



Statistics Korea

Press Release

다시, 대한민국!
새로운 국민의 나라

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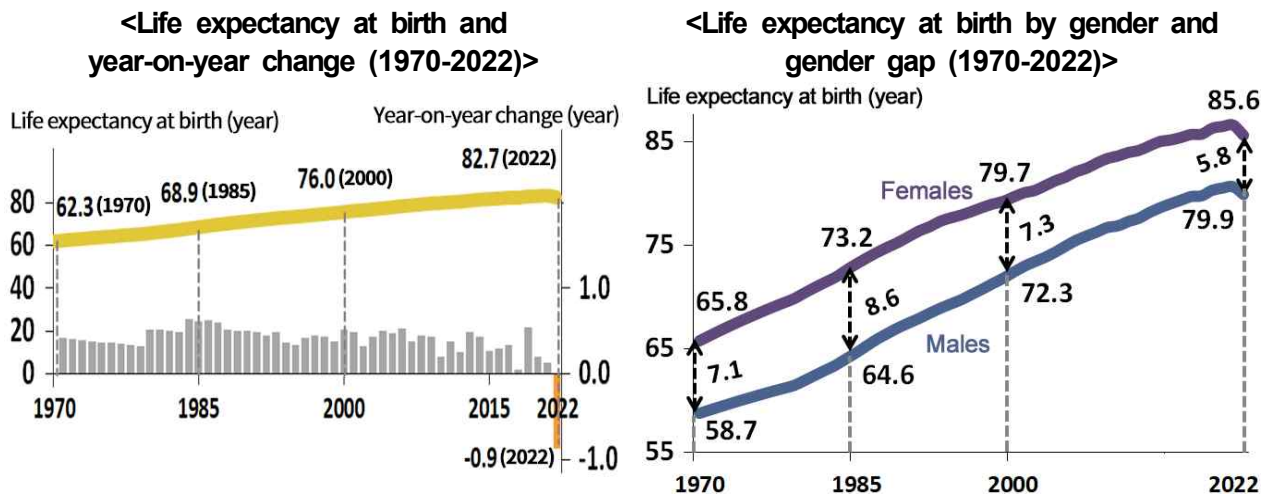
Life Tables for Korea, 2022

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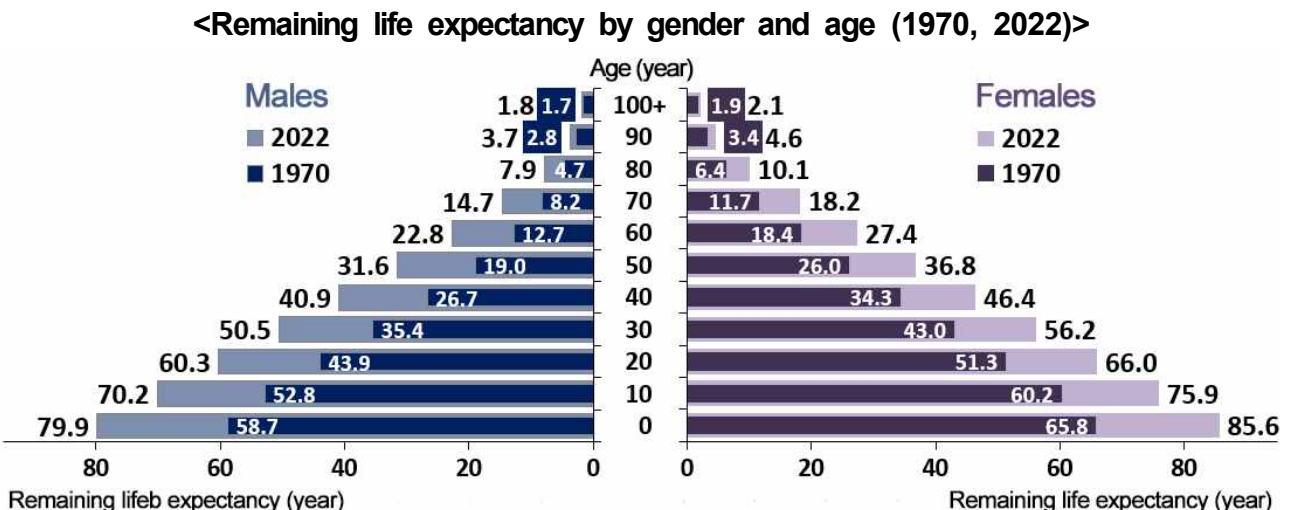
Life Tables for Korea, 2022

In 2022, the life expectancy at birth stood at 82.7 years, falling by 0.9 year from 2021.

