Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

ST. JAMES'S HOSPITAL
DUBLIN . IRELAND

Investigating and Modifying Frailty in PLWHIV

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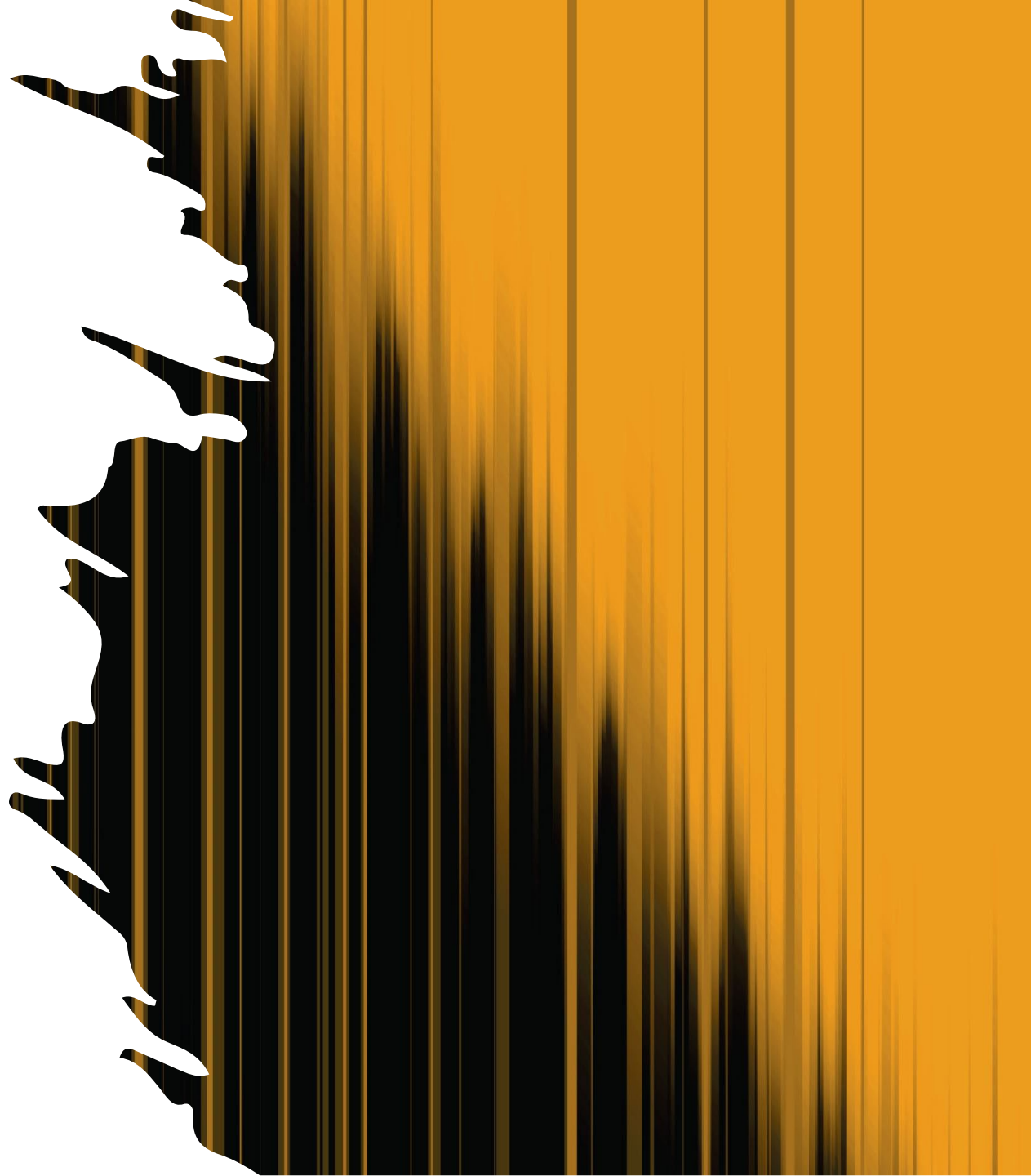
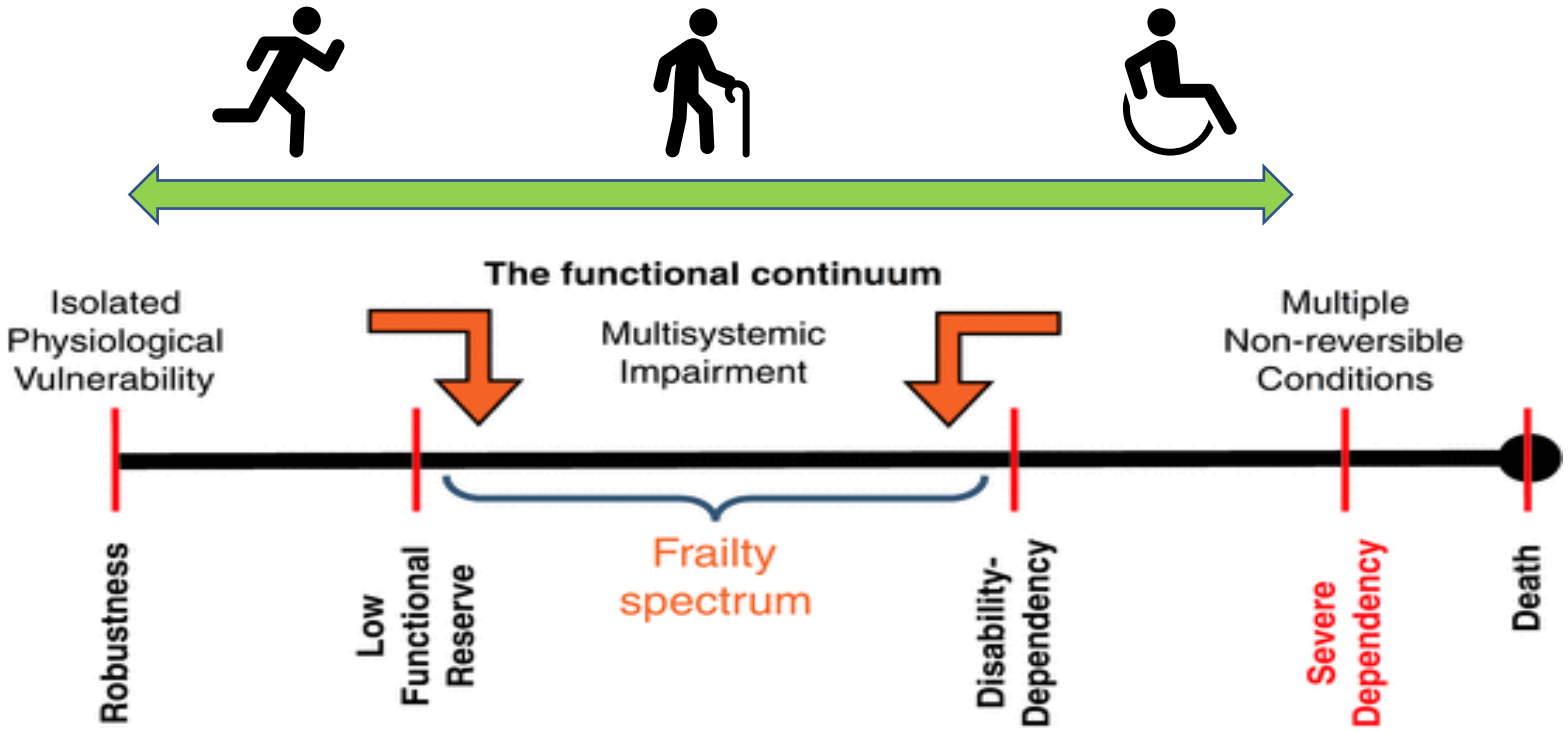
St James's Hospital, Dublin, Ireland

