Generation Lab

Name: **Diego Iruretagoyena**
DOB: **1994-11-08**
Sex: **Male**

Test Date: **2024-09-08**
Report Date: **2024-10-16**
Version: **1.3.5**

SystemAge Report

Step 1
Understand your Top Aging Reasons

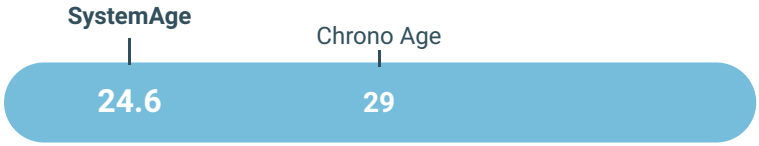
Step 2
Explore your SystemAge Breakdown

Step 3
Meet with a Longevity Doctor for Your Action Plan

SystemAge Overview

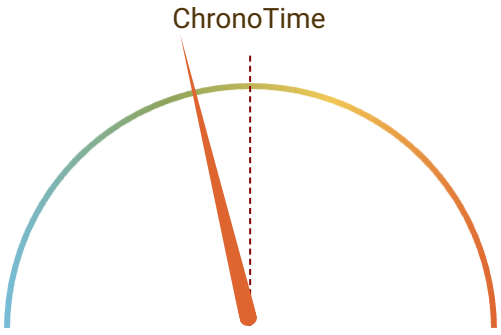
Aging is a complex, non-linear process, and plateau phases can occur at various points in life where biological changes slow down and stabilize. For individuals in their late 20s to early 40s, biological aging typically enters one such plateau phase, where changes are minimal. As a result, seeing a SystemAge of 28, 38, or 40 does not indicate significant biological differences -- these ages fall within a range where biological noise is relatively indistinguishable.

Overall SystemAge



Overall, you are **4.3** years younger than your chronological age

Overall Aging Speed



You are aging **0.85x** of your chronological age

SystemAge test analyzes changes in DNA methylation patterns that are associated with aging using CpG sites causal to aging-related mortality. This module provides an estimate of the change in your biological age due to the accumulation of biological noise.

Top Aging Factors

19.96% **Muscular System**
SystemAge: 33.4

13.34% **Cardiac System**
SystemAge: 31.9

5.54% **Reproductive System**
SystemAge: 30.2

4.84% **Tissue Regeneration**
SystemAge: 30.1

4.81% **Blood Sugar and Insulin Control**
SystemAge: 30.0

SystemAge Breakdown

- Reverse
- Good
- Average
- Need Attention

Auditory System
SystemAge 29.3 | Aging Speed 1.01x

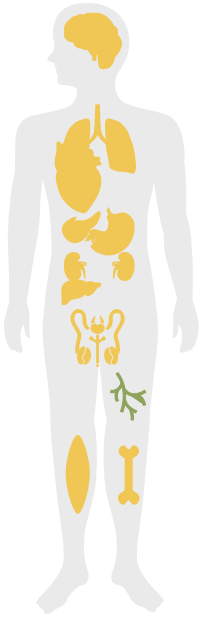
Blood Sugar and Insulin Control
SystemAge 30.0 | Aging Speed 1.04x

Skeletal System
(Bone)
SystemAge 29.7 | Aging Speed 1.02x

Cardiac System
(Heart)
SystemAge 31.9 | Aging Speed 1.10x

Digestive System
SystemAge 29.3 | Aging Speed 1.01x

Hepatic System
(Liver)
SystemAge 29.6 | Aging Speed 1.02x



Muscular System
SystemAge 33.4 | Aging Speed 1.15x

Neurodegeneration
(Nerve Cells)
SystemAge 29.6 | Aging Speed 1.02x

Reproductive System
(Testes)
SystemAge 30.2 | Aging Speed 1.04x

Respiratory System
(Lung)
SystemAge 29.3 | Aging Speed 1.01x

Urinary System
SystemAge 29.7 | Aging Speed 1.02x

Blood and Vascular System
SystemAge 25.2 | Aging Speed 0.87x

Immune System
SystemAge 29.9 | Aging Speed 1.03x

Metabolism
SystemAge 29.4 | Aging Speed 1.01x

Tissue Regeneration
SystemAge 30.1 | Aging Speed 1.04x

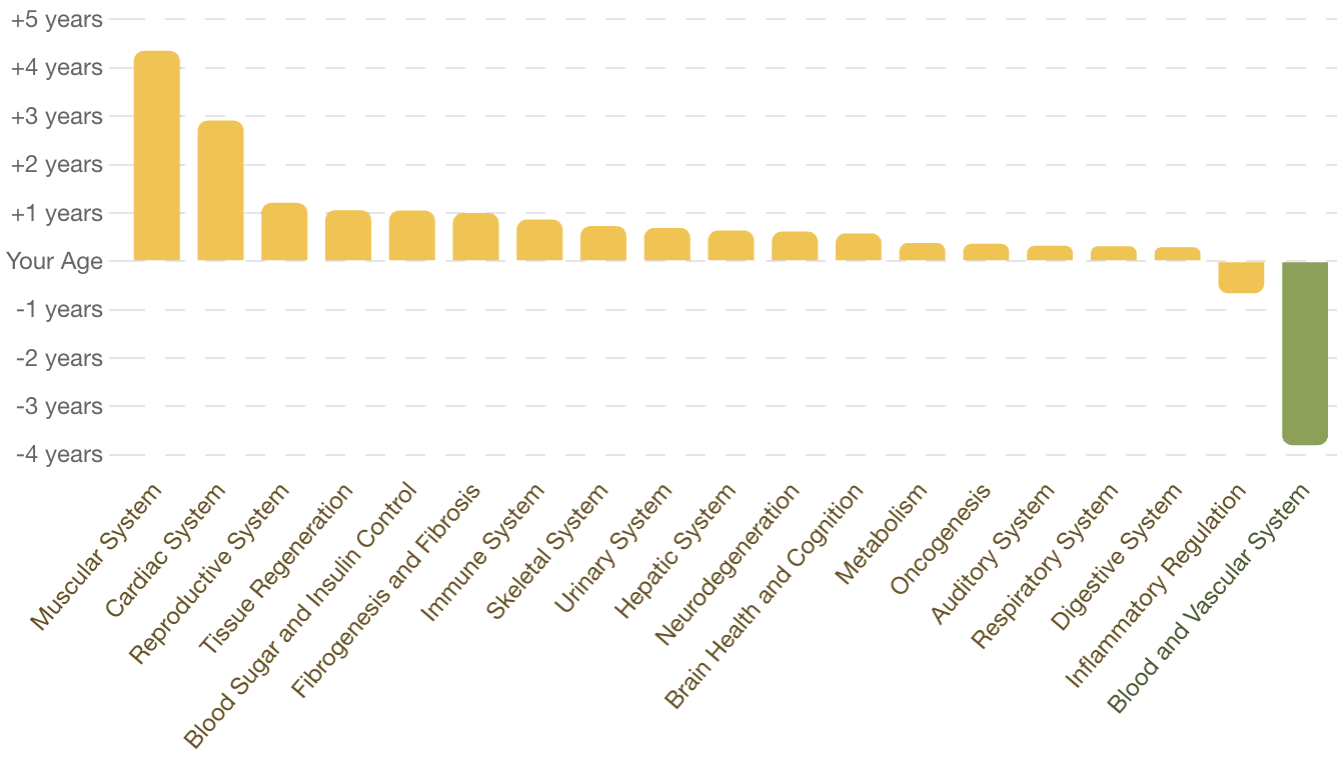
Oncogenesis
(Cell Mutation)
SystemAge 29.4 | Aging Speed 1.01x

