



Newsletter

■ November, 2022



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Advisor Insight

The most prevalent disease across the globe and the one that causes the majority of cancer fatalities is lung cancer. In order to put it into perspective, it accounts for 11.6% of all new cancer cases and 18.4% of all cancer deaths globally. It is the second most prevalent cancer in men and the sixth most prevalent cancer among women in India. The numbers indicate a need to lessen the impact lung cancer has on our society, but doing so will need an all-encompassing strategy.

The present situation in our country is such that most patients are treated non-surgically when they are diagnosed at an advanced stage (IIIB/IV). One of the main reasons for this disease's delayed detection in India is the incorrect diagnosis of TB and the irrational use of anti-tubercular medications prior to referral to a higher hospital. Hence, in such a scenario empirical anti TB treatment should not be encouraged. Further compared to other cancer forms, lung cancer has received less financing for research throughout the years due to low political priority and poor public awareness. People sometimes postpone seeking medical attention because they are unaware that their symptoms might be signs of lung cancer. Additionally, primary care doctors might not always be aware of the possibility of early lung cancer diagnosis. Thus, they might need further training and skill building to help them recognise lung cancer symptoms, especially in high-risk groups, in order to prevent delays in diagnosis. Additionally, large-scale screening programmes that focus on high-risk persons must be implemented, coupled with smoking cessation programmes, to improve early detection. Screening of lung cancer after the

age of 50 years in high risk patients may be particularly beneficial. The detection and treatment of lung cancer has made significant strides, but access to high-quality testing and care is sometimes uneven. Despite its significance in enhancing quality of life for those with advanced-stage lung cancer, palliative care is not always readily available. A central point of contact for persons with lung cancer as they go through the various stages of their treatment is frequently lacking, and there are persistent shortages of specialised cancer nurses in some regions. It is important to keep in mind the requirements of those who have lung cancer and have had it for a long time. The significance of survival has sometimes been overlooked because to the historically dismal prognosis associated with lung cancer. It is important to note that 70% of patients even in stage 4 lung cancer are treated with targeted oral tablet or immunotherapy (instead of chemotherapy) and live longer.

Ultimately, when outcomes change due to improvements in early identification and treatment, we must consider the requirements of lung cancer "survivors," or those who have the disease and have survived it. In order to provide a high-quality treatment route for all sections of the population, we must ensure that the cancer care being provided includes rehabilitation, psychiatric support, peer-support groups, and follow-up care.



Dr Amish Vora

Head of Oncology, HOPE
Oncology Clinic

Stories of Hope

My Story would not have been born but for the change in my life cycle in the middle of May-June 2016 when symptoms of a tumour were not diagnosed properly. Almost every day, I was having a tendency to spit out the accumulated phlegm in my mouth that was coming out from the lungs. In addition, I was also having cough intermittently, the intensity of which increased day by day. I had no other symptoms such as a running nose, fever, headache, body pain and others. So, for a few days, I felt the symptoms as some imbalance in my system or increase in Eosinophils counts (effect of over dependence of Google doctor). I was a Type II diabetic and all the parameters relating to blood sugar such as Fasting Sugar, PP Sugar, HbA1c, Creatinine were under control.

