PROVIDED BY: TruDiagnostic™ The Epigenetic Company

OMICm Age

*Developed with Harvard**

51.23
YEARS OLD
OMIC*m* Age

Calendar Age 51.16

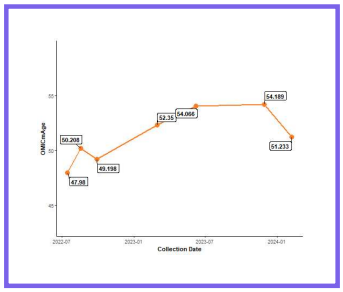
Biological Age 51.23

Your OMICm Age is

HIGHER THAN

your calendar age by **0.07** years.

YOUR OMIC*M* Age IS IN THE:
47.96th
PERCENTILE MEANING THAT YOUR OMIC*M* AGE IS HIGHER THAN **47.96%** OF THE POPULATION AT YOUR SAME CHRONOLOGICAL AGE.



Aging has been scientifically proven to be the number one risk factor for major chronic diseases world-wide. Accelerated aging (having an older biological age than your calendar age) increases your **risk of disease with each year of discrepancy,** and having a younger biological age decreases these risks. Based on age, we can predict the following increase or decreased risk of Death, Cancer, Heart Disease, Stroke, Type 2 Diabetes, COPD, and Depression.

YOUR RISK OF DISEASE

-28% Disease Risk — Reflects your current risk. A -28% score means that your risk is 28% lower compared to people of your same chronological age.

47% Disease Risk — Reflects your current risk. A 47% score means that your risk is 47% higher compared to people of your same chronological age.

31 — Reflects your **potential risk** score based on potential changes to your biological age.

DEATH

-15.2% | -1 YEAR | -2.88% Disease Risk | 11.21% | +1 YEAR

CANCER

-7.14% | -1 YEAR | -1.3% Disease Risk | 4.89% | +1 YEAR

HEART DISEASE

-8.52% | -1 YEAR | -1.57% Disease Risk | 5.91% | +1 YEAR

STROKE

-7.88% | -1 YEAR | -1.44% Disease Risk | 5.43% | +1 YEAR

TYPE 2 DIABETES

-7.25% | -1 YEAR | -1.32% Disease Risk | 4.97% | +1 YEAR

COPD

-4.82% | -1 YEAR | -0.87% Disease Risk | 3.24% | +1 YEAR

DEPRESSION

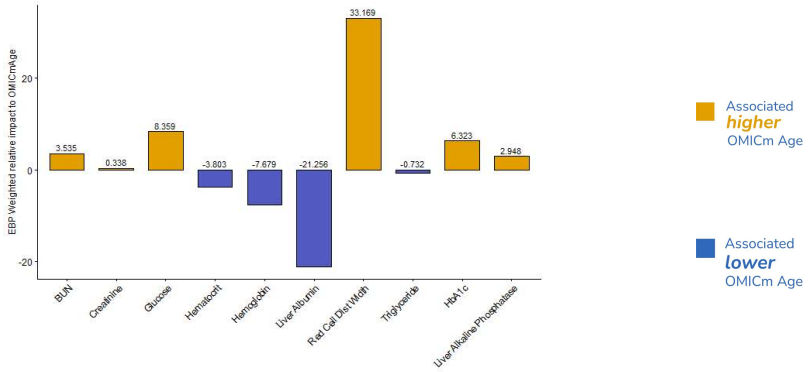
-4.67% | -1 YEAR | -0.84% Disease Risk | 3.13% | +1 YEAR

PROVIDED BY: TruDiagnostic™ The Epigenetic Company

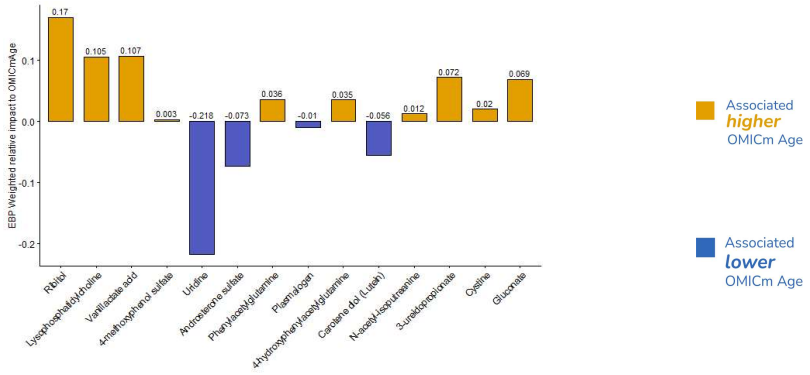
The Epigenetic Biomarker Proxies Driving Your Biological Age