Fibrogenesis and Fibrosis
(Scar Tissue Formation)
SystemAge 30.0 | Aging Speed 1.03x

Inflammatory Regulation
SystemAge 28.3 | Aging Speed 0.98x

Brain Health and Cognition
SystemAge 29.6 | Aging Speed 1.02x

SystemAge vs Chronological Age



Lifestyle Recommendations

* Here are your personalized recommendations based on your test results. These recommendations are for reference only. **Please consult a physician before taking any actions.**

Nutrition & Supplement Recommendations

Probiotics

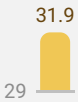
Probiotics are live bacteria and yeasts that are beneficial for digestive health, supporting the balance of the gut microbiome. They may enhance immune function, aid in digestion, and prevent gastrointestinal infections.

Suggestions for Probiotics:

- Natto
- Yogurt
- Kimchi

Muscular System

Your muscular system is biologically 33.4 years old, 4.3 years older than your chronological age.
Probiotics help maintain a balanced gut microbiome, which is essential for efficient digestion and nutrient absorption. This means that muscles receive a consistent supply of essential nutrients, aiding in muscle maintenance, repair, and strength.



Cardiac System

Your cardiac system is biologically 31.9 years old, 2.9 years older than your chronological age.
By supporting gut health, probiotics can indirectly benefit the heart by reducing inflammation and lowering bad cholesterol levels. The short-chain fatty acids produced by probiotics help in maintaining arterial health, preventing conditions like atherosclerosis. Probiotics also support better blood pressure control, important for heart health.

Blood Sugar and Insulin Control

Your blood sugar and insulin control is biologically 30.0 years old, 1.0 years older than your chronological age.
Probiotics may aid in managing blood sugar levels by supporting a balanced gut microbiome. This balance is crucial for proper glucose metabolism and can lead to improved insulin sensitivity.

Selenium

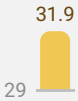
Selenium is an essential mineral with antioxidant properties that help prevent cellular damage from free radicals. It is vital for thyroid function, immune system performance, and may reduce the risk of certain cancers.

Suggestions for Selenium:

- Cottage cheese
- Mushrooms
- Chicken

Muscular System

Your muscular system is biologically 33.4 years old, 4.3 years older than your chronological age.
The role of selenium in the muscular system is to support the production of antioxidant enzymes that protect muscle tissues from oxidative stress. This protection is essential for preserving muscle function and preventing degenerative muscle conditions. Selenium contributes to better muscle health and performance by reducing cell damage.



Cardiac System

Your cardiac system is biologically 31.9 years old, 2.9 years older than your chronological age.
By contributing to the antioxidant system of the body, selenium helps to preserve the integrity of heart muscle cells. This protection is crucial in reducing oxidative stress, which can lead to heart disease and impaired cardiac function.

Reproductive System

Your reproductive system is biologically 30.2 years old, 1.2 years older than your chronological age.
Selenium is important for the reproductive system as it enhances antioxidant defenses, protecting delicate reproductive tissues from damage. This ensures the viability and function of sperm and eggs, aiding in overall reproductive health and fertility.

Vitamin C

Vitamin C, also known as ascorbic acid, is a powerful antioxidant that helps protect cells from damage. It is necessary for the growth, development, and repair of all body tissues, and plays a key role in collagen production, iron absorption, and maintaining immune health.

Suggestions for Vitamin C:

- Kiwifruit
- Oranges
- Bell Peppers

Muscular System

Your muscular system is biologically 33.4 years old, 4.3 years older than your chronological age.
Vitamin C's powerful antioxidant action helps neutralize free radicals generated during intense physical activity. This reduces muscle fatigue and supports quicker recovery times.

Cardiac System

Your cardiac system is biologically 31.9 years old, 2.9 years older than your chronological age.
As an antioxidant, Vitamin C helps neutralize harmful free radicals in the cardiovascular system. By reducing oxidative damage, it helps maintain the integrity of the heart and blood vessels. This protective effect lowers the risk of developing heart disease over time.

Reproductive System

Your reproductive system is biologically 30.2 years old, 1.2 years older than your chronological age.
For the reproductive system, Vitamin C's antioxidant properties help eliminate free radicals that can damage reproductive cells. This function is crucial for maintaining the health and quality of sperm and eggs. Thus, adequate Vitamin C intake can improve reproductive outcomes and boost fertility.

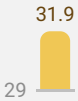
Fitness Recommendations

Strength Training

Strength training is a form of exercise that involves using resistance to build muscle strength, endurance, and size. This can be done through weight lifting, resistance bands, or bodyweight exercises such as push-ups and squats. The goal is to progressively increase the resistance or intensity over time to challenge the muscles, promote growth, and improve overall physical fitness.

Suggestions for Strength Training:

- Plank
- Squats
- Push-Ups



Muscular System

Your muscular system is biologically 33.4 years old, 4.3 years older than your chronological age.
Strength training, such as lifting weights, leads to increased muscle mass and improved muscle strength. By regularly challenging the muscles, it promotes growth in muscle fibers and improves the efficiency of muscle contraction. This enhances overall muscular health and helps prevent injuries and muscle deterioration.

Cardiac System

Your cardiac system is biologically 31.9 years old, 2.9 years older than your chronological age.
Engaging in regular strength training can enhance the heart's capability to manage blood circulation, reducing blood pressure and aiding in the prevention of hypertension and related cardiac issues.

Blood Sugar and Insulin Control

Your blood sugar and insulin control is biologically 30.0 years old, 1.0 years older than your chronological age.
By regularly practicing strength training, muscles increase their glucose uptake efficiency, which helps control blood sugar levels. This increased efficiency in glucose metabolism directly improves insulin sensitivity. Therefore, strength training is an effective intervention for promoting balanced blood sugar and reducing the likelihood of developing type 2 diabetes.

Swimming

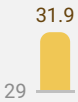
Swimming is a physical activity that involves moving through water using one's arms and legs. It is an excellent exercise for improving cardiovascular health, building muscle strength, and enhancing flexibility. Swimming is also a low-impact activity, making it suitable for people of all ages and fitness levels. It can be done in pools, lakes, and oceans, providing both recreational enjoyment and competitive opportunities.

