

Prevenzione vaccinale e contrasto alla fragilità dell' anziano

Roberto Bernabei

2023

100+ years old

20,445

83% women – 17% men

105+ years old

844

87% women – 13% men

110+ years old

24

92% women – 8% men

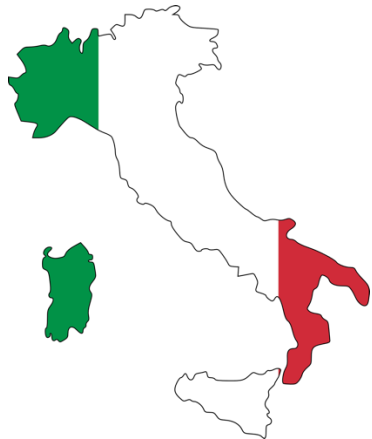
People aged ≥ 100 years in 2024 \rightarrow 22,552 (+2000 persons vs. 2023)

2023:

- 818,970 persons aged ≥ 90 yrs
- 179,188 persons aged ≥ 95 yrs

2024:

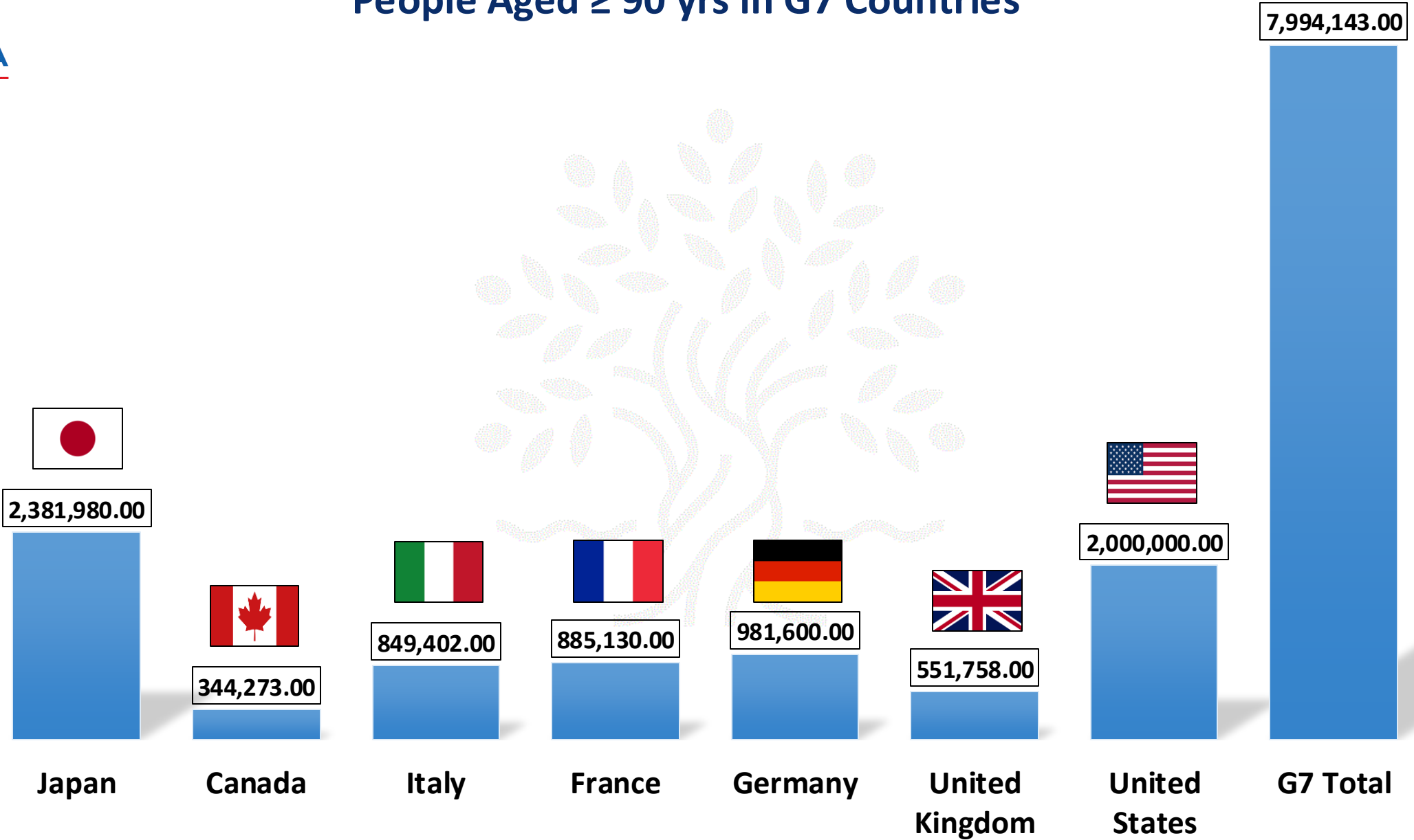
- 849,402 persons aged ≥ 90 yrs
- 189,718 persons aged ≥ 95 yrs



