Total cancers

Summary Total cancers resulted in 23·6 million (22·2–24·9) incident cases, 10·0 million (9·36–10·6) deaths, and 250 million (235–264) DALYs globally in 2019. Total cancers was the second-leading cause of death and second-leading cause of DALYs among Level 2 causes globally in 2019.

Definition This summary cause incorporates death and disability resulting from malignant neoplasms, including ICD-10 codes such as C00 through C96. This category includes non-melanoma skin cancers but excludes benign and in situ neoplasms.

	Total sources
Incidence	4317
Prevalence	3
Remission	0
Causes of death	5466
Other	268

Table 1: Total sources used in GBD 2019 estimation

What is new in GBD 2019?

- New location-years of population-based cancer registry data were added, with a focus on paediatric cancer data.
- Age restrictions for modelling were updated using incidence data from the Surveillance, Epidemiology, and End Results (SEER) program.
- Garbage code redistribution of cancer causes were updated to incorporate additional coding systems and improve mapping of codes that include secondary cancers.
- Mortality-to-incidence ratio models included additional data and were modified to perform more smoothing across time and age.
- Survival estimation was updated to use age-specific rather than all-ages survival curves, impacting age-specific prevalence and YLD estimates.
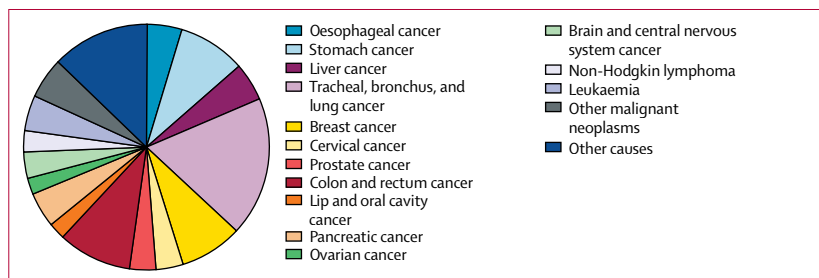
	Prevalence		Incidence		Deaths		YLLs		YLDs		DALYs	
	Cases (millions)	Rate (per 100 000)	Cases (millions)	Rate (per 100 000)	Deaths (millions)	Rate (per 100 000)	Counts (millions)	Rate (per 100 000)	Counts (millions)	Rate (per 100 000)	Counts (millions)	Rate (per 100 000)
2019												
Both sexes	85·8 (80·3 to 92·1)	1046·7 (977·6 to 1122·0)	23·6 (22·2 to 24·9)	290·5 (274·0 to 307·1)	10·0 (9·36 to 10·6)	124·7 (116·4 to 132·0)	242 (227 to 256)	2951·1 (2769·2 to 3122·9)	7·84 (5·76 to 10·1)	95·9 (70·5 to 124·2)	250 (235 to 264)	3047·0 (2856·9 to 3222·3)
Females	45·2 (41·8 to 48·6)	1056·0 (975·2 to 1134·1)	10·6 (9·92 to 11·4)	246·1 (229·8 to 263·1)	4·34 (3·97 to 4·66)	99·9 (91·5 to 107·3)	106 (97·9 to 114)	2482·3 (2298·8 to 2667·9)	3·85 (2·82 to 4·99)	89·6 (65·7 to 116·3)	110 (101 to 118)	2571·9 (2376·0 to 2764·8)
Males	40·6 (37·3 to 44·5)	1058·5 (975·5 to 1159·2)	12·9 (12·1 to 13·8)	348·7 (327·3 to 370·8)	5·69 (5·25 to 6·10)	156·1 (143·9 to 167·2)	137 (126 to 147)	3499·5 (3226·4 to 3770·3)	4·00 (2·93 to 5·10)	105·3 (77·4 to 133·9)	141 (130 to 151)	3604·7 (3325·3 to 3872·5)
Percentage change 2010–19												
Both sexes	28·7% (21·2 to 36·3)	2·7% (−3·2 to 8·7)	26·3% (20·3 to 32·3)	−1·1% (−5·8 to 3·5)	20·9% (14·2 to 27·6)	−5·9% (−11·0 to −0·9)	15·7% (8·8 to 22·6)	−6·8% (−12·2 to −1·3)	26·8% (19·3 to 34·7)	0·7% (−5·2 to 6·8)	16·0% (9·3 to 22·8)	−6·6% (−11·9 to −1·1)
Females	26·0% (17·6 to 34·8)	1·7% (−5·1 to 8·7)	24·7% (18·0 to 31·5)	−1·2% (−6·5 to 4·2)	22·2% (14·2 to 30·1)	−4·4% (−10·7 to 1·7)	17·5% (9·3 to 25·8)	−4·7% (−11·5 to 1·9)	25·0% (16·2 to 34·0)	0·5% (−6·5 to 7·8)	17·8% (9·4 to 26·0)	−4·6% (−11·2 to 2·0)
Males	31·9% (22·1 to 42·1)	3·8% (−3·6 to 11·5)	27·6% (19·9 to 35·7)	−1·5% (−7·1 to 4·4)	19·9% (11·0 to 29·3)	−7·3% (−13·7 to −0·5)	14·3% (5·1 to 23·9)	−8·4% (−15·5 to −0·9)	28·5% (18·7 to 39·1)	0·7% (−6·7 to 8·8)	14·7% (5·9 to 24·1)	−8·2% (−15·0 to −0·9)

