Swiss Re

Life & Health Trend Spotlight

Cancer Epidemiology: evolving mortality and morbidity trends

Cancer is a leading cause of claims in Life & Health insurance, and its epidemiology is entering a more dynamic phase. Shifting demographics, adverse lifestyle and environmental exposures, rising early-onset disease, over-diagnosis and rapid developments in diagnosis and treatment all reshape risk patterns and/or promote survivorship. These changes create challenges and opportunities, with differentiated impacts across pricing, underwriting and product design.

Introduction

Cancer remains one of the most significant global drivers of mortality and morbidity. Incidence and survivability are shaped by underlying risk factors and by the availability and accessibility of screening and effective, high-quality treatment. All of these vary globally, leading to disparate outcomes. At the individual level, disease trajectory is determined by tumour type, stage of diagnosis, underlying state of health and response to treatment.

For the insurance industry, cancer remains a core driver of Life and Health (L&H) insurance claims across multiple product lines. Shifting demographic risk profiles and technological progress are reshaping impacts across healthcare systems, insurers and societies at large.[1]

Cancer risk is driven by two broad categories – non-modifiable risk factors (particularly ageing) and modifiable risk factors (such as poor metabolic health, unhealthy diets and smoking). Beyond that, at Swiss Re we have identified five key epidemiological trends shaping the future of cancer: **Demographics and Ageing Populations, Rising Early-Onset Cancers, Survivorship and the *Right to be Forgotten*, Shifting Incidence and Geography and Changing Risk Landscapes**, and what they all mean for L&H insurance.

Find out more

For more detailed information visit *Cancer epidemiology: new trends and risks, and what they mean for insurance*

Demographics and Ageing Populations

Cancer remains a disease of ageing. While it can occur at any age, incidence rises sharply in later life, reflecting the strong association between cancer risk and advancing age. In the US, adults aged 45–49 show rates over 13x higher, and

Key message

- Cancer epidemiology is entering a more dynamic phase, influenced by population ageing and an evolving risk landscape.
- **Changing incidence rates:** metabolic ill-health, driven by lifestyle behaviours is impacting disease patterns.
- **Primary prevention:** remains the most powerful yet underutilised lever for reducing lifetime cancer risk.
- **Ageing populations and growing survivorship:** cancer risk increases at older ages. Although incidence is increasing, mortality continues to fall in many markets; shifting part of the burden towards long-term morbidity.
- **Early-onset cancers:** increasing across many regions, although drivers remain poorly understood. These vary by cancer type and affect working-age populations.
- **Evolving technology:** advances in screening, diagnosis and treatment are also reshaping cancer incidence.
- **Life & Health insurers:** will need to consider adapting underwriting frameworks, including static age-based approaches, pricing models and product design, to reflect evolving cancer risk dynamics; including changing incidence, prevention, survivorship and longer cancer journeys.

those aged 60 and above, more than 38x higher, than those under 20.[2] As older populations increase globally, incidence among the 60+ age group is projected to rise from 12.4 million cases in 2020 to 20.7 million in 2040, with cancer deaths in the same age group expected to increase by 79% to 12.7 million.[3]

The distribution of cancer types may also shift with population ageing, also combined with decades of cumulative exposure to carcinogenic factors from lifestyle and occupational hazards, substantially increasing cancer risk in later life.[4] While the risk patterns for cancers such as liver and gastric remain broadly consistent across age groups, older men experience greater rates of lung cancer, predominantly driven by lifelong smoking exposure risk.

By 2040, tracheal, bronchial and lung cancers will be the most common in the 60+ age group, followed by colorectal, prostate, breast, gastric and liver cancers. The burden is expected to grow sharply. New cases of lung cancers alone are forecast to rise by over 70%, reaching 2.9 million, despite falling smoking rates.[5] The projected increase is largely due to population ageing, greater detection, and population growth in regions where smoking remains high.[6] These projections underscore the scale and concentration of cancer burden in later life. Beyond all of this, the impact of vaping and alternative nicotine products (such as heated tobacco or nicotine pouches) on total cancer risk remains unclear.

The Silver Economy

Across high-income regions (including the United States, the United Kingdom, Europe and affluent Asia-Pacific economies), population ageing is accelerating.[7] The growing *Silver Economy* reflects older adults remaining economically active, and engaged with financial and healthcare systems for longer.[8] United Nations projections indicate that by 2050, more than a quarter of the population in these markets will be over 65 years old, virtually ensuring sustained growth in cancer cases even outside behavioural or environmental risks.[9]

Advancements in prevention, early detection and treatment, improved survival, creating a growing cohort of older cancer survivors with multiple chronic conditions and ongoing care needs. Globally, individuals live on average 11 years in poorer health at the end of life, rising to 12 years in the United States and South Korea.[10] Despite this, adults aged 70 and over remain underrepresented in clinical trials, limiting the applicability of trial evidence to real-world populations.[11]

Rising Early-Onset Cancer

Early-onset cancer trends rising in both sexes, globally

Early-onset cancer (EOC) refers to cancers traditionally diagnosed in later life that are increasingly occurring at younger ages, typically defined as adults before the age of 50.[12] This trend represents one of the most significant shifts in contemporary cancer epidemiology, and is increasingly relevant for insurers given its implications for morbidity, survivorship and long-term claims.