Suggestions for Swimming:

- Breaststroke
- Butterfly
- Freestyle

Muscular System

Your muscular system is biologically 33.4 years old, 4.3 years older than your chronological age.
The resistance of water during swimming workouts helps in building muscle strength and endurance without causing extensive wear and tear. This is particularly beneficial for maintaining muscular health over the long term.



Cardiac System

Your cardiac system is biologically 31.9 years old, 2.9 years older than your chronological age.
Regular swimming sessions improve cardiovascular health through sustained aerobic activity, which increases heart rate and strengthens the heart. This enhancement leads to better heart function and reduced blood pressure.

Aging Entropy Curve & Insights

Aging Entropy Curve Graph illustrates changes in bodily functions over a lifetime in population. It identifies if you're in a "prime", "plateau", or "accelerated" aging stage. Even if you're healthy for your age, the graph might show you are nearing an "accelerated aging" phase where functions decline faster in general population. This insight helps manage health proactively by anticipating age-related changes before they become noticeable.

“BioNoise“, is the variability in gene expression and molecular changes in the body. It increases with age and can signal early stages of aging and diseases. Measuring BioNoise helps identify aging and disease progression, indicating whether a person is becoming unhealthy, stable, or improving.

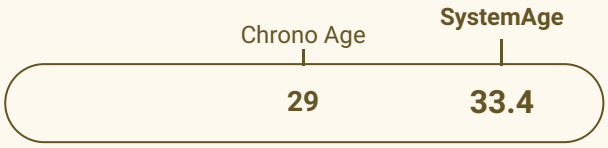
Muscular System

Skeletal muscle allows us to move voluntarily and gives us strength and agility. Muscle tissue becomes progressively lost with aging and in certain diseases (dystrophies), causing people to lose strength, become frail, and depend on others.

Aging Insights

Your test results indicate that the aging speed of your muscular health is average and typical for your age. This suggests that your current lifestyle and health practices are effectively maintaining your muscular function at an expected level. However, it remains important to continue engaging in regular physical activity and balanced nutrition to support muscle health and prevent future decline.

In your recent assessment for muscular health, your results indicate that you fall into the plateau stage of the aging trajectory. This stage represents a period of relative stability in your muscular functions, typically occurring after early adulthood but before any marked decline associated with accelerated aging. During this phase, your muscles maintain their strength and function at a consistent level, reflecting a healthy, stable state.



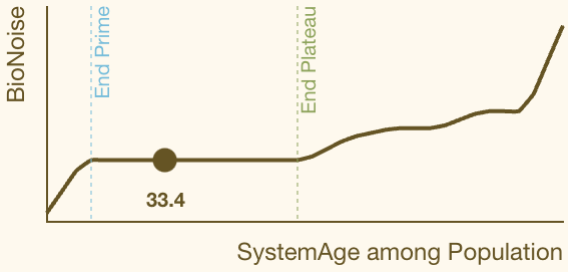
Associated Diseases

- Tetanus
- Dermatomyositis
- Polymyositis

Associated Pathways

- Muscle Contraction Pathway (Excitation-Contraction Coupling)
- Amino Acid Metabolism
- Calcium Signaling Pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

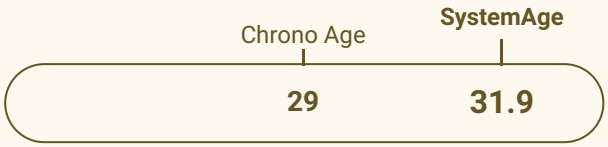
Cardiac System

Our hearts pump blood without stopping from early embryonic development until the end of our lives. The health of cardiac system is regulated by the complex interplay of the heart organ, cardiac tissue, cardiomyocyte cells, the systemic environment, and feedback to and from other organ systems, including the endocrine system and central nervous system (CNS).

Aging Insights

Your cardiac health is aging at a typical rate for someone of your age. This suggests that your heart health is being maintained in line with general expectations for your age group. Going forward, it will be important to continue with a heart-healthy lifestyle to prevent any potential decline and ensure long-term cardiovascular well-being.

The results of your test indicate that your cardiac health falls into the plateau stage of the aging trajectory. This stage is characterized by a stable phase where cardiac functions remain robust and consistent following early adulthood. It is a period during which the heart typically maintains its functionality effectively before any potential decline associated with the accelerated aging stage.



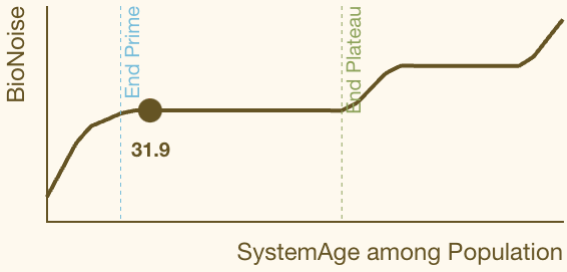
Associated Diseases

- Coronary Artery Disease
- Congenital Heart Disease
- Hypertension (High Blood Pressure)

Associated Pathways

- Notch Signaling Pathway
- Calcium Signaling Pathway
- Oxidative Phosphorylation

Aging Entropy Curve



● You Are Here

Status: Plateau

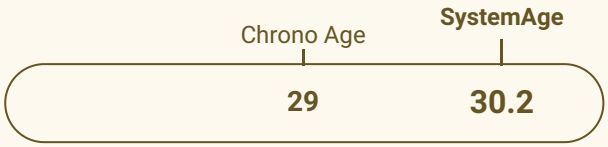
Reproductive System

Reproductive health depends on the interplay of hormones, the brain, reproductive organs, and gametes. It intricately balances the dance of life, transmitting cell pluripotency features from one organism to another through generations.

Aging Insights

In terms of reproductive health, your biological age aligns closely with your chronological age, indicating that the aging process for this function is progressing at a typical rate. This suggests that your current lifestyle and health practices are effectively supporting your reproductive health. However, continued attention to overall wellness will be important in maintaining this function's health as you age.

In your reproductive health assessment, you have been placed in the plateau stage of the aging trajectory. This stage indicates that your reproductive functions are stable and remain in good condition, typically following the peak efficiency of early adulthood and preceding any notable decline associated with accelerated aging. It is a period where reproductive capacities remain consistently healthy before any significant aging-related changes occur.



