

ONCOLOGY: THE DISEASE, DYNAMICS & CHALLENGES OF MARKET RESEARCH

January 2026 Update

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Introduction

According to latest available data from the World Health Organization (WHO), nearly 10 million people died from cancer in 2020, with breast, lung, colorectal, and prostate cancers being the leading contributors to these deaths. [\(1\)](#)

Startling though these figures are, they rise year on year. Projections by the International Agency for Research on Cancer (IARC) indicate that new cancer cases could climb to 30 million by 2040, with annual deaths up to 16 million – primarily due to population growth, aging, and increased risk factors. [\(2\)](#)

To put this into context, although excess mortality estimates suggest the true toll could be dramatically higher, the WHO reports just over 7 million confirmed COVID-19 deaths globally to date (May 2025). [\(3\)](#)

What these trends highlight is that cancer will likely impact every one of us, directly or indirectly, during our lifetimes.

The earliest documented case of cancer is over 3,000 years old and yet, in some ways, it remains a mystery today. [\(4\)](#) While we have learned a great deal about causes and effective treatments, those who work in the oncology market are constantly faced with the challenges of this ever-changing disease.

Cancer is complex because it is one term that encompasses many different malignant diseases. There is no one cause of cancer, nor is there one single treatment protocol. The biology of cancer is also very complex, leading to an abundance of treatment approaches. Incidence and prevalence rates differ globally, and treatment of the disease is managed by numerous physician specialties. In addition to these challenges, the continually evolving nature of our understanding of the disease and its treatment approaches makes it difficult to remain current. According to our own desk research, approximately 147 new cancer drug

approvals (including new molecular entities and label expansions, excluding biosimilars and generics) were granted across the US, EU4 + UK, Japan, and China. This reflects sustained and growing regulatory activity in oncology, driven by innovation and expedited pathways in these major pharmaceutical markets.

The rapid expansion in cancer drug development is driving significant increases in both costs and revenues within the pharmaceutical sector. Valued at USD 1.6 trillion in 2024, the global pharmaceutical drugs market is projected to reach USD 2.2 trillion by 2029, growing at a compound annual growth rate (CAGR) of 5.5%. [\(5\)](#) The oncology segment is a major contributor to this growth, propelled by technological innovations such as artificial intelligence (AI), nanotechnology, and 3D printing that are transforming drug development. These advancements, combined with strong industry

competition, highlight the immense economic scale and critical importance of the oncology field as it continues to evolve and expand.

In recent years, we've witnessed a continued increase in the use of immunotherapies, a treatment approach that uses the body's own immune system to fight disease, and this has now become one of the most used anti-cancer drug categories in a number of cancer types. A significant proportion of new agents have been approved alongside new companion diagnostics tests, and we continue to see increased implementation of tumour-agnostic biomarkers and

liquid biopsies. Other novel approaches under development, including therapeutic vaccines, gene editing and blood-based early cancer detection, hold the promise of potentially revolutionising treatment and diagnosis in the future, if they prove effective.

This paper provides an introduction to the complex oncology market and highlights some of its distinct challenges. Its aim is to inform and equip professionals who market, or conduct marketing research, for oncology products globally today.

Complexity of the Disease Area

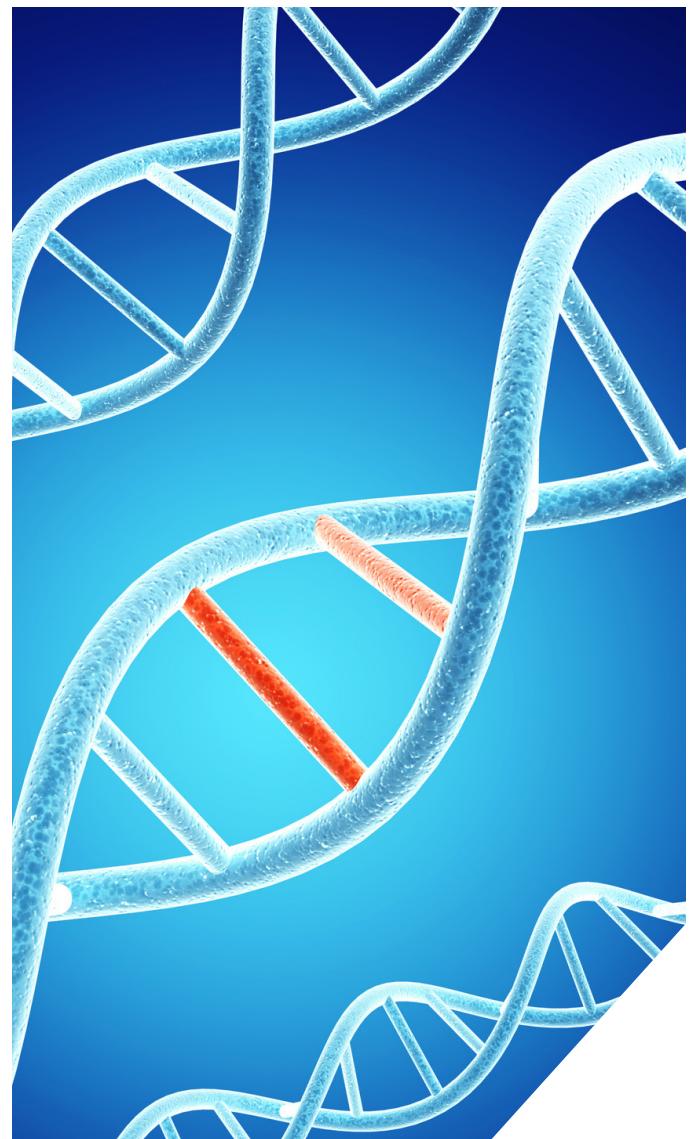
Cancer and its Causes

Simply put, cancer is the uncontrolled growth of poorly differentiated (non-functioning) cells. These cells' unchecked proliferation causes them to crowd out normal functioning cells, eventually leading to cell death.

The proximate cause of cancer (i.e., the event which is closest to, or immediately responsible for causing) is mutations of genes that keep normal cellular growth regulated. Mutations in key regulatory genes alter the behaviour of cells and can potentially lead to the unregulated growth seen in cancer. Proto-oncogenes are genes that, when mutated, may lead to unlimited cellular proliferation. It appears that a number of mutations are likely to be involved in cancer, and tumours rarely rely on one mutation alone; it is the accumulation of such mutations that lead to the occurrence of cancer.

The fact that cancer is caused by mutations has many implications for its treatment. However, mutations do not occur in a vacuum. Many factors can be involved in the mutation of genes, including:

Lifestyle choices: Smoking and alcohol are chemical teratogens (chemicals that cause mutations), while a diet high in fat and a sedentary lifestyle are thought to increase body fat, which stores teratogenic chemicals.



Environmental factors: Radiation causes mutation directly by altering DNA; chemicals work to disrupt transcription and translation processes or act as endocrine disrupters that can stimulate cell growth.

Infectious agents: Some viruses act by inserting their own DNA into the nucleus, which can lead to oncogenic mutations. Furthermore, some bacterial infections may contribute to the proliferation of cancer cells.

Our bodies constantly fight off cancer. If damaged DNA is detected, our DNA repair mechanism typically restores the cell's genetic material. If this mechanism fails and poorly differentiated cells are detected, our immune system typically destroys the damaged cells before they can multiply and spread. However, increasing age has an impact on these processes.

Some people also inherit genes that predispose them to developing cancer; cancer is not inevitable, but it is much more likely to develop in people with so-called cancer genes than among the general population.

About 5-10% of cancers are thought to be hereditary. (6) Hereditary cancer tends to occur at an earlier age than the sporadic form of the same cancer, so screening is recommended. For example, mutations to tumour suppressor genes BRCA1 and BRCA2 predispose individuals who carry them to breast and ovarian cancers, in addition to a higher risk of other tumours as well.

Cancer Type	General Population Risk	Risk for Malignancy	
		BRCA1	BRCA2
Breast	12%	55%-72% by age 70	45%-69%
Contralateral breast cancer	2% w/in 5 yrs	20%-30% w/in 10 yrs; 40%-50% w/in 20 yrs	
Ovarian	1%-2%	39%-44%	11%-17%
Male breast	0.1%	1%-2%	6%-8%
Prostate	6% by age 69 yrs	21% by age 75 yrs; 29% by age 85 yrs	27% by age 75 yrs; 60% by age 85 yrs
Pancreatic	0.5%	1%-3%	3%-5% by age 70 yrs
Melanoma (cutaneous & ocular)	1.6%		Elevated risk

Figure 1. Risk of Malignancy in Individuals with a Germline BRCA1 or BRCA2 Pathogenic Variant

Source: National Library of Medicine (7)

Cancer – One Disease or Many?

Each type of cancer is unique – a disease within itself, with its own causes, symptoms and methods of treatment. Leukaemias, lymphomas and myelomas are considered haematologic malignancies, while tumours affecting a specific organ are considered solid tumours. As with all groups of disease, some types of cancer are more common than others.