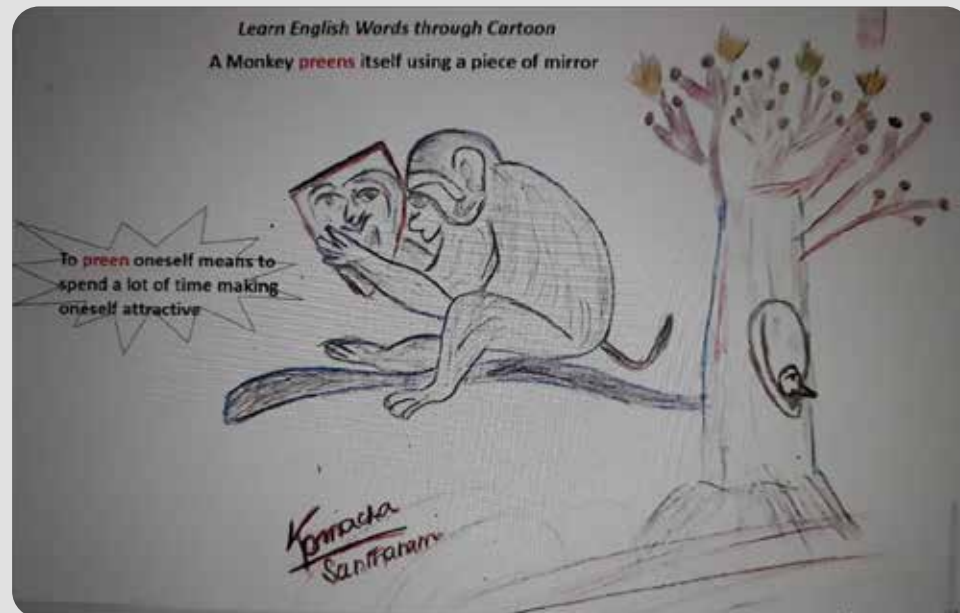
On 6th July 2016, I visited Dr Abhay Raut at his Clinic for my periodical review of my diabetic treatment. After examining me, he prescribed some medicines specifically for treating my complaint of spitting of phlegm and dry cough. It was partially my fault (or as one would tend to believe, my fate) and partially the error of judgement of the doctors in Mumbai, a Homeopath and an ENT in Chennai who attended on me to find the cause of my cough. My problem was attributed to an allergy due to erratic weather conditions. Since nothing worked on me, I was brought to Bengaluru and shown to Dr Padma Sundaram, Pulmonologist, Manipal Hospital. Looking at the X-ray, she diagnosed it as a tumour in the right lung. Then we decided to move to Chennai where we have more of our relatives to take care of me in case of need. From early October 2016, a series of biopsies, CT Scan and investigations confirmed that I was having Stage IV Lung Cancer. Dr T Raja, Senior Oncologist, Apollo Cancer Institute, Chennai put me on Targeted Therapy. Unlike normal chemo treatment resulting in loss of hair, shrinking skin etc., I was surprised that there was no loss of anything except long haul of dependency on medication. This was followed with periodical reviews. It worked well for about 15 months. On 26 June 2018, myself and my wife were in Puttaparthi celebrating our Wedding Anniversary. That day morning, while getting up from the bed, I found some unstable sensation within me for a few seconds and thereafter I

was feeling fine. We finished our visits to the Ashram and returned to Bengaluru. I was taken to the Manipal Hospital, and shown to Dr Amit Rautan, Chief Oncologist. As recommended by him, I was given ten sessions of Radiation Therapy to the brain. As it did not improve my condition, it was abandoned after 4-5 sittings. Around 8th October 2018, I found myself disoriented and unstable. I was rushed to the Manipal Hospital and admitted for treatment and administered targeted therapy. I am still on the same targeted therapy with a six monthly review. I am healthy though I had covid attacks and on my own, occasionally cycling, swimming.

I am sure that I will stay healthy for years, thanks to the medical fraternity in innovating with new methods of treatment of Cancer.



Dr Srinivasan Santhanam
Lung Cancer Survivor and General Manager (Retd), NABARD, Pune



A sketch by Dr Srinivasan

National Developments



Policy Insight

- **THEME:** Timely Diagnosis
- **UPDATE:** 'Timely treatment of breast cancer improves longevity'

Key Highlights

- The overall survival (OS) of people with breast cancer in five and ten years was found to be 79% and 66%, respectively, in a research examining how early treatment of breast cancer increases lifespan. According to a research by Amrita Hospital in Kochi, although breast cancer is the most common malignancy among women in Kerala, those who received treatment early on fared better.
- The breast cancer-specific survival rate (BCSS) at 5 and 10 years was 79% and 70%, respectively. At 15 years following initial cancer therapy, the OS and BCSS were 51% and 58%, respectively. Women under the age of 50 had superior survival rates, early-stage illness at presentation, combined with kind of treatment received, as well as other contributing variables. The World Health Organization (WHO) wants to increase survival rates to 50%, 60%, or 80%. (15 years, 10 years & 5 years).

Policy Insight

- **THEME:** Risk Factor
- **UPDATE:** 40% of cancers, cardiovascular diseases directly linked to tobacco use: ICMR

Key Highlights

- For six to eight of the top causes of mortality, tobacco smoking is a significant risk factor. Tobacco use is directly responsible for around 40% of Non Communicable Ailments (NCDs), including lung problems, cancer, and cardiovascular diseases. The legislative panel also noted in its study, "Cancer Care Plan & Management: Prevention, Diagnosis, Research & Affordability of Cancer Treatment," that tobacco use in various forms accounts for close to 50% of all malignancies in India. Since they are referred to as tobacco-related malignancies, they can be avoided.
- According to the study, "there is an urgent need to discourage tobacco use in the nation. The Committee therefore encourages government to create effective policies on tobacco control as well as ensuring the young population does not succumb to tobacco addiction."