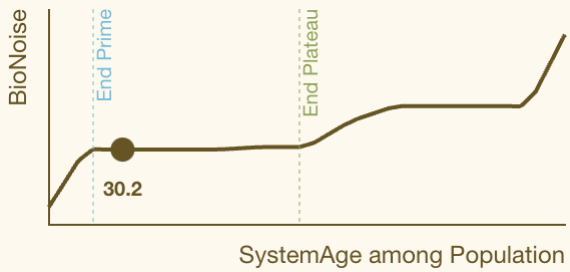
Associated Diseases

- Varicocele
- Prostatitis
- Erectile Dysfunction (ED)

Associated Pathways

- Spermatogenesis Pathway
- Androgen Signaling Pathway
- Hypothalamic-Pituitary-Gonadal (HPG) Axis

Aging Entropy Curve



● You Are Here

Status: Plateau

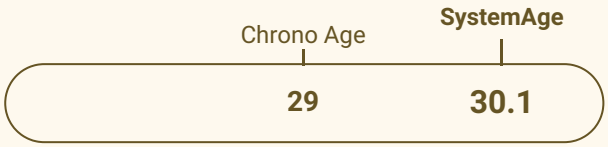
Tissue Regeneration

Tissue regeneration replaces damaged cells in a tissue with new ones, a process that recapitulates organ development. This process ensures the restoration of normal tissue structure and function after injury or attrition, embodying nature's efficient renovation for sustained health. Tissue regeneration declines with aging and certain degenerative pathologies.

Aging Insights

Your tissue regeneration function is aging at an average speed, which indicates that the regenerative capacity of your body is in line with typical expectations for your age. This suggests that your current lifestyle and health practices are generally effective at maintaining this function. To prevent potential decline and maintain optimal tissue health, it may be beneficial to consider ongoing health and wellness strategies.

The test results indicate that your tissue regeneration function is in the plateau stage of the aging trajectory. This stage represents a period of relative stability where tissue regeneration processes remain healthy and consistent, typically occurring after early adulthood and preceding the accelerated aging phase. During the plateau stage, your body's ability to regenerate tissues is maintained at a stable level, indicating a healthy equilibrium in this particular function.



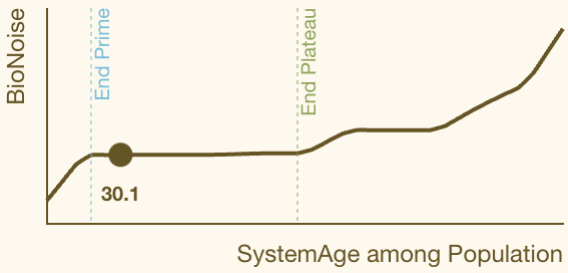
Associated Diseases

- Alzheimer's Disease
- Chronic Kidney Disease
- Chronic Obstructive Pulmonary Disease (COPD)

Associated Pathways

- Hippo Signaling Pathway
- Wnt Signaling Pathway
- JAK-STAT Pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

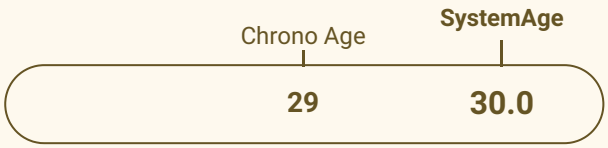
Blood Sugar and Insulin Control

Blood sugar and insulin control are crucial for metabolic health, and this pancreatic function is responsible for maintaining stable blood sugar levels and proper insulin production. It involves a delicate balance between glucose regulation and insulin sensitivity, essential for preventing metabolic disorders and ensuring overall metabolic harmony. Sugar-insulin imbalance often accompanies human aging and manifests in diabetes.

Aging Insights

Your blood sugar and insulin control function is aging at an average speed, indicating that your body's ability to regulate glucose levels and insulin production is typical for your age. This suggests that your current lifestyle and health practices are effectively maintaining this function. However, it remains important to continue monitoring and managing your health to prevent potential declines in the future.

In your test results, you fall into the plateau stage of the aging trajectory for blood sugar and insulin control. This stage indicates that your biological function related to regulating blood sugar levels is generally stable and effective, typically following early adulthood and before any noticeable decline due to accelerated aging. It suggests that at this point, your body's ability to manage glucose and respond to insulin remains consistent and efficient.



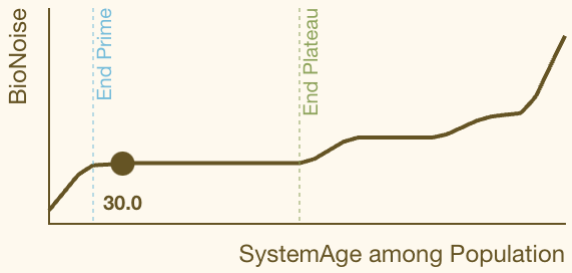
Associated Diseases

- Type 1 Diabetes
- Insulinoma
- Hyperglycemia

Associated Pathways

- Insulin signaling pathway
- Hexosamine biosynthetic pathway
- Glycogenesis

Aging Entropy Curve



● You Are Here

Status: Plateau

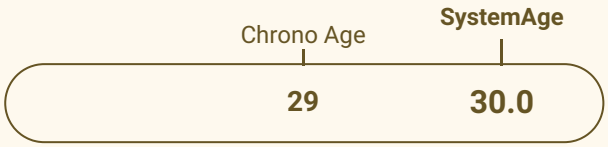
Fibrogenesis and Fibrosis

Healthy fibrogenesis and fibrosis is the 'plan B' for quickly patching up tissues when the damage is significant, and stem cells might be too slow to heal. This process also re-creates a healthy supportive environment for the cells. In contrast, pathogenic fibrosis produces excessive fibrous connective tissue, diminishing the function of organs and altering tissue structures.

Aging Insights

The aging speed of your fibrogenesis and fibrosis functions is within the average range for your age. This suggests that your current lifestyle and health practices are effectively maintaining these bodily functions as expected. Continuing to follow healthy habits and monitoring these functions will be important to prevent any future decline.

In the plateau stage of fibrogenesis and fibrosis, your biological function has reached a phase where the formation and turnover of fibrous tissue remain relatively stable. This stage is characterized by consistent levels of fibrotic activity, neither rapidly increasing nor significantly decreasing. This indicates that while the body's ability to manage fibrous tissues is not as robust as in early adulthood, it has not yet entered the phase of accelerated dysfunction typically associated with older age.



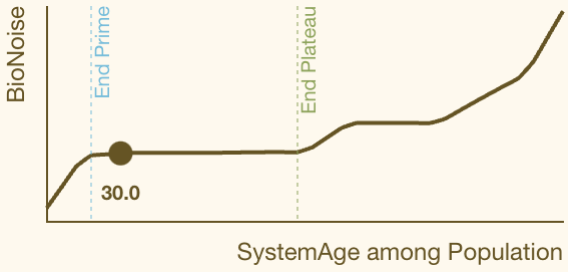
Associated Diseases

- Systemic Sclerosis
- Idiopathic Pulmonary Fibrosis
- Bronchopulmonary Dysplasia

Associated Pathways

- JAK-STAT signaling pathway
- TGF-beta signaling pathway
- PI3K-Akt signaling pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

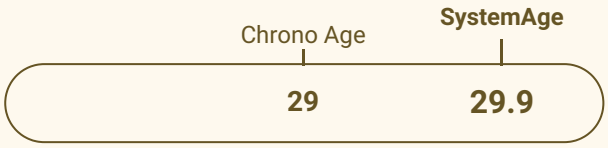
Immune System

The immunity is the body's defense mechanism against infections and diseases, including cancers. The immunity also facilitates wound healing and tissue repair. With aging and disease, adaptive immunity declines and inflammation becomes excessive.

