La fragilidad: una herramienta para añadir calidad a los años

MARCO INZITARI, MD, PHD

Director de Atención Intermedia y Investigación, Parc Sanitari Pere Virgili
Jefe, Grupo de Investigación REFiT, Instituto de Investigación Vall d'Hebron
Profesor Agregado, UOC
Presidente, Societat Catalana de Geriatria i Gerontologia

#REFiTBcn research group

Parc Sanitari Pere Virgili

Universitat Oberta de Catalunya

Vall d'Hebron Institut de Recerca VHIR

¿Quien es frágil?

“Comunitat”

“Clínica”

Fragilidad: definición

Estado dinámico

Riesgo incrementado de avanzar rápidamente hacia dependencia o empeoramiento de la salud

Determinada por:

- equilibrio inestable entre re temas y órganos que se ha reducido
- mayor vulnerabilidad o hab ponder a “insultos” internos o externos

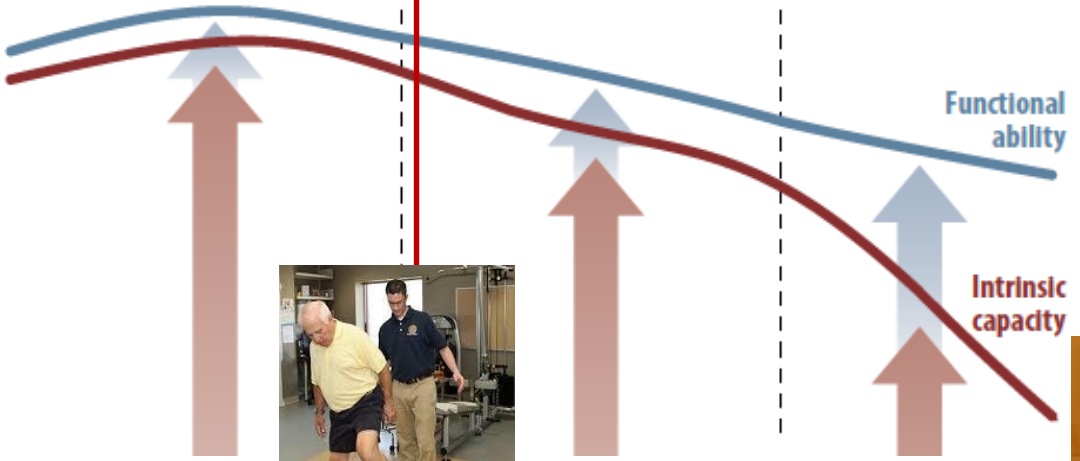
Period	High and stable capacity	Declining capacity	Significant loss of capacity
Risks and challenges	Risk behaviours, emerging NCDs	Falling mobility, sarcopaenia, frailty, cognitive impairment or dementia, sensory impairments	Difficulty performing basic tasks, pain and suffering caused by advanced chronic conditions

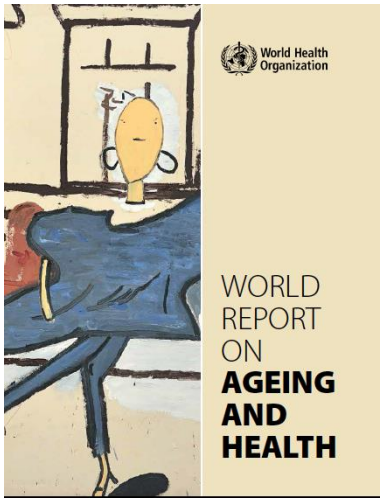
Goals

Build and maintain capacity and resilience

Reverse, stop or slow the loss of capacity

Compensate for loss of capacity





Fragilitat i capacitat intrínseca

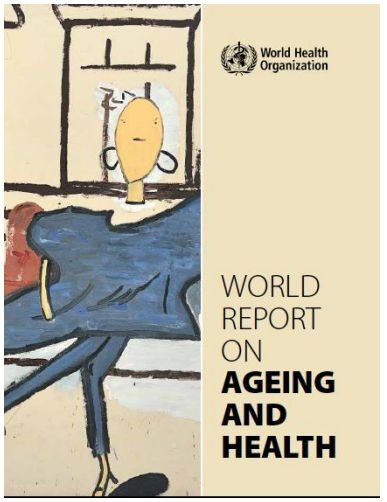
Period	High and stable capacity	Declining capacity	Significant loss of capacity
Risks and challenges	Risk behaviours, emerging NCDs	Falling mobility, sarcopaenia, frailty, cognitive impairment or dementia, sensory impairments	Difficulty performing basic tasks, pain and suffering caused by advanced chronic conditions

Goals

Build and maintain capacity and resilience

Reverse, stop or slow the loss of capacity

Compensate for loss of capacity



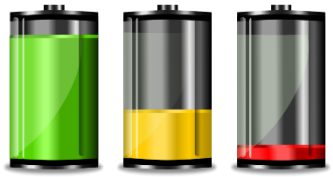
El fenotipo de fragilidad

Linda P Fried, geriatra i epidemióloga de la Universidad Johns Hopkins, Baltimora, i posteriormente primera mujer Decana de la escuela de Salud Publica de la Universidad Columbia, NY, EUA.