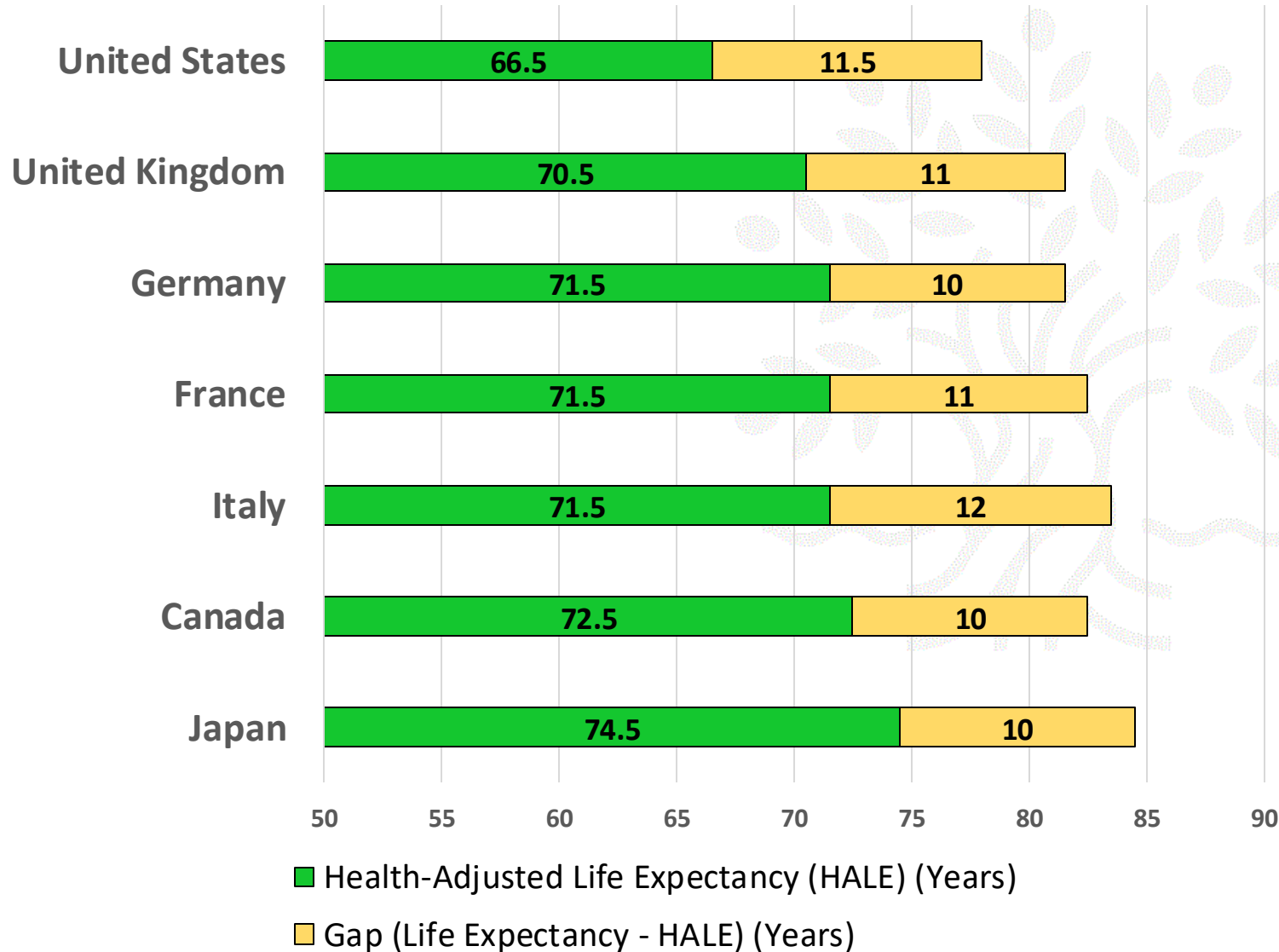
% change from 2023:

- + 3.7%
- + 5.9%

People Aged ≥ 90 yrs in G7 Countries



Lifespan/Healthspan Gap in G7 Countries



...there is a recognized gap between lifespan (the total life lived) and healthspan (the period free from disease). Using health-adjusted life expectancy, ... the healthspan-lifespan gap is estimated at around 10 years

Review
Hallmarks of aging: An expanding universe

Dysbiosis

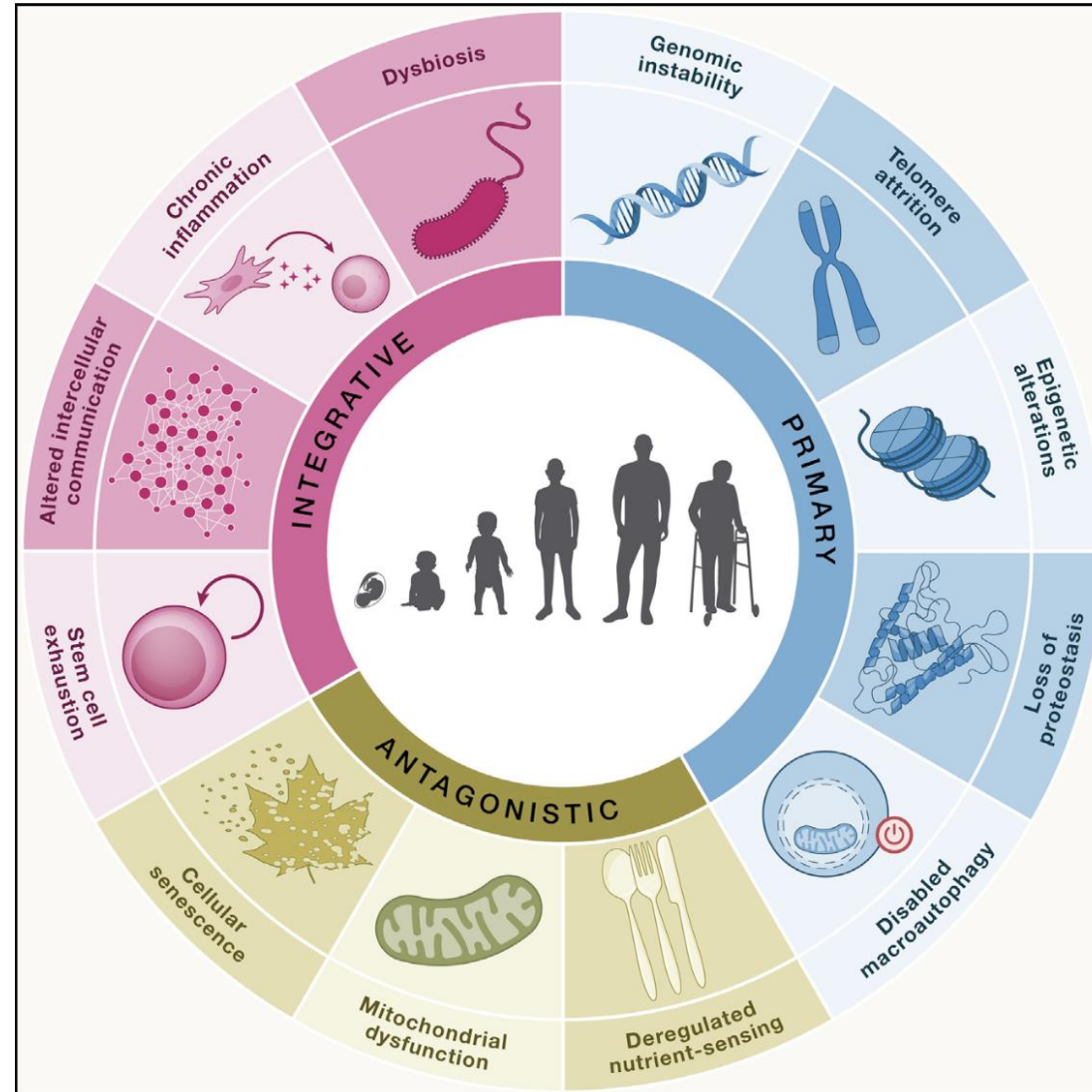
Chronic Inflammation

Altered Intercellular Communication

Stem cell exhaustion

Cellular senescence

Mitochondrial Dysfunction



Genomic Instability

Telomere Attrition

Epigenetic Alterations

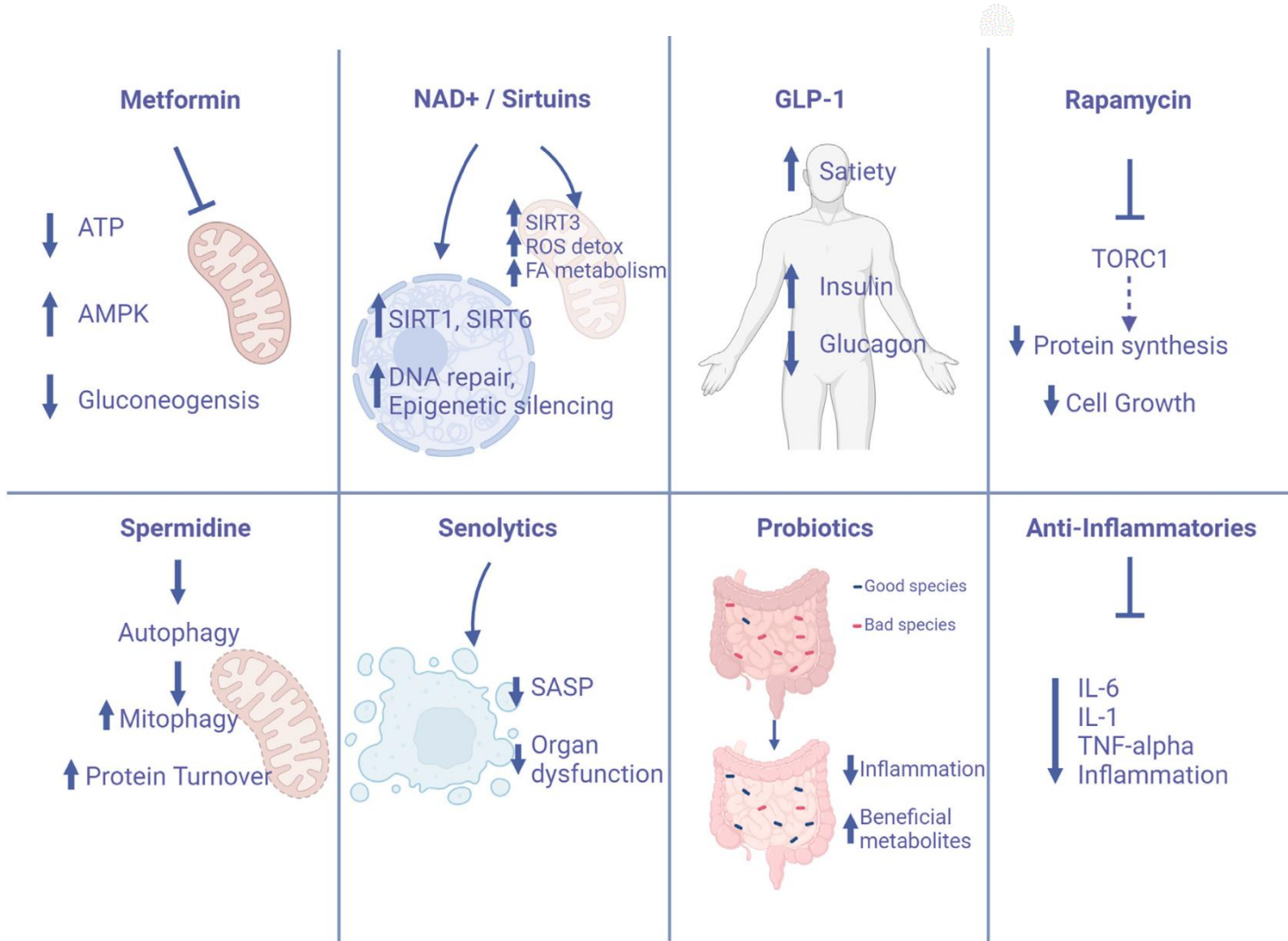
Loss of Proteostasis

Disabled Macroautophagy

Deregulated Nutrient-Sensing

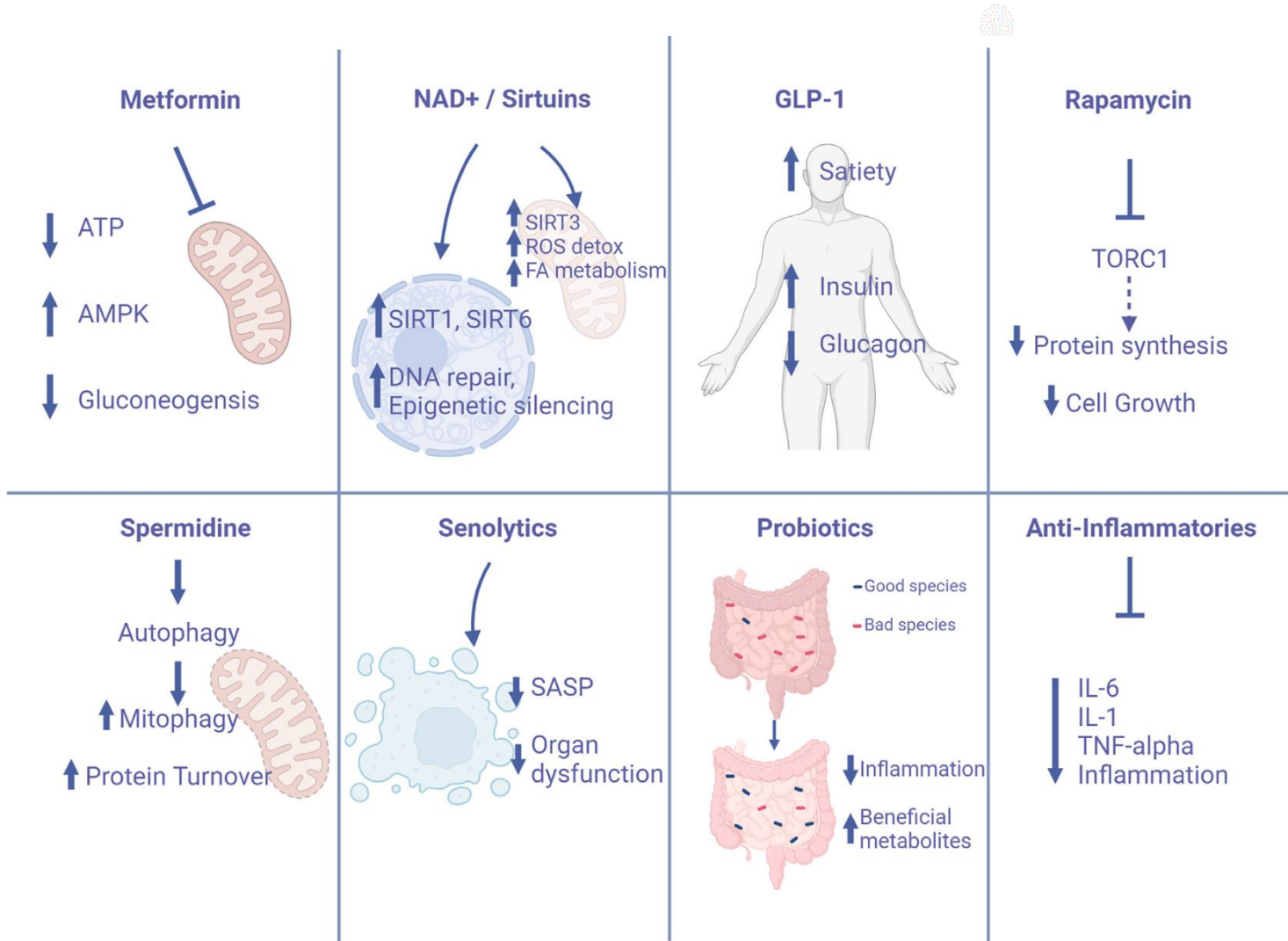
Human trials exploring anti-aging medicines

Leonard Guarente,^{1,2,*} David A. Sinclair,^{2,3} and Guido Kroemer^{2,4,5,6,*}



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NEWS | 02 September 2024

Senolytics target cellular senescence – but can they slow aging?

By [Natalie Healey](#)

«Senolytics can prevent and treat age-related diseases in mice, but data in humans are lacking — for now.»