Aging Insights

The test results indicate that your immune function is aging at an average speed for your age, which suggests that your immune system health is typical for individuals of your demographic. While this reflects generally good health practices and lifestyle choices, it is important to continue monitoring and supporting your immune function to maintain its efficiency and prevent any potential decline. Consider regular health check-ups and adopting preventive measures such as a balanced diet, regular exercise, adequate sleep, and stress management.

The results indicate that your immunity falls into the plateau stage of the aging trajectory. This stage is characterized by a stable and consistent level of immune function, following early adulthood's peak performance and preceding the eventual decline associated with accelerated aging. During this plateau phase, your immune system is generally maintaining its health and effectiveness in protecting against infections and diseases.



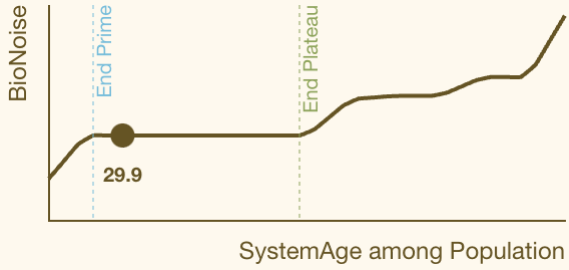
Associated Diseases

- Graves' Disease
- Rheumatoid Arthritis
- Multiple Sclerosis

Associated Pathways

- NF-κB Signaling Pathway
- T Cell Receptor Signaling Pathway
- B Cell Receptor Signaling Pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

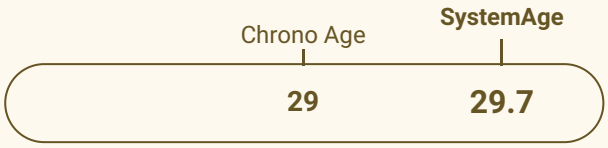
Skeletal System

Bone function is crucial for skeletal health, and aging negatively impacts bone structure, strength, and density. Bone morphogenesis is the continuous remodeling of bone tissue that is effective in youth and becomes perturbed with aging and disease.

Aging Insights

The biological assessment indicates that your skeletal health functions at an average aging speed, consistent with typical expectations for your chronological age. This suggests that your current lifestyle and health practices are effectively maintaining your bone health. It is important, however, to continue practicing good bone health habits to prevent any future decline.

In your skeletal health function test, you have been identified as being in the plateau stage of the aging trajectory. This stage is characterized by a period of stability where skeletal health remains relatively strong and consistent. It indicates that your bones are maintaining their density well, following early adulthood, and before the potential decline seen in accelerated aging.



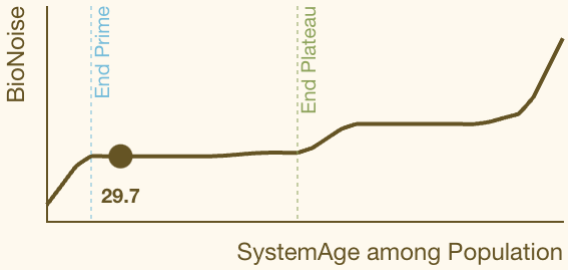
Associated Diseases

- Osteogenesis Imperfecta
- Paget's Disease of Bone
- Rickets

Associated Pathways

- FGF (Fibroblast Growth Factor) Signaling Pathway
- RANK/RANKL/OPG Pathway
- Notch Signaling Pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

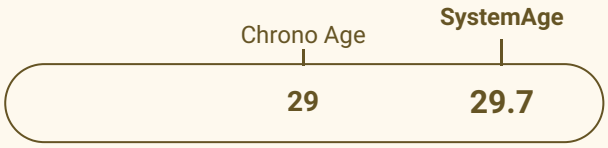
Urinary System

Urinary health encompasses the kidneys, bladder, and associated structures, maintaining fluid balance and waste elimination. It acts as the body's filtration system, ensuring toxins are efficiently removed and fluid balance is maintained, promoting kidney and urinary well-being.

Aging Insights

Your urinary health is aging at an average speed, which means it is in typical condition for your age. This suggests that your lifestyle and health practices are currently effective in maintaining your urinary health. It is generally advisable to continue monitoring and take preventive measures to ensure it remains healthy in the future.

According to the results of your biological age assessment for urinary health, you fall into the plateau stage of the aging trajectory. This stage represents a period where urinary functions are generally stable and healthy, occurring after early adulthood and before any noticeable decline typically associated with accelerated aging. It means that for most individuals in this stage, urinary health remains relatively consistent and free from significant age-related changes.



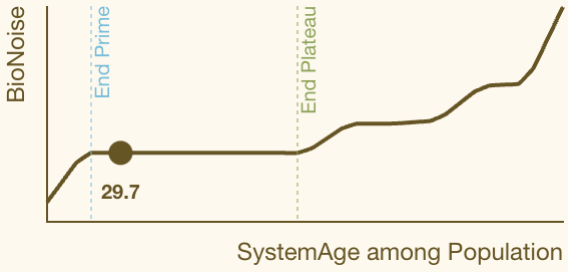
Associated Diseases

- Bladder Cancer
- Kidney Stones
- Renal Cell Carcinoma

Associated Pathways

- Aldosterone Synthesis and Secretion Pathway
- Prostaglandin Synthesis Pathway
- Calcium and Phosphate Reabsorption Pathways in Nephron

Aging Entropy Curve



● You Are Here

Status: Plateau

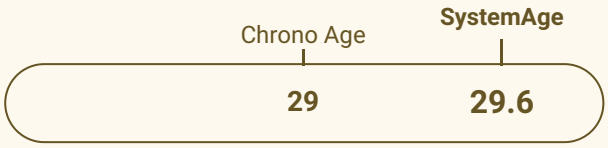
Hepatic System

Hepatic health plays a vital role in detoxification, metabolism, and digestive health. With aging and certain diseases (hepatitis), liver tissue becomes replaced with fibrosis and/or experiences persistent inflammation that diminishes liver function and contributes to the overall loss of health.

Aging Insights

The analysis indicates that your hepatic health is currently aging at an average speed, which means it is functioning at a level typical for your chronological age. This suggests that your liver health is being maintained effectively through your lifestyle and health practices. To ensure continued hepatic wellbeing, consider regular medical check-ups and proactive measures to prevent any potential decline in the future.

In the plateau stage of hepatic health, your liver function is currently in a stable phase where its biological processes are functioning well and maintaining consistency. This stage typically follows early adulthood, where the liver is still in peak performance, and precedes the accelerated aging phase in which performance might start to decline. Generally, this indicates that your liver is effectively managing metabolic processes, detoxification, and other vital tasks crucial for overall health.