Policy Insight

- **THEME:** Affordability
- **UPDATE:** Cancer drugs among 384 key medicines to become cheaper

Key Highlights

- Since they are now on the National List of Essential Medicines, life-saving medications for neurological disorders, diabetes, TB, cancer, palliative care, heart disease, and neurological disorders will be less expensive (NLEM).
- All medications used in hospitals at the primary, secondary, and tertiary levels are now covered by NLEM. These include anaesthetics, ophthalmic medications, immunosuppressives, anti-cancer medications, medications for palliative care, medications for gout and disease-modifying medications for rheumatoid illnesses, medications for neurological disorders, and medications for cardiovascular disease.

Policy Insight

- **THEME:** Cancer infrastructure
- **UPDATE:** Andhra Pradesh government will develop Tirupati as cancer care Hub: Health Minister

Key Highlights

- According to State Minister of Health, Family Welfare, and Medical Education Vidadala Rajini, the Andhra Pradesh government plans to transform Tirupati into a significant centre for cancer treatment in order to increase the accessibility and availability of treatment options. According to the Minister, Balaji Institute of Oncology (BIO) is a cutting-edge cancer centre that will offer sophisticated solutions in the areas of genetics, individualised treatment plans, and targeted medicines, as well as a variety of services including preventative, surgical, medical, and radiation oncology.
- To provide patients with comprehensive and cutting-edge treatment choices, the institution would be linked to a network of cancer treatment centres spread out over the State.
- State government representatives saw that cancer patients were receiving free care under the Aarogyasri programme. To date, the government has spent 400 crore on cancer treatments, or 25% of all health-related spending.

Policy Insight

■ **THEME:** Cancer treatment

■ **UPDATE:** 1,265 cancer patients avail of free treatment in Punjab

Key Highlights

- Giving the health and wellness of the state's residents top priority, the Punjab government has so far given cancer sufferers free treatment totaling Rs 13.54 crore.
- Chetan Singh Jouramajra, Punjab's Minister of Health and Family Welfare, revealed this in a press statement issued here today. He said that more than 1,265 cancer patients had received free treatment worth Rs 13.54 crore through the "Mukh Mantri Cancer Rahat Kosh" in hospitals affiliated with the Punjab Government.
- According to him, health professionals have been given orders to speed up the execution of the government's health plans and initiatives so that the general population can gain more from such welfare measures.
- The minister added that cancer was more prevalent in Punjab and that individuals from the lower socioeconomic classes could not afford the hefty expense of therapy.

Policy Insight

■ **THEME:** Cancer burden

■ **UPDATE:** Analysis shows shocking rise in lung cancer cases among youth, non-smokers and women

Key Highlights

- An investigation by a renowned hospital in the National Capital Region discovered that nearly 50% of the lung cancer patients identified over the last ten years were not smokers, providing another proof of the rising danger posed by air pollution in Indian cities.
- Adenocarcinoma, a more aggressive form of lung cancer, was increasingly seen in the majority of patients, according to an analysis done by Medanta hospital in Gurugram on 304 patients from different states who received treatment there between March 2012 and November 2022. Nearly 30% of the patients were women.
- The troubling findings have been made public even as Delhi-NCR and other Indian cities' appallingly bad air quality has become a yearly fixture.
- Nearly 20% of patients were under the age of 50, according to the report, which will be presented to medical professional organizations

Policy Insight

- **THEME:** Timely Diagnosis
- **UPDATE:** One in every 100 women has undiagnosed cervical cancer in Maharashtra: Experts call for vaccination

Key Highlights

- In Maharashtra, one undetected cervical cancer case was found for every 100 women screened, according to a recent statewide health screening programme. Despite this, the long-standing need to incorporate the cervical cancer vaccine for the human papillomavirus (HPV) into the national immunisation programme has not been met. A total of 73,554 women over the age of 30 in the state were evaluated, and 925 of them had cervical cancer that had not yet been identified.
- According to a research titled "HPV Vaccination of Girl Child in India" that was published in the Asian Pacific Journal of Cancer Prevention, India accounts for 27% of all cervical cancer cases worldwide, while only having 16–17% of the world's women.
- With the delivery of the HPV vaccine to female children before they are 14 years old, it may be greatly avoided. Despite being launched in 2008, the national immunisation programme has not yet included the HPV vaccine.

