TruDiagnostic™
The Epigenetic Company

TruAge Report

XXXXXXXXXXXXXXX

EPXXX-XXX-XXX

Age: 49.17 | Sex: Female

Collected: XX/XX/2025 | Reported: XX/XX/2025

Fasted: Unknown

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DEVELOPED WITH HARVARD

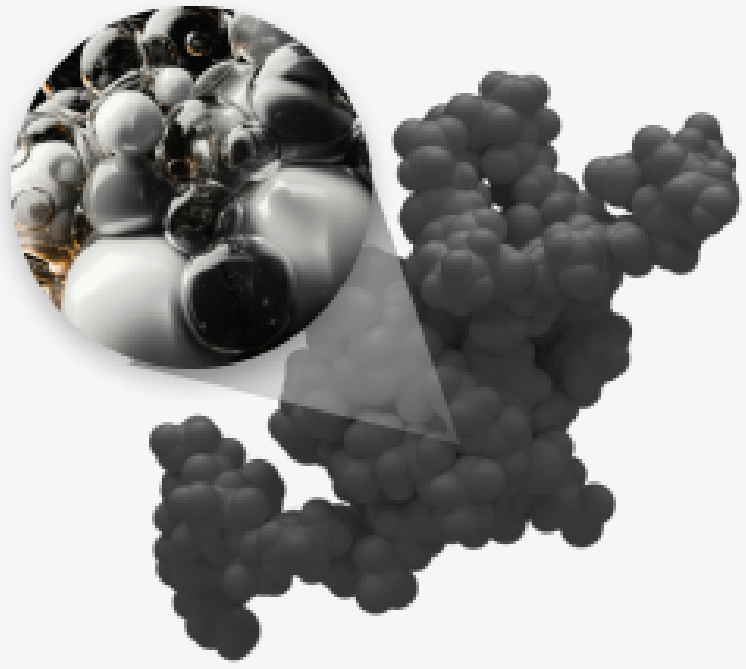
OMICmAge

OMICm Age

43.7

Chronological Age

49.2



Your OMICm age is a deeper reflection of your biological age, considering the effects of lifestyle, environment, and genetics on your DNA and the aging process.

In contrast your chronological age is the number of years you have lived, a straightforward measure of time since birth. The difference between OMICm Age from chronological age highlights underlying health insights, guiding tailored wellness strategies.

-5.5

Your OMICm Age is **lower** than your calendar age by 5.5 years.

50.7%

Your OMICm Age is **lower than** 49.3% of other 49.2 year old females.

RESULTS OVER TIME

PAST RESULTS

Since you have only completed one test, this graph is a bit empty! In 3 months, take another test to see how your score has changed and monitor your progress.

DISCLAIMER: The percentile for OMICm Age is based on observed and validated data patterns from an equal distribution of Harvard research participants and TruDiagnostic clients to emulate a population of average health.

DEVELOPED WITH YALE

SYMPHONY Age

This advanced approach dives into the age of **11 distinct organ systems** providing a detailed aging map.