EOC incidence is rising in more than half of countries for men and in more than three-quarters for women.[13] The most pronounced increases are observed in the Western Pacific, Europe and Canada. In the US, colorectal, pancreatic, kidney, uterine and female breast cancers are most commonly cited.[14]

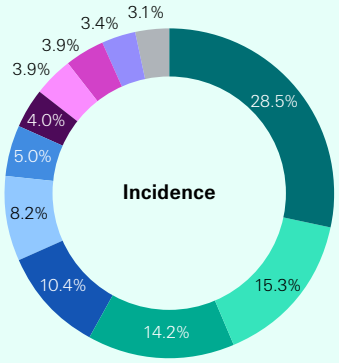
Colorectal cancer incidence has declined since the mid-1980s, but this reflects reductions among older adults, whereas incidence continues to rise in younger cohorts.[15]

In 2022, EOC accounted for approximately 11% of male and 21% of female cancer cases globally.[16] Women under 50 now experience substantially higher incidence than men, and this gap has widened over the past two decades. In 2021, younger women's global cancer incidence was approximately 82% higher than among young men, driven largely by sharp increases in breast and thyroid cancers, although this may be partly explained by elevated screening. Since 2002, incidence among younger women has risen by almost 20%, while rates in young men have declined slightly overall, despite increases in colorectal, testicular, kidney and leukaemia cases.[17] Despite this, EOC has historically received limited attention from insurers, reflecting the longstanding perception of younger adults as a low cancer risk.

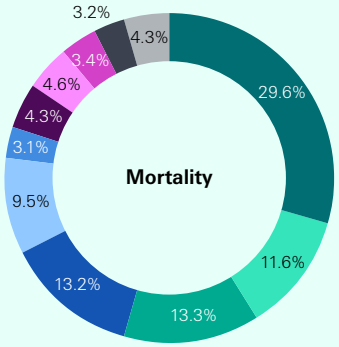
EOC mortality and survivorship

In 2019, global EOC mortality declined by approximately 11% from 1990, even as incidence increased by almost 25% (to a rate of 83/100k). In many countries, EOC incidence is growing as rapidly as, or faster than, late-onset cancers. However, mortality has remained stable or declined, largely reflecting earlier detection, improved treatment and enhanced survivorship care.[18, 19]

Figure 1: US incidence and mortality for top cancers (2022)



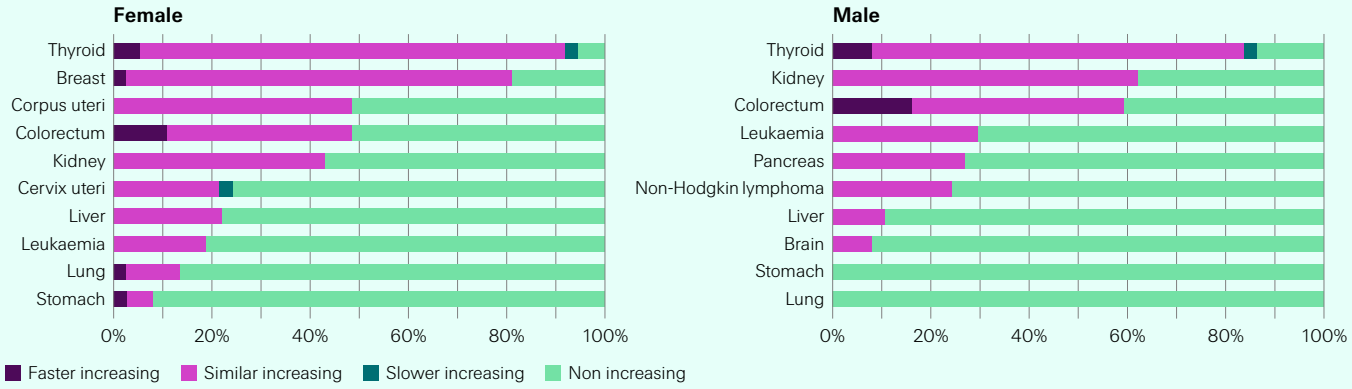
Miscellaneous	M: 29.1% / F: 27.9%
Breast	M: 0.3% / F: 31.0%
Prostate	M: 27.9% / F: 0.0%
Lung and bronchus	M: 10.1% / F: 10.7%
Colon and rectum	M: 8.6% / F: 7.8%
Melanoma of the skin	M: 5.8% / F: 4.2%
Non-Hodgkin Lymphoma	M: 4.3% / F: 3.7%
Urinary bladder	M: 5.9% / F: 1.8%
Kidney and renal pelvis	M: 4.9% / F: 2.9%
Corpus and uterus, NOS	M: 0.0% / F: 7.0%
Pancreas	M: 3.2% / F: 3.1%