We use epigenetic biomarker proxies to predict genomics, transcriptomics, proteomics, and metabolomics sum values that are positive for your aging, and some that are negative for your aging. In the graph below you will see the factors contributing to your aging the most. If a bar is above zero, its increasing your OMICm Age, if below zero, it is decreasing your OMICm Age.

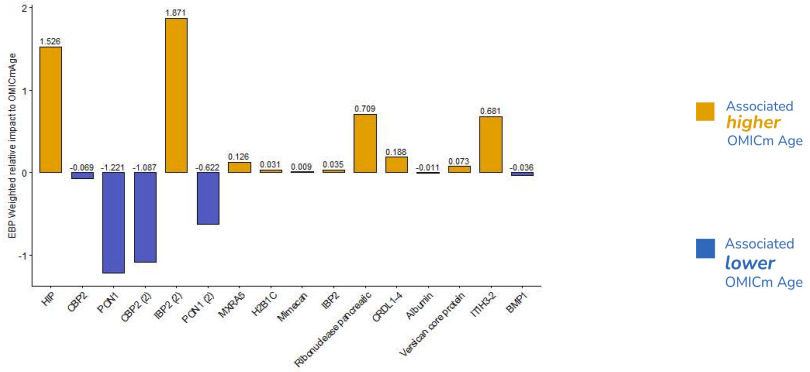
Your Clinical Epigenetic Biomarker Proxies (EBP)



Your Metabolites Epigenetic Biomarker Proxies (EBP)



Your Protein Epigenetic Biomarker Proxies (EBP)



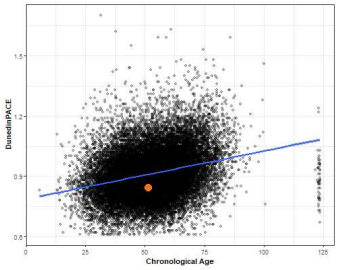
PROVIDED BY: TruDiagnostic™ The Epigenetic Company

DunedinPACE of Aging

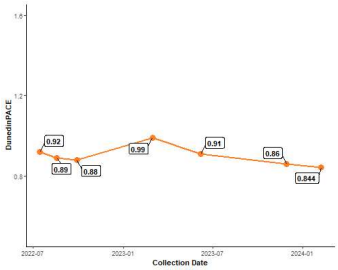
DunedinPACE Value

DunedinPACE Value
0.84

Population

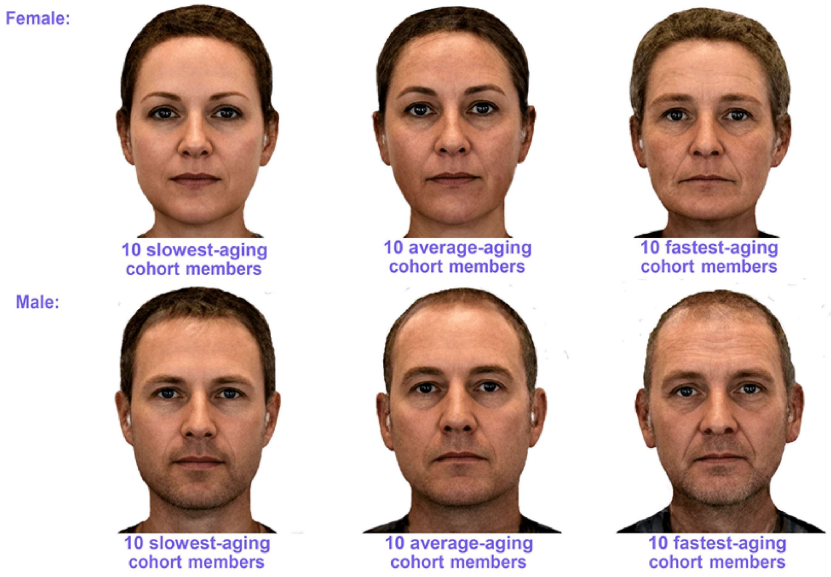


Changes Over Time



ALGORITHM	PATIENT DATA	MORBIDITY AND MORTALITY ASSOCIATIONS	RISK STATEMENT
DunedinPACE	0.84 Biological years per year	**All-Cause Mortality** (Beslsky et al., 2020)	If you are aging above a rate of 1.00, you would increase risk of death by 56% over the next 7 years.
		Chronic Disease (Beslsky et al., 2020)	If you are aging above a rate of 1.00, you would increase risk of chronic disease diagnosis by 54% over the next 7 years.