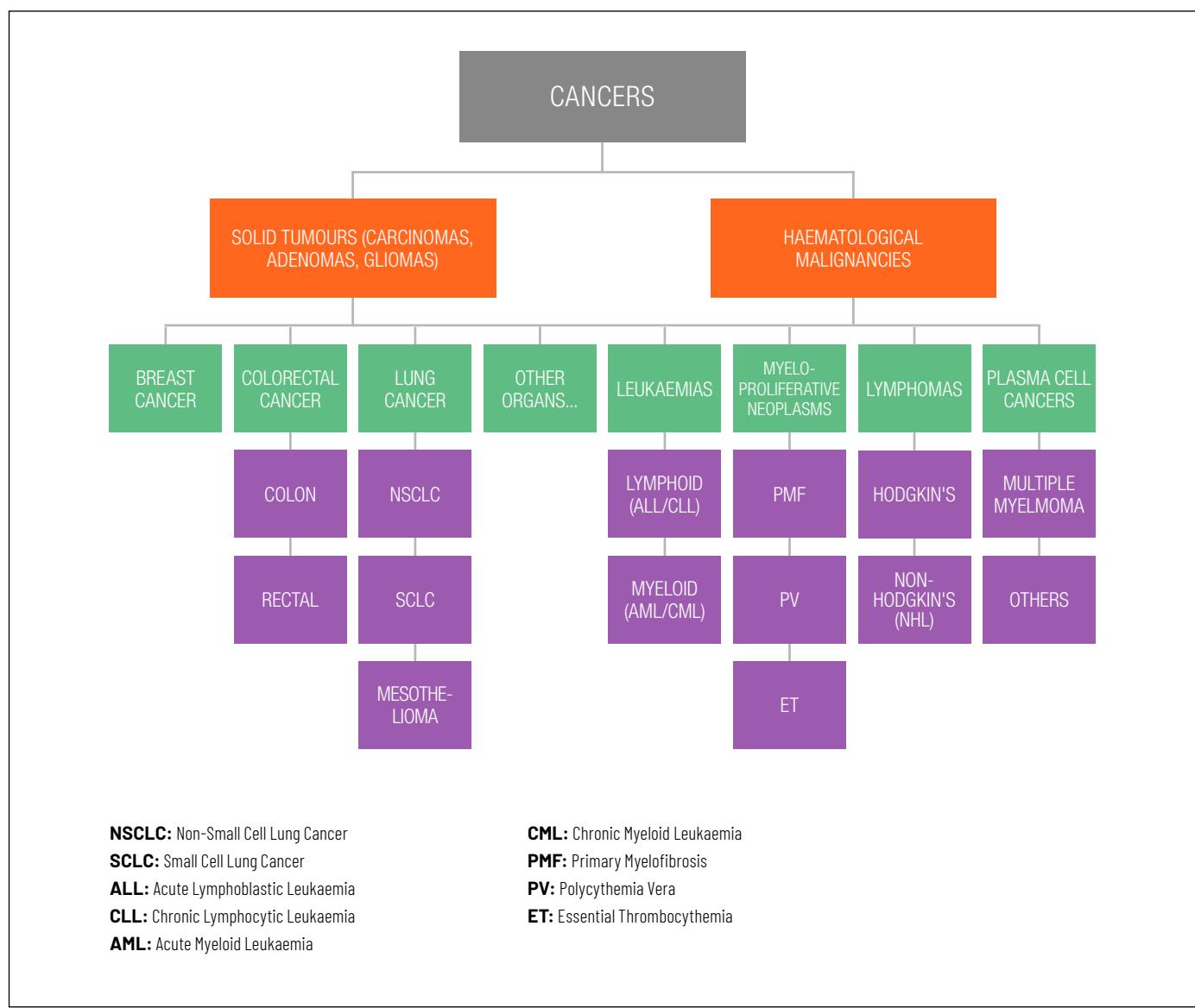


Figure 2: Tumour Types and Sub-Types

Classifying cancer becomes more comprehensive when linking it to the specific organ or system in the human body affected. The following table shows this classification.

CNS	GENITOURINARY / GERM CELL	LEUKAEMIA
<ul style="list-style-type: none"> • Brain Stem Glioma • Cerebellar Astrocytoma • Cerebral Astrocytoma / Malignant Glioma • Ependymoma • Medulloblastoma • Supratentorial Primitive Neuroectodermal Tumours and Pineoblastoma • Visual Pathway, Hypothalamic Glioma • Neuroblastoma • Primary CNS Lymphoma 	<ul style="list-style-type: none"> • Bladder Cancer • Kidney (Renal Cell) Cancer • Penile Cancer • Prostate Cancer • Renal Pelvis and Ureter Cancer • Testicular Cancer • Urethral Cancer • Wilms' Tumour • Germ Cell Tumour • Ovarian Germ Cell Tumour 	<ul style="list-style-type: none"> • Acute Lymphoblastic Leukaemia • Acute Myeloid Leukaemia • Chronic Lymphocytic Leukaemia • Chronic Myelogenous Leukaemia • Hairy Cell Leukaemia • Myelodysplastic Syndromes • Myeloproliferative Neoplasms
SKIN CANCER	ENDOCRINE	GYNAECOLOGIC
<ul style="list-style-type: none"> • Kaposi's Sarcoma • Melanoma • Merkel Cell Carcinoma • Basal Cell Skin Cancer • Squamous Cell Skin Cancer 	<ul style="list-style-type: none"> • Adrenocortical Carcinoma • Parathyroid Cancer • Pheochromocytoma • Pituitary Tumour • Thyroid Cancer • Neuroendocrine Tumours • Thymoma / Thymic Carcinoma 	<ul style="list-style-type: none"> • Cervical Cancer • Uterine / Endometrial Cancer • Gestational Trophoblastic Tumour • Ovarian Cancer • Vaginal Cancer • Vulvar Cancer
LUNG / RESPIRATORY	MUSCULOSKELETAL (SARCOMAS)	GASTROINTESTINAL
<ul style="list-style-type: none"> • Lung Cancer, Non-Small Cell • Lung Cancer, Small Cell • Malignant Mesothelioma 	<ul style="list-style-type: none"> • Ewing's Family of Tumours • Osteosarcoma / Bone Histiocytoma • Rhabdomyosarcoma • Soft Tissue Sarcoma • Uterine Sarcoma 	<ul style="list-style-type: none"> • Anal Cancer • Bile Duct Cancer, Extrahepatic • Carcinoid Tumour, Gastrointestinal • Colon and Rectal Cancers • Esophageal Cancer • Gastric Cancer • Gallbladder Cancer • Pancreatic Cancer • Hepatobiliary Cancer
HEAD AND NECK	LYMPHOMA / PLASMA CELL	BREAST CANCER
<ul style="list-style-type: none"> • Hypopharyngeal Cancer • Laryngeal Cancer • Lip and Oral Cavity Cancer • Nasopharyngeal Cancer • Oropharyngeal Cancer • Paranasal Sinus & Nasal Cavity Cancer • Salivary Gland Cancer • Melanoma, Intraocular • Retinoblastoma 	<ul style="list-style-type: none"> • AIDS-Related Lymphoma • Cutaneous T-Cell Lymphoma • Cutaneous B-Cell Lymphoma • Hodgkin's Lymphoma • Mycosis Fungoides • Non-Hodgkin's Lymphoma • Sézary Syndrome • Waldenström's Macroglobulinemia • Multiple Myeloma 	<p>UNKNOWN PRIMARY</p>

Figure 3:
 Cancer Classifications

Once the cancer type is identified, there is still a need to understand the histology or cell type of the disease. This process allows pathologists and physicians to understand which cells are being primarily impacted within the cancer.

For example, in NSCLC alone, there are different histological categories, the most common ones being:

- Squamous cell
- Adenocarcinoma
- Large Cell

Adenocarcinoma and Large Cell are often grouped together and referred to as "non-squamous" NSCLC. There are also several other rarer subtypes of NSCLC, such as pleomorphic, carcinoid tumour, adenosquamous, and salivary gland-type carcinoma.

NSCLC subtypes are further segmented by predictive biomarkers (which are discussed in a later section). All of this will ultimately inform the oncologist's treatment approach and selection for the individual NSCLC patient.

Cancer Around the Globe

As cancer and treatment approaches vary significantly from country to country, it is important to understand not only the biology of each of the diseases but also the global differences.

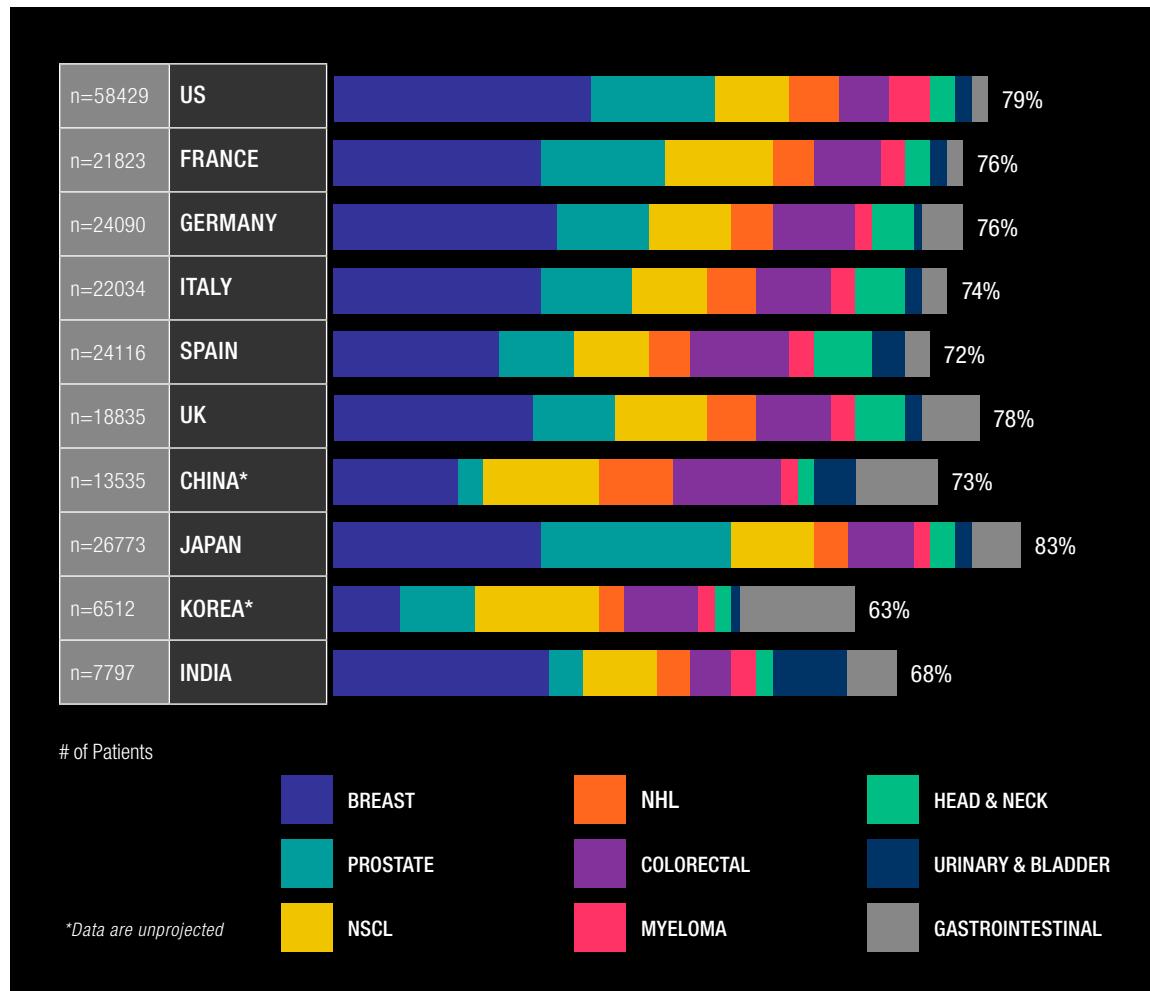
It is well documented that cancer incidence varies globally. For example, prostate cancer incidence is generally lower in many Asian countries than it is in the US and Europe (although it is rising rapidly across Asia, particularly in East Asian nations like Japan, South Korea, China, Taiwan, and Singapore). (8) By contrast, stomach cancer is more prevalent in Asia, especially East Asia, due to dietary habits, to *Helicobacter pylori* infection rates, and to other environmental and genetic factors. (9)(10) These regional variations in cancer incidence reflect a complex interplay of lifestyle, demographic, genetic, and economic influences.