Pérdida de peso no intencional

Debilidad

Lentitud



Escasa resistencia

Escasa actividad física

#REFiTBcn research group

Parc Sanitari Pere Virgili

Vall d'Hebron Institut de Recerca VHIR

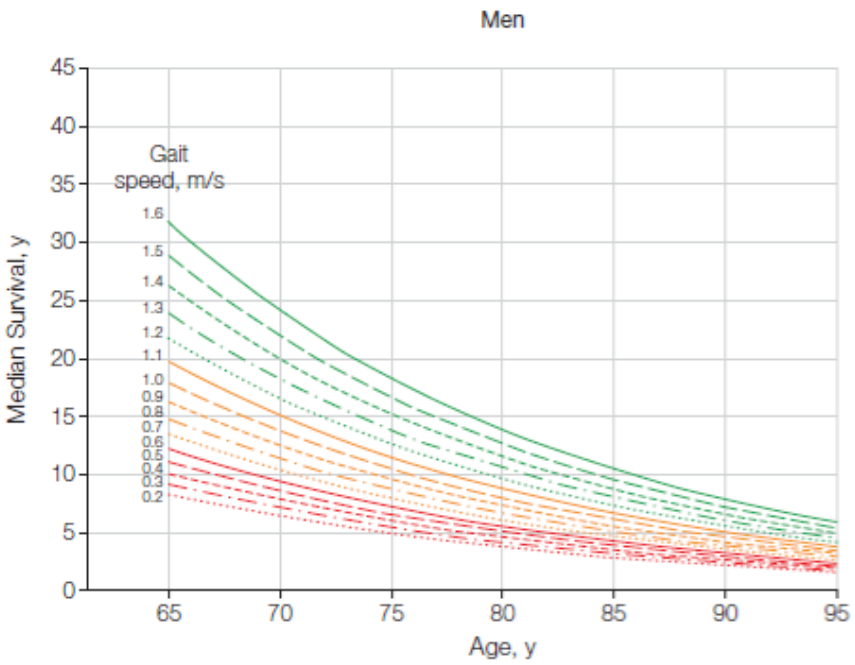
Fried LP et al., J Gerontol MS 2001

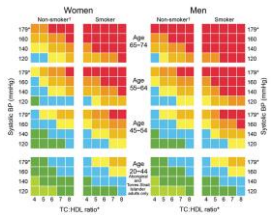
A qué velocidad caminas: clave de supervivencia

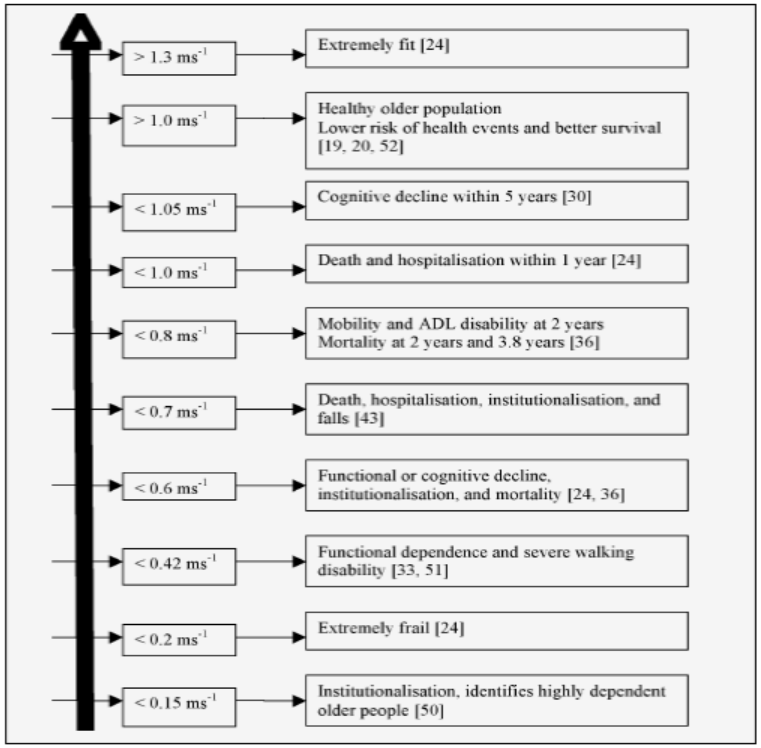
Design, Setting, and Participants Pooled analysis of 9 cohort studies (collected between 1986 and 2000), using individual data from 34 485 community-dwelling older adults aged 65 years or older with baseline gait speed data, followed up for 6 to 21 years. Participants were a mean (SD) age of 73.5 (5.9) years; 59.6%, women; and 79.8%, white; and had a mean (SD) gait speed of 0.92 (0.27) m/s.