Miscellaneous	M: 26.2% / F: 33.6%
Breast	M: 0.2% / F: 24.7%
Prostate	M: 24.8% / F: 0.0%
Lung and bronchus	M: 12.5% / F: 14.0%
Colon and rectum	M: 9.4% / F: 9.6%
Melanoma of the skin	M: 3.7% / F: 2.3%
Non-Hodgkin Lymphoma	M: 4.4% / F: 4.1%
Urinary bladder	M: 6.5% / F: 2.4%
Kidney and renal pelvis	M: 4.0% / F: 2.7%
Liver and intrahepatic bile duct	M: 4.1% / F: 2.1%
Pancreas	M: 4.1% / F: 4.5%

Source: US National Cancer Institute, Surveillance, *Epidemiology, and End Results (SEER) Program*, accessed January 2026

Figure 2: Proportion of early-onset incidence by cancer type (2022)



Source: Global Cancer Observatory: Cancer Over time (version 2.1). International Agency for Research on Cancer. Available from: *Cancer Over Time*, accessed January 2026

The US is a notable exception, where EOC-related colorectal cancer mortality is increasing, despite falling mortality in other cancers with increasing incidence such as breast cancer and leukaemia.[20] Some incidence increase likely reflects overdiagnosis, particularly in thyroid cancer, where improved imaging detects indolent tumours with limited mortality impact. However, rising aggressive cancers, including colorectal and pancreatic, indicates that improved detection alone does not fully explain observed trends. Despite increasing diagnoses and site-specific mortality (e.g. colorectal or thyroid cancer), overall EOC mortality remains stable or declining in most regions. This shift has significant implications for insurers. More young adults are living with the long-term effects of cancer and its treatment, including persistent morbidity and elevated risk of recurrence.

The aetiology of EOC differs from older age groups

The rise in cancer among individuals under 40 is of particular concern, as its underlying drivers remain poorly understood. This age range represents a distinct stage of life: biological development is complete, yet individuals have not yet experienced the hormonal decline, immune impacts or organ dysfunction associated with later life. Meanwhile, this period coincides with major educational, professional and family milestones, amplifying the social and economic impact of cancer.

Outcomes for cancers in younger adults are often poorer than those in older populations. This reflects a combination of factors, including distinct tumour biology, delayed diagnosis and challenges in optimising treatment. Lower adherence to medical recommendations and competing personal or professional priorities can further delay presentation, increasing the likelihood of advanced disease at diagnosis.[21, 22] Expanded screening and improved diagnostics are also leading to more incidental findings in younger age groups, though the financial costs and risks of overdiagnosis and false positives must be balanced against potential benefits.

From an aetiological perspective, long term exposure, often since childhood, to metabolic ill-health, particularly obesity and insulin resistance, is increasingly viewed as a central driver.[23, 24] Emerging evidence also implicates microplastics, antibiotic exposure and high consumption of ultra-processed foods. [25, 26]

EOC represents a generational redistribution of cancer burden to earlier life, extending financial and health consequences over longer horizons. The key epidemiological question is whether EOC reflects a pure age shift where cancers occur earlier in life but not more frequently over a lifetime, compared to a birth cohort effect where there is a true higher lifetime cancer risk among younger generations. If early-life exposures confer persistent biological vulnerability, EOC may represent a leading indicator of future burden. These trends have significant implications for insurers, healthcare systems and policymakers globally.

Survivorship and the *Right to be Forgotten* (RTBF)

Cancer survivorship is now a defining feature of modern cancer epidemiology. Declining mortality alongside rising incidence has produced a rapidly expanding population living with and beyond cancer, often for many years and across multiple life stages. For some, cancer is increasingly managed over time, rather than treated as a single event. This is particularly relevant to prostate cancer, the second most commonly diagnosed cancer for men worldwide. Improved MRI based detection has increased diagnoses, while earlier and more accurate risk stratification enables timely, targeted treatment.[27] An often under-considered component of survivorship is its psychological impact, extending beyond diagnosis and initial treatment to include ongoing surveillance for recurrence or secondary cancers and, in some cases, ongoing immunotherapy.

Rising incidence in younger cohorts is increasing the number of working age survivors seeking insurance, bringing heightened attention to *Right to Be Forgotten* (RTBF) legislation.[28] In jurisdictions where RTBF applies, including much of Europe, applicants may no longer need to disclose a prior cancer diagnosis under certain conditions, regardless of residual recurrence risk. Given wide variations in cancer risk profiles, this marks a shift away from traditional risk-based insurance pricing. Close collaboration among insurers, medical experts and legal advisors will be essential in navigating this evolving and closely monitored regulatory landscape.