- If people would experience the current age-specific death rates in 2022, the life expectancy at birth of males marked 79.9 years, which dropped by 0.8 year from 2021. The life expectancy at birth of females marked 85.6 years, which dropped by 1.0 year from 2021.
- In 2022, the gender gap in life expectancy at birth recorded 5.8 years, which showed a decreasing trend after marking a peak of 8.6 years in 1985.

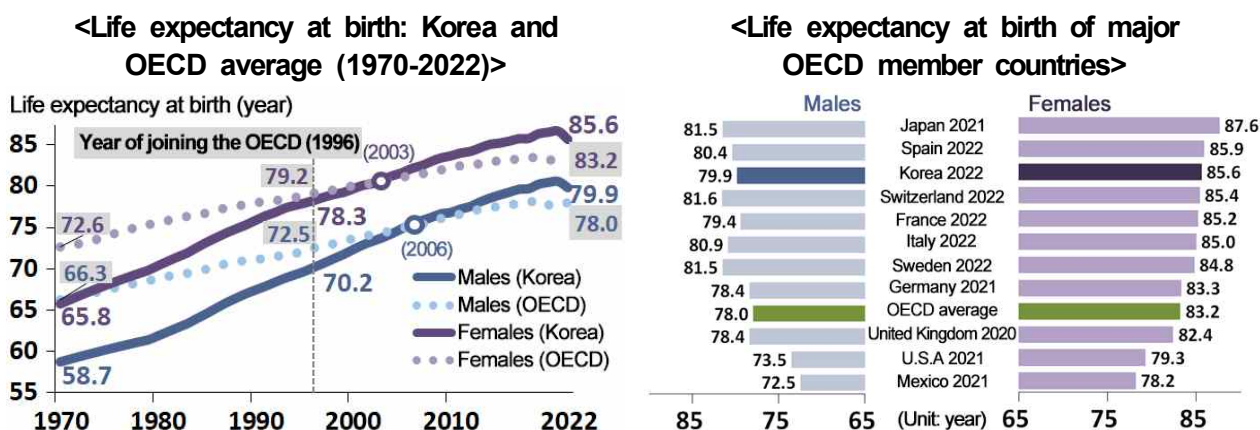


- In 2022, the remaining life expectancy of males aged 60 recorded 22.8 years, which fell by 0.7 year from 2021. The remaining life expectancy of females aged 60 recorded 27.4 years, which fell by 1.0 year from 2021.



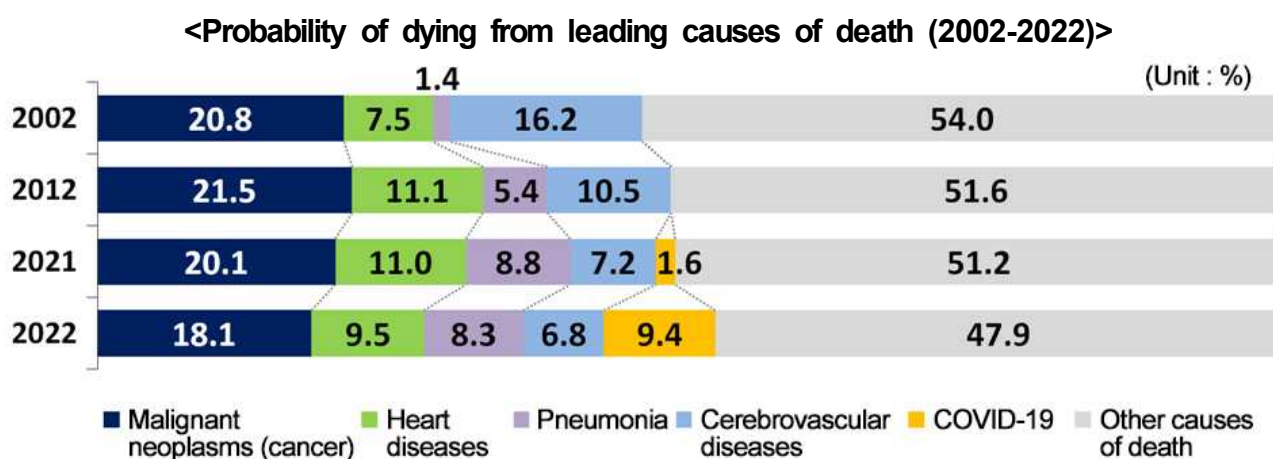
The life expectancy at birth of Korean males was 1.9 years longer than the OECD average of males. The life expectancy at birth of Korean females was 2.4 years longer than the OECD average of females.

- The life expectancy at birth of Korean males stood at 79.9 years, which was 1.9 years longer than the OECD average of males (78.0 years). The life expectancy at birth of Korean females stood at 85.6 years, which was 2.4 years longer than the OECD average of females (83.2 years).