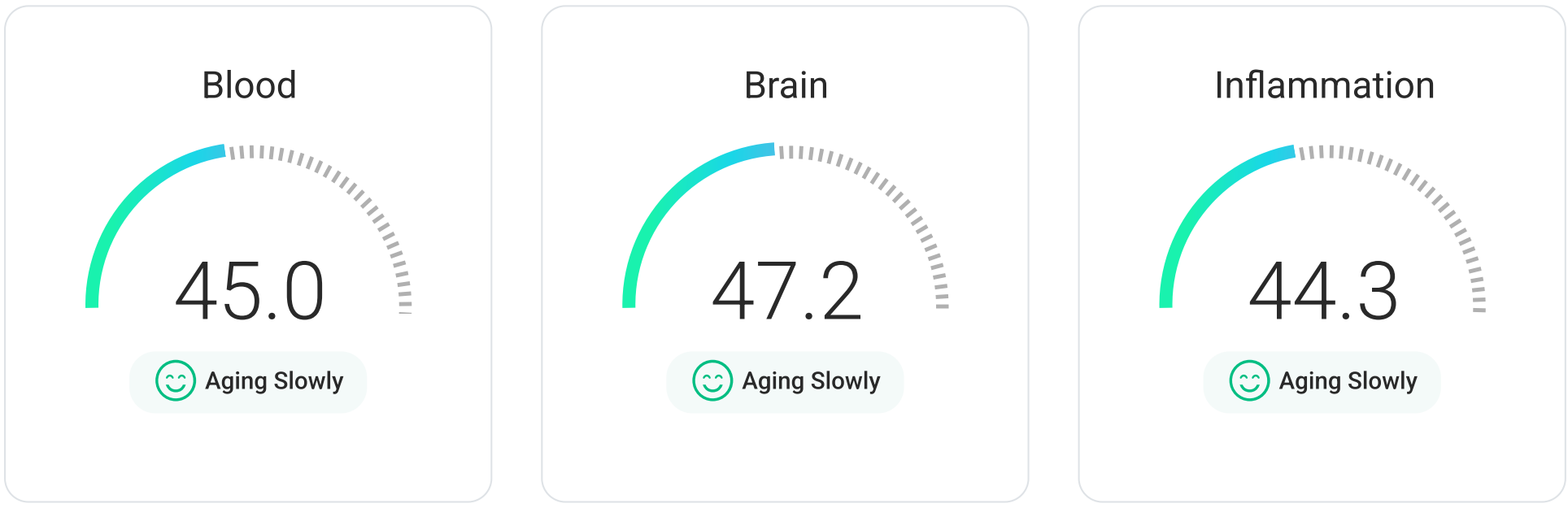
Everyone ages differently

Epigenetic clocks have revolutionized how we understand aging, offering insights beyond what the calendar tells us. These innovative tools reveal your body's true age and the pace at which it's aging, acknowledging that everyone's journey through time is unique.

Developed by researchers at Yale, SYMPHONYAge enriches our understanding of aging by showing how each part of your body ages on its own path, offering a comprehensive snapshot of your health. SYMPHONYAge was developed by analyzing biomarkers from 5,000 individuals, enabling a precise study of aging across 11 organ systems.

This method integrates data from various sources, including whole exome sequencing and plasma metabolomics, to pinpoint epigenetic markers linked to specific organ aging. This detailed approach segments 130 biomarkers, offering insights into individual organ system aging.

Distinct from traditional epigenetic clocks, SYMPHONYAge provides a detailed view of biological age by organ system, facilitating targeted medical interventions and advancing personalized medicine. This tool significantly enhances our ability to manage and understand aging, emphasizing its heterogeneity and supporting tailored healthcare strategies for aging populations.



Heart

Aging Faster

Hormone

Aging Faster

Immune

Aging Slowly

Kidney

Aging Slowly

Liver

Aging Slowly

Metabolic

Aging Slowly

Lung

Aging Faster

MusculoSkeletal

Aging Slowly

PAST RESULTS

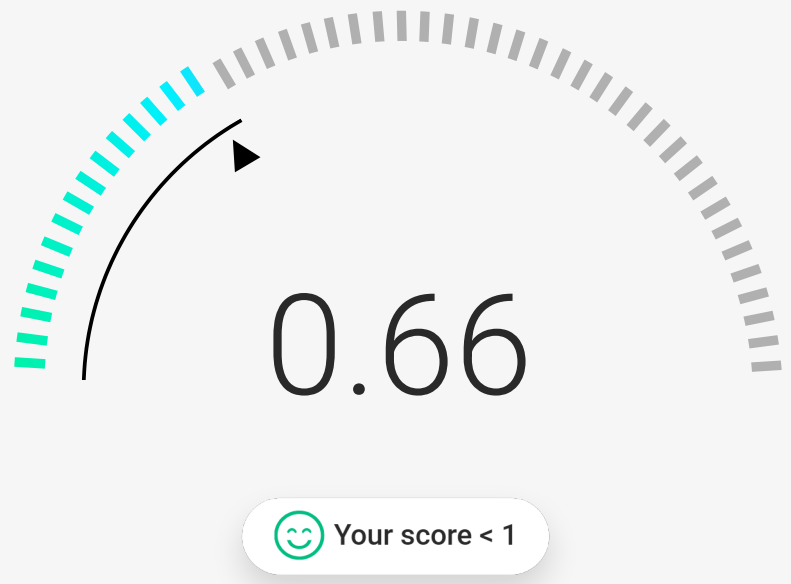
ORGAN SYSTEM	08.17.2025
Blood	45.0
Brain	47.2
Inflammation	44.3
Heart	49.3
Hormone	53.1
Immune	42.7
Kidney	43.1
Liver	46.7
Metabolic	45.7
Lung	49.5
MusculoSkeletal	43.9

