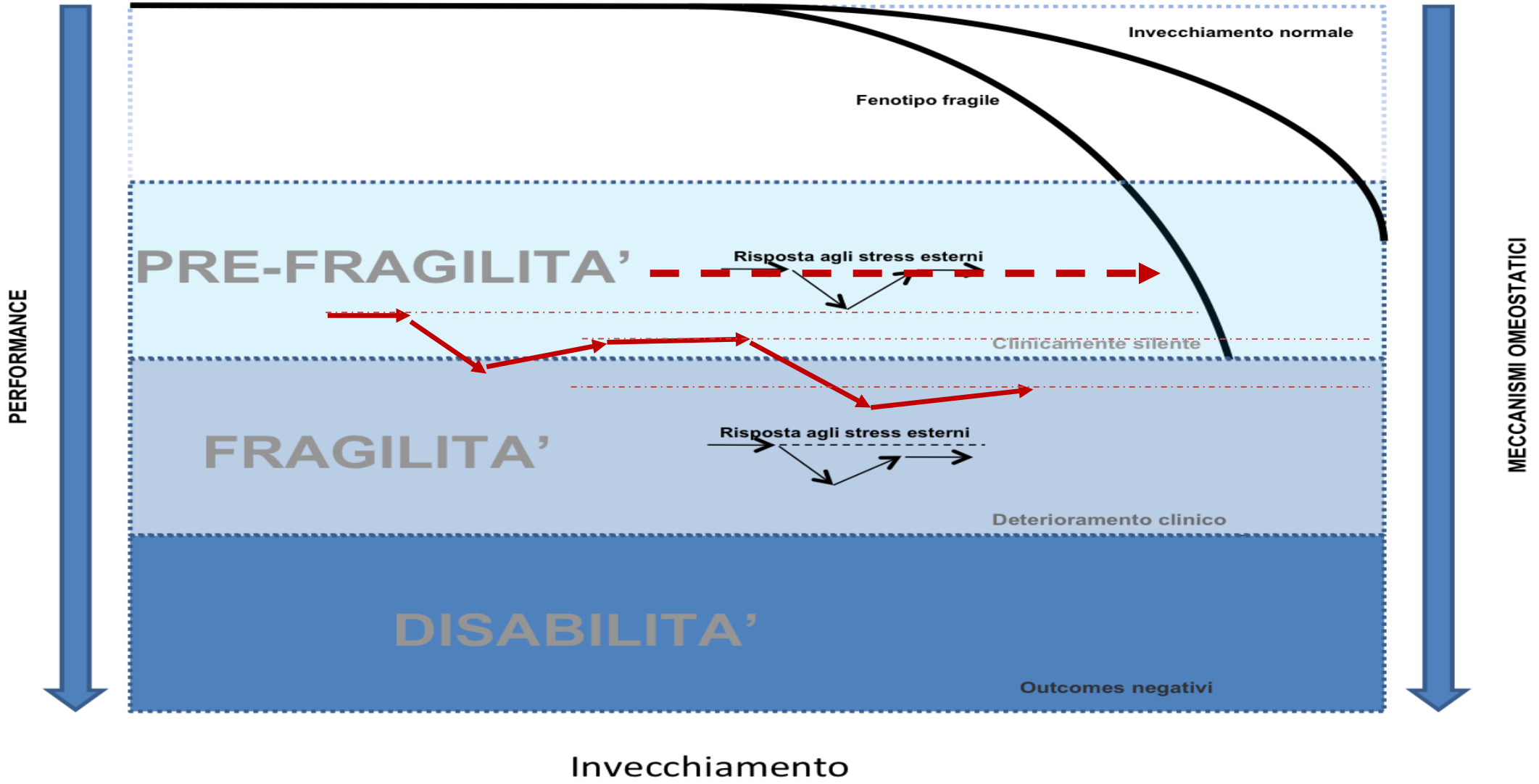
Frail/complex patient

- Multimorbidity
- Multiple drugs
- Function deficits
  - Cognitive deficit
  - Physical deficit
- Financial toxicity
- Affective problems
- Social problems
- Incontinence
- Malnutrition
- Anemia
- Falls
- Sarcopenia
- Osteoporosis