As for people born in 2022, the probability of dying from cancer recorded the highest figure of 18.1%, which was followed by heart diseases (9.5%), COVID-19 (9.4%), pneumonia (8.3%) and cerebrovascular diseases (6.8%).

- Compared to 2021, the probability of dying from cancer, heart diseases, pneumonia and cerebrovascular diseases marked a decrease. Whereas, the probability of dying from COVID-19 showed an increase.

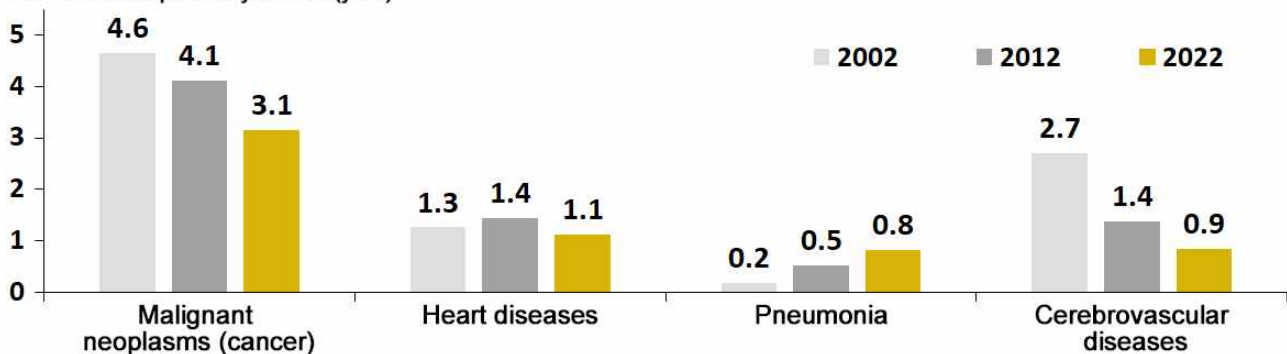


When eliminating cancer from causes of death, the life expectancy at birth would increase by 3.1 years.

- As for people born in 2022, the life expectancy at birth would increase by 3.1 years when eliminating cancer from causes of death, by 1.1 years when eliminating heart diseases and by 0.8 year when eliminating pneumonia.

<Gains in life expectancy at birth when eliminating major causes of death 2002, 2012, 2022>

Gains in life expectancy at birth (year)



As for people born in 2022, the disease-free life expectancy at birth stood at 65.8 years. Subjective life expectancy at birth stood at 72.2 years.

- The disease-free life expectancy at birth of males recorded 65.1 years (81.5% of the life expectancy at birth). The disease-free life expectancy at birth of females recorded 66.6 years (77.7% of the life expectancy at birth).

<Disease-free life expectancy at birth (2022)>



<Subjective life expectancy at birth (2022)>



Appendix Outline of Life Tables

Purpose of life tables

- Life tables are designed to be used as basic data when establishing health care and medical policies and calculating insurance premiums and compensation for human injuries; and establishing Population Projections and comparing economic, social and health care levels among nations and regions.

Legal basis

- General statistics approved in accordance with Article 18, Paragraph 1 of the Statistics Act (Approval number 101035)

Method to construct complete life tables

Basic data	Population: Mid-year resident registration population Number of deaths: Number of deaths in the survey reference year
Calibration of basic data	Calibration of delayed reporting and unidentified ages
Calculation of age-specific death rate (m_x)	$m_x = \frac{D_x}{P_x}$ <p>D_x: Number of deaths of people at age x, P_x: Mid-year resident registration population aged x</p>
Calculation of age-specific probability of dying (q_x) / Probability of dying of people aged 85 or more	$q_x' = \frac{m_x}{1 + \frac{1}{2}m_x}$ <ul style="list-style-type: none"> q_x' is calibrated to q_x by applying Greville's 9th formula. $q_x = q_{x-1} \times \exp(k_x)$, $x = 85, 86, \dots, 115$ $k_x = \alpha x + \beta$ ($x = 80, \dots, 115$) Probability of dying of the aged: Calibration by applying the Coale-Kisker model
Calculation of the number of age-specific deaths (d_x)	$d_x = l_x \times q_x$
Calculation of the number of age-specific survivors (l_x)	$l_{x+1} = l_x - d_x$
Calculation of the number of the age-specific stationary population (L_x)	$L_x = \frac{l_x + l_{x+1}}{2}, L_{100+} = \sum_{x=100}^{115} L_x$ <ul style="list-style-type: none"> Stationary infant population ${}_1L_0 = f_0 \times l_0 + (1 - f_0) \times l_1$ $f_0 = \frac{\text{Number of live births in the } t-1 \text{ year among the deaths at age 0 in the } t \text{ year}}{\text{Number of deaths at age 0 in the } t \text{ year}}$
Total number of age-specific survival years (T_x)	$T_x = \sum_{y=x}^{\infty} L_y$
Calculation of remaining life expectancy (e_x^o)	$e_x^o = \frac{T_x}{l_x}$