Blue Zones



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ICARIA, *Greece*

LOMA LINDA, *US*

NICOYA, *Costa Rica*

OKINAWA, *Japan*

www.bluezones.com



Blue Zones: The 7 Principles



Move Naturally



Eat Wisely



Avoid Stress & Get plenty of Sleep



Keep Strong Family Ties



Stimulate Strong Community Support



Respect for the Planet

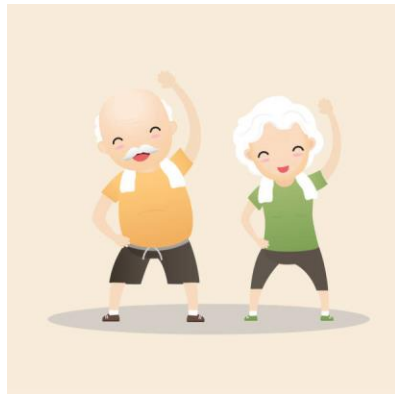


Having a Purpose in Life

Multicomponent intervention to prevent mobility disability in frail older adults: randomised controlled trial (SPRINTT project)

Bernabei R et al. BMJ 2022;377:e068788

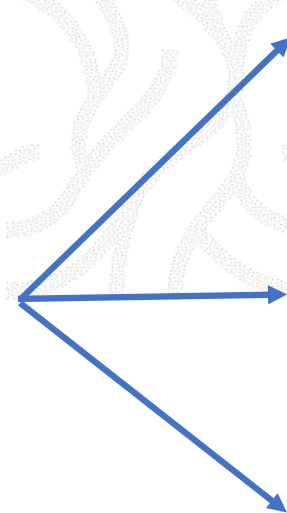
Multicomponent Intervention
(Healthy lifestyle)