Geriatric Syndromes

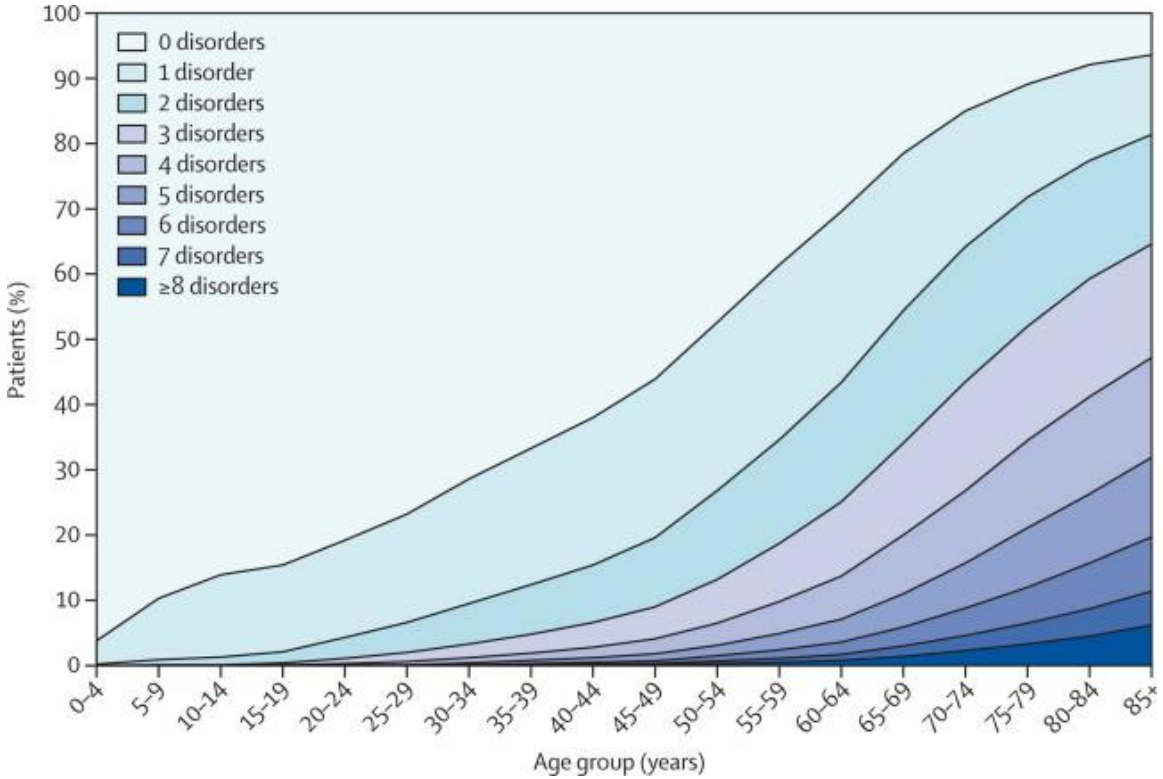


Development of frailty with advancing age

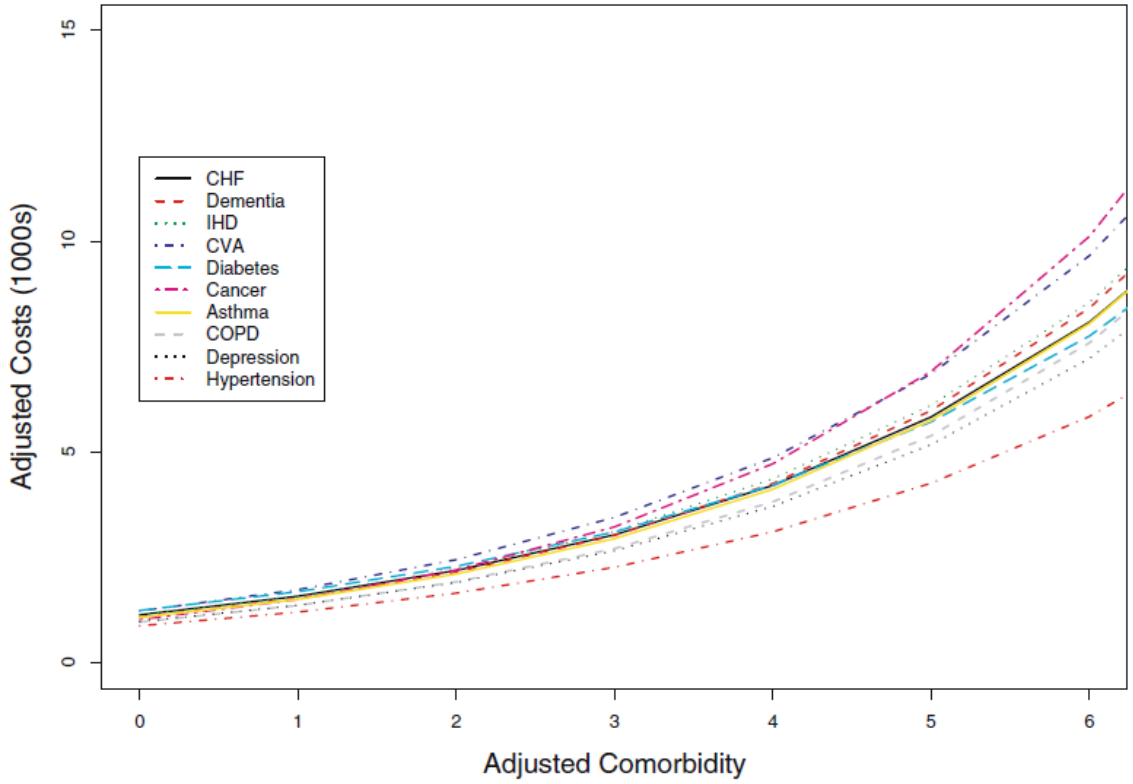


Colloca G et al. Aging Dis. 2020 May 9;11(3):649-657.