Significant Variation in Facial Aging



PROVIDED BY: TruDiagnostic™ The Epigenetic Company

Immune Health

IMMUNE CELL TYPE	95% CONFIDENCE INTERVAL RANGE	YOUR PERCENTAGE	MEAN	SD	# OF STANDARD DEVIATIONS ABOVE OR BELOW MEAN	IS THIS HIGHER OR LOWER THAN ANTICIPATED?
Naïve CD4T	7.196%-7.35%	11.69%	7.273	0.0383	1.15	**Higher**
Memory CD4T	5.14%-5.284%	0.00%	5.212	0.0361	-1.44	**Lower**
Memory CD8T	6.519%-6.691%	12.11%	6.605	0.0430	1.28	**Higher**
Naïve CD8T	1.09%-1.16%	0.00%	1.125	0.0175	-0.64	**Lower**
Basophils	1.026%-1.056%	0.00%	1.041	0.0076	-1.37	**Lower**
B Memory	1.689%-1.785%	2.86%	1.737	0.0241	0.47	**Higher**
Naïve B	2.207%-2.311%	0.00%	2.259	0.0260	-0.87	**Lower**
Regulatory T	0.604%-6.408%	10.47%	3.506	1.4510	4.80	**Higher**
Eosinophils	0.376%-0.424%	0.00%	0.400	0.0121	-0.33	**Lower**
Natural Killer	3.353%-3.459%	2.93%	3.406	0.0264	-0.18	**Lower**
Neutrophils	62.899%-62.953%	56.95%	62.93	0.0136	-0.44	**Lower**
Monocyte	4.453%-4.567%	2.99%	4.510	0.0285	-0.53	**Lower**

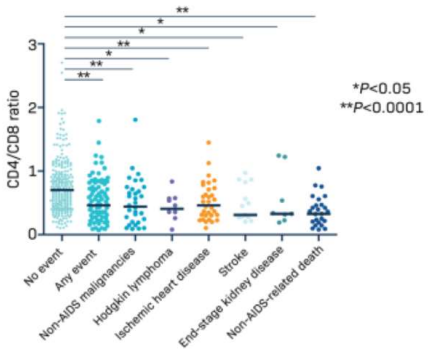
PROVIDED BY: TruDiagnostic™ The Epigenetic Company

CD4/CD8 T Cell Ratio

CD4/CD8T cell ratio is incredibly informative on disease. A value between 1 and 4 is ideal. A value between 0 and 1 marks "inverted ratio". A low or inverted CD4/CD8 ratio is an immune risk phenotype and is **associated with altered immune function, immune senescence, and chronic inflammation.**

The prevalence of an inverted CD4/CD8 ratio increases with age. An inverted ratio is seen in 8% of 20-59 year olds and in 16% of 60-94 year olds. Women across all age groups are less likely to have an inverted ratio than their male counterparts.

Age, and hormone-related atrophy of the thymus is theorized to explain the differences between populations. Hormonal influence on the ratio is supported by a correlation between low Plasma Estradiol levels, high circulating CD8, and low CD4/CD8 ratios in women with premature ovarian failure.

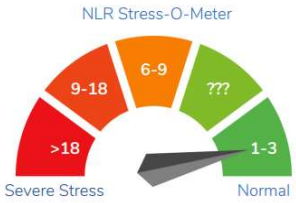


We have been able to refer patients for additional testing to diagnose HIV, Chronic Lymphocytic Leukemia, and even individuals taking their Rapamycin at too high of a dose. **If you see a low CD4/CD8 ratio, it is not an immediate cause for concern but we might recommend testing via traditional labs just in case.** A value of 4+ marks hyperactivity or possible infection, autoimmunity or additional immune risk phenotypes.