Shifting Incidence and Geography

Cancer incidence patterns are shifting globally, driven by demographic ageing, screening expansion and lifestyle changes

Table 1: Shifting Cancer Incidence and Geographic Patterns

Region	Incidence trends	Mortality trends	Key drivers and rationale	Implications	Mortality/ Incidence (rate/ 100K age-standardised)[29]
High-income Western regions (US, UK, Western Europe, Australia).[30]	High incidence, particularly breast, lung, colorectal and prostate cancers.	Mortality declined steadily, expanding survivor populations.	Population ageing; worsening metabolic health; rising early-onset cancers; environmental exposures; widespread screening and advanced cancer registries.[31]	Shift from mortality- to morbidity-driven burden; growing survivorship and long-term cancer care needs.	**US:** 82/367 **UK:** 98/308 **Australia:** 85/463 **Western Europe:** 100/304 **Northern America:** 84/365
High-income Asia-Pacific (Japan, South Korea, Singapore).[32]	High overall incidence; very high rates of thyroid, stomach, colorectal and breast cancers.[33, 34]	High absolute mortality, but low relative to incidence.	Exceptionally high screening uptake; early diagnosis; robust healthcare systems. Overdiagnosis concerns (notably thyroid cancer).[35, 36]	Large survivorship cohort; sustained long-term care demand; need for evidence-based management of screening-detected abnormalities.[37, 38]	**Japan:** 79/267 **South Korea:** 77/235 **Singapore:** 111/231
Transitioning Asian economies (India and China)	Mixed profiles: declining infection-related cancers; rising lifestyle-associated cancers.[39, 40, 41]	Declining mortality for infection-related cancers; lifestyle-related mortality rising (except smoking-linked cancers).	Improved infection control and vaccination; rapid urbanisation; lifestyle deterioration; expanding screening (thyroid ultrasound & low-dose CT); AI enabled diagnostics.[42]	Rising incidence driven by lifestyle risk and enhanced detection; growing survivorship cohort over time.[43, 44]	**China:** 97/202 **India:** 64/99
Other regions (Central & Eastern Europe, Latin America, Africa, Southeast Asia, South-Central Asia)	**Southeast Asia:** Persistent burden of both lifestyle-related and infection-related cancers; later-stage diagnosis common.[45, 46] **Central and Eastern Europe:** Similar incidence rates to Western Europe.[47] **Latin America:** Rising cancer incidence over recent decades.[48, 49] **Africa:** Rapidly increasing cancer incidence.	**Southeast Asia:** elevated mortality relative to incidence.[50] **Central and Eastern Europe:** high mortality-to-incidence ratios, especially for lung and colorectal cancers.[51] **Latin America:** declining mortality but late-stage presentation remains commonplace.[52] **Africa:** Rising mortality; very high mortality-to-incidence ratio.[53]	Smoking prevalence (CEE) remains among the highest globally; urbanisation and metabolic ill-health on the rise; persistent infections (HPV, *H. pylori*); delayed diagnosis; limited screening and treatment access; weaker registries.	Higher severity at diagnosis; greater mortality-linked burden; strong scope for prevention via vaccination, screening and early detection.	**African region:** 89/132 **Eastern Europe:** 116/250 **Latin America & Caribbean:** 86/186 **Southeast Asia:** 93/150 **South-Central Asia:** 68/103

Source: Swiss Re, cited as above.

in transitioning economies. While cancer has long been more prevalent in high-income regions, the burden is redistributing across geographies and is growing in low- and middle-income countries.

Changing Risk Landscape

The global risk landscape for cancer is changing significantly. While traditional carcinogens, such as tobacco, alcohol and infections remain important, metabolic and lifestyle factors increasingly shape cancer epidemiology in high-income and emerging markets.[54] Genetic predisposition accounts for only 5–10% of cancers; the rest arise from somatic mutations, influenced by environmental and lifestyle exposures.[55, 56, 57] Other mutations appear randomly without a known cause, as seen in some childhood cancers.

Around 38% of cancer cases (over 7 million cases) are linked to 30 modifiable risk factors.[58] Ten cancer types, in particular lung, breast and colorectal, continue to account for roughly two-thirds of global cancer incidence and mortality, though their relative importance is shifting, with breast cancer projected to rise substantially by 2050.[59, 60]

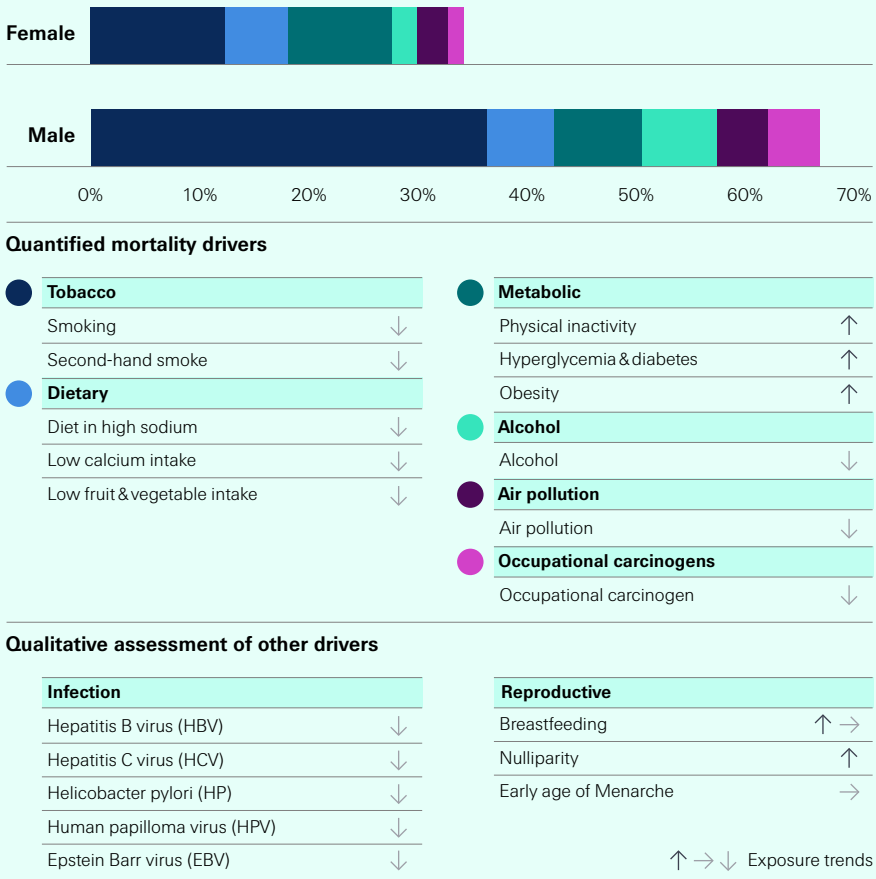
This complexity helps explain why a substantial proportion of cancer incidence cannot be clearly attributed to modifiable causes. For insurers, it reinforces both the limits of risk attribution and the importance of long-term trends in lifestyle, metabolic health and ageing.