NUMBER OF CHRONIC DISORDERS BY AGE-GROUP



The Lancet 2012;380:37-43



J Gen Intern Med. 2007 April; 22(4): 464–469

About Chronic Diseases

Six in ten adults in the US have a chronic disease and **four in ten adults** have two or more.

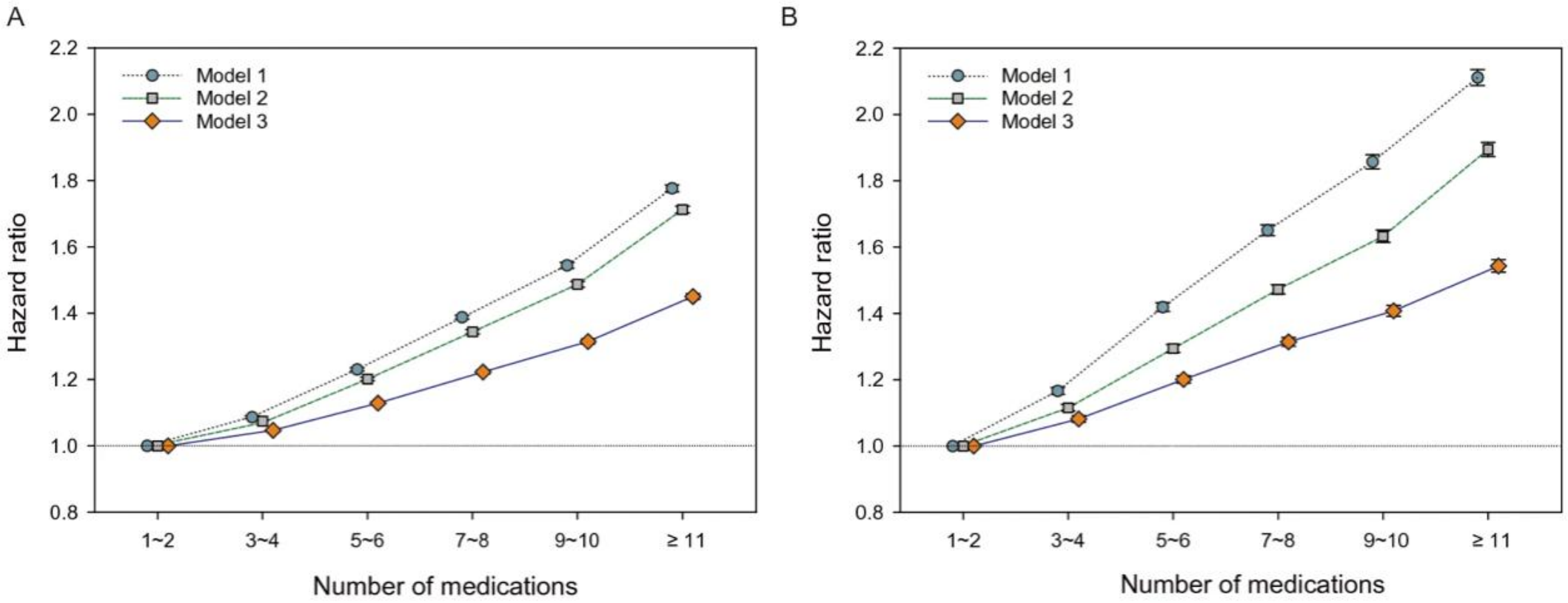
HEART DISEASE | CANCER | CHRONIC LUNG DISEASE | STROKE | ALZHEIMER'S DISEASE | DIABETES | CHRONIC KIDNEY DISEASE



90% of the nation's $4.1 trillion in annual health care expenditures are for people with chronic and mental health conditions.[1,2]



Polipharmacy



Associations between the number of daily prescribed medications with the risk of (**A**) hospitalization and (**B**) mortality. All models were adjusted for age, sex, residential area, and Charlson comorbidity index score.

Sci Rep 10, 18964 (2020). https://doi.org/10.1038/s41598-020-75888-8

PHYSIOLOGICAL CHANGES IN THE ELDERLY

Pharmacodynamics mechanisms of drug action

- Increased sensitivity to drugs
- Increased adverse effects
- Reduced capacity to respond to physiological challenges and the adverse side effects

Colloca G Surg Onc. 2010 Sep;19(3):124-30.