The Western diet, characterised by high fat and refined sugar consumption combined with low fibre intake has been associated with increased risks of prostate, colorectal, and breast cancers, which remain among the most commonly drug-treated cancers in the US and Western Europe according to Ipsos Global Oncology Monitor data (see Figure 4).

In China, the 2024 Chinese Society of Clinical Oncology (CSCO) guidelines confirm that non-small cell lung cancer (NSCLC) remains the most prevalent and the most prevalently drug-treated cancer, largely driven by high smoking rates and air pollution. (11) In India, the elevated incidence of head and neck cancers is primarily linked to widespread use of smokeless tobacco products and the cultural practice of chewing betel quid. (12) The ACS guidelines underscore that lifestyle factors – including diet, smoking, and tobacco use – play a critical role in cancer risk and stress the need for preventive strategies tailored to specific regional risk profiles. (13)

However, it is important to remember that actual drug-treatment rates will not correlate directly with incidence as additional variables come into play, including more prevalent screening, accessibility to medical care, and ability to afford treatment. Such socioeconomic factors often drive greater treatment of cancer in more developed countries.

When viewing cancer globally, it is vital to understand these local and regional considerations that impact incidence, prevalence and ultimately treatment of cancer.



Cancer – One Treater or Many?

When undertaking market research, great care needs to be taken when deciding what audience to survey – we need to think about the sample.

When conducting global research with cancer treaters, many researchers may believe it would be safe to focus only on Medical Oncologists and/or Haematologist/Oncologists. The reality is, there are multiple physician specialties treating cancer with drug therapy, with variability seen by cancer type as well as by region.

The vast majority of cancer treaters in the US are Oncologists. According to 2023 snapshot data reported by ASCO, the number of practicing oncologists engaged in patient care in the US was approximately 15,959. (14) This compares with 13,365 oncologists in 2022, and 13,146 in 2021. (15), (16) Of the 15,959 clinicians, 14% were aged 40 years or younger and 23% were aged 64 years and older. (14)

When comparing the US to a market such as Japan, however, there is a stark difference in the physician

specialties that treat cancer with systemic therapy. Up until 2007, there was no “oncology” specialty in Japan. Although the number is growing, the most recent data from the Japanese Society of Medical Oncology (JSOM) reports that, as of April 1 2025, there are only 1,825 oncologists across Japan. (17) Compared to the US, the oncology specialty in Japan is smaller on a per capita basis, with systemic cancer treatments frequently administered by surgeons or specialists focused on specific organs.

Ipsos Global Oncology Monitor data indicate that cancer treatment in the US is highly concentrated within two main specialties. Oncology accounts for 57% of systemic cancer treaters, while Oncology–Hematology contributes another 3%. Other specialties, such as Radiology (17%) and Primary Care/Generalists (21%), also contribute to a notable degree, suggesting that while oncologists dominate, some early diagnosis and referral may come from broader specialties. This concentration is largely due to the strong fellowship and training systems that have established Medical Oncology as a central pillar of cancer care.

Across Europe’s four largest markets (France, Germany, Italy, Spain) and the UK, our data suggest a more mixed picture but one that still leans heavily toward oncology-focused care. Oncology leads at 41%, though Oncology–Hematology plays a significant role at 27%. There is notable variation between countries: France is led by Oncology (34%) but also includes Pulmonology (17%) and Urology (12%), reflecting a collaborative, tumour-specific approach. Germany sees Oncology–Hematology dominate at 46%, with Oncology–Gynaecology (13%) and Urology (17%) also contributing, illustrating a strong specialist-driven system. Italy and Spain both rely heavily on Oncology (64% and 58%, respectively), with Oncology–Hematology at 21% and 20%, respectively. The UK mirrors this structure, with Oncology at 58% and Hematology–Oncology at 25%, shaped by formal specialisation pathways.

Moving to Asia, the landscape becomes even more fragmented. In Japan, the oncology specialty is less centralised, with Oncology–Surgery leading at 32%, followed by Urology (15%), Pulmonology (12%), and Oncology–Hematology (11%). This highlights a system where organ-specific specialists are crucial to cancer care. Korea shows a similar pattern, with Oncology–Hematology (41%), Gynaecology Oncology (15%), and Pulmonology (10%) among the main specialties involved, pointing to a multi-specialty model. Surgical Oncology and Radiology also contribute, indicating a broadened treatment approach.

China and India present the most hybrid and fragmented models. In China, Oncology accounts for 28% of treaters, with Oncology–Hematology (11%), Oncology–Surgery (19%), and Pulmonology (4%) indicating that multiple specialties are involved in drug therapy. Urology (6%) and Gastroenterology (6%) further underline a distributed care model. India displays the greatest diversity, with Oncology at 34%, but significant roles for Oncology–Surgery (14%), Radiology (18%), Oncology–Hematology (8%), Urology (8%), and other specialties such as Neurology (5%), Pulmonology (6%), and Gastroenterology (4%) also engaged. This reflects a system with mixed infrastructure and resource-driven adaptations, where a wide range of specialists are involved in cancer management.

Understanding the correct specialties of physician/treater to target and talk to globally can be as much of a challenge as understanding the nuances of cancer treatment. (Ipsos conducts a market sizing study that enables us to identify the physician specialties treating cancer in each country, allowing for more precise targeting and strategic planning.)

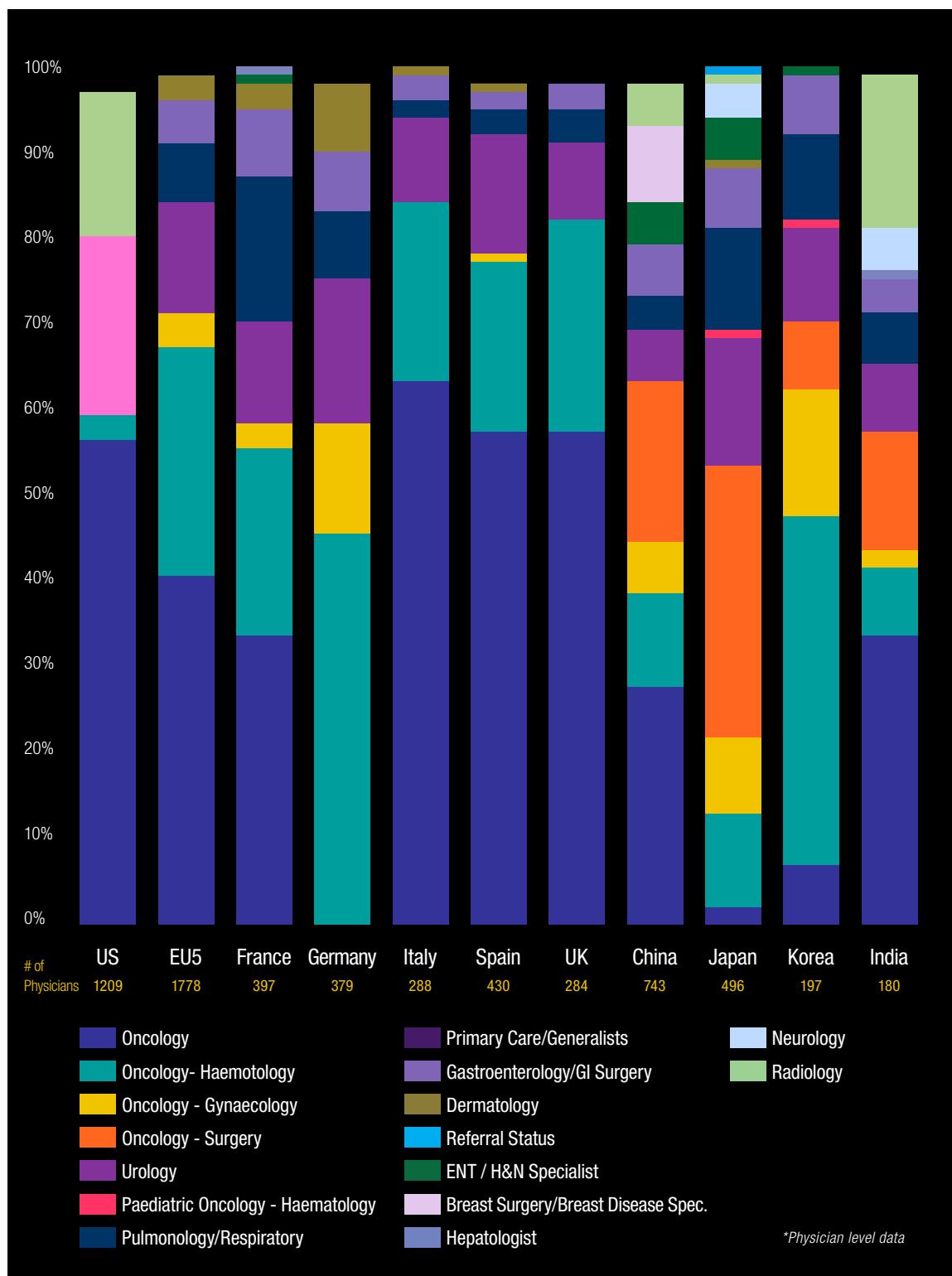


Figure 5: Systemic Cancer Treating Specialties by Country (Jan – Dec 2024)

Treatment Challenges

Cancer Staging – One System or Many?

In order to determine the proper treatment for cancer, it is critical to assess the extent of the disease. Several staging systems have been developed to do this.

Solid tumours are commonly staged by a Roman numeric system that is related to the extent of disease, with 0 being the least extensive and IV being the most extensive (metastatic) disease. However, gliomas and other CNS diseases are solid tumours that are exceptions to this system.