JAMA®
The Journal of the American Medical Association

Figure 2. Predicted Median Life Expectancy by Age and Gait Speed





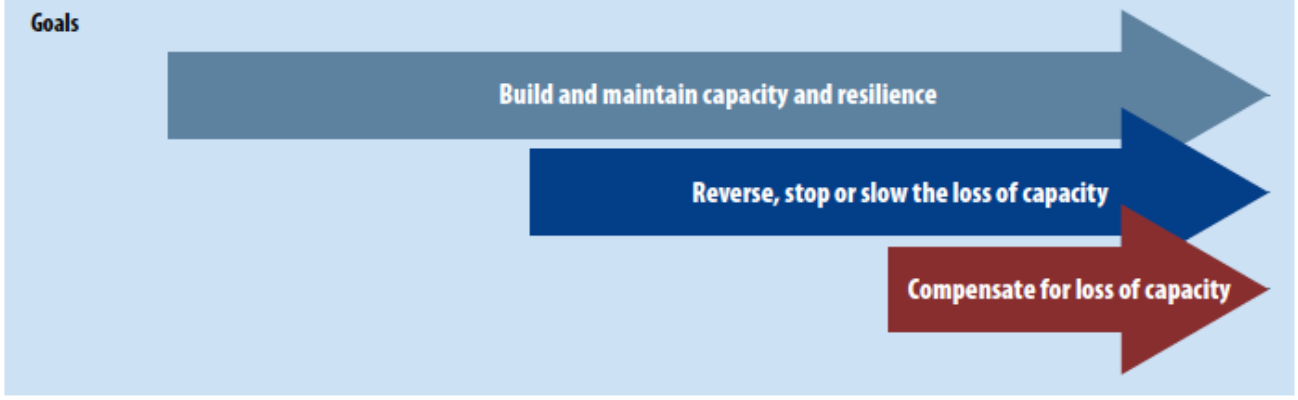


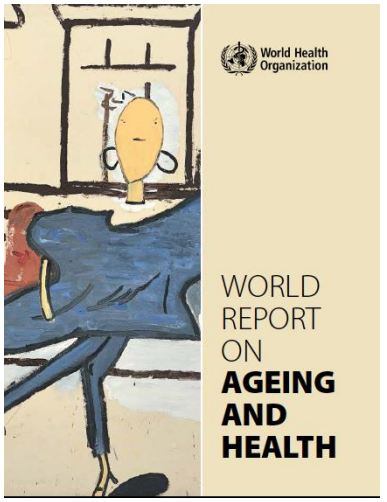
Abellan Van Khan et al, JNHA 2009

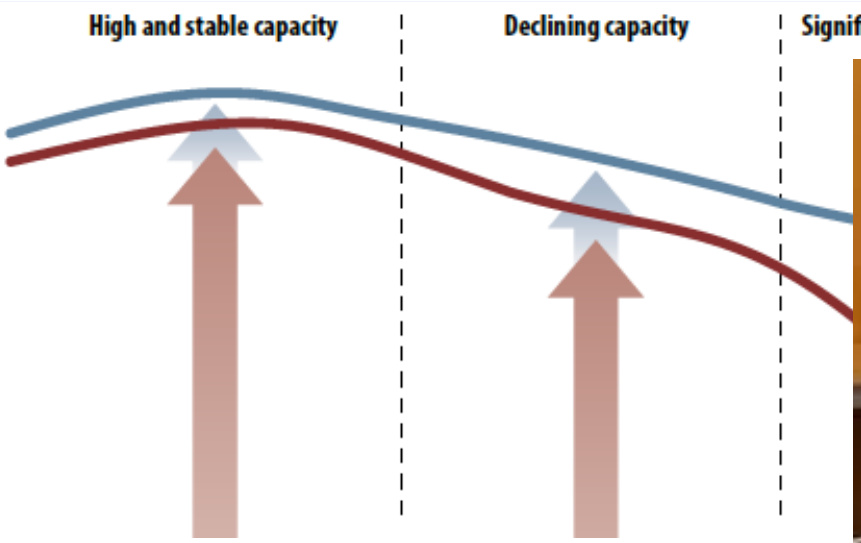
Studenski S, et al, , JAMA, 2011

Fragilitat i capacitat intrínseca

Period	High and stable capacity	Declining capacity	Significant loss of capacity
Risks and challenges	Risk behaviours, emerging NCDs	Falling mobility, sarcopaenia, frailty, cognitive impairment or dementia, sensory impairments	Difficulty performing basic tasks, pain and suffering caused by advanced chronic conditions







El índex de fragilidad por “Acumulación de déficits”

Canadian Study of Health and Aging

Table 2. Occurrence of the Individual Deficits and Their Odds Ratios for 10-Year Death