Policy Insight

- **THEME:** Screening
- **UPDATE:** Andhra Pradesh starts broad cancer screening programme

Key Highlights

- In an effort to improve its early cancer diagnosis efforts, the Andhra Pradesh health department has rolled out its first comprehensive cancer screening programme for high risk women groups, including people living with HIV, sex workers, women having a family history of cancer, etc.
- The programme will initially cover Peddapuram and Rajahmundry areas of the combined East Godavari district. About 12,400 women will be screened for oral, breast, and cervical cancer in these two places. The major objective of the programme is early diagnosis of cancer, followed by appropriate and timely treatment, which are the cornerstones for successful outcomes. This comprehensive screening programme will be extended to all parts of the state in a phased manner.
- The cancer screening programme will be launched in Madanapalli in the next few weeks. The health department has taken up this initiative to find cancers at an early stage, which makes the treatment effective and easier for the patients

Policy Insight

- **THEME:** Capacity Building
- **UPDATE:** Tata Memorial Centre successfully trains two batches of Indonesian Cancer Patient Navigators

Key Highlights

- On World Health Day this year, April 7, 2022, Tata Memorial Center (TMC) signed a Partnership Agreement of Cancer Patient Navigation Program to enhance cancer care in Indonesia. PT Roche Indonesia and the Dharmais National Cancer Hospital signed the Memorandum of Understanding. With 100% placement under the Cancer Patient Navigation Program (CPN), the global extension of TMC's Kevat programme, two successful batches of students—30 students each—have graduated from the programme. Thirty-seven Indonesian students from the third batch are now enrolled in training.
- By introducing India's first authorised postgraduate diploma in patient navigation in cancer and afterwards providing employment to the trained students, Tata Memorial Centre developed Kevat—a new vertical in paramedical care. The Kevat programme, offered by TISS- Tata Institute of Social Sciences and supported by the Tata Trusts, is the nation's first approved post-graduate credential in patient navigation in cancer. Through the whole cancer care continuum, the navigators' cohesive network effectively supports patients and their carers.

- The navigation programme was created to meet the unmet patient care needs that are exacerbated by the variety in social, cultural, economic, and educational backgrounds. Language hurdles, a lack of knowledge, a lack of understanding of health information, the supply of resources, prompt diagnosis and intervention, and adherence to treatment objectives are some of the issues that have been highlighted. The program's objectives include developing and implementing patient navigation programmes across cancer hospitals or hospitals providing specialised cancer care services, as well as developing and implementing a well-trained workforce to support patient care, reducing the burden on clinicians and nurses, improving the delivery and quality of care, maintaining compliance with treatment and follow-up, reducing attrition rates, and improving survivorship outcomes of care.

Policy Insight

■ **THEME:** Drug prices

■ **UPDATE:** Landmark innovation brings hope for head and neck cancer patients with low-dose immunotherapy that reduces cost by 95%

Key Highlights

- The Tata Memorial Centre's oncologists have evaluated a low-dose immunotherapy strategy that reduces the cost of treating head and neck tumours from Rs 62 lakh to Rs 3.3 lakh annually. Immunotherapy genetically modifies cells taken from the patient's own body to combat cancer cells.
- A novel low-dose immunotherapy method developed by medical professionals at the government-run hospital in the Union reduces the cost of treatment from Rs 62 lakh to Rs 3.3 lakh annually, or around Rs 25,000 per month.

- One-tenth of the immunotherapy medicine Nivolumab is given to prolong the lives of critically ill head and neck cancer patients as part of this "budget-friendly" immunotherapy breakthrough. The study's lead author, TMC oncologist Dr. Vijay Patil, along with colleagues Dr. Vanita Noronha and Dr Kumar Prabhash, found that patients who received low-dose immunotherapy in addition to chemotherapy had a significantly higher one-year survival rate (43.4%) than those who only received chemotherapy. Dr Prabhash however also pointed out the limitation of the study that the study, for example, does not suggest that low-dose immunotherapy can be used in all settings

Policy Insight

- **THEME:** Cancer infrastructure
- **UPDATE:** Kerala strengthening cancer infrastructure and treatment facilities