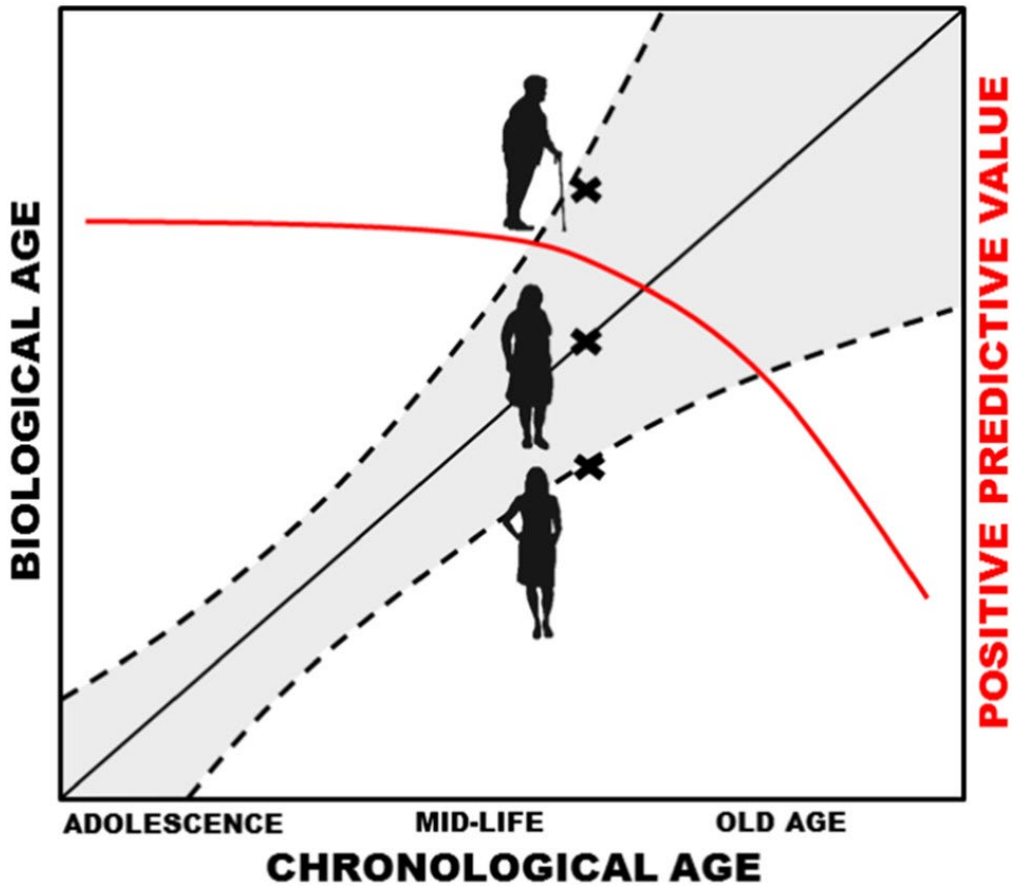


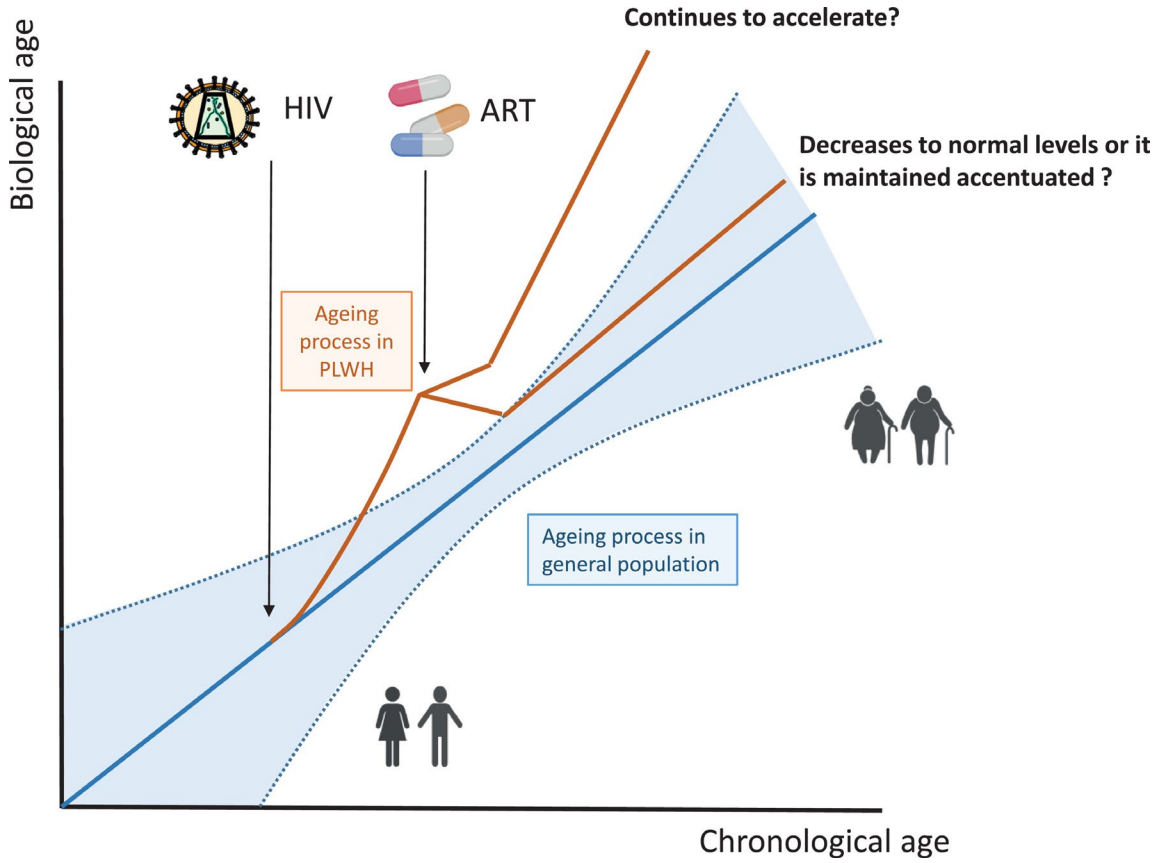
Frailty



Rodriguez-Mañas, L. and Mora, M.A.C., The Concept of Frailty and Functional Decline.