Numbers in parentheses are 95% uncertainty intervals.

Table 2: Global prevalence, incidence, deaths, YLLs, YLDs, and DALYs in counts and age-standardised rates for both sexes combined, females, and males, 2019, with percentage change between 2010 and 2019

	Deaths	YLLs	YLDs	DALYs
1990	2nd	6th	21st	6th
2010	2nd	3rd	20th	3rd
2019	2nd	2nd	20th	2nd

Table 3: Rank among Level 2 causes for global deaths, YLLs, YLDs, and DALYs in 1990, 2010, and 2019, for both sexes combined

- Oesophageal cancer
- Stomach cancer
- Liver cancer
- Tracheal, bronchus, and lung cancer
- Breast cancer
- Cervical cancer
- Prostate cancer
- Colon and rectum cancer
- Lip and oral cavity cancer
- Pancreatic cancer
- Ovarian cancer
- Brain and central nervous system cancer
- Non-Hodgkin lymphoma
- Leukaemia
- Other malignant neoplasms
- Other causes

Figure 1: Composition of DALYs by constituent Level 3 causes for both sexes combined, 2019
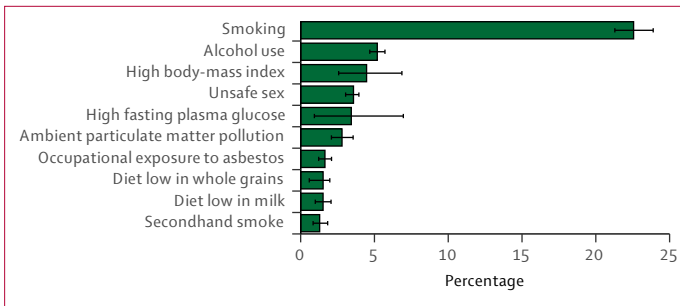
Figure 2: Percentage of DALYs attributable to top risk factors for both sexes combined, 2019
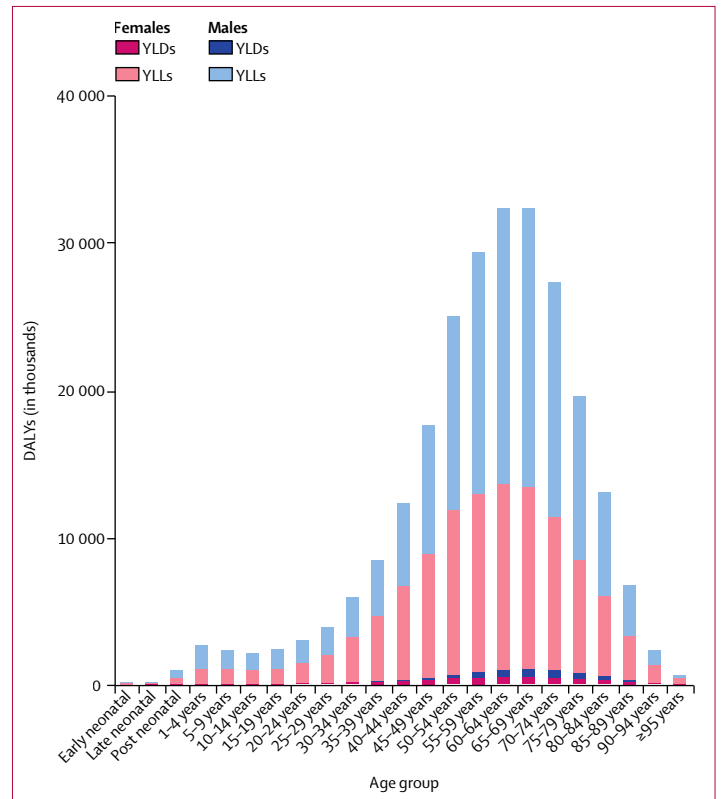