Key Highlights

- Children's retinoblastoma has begun treatment at the Malabar Cancer Centre (MCC) in Thalassery, while lutetium therapy for neuro-endocrine tumours has begun at the Regional Cancer Centre in the nation's capital. According to the Minister, the MCC has also established a branch of neuro-surgical oncology with cutting-edge surgical facilities.
- In order to provide follow-up diagnoses and treatment for persons suspected of being at risk for cancer, the State has also created a cancer screening site. Through the cancer screening portal, about 2.6 lakh persons who were identified as having a high risk of getting cancer through the Health Department's non-communicable illness screening initiative would be followed up.
- Patients who have been travelling outside the State for the same therapy will benefit from the complete retinoblastoma care services at the MCC.

Policy Insight

- **THEME:** Cancer burden
- **UPDATE:** Lung cancer is hitting younger desis: Study

Key Highlights

- According to a research that looked at the profile of SCLC patients treated at AIIMS here between 2008 and 2020, the average age at which Indians are diagnosed with Small Cell Lung Cancer (SCLC), an aggressive type of the illness, is 57 years old – over a decade earlier than in western nations.
- Additionally, it emphasises how smoking contributes to SCLC, which accounts for 13–15% of lung cancer incidences worldwide as well as in India. The AIIMS lung cancer centre treated 361 SCLC patients between 2008 and 2020. In the study that was published in Lung India, 43% of the patients had quit smoking, while 35% still did. According to the research, "more than 60% of the patients were heavy smokers."
- According to the study, 20% or so of the individuals with SCLC did not smoke. The cause of the same is difficult to pinpoint, according to the experts, who do note that air pollution plays a part in the growth of lung cancer.
- Randeep Guleria, a former director of AIIMS, Anant Mohan, the head of the pulmonology division, and Rambha Pandey from the radiation oncology division were among the researchers. It revealed that 34% of the patients had undergone anti-TB therapy for a variety of time periods prior to cancer diagnosis.

Pharma and Device

■ **THEME:** Cancer Technology

- **UPDATE:** The Indian AI enabled Colposcope – A ray of hope for the fight against cervical cancer

Key Highlights

- An Endo Microscope was created by Imperial College, London scientists. This device was created by Indian doctor Khushi Vyas. It has a diameter of just one millimetre and is made to be injected into the body during surgery. This gadget transmits images of cancerous tissue from within the body, making it simpler to remove the cancerous tissue. Even cancer cells as tiny as one tenth of a millimetre can be found with it. According to the team who created it, this will significantly reduce the need for cancer follow-up surgery. Because not all cancer cells could be found at once until recently, the majority of the time, repeated surgeries had to be carried out to eliminate the cancer cells.
- The use of this tool is also possible during breast-conserving surgery. Following the removal of the cancerous cells, the breast is rebuilt during this procedure. Currently, this procedure is necessary for 20% of breast cancer patients. This tool can swiftly and precisely identify the precise location of the tissue around malignancies. The Engineering and Physical Sciences Research Council, a UK research and innovation institution, helped design the gadget. The World Cancer Research Fund International reports that breast and lung cancer account for the majority of cancer cases worldwide. 12.5% of all cancer cases are breast cancer-specific instances. Every fourth patient with cancer in women has breast cancer.

Pipeline news

■ **THEME:** Cancer infrastructure

- **UPDATE:** Medica launches Eastern India's first home-based palliative cancer care services

Key Highlights

- National Cancer Awareness Day was observed with a panel discussion hosted by the oncology department of the Medica Superspecialty Hospital in Kolkata's Science City Auditorium. The Oncology Department of Medica made the announcement that home-based palliative cancer care services will be made available to cancer patients, making it the first institution in Eastern India to do so.
- In order to relieve the symptoms and stress brought on by a serious illness like cancer, a trained team of doctors, nurses, psychiatrists, and other medical staff members administer the specialised medical treatment known as "Palliative Care." As it offers patients respite, palliative care is often given to patients who are in the final stages of their illness and have a constrained time left to live.

