

Deep Longevity releases an AI-based predictor of COVID time-to-death

The pace of aging may be a better predictor of COVID-related mortality than chronological age alone.

HONG KONG, CHINA, July 29, 2021 /EINPresswire.com/ -- Despite the global effort to fight the pandemic, it is still ongoing. Hospitals all over the world are stretched beyond their capacity with the emergence of new strains and the premature relaxation anti-COVID measures'. In such circumstances, risk-stratification of the admitted patients remains an essential, albeit grim, necessity.

Jamie Gibson, Chief Executive Officer of the Company, said, "Age was recognized as the main risk factor affecting patients' survival at the very onset of the pandemic. The elderly have been reported to have the highest mortality rate, as well as suffer from more complications in numerous studies. In the meantime, most such studies ignore that there is no universal pace of aging. Some people age faster than others. This notion is obvious to medical professionals, who have gained the ability to tell overagers and underagers apart throughout the years of practice. However, the official records lack any information on the true, biological age of COVID patients. The research project by Deep Longevity in collaboration with Lincoln Medical Center highlights the importance of quantifying the aging rate for accurate survival analysis". The results of this collaboration have been released as an MDPI Life publication "[Increased Pace of Aging in COVID-Related Mortality](#)".

The study features a collection of over 5,000 COVID-positive patients admitted to 11 public New York hospitals. Blood tests obtained during the admission were analyzed by a deep-learning neural network — [BloodAge](#), to quantify the intensity of the aging process. The network takes in a typical blood panel and returns their biological age, which can be higher or lower than their chronological age.

Two survival models (Cox proportional hazards, logistic regression) showed BloodAge predictions to have more impact on a patient's survival than chronological age. In terms of expected time-to-death (TTD), each extra BloodAge year was equivalent to a one-day reduction in TTD.

One of the survival models was transformed into a TTD calculator, which is available online at app.young.ai/covid. It requires a physician to input 15 variables, including symptoms and comorbidities, to return a patient's [COVID Risk Score](#), expected TTD, and survival probability curve. The authors emphasize the limitations of this calculator and urge anyone to read the

original paper.

BloodAge is available for consumer use at Young.ai, a website, and the Young.AI app (available in the Apple App Store), which allows longitudinal tracking of age predictions, and for use by academics at Aging.ai, available for one-time testing.

About Deep Longevity

Deep Longevity is a wholly-owned subsidiary of Endurance Longevity (SEHK:0575.HK), a publicly traded company. Deep Longevity is developing explainable artificial intelligence systems to track the rate of aging at the molecular, cellular, tissue, organ, system, physiological, and psychological levels. It is also developing systems for the emerging field of longevity medicine enabling physicians to make better decisions on the interventions that may slow down or reverse the aging processes. Deep Longevity developed Longevity as a Service (LaaS)© solution to integrate multiple deep biomarkers of aging dubbed "deep aging clocks" to provide a universal multifactorial measure of human biological age. Originally incubated by Insilico Medicine, Deep Longevity started its independent journey in 2020 after securing a round of funding from the most credible venture capitalists specializing in biotechnology, longevity, and artificial intelligence. ETP Ventures, Human Longevity and Performance Impact Venture Fund, BOLD Capital Partners, Longevity Vision Fund, LongeVC, co-founder of Oculus, Michael Antonov, and other expert AI and biotechnology investors supported the company. Deep Longevity established a research partnership with one of the most prominent longevity organizations, Human Longevity, Inc. to provide a range of aging clocks to the network of advanced physicians and researchers.

<https://www.deeplongevity.com/>

About Endurance Longevity (Stock code: 0575.HK)

Endurance Longevity is a diversified investment group based in Hong Kong currently holding various corporate and strategic investments focusing on the healthcare, wellness, and life sciences sectors. The Group has a strong track record of investments and has returned approximately US\$298 million to shareholders in the 21 years of financial reporting since its initial public offering.

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