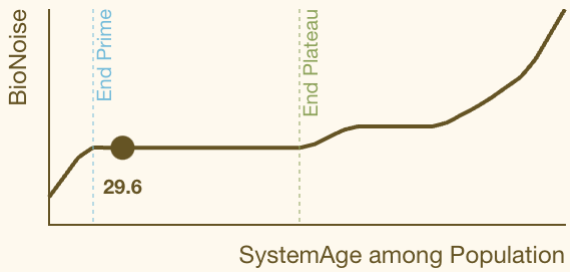
Associated Diseases

- Liver cancer (hepatocellular carcinoma)
- Hepatitis B
- Hepatitis C

Associated Pathways

- Fatty Acid Synthesis
- Beta-Oxidation of Fatty Acids
- Citric Acid Cycle (Krebs Cycle)

Aging Entropy Curve



● You Are Here

Status: Plateau

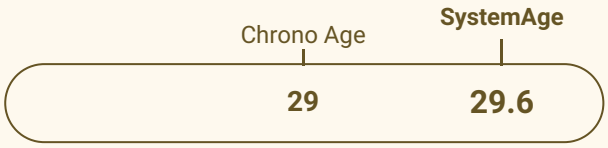
Neurodegeneration

Certain diseases, exemplified by Parkinson's, Alzheimer's, Multiple Sclerosis, ALS, and aging-related brain changes, result in the progressive neurodegeneration of particular brain areas. In these diseases, the loss of neurons and neuronal connections results in diminished functional capacities.

Aging Insights

Your neurodegeneration aging speed has been categorized as average, which indicates that your neurological function is maintaining typical health for your age. This suggests that your current lifestyle and health practices are effective in supporting your brain health at an expected level. Continuing with healthy habits and monitoring cognitive function as you age will help prevent decline in the future.

In the context of neurodegenerative function, falling into the plateau stage signifies that your neural activities are currently stable and consistent, reflecting a period where cognitive and neurological functions remain relatively healthy. This stage follows early adulthood, where development peaks, and precedes the accelerated aging phase, where functions might begin to decline more noticeably. Maintaining this plateau stage is crucial as it offers an optimal window for implementing preventive measures to sustain neural health.



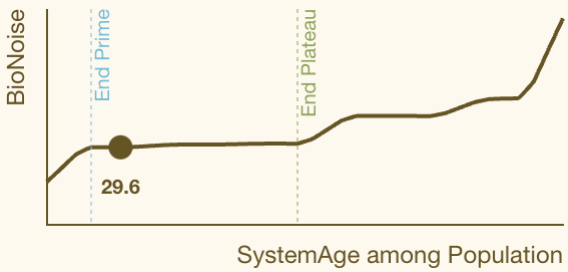
Associated Diseases

- Frontotemporal Dementia
- Creutzfeldt-Jakob Disease
- Alzheimer's Disease

Associated Pathways

- Apoptosis Pathway in Neurons
- Cholesterol Metabolism Pathway
- Excitotoxicity Pathway (involving glutamate)

Aging Entropy Curve



● You Are Here

Status: Plateau

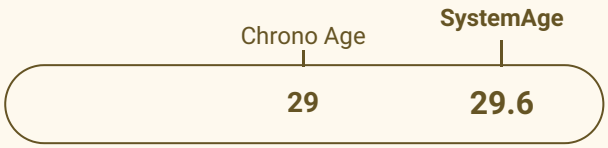
Brain Health and Cognition

Our mental well-being, mood, memory, cognition, and overall mental health depend on the health of the brain, which is influenced by the peripheral organ systems connected by the circulatory system - the blood. Neuroinflammation increases with aging and disease, while maintenance and repair of brain cells, including neurons, decline. Strategies for promoting brain health include changes in the systemic milieu - the blood, as well as implementing mindfulness and fostering social connections.

Aging Insights

The assessment indicates that your brain health and cognition are aging at an average speed, which is typical for your age. This suggests that your current lifestyle and health practices are effectively maintaining cognitive function within expected parameters. To sustain and potentially enhance this stability, consider ongoing mental stimulation, balanced nutrition, regular physical activity, and routine health check-ups.

In the plateau stage of brain health and cognition, you are in a period where these functions typically remain stable and consistent. This stage follows early adulthood, where peak cognitive abilities are often observed, and precedes the accelerated aging phase, where more noticeable declines might occur. Generally, individuals in the plateau stage maintain healthy brain function and cognitive performance, benefiting from a period of stability before any significant age-associated changes arise.



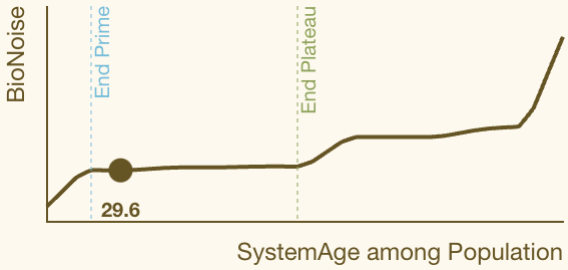
Associated Diseases

- Depression
- Post-Traumatic Stress Disorder (PTSD)
- Attention Deficit Hyperactivity Disorder (ADHD)

Associated Pathways

- Glutamatergic Signaling Pathway
- Serotonergic Signaling Pathway
- BDNF Signaling Pathway (Brain-Derived Neurotrophic Factor)

Aging Entropy Curve



● You Are Here

Status: Plateau

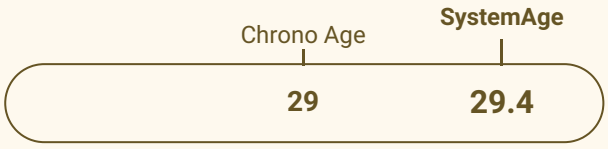
Metabolism

The sum of chemical processes converting food into energy influences every aspect of our health, including weight and vitality, and involves every organ system. Metabolic pathways are tightly regulated to efficiently utilize nutrients at the level of cells and the entire body, orchestrating a dynamic process that adapts to individual needs and shapes the body's energy landscape.

Aging Insights

Your metabolic function is currently aging at an average speed, indicating it is in typical health for your age. This suggests that your current lifestyle and health practices are effectively maintaining your metabolism. However, it is important to continue monitoring and adopting healthy habits to prevent potential decline in the future.

The results of your biological age test for metabolism indicate that you are in the plateau stage of the aging trajectory. This stage, which follows early adulthood and precedes accelerated aging, is characterized by a period of stability where metabolic functions remain relatively consistent and healthy. It suggests that your metabolic rate is maintaining a steady state, allowing for effective energy management and related bodily processes.