International Developments



Policy Insight

■ **THEME:** Cancer Burden

■ **UPDATE:** Europe faces 'cancer epidemic' after estimated 1m cases missed during Covid

Key Highlights

- After an estimated 1 million diagnoses were missed during the pandemic, experts have warned that Europe risks a "cancer epidemic" unless immediate action is made to enhance treatment and research.
- The impact of Covid-19 and the attention it has received have shown "weaknesses" in cancer health systems and the landscape of cancer research throughout the continent, which, if urgently addressed, will delay cancer outcomes by almost a decade.
- According to the experts, one unanticipated consequence of the pandemic was the negative consequences that the quick redeployment of health resources and countrywide lockdowns, as well as their lasting legacy, have had on cancer services, cancer research, and cancer patients.

- In the first year of the pandemic, doctors saw 1.5 million fewer cancer patients, and one in two of these patients did not receive timely surgery or chemotherapy, according to data analysis in the paper. About 100 million tests were missed, and as a result of the backlog, it is thought that up to 1 million European individuals may still be living with cancer without having it detected.
- The paper also makes the case that financing for cancer research and preventive initiatives in particular has not been adequate. It claims that by putting more of an emphasis on cancer prevention, fewer individuals would contract the disease, freeing up more resources for those who do need treatment. According to Anna Schmütz of the International Agency for Research on Cancer, "it is predicted that 40% of cancers in Europe might be averted if primary prevention initiatives made greater use of our present understanding of cancer risk factors."

Policy Insight

- **THEME:** Prevention and treatment
- **UPDATE:** Survey: Nearly two-thirds of cancer patients want to know about complementary therapies before treatment

Key Highlights

- According to a recent survey conducted on behalf of the Samueli Foundation, nearly two-thirds (62%) of cancer patients want to learn more about complementary therapies like exercise, nutrition counselling, massage, and meditation before beginning conventional treatment, but only 33% of oncologists concur with that timeline.
- If they could go back in time, 40% of cancer patients said they would have picked a hospital that provided complementary therapy. More than one-third (35%) claim that if their healthcare team had provided them with supplementary services like mental health support/therapy, mindfulness training, and spiritual counselling in addition to conventional treatments like radiation and chemotherapy, their level of satisfaction would have increased.

- More than 76% of oncologists indicated they are interested in learning more about the advantages of complementary medicines used in conjunction with conventional medications. However, many reported difficulties in adopting integrative methods, such as a lack of insurance funding (49%), a staffing shortage (39%), the false belief that patients are uninterested (32%), and a lack of time to accommodate these choices into patient consultations (31%).
- Integrative oncology can help manage side effects and improve general well-being both during and after treatment, according to 60% of oncologists and 50% of patients. Additionally, compared to using medical treatments alone, 40% of patients and oncologists agree that adding complementary therapies improves treatment outcomes and overall survival.

Policy Insight

- **THEME:** Prevention and treatment
- **UPDATE:** Breast cancer: NHS England offers life-saving drug that can make tumour 'disappear'

Key Highlights

- A breakthrough immunotherapy medicine recently made available by the National Health Service (NHS) of England has given hope to numerous women suffering a severe type of breast cancer. The National Institute for Health and Care Excellence (Nice) has authorised the medicine, pembrolizumab, for use in up to 1600 women every year. It is claimed that the treatment can cause tumours to "disappear." Triple-negative breast cancer, an aggressive type of the illness that predominately affects persons under the age of 40, will now be treated with pembrolizumab.
 - Trials show that when combined with chemotherapy, the medicine decreases the likelihood of the disease advancing by about two-fifths. Pembrolizumab may also make cancer go away before surgery, sparing women from having to undergo risky procedures. The medication is infused intravenously to boost the immune
- system's ability to combat cancer cells. The medications target immune cell surface proteins, which serves as a brake on their incapacitating effects. Starting on November 8th, the procedure was accessible through the NHS. In addition, the health organisation announced that it had reached a confidential discount agreement with MSD, the drug's maker, to cover the medication immediately at the advertised price of £91,000 per patient.
 - Only individuals with the highest risk of developing breast cancer will receive the new medicine, and doctors will assess which patients are most suitable for therapy based on these criteria.

Policy insight

- **THEME:** Cancer treatment
- **UPDATE:** Adult cancer survivors at higher risk of bone fractures, say researchers

Key Highlights

- An adult cancer survivor's risk of bone fractures, specifically pelvic and vertebral fractures, is higher than that of an older adult without cancer, according to a recent large study by researchers at the American Cancer Society. This risk is particularly high for cancer survivors who were diagnosed within five years of their age and/or who have a history of chemotherapy (ACS).
- Additionally, survivors who were physically active were less likely to shatter a bone than those who smoked, who were more likely to do so. The American Medical Association's publication, JAMA Oncology, published the findings today.