Pharmacokinetics time course of drug concentration

- Solubility (changes of distribution, protein binding)
- Therapeutic window (hydrophilic vs. lipophilic drugs)
- Adverse drug reactions
- Increased target organ sensitivity

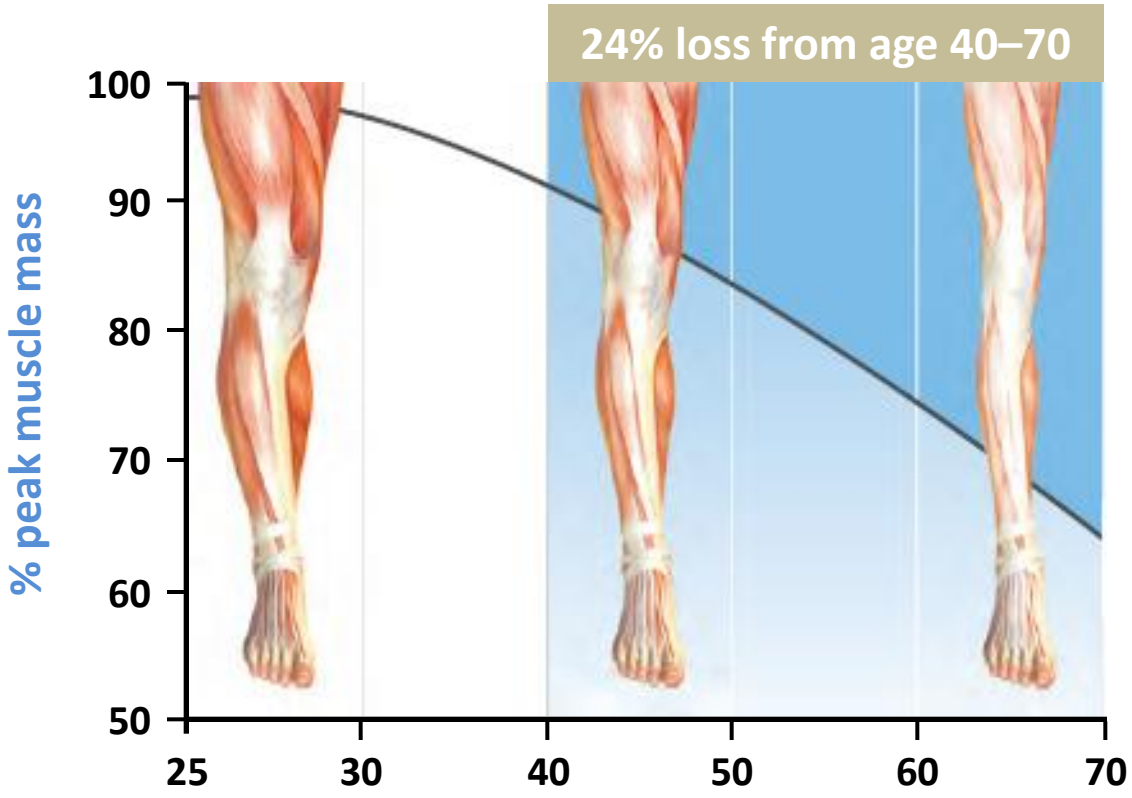
Colloca G Surg Onc. 2010 Sep;19(3):124-30.

Physiological changes in the elderly

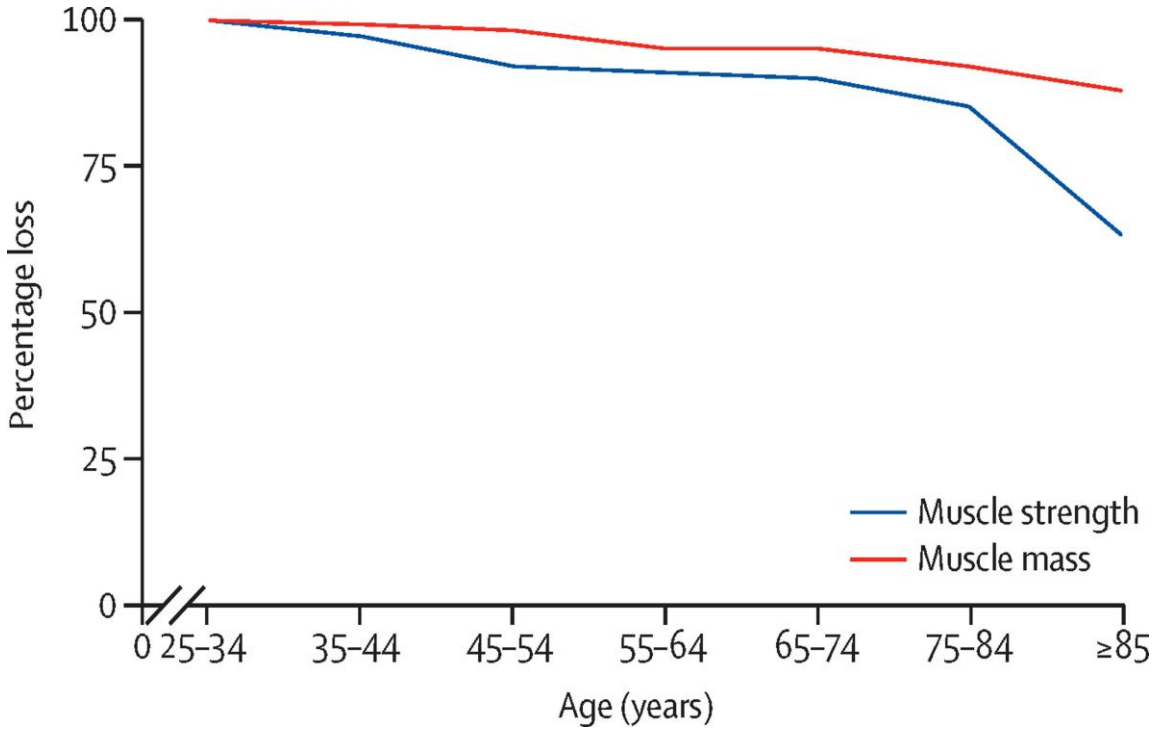
Parameter	Changes	Consequences
Absorption	Absorptive surface decreases Splanchnic blood flow decreases Drug-drug interaction may alter absorption Acid production generally unchange	Reduced bioavailability of oral drugs
Decreased renal function	Reduced glomerular filtration rate Decreased blood flow to the kidneys Decreased tubular secretion Reduced creatinine clearance	Reduced: Removal of drug from the body by excretion
Drug distribution	*Reduced for hydrophilic agents:* Decrease in total body water Hemoglobin Decrease in serum albumin levels *Increased for lipophilic agents:* Decreased ratio of lean body mass and increase in fat compartment	Increased toxicity of hydrosoluble agents Reduced effectiveness of liposoluble agents
Decreased liver function	*Reduced:* Hepatocyte mass Hepatic blood flow First pass effect Phase II metabolism generally preserved	Phase I metabolism decreased