DunedinPace of Aging

YOUR PACE SCORE

You're aging **slowly.**

Each year that passes, your body will biologically age 0.66 years.



The DunedinPace algorithm is a revolutionary approach to quantifying aging that shifts the focus from merely knowing your biological age to understanding the pace, or rate at which you're aging.

It's not just about how old your body is biologically; it's equally crucial to grasp how quickly you are moving towards aging. This knowledge is vital because slowing down the pace of aging can significantly impact your health, vitality, and the prevention of chronic diseases. By providing a clearer picture of how fast you're aging, DunedinPace empowers you to make informed lifestyle choices that can help decelerate the aging process, aiming for a healthier, more vibrant life. Your pace of aging changes quickly and has been shown to be affected by lifestyle choices, making it a perfect tool to understand the success of interventions.

A pace **greater than 1** has been associated with a **56% increased risk of death** and a **54% increased risk of chronic disease** in the next 7 years.

(Belsky et al, 2020)

RESULTS OVER TIME

PAST RESULTS

Since you have only completed one test, this graph is a bit empty! In 3 months, take another test to see how your score has changed and monitor your progress.

NOW WHAT?

Top Aging Interventions

Changing your Biological age and reducing risk of disease requires a systematic approach to interventions and testing.

SUPPLEMENTS

- **Spermidine**: Supports autophagy, cellular repair, and longevity pathways.
- **Nicotinamide Mononucleotide (NMN) or Nicotinamide Riboside (NR)**Boosts NAD+ levels, essential for mitochondrial and DNA repair.
- **Quercetin + Dasatinib (D+Q Senolytics)**: Helps clear senescent cells, reducing systemic inflammation and improving biological age markers.
- **Vitamin D3 + K2**: Supports immune function, bone health, and may influence gene expression related to aging.

DIET

- **Green Mediterranean Diet**: A more polyphenol-rich version of the Mediterranean Diet, shown to have superior anti-aging effects.
- **Polyphenol-Rich Foods**: Berries, Dark Chocolate, Green Tea, Olive Oil, Red Wine in Moderation, reduce oxidative stress and inflammation.
- **Cruciferous Vegetables**: Broccoli, Brussels Sprouts, Kale, Cauliflower contain sulforaphane and other bioactive compounds that enhance detoxification and DNA repair.
- **Adequate Protein Intake**: Pea/Hemp Protein, Grass-Fed Meat, Fatty Fish supports muscle maintenance and metabolic function, critical for longevity.
- **Prebiotic & Fermented Foods**: Kimchi, Sauerkraut, Yogurt, Garlic, Onions, enhance gut microbiome diversity, which is linked to immune function and longevity.

LIFESTYLE

- **Caloric Restriction (CR)**: One of the most well-documented longevity interventions, shown to slow biological aging and improve metabolic flexibility.
- **Strength & Resistance Training**: Builds muscle mass, enhances mitochondrial function, and improves metabolic flexibility.
- **High-Intensity Interval Training (HIIT)**: Increases cardiovascular efficiency, stimulates mitochondrial biogenesis, and enhances insulin sensitivity.
- **Hyperbaric Oxygen Therapy (HBOT)**: High & mild pressure increases oxygen availability, promotes telomere lengthening, reduces inflammation, and enhances stem cell activity.
- **Prioritizing High-Quality Sleep**: 7-9 hours per night is crucial for epigenetic stability, immune function, and cognitive longevity.