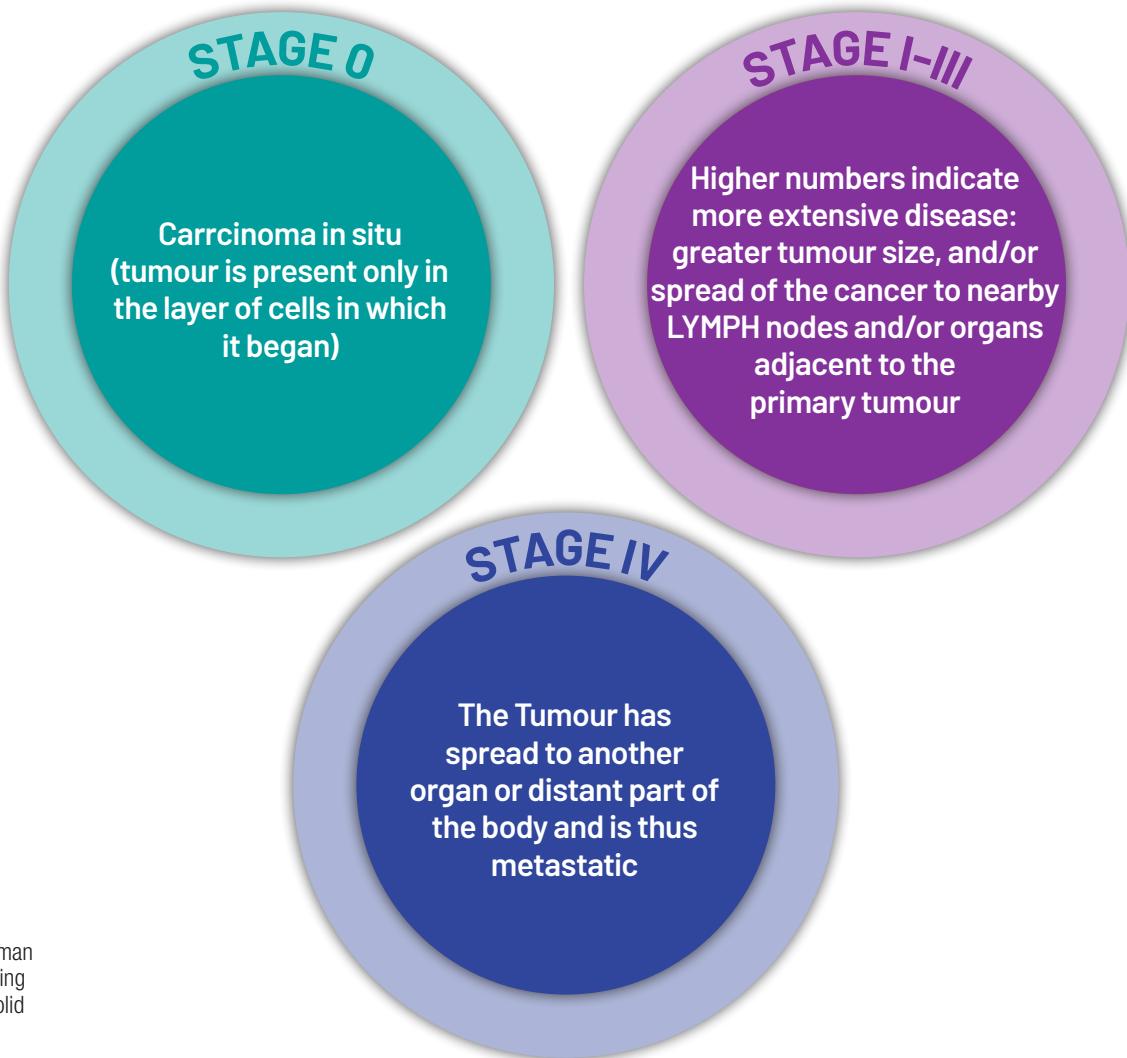


Figure 6: Roman Numeric Staging System for Solid Tumours

For most solid tumours, the TNM staging system is typically used to arrive at the Roman numeral stages. For each cancer type, the exact criteria for assigning these T, N and M values are different, as are the conversions from TNM into their respective Roman numeral stages.

Cancer staging systems are continually refined as our knowledge advances. For instance, the American Joint Committee on Cancer (AJCC) has updated its approach, moving from "Editions" to "Versions" – with the current AJCC Cancer Staging System being Version 9. (18) This latest version presents staging information in a more user-friendly format, featuring synoptic staging reports, tables, explanatory notes, and illustrations. Additionally, Version 9 is accessible through the AJCC Staging Online platform, which was launched in early 2024 to give healthcare professionals convenient access to the latest staging guidelines. (19)

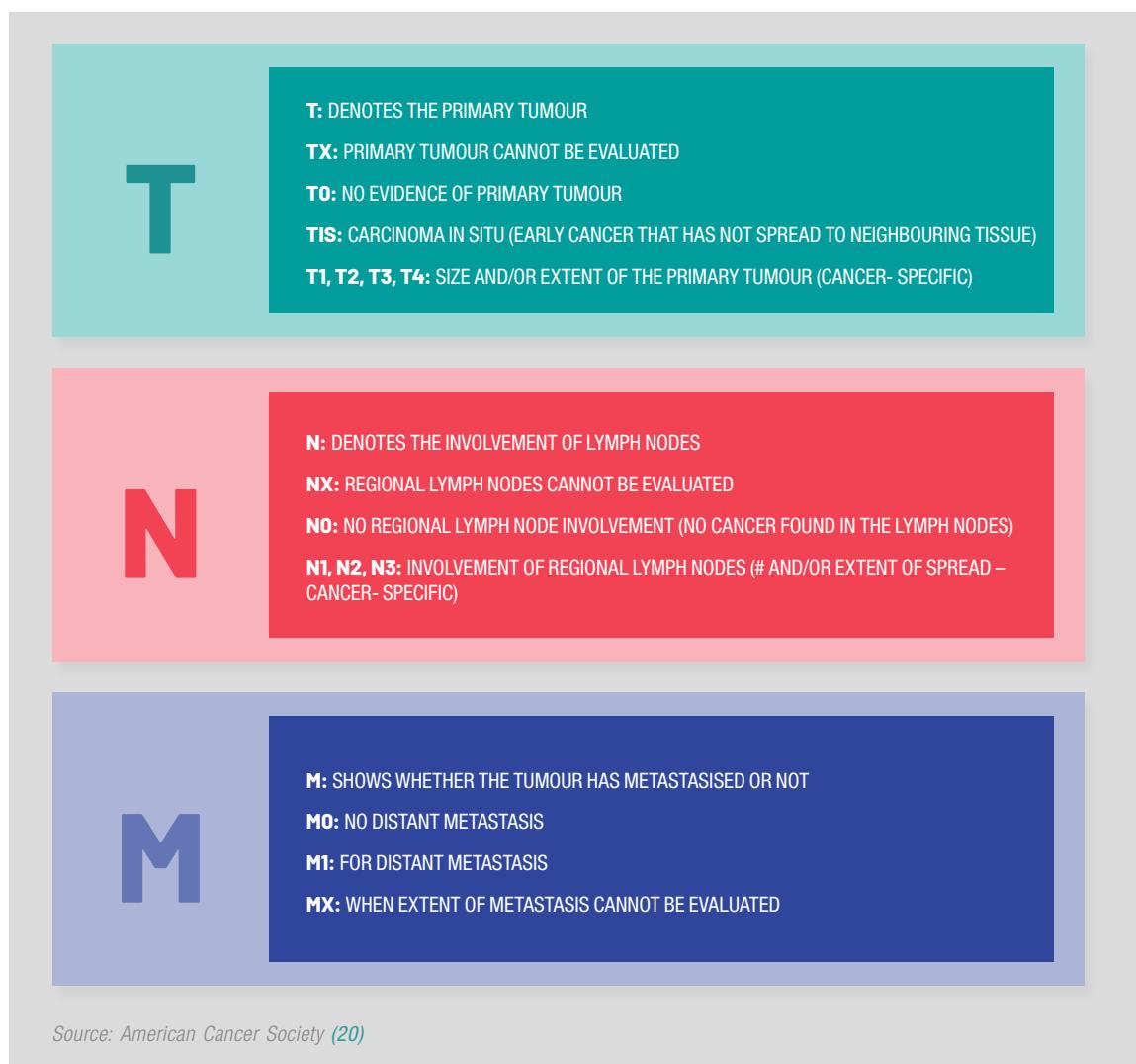


Figure 7: TNM Staging System for Solid Tumours

Alternative staging systems to TNM also exist for certain solid cancers, though their usage is generally on the decrease in favour of TNM.

SYSTEM	TUMOURS USED	DESCRIPTION
FIGO (21)	Ovarian	<ol style="list-style-type: none">1. Malignancy of one or both ovaries, without ascites2. Malignancy of one or both ovaries, with pelvic extension and ascites3. Malignancy involves one/both ovaries, intraperitoneal metastases outside pelvis and/or positive retroperitoneal lymph nodes4. Involvement of one/both ovaries with metastases and histologically confirmed extension to pleural cavity or liver
CIN (22) (23)	Cervical	Cervical Intraepithelial Neoplasia – grading system for pre-cancerous cervical lesions
Dukes (24)	CRC	Stages A, B, C, and D roughly correspond with Stages I-IV
Sassun-Mayo (25)		Emerging staging system that integrates tumour deposits with lymph node counts to improve prognostic accuracy
Jewett-Whitmore (26)	Prostate	Superseded staging system in which Stages A and B cancers are considered curable. Stages C and D are treatable, but their prognoses are discouraging. AJCC TNM system remains the global gold standard for anatomical staging.
Breslow Depth/Clark Level (27)	Melanoma	Breslow thickness is defined as the total vertical height of the melanoma, from the very top (called the "granular layer") to the area of deepest penetration in to the skin. The Clark level refers to how deep the tumour has penetrated into the layers of the skin.

Figure 8: Other Staging Systems for Solid Tumours

Due to the more diffuse and 'dimensionless' nature of these cancers, staging of haematological malignancies is generally very different to staging of solid tumours, and is also specific to each malignancy.

