FRAGILITA’

«La fragilità degli slogan dominanti è l’immagine di un’esperienza inutile ed antiquata, immatura e malata, inconsistente e destituita di senso, estranea allo spirito del tempo»

Eugenio Borgna

Ed invece nella fragilità si adombrano valori di sensibilità e di conoscenza, di conquiste e di dignità che, se colti ,possono ispirare progetti per un futuro luminoso e ricco di dignità

FRAGILITA’

“

Desti a me quest'anima divina e poi la imprigion asti in un corpo debole e fragile, com'è triste vive rci dentro

”

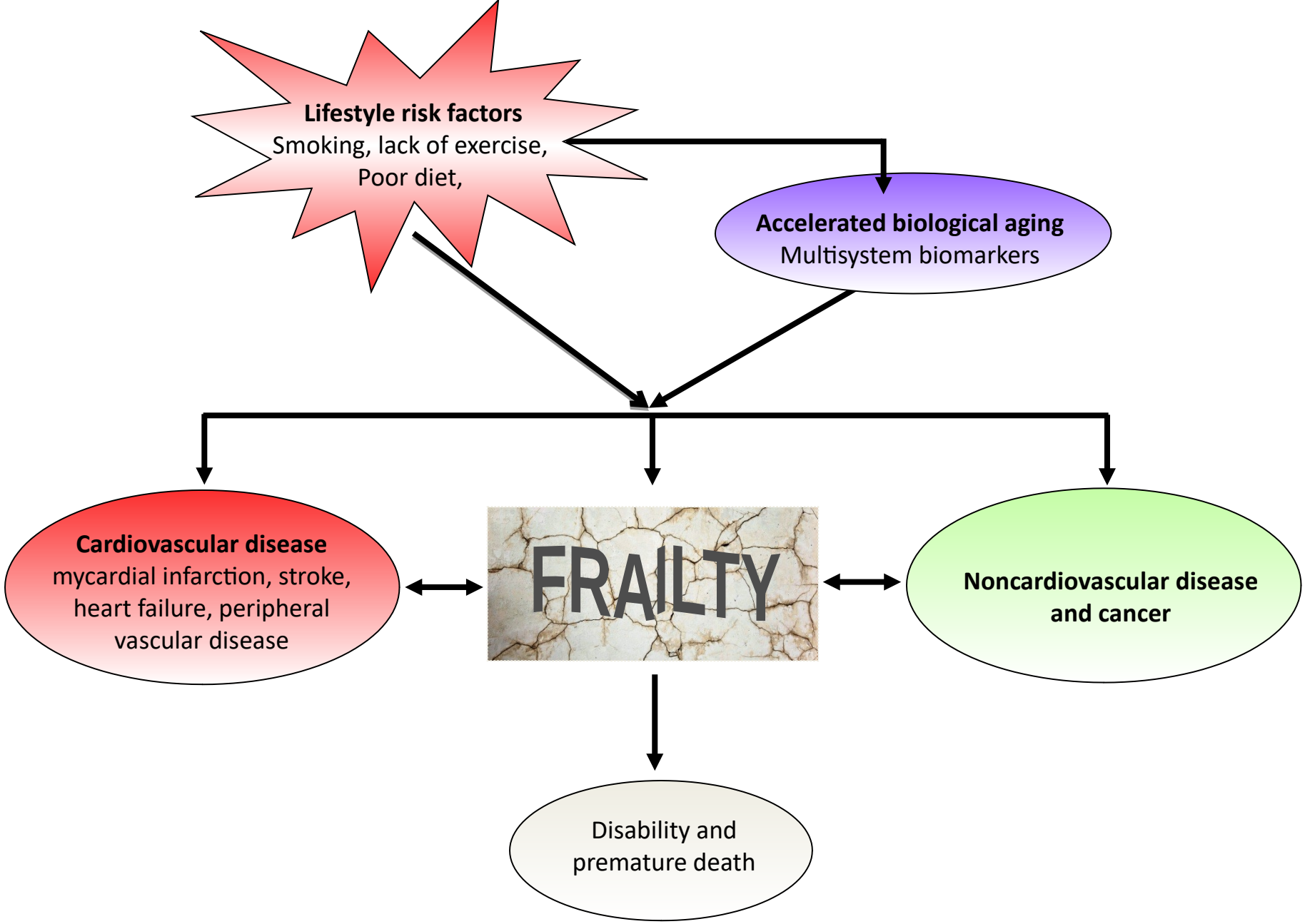
Michelangelo Buonarroti

FRAILTY

……is a clinical syndrome characterized by ***multisystem impairment*** that ***decreases physiologic reserve*** and ***increases vulnerability to stress***.