Primary prevention – evolving metabolic health

Primary prevention remains the most powerful, yet underutilised, lever for shaping long-term cancer burden. While medical advances influence the timing of diagnosis and survival, primary prevention determines whether cancer develops at all, by reducing lifetime risk, rather than simply advancing detection.

One of the clearest structural changes in cancer risk over recent decades has been the rise of metabolic ill-health. The increasing prevalence of obesity, insulin resistance, diabetes, poor diet and sedentary lifestyles have driven cancer incidence linked to chronic inflammation and hormone dysfunction.[61] This is particularly notable in colorectal,

Figure 3: Global proportion of cancer cases attributable to selected modifiable risk factors and exposure trends for cancers



Note: These proportion estimates are not adjusted for co-exposure of multiple risk factors.
Source: Swiss Re; GBD 2019 Cancer Risk Factors Collaborators, 'The global burden of cancer attributable to risk factors, 2010–19: a systematic analysis for the Global Burden of Disease Study 2019', Lancet, 2022.

endometrial, pancreatic and post-menopausal breast cancers. The WHO currently recognises 13 cancers as obesity-related, but emerging evidence suggests associations with up to 32 types.[62,63] If causal links are confirmed, excess body weight could account for up to 40% of cancers, supporting the hypothesis that obesity may act as a near 'universal carcinogen'.[64]

Regional variation is pronounced. Western countries face entrenched obesity epidemics.[65] Meanwhile, rapid increases from lower baselines are emerging across parts of Latin America, Africa, Europe and Asia-Pacific.[66,67,68]

In the US, over 40% of adults are considered obese, and youth obesity rates are approximately 20%, continuing to challenge future health improvements, and European countries may be on a similar upward trajectory.[69,70,71]

Anti-obesity medications, such as GLP-1 drugs, offer promise for improvements in many baseline factors, including an improvement in BMI, blood pressure, lipid markers, HbA1c and others.[72]. Whether these improvements translate into measurable shifts in cancer incidence remains uncertain.[73]

Adverse lifestyle trends

Lifestyle transitions are adding further complexity to cancer patterns. Declining smoking rates have reduced lung cancer incidence, and alcohol consumption has fallen in many high-income countries.[74, 75] These gains are partially offset by rising consumption of ultra-processed foods and increasing sedentary behaviour, associated with higher risks of colorectal and breast cancers, among others.[76] Shifts in reproductive patterns, including later childbearing and fewer pregnancies, continue to elevate breast and endometrial cancer risk in many affluent regions.[77] Chronic sleep disruption and circadian misalignment are also increasingly associated with breast, prostate and colorectal cancers.[78]

Notably, while smoking-related lung cancer has declined, the proportion of lung cancer among never-smokers is growing, particularly in Asia, with early detection and air pollution suspected as key contributors.[79,80,81]

Environmental exposures

While the cancer burden from major environmental exposures, including air pollution and occupational pollutants, has declined, emerging risks warrant renewed attention.[82,83] Endocrine disrupting "forever chemicals", notably PFAS, are now widespread after decades of industrial use. These are increasingly linked to hormone-related cancers, including breast, endometrial and prostate cancer, even at low exposure levels. [84,85] Evidence that microplastics and nanoplastics can accumulate in human tissues has also raised concerns about potential long-term health effects, including carcinogenic risk. Plausible mechanisms include chronic inflammation and oxidative stress, with particular relevance for gastrointestinal and hormone-sensitive cancers.[86] Together, these exposures introduce long-horizon uncertainty with the potential for cohort-wide cancer population impacts.

Impact of risk factors on genetics, epigenetics and cancer outcomes

Cancer is a complex, multi-stage disease that often develops over decades, and is strongly influenced by metabolic ill-health, lifestyle trends, and environmental exposures known together as the *exposome* – encompassing non-genetic influences on health over a lifetime.