Colloca G Surg Onc. 2010 Sep;19(3):124-30.

Loss of muscle mass and strength, a natural part of aging

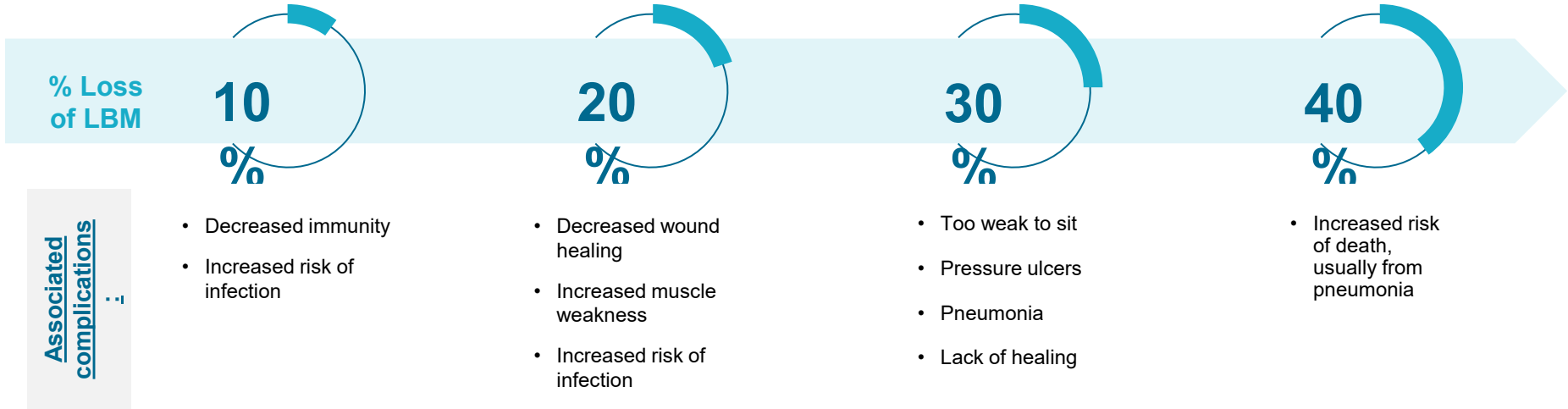


15% Loss each decade after age 70



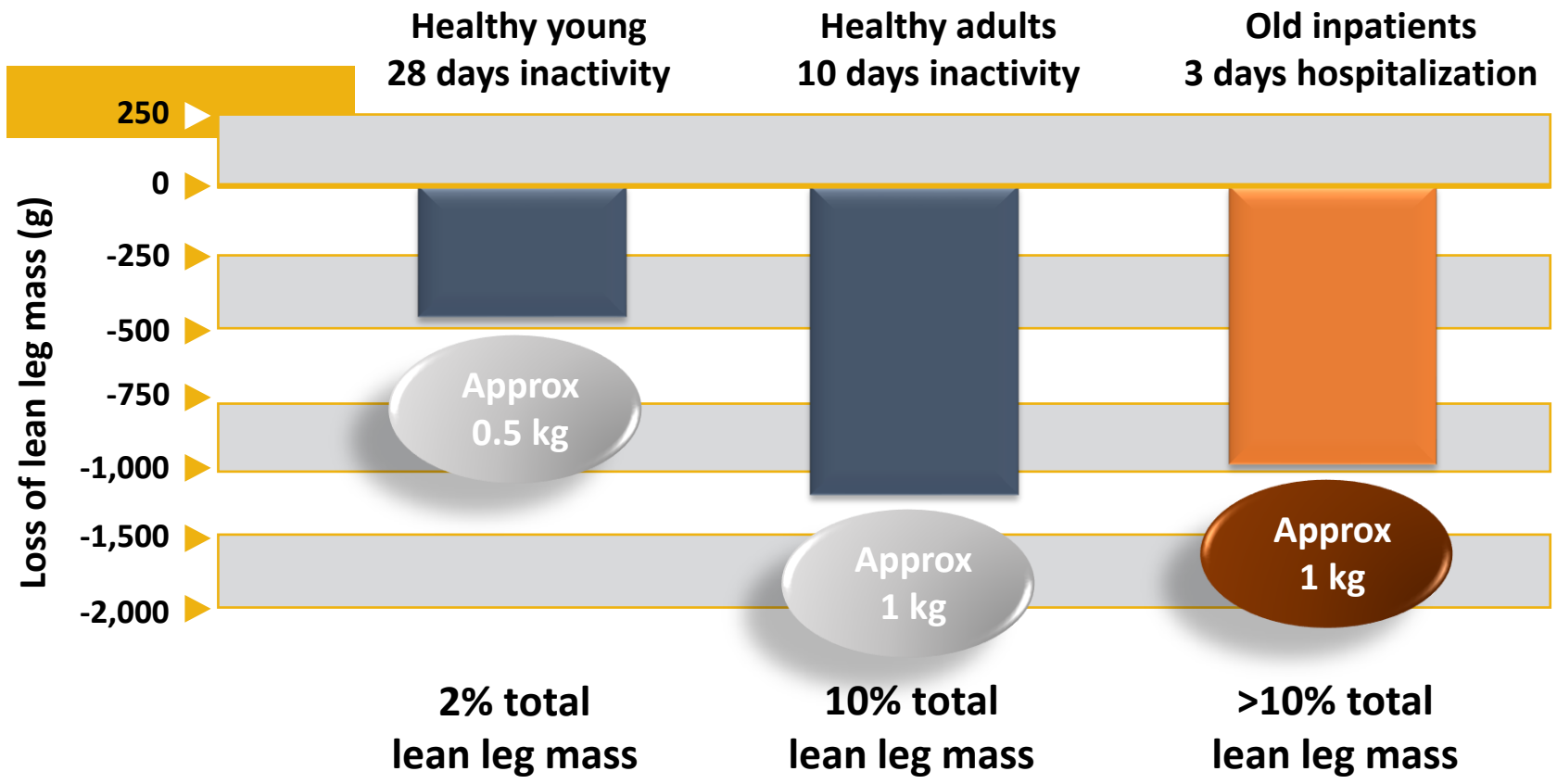