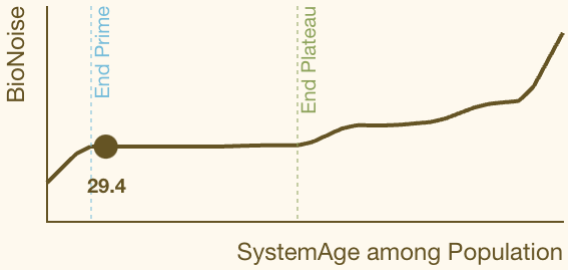
Associated Diseases

- Mitochondrial Myopathy
- Hyperthyroidism
- Phenylketonuria

Associated Pathways

- Citric Acid Cycle (Krebs Cycle)
- Pentose Phosphate Pathway
- Amino Acid Catabolism

Aging Entropy Curve



● You Are Here

Status: Plateau

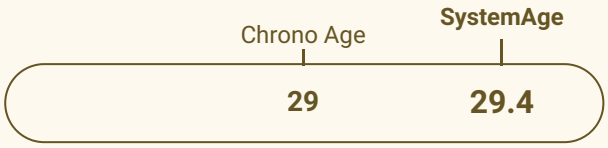
Oncogenesis

Oncogenesis is the process by which normal cells undergo a transformation into cancerous ones. Understanding the factors that trigger, promote, and suppress abnormal cell fates is crucial in developing strategies for the prevention and treatment of cancer.

Aging Insights

Your test results indicate that the biological age of your oncogenesis function aligns with your actual age. This suggests that your rate of cellular changes related to potential cancer development is within the typical range for your age group. Moving forward, it will be important to maintain healthy lifestyle practices and regular medical check-ups to continue managing this function effectively and to mitigate any potential risks.

The results of your recent test indicate that you are in the plateau stage of the aging trajectory for oncogenesis. This stage represents a stable phase in which the body's age-related susceptibility to cancer remains relatively constant, following the initial increased risk seen in early adulthood. It is important to recognize this stage as a time where maintaining overall health and regular screenings can be particularly effective in managing long-term cancer risk before reaching the accelerated aging stage.



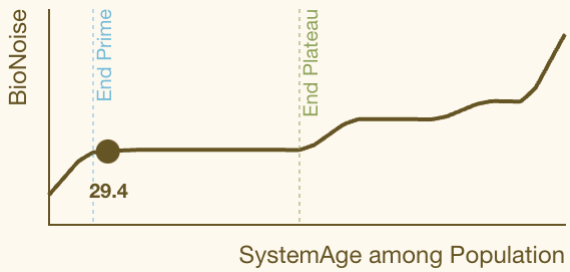
Associated Diseases

- Colorectal Cancer
- Lung Cancer
- Pancreatic Cancer

Associated Pathways

- TGF-β/SMAD pathway
- Notch signaling pathway
- PI3K/AKT/mTOR pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

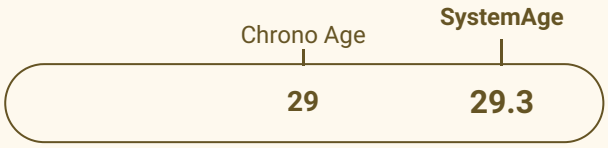
Auditory System

The Auditory Health is responsible for hearing and plays a pivotal role in our sense of balance, ensuring a symphony of sensory experiences that enrich our daily lives. Auditory health frequently declines with aging and in certain diseases.

Aging Insights

The test results indicate that your auditory health is aging at an average speed relative to your chronological age. This suggests that your hearing function is maintaining typical health for your age group. It is important to continue practices that support auditory health, as interventions may be needed in the future to prevent potential decline.

In your test results, you fall into the early adulthood stage of the aging trajectory graph for auditory health. This stage is characterized by optimal auditory function, indicating that your ability to hear is generally at its peak performance. Typically, individuals in this stage experience the best auditory sensitivity and clarity, compared to later stages which entail a plateau followed by a decline in function.



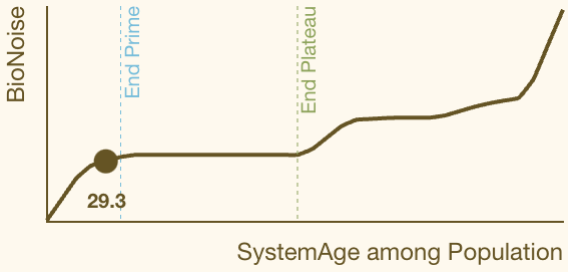
Associated Diseases

- Presbycusis
- Noise-Induced Hearing Loss
- Otitis Media

Associated Pathways

- Tonotopic Organization Pathway
- Auditory Nerve Signal Transduction Pathway
- Inner Ear Hair Cell Potassium Recycling Pathway

Aging Entropy Curve



You Are Here

Status: Prime

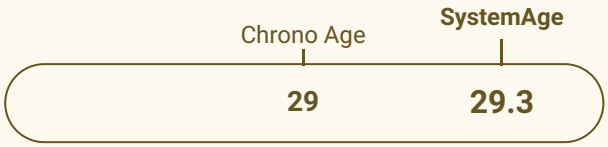
Respiratory System

Respiratory health is essential for breathing and relies on lung health. Lungs maintain optimal respiratory function throughout our lives. Respiration intakes oxygen and expels carbon dioxide, essential for sustaining life. Respiratory health often declines with aging and in certain diseases, such as pulmonary illnesses.

Aging Insights

The results of the test indicate that your respiratory health is aging at an average pace relative to your actual age. This suggests that your current lifestyle and health practices are effectively maintaining your respiratory function at an expected level for your age. However, it is important to continue monitoring and potentially adopting preventive measures to ensure this function remains stable in the future.

Based on the test results, your respiratory health falls into the early adulthood stage of the aging trajectory graph. This stage is characterized by optimal biological function, meaning that your respiratory system is likely operating at its peak efficiency. At this stage, respiratory function is generally at its highest, before reaching the plateau stage and subsequent accelerated aging.



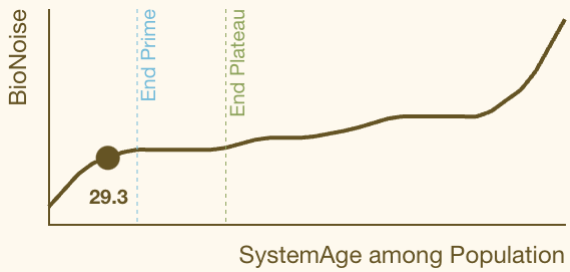
Associated Diseases

- Cystic Fibrosis
- Pulmonary Fibrosis
- Pulmonary Hypertension

Associated Pathways

- Cori Cycle
- Beta-Oxidation of Fatty Acids
- Glycolysis

Aging Entropy Curve



● You Are Here

Status: Prime

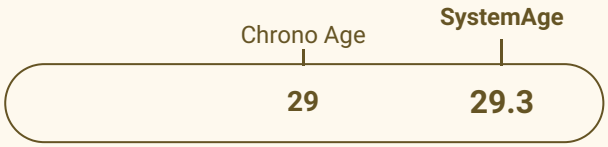
Digestive System

Digestive health is central to nutrient absorption and overall health. The gastrointestinal tract ensures that the body receives essential nutrients for optimal well-being. From breaking down food into nutrients to absorption in the intestines to the essential functions of the microbiome, the dynamic digestive system nourishes the body and supports overall health.