Genes provide inherited instructions in our DNA, while epigenetics control whether these genes are turned on and off (gene expression).

Gene expression can influence how cells in the body develop and function. If the gene is damaged or faulty (a mutation) and is expressed, it can disrupt normal processes and contribute to malignancy. Environmental and lifestyle factors can alter gene expression, increase DNA damage and promote mutation accumulation, disrupting normal cell regulation, leading to uncontrolled growth and in some cases, tumour formation and metastasis.[87, 88]

Recurrence varies by cancer type and stage, underscoring the evolving nature of cancer risk. Importantly, epigenetic changes are often dynamic and partially reversible, creating potential opportunities for cancer prevention, risk reduction and future therapeutic or diagnostic innovation.

Impact on Life & Health Insurance Products

Diagnostic and treatment advancements affect incidence, prevalence and survivorship

Rapid advancements in cancer diagnostics are increasing reported incidence. Screening technologies, advanced imaging and genomic testing are already transforming clinical practice, enabling earlier and more accurate detection. Novel biomarker discoveries, multi-cancer early detection (MCED) tests, and the expanding applications of AI are expected to reinforce this trend and improve survival, although they also raise the risks of overdiagnosis and overtreatment.[89] Nevertheless, improved screening can reduce mortality; for example, low-dose CT scans reduce lung cancer mortality by 20%–24% compared with chest X-ray or no screening.[90]

Therapeutic advances have also had a material impact, with treatment advancements in the United States averting an estimated 20% of deaths from major cancers over the past 45 years.[91]

Further refinements in precision radiotherapy and surgical techniques are expected to deliver incremental gains, while wider adoption of targeted therapies, immuno-oncology, personalised medicine and combination regimens could drive larger step changes in survival. Over time, these advances may render a subset of cancers curable and transform others from an acute life-threatening state into a more longer-term condition, manageable with sequential or continuous therapies, resulting in increased survivorship.

In-depth analysis of novel cancer diagnostics and emerging treatment patterns will be covered in separate upcoming publications.

Shifting sex disparities in cancer incidence

Cancer incidence exhibits distinct sex-based patterns in age-standardised incidence rates (ASIR), with clear implications for insurance risk modelling. Globally, men face a higher lifetime risk of developing cancer, reflecting biological factors and greater exposure to occupational, environmental and behavioural risk factors.[92, 93] However, between ages 20 and 50, ASIR is consistently higher in women, driven largely by breast and thyroid cancers, which tend to present earlier in life. From around age 50–60, male ASIR rises sharply and exceeds female rates, reflecting the cumulative impact of long-term exposures and the increasing incidence of prostate cancer.

Recent data suggest a narrowing of the sex gap in several regions. In many high-income markets, male ASIR has stabilised or declined (often attributed to reduced smoking) while female ASIR continues to rise. This trend is driven by delayed effects of historical smoking patterns among women, particularly lung cancer, alongside increasing breast cancer incidence.

Recent shifts in cancer epidemiology are reshaping the insurance landscape. Reported cancer incidence has increased over time, reflecting a combination of underlying risk, expanded screening, improved diagnostic technologies and population ageing, with rising incidence at younger ages for some cancer types. Survival continues to improve due to earlier detection and more effective treatments. These dynamics are accelerating product innovation, as policyholders increasingly expect cover that reflects earlier diagnosis, longer survival, return-to-work needs and broader support beyond mortality protection.

Mortality

- Cancer remains a leading cause of mortality claims, rates for which have declined in many markets in recent years, despite rising overall incidence, including EOC.
- Earlier diagnosis, improved prevention and more effective treatments have extended survival and reduced near-term mortality.
- However, the current pattern of increasing incidence and improved short-term survival after diagnosis, is not guaranteed to persist. Continued growth in cancer incidence, combined with deteriorating metabolic health, could place upward pressure on future cancer mortality if survival gains slow or plateau.
- Where policy entry and expiry ages increase, exposure may shift towards older ages.
- This could potentially increase cancer-related mortality claims, with implications varying by market and product design.
- Mortality assumptions therefore need to account for potentially elevated long-term mortality risk within growing survivor populations.

Critical illness (CI)

- CI pricing and coverage should reflect local ASIR patterns and stage at diagnosis, both of which affect claim severity and frequency.
- For example, younger female applicants may require greater focus on family history and screening. Older male applicants may need emphasis on lifestyle factors and prostate health.
- Increasing EOC raises the likelihood of CI claims, shifting risks towards younger, working-age populations.
- Expanded screening is likely to increase overall claim frequency while reducing severity through earlier-stage diagnosis.
- Changes to cancer classification systems (e.g. ICD-O or WHO) may shift cancer claim eligibility in niche or edge cases, even where underlying tumour biology or disease progression remain unchanged.
- Higher diagnosis rates will place pressure on CI products, particularly those offering multiple payments or full payments for any stage of cancer.
- The industry may adjust benefit design and pricing to remain sustainable in a higher-incidence, lower-severity environment, including recalibrating payouts to better align payments with prognosis and morbidity risk.