Colloca G, JGO. 2019

Aging and Muscle
Consequences of Losing LBM/Muscle

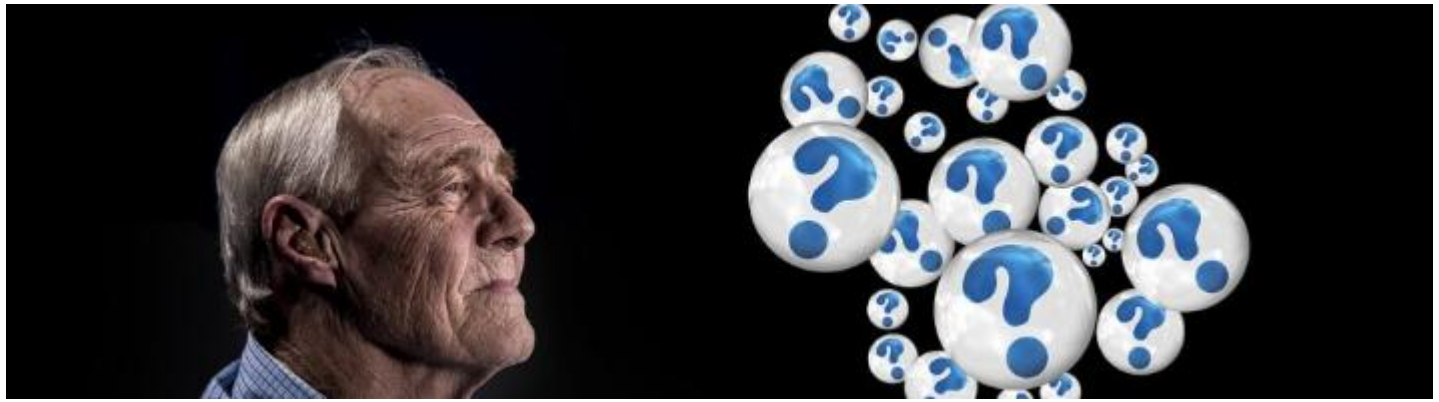


- **Limited activities of daily living**
- **Lowered quality of life**

Demling RH. Eplasty 2009;9:e9.