Variable Description	%, Odds Ratio (95% Confidence Interval) *P*-Value	
	Men (1,073)	Women (1,667)
Has long-term disability or handicaps	32.1, 2.37 (1.86–3.01) <.001	30.6, 1.34 (1.12–1.61).002
Restriction of activities	40.4, 2.29 (1.85–2.83) <.001	41.5, 1.21 (1.03–1.41).02
Needs help for preparing meals	6.3, 8.57 (3.92–18.75) <.001	7.8, 4.22 (2.70–6.58) <.001
Needs help for shopping for necessities	9.1, 5.79 (3.28–10.20) <.001	16.7, 3.16 (2.38–4.20) <.001
Needs help for house work	10.3, 6.79 (3.87–11.89) <.001	17.3, 1.93 (1.51–2.49) <.001
Needs help for heavy household chores	21.9, 4.11 (2.96–5.72) <.001	35.7, 1.63 (1.37–1.94) <.001
Needs help for personal care	4.6, 15.00 (4.66–48.27) <.001	5.2, 4.61 (2.64–8.06) <.001
Needs help moving about inside house	2.5, 11.50 (2.71–48.78) .001	2.6, 6.18 (2.61–14.66) <.001
Has arthritis or rheumatism	35.5, 1.55 (1.25–1.92) .01	48.8, 0.95 (0.79–1.06) .23
Has high blood pressure	23.7, 1.48 (1.14–1.92) .003	33.6, 0.88 (0.74–1.05) .15
Has chronic bronchitis or emphysema	8.3, 2.25 (1.76–4.64) <.001	6.1, 1.25 (0.82–1.89) .30
Has diabetes mellitus	11.7, 1.79 (1.24–2.59) .07	9.5, 1.92 (1.37–2.69) .001
Has heart disease	18.7, 2.38 (1.75–3.24) <.001	16.5, 1.46 (1.13–1.89) .004
Has cancer	5.1, 3.07 (1.64–5.73) <.001	5.4, 1.50 (1.07–2.10) .007
Has stomach or intestinal ulcers	5.6, 1.90 (1.10–3.26) .02	5.2, 1.19 (0.77–1.84) .44
Suffers from the effect of stroke	3.9, 5.65 (2.37–13.43) <.001	3.5, 1.54 (0.90–2.64) .11
Suffers from urinary incontinence	3.1, 2.49 (1.10–5.65) .29	4.5, 1.53 (0.95–2.47) .08
Has migraine headache	2.9, 1.89 (0.88–4.07) .10	5.1, 0.95 (0.60–1.49) .81
Has cataracts	9.6, 2.09 (1.37–3.18) .001	18.3, 1.23 (0.97–1.56) .09
Has glaucoma	3.4, 1.40 (0.72–2.71) .32	5.2, 1.39 (0.89–2.18) .15
Has other medical conditions	8.2, 1.42 (0.91–2.22) .12	8.5, 0.94 (0.66–1.33) .72
Have no regular physical exercise	48.8, 1.77 (1.46–2.14) <.001	55.7, 1.13 (0.98–1.30) .08
Has vision problem	5.6, 1.87 (1.08–3.23) .03	9.4, 2.01 (1.42–2.85) <.001
Has hearing problem	8.3, 2.75 (1.70–4.46) <.001	7.0, 1.43 (0.97–2.11) .07
Feeling hopeless	3.8, 2.19 (1.06–4.56) .04	6.2, 1.65 (1.08–2.54) .02
Has dexterity problem	2.9, 5.52 (1.86–16.35) .02	2.8, 2.01 (1.07–4.00) .03
Has emotional problem	4.3, 2.05 (1.08–3.91) .03	4.0, 1.56 (0.89–2.56) .12
Has memory problem	34.2, 1.80 (1.44–2.24) <.001	33.8, 0.85 (0.71–1.01) .06
Has bodily pain	26.4, 1.78 (1.38–2.31) .01	29.5, 1.04 (0.87–1.26) .66
Has speech problem	2.1, 3.29 (1.20–9.04) .02	1.5, 0.71 (0.32–1.60) .41
Taking 5 or more medications	10.6, 4.61 (2.74–7.76) <.001	13.0, 1.53 (1.13–1.53) .006
Has difficulty carrying or lifting light loads	30.3, 2.41 (1.89–3.07) <.001	31.7, 1.52 (1.26–1.82) <.001
Mobility problem	13.0, 4.98 (3.16–7.84) <.001	17.1, 2.34 (1.80–3.05) <.001
Has limited kind or amount of activity	30.2, 2.58 (2.01–3.30) <.001	33.7, 1.27 (1.07–1.51) .007
Feels tired all the time	8.4, 1.63 (1.09–3.31) .03	7.4, 1.58 (1.23–2.80) <.001
Weight loss	4.3, 2.15 (0.59–3.80) .48	3.9, 1.42 (1.15–2.46) <.001