- These results will guide clinical recommendations on fracture prevention, which can include physical activity with exercise programmes for cancer patients and smoking cessation programmes, to enhance quality of life following a cancer diagnosis.

Policy Insight

- **THEME:** Cancer treatment
- **UPDATE:** Potential treatment for lethal childhood cancer: Research

Key Highlights

- The most aggressive form of this malignancy, MYC gene-amplified medulloblastoma, was shown to be inhibited in mouse models by inhibiting the synthesis of an enzyme called DHODH.
- According to the first author, William Gwynne, healthy brain and nerve cells are unaffected by DHODH inhibition, which inhibits the tumour from spreading. By doing this, it will be possible to prevent the side effects of conventional therapies like radiation and chemotherapy, which can harm a child's ability to learn even after cancer has been properly treated.

- All medulloblastoma varieties, according to Gwynne, a second author, begin as neural stem cells in the cerebellum, the area of the brain that regulates voluntary movements including walking, balance, coordination, and speaking. After birth, the cerebellum fully matures. According to him, abnormal cell formation in the cerebellum is the origin of cancer, but research into the reasons behind this dysfunction may help create novel therapies.
- Especially when it is the MYC-amplified form, the cancer has frequently progressed into the spinal fluid by the time children are diagnosed.
- According to Gwynne, medulloblastoma is the most typical juvenile brain cancer to be discovered in kids, and brain tumours recently surpassed leukaemia as the most fatal childhood disease.

Policy Insight

- **THEME:** Cancer treatment
- **UPDATE:** Racial Disparities Persist in Access to Ovarian Cancer Care

Key Highlights

- According to a recent study, the majority of ovarian cancer patients do not receive the prescribed therapies, and the chances of survival are considerably worse for Black women.
- Long-standing access and cost disparities have contributed to the persistence of ovarian cancer treatment disparities. But even with these characteristics taken into consideration, the current study discovered that Black patients had a 14% lower likelihood than White patients of receiving all of the therapies for ovarian cancer recommended by the National Comprehensive Cancer Network (NCCN).

- Researchers looked at information on 5,632 ovarian cancer patients who were diagnosed between 2008 and 2015 and lived for at least one year following diagnosis to see how frequently patients received all of these advised therapies. The bulk of the study's patients were white, although 6% of them were Black and 6% were Hispanic.
- Just 24% of White, Hispanic, and only 14% of Black patients received all of the prescribed treatments, out of the total number of patients.

Pipeline News

- **THEME:** Cancer treatment
- **UPDATE:** Lung cancer: Novel drug shows promise in early-stage clinical trials

Key Highlights

- About 0.9-2.6% of non-small cell lung tumours, the most prevalent kind of lung cancer, are caused by the ROS-1 gene fusing with other genes.
- FDA-approved medications that target the ROS-1 fusion protein, including crizotinib and entrectinib, have antitumor effects, although it is usual for these medications to develop drug resistance.
- A new generation ROS-1 inhibitor called repotrectinib was created to circumvent widespread mutations that cause resistance to medications that target the ROS-1 protein.
- Repotrectinib demonstrated anticancer effect and was usually well tolerated in individuals with advanced non-small cell lung cancer that was ROS-1 positive, according to a recent phase I/II clinical research.

Pipeline News

- **THEME:** Early diagnosis
- **UPDATE:** Pancreatic cancer could be diagnosed up to three years earlier - new study

Key Highlights

- Researchers from the University of Surrey and the University of Oxford examined known symptoms of pancreatic cancer, such as weight loss, high blood sugar, and diabetes, and examined when these symptoms first appear in relation to cancer in the largest study of its kind, which was published in PLOS ONE.
- Analysis showed that, compared to those without diabetes, those who lost weight had a greater chance of acquiring pancreatic cancer. And rising glucose levels were linked to an increased incidence of pancreatic cancer in those without diabetes compared to those with the disease. The findings imply that unexplained weight loss should be taken seriously, especially but not primarily in diabetics. Additionally, rising glucose levels should be taken into consideration as a potential warning sign for pancreatic cancer, especially in those who have not gained weight. These alterations are significant candidates for routine health examinations that might aid medical professionals in locating patients who could be suffering from pancreatic cancer but have not yet been detected.