NOW WHAT?

Lifestyle Recommendations

GOAL SETTING

Based on the test results, set realistic and specific goals for lifestyle changes, focusing on areas that could significantly impact your biological age, such as diet, exercise, stress management, and sleep.

JOURNALING

Keep a journal to track your progress on lifestyle changes, noting any improvements in how you feel physically and mentally. This record can help identify what's working and areas that need adjustment.

DIETARY MODIFICATIONS

Incorporate a balanced diet rich in fruits, vegetables, whole grains, and lean proteins. Consider reducing processed foods, sugar, and saturated fats.

REGULAR EXERCISE

Design a regular exercise routine that includes a mix of cardiovascular exercises, strength training, and flexibility exercises. Aim for at least 150 minutes of moderate aerobic activity or 75 minutes of vigorous activity each week.

IMPROVING SLEEP HYGIENE

Ensure 7-9 hours of quality sleep per night by establishing a regular sleep schedule, creating a restful environment, and avoiding screens before bedtime.

AVOID HARMFUL HABITS

Limit alcohol consumption and avoid smoking and drug use, as these habits can significantly accelerate biological aging.

STRESS MANAGEMENT

Adopt stress reduction techniques such as mindfulness, meditation, yoga, or deep breathing exercises. Consistently managing stress can have a profound impact on your biological age.

NOW WHAT?

Retest in 2 to 3 Months

Tracking your biological age is an ongoing journey. Retesting helps measure the impact of your changes and keeps you moving toward healthier aging.

FOLLOW-UP TESTING

Retest with the TruAge test after three months to assess the impact of your lifestyle changes on your biological age. The three-month mark is a reasonable period to see initial changes without expecting dramatic reversals in aging.

REVIEW AND ADJUST

Review the results of the follow-up test with your healthcare professional. Celebrate improvements and discuss any areas that did not change as expected. Adjust your lifestyle plan accordingly to address these areas.

LIFELONG COMMITMENT

Understand that maintaining or reducing your biological age is a lifelong commitment. Continue with the lifestyle changes, retesting periodically (e.g., every 6 to 12 months), and adjusting your plan as necessary to continue improving your health and longevity.

OUR APPROACH

Multi OMICs & Biological Aging

It turns out, our health and aging aren't determined by genetics alone... we applied cutting-edge techniques to measure the full spectrum of biomarkers—proteins, metabolites, and DNA methylation patterns—creating a detailed portrait of the body's aging process.

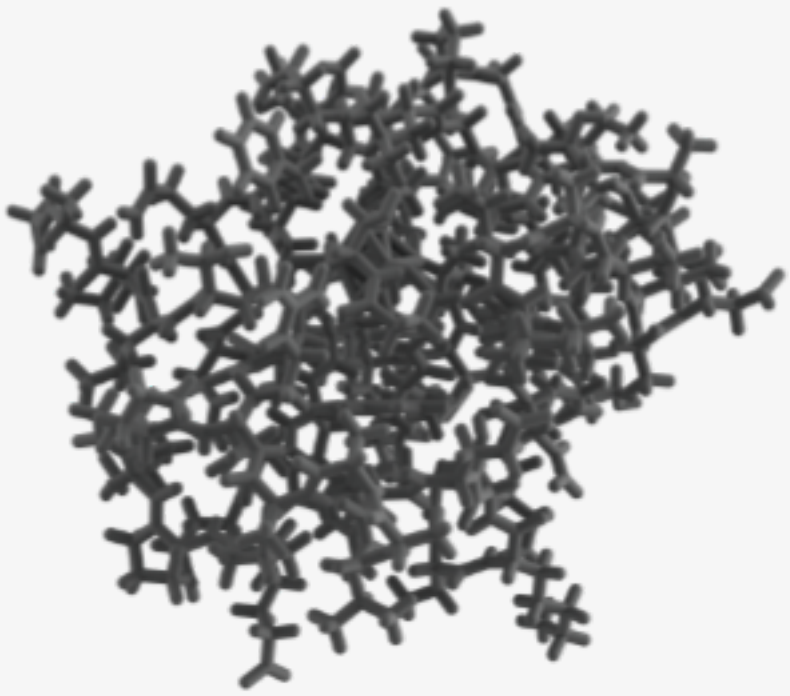
The launch of the Human Genome Project sparked hopes of unlocking all the secrets of human biology. However, while groundbreaking, the project didn't deliver the comprehensive health insights many had hoped for. It turns out, our health and aging aren't determined by genetics alone. Instead, they're influenced by a complex network that includes our epigenetics, the variety of proteins and peptides in our bodies (the proteome), and the metabolites produced through bodily processes and environmental interactions. This intricate web of factors is known as the multiome, representing the vast array of measurements we can analyze in the body.