Next Gen CI products
Swiss Re is working on Next Gen CI products. These simplify product scope and structure, focus on need-based benefits, and are designed to adapt as cancer epidemiology and medical practice evolve. Many existing CI offerings are overly broad, covering dozens of relatively low-relevance conditions, all of which add to policyholder cost without improving protection for most claimants. For us, 'simplicity' means reworking the scope, structure, condition set and consumer understanding of policies, and working towards a streamlined, high-impact condition set, reducing complexity.

A more risk-aligned payout approach may still use more nuanced triggers such as disease (stage or prognosis) to maintain fairness and sustainability. Earlier detection increases the likelihood of diagnosing and successfully treating lower-severity cancers that will not have a life-altering impact. Automatically paying full benefits in such cases may lead to over-compensation and increase anti-selection risk. Severity-based products, including staged cancer payouts, better match benefits to financial need and help mitigate the implications of overdiagnosis, while supporting the long-term affordability of cover.

We also recognise that rapid advances in screening and treatment create uncertainty in long-term pricing. Flexible product designs, such as 5–10-year CI terms with guaranteed renewability, or long-term policies with reviewable premiums, allow insurers to adapt to shifting risks. These structures help maintain coverage while providing the flexibility to adjust premiums at product level for all policyholders upon renewal, factoring in medical inflation and the growing availability of more advanced diagnostics and treatment.

Disability income/Income protection (DI/IP)
- EOC may lead to more working-age individuals requiring income support during treatment and recovery.
- For DI/IP portfolios, example impacts could vary by composition: earlier detection may reduce claims if successful treatment occurs within deferred periods, while improved survival may increase the likelihood of multiple or recurrent claim episodes over time.
- As a result, DI/IP risk is shifting towards longer and more variable recovery timelines, increasing the importance of robust claims management.
- These trends also create opportunities to differentiate through targeted return-to-work programmes and long-term risk monitoring.

Medical insurance
- Expanded screening, AI-enabled imaging and MCED testing are driving earlier diagnosis, creating both opportunities and challenges for medical insurers.
- Positive screening outcomes generate cascading effects, including confirmatory imaging, biopsies, liquid biopsies, repeated testing, incidental findings and treatment, increasing healthcare utilisation and costs.
- Over-diagnosis, misdiagnosis and other screening issues also increases care burdens.
- Expensive cancer treatments, including targeted immunotherapies and emerging cell or gene therapies, are increasingly delivered over longer durations, rather than one-off interventions.
- As survival improves, treatment costs accumulate over time, shifting claims from rare, high-severity events to more frequent, mid-severity claims with earlier onset and longer duration.

Long-term care (LTC)
- Expanding cancer epidemiology may drive demand for LTC, particularly in older survivors.
- Many survivors require ongoing medical management, support for late treatment effects and care for co-morbidities.
- Estimating future care costs and requirements is challenging due to uncertainty around duration, complexity and need.
- LTC products may evolve towards managing long-term risk, with greater emphasis on flexible benefits covering rehabilitation, home care and palliative services.

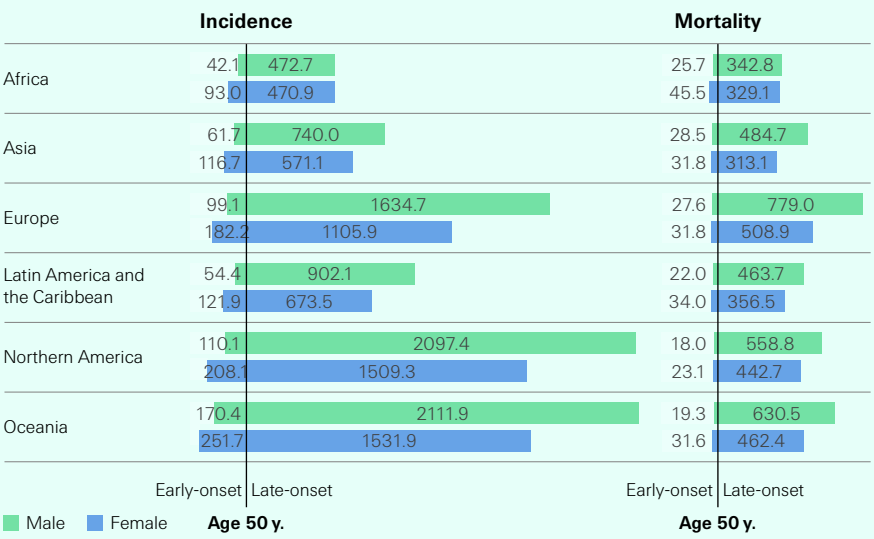
Cancer-specific L&H products
- Applicants' awareness of increasing EOC, earlier diagnosis and improved survival are increasing demand for cancer-specific L&H products, including standalone policies and riders.
- These products aim to support the full cancer journey rather than single lump-sum payments.
- Expanded screening is likely to increase claim frequency while reducing cancer severity, challenging products that provide full benefits regardless of stage.
- Insurers may move to adopt severity- or stage-based benefits, recurrent payments and treatment-linked support.
- These products can complement CI and DI/IP by addressing gaps in survivorship and return-to-work need but require careful pricing and underwriting to remain sustainable.