Figure 3: Age-standardised DALY rates for each location by SDI, both sexes combined, 2019

Figure 4: Composition of DALYs by YLLs and YLDs, age group, and sex, 2019
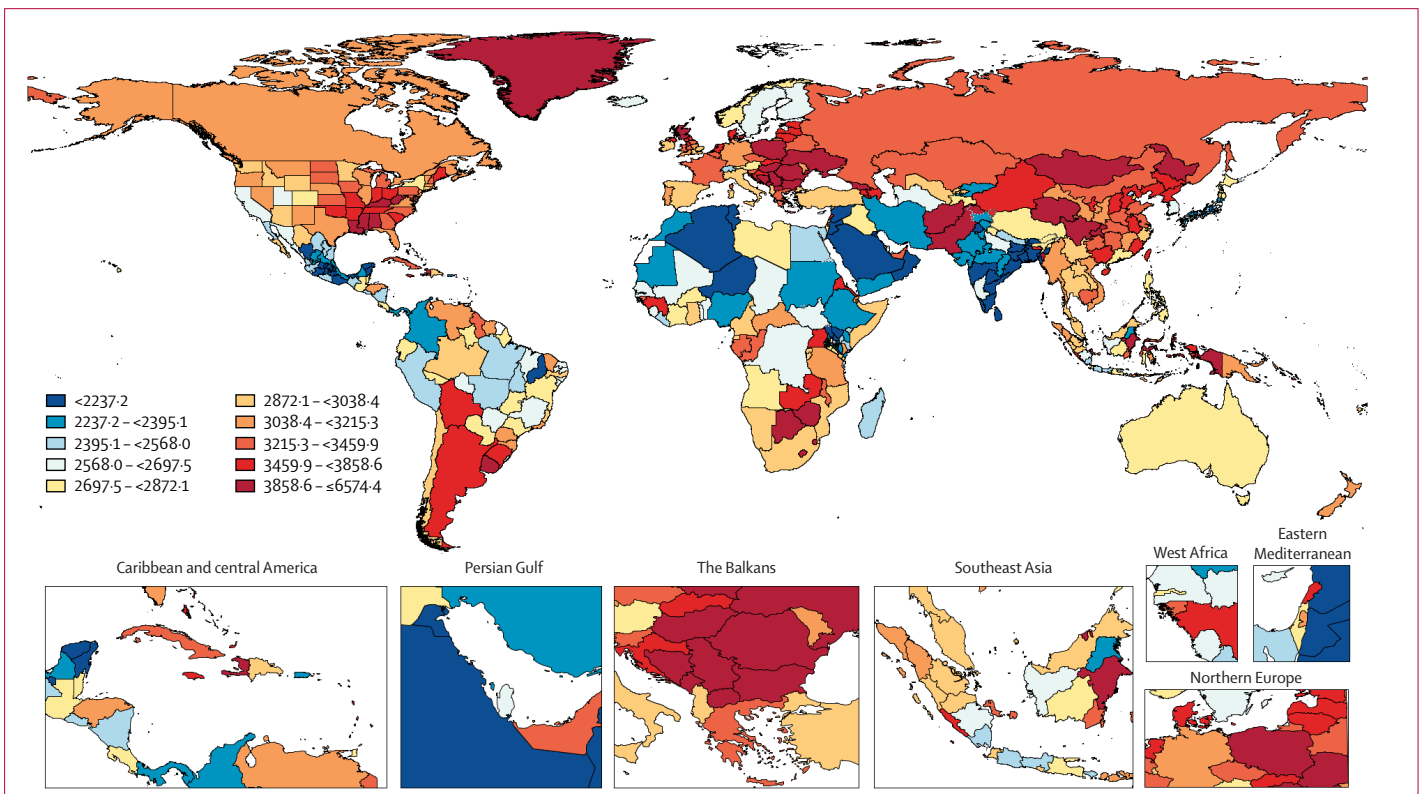

Figure 5: Age-standardised DALY rates (per 100 000) by location, both sexes combined, 2019