CELL TYPE	REFERENCE RANGE	YOUR RATIO	MEAN	SD	# OF STANDARD DEVIATIONS ABOVE OR BELOW MEAN	IS THIS HIGHER OR LOWER THAN ANTICIPATED?
CD4/CD8 T Cell Ratio	1.00-4.00	0.96	2.59	0.074	-0.22	**Lower**

RATIO	ABOUT THIS RATIO	YOUR VALUE
Regulatory T Cells to Total T Lymphocytes (RegT/all other T Cells)	There is evidence that Tregs exhibit atheroprotective properties by suppression of autoreactive T cell responses or by secretion of anti-inflammatory cytokines (Pastrana et al., 2012). Thus this might be a marker for cardiovascular disease. (www.sciencedirect.com)	0.44
Adaptive to Innate Immune (A/A Ratio)	The adaptive-to-innate immune ratio (A/I ratio) has been linked to response to several types of immunotherapy.	0.64

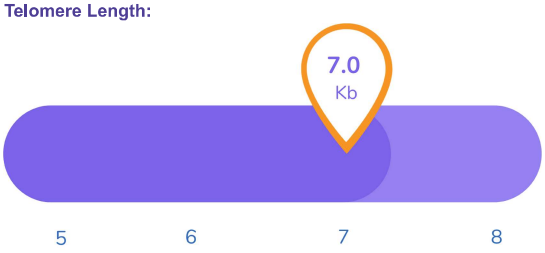
Other Immunosenescence Ratios

RATIO	ABOUT THIS RATIO	NORMATIVE RATIO	YOUR VALUE
Neutrophil to Lymphocyte	The NLR is simply the number of Neutrophils divided by the number of Lymphocytes. Under physiologic stress, the number of Neutrophils increases, while the number of Lymphocytes decreases. The NLR **combines** both of these changes, making it more sensitive than either alone: Effect of Physiologic Stress on the NLR: ↑↑ NLR= Neutrophils / Lymphocytes Endogenous cortisol and catecholamines may be major drivers of the NLR. Increased levels of cortisol are known to increase the neutrophil count while simultaneously decreasing the lymphocyte count. Thus, NLR is not solely an indication of infection or inflammation. Any cause of physiologic stress may increase the NLR (e.g. hypovolemic shock).	 Neutrophil-to-Lymphocyte ratio (NLR) reflects the amount of physiologic stress. The optimal cutoff value will vary depending on the specific patient population and disease state. The numbers provided above are. intended merely to provide a general concept of NLR interpretation.	1.53
Monocyte to Lymphocyte	MLR (Monocyte to Lymphocyte ratio) has demonstrated to be a novel hematological and inflammatory parameter. MLR is associated with various diseases, such as community-acquired pneumonia, axial spondylarthritis, and coronary angiography, as well as the systemic inflammatory response, which reflects the abnormal immune status of diseases.	The mean Neutrophil-toLymphocyte ratio in the whole population was 1.70±0.70 (Range: 8.38, Min: 0.23, Max: 8.61), mean lymphocyte-to-monocyte ratio was 11.15±3.14 (Range:23.21, Min:3.46, Max:26.67), and mean platelet-to-lymphocyte ratio was 117.05±47.73 (Range:93.60, Min:19.11, Max:1598.77).	12.41

PROVIDED BY: TruDiagnostic™ The Epigenetic Company

Telomere Length

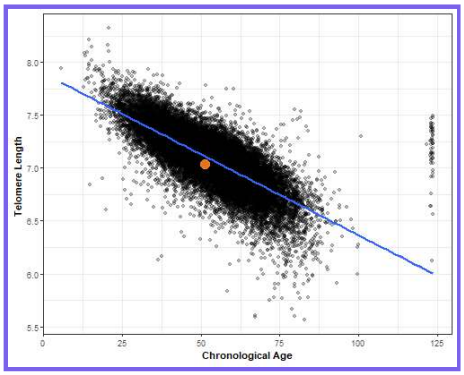
Telomere Length:



If we were to estimate your biological age **strictly from your telomere measurement,** we would anticipate your age to be:

56.16
YEARS OLD

Telomere Length Based on Biological Age Prediction:



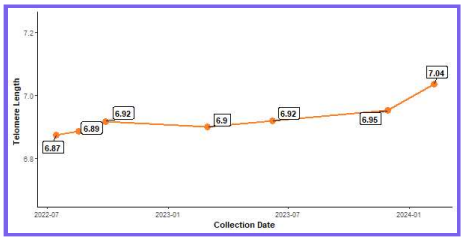
Your Average telomere prediction length:

7.0 kb

This puts you in the:

29.04th Percentile

Changes Over Time



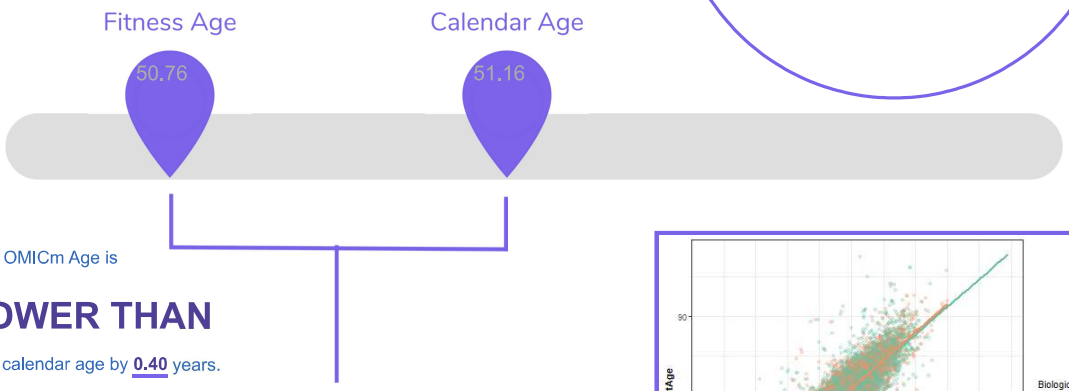
ALGORITHM	PATIENT DATA	MORBIDITY AND MORTALITY ASSOCIATIONS	RISK STATEMENT
Telomere	7.0 Kilobase Unit	At your chronological age of 51.16, your telomeres are longer than 29.04th% of people. who share the same chronological age as you.	Shorter telomeres are not only associated with age but with disease too. Shorter telomere length and low telomerase activity are correlated with several chronic preventable diseases.

PROVIDED BY: TruDiagnostic™ The Epigenetic Company

Fitness Age

OMICm FitAge

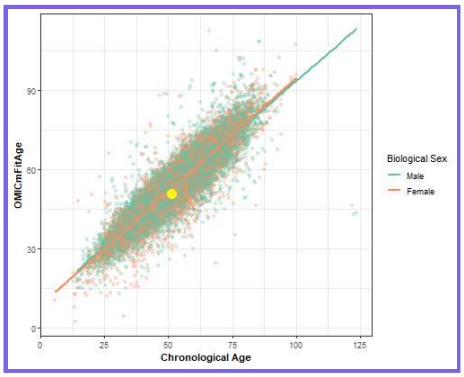
The incorporation of physical fitness measurements into epigenetic clocks **increases the measurable effects of lifestyle, medical, and environmental interventional changes** on the aging process. The DNAmFitAgeAccel algorithm, also simply known as FitAgeAcceleration, was developed by researchers at UCLA, and is an estimate of epigenetic age acceleration. We have created a version of this, however, we incorporated our **OMICm Age** algorithm (developed with Harvard) instead. We call this **OMICm FitAge,** which tells you how old you are according to your physical fitness and functionality.



Your OMICm Age is

LOWER THAN

your calendar age by **0.40** years.



IFor every one year older OMICm FitAge is, there is an average **0.29 decrease in relative grip strength and 0.32 increase in BMI.** OMICm FitAge has estimated that high-fit individuals (classified through VO2max) have a **1.5 to 2.0 younger biological age** compared to low/medium fit individuals in females and males, respectively. Younger OMICm FitAge was associated with better memory test performance, emphasizing the beneficial role of physical exercise on cognitive health.

OMICm FitAge is impacted by:

GRIP STRENGTH

Maximum hand grip strength (GripMax) a measurement of force taken in kg and is used to measure the age-associated decline in terms of muscle strength.