Exercise



Nutrition



risk of developing
mobility disability

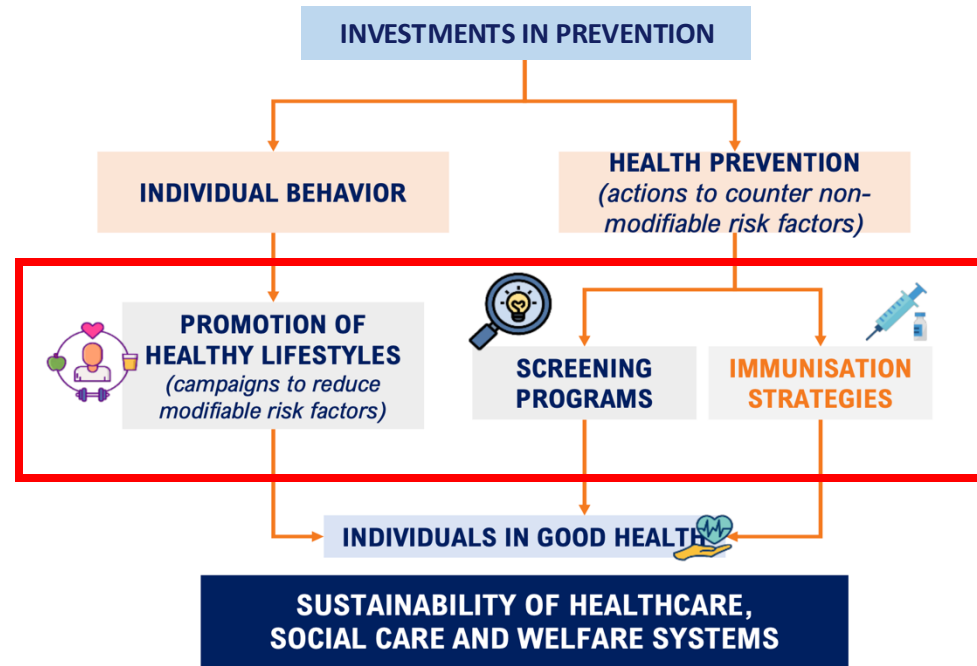


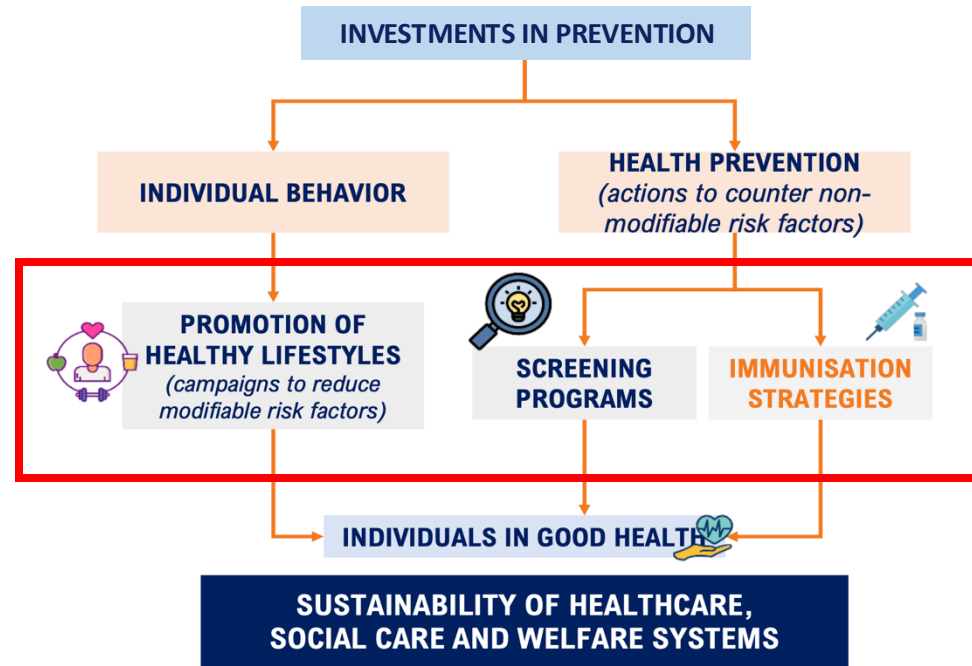
Physical Function



Muscle loss (in women)



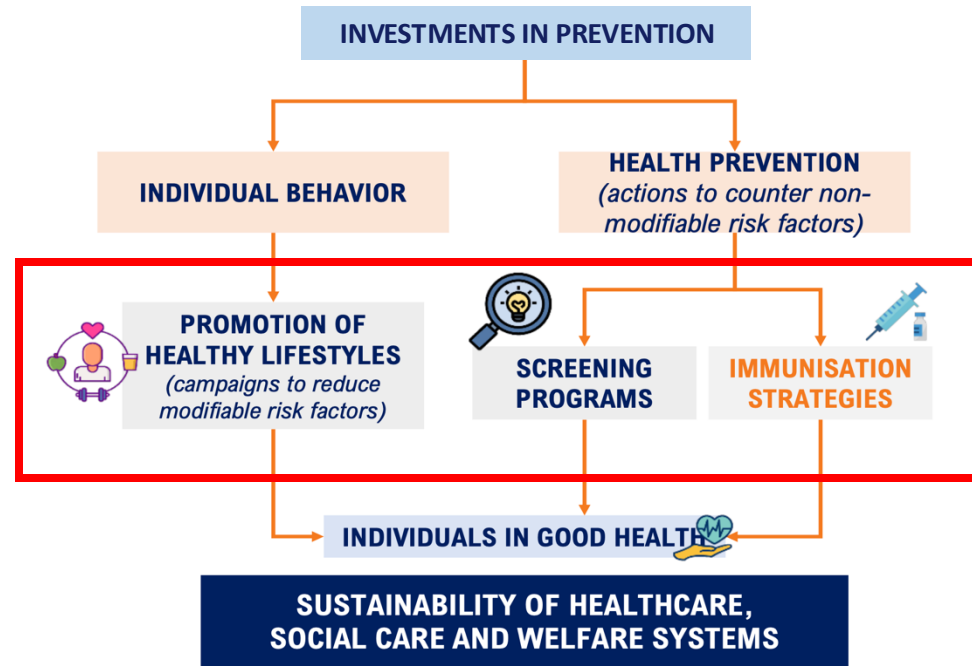





Studies suggest that **every 1 euro spent on preventative healthcare** generates a **14 euro return to the health and social care economy.**

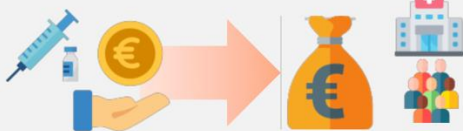
TEHA on Masters, Rebecca, et al.
 "Return on investment of public health interventions: a systematic review." J Epidemiol Community Health 71.8 (2017) data, 2024






Studies suggest that **every 1 euro spent on preventative healthcare** generates a **14 euro return to the health and social care economy.**

TEHA on Masters, Rebecca, et al.
 "Return on investment of public health interventions: a systematic review." J Epidemiol Community Health 71.8 (2017) data, 2024



Studies suggest that **every 1 euro spent on adult vaccination** generates a **19 euro return to the health and social care economy***

TEHA on Steuten, H. E. B. et al. (2024), «Socio-Economic Value of Adult Immunisation Programmes», 2024



Innovation to promote healthy longevity: Humanoid robots and AI-based digital twins

nature

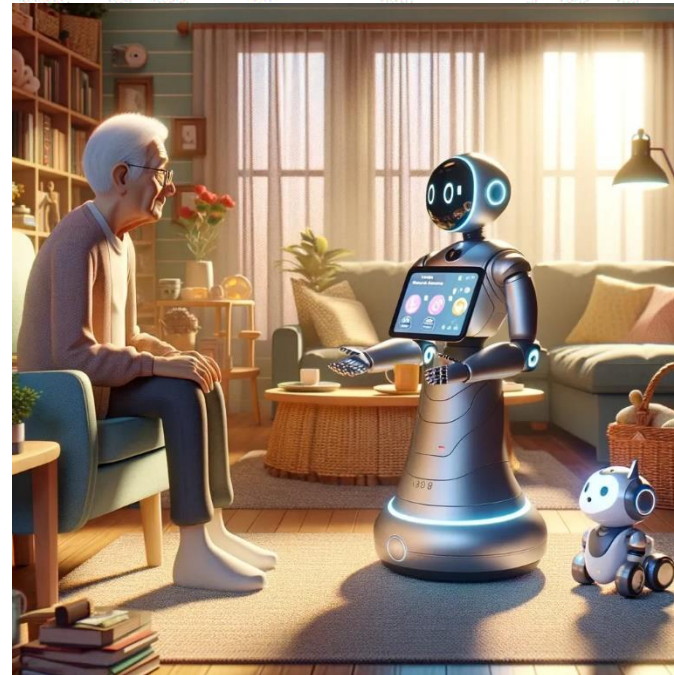
Are robots the solution to the crisis in older-person care?

Social robots that promise companionship and stimulation for older people and those with dementia are attracting investment, but some question their benefits.

By [Tammy Worth](#)



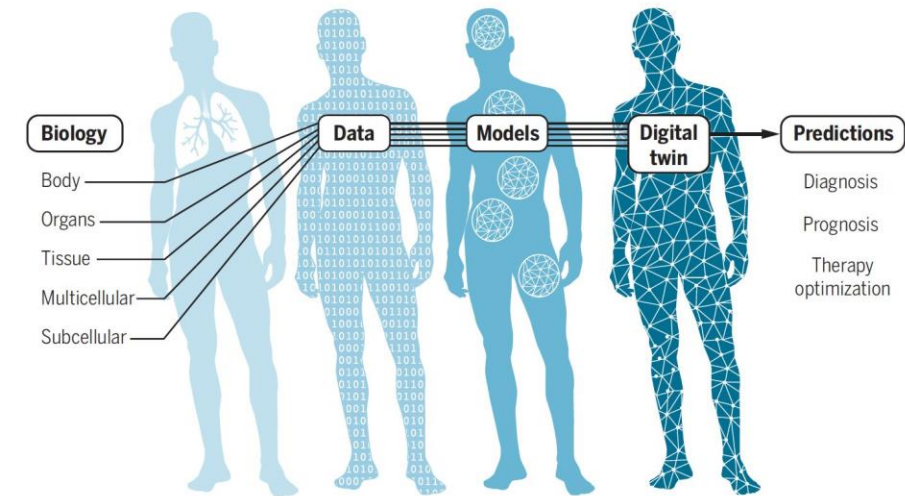
Interactive therapeutic robot Paro keeps a resident company at a nursing home in Japan. Credit: Noriko Hayashi/Panos Pictures



Science
JOURNALS AAAS

Building a personalized digital twin

Data from multiple scales are needed to build computational representations of biological processes and body systems that are affected by viral infection. These submodels are integrated and personalized with clinical data from individual patients. The digital twin can then be used to derive predictions about diagnosis, prognosis, and efficacy and optimization of therapeutic interventions.



Science. 2021 March 12; 371(6534): 1105–1106. doi:10.1126/science.abf3370.