To develop the most accurate biological age clock, we aimed to capture this entire multiome, not just a slice of it. By studying 5,000 individuals, we applied cutting-edge techniques to measure the full spectrum of biomarkers—proteins, metabolites, clinical lab measures, and DNA methylation patterns—creating a detailed portrait of the body's aging process.

Our research, which included Whole Exome Sequencing, Plasma Proteomics, Metabolomics, and thorough clinical data analysis, has led to the OMICm Age algorithm. This groundbreaking tool offers unprecedented insight into how we age across the multiome, providing a clearer, more comprehensive view of aging based on DNA methylation.

Our initial research and findings, which laid the foundation for the OMICm Age algorithm, demonstrate its superior ability to predict health outcomes compared to any other methylation-based aging clock available. This represents a significant leap forward in understanding and measuring the aging process, offering exciting possibilities for personalized health strategies.

MULTI OMICS & BIOLOGICAL AGING



Biomarkers—proteins, metabolites, and DNA methylation patterns—creating a detailed portrait of the body's aging process.

GENOMICS

The study of the genes housed in our DNA. Our DNA, located in the nucleus of our cells, contains sections of instructions (genes) that tell a cell how to behave. Your genetics stay the same from conception to death.

TRANSCRIPTOMICS

The study of how our genes turn into actionable RNA. During transcription, molecules called RNA copy the instructions of our DNA; skipping over or boosting sections based on the epigenetic patterns at that location.

METABOLOMICS

The study of the chemical processes produced by protein interactions. Metabolites are a by-product of proteins hard at work, and are used to help break down food, drugs, chemicals, or the body's own tissue.

EPIGENOMICS

The study of how our genes are modified. Epigenetic molecules interact with our DNA, either amplifying or silencing certain instructions. These interactions change throughout your lifetime.

PROTEOMICS

The study of how proteins function. Proteins are created by RNA, and perform most of the work within a cell. Antibodies, enzymes, and hormones are all types of protein functions.

PHENOMICS

The study of observable traits such as eye, skin, and hair color. Epigenetics can curate those instructions, and the resulting proteins and metabolites impact your biology to result in physical expression.

OUR APPROACH

About DunedinPace

DunedinPace acts as a dynamic health monitoring tool, offering a**personalized roadmap to aging gracefully and healthily.**

The DunedinPace algorithm is a significant advancement in understanding the aging process by analyzing epigenetic markers to determine the rate of biological aging.

This approach enhances our ability to gauge an individual's health and longevity, providing insights on whether they are aging faster or slower than their chronological age. Clinically, this tool is transformative for preventive medicine and personalized health strategies, enabling early interventions for those aging rapidly, which can mitigate age-related health risks and potentially extend lifespan. Regular use of the DunedinPace algorithm allows for the fine-tuning of health strategies by monitoring the effectiveness of lifestyle changes or treatments, offering a personalized guide to healthier aging through quantifiable evidence.

How Dunedin Pace was developed

The DunedinPace algorithm was developed through a partnership between Duke University and the University of Otago, utilizing extensive data from the Dunedin Longitudinal Study. This study followed over a thousand individuals from birth in 1972-1973 in Dunedin, New Zealand, tracking their health and lifestyle over decades. This rich dataset allowed the team to identify precise DNA methylation changes correlating with the rate of aging. The development focused on analyzing these methylation patterns and their links to aging at different time points for the same individuals, using statistical models and machine learning to find biomarkers of aging pace.

