Why cancer in young adults is rising – and why their needs are different

Younger adults may tolerate intensive cancer therapy better in the short term, but they also live long enough to experience the cumulative effects of those treatments. PHOTO ILLUSTRATION: PEXELS

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Cancer has long been seen as a disease of ageing. Yet across Singapore and worldwide, more people in their 20s, 30s and early 40s are being diagnosed.

This shift is reshaping oncology and raising urgent questions about why younger adults are developing cancer – and how best to care for them.

While researchers are still working to understand the causes, one thing is already clear: cancer affects younger adults very differently from older patients, prompting the emergence of adolescent and young adult oncology – a growing field dedicated to their unique medical and life-stage needs.

A global rise in early-onset cancers

Across multiple countries, cancers diagnosed before age 50 are increasing, especially colorectal, breast and some blood cancers. Clinicians in Singapore are observing the same trend.

The causes appear multifactorial. Researchers are studying the roles of obesity, sedentary lifestyles, ultra-processed diets, chronic stress, poor sleep and gut microbiome disruption.

Earlier and longer exposure to environmental pollutants, plastics and endocrine-disrupting chemicals may also contribute. Reproductive pattern, such as delayed childbirth and shorter breastfeeding, have been linked to higher risk of certain cancers, particularly breast cancer.

At the same time, the picture is not uniform. Some cancers are not rising in younger adults.

Public health measures have reduced others: HPV vaccination has lowered cervical cancer risk; hepatitis B vaccination has reduced liver cancer in many populations; smoking-related cancers are declining in some groups.

Together, these trends underscore that cancer risk reflects a complex interplay of genetics, lifestyle, environment and preventive care.

What scientists know – and what they do not

Researchers are asking whether cancers in younger adults differ biologically from those diagnosed later in life.

So far, findings are mixed. Some studies report differences in tumour behaviour, molecular features and microbiome profiles, but results vary by cancer type.

It is premature to conclude that early-onset cancers are fundamentally distinct diseases. What is clearer is the higher likelihood of inherited cancer predisposition in younger patients.

Germline mutations – such as BRCA1/2 for breast and ovarian cancers, and Lynch syndrome for colorectal and other cancers – are identified more often at younger ages.

As a result, genetic counselling and testing are frequently recommended to guide treatment and inform at-risk family members. Precision oncology further heightens the value of molecular profiling and next-generation sequencing to match tumours with targeted therapies.

Beyond hereditary syndromes, key questions remain: Are early-onset cancers biologically unique, or are changing exposures accelerating disease that would otherwise emerge later? Ongoing research aims to answer this.

Why younger adults need different cancer care

While the biological science continues to evolve, the biggest differences between younger and older patients are often practical, physical and psychosocial.

Cancer strikes younger adults during a period typically defined by education, career building, relationships and starting a family. A diagnosis can abruptly interrupt all of these.

Fertility is often an immediate concern. Some chemotherapy drugs, radiotherapy and surgery can permanently affect fertility, making discussions about egg freezing, sperm preservation or ovarian protection an important part of treatment planning before therapy even begins.

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Younger patients also face emotional and social challenges that differ from those of older adults. Many watch friends advance in their careers, relationships and family life while they spend months or years undergoing treatment.

Financial pressures can be equally significant. Interrupted education, disrupted careers and reduced income often coincide with rising healthcare costs, creating substantial strain at a stage of life when many are still establishing financial stability.

The impact frequently extends to partners, young children and other family members.

More survivors, but also longer survivorship

Advances in treatment mean many younger patients survive cancers once considered fatal. Surviving at 28 may mean living another 40 to 50 years – changing how oncologists balance cure with the prevention of long-term side effects of cancer treatment.

The goal is twofold: eradicate the cancer and minimise late effects such as heart disease, infertility, cognitive changes and secondary cancers.

Younger adults may tolerate intensive therapy better in the short term, but they also live long enough to experience the cumulative effects of those treatments. That is why structured survivorship care is now integral to modern oncology.

Beyond treatment: supporting life after cancer

Recognising these challenges, Singapore's healthcare system has increasingly adopted a more multidisciplinary approach to caring for adolescents and young adults with cancer.

Specialist cancer centres now work closely with fertility specialists, genetic counsellors, psychologists, rehabilitation therapists, medical social workers and survivorship teams to ensure that care extends beyond treating the tumour itself.

Crucially, survivorship planning now starts at diagnosis rather than only after treatment has ended.

Increasingly, healthcare professionals recognise that success is measured not only by survival, but also by preserving fertility, cognitive function, mental well-being and the ability to return to education, employment and family life.

Equally important, patients and families should know they do not have to face cancer alone.

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In Singapore, organisations such as the Singapore Cancer Society and Children's Cancer Foundation play an important complementary role alongside hospitals.

The Singapore Cancer Society provides counselling, rehabilitation, financial assistance, survivorship programmes and support groups that help patients and their families navigate the practical, emotional and financial impact of cancer.

Increasingly, these services also address the unique concerns of younger adults, including returning to work or school, fertility, relationships and rebuilding confidence after treatment.

For children, adolescents and young adults who have experienced childhood cancer, the Children's Cancer Foundation provides comprehensive psychosocial care throughout the cancer journey and beyond.

Its programmes include counselling, educational support, social work services, rehabilitation, family support, survivorship initiatives and transition programmes that help survivors move confidently into adulthood.

As survival rates continue to improve, the Foundation's work has increasingly focused on enabling survivors not simply to overcome cancer, but to achieve their educational, vocational and personal aspirations over the decades that follow treatment.

As chairman of the Children's Cancer Foundation and medical oncologist in practice, I have had the privilege of seeing first-hand how cancer care has evolved over the years.

More children and young people are surviving longer than ever before. With that progress comes a broader responsibility: to help them live well.

Beyond excellent medical care, they need sustained psychosocial support, educational assistance, rehabilitation, peer connection and real opportunities to reintegrate into school, work and society.

It takes a coordinated effort between healthcare institutions, community organisations, schools, employers and families to ensure that every young survivor has the opportunity not merely to survive, but to thrive.

As survival rates continue to improve, success should no longer be measured solely by curing cancer. It should also be measured by how well we help young people return to school, build careers, start families and live fulfilling lives long after treatment ends.

Correction note: The author's bio in this article has been updated to reflect the current positions held.

- Kevin Tay is a senior consultant medical oncologist at OncoCare Cancer Centre and chairman of the Children's Cancer Foundation.

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