GAIT SPEED

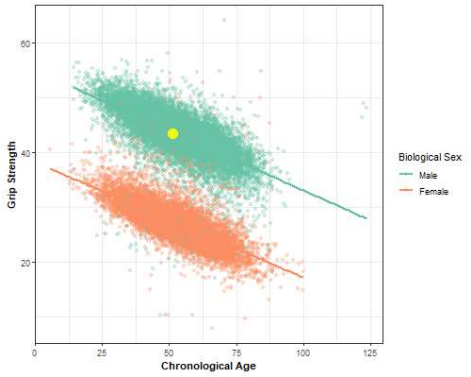
Gait speed, also known as walking speed, is measured in meters per second.

VO2MAX

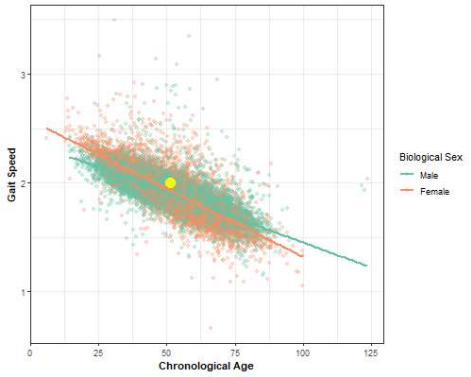
Maximal oxygen uptake, or VO2max, is a measure of cardiovascular health and aerobic endurance.

FEV1

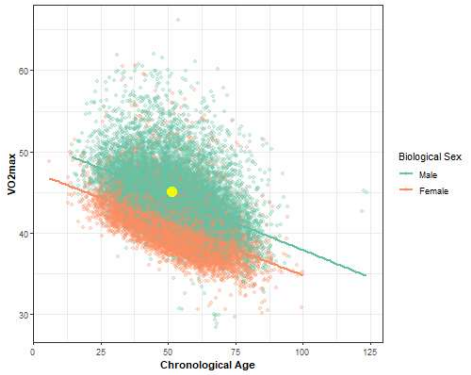
Forced expiratory volume, also known as FEV1, measures lung function by determining the amount of air forced from the lungs in one second.



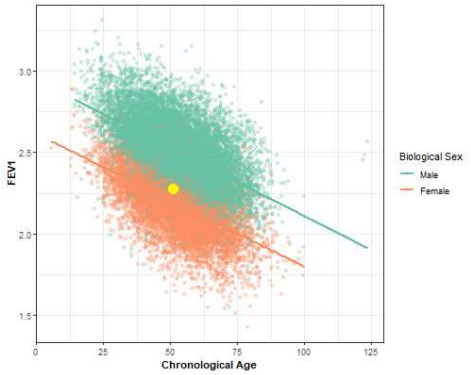
Your Grip Strength Epigenetic Biomarker Proxy is **43.38.** This puts you scoring higher than **63.77%** of the population with a similar reported age and sex.



Your Gait Speed Epigenetic Biomarker Proxy is **2.00.** This puts you scoring higher than **85.12%** of the population with a similar reported age and sex.



Your V02Max Epigenetic Biomarker Proxy is **45.13.** This puts you scoring higher than **77.68%** of the population with a similar reported age and sex.



Your FEV1 Epigenetic Biomarker Proxy is **2.28.** This puts you scoring higher than **33.91%** of the population with a similar reported age and sex.

PROVIDED BY: TruDiagnostic™ The Epigenetic Company

Smoking & Drinking

Smoking and Disease Risk

AHRR (cg05575921)
Average Beta Value %:

Your Epitype Value: 86%

[64%-100%]
No Epigenetic Risk

The impact that tobacco smoke exposure has on the epigenome is based on the level of methylation at the AHRR gene locus cg05575921.

Your DNA methylation score was **86%** at the AHRR locus, meaning that your methylation score aligns with the status of **non-smoker,** putting you at **Low risk** for developing smoking-related conditions.

Alcohol Consumption and DNA Methylation

On your intake survey, you self-reported your drinking status as **Once per week.** With our custom epigenetic biomarker proxy, you are in the **37.37th** percentile. This means your score is higher than **37.37%** of the population we have tested.

