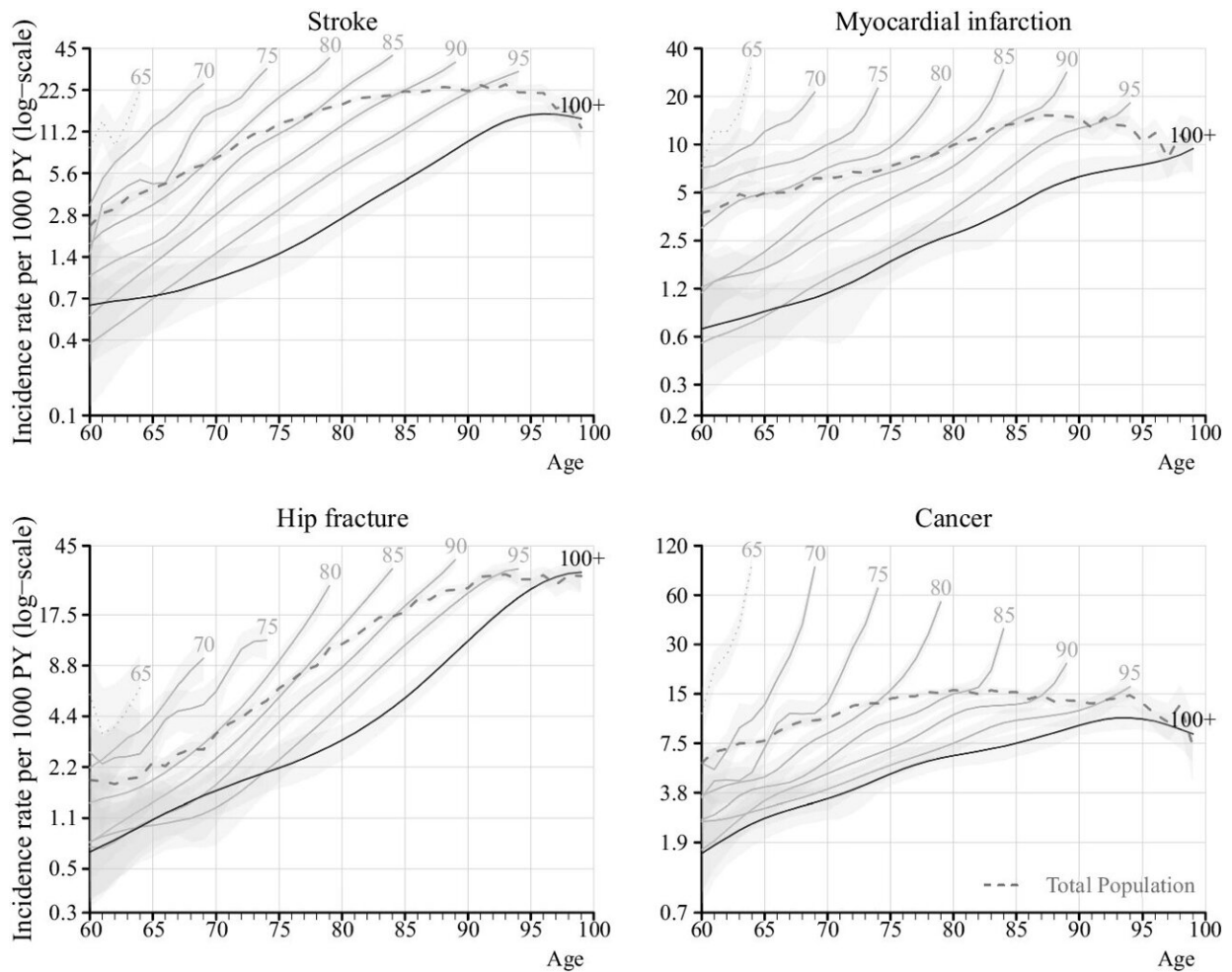# Predicting who will live to 100: Study shows it may be possible

September 10 2024, by Maja Lundbäck

Age-specific incidence rates of stroke, myocardial infarction, hip fractures, and cancer from age 60 for individuals born between 1912 and 1922, by age at death, in Stockholm County, Sweden. Notes: Solid lines represent the smoothed rates while dashed line for age 65 represents the observed rates. The light grey area represents the 95% confidence interval. The x-axis represents the chronological

Swedes are living to increasingly older ages. Thirty years ago, 85–90-year-olds were rare, but now the majority reach that age—and two percent even get to see 100 candles on their birthday cake.

"Centenarians are the age group that is increasing the most now," says Karin Modig, Associate Professor at the Institute of Environmental Medicine at Karolinska Institutet, who researches aging and health.

In a study published in the journal *GeroScience*, she and her colleagues show that it is possible to predict who has the greatest chance of becoming very old already during early aging. The study is based on approximately 44,000 Swedes who underwent health examinations between 1985 and 1996, aged between 64 and 99. Of these, 1,224 individuals lived to 100.

"The results suggest that becoming very old is not solely a matter of chance; it also seems to be linked to lifestyle," says Modig.

By looking at known biomarkers previously associated with aging and disease, the researchers found that the centenarians had better health than their peers already in their 60s. All but two of twelve biomarkers examined could be linked to increased chances of reaching 100 years. Low iron levels reduce the chance, as does low total cholesterol, which can be a marker of disease processes in the body.

Four of the biomarkers stood out as particularly important: creatinine levels, which indicate kidney health, were almost always normal at age

60 in those who lived to 100. The same was true for liver markers and uric acid levels, a marker for inflammatory processes. Individuals with the lowest uric acid levels had a four percent chance of living to 100, while those with the highest levels had a 1.5% chance. Blood sugar levels were also rarely above 6.5 mmol/liter.

The results suggest that it may be possible to increase one's chances of living to 100 by changing your lifestyle, she believes.

"At the same time, life is not about living according to an algorithm; everyone must find a balance between risk factors and health factors," she says.

More information: Yuge Zhang et al, Do people reach 100 by surviving, delaying, or avoiding diseases? A life course comparison of centenarians and non-centenarians from the same birth cohorts, *GeroScience* (2024). DOI: 10.1007/s11357-024-01330-w

Provided by Karolinska Institutet