Kortebein et al., J Gerontol 2007



30

Our thinking ability normally peaks around age 30

15-20%

An estimated 15-20% of people age 65 years and older have some symptoms of mild cognitive impairment

"People with mild cognitive impairment may have thinking changes, but they're still functioning."

– Dr. Jennifer Davis

NINKATEC
Right at home

MILD COGNITIVE IMPAIRMENT (MCI)

12-18%



of people **age 60 or older** are living with MCI.

1 in 3



people living with MCI due to Alzheimer's disease **develop dementia within 5 years.**



Clinician



💊 Effetti collaterali dei trattamenti per SCLC

Chemioterapia

- **Tossicità ematologica**: anemia, neutropenia, trombocitopenia.
- **Nausea e vomito**.
- **Alopecia**.
- **Neuropatia periferica**.
- **Fatigue**.
- **Tossicità renale**.
- **Tossicità ototossica**.
- **Mucosite e diarrea**.

Immunoterapia

- **Tossicità immuno-mediata**:
  - Dermatite.
  - Colite.
  - Polmonite.
  - Ipofisite.
  - Tiroidite autoimmune.
- **Fatigue**.
- **Febbre, rash cutanei**.

Radioterapia toracica

- **Esofagite**.
- **Tossicità polmonare** (fibrosi, polmonite da radiazioni).
- **Fatigue**.
- **Irritazione cutanea**.
- **Tossicità cardiaca** (a lungo termine).

Effetti collaterali nel paziente anziano e fragile

Fattori di rischio aumentati

- **Alterata farmacocinetica**: ridotta funzione renale/epatica.
- **Polifarmacoterapia**: rischio di interazioni.
- **Comorbidità**: cardiovascolari, metaboliche, cognitive.
- **Ridotta riserva midollare**: maggiore rischio di tossicità ematologica.
- **Maggiore vulnerabilità neurocognitiva**: rischio aumentato con PCI e immunoterapia.

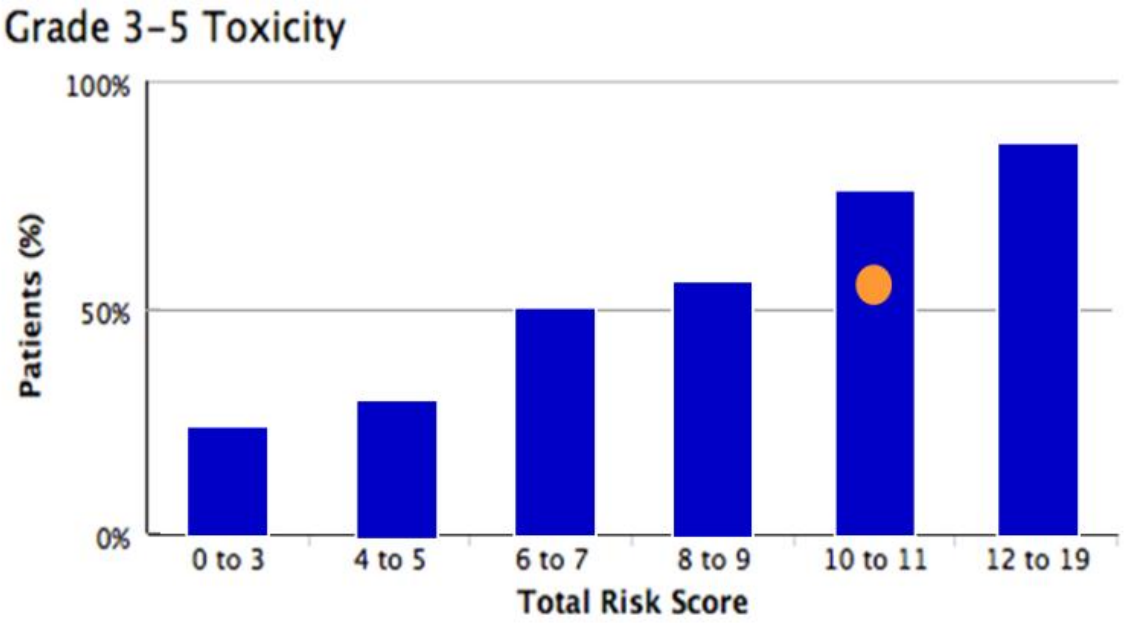
Tossicità più frequente e grave

- **Grado 3-4 ematologica**: fino all'84% nei pazienti ≥70 anni.
- **Tossicità renale e ototossica**: più marcata con cisplatino.
- **Declino cognitivo**: PCI può accelerare deterioramento.
- **Fatigue e sarcopenia**: impatto maggiore sulla qualità di vita.
- **Cadute e fratture**: secondarie a neuropatia, anemia, ipotensione.