***Those who marked self-reported drinking as "Not Applicable" were assumed to have no drinking status and have been combined with data from "Never" status.**

PROVIDED BY: TruDiagnostic™ The Epigenetic Company

Weight Loss Response

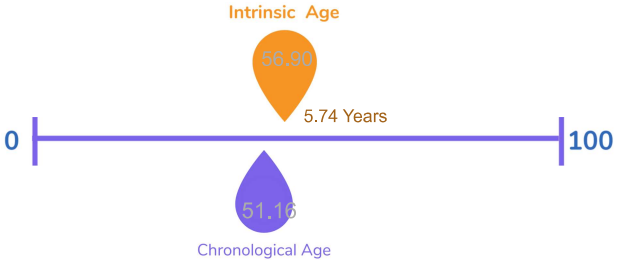
CPG SITE	GENE	β - VALUE RESPONDERS	YOUR SCORE	RESPONSE STATUS
cg15500865	PON3	0.072	0.06	Hypomethlyated
cg25161512	PON3	0.115	0.10	Hypomethlyated
cg11435506	PON3	0.165	0.08	Hypomethlyated
cg03301582	PON3	0.120	0.09	Hypomethlyated
cg08898155	PON3	0.163	0.03	Hypomethlyated
cg04080282	PON3	0.324	0.23	Hypomethlyated
cg26457160	PON3	0.490	0.49	Hypermethylated
cg10329418	PON3	0.252	0.27	Hypermethylated
cg27166921	PON3	0.253	0.33	Hypermethylated
cg24750391	PON3	0.355	0.43	Hypermethylated
cg08461772	PON3	0.418	0.37	Hypomethlyated

RISK REPORT	PATIENT OUTCOMES	SUMMARY	IMPACT	ADDITIONAL NOTE
Weight Loss Response	**No response**	Your DNA methylation scores at the above loci indicate you are a **Non responder** for weight loss treatment utilizing a hypocaloric diet. This means a calorie deficit diet **passably works** as your weight loss strategy.	If your DNA methylation score puts you in the category of non-responder or intermediate responder then a hypocaloric diet might not be the best treatment option for you. If you are a responder, that means a hypocaloric diet has a greater chance of positively impacting your weight loss goals.	Studies on these particular CpG loci have concluded that some individuals have a better response to a calorie deficit diet than others. This may indicate why weight loss has been difficult to achieve and can provide insight into finding the best weight loss strategy.

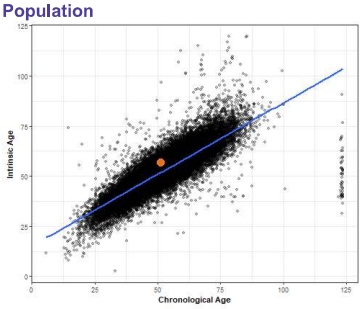
PROVIDED BY: TruDiagnostic™ The Epigenetic Company

Intrinsic & Extrinsic Age

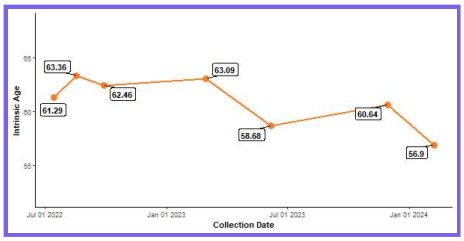
Intrinsic Epigenetic Age



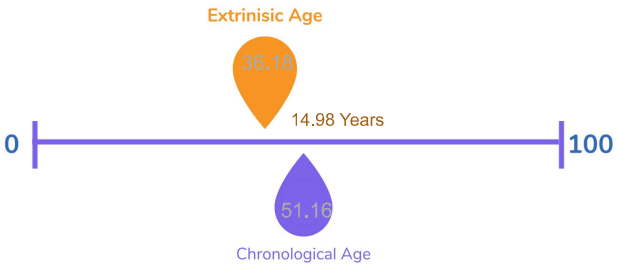
Population



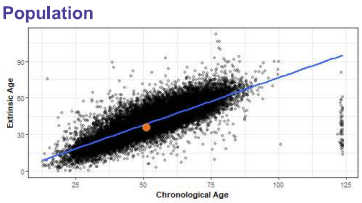
Changes Over Time



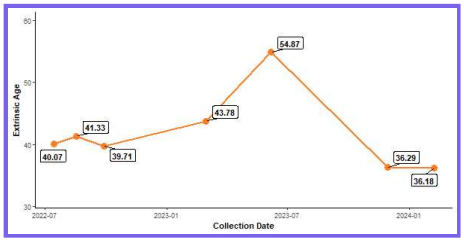
Extrinsic Epigenetic Age



Population



Changes Over Time



[redacted]