Method to construct life tables when eliminating causes of death

Basic data	Complete life tables in the reference year Causes of death statistics in the reference year
Calculation of the number of deaths from a specific cause of death ($d_x(i)$)	$d_x(i) = d_x \times \frac{D_x(i)}{D_x}$ <p>D_x: Number of deaths of people aged x $D_x(i)$: Number of deaths from a specific cause of death (i) of people aged x</p>
Calculation of the number of deaths when eliminating a specific cause of death ($d_x(-i)$)	$d_x(-i) = d_x - d_x(i)$
Calculation of the number of survivors when eliminating a specific cause of death ($l_x(-i)$)	$l_{x+1}(-i) = l_x(-i) - d_x(-i)$
Calculation of the stationary population when eliminating a specific cause of death ($L_x(-i)$)	$L_x(-i) = \frac{l_x(-i) + l_{x+1}(-i)}{2}$ ${}_{\infty}L_{90}(-i) = \frac{l_{90}(-i) \cdot e_{90}^o}{1 - {}_{\infty}R_{90}(i)}$ <p>• Stationary infant population</p> ${}_1L_0(-i) = f_0 \times l_0(-i) + (1 - f_0) \times l_1(-i)$ <p>Number of live births in the $t-1$ year among the deaths at age 0 in the t year</p> $\therefore f_0 = \frac{\text{Number of live births in the } t-1 \text{ year among the deaths at age 0 in the } t \text{ year}}{\text{Number of deaths at age 0 in the } t \text{ year}}$
Calculation of the total number of survival years when eliminating a specific cause of death ($T_x(-i)$)	$T_x(-i) = \sum_{y=x}^{\infty} L_y(-i)$
Calculation of remaining life expectancy when eliminating a specific cause of death ($e_x^o(-i)$)	$e_x^o(-i) = \frac{T_x(-i)}{l_x(-i)}$
A gain in remaining life expectancy when eliminating a specific cause of death	$e_x^o(-i) - e_x^o$

Method to construct remaining life expectancy by health level

Type	Disease-free remaining life expectancy	Subjective remaining life expectancy
Definition	Remaining life expectancy (or life expectancy at birth) when eliminating the disease or disability period	Individual's expectation of remaining years of life
Basic data	'Health' in 2022 Social Survey	
	Disease period	Health evaluation
Survey question	9. Have you ever been ill owing to a disease or an injury for the past 2 weeks (April 27 ~ May 10, 2022)? Count days of illness or lying down (3 hours among working hours). ① Yes - Days of illness: () days - Days of hospitalization or lying down: () days ② No	4. Are you healthy? ① Very healthy ② Healthy ③ Neither healthy nor unhealthy ④ Unhealthy ⑤ Very unhealthy
Formula	$E'_x = \frac{1}{l_x} \sum_{i=x}^w (L_i \times (1 - \pi_i))$ <ul style="list-style-type: none"> - x: Age (w: Total number of age groups, i: Group aged x) - L_i: Stationary population aged i - π_i: Prevalence at age i - l_x: Number of survivors aged x 	
Prevalence	Average number of illness days for the 2 weeks among respondents	Percentage of people who thought that they were 'Unhealthy' and 'Very unhealthy'

Statistical terms

○ Average remaining life expectancy [e_x^0]

- Remaining life expectancy indicates to what age a person of a specific age (x) would live on average.
- Life expectancy at birth is an average time a person is expected to live, based on the year of birth

○ Probability of dying [${}_nq_x$]

- A probability that a person of a specific age (x) would die without living to the next age ($x+n$)

○ Probability of surviving [${}_np_x$]

- A probability that a person of a specific age (x) would live to the next age ($x+n$)

○ Number of survivors [l_x]

- Number of people alive at a specific age (x)
- Number of people who are expected to be alive at a specific age (x) when 100,000 persons born at the same time die according to their probability of dying

○ Number of deaths [${}_nd_x$]

- Number of people alive at a specific age (x) who are expected to die without living to the next age ($x+n$)

○ Stationary population [${}_nL_x$]

- The sum of survival years that survivors at a specific age (x) are expected to live to the next age ($x+n$)

○ Total number of survival years [T_x]

- The sum of survival years that survivors at a specific age (x) are expected to survive until all of them die (total stationary population)

○ Probability of dying from a specific cause of death [$R_x(i)$]

- A probability that a person of a specific age (x) would eventually die from a specific cause of death (i)

○ Gain in remaining life expectancy when eliminating a specific cause of death [$e_x^0(-i) - e_x^0$]

- A gain in remaining life expectancy when a person would die from another cause of death without dying from a specific cause of death (i)