G8 Strumento di Screening			
	Domande	**Possibili risposte**	**Punteggio**
A	Negli ultimi 3 mesi, considerando le abitudini alimentari, è diminuita l'assunzione di cibo a causa di: perdita di appetito, problemi digestivi, difficoltà di masticazione e/o deglutizione?	**0**: grave riduzione **1**: moderata riduzione **2**: normale assunzione	.....
B	Perdita di peso durante gli ultimi 3 mesi?	**0**: riduzione >3kg **1**: sconosciuta **2**: riduzione fra 1 e 3 kg **3**: non perdita di peso	.....
C	Movimento	**0**: letto o poltrona **1**: in grado di alzarsi dal letto/sedia ma senza uscire **2**: esce	.....
E	Problemi Neuropsicologici (anamnestico) Se sospetto, rimandare compilazione a dopo invio allo specialista (Neurologo)	**0**: demenza o depressione severa **1**: demenza o depressione moderata/lieve **2**: non problemi psicologici	.....
F	Body Mass Index (peso in kg/altezza in m^2)	**0**: BMI <19 **1**: BMI 19 - 21 **2**: BMI 21 - 23 **3**: BMI >23	.....
H	Assume stabilmente più di 3 tipologie di farmaci al giorno?	**0**: si **1**: no	.....
P	In confronto alle altre persone della stessa età come considera il paziente il suo stato di salute?	**0**: non buono **0,5**: ignoto **1**: buono **2**: ottimo	.....
	Età	**0**: >85 **1**: 80-85 **2**: <80	.....
	Punteggio totale (0-17)		.....

P. Soubeyran et al. Validation of a screening test for elderly patients in oncology. JCO. Vol 26, 15S, 2008

Chemo-Toxicity Calculator



Chemotherapy Risk Assessment Scale For High-Age Patients (CRASH)

Hematologic Chemotoxicity Risk

Risk Factors for Grade 4 Hematologic Toxicity	0 points	1 point	2 points
Diastolic blood pressure	</= 72 mm Hg	>72 mm Hg	
Instrumental Activities of Daily Living	26-29	10-25	
Lactate dehydrogenase*	0-459 IU/mL		>459 IU/mL
Chemotoxicity (MAX2 index)	0-0.44	0.45-0.57	>0.57

*For an upper limit of normal at 618 IU/mL.
Note: Risk: 0-1 = low, 2-3 = intermediate low, 4-5 = intermediate high, 6 = high.

Nonhematologic Chemotoxicity Risk

Risk Factors for Grade 3/4 Nonhematologic Toxicity	0 points	1 point	2 points
Eastern Cooperative Oncology Group performance status	0	1-2	3-4
Mini-Mental State Examination score	30		<30
Mini Nutritional Assessment score	>27.5		0-27.5
Chemotoxicity (MAX2 index)	0-0.44	0.45-0.57	>0.57

Note: Risk: 0-2 = low, 3-4 = intermediate low, 5-6 = intermediate high, 7-8 = high.
Source: Dr. Extermann

CARG
Cancer & Aging Research Group

Cancer and Aging Research Group

mproving the care of older adults with cancer

Chemo-Toxicity Calculator Results

elect the language

English

Patient Total Risk Score 12

Patient Toxicity Risk 82%

Using the predictive model for treatment-related toxicity in older adults (Hurria et al, Journal of Clinical Oncology, 2011[1]), this patient has a 82% risk of grade 3-5 oxicity[2].

Toxicity Factor/Question	Value/Response	Score
Patient's Age	Age >= 72	2
Cancer Type	Gastrointestinal	2
Dosage	Standard dose	2
Number of chemotherapy agents	Poly-chemo therapy	2

	Total Risk Score	%Risk	N
Low	0 to 3	25%	28
	4 to 5	32%	100
Medium	6 to 7	50%	136
	8 to 9	54%	91
High	10 to 11	77%	62
	12 to 19	89%	47

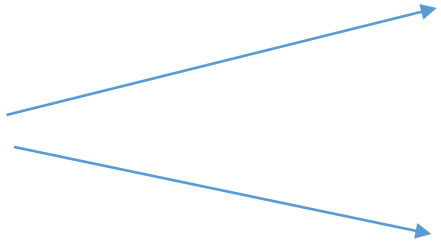
[1]**Predicting chemotherapy toxicity in older adults with cancer: a prospective multicenter study.**

[2]using the NCI Common Terminology Criteria for Adverse Events version 3.0

How we evaluate and assess the fitness in our patients

A Transitional State in a Dynamic Process

FIT
Vulnerabile (prefrail)
Frail



Physical Performance

Cognitive Performance

Screening test

Comorbidity index
Polipharmacotherapy
Cognitive Assessment
Mood Assessment
Physical performances assessment