dependéncia

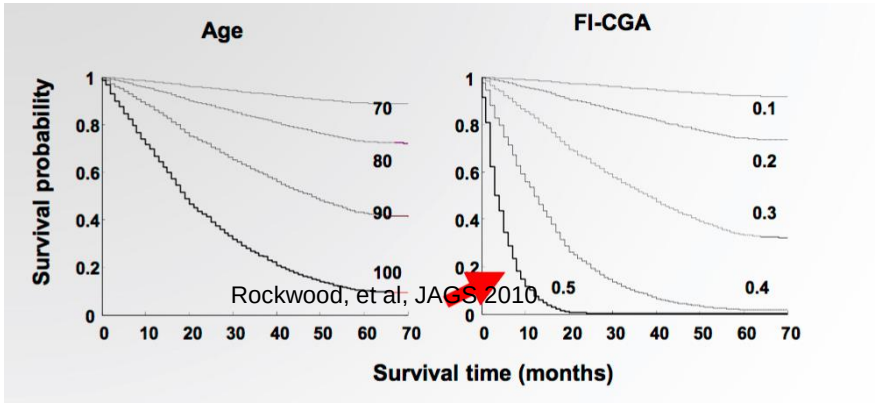
enfermedades

Síndromes geriátricos

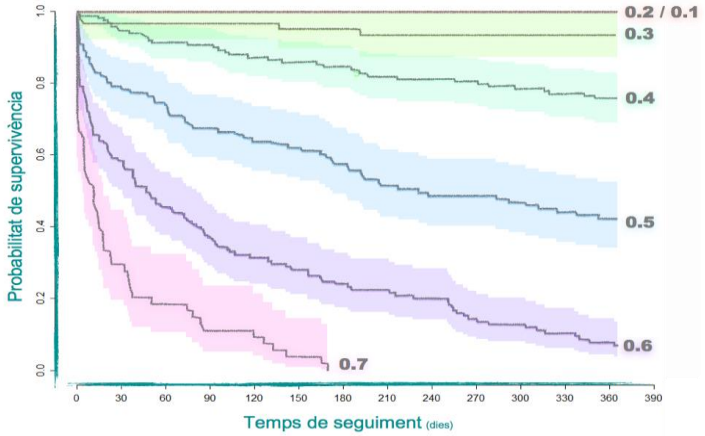
Song X, et al., JAGS 2010

IF y predicción de riesgos

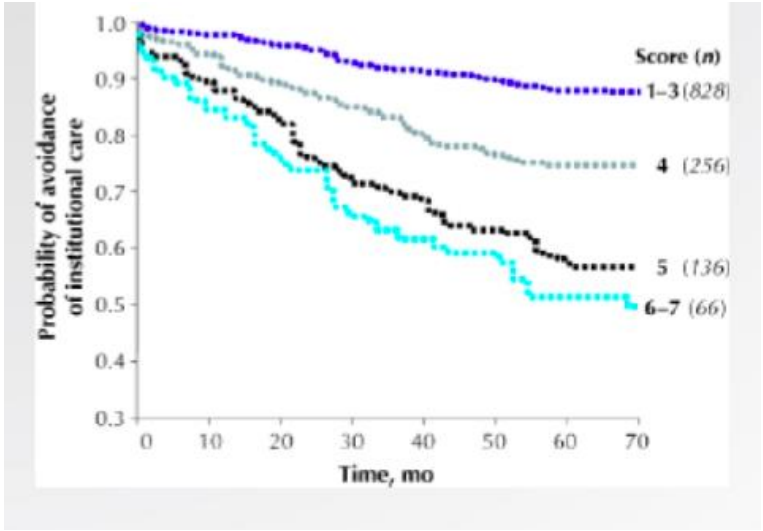
…de muerte

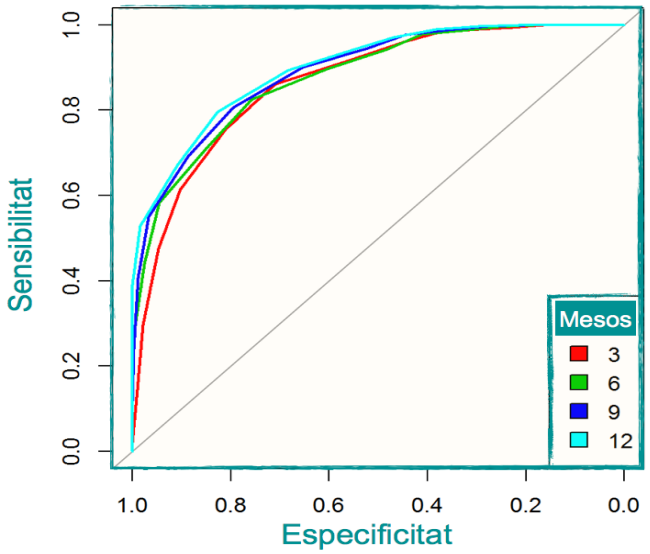


Rockwood, et al, JAGS 2010



…de ingreso en residencia





Rockwood, et al

Amblàs J, et al, REGG 2016

Una visión grafica

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.

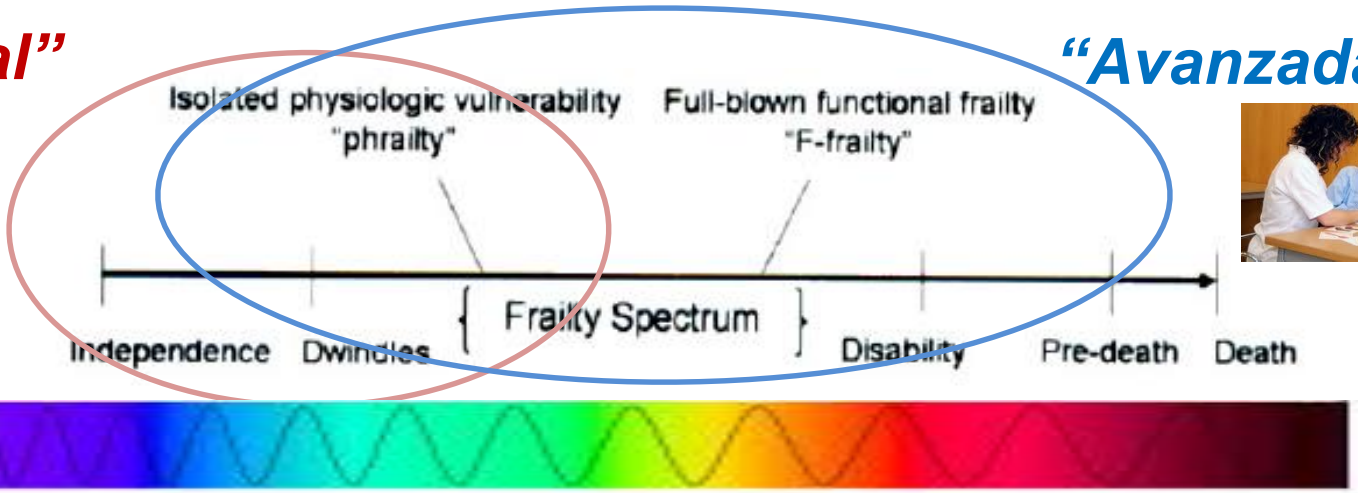
* 1. Canadian Study on Health & Aging, Revised 2008.
2. K. Rockwood et al. A global clinical measure of fitness and frailty in elderly people. CMAJ 2005;173:489-495.