Pipeline News

- **THEME:** Cancer treatment
- **UPDATE:** Researchers identify new therapeutic approach against treatment-resistant prostate cancer

Key Highlights

- A therapy strategy under evaluation has been demonstrated by Cedars-Sinai Cancer researchers to be potentially beneficial against treatment-resistant prostate cancer. The outcomes of their Phase II clinical study, which were reported in the peer-reviewed journal *Molecular Therapy*, have prompted the initiation of a larger, multicenter experiment. The second most common cause of cancer-related mortality in males is prostate cancer, which affects a tiny gland located under the bladder. Since many prostate cancers are not aggressive, therapy may not be necessary or may be minor. Radiation treatment or surgery are originally used to treat aggressive cancers.
- Bethany Smith, PhD, a project scientist at the Bhowmick Lab, discovered via research with human cells and laboratory animals that the cancer cells were signalling to the surrounding supportive cells through a protein called CD105 to produce these slice variant proteins. Then, researchers tested a medication on human volunteers in the hopes that it might prevent

the formation of such incomplete proteins by blocking CD105. Nine patients in the experiment who had malignancies resistant to androgen-blocking treatment maintained that therapy while simultaneously receiving carotuximab, a CD105 inhibitor. According to radiographic imaging, 40% of the patients had progression-free survival.

Pipeline News

- **THEME:** Risk Factor
- **UPDATE:** Popular dietary supplements may increase cancer risk: Study

Key Highlights

- According to a recent study, use of well-known commercial nutritional supplements like nicotinamide riboside (NR), a type of vitamin B3, may actually raise the risk of catastrophic illnesses like cancer. High levels of NR were shown to not only raise the likelihood of developing triple-negative breast cancer but also to promote the spread of the disease to the brain, according to the study.
- Since there are currently no effective treatments available, if the cancer has spread to the brain, the effects might be fatal.
- Although very little is known about how vitamins and supplements truly function, some individuals take them because they erroneously believe that they will only be good for their health. The researchers of the study were motivated to study the fundamental issues surrounding how vitamins and supplements function in the body as a result of this information gap.

- Light is used to indicate the existence of NR, and the more light there is, the more NR is there. The study's findings, according to Goun, highlight the need of thoroughly examining the potential adverse effects of supplements like NR before their usage in individuals who may have a variety of health issues.

Pipeline News

- **THEME:** Cancer treatment
- **UPDATE:** Breast cancer vaccine safely generates anti-tumor immunity

Key Highlights

- In a study published in the journal JAMA Oncology, researchers from the University of Washington School of Medicine in Seattle report that an experimental vaccination against breast cancer successfully induced a potent immune response to a crucial tumour protein. The results imply that the vaccination could be effective in treating various forms of breast cancer.
- The goal of the phase I study was to assess the vaccine's safety and determine if it elicited an immunological response against the protein known as human epidermal growth factor receptor 2 (HER2). Although HER2 is present on the surface of many cells, up to 30% of breast tumours overproduce it by a factor of 100 compared to healthy cells. Despite the fact that these "HER2-positive" tumours are more aggressive and more likely to come back after therapy, the overproduction of HER2 also sets off an immune response that may be helpful.

- Those with HER2-positive breast tumours who build cytotoxic immunity, also known as cell-killing immunity, have a lower risk of cancer recurrence after therapy and a longer overall life than patients who do not do so. Disis and her coworkers developed a DNA vaccination to elicit this type of reaction. DNA vaccines include the DNA instructions for the target protein, as opposed to protein vaccinations, which often contain the protein or a portion of the protein that you want the immune system to attack

Pipeline News

■ **THEME:** Cancer Prevention

■ **UPDATE:** Aerobic exercise lowers risk of metastatic cancer: Study

Key Highlights

- According to a new study, aerobic exercise can lower the likelihood of cancer metastatic spread by 72%. According to the researchers, during vigorous aerobic activity, the quantity of glucose (sugar) absorbed by internal organs increases, which reduces the amount of energy the cancer has access to.
- Professor Carmit Levy from the Department of Human Genetics and Biochemistry and Dr. Yftach Gepner from the School of Public Health and the Sylvan Adams Sports Institute at TAU's Sackler Faculty of Medicine conducted the study.
- The study combined data from healthy human volunteers who were assessed before and after jogging with an animal model in which mice were trained under a stringent exercise schedule. The epidemiological study followed 3,000 people for roughly 20 years and found that those who reported frequent, vigorous aerobic activity