SYSTEM	TUMOURS USED	DESCRIPTION
Ann Arbor (28)	Hodgkin's Lymphoma	<ol style="list-style-type: none"> I. Cancer is located in a single region II. Cancer is located in two separate regions III. Cancer has spread to both sides of the diaphragm IV. Diffuse or disseminated involvement of one or more extralymphatic organs
Lugano classification (29)	NHL	The standard adult NHL staging system, adapted from Ann Arbor, incorporates modern imaging (e.g., FDG-PET/CT) and uses stages I-IV with modifiers to indicate extranodal involvement and bulky disease, focusing on anatomical spread and tumour burden.
International Staging System (ISS) (30) (31)	Multiple Myeloma	<p>Based on serum beta-2-microglobulin (B2M) and albumin levels only.</p> <p>I. B2-microglobulin (B2M) < 3.5 mg/L, albumin \geq 3.5 g/dL</p> <p>II. B2M < 3.5 and albumin < 3.5; or B2M \geq 3.5 and < 5.5</p> <p>III. B2M \geq 5.5</p>
Revised International Staging System (R-ISS) (30) (31)		<p>Builds on ISS by adding high-risk cytogenetic abnormalities detected by FISH (del(17p), t(4;14), t(14;16)) and elevated serum LDH levels.</p> <p>I: ISS I, no high-risk cytogenetics, normal LDH</p> <p>II: Not stage I or III</p> <p>III: ISS III and/or high-risk cytogenetics and/or elevated LDH</p>
Second Revised ISS (R2-ISS) (32)		<p>Refines the Revised ISS by adding 1q21 gain/amplification to key cytogenetic markers (del(17p), t(4;14), t(14;16)), ISS stage, and elevated LDH. Points are assigned based on these factors to stratify patients into four risk groups. R2-ISS improves prognostic accuracy and is mainly validated in clinical trial populations.</p>
Real-World ISS (RW-ISS) (32)		<p>Builds on R2-ISS by including age >70 and performance status (ECOG >1), with weighted scoring of clinical and cytogenetic factors. Developed from real-world data, RW-ISS better predicts outcomes in everyday practice and is recommended for routine use.</p>
Binet Classification/ RAI Staging System (33) (34)	CLL	<p>Clinical stage A characterised by no anemia or thrombocytopenia and fewer than three areas of lymphoid involvement (Rai stages 0, I, and II).</p> <p>Clinical stage B characterised by no anemia or thrombocytopenia with three or more areas of lymphoid involvement (Rai stages I and II).</p> <p>Clinical stage C characterised by anemia and/or thrombocytopenia regardless of the number of areas of lymphoid enlargement (Rai stages III and IV).</p>
No staging system – PHASE used instead (which refers to aggressiveness)	CML	<p>Chronic Phase. Fewer than ten percent of the cells in the blood and bone marrow are blast cells (immature white blood cells).</p> <p>Accelerated Phase. Ten to nineteen percent of the cells in the blood and bone marrow are blast cells.</p> <p>Blast Phase. Twenty percent or more of the cells in the blood or bone marrow are blast cells. When tiredness, fever and an enlarged spleen occur during this phase, it is called blast crisis.</p>

Figure 9:
 Staging Systems for
 Haematological
 Malignancies

Some haematological malignancies, such as AML and ALL, are not commonly staged.

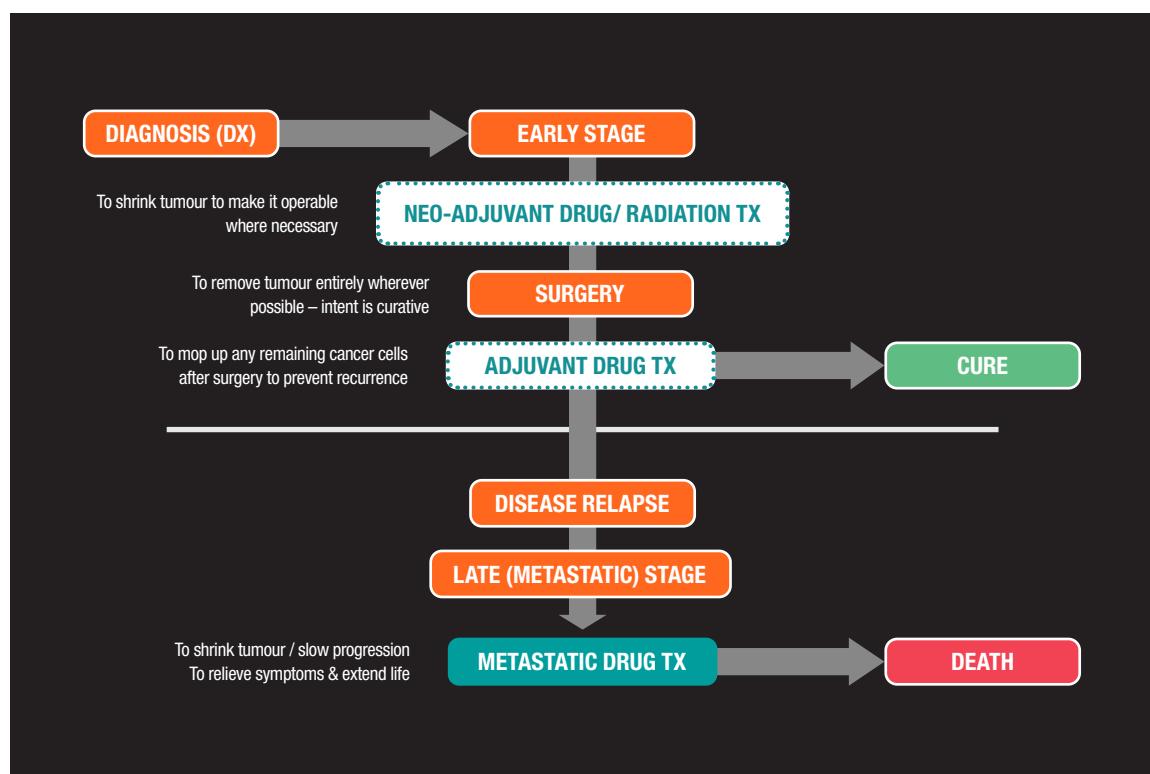
Cancer Treatment – Art or Science?

Solid tumours, like breast and lung cancer, begin as small groups of localised malignant cells in the primary organ in which they arose, but ultimately become much more dangerous to the host body by spreading to distant organs. Their relentless drive to replicate means that tumour cells often gain the ability to spread through the human body, in many cases (especially if not treated early enough) resulting in distant metastases. Cancer metastasises by shedding cells from the primary tumour, which enter the lymphatic system and/or the bloodstream and travel to distant sites where they eventually take hold and replicate.

A significant challenge associated with cancer is that treatment is as much an art as it is a science. Even after the cell type, stage and grade (i.e. how aggressive the tumour is) have been determined,

other variables such as the patient's general health, treatment history, preferences and support system, as well as the doctor's training, come into play to decide the appropriate treatment approach. Initial treatment modality may include surgery, radiation, drug therapy, or some combination of these approaches, with variability seen by tumour type.

Figure 10 shows two different patient diagnoses: one in which the cancer is detected early and another in which the cancer was detected late and had already metastasised (spread).





When cancer is detected early and the tumour is localised, surgery is generally the standard treatment modality of choice. By resecting the tumour and a margin of tissue surrounding it, a cure is possible. Surgery may also be combined with systemic drug or radiation therapy.

- **Neo-adjvant** means that anti-cancer drugs are given before surgery. This aims to decrease the tumour size to make the tumour eligible for resection, improve the outcome, and/or make the resection easier to perform.
- **Adjuvant** means that anti-cancer drugs are given after surgery. This aims to kill any cancer cells that remain after surgery and prevent a recurrence/return of the cancer.

In some cases, surgery cannot be performed due to the location of the tumour or the patient's surgical ineligibility due to their general health and/or refusal. In this case, drug and/or radiation therapy may be used instead of surgery.

When cancer is diagnosed late, the treatment objective is to slow its progression in order to extend the patient's life. Cancer itself does not cause death; death occurs because the cancer cells crowd out the normal functioning cells and damage the organs of the body.

Cancer Treatment – A Plethora of Options

The complexity of cancer treatment is amplified by the fact that more drugs have been approved for cancer than for any other single disease. (35) Illustrating this, the FDA approved 13 oncology drugs spanning nine different cancer types in just the first quarter of 2025, reflecting the rapid and high volume of cancer drug approvals compared to other therapeutic areas. (36) Moreover, the advent of targeted therapies and immunotherapies has been instrumental in transforming certain cancers into more chronic conditions, resulting in significantly longer patient survival. (37)

Systemic drug therapy for cancer began with cytotoxic drugs and has since expanded to a number of different classes and modalities, each with their own functions and targets, as shown in Figure 11.