Validation of the DunedinPace algorithm expanded beyond the original cohort, incorporating external datasets to confirm its effectiveness across various demographics and prove its broad applicability. Unlike earlier epigenetic clocks that estimate biological age from static DNA snapshots, DunedinPace analyzes dynamic changes, providing a deeper, more accurate view of aging. This makes it a valuable tool for predicting health outcomes and customizing interventions, thanks to its rigorous scientific foundation and focus on the aging process's pace.

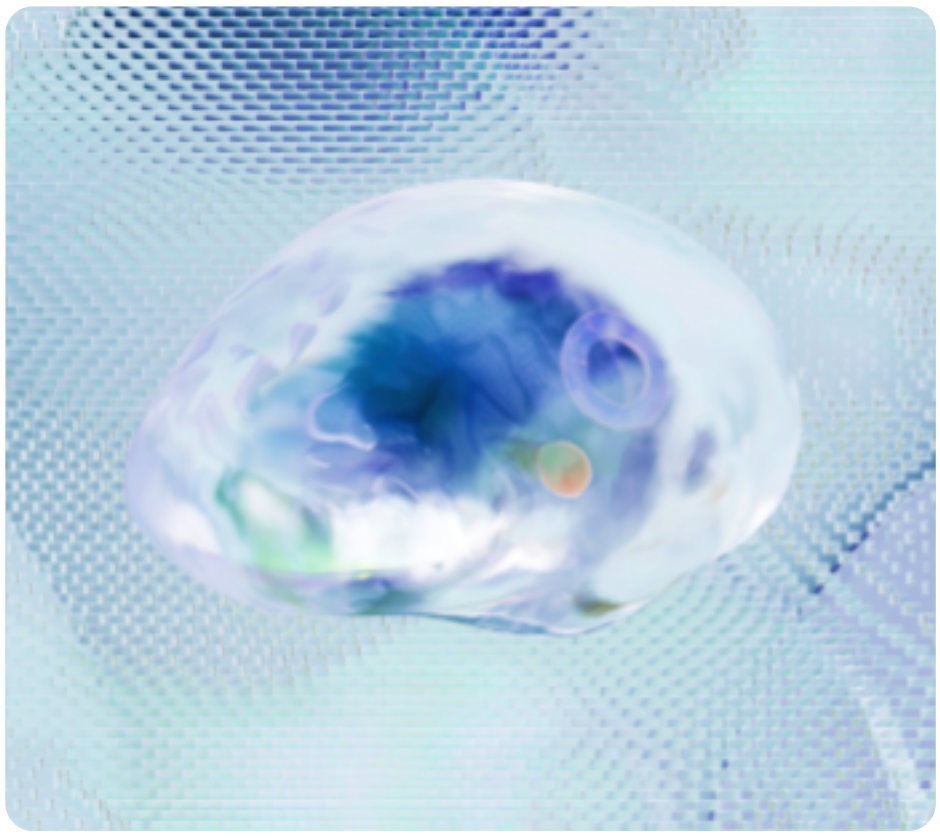
OUR APPROACH

About SYMPHONYAge

SYMPHONYAge is an innovative approach to understanding the aging process across different organ systems within the body.

SYMPHONYAge, developed at Yale, uses epigenetic data from a single blood draw to analyze aging across 11 major organ systems, recognizing that aging varies among different parts of the body. This innovative method provides a detailed view of which organ systems are aging faster or slower, offering a nuanced perspective on the aging process.

Clinically, SYMPHONYAge offers substantial potential for personalized medical interventions. For instance, if SYMPHONYAge reveals accelerated aging in the metabolic system, targeted interventions can be applied to mitigate risks like metabolic syndrome. Additionally, by monitoring the aging rates of organ systems over time, SYMPHONYAge serves as a dynamic tool for assessing the effectiveness of treatments and lifestyle adjustments, aiding clinicians and patients in pursuing healthy aging.



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