……is ***complex***, with ***multiple causes*** and ***contributing factors***

Stewart R. Clin Chem 2019



Stewart R. Clin Chem 2019

FRAGILITA’

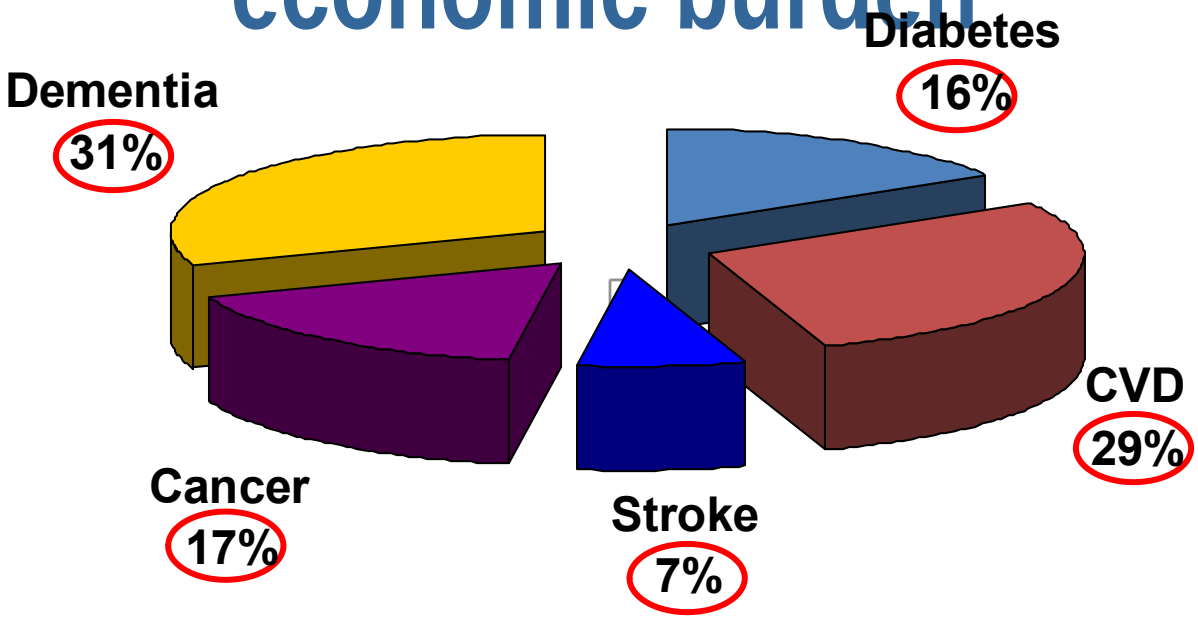
La fragilità, nella sua accezione più vera, è una condizione che ***non colpisce solamente l’età senile*** ma si estende a tutte le fasi della vita dell’uomo e, se compresa in modo appropriato, diviene il razionale per spiegare il passaggio da una medicina puramente “curativa” a quella ormai nota come medicina delle 4 P, ed in particolare preventiva, predittiva e personalizzata.

FRAGILITA’

Non sono fragili solo gli anziani con patologie croniche, spesso multiple, ma anche alcuni neonati e soggetti di età pediatrica, giovani adulti e, nella loro diversità di genere soggetti di sesso maschile e femminile.

La medicina di laboratorio è chiamata oggi a ***intercettare i soggetti fragili di ogni età*** svelando i meccanismi genetici e molecolari che sono alla base della storia naturale delle malattie che più comunemente evolvono verso la cronicità. Il valore della moderna medicina di laboratorio all’interno dei percorsi diagnostico-terapeutici deve cogliere anche la capacità di ***andare oltre e prima dei segni clinici e dei sintomi*** per prevenire, modificare stili di vita e curare precocemente gli esordi delle patologie.