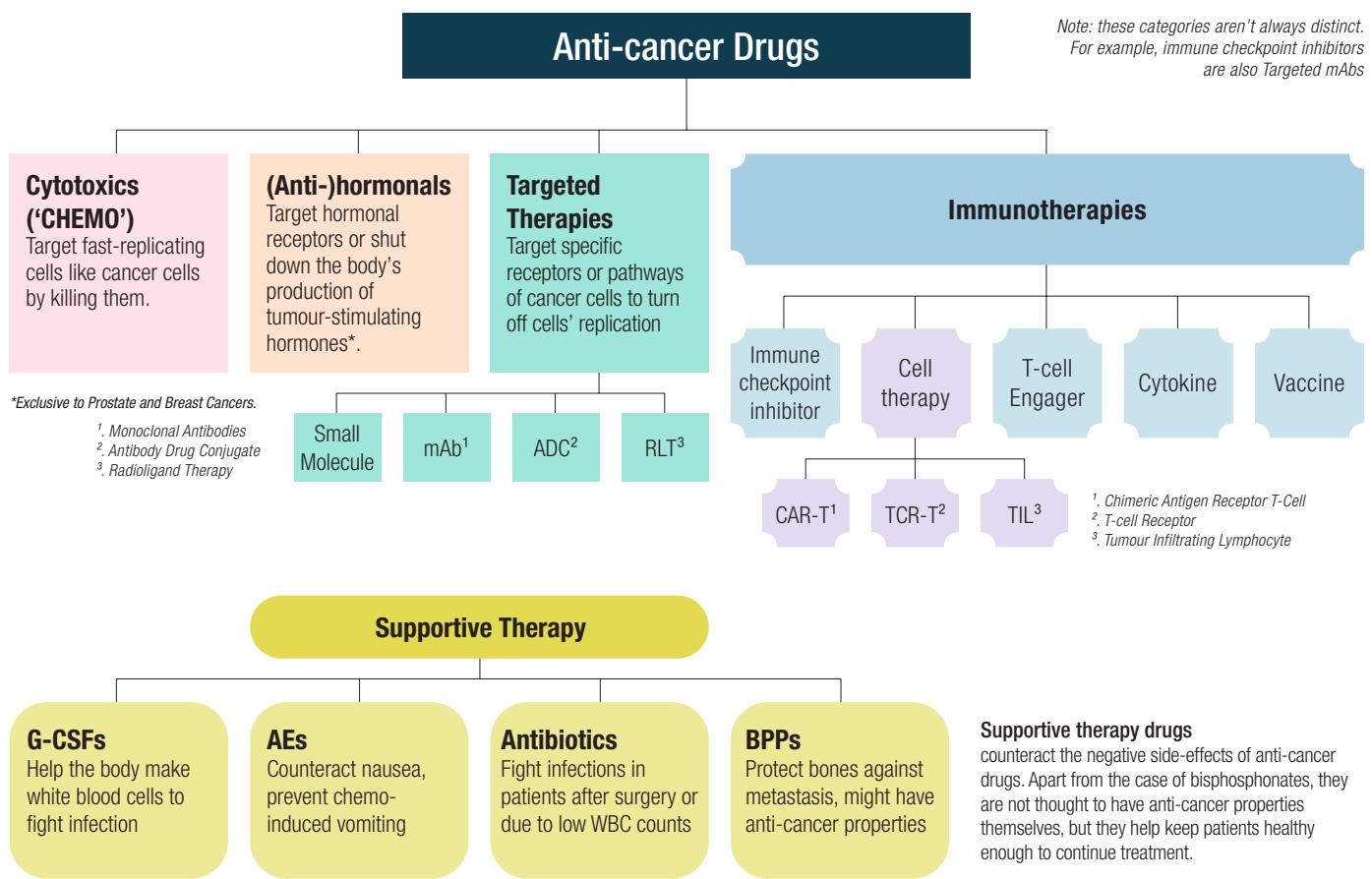


Figure 11:
Systemic Therapy –
Cancer Drug Treatment
Class Overview

The oldest group of anti-cancer drugs is called cytotoxics; these drugs indiscriminately kill cells. Cytotoxic chemotherapy drugs interfere with DNA replication and/or cell division. They do not specifically target cancer cells but instead rely on the fact that tumours are amongst the most rapidly dividing tissues in the body, hence affecting cancer cells to a larger degree than healthy cells. Because of this indiscriminate mode of action, they often have significant side-effects.

Then there are anti-hormonal therapies which are predominantly used in hormone-sensitive breast and prostate cancer. Some breast and prostate cancer cells have receptors on their surfaces that, when stimulated by hormones, result in the cells growing and dividing. Anti-hormonal therapies, sometimes referred to as hormonal agents, act by blocking the surface hormone receptors and preventing the cells from receiving a signal to grow and divide.

Biological/targeted therapies utilise the mechanisms of cancer and the pathways through which the cell signals. They can be divided into two sub-groups:

- **mAbs (monoclonal antibodies):** mAbs work at the level of the cell surface by blocking receptors that are involved in signalling cancer cells to keep dividing, keep growing and/or stop dying. They are large molecules and are typically administered by IV infusion or subcutaneous injection.
 - △ Some therapeutic antibodies have two binding domains, selective for two different receptors (as opposed to one). These are called 'bispecific antibodies'.
 - △ There are also some mAbs that work not only by blocking the cell surface receptors but by delivering cytotoxics directly to the cancer cells (sparing health cells). These so-called "smart bombs" are a type of targeted therapy called "antibody-drug conjugates" (ADC), and a number have now been approved across different tumour types. Similarly, targeted molecules that carry a radiological payload exist - these are referred to as radioligand therapies (RLT). As of August 2025, the FDA has approved 19 different ADCs and 2 RLTs for various cancers. [\(38\)](#)[\(39\)](#)
 - △ Note that some mAbs and bispecific antibodies exert their anti-cancer therapeutic effect not by blocking cell signaling or delivering a cytotoxic/ radiological payload, but by harnessing the immune system to fight the tumour cells (see our section on immunotherapy).
- **Small molecules that target the cell signalling process within the cell:** These work within the cell by blocking the complex pathways involved in the cell cycle and apoptosis (programmed cell death). These are orally administered, which can also provide a patient convenience benefit.

Targeted therapies have created much excitement in the field of oncology and have transformed the way in which some cancers are treated.

Biomarkers – Continuing to Transform Treatment Paradigms

Whereas treatment decisions used to rely on a combination of clinical observations, various imaging techniques and general histopathological findings, oncologists now have a range of biomarker tests at their disposal to make a more informed drug choice in a growing number of tumour types. Notwithstanding the increasing complexity of such testing, this approach ultimately benefits physicians and patients alike: treatments which are likely to lead to better response rates and more prolonged responses can be selected based on molecular characteristics exhibited by the patient's tumour.

The biomarker testing landscape has undergone multiple major and incremental changes in the past few years, providing oncologists and other specialties with an increasing toolkit to ensure the right treatments are selected for their patients. Apart from the ever-growing list of biomarkers and their associated companion diagnostics, recent key innovations include the advent of tumour-agnostic biomarkers and liquid biopsies.

Tumour-agnostic biomarkers are part of a key change in philosophy when it comes to how to approach cancer treatment. Whereas cancers used to be treated primarily based on the affected organ/ cell type (see earlier section in this paper), there is a growing realisation that the molecular signature of tumours (the presence or absence of certain genetic changes) is what should be driving treatment choice. For example, a lung cancer with an NTRK fusion can be treated with an TRK inhibitor, much like a breast cancer with the same NTRK fusion can be. On the other hand, lung cancers without NTRK fusions would require a completely different treatment approach. The increased use of these tumour-agnostic biomarkers has been made possible by the continued rise of Next Generation Sequencing – allowing physicians to determine the mutation status of many genes at once - driven in turn by ongoing declines in sequencing costs. (40) A large number of commercial tumour-agnostic panels now exist, and this area continues to change at a rapid pace.

Biomarker testing traditionally required a viable tissue sample from the tumour (or metastases), which often necessitated re-biopsies for patients whose cancer had progressed, or for whom insufficient tissue was present in the initial biopsy sample. In the past few years, however, liquid biopsies have arrived on the scene, allowing physicians to send blood (or in some cases, urine) samples from their patients straight to the lab to be analysed for biomarkers, avoiding the use of a (sometimes invasive) tissue biopsy. In fact, several commercial panels now exist that combine both of these two innovations, allowing for large numbers of genes to be sequenced based on a blood sample only.



The Ongoing Rise of Immunotherapy

Immunotherapy – which includes checkpoint inhibitors, therapeutic cancer vaccines, oncolytic viruses, cell-based therapies (e.g. CAR-Ts, TILs and TCR-Ts), T-cell Engagers (TCEs) and cytokines (e.g. IL-2) – deserves a section of its own.

This treatment approach uses the body's own immune system to fight diseases. Of note, checkpoint inhibitors, such as anti CTLA-4s, anti PD-1s (programmed-death 1), anti PD-L1s (programmed-death ligand 1), anti-LAG-3 (lymphocyte-activation gene 3), and CAR-Ts (chimeric antigen receptor T-cell) have revolutionised cancer therapy in recent years. TCEs are also starting to play a prominent role in both haematological malignancies (e.g. multiple myeloma and lymphomas) and solid tumours (e.g. SCLC, uveal melanoma). TCEs are bispecific antibodies that exert their therapeutic effect by binding to both a target receptor on the tumour cell, and a receptor found on the T-cell. This allows the T-cell to activate, recognise and kill the tumour cells.

In some indications, there are trends showing that PD-1 inhibitors and PD-L1 inhibitors are now the new standard of care in areas that used to be dominated by treatments such as chemotherapies or other targeted therapies. Figure 13, based on recent data from the Ipsos Global Oncology Monitor, shows the dominance of new therapies versus traditional therapies in the treatment of melanoma by our participating physicians. Chemotherapy using dacarbazine-based regimens used to be the standard of care in the EU4+UK prior to the arrival of targeted therapies such as the BRAF/MEK inhibitors and Immuno-Oncology agents (I-Os). Now, however, chemotherapies are rarely used for the treatment of advanced melanoma; anti PD-1s, such as Opdivo® and Keytruda®, are now the key treatment in both the US and EU4+UK, alongside BRAF/MEK targeted therapies.