Impact on Underwriting, Claims and Pricing

Beyond product-specific considerations, there are broader issues to examine for insurance practitioners with changing cancer epidemiology.

Underwriting
- The insurance industry will need to consider adapting underwriting frameworks and pricing models to reflect evolving cancer risk dynamics.
- Traditional indicators such as age, family and past medical history remain relevant but are increasingly insufficient on their own, as cancer risk is shaped by multiple interacting factors.
- Future underwriting may place greater emphasis on metabolic health, lifestyle behaviours, environmental exposures and screening participation, with a stronger focus on modifiable risks and prevention, rather than static risk markers alone.
- Emerging data sources, such as Swiss Re's partnership with the University of Oxford, seek to explore wearables and novel health metrics (e.g. step count and sleep patterns). These may help supplement as proxies, to traditional underwriting inputs and improve risk assessment.[94]
- Rising EOC and prolonged survivorship are increasing the number of applicants with prior cancer histories. While this reflects positive societal progress, insurers must accurately assess residual risk, to underwrite cancer survivors in a fair and evidence-based manner.

Figure 4: Crude incidence and crude mortality rate (per 100 000) by world region (2022)



Source: Global Cancer Observatory: Cancer Today (version 1.1). International Agency for Research on Cancer. Available from: *Cancer Today*, accessed January 2026

- Accurate assessment increasingly depends on understanding shifting epidemiology, regional differences and the long-term impact of new diagnostic and treatment technologies.
- Wider access to advanced diagnostics and genetic information may heighten information asymmetry and anti-selection risk, while regional variation in screening and healthcare capacity continues to shape outcomes.[95]
- Tools such as Swiss Re's underwriting manual, *Life Guide*, are being continuously adapted through evidence-based review cycles, to support transparent, regionally informed risk assessment. This ensures that underwriting keeps pace with evolving clinical practice, and supports fair, explainable decisions for regulators and customers.

Claims

- Cancer claims dynamics are shifting as mortality declines but claim frequency, benefit duration and cumulative costs rise with more long-term, multi-phase cancer pathways.
- Survivors increasingly require ongoing monitoring, repeated treatment and chronic disease management, raising morbidity intensity across portfolios.
- Claims teams must be equipped to keep pace with medical advances by routinely updating clinical definitions, diagnostic thresholds, and terms and conditions to support claimants through the whole cancer journey.
- While the claims team's primary role is to assess claim validity, there is growing emphasis on supporting customers beyond policy terms, offering services such as second medical opinions, access to counselling and small supportive gestures to help claimants and their families during difficult times.
- Therefore, claims assessors should keep pace with medical advances and softer, customer service and communications skills.
- Embedding a biopsychosocial approach and formal vocational rehabilitation pathways can improve consistency, support recovery and enhance return-to-work outcomes.

Pricing

- Cancer trends primarily affect the base morbidity and mortality assumptions in L&H products.
- If EOC reflects an increase in lifetime risk rather than an age shift to younger groups, incidence may remain structurally elevated over time.
- Rising incidence (in non-excluded cancers) increases CI claim frequency, while earlier detection and better treatment have reduced severity (stage) and mortality risk, especially in high-screening markets.
- These offsetting effects weaken the reliability of historical age-based assumptions.
- This has material implications for exposure, pricing adequacy and long-term capital planning, particularly placing upward pressure on CI premiums and mortality assumptions, depending on product mix and market exposure.
- Accurate pricing requires explicit allowance for changing incidence, survivorship and disease progression.

Conclusion

Cancer risk, detection, treatment and outcomes continue to evolve. While cancer mortality has declined in most countries, morbidity remains dynamic and heterogeneous.

Exposure to traditional risk factors has been decreasing, yet newer factors such as metabolic deterioration, emerging dietary and environmental risks, and technological advancements are reshaping cancer patterns.

Reinsurers play a critical role in translating emerging medical insights and cancer trends into risk frameworks, underwriting guidance, and claims best practice, supporting clients. Effectively managing future mortality and morbidity risk will require a deeper understanding of these evolving dynamics. Embedding emerging epidemiological insights into core business frameworks will better position the industry to manage cancer risk.

Cancer is not a single disease, and the fight against it will not evolve in just a single direction. Swiss Re's focus on cancer over the course of 2026 underscores our deep commitment to help the L&H industry keep pace with this growing complexity as we all seek to live longer, healthier lives.

Authors:
Dr Minfu He
Dr Prachi Patkee
Dr Florian Rechfeld
Prof. Dr. Tobias Schiergens
Dr Adam Strange

Managing Editor:
Sergio Lopez Jimenez

Executive Sponsors:
Natalie Kelly

With thanks for contributions by:
Dr Kent Chong, Chris Jones, Vicky Livingstone, Claire Nolan, Tim Knaust, Dr Sitara Kuruvilla, Dr Rajender Reddy, Eva Richardson Dr John Schoonbee

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