Types of Ageing





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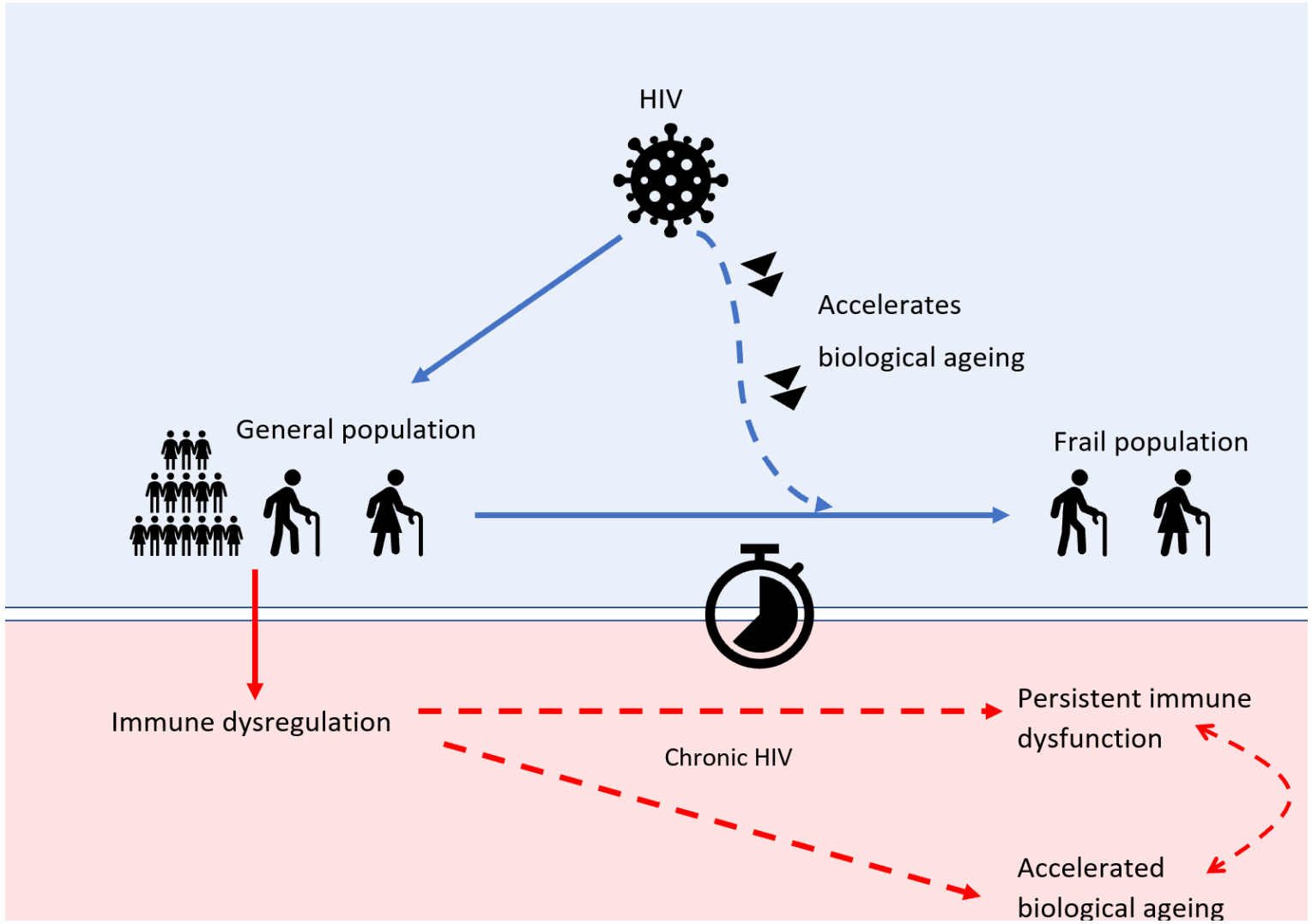
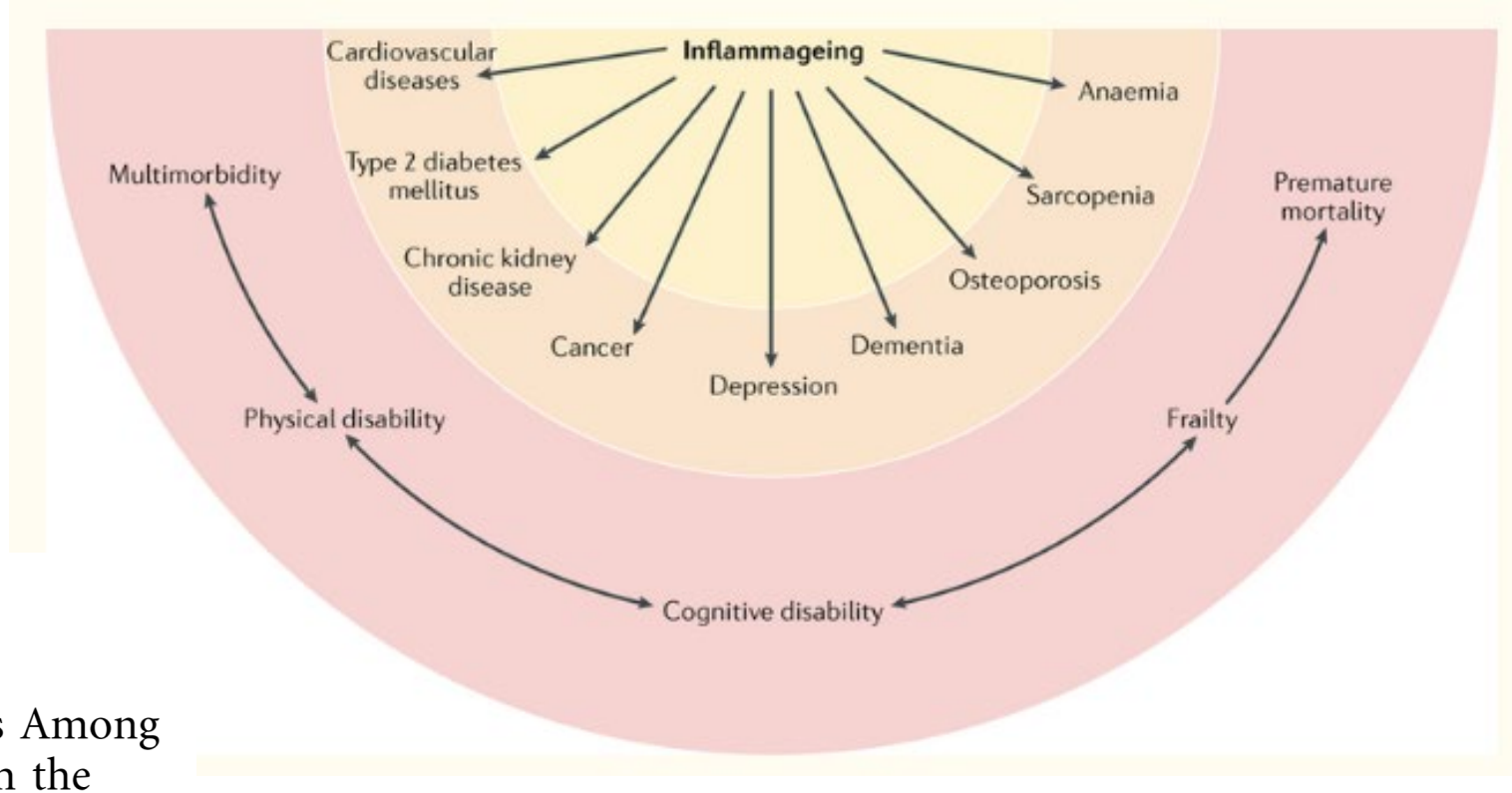
Proposed mechanisms of HIV-associated frailty