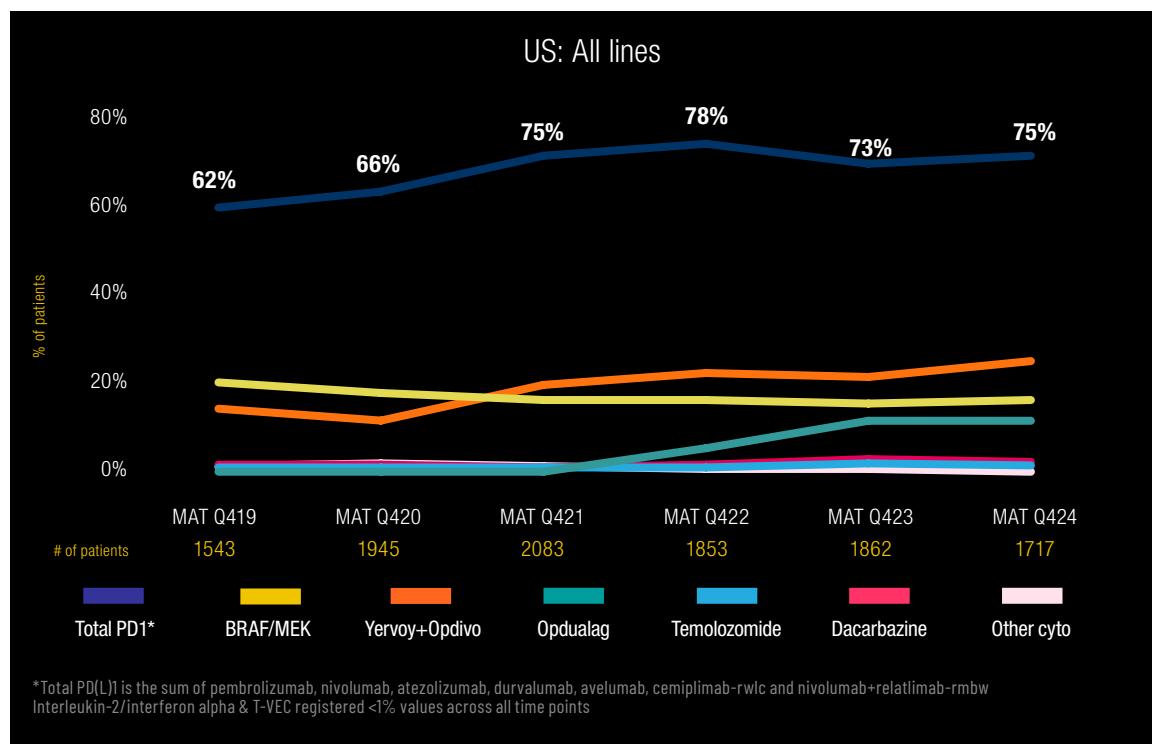
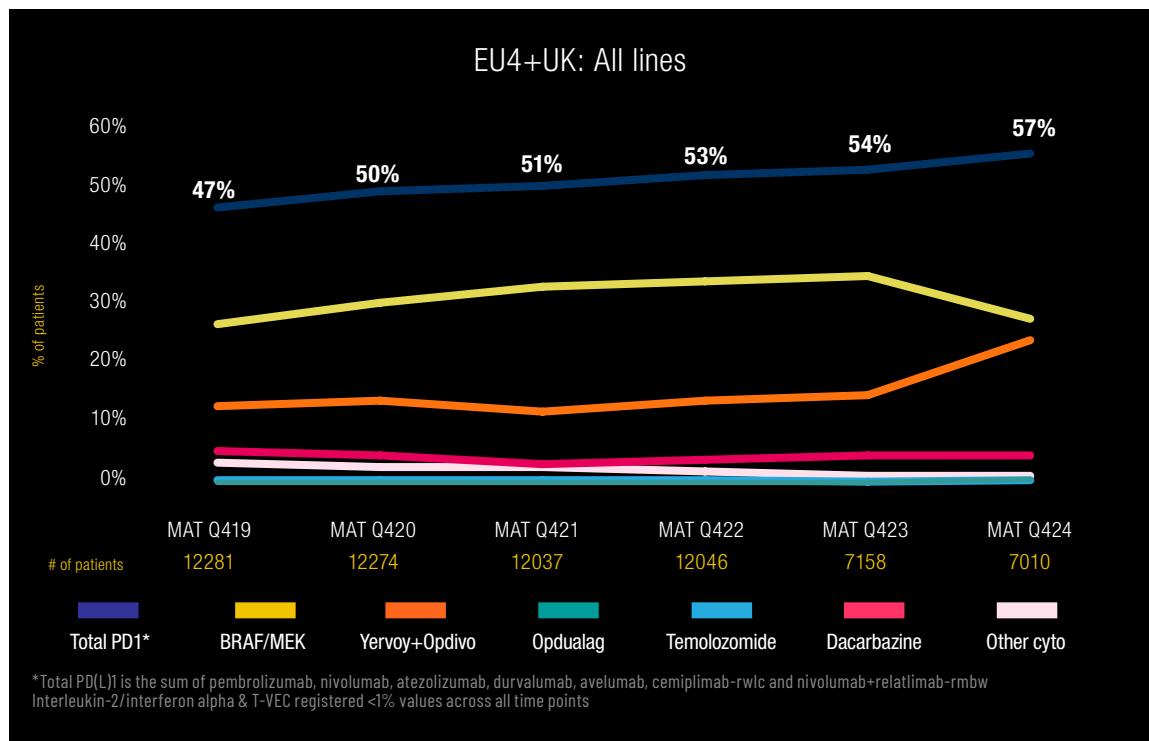


Figure 12b:
Conventional vs. New
Therapies in
Melanoma (EU4+UK)
(2019 - 2024)



There are now many hundreds of immuno-oncology agents (across established and novel categories) in the developmental pipeline. To put some financial context to this, the global cancer immunotherapy market was valued at USD 226 billion in 2024 and is expected to grow to USD 443 billion by 2030, reflecting an estimated CAGR of 11.9% between 2025 and 2030. (41)

Given the advent of the COVID-19 pandemic and the subsequent vaccination programme, we feel a specific acknowledgment must be made of mRNA vaccines and their potential use in the fight against cancer. mRNA vaccines 'teach' our cells to produce and recognise certain proteins that appear on the surface of the cancer tumour, thereby triggering an immune response to the tumour itself. Taking it a step further, personalised mRNA cancer vaccines use tumour tissue from an individual patient, identifying the specific mutations that led to that individual's cancer and combatting accordingly –

the ultimate targeted therapy. (42) A 2024 medical journal review reports over 120 clinical trials of mRNA cancer vaccines across multiple cancer types, with mRNA technology showing potential to drive major advancements in cancer treatment. (43)

Cell and Gene Therapies

Cell therapies and gene therapies hold significant promise for further revolutionising the treatment of cancer.

Since 2017, a number of CAR-T cell therapies (T-cells modified with chimeric antigen receptors) have entered the market, and TCR-Ts (T-cell-receptor-engineered T-cells) are a second class of cell therapies which received their first FDA approval in 2024. Much like the personalised mRNA vaccines mentioned above, CAR-T and TCR-T therapies are currently customised and manufactured separately for each individual patient, in this case by collecting T-cells from the patient and re-engineering them in a laboratory before re-infusing them into the patient.

To date, seven CAR-T therapies have been FDA-approved for a number of hematological malignancies, with many more cell therapies in clinical development. [\(44\)](#) The first TCR-T therapy was approved in August 2024 for the treatment of synovial sarcoma – also the first cell therapy for a solid tumour. [\(45\)](#) These cell therapies are a specific subset of the wider category of gene therapies, as targeted changes are made to the genetic make-up of patients' T-cells.

Other types of gene therapies under investigation involve making changes to the DNA of cancer cells, for example by inserting genes that promote cell death, or by replacing missing or non-functioning genes. Given that cancer is ultimately a disease of faulty genes, it is no surprise that expectations are high for gene therapies to finally turn the tide and provide curative options where none existed previously.

Another type of cell therapy recently approved is tumour-infiltrating lymphocyte (TIL). TILs are a patient's activated lymphocytes that are found within the tumour micro-environment. TIL therapy involves harvesting a patient's own TILs, purifying and expanding their numbers in a sterile environment, and then infusing them back into the patient.



Biosimilars – Making their Mark on the Treatment Landscape



Such is the context at a time when 'generics' of biologic targeted therapies are widely approved to treat certain types of cancer, and more brands continue to become available.

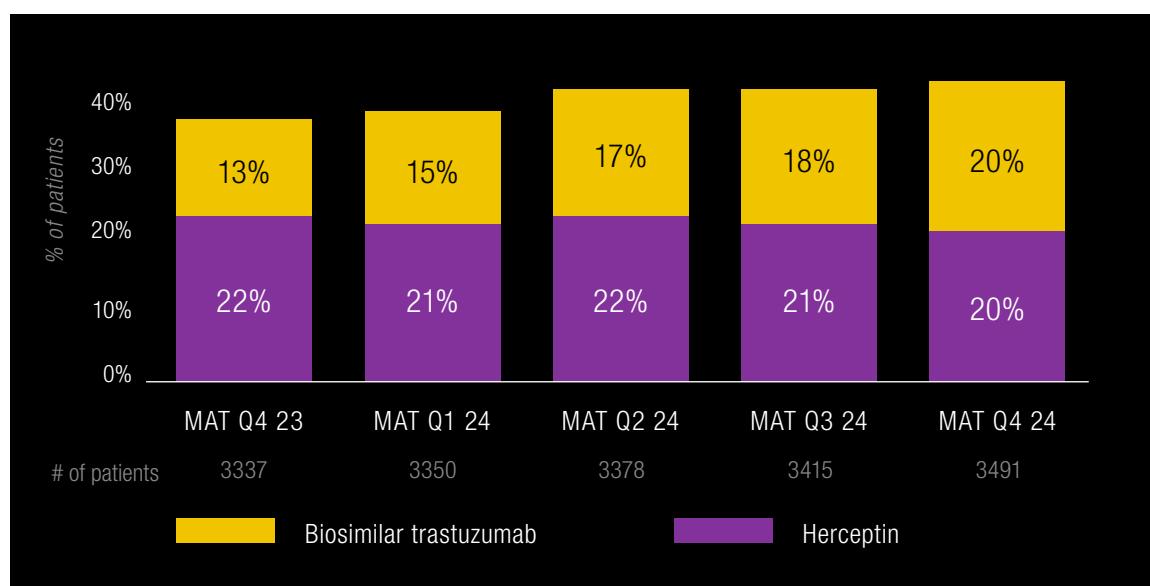
As mentioned, targeted therapies such as mAbs are designed to recognise features specific to cancer cells and then target the specific areas of the cell that allow it to grow faster and/or abnormally. Copies of these targeted therapies are known not as generics but as 'biosimilars' – because it is impossible to replicate a biologic drug exactly. Manufacturing alone can modify its molecular structure. However, a biosimilar drug will have no clinically meaningful differences from the originator biological medicine in terms of quality, safety and efficacy.

Biosimilars themselves have been around for some time. Despite a slow initial uptake and ongoing debate over the concept of bio-similarity, there is now widespread use and growing comfort with biosimilars across several autoimmune indications spanning gastroenterology, rheumatology and dermatology, such as rheumatoid arthritis (RA) and ulcerative colitis (UC). 2017 saw the approval of two mAb biosimilars to treat cancer, Truxima® and Rixathon®, both biosimilars of rituximab. In line with all biosimilar drugs, Truxima® was launched at a significantly cheaper cost than the branded version of rituximab, MabThera®.

According to Ipsos desk research, as of April 2025, a total of 21 biosimilar brands for rituximab, bevacizumab, and trastuzumab are approved for oncology use by the United States Food and Drug Administration (FDA) and the European Medicines Agency (EMA), with additional biosimilars still under development.

Uptake of Biosimilars in Oncology

Potential barriers may remain to the use of biosimilars, such as lack of evidence, patients' preference for brands and the impossibility of direct replication of originators, but Ipsos' data have indicated a receptive and adaptive marketplace for these more cost-effective options. European HER2+ breast cancer patient data from the Ipsos Oncology Monitor suggests a notable and steady growth of biosimilar trastuzumab usage approximately one year on from availability of this first biosimilar brand.