DALHOUSIE UNIVERSITY
Inspiring Minds

Diferentes fases de un mismo espectro

"Inicial"

"Avanzada"



Fragilidad más cerca a la edad biológica, respeto a la edad cronológica

Clegg A, et al., Lancet 2013

¿De qué sirve medir la fragilidad?

FRAGILIDAD INICIAL

→ Prevención

FRAGILIDAD AVANZADA

→ Toma de decisiones CON la persona para adecuar la intervención

3 mensajes

1. Revertir la fragilidad inicial se puede

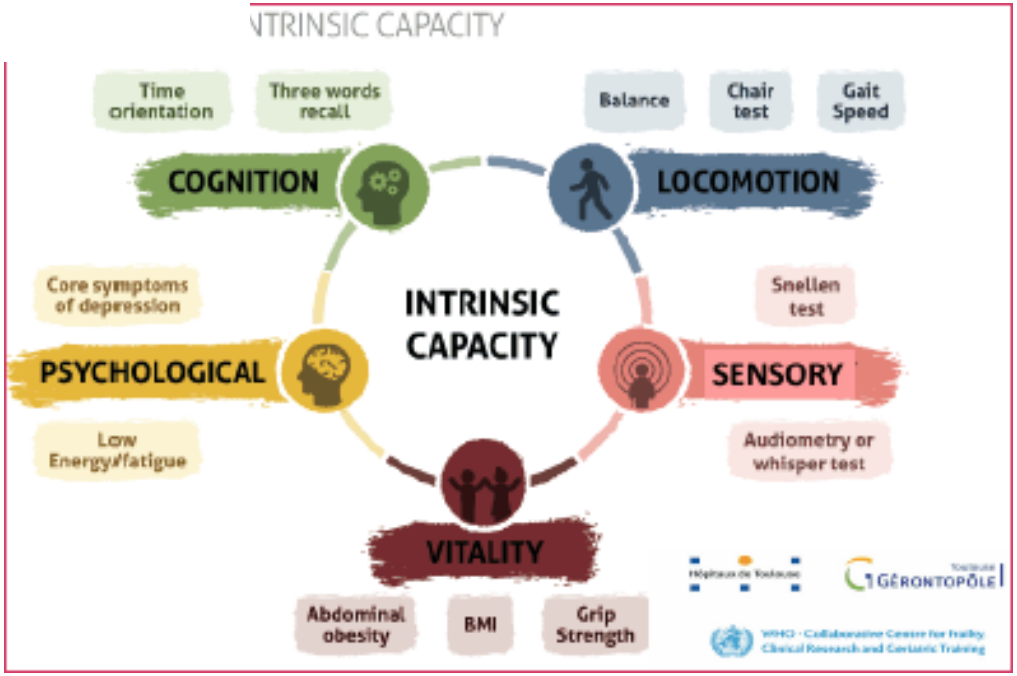
2. El reto es superar “el abismo entre investigación y implantación real”

3. Medir la fragilidad avanzada es clave para proporcionar intervenciones adecuadas y compartidas con las personas

Mensaje 1: la fragilidad se puede reverti como mínimo en el laboratorio

Pahor M, 2006, Cameron D, 2013, Pahor M 2014, Fielding R 2017, Tarazona F 2016, Romera L 2018, Kivipelto 2018, Oh G 2022...etc


MAGIC PILL


NTRINSIC CAPACITY
Time orientation
Three words recall
Balance
Chair test
Gait Speed
COGNITION
LOCOMOTION
Core symptoms of depression
INTRINSIC CAPACITY
Snellen test
PSYCHOLOGICAL
SENSORY
Low Energy/fatigue
Audiometry or whisper test
VITALITY
Abdominal obesity
BMI
Grip Strength
GÉRONTOPÔLE

Mensaje 2.

El reto: superar el abismo

#mesAgil

El programa per envellir en positiu

En medicina, la **fragilitat** és un estat de vulnerabilitat davant de les discapacitats.

10-40 % de les persones amb més de 65 anys es troba en un estat de fragilitat.

112 persones de BCN van veure reduïda la seva fragilitat amb 3 mesos de +AGIL.

Ajut a l'envelliment i la qualitat de vida

Investigador líder del projecte:
Marco Inzitari, VHIR

Un projecte de:

En uns anys, gairebé el 30% de la població serà més gran de 65 anys. Amb l'envelliment, la **fragilitat de les persones augmenta**, i pot derivar en **discapacitat i dependència**. És un repte urgent; doncs, implementar mesures innovadores per minimitzar o revertir aquesta situació.

L'innovador programa pilot +AGIL va reduir la fragilitat a **112 persones de l'Àrea Bàsica de Salut (ABS) Bordeta-Magòria al Districte de Sants-Montjuïc**. La clau va consistir en el codisseny amb l'usuari final, així com en la reorganització de mesures existents per tal d'integrar l'atenció primària, la geriatria i els recursos comunitaris en un mateix tractament compartit. Aquest tractament inclou **activitat física, una medicació adequada i intervencions en la dieta, la soledat els trastorns cognitius i l'adherència al tractament.**

Arran de l'èxit aconseguit, es vol ampliar aquest programa interdisciplinari a **180 participants** de tres ABS més de Barcelona, adaptant el programa a cada ABS amb participació de ciutadans i professionals, i estudiant-ne la implementació. Els resultats obtinguts seran determinants a l'hora de **millorar les pràctiques, estratègies i polítiques en salut** de la nostra ciutat.