Aging Insights

Your digestive health is aging at an average speed compared to your actual age, which indicates that it is functioning typically for someone of your demographic. This suggests that your current lifestyle and health practices are maintaining this function well. However, continuous attention to a balanced diet and regular check-ups will be essential to prevent any future decline.

The results of your digestive health test indicate that you fall into the plateau stage of the aging trajectory for this function. This stage, occurring after early adulthood and before accelerated aging, is characterized by stable and consistent digestive function. During the plateau stage, your digestive health is generally expected to remain healthy and functional, reflecting a well-maintained state of biological activity.



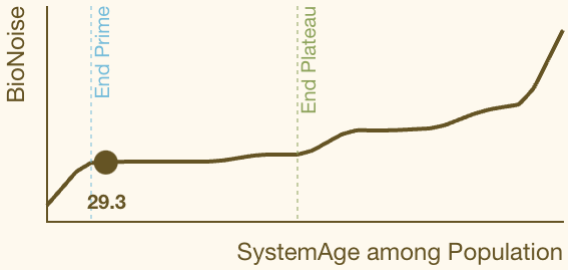
Associated Diseases

- Diverticulitis
- Crohn's Disease
- Gastroesophageal Reflux Disease (GERD)

Associated Pathways

- Electron Transport Chain
- Gluconeogenesis
- Citric Acid Cycle (Krebs Cycle)

Aging Entropy Curve



● You Are Here

Status: Plateau

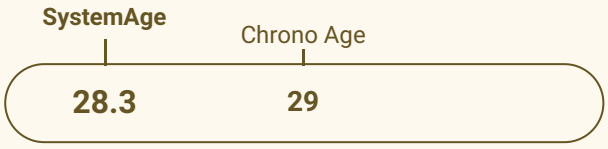
Inflammatory Regulation

Productive inflammatory regulation overlaps with tissue repair and is the first step in combating pathogens. It plays a vital role in orchestrating the body's response to challenges, ensuring a balanced immune reaction without causing harm. However, when inflammatory regulation becomes persistent (chronic or inflammaging), it exacerbates tissue damage and ironically prevents effective immunity.

Aging Insights

Your test results indicate that your inflammatory regulation is aging at an average speed, which is typical for your age. This means that your lifestyle and health practices are effectively maintaining this function at an expected level. It is important to continue these practices and consider proactive measures to prevent potential decline in the future.

The results of your biological age test for inflammatory regulation indicate that you are in the plateau stage of the aging trajectory. During this stage, the regulatory functions of your body's inflammatory responses remain stable and consistent, suggesting they are functioning healthily. This phase typically occurs after early adulthood and before any potential accelerated aging, meaning your inflammatory regulation is currently well-maintained.



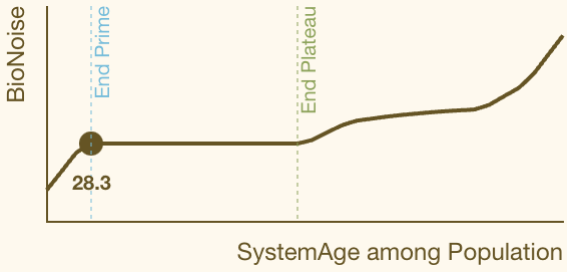
Associated Diseases

- Systemic lupus erythematosus (SLE)
- Psoriasis
- Inflammatory bowel disease (IBD)

Associated Pathways

- TNF signaling pathway
- NOD-like receptor signaling pathway
- Toll-like receptor signaling pathway

Aging Entropy Curve



● You Are Here

Status: Plateau

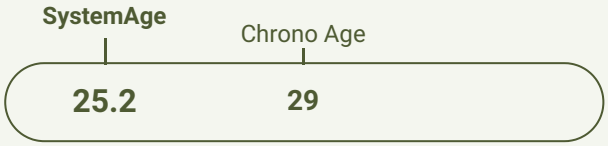
Blood and Vascular System

Blood components include immune cells, oxygen-delivering red blood cells, and platelets that form clots to stop bleeding. In addition to the blood cells, hormones, growth factors, antibodies, and other proteins, macromolecules, and nutrients are circulated in the vasculature. The vasculature is composed of a complex network of blood vessels, which are vital for maintaining proper blood flow. With aging, vascularization becomes perturbed and typically diminished, contributing to many aging-associated dysfunctions.

Aging Insights

Your test results indicate that your blood and vascular health are aging at a good speed, which means the function is well-maintained for your age. This suggests that your current lifestyle and health practices are effectively supporting your cardiovascular system. However, there is always room for improvement, so consider continuing to adopt heart-healthy habits to maintain and possibly enhance this good outcome.

Your test results indicate that your blood and vascular function falls into the early adulthood stage of the aging trajectory. This stage is characterized by optimal biological performance, meaning that your blood vessels and circulatory system are likely functioning efficiently and effectively. Being in this stage typically suggests a period where vascular health is at its peak before the onset of the plateau and subsequent accelerated aging stages.



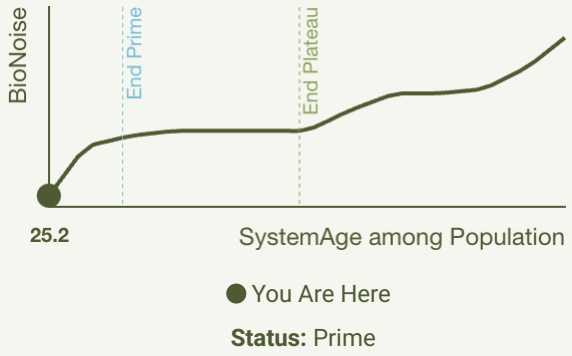
Associated Diseases

- Raynaud's Disease
- Acute Limb Ischemia
- Deep Vein Thrombosis (DVT)

Associated Pathways

- VEGF (Vascular Endothelial Growth Factor) Signaling Pathway
- PI3K-Akt Signaling Pathway
- Renin-Angiotensin-Aldosterone System (RAAS)

Aging Entropy Curve



Status: Prime

*Disclaimer: The information provided by our health recommendation engine, including both Clinical Recommendations and Lifestyle Recommendations, is intended for maintaining or encouraging a healthy lifestyle and is for informational general wellness purposes only. The information provided is unrelated to the diagnosis, cure, mitigation, prevention, or treatment of a disease or condition. and is not intended as a substitute for professional medical advice, diagnosis, or treatment. While we strive to offer accurate and personalized recommendations based on your test results, it is essential that you consult with a qualified healthcare provider before making any decisions or taking any actions based on these recommendations. We do not assume any liability for actions taken based on the information provided by our engine. Always seek the guidance of your physician or other qualified health professional with any questions you may have regarding your health and wellness.