Source: Ipsos Global Oncology Monitor in EU4 & UK (Q4 2023 - Q4 2024; sampled physicians in FR, DE, IT, ES, UK (split equally across regions) reporting on breast cancer patients seen in consultation (min-max range per wave), data collected online. Sample data were projected to the wider clinical population. Participating physicians were primary treaters and saw a minimum number of patients per month). Data © Ipsos 2025, all rights reserved.

Multi-cancer Early Detection (MCED) Tests

In general, the earlier cancer is diagnosed the better, as it means potentially being able to cure the patient before the cancer spreads. Right now, there is growing momentum for getting patients diagnosed earlier thanks to an increasing focus on providing innovative/targeted drug treatment options for early-stage patients.

Traditionally, cancer screening programmes – e.g., mammograms, colonoscopies, chest X-rays – have been challenging and sometimes controversial. When is too early to test? Do they actually provide a real benefit in improving survival before a certain age? Recently, however, a number of companies have been working on developing blood-based early cancer detection tests, which hold the promise of detecting cancer before symptoms appear – just using a simple blood draw. Some of these can detect several different cancer types with one test, and these are known as multi-cancer early detection (MCED) tests.

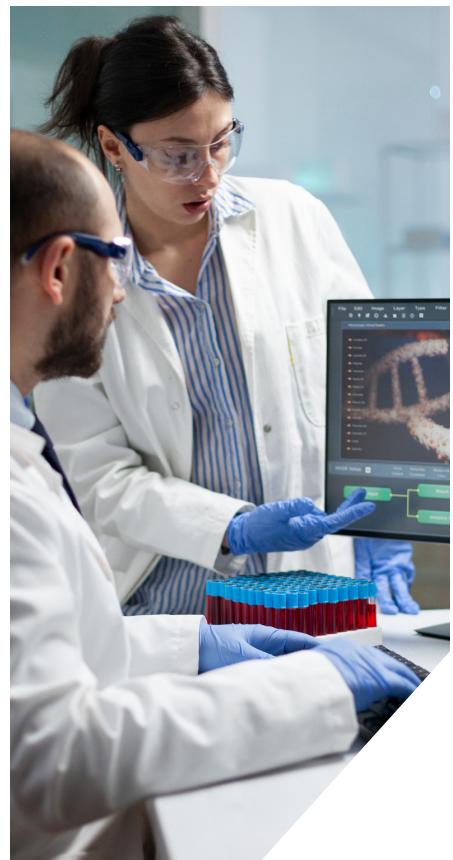
These tests may potentially revolutionise cancer diagnosis, which could result in a significant shift in the distribution of stages at diagnosis. Their true impact on stage of diagnosis – and potentially on overall survival – will depend on how widespread their usage becomes, which will ultimately be determined by a combination of cost, insurance and guidelines.

AI: the New Intelligence in Cancer Care

No exploration of today's oncology market would be complete without reference to artificial intelligence (AI).

No longer a futuristic concept in cancer care, the promise of AI is immense, with a multitude of applications, both current and potential. Broadly speaking, these fall within the following categories:

- **Drug development & new target identification:** AI's ability to sift through massive and complex datasets may be able to reduce the timeline and cost of drug discovery & development dramatically, for example by generating detailed molecular structures of potential drugs that should result in an optimal fit to a mutated target protein. This is a rapidly advancing area in which AI is showing huge promise.
- **Early cancer detection:** AI algorithms are already a core component of the multi-cancer early detection tests (MCEDs) that we touched upon earlier in this paper, using machine learning to help interpret complex signals from blood-based tests.
- **Diagnosis & slide interpretation:** AI-assisted radiology and digital pathology are already being implemented to some extent, helping detect and classify cancers like breast, lung, and prostate earlier, and with greater accuracy. We are still in the early stages of widespread adoption, however.
- **Determining risk of recurrence:** Using AI to mine complex clinical and genomic data for hidden patterns holds promise for predicting a patient's risk of recurrence – leading to more proactive and personalised care.
- **Optimising treatment approach:** AI algorithms are already being trained to analyse biomarker data and other patient information to determine the optimum treatment – a key component of precision medicine. This is probably the most complex and controversial development – given the potential risks of relying on an algorithm to assign a treatment – and the furthest away. However, oncologists increasingly working alongside AI tools to help determine optimal treatment sequencing among an ever-increasing volume of patient-specific information is ultimately where this field is heading.

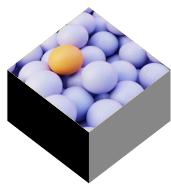


Of course, the path to widespread adoption of AI in oncology is not without its hurdles. Key challenges include ensuring the quality and diversity of data used to train AI algorithms (to avoid biased outcomes), navigating the complex regulatory landscape for approval of new AI tools, and seamlessly integrating these technologies into clinical workflows. Building trust among clinicians is also crucial, and depends on transparency in how AI models arrive at their conclusions.

Despite these challenges, however, the promise of AI in oncology is huge. It is poised to become a crucial partner to clinicians, ultimately leading to improved patient outcomes.

The Implications for Marketers

As we have tried to establish in this paper, the oncology market rarely stands still. This constant evolution affects oncology marketers and market researchers alike. Whatever specific challenges or objectives are in play – and these will be many and various – there are certain common challenges and look-outs for all of us working in oncology today:



Personalised medicine

The personalisation of medicine has transformed the oncology treatment landscape. As established, we have tests today that can identify individuals with a higher lifetime risk of developing ovarian and/or breast cancer, enabling them to take early preventative action. Then, of course, we have biomarker tests to understand which therapy is likely to be most effective against that individual's particular cancer. The biomarker testing landscape is undergoing multiple revolutions, with tumour-agnostic sequencing panels based on solid or liquid biopsies helping to drive this transformation. Personalised medicine is set to evolve still further in the future, with cancer vaccines being developed and ongoing approvals of CAR-T therapies that use a patient's own genetically modified immune cells to fight cancer. For marketers, the implication of all this is clear: a catch-all approach is unlikely to succeed. As treatments become increasingly personalised, so too must the marketing strategies around them.



Proof of value

Cancer (and other) treatments have become so expensive in recent years that the overall value of each has been placed firmly in the spotlight. The industry's focus on value, and the dawn of value-based pricing, is another big change in the industry. Today's oncology marketers must create the right messages for payers; they must understand the importance of real-world data and create a plan that showcases the product's value, efficacy and patient outcomes.



The proliferation of data

Today, data are literally everywhere. We have public data, claims data, syndicated data, patient record forms, electronic medical records, social media... What to do with all this data is still unclear to many. Ultimately, these datasets must all be analysed in order to gain a full understanding of what's really happening in the market. For marketers, understanding how to integrate the data and use it to answer the commercial questions is critical – and a significant challenge they face.



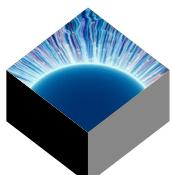
Patient centricity

And what about patients themselves? Twenty years ago, oncology marketing and marketing research was all about the oncologist. Today, it's about the physician, other healthcare providers such as nurses, the payer and the patient. After all, today's patients have a wealth of information at their fingertips and countless communities through which to share their experiences and ideas. In addition, both patients and their caregivers are becoming increasingly aware of the importance of personalised medicine and associated biomarker tests. As such, they are increasingly part of the decision-making team when it comes to their own care. Not only is this changing the dynamic between doctors and patients, it has also shifted the focus of pharma. Patient-centricity is not only well documented in corporate visions and missions, it is at the top of many pharmaceutical company agendas. This is a big change in the industry, with marketers needing to heed the shift from product to patient centricity.



Achieving differentiation

One of the biggest challenges, and a lookout for marketers and market researchers, is differentiation. This is one area in which a patient-centric approach can help. Looking beyond the mechanism of action, what is the patient's experience? What is their quality of life? What are their challenges? What are they frustrated with? Do they get enough specific information? Cancer is complicated and listening to the patient's voice and directing the right information and support to them – and their caregivers – could be a strong point of difference.



Artificial Intelligence

For pharmaceutical marketers and market researchers, the rise of AI in oncology signals a fundamental shift from broad outreach to intelligent, personalised engagement. AI enables a much deeper and more nuanced understanding of the oncology landscape, allowing for sophisticated segmentation of healthcare professionals and patients based on vast datasets. This means marketing messages can be tailored with unprecedented precision to the specific needs and behaviours of different groups. The advent of Agentic AI, which could be trained on a wide range of oncology-related data sources, could give rise to trusted "Oncology Expert" AI agents as knowledgeable companions to enhance and complement market research teams. Additionally, generative AI is beginning to accelerate the creation of marketing content and the synthesis of strategic insights from customer data. This evolution demands a new approach for marketers – one that leverages AI to deliver empathetic, relevant, and timely information, ultimately transforming marketing from a promotional activity into a vital part of the care journey.

Closing

Of course, one of the biggest challenges of working in cancer is that we're focusing on diseases that, generally, do not yet have cures (unless they are diagnosed in early stages).

However, there has been so much progress made in such a short space of time. The understanding that we now have of the pathogenesis and pathophysiology of cancer, the personalisation of treatment via treatment selective biomarkers, the rise of immuno-oncology – all of this will lead to yet more advances in cancer treatment.

As the industry continues to advance, we can potentially expect advanced cancers to become chronic diseases rather than terminal ones, until true cures are eventually discovered. All of us currently working in cancer are waiting for the day this happens.

Further reading

Other publications from Ipsos' Oncology Centre of Expertise (2025)

- **Point of View:** Would You Want to Know? The Paradox of Early Cancer Detection
- **Point of View:** Does Everything Really Cause Cancer?
- **Report:** Mid-year Oncology Review 2025: History Informs the Future

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About the research

The Ipsos Global Oncology Monitor is a physician-reported syndicated patient record database, capturing prescribing of anti-cancer and supportive care agents. Participating physicians are screened for specialty, level of seniority and number of drug-treated cancer patients seen per study wave, and must be the primary decision- maker for their patients. Each wave, participants provide demographic information and de-identified information on a predefined quota of oncology patients (across solid and liquid tumours) seen in consultation, retrospectively. Sample sizes and fieldwork dates for the data shared in this article are provided beneath the relevant chart. The Global Oncology Monitor is validated with market sizing studies to ensure that the size and representativeness of the physician sample reflects the wider population of relevant treating physicians.

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