Inflammageing



HIV/AIDS MAJOR ARTICLE

Premature Age-Related Comorbidities Among HIV-Infected Persons Compared With the General Population

Giovanni Guaraldi,[1] Gabriella Orlando,[1] Stefano Zona,[1] Marianna Menozzi,[1] Federica Carli,[1] Elisa Garlassi,[1] Alessandra Berti,[2] Elisa Rossi,[2] Alberto Roverato,[3] and Frank Palella[4]

Prevalence of HIV and chronic comorbidities among older adults

Joel Negin[a], Alexandra Martiniuk[a,b,c], Robert G. Cumming[a], Nirmala Naidoo[d], Nancy Phaswana-Mafuya[e,f], Lorna Madurai[g], Sharon Williams[h] and Paul Kowal[d]

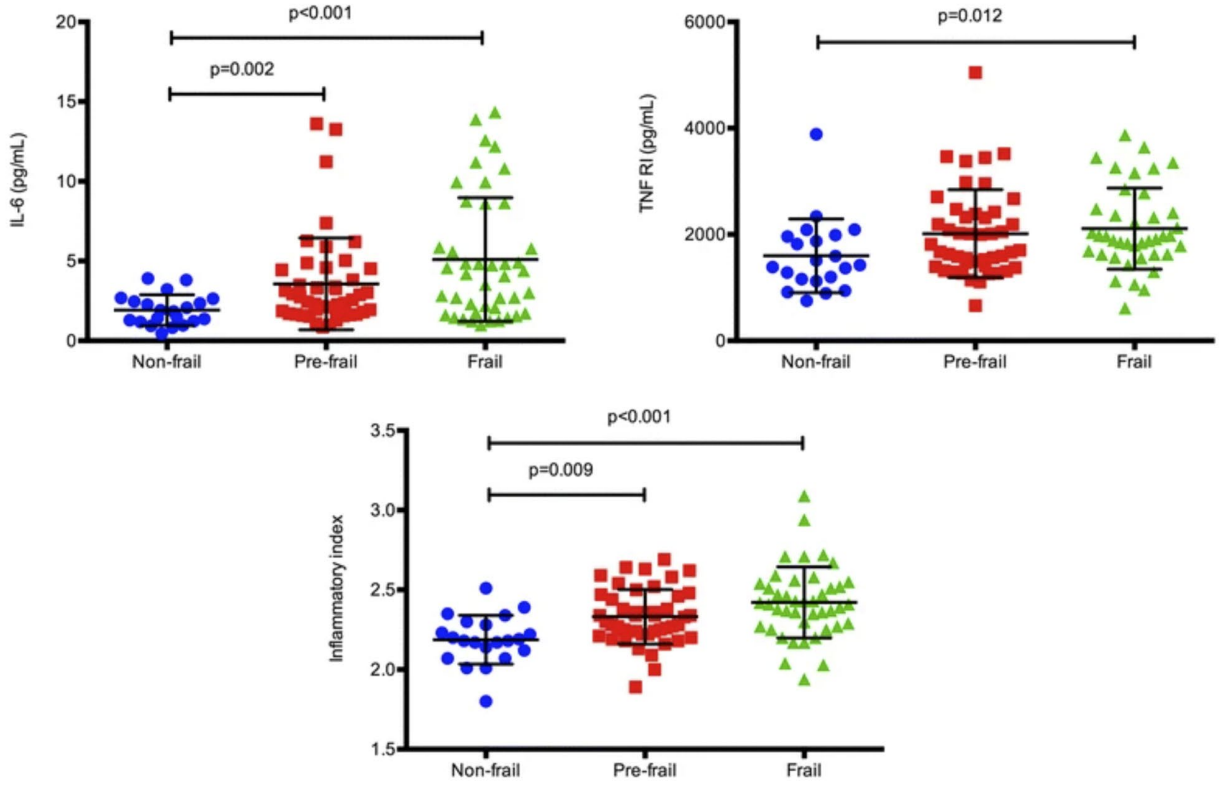
Contributions of traditional and HIV-related risk factors on non-AIDS-defining cancer, myocardial infarction, and end-stage liver and renal diseases in adults with HIV in the USA and Canada: a collaboration of cohort studies