"la Caixa"

Ajuntament de Barcelona

Pilares del proyecto (inicio: 2016)

Atención integrada: integración geriatría + atención primaria + recursos sociales/comunitarios en la vida real, cercana a la persona

Participación y empoderamiento de las personas: co-diseño con los usuarios + empoderamiento

Sostenibilidad: sin recursos añadidos, sino reorganización de los existentes; adaptación flexible a los recursos comunitarios existentes

Atención primaria

- >80 años o con perfil de riesgo (lentitud, problemas de memoria, pérdida de peso involuntaria, riesgo social…)
- Screening: Gerontopôle FST

Geriatría

- Valoración integral por geriatra y fisioterapeuta
- Herramientas de fragilidad (SPPB, CFS)

Plan de intervención individualizado (ejercicio grupal, nutrición, sueño, medicación, soledad)

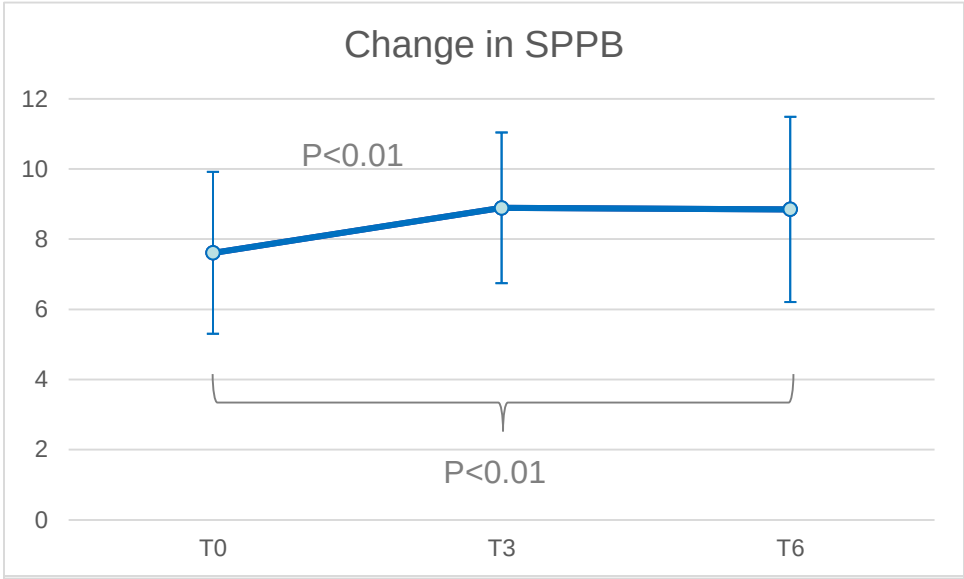
Seguimiento a 3 meses (max. 1 visita)

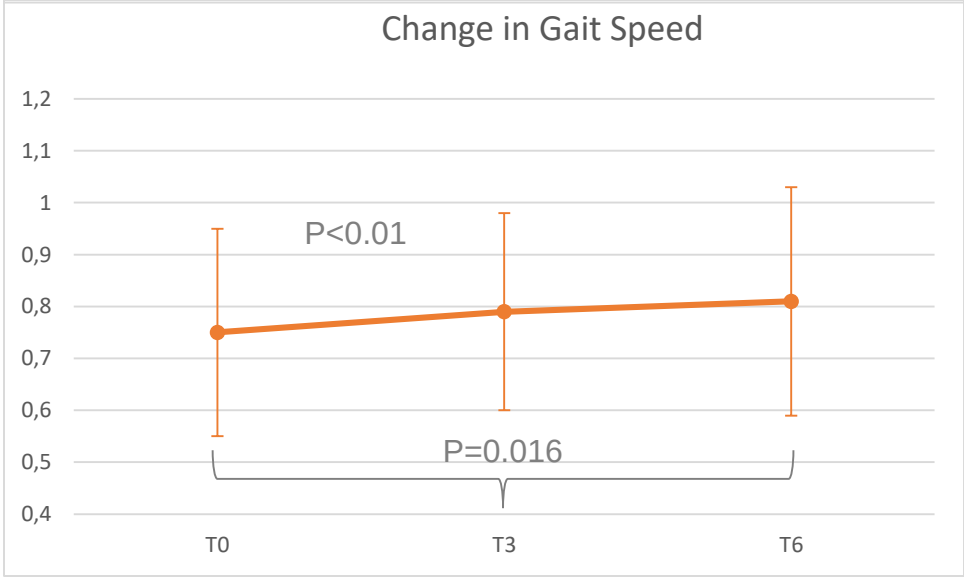
PT

Geriatrician

Continuidad en recursos de la comunidad

Impacto a 3 y 6 meses





#REFiTBcn research group

ÀgilBCN

Pérez LM, et al, JNHA 2019

Parc Sanitari Pere Virgili

Vall d'Hebron Institut de Recerca VHIR

¿Cómo seguir con la actividad?

- **Empoderamiento de la persona**
  - Estímulo a responsabilizar-se y practicar
  - Herramientas de soporte: apps dedicadas

- **Recursos comunitarios**
  - FT + TS identifican recursos
  - Co-diseño con Casal Cívico

#REFiTBcn research group

ÀgilBCN

Parc Sanitari Pere Virgili

Vall d'Hebron Institut de Recerca VHIR

Mensaje 3: Medir la fragilidad avanzada es clave para proporcionar intervenciones adecuadas y compartidas con las personas

Fragilidad en pacientes oncológicos o cardíacos

Frailty and Cancer: Implications for Oncology Surgery, Medical Oncology, and Radiation Oncology

Cecilia G. Ethun, MD, MS[1]; Mehmet A. Bilen, MD[2]; Ashesh B. Jani, MD, MSEE[3]; Shishir K. Maithel, MD, FACS[4]; Kenneth Ogan, MD, FACS[5]; Viraj A. Master, MD, PhD, FACS[4,7]

CME CNE

[1]General Surgery Resident, Division of Surgical Oncology, Department of Surgery, Winship Cancer Institute, Emory University, Atlanta, GA; [2]Assistant Professor, Department of Hematology and Medical Oncology, Winship Cancer Institute, Emory University, Atlanta, GA; [3]Professor, Department of Radiation Oncology, Winship Cancer Institute, Emory University, Atlanta, GA; [4]Associate Professor, Division of Surgical Oncology, Department of Surgery, Winship Cancer Institute, Emory University, Atlanta, GA; [5]Professor of Urology, Department of Urology, Winship Cancer Institute, Emory University, Atlanta, GA; [6]Professor, Department of Urology, Winship Cancer Institute, Emory University, Atlanta, GA; [7]Director of Clinical Research, Department of Urology, Winship Cancer Institute, Emory University, Atlanta, GA.

Corresponding author: Viraj A. Master, MD, PhD, Department of Urology, Winship Cancer Institute, Emory University, 1365B Clifton Rd NE, Atlanta, GA 30322; vmaster@emory.edu

DISCLOSURES: The authors made no disclosures.

doi: 10.3322/caac.21406. Available online at cacancerjournal.com

Abstract: The concept of frailty has become increasingly recognized as one of the most important issues in health care and health outcomes and is of particular importance in patients with cancer who are receiving treatment with surgery, chemotherapy, and radiotherapy. Because both cancer itself, as well as the therapies offered, can be significant additional stressors that challenge a patient's physiologic reserve, the incidence of frailty in older patients with cancer is especially high–it is estimated that over one-half of older patients with cancer have frailty or prefrailty. Defining frailty can be challenging, however. Put simply, frailty is a state of extreme vulnerability to stressors that leads to adverse health outcomes. In reality, frailty is a complex, multidimensional and cyclical state of diminished p and adaptive capacity and incr different measures of frailty hav frail patients are at increased ris erance, disease progression, a frailty cutoff points are needed, to identify frailty and promote more individualized managemen CA Cancer J Clin 2017;000:000

Keywords: complications, Co phenotypic frailty, survival

Practical Implications fo

> The concept of frailty has important issues in health importance in patients wit and radiotherapy. Howeve

> Frailty is a complex, multi physiologic reserve that r and increased vulnerabilit

> It has been demonstrated that frail patients are at increased risk of postoperative complications, chemotherapy intolerance, disease progression, and death. Although international standardization of frailty cutoff points is needed, continued efforts by oncology physicians and surgeons to identify frailty and promote multidisciplinary decision making will help to develop more individualized management strategies and optimize care for patients with cancer.

J Am Coll Cardiol. Author manuscript; available in PMC 2015 Sep 16.
Published in final edited form as:
J Am Coll Cardiol. 2014 Mar 4; 63(8): 747–762.
Published online 2013 Nov 27. doi: 10.1016/j.jacc.2013.09.070
PMCID: PMC4571179
NIHMSID: NIHMS639665

Frailty Assessment in the Cardiovascular Care of Older Adults

Jonathan Afilalo, MD, MSc,[*] Karen P. Alexander, MD,[†] Michael J. Mack, MD,[‡] Mathew S. Maurer, MD,[§] Philip Green, MD,[§] Larry A. Allen, MD, MPH,[‖] Jeffrey J. Popma, MD,[¶] Luigi Ferrucci, MD, PhD,[#] and Daniel E. Forman, MD[**]

Author information ▶ Copyright and License information ▶

Abstract Go to:

Due to the aging and increasingly complex nature of our patients, frailty has become a high-priority theme in cardiovascular medicine. Despite the recognition of frailty as a pivotal element in the evaluation of older adults with cardiovascular disease (CVD), there has yet to be a road map to facilitate its adoption in routine clinical practice. Thus, we sought to synthesize the existing body of evidence and offer a perspective on how to integrate frailty into clinical practice. Frailty is a biological syndrome that reflects a state of

Ethun C, et al, 2017

3 mensajes

1. Revertir la fragilidad inicial se puede

2. El reto es superar “el abismo entre investigación y implantación real”

3. Medir la fragilidad avanzada es clave para proporcionar intervenciones adecuadas y compartidas con las personas

La clave: participación y colaboración entre actores

Barcelona Aging coLLaboratory (BALL)

Aging Living Lab

Financiación

El proyecto +ÀGIL Barcelona ha recibido diferentes premios y financiación para la investigación y implementación

Cercle de Salut

Societat Catalana de Gestió Sanitària

Ajuntament de Barcelona

"la Caixa"

#REFiTBcn research group

+ÀgilBCN

Parc Sanitari Pere Virgili

Vall d'Hebron Institut de Recerca VHIR

minzitari@perevirgili.cat @marcoinzi

Recerca en Envelliment, Fragilitat i Transicions a Barcelona

PRESENTACIÓ | EQUIP | LÍNIES DE RECERCA | NOTÍCIES | PROJECTES