Chronic conditions and economic burden



No country can afford this

I has been estimated that the commonest chronic conditions are costing the EU contries *more than 1 trillion Euros per year, which is expected to increae to 6 trillion Euros by middle to the country.* In UK the cost of chronic conditions such as stroke, heart diseases, diabetes, cancer and dementia pile up to over 50% of total healthcare expenditure

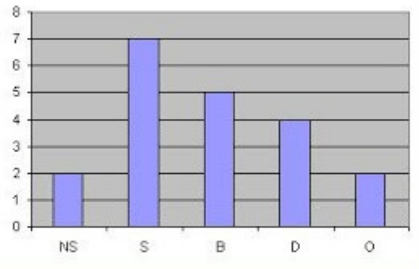
1 trillion = 1.000.000.000.000.000.000

COSA RENDE INEFFICACE ed INEFFICIENTE IL SISTEMA SANITARIO

Delay in treatment

Same treatment for all

Undue variability in health conditions

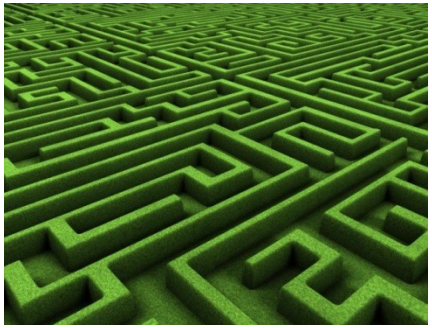


Waiting for patients to arrive in our silo structures

Uncertainty on what really works

Frequent medical errors (not notified)