Keri N Althoff, Kelly A Gebo, Richard D Moore, Cynthia M Boyd, Amy C Justice, Cherise Wong, Gregory M Lucas, Marina B Klein, Mari M Kitahata, Heidi Crane, Michael J Silverberg, M John Gill, William Christopher Mathews, Robert Dubrow, Michael A Horberg, Charles S Rabkin, Daniel B Klein, Vincent Lo Re, Timothy R Sterling, Fidel A Desir, Kenneth Lichtenstein, James Willig, Anita R Rachlis, Gregory D Kirk, Kathryn Anastos, Frank J Palella Jr, Jennifer E Thorne, Joseph Eron, Lisa P Jacobson, Sonia Napravnik, Chad Achenbach, Angel M Mayor, Pragna Patel, Kate Buchacz, Yuezhou Jing, Stephen J Gange for the North American AIDS Cohort Collaboration on Research and Design

Evidence of inflammation

Odds of Frailty and Prefrailty by Level of Inflammation in ALIVE*

Model	Prefrail	Prefrail	Frail	Frail
	Unadjusted	Adjusted †	Unadjusted	Adjusted †
	OR (95% CI)	OR (95% CI)	OR (95% CI)	OR (95% CI)
IL-6	1.13 (0.99–1.29)	1.09 (0.95–1.26)	1.40 (1.17–1.68)	1.33 (1.09–1.61)
sTNFR1	1.08 (0.93–1.24)	1.03 (0.89–1.19)	1.40 (1.17–1.66)	1.25 (1.04–1.51)
Inflammatory index score	1.13 (0.99–1.30)	1.08 (0.94–1.25)	1.53 (1.28–1.83)	1.39 (1.14–1.68)

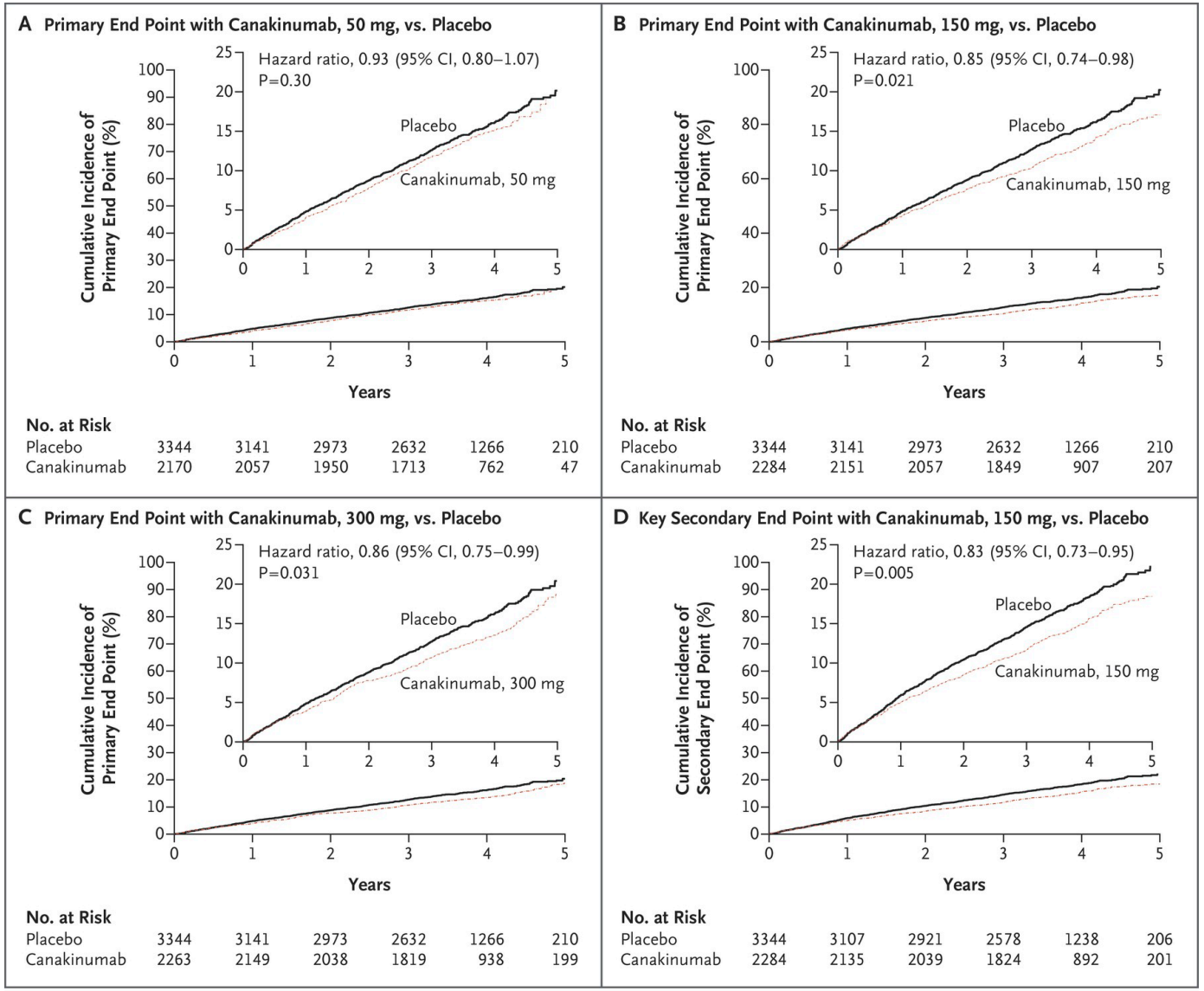


doi.org/10.1093/gerona/glv107

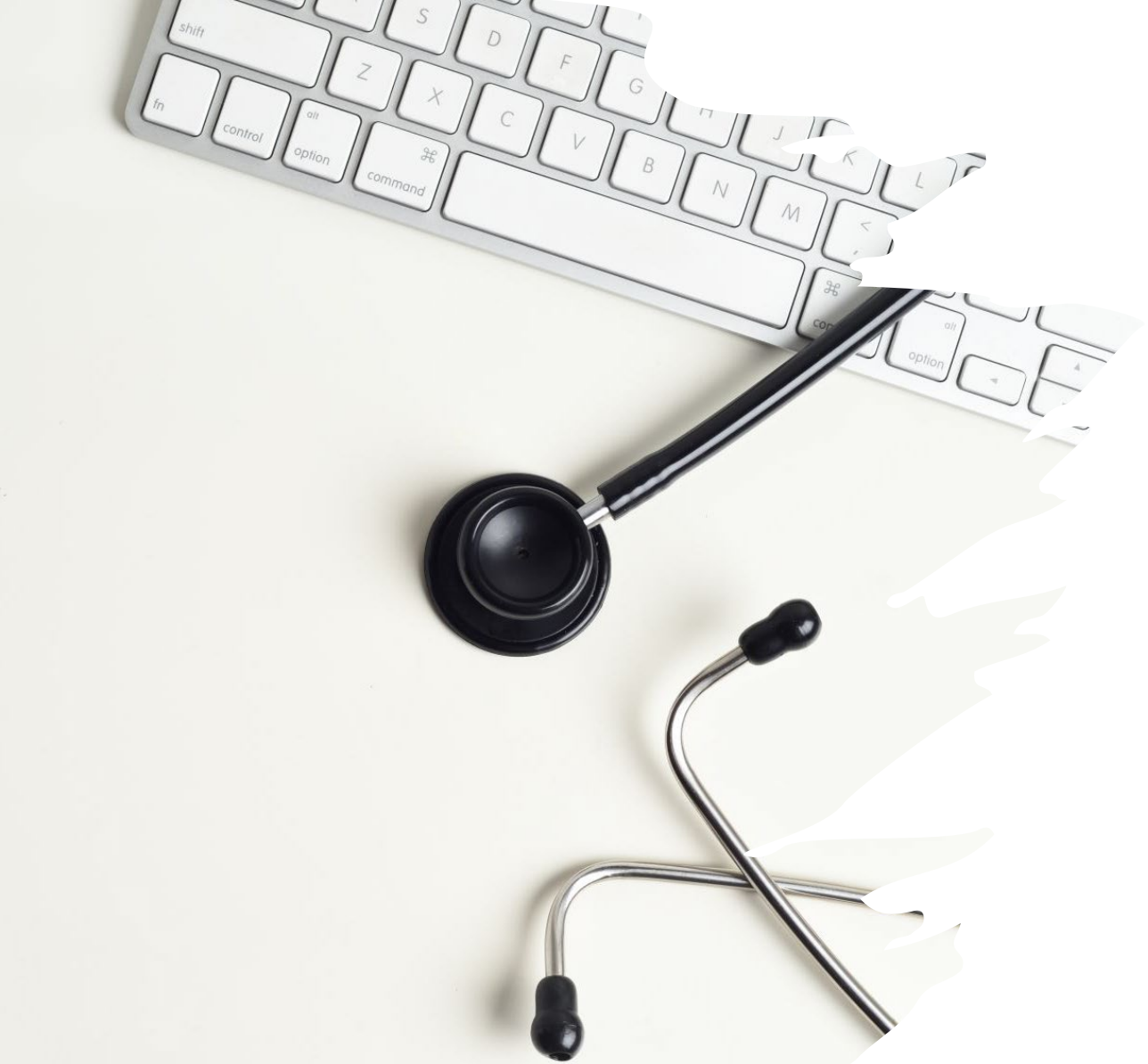
doi.org/10.1186/s12979-016-0082-z

Type	Biomarker	Hallmarks of cell ageing covered
Nucleic acid-based	Telomere lenght	Telomere attrition
	Epigenetic clocks	Epigenetic alterations
	Mitocondrial DNA	Mitochondrial dysfunction
Protein-based	Apolipoprotein J/Clusterin (ApoJ/CLU)	Cellular senescence
	Proteasome subunits	Loss of proteostasis
Metabolic-based	NAD/NADH ratio	Mitochondrial dysfunction
	Lipid alterations in plasma	Deregulated nutrient sensing
	Plasma levels of essential amino-acids	Deregulated nutrient sensing
Immunologic	Soluble inflammatory markers (sCD14, sCD163, IL-6, hsCRP, D-dimer)	Inflammageing
	Cell surface molecules (CD28, CD96)	Cellular senescence and exhaustion
Integrative	MARK-AGE	Epigenetic alterations Mitochondrial dysfunction Deregulated nutrient sensing Inflammageing

Modifiable?



10.1056/NEJMoa1707914



Modifications

- MDT….! (Geriatrician, physio, OT, dietician…)
- Medication opimisation
  - Deprescribing
- Comorbidity management
- Physical function interventions
- Peer support groups

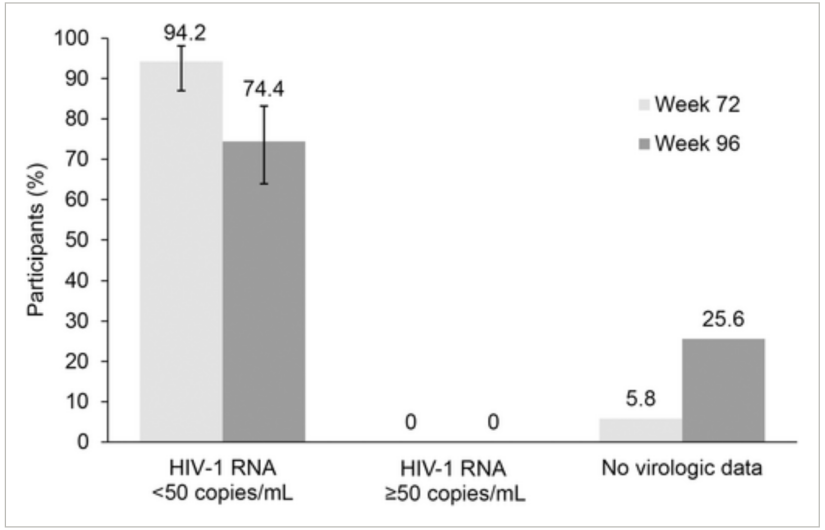
- Advance care planning…

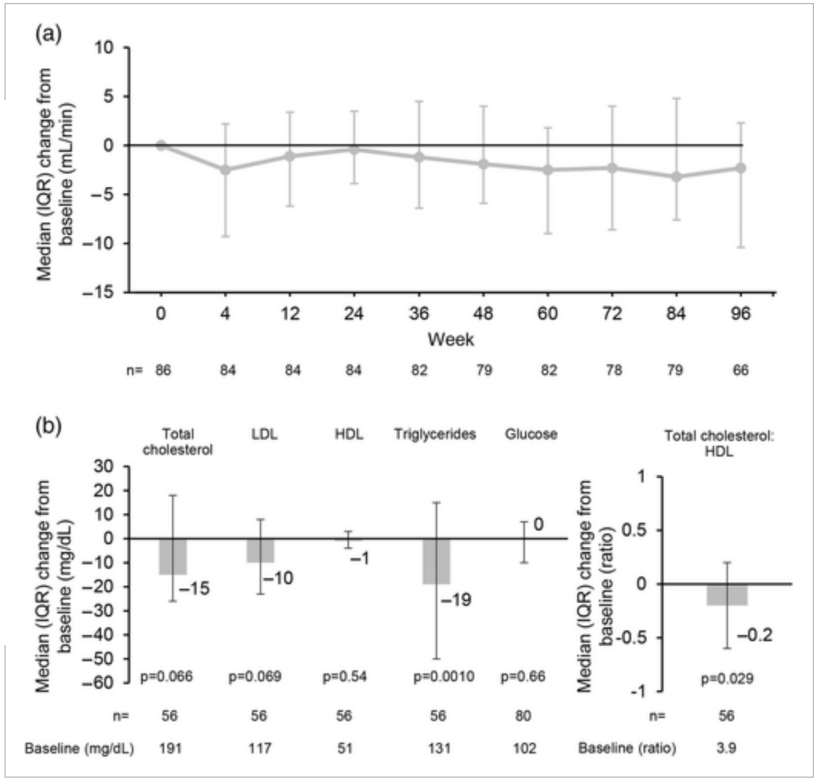
ART Optimisation in Frailty & Increasing Age

Bictegravir/emtricitabine/tenofovir alafenamide in older individuals with HIV: Results of a 96-week, phase 3b, open-label, switch trial in virologically suppressed people ≥65 years of age

Franco Maggiolo, Giuliano Rizzardini, Jean-Michel Molina, Federico Pulido, Stephane De Wit, Linos Vandekerckhove, Juan Berenguer, Michelle L. D'Antoni, Christiana Blair ... See all authors

First published: 08 May 2022 | https://doi.org/10.1111/hiv.13319 | Citations: 1





Conclusions

NO AGREED NON-PHENOTYPIC ASSESSMENT OF FRAILTY

CHRONIC INFLAMMATION

NO PHARMACOLOGICAL INTERVENTIONS FOR *FRAILTY*

PHENOTYPIC APPROACH AND FUNCTIONAL INTERVENTIONS REMAIN MAINSTAY OF THERAPY