Irrational workflow

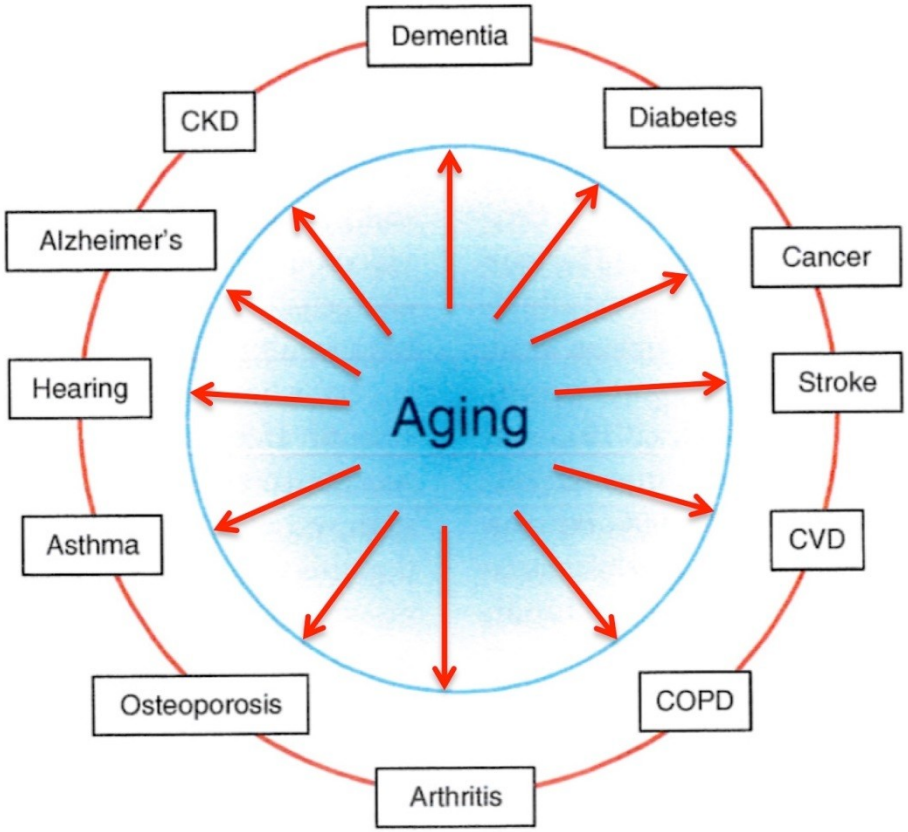


Patients ignore doctor's instructions

PARADIGM
SHIFT

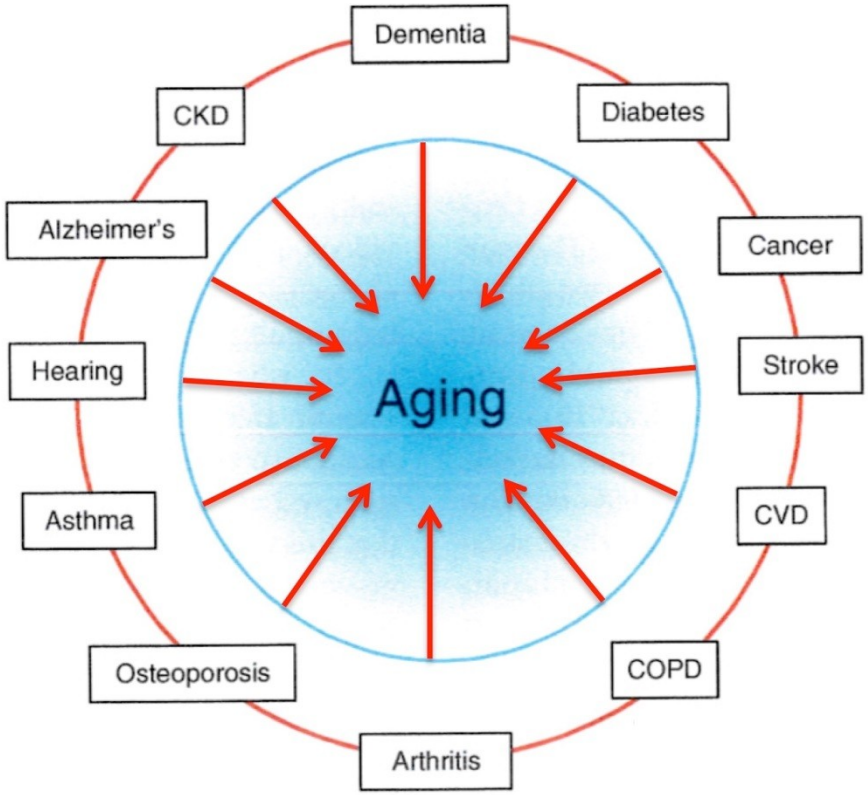
PARADIGM SHIFT
A change from one way of thinking to another.

Aging is the major risk factor for most chronic diseases



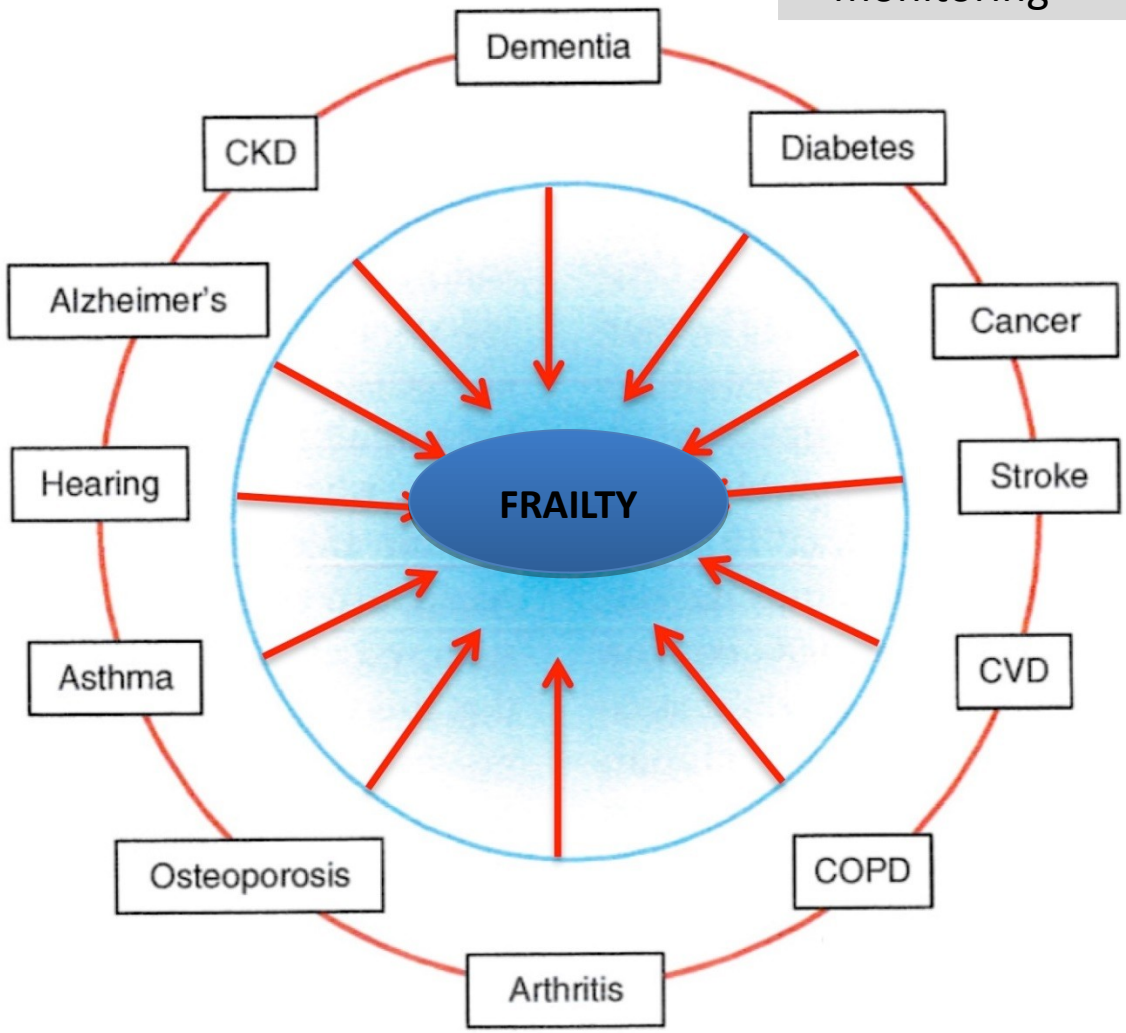
F. Sierra, from Olshansky *et al.* - 2015

Most chronic diseases are the major risk factor for aging



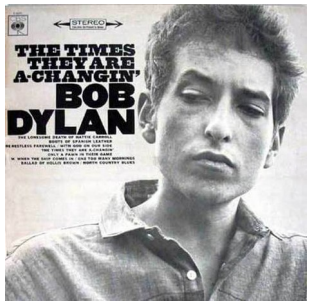
(modified by F. Salvatore, 2016)

LABORATORY TESTING for
- diagnosis in symptomatic patients
- monitoring



A PARADIGMATIC SHIFT

- Over the recent years there has been a progressive ***shift from disease diagnosis*** and treatment ***to predictive*** and preventative medicine and personalised health monitoring.
- As well as clear indicators of risk disease, such as defective genes, research at the ***molecular level*** has also been able to identify associations and implications based on ***new biomarkers***



CENTRAL ILLUSTRATION Troponin and Risk of CVD Outcomes

Study Data

154,052 participants without CVD
recruited by 28 prospective studies

Cardiac Troponin Concentration

Detectable in 80% with high-sensitivity assays

Risk of a First-ever CVD Event

Relative risk comparing top vs. bottom third

8-11 ng/L

CVD	+43%
Fatal CVD	+67%
CHD	+59%
Stroke	+35%

Willeit, P. et al. J Am Coll Cardiol. 2017;70(5):558-68.

In assessing the association of cardiac troponin concentration and CVD outcomes, we identified 28 relevant studies. Thirds of cardiac troponin concentration were defined within each study separately. Study-specific relative risks for first-ever CVD outcomes were pooled by using a random effects meta-analysis, demonstrating that high cardiac troponin levels in the normal range are associated with increased CVD event risk. The distribution graph is illustrative and cardiac troponin distributions were not normally distributed. CHD = coronary heart disease; CVD = cardiovascular disease.

51° Congresso SIBioC
Medicina di Laboratorio

La Medicina di Laboratorio nella fragilità e la fragilità della Medicina di Laboratorio

Laboratory Medicine in frailty and frailty of Laboratory Medicine

PADOVA
20-22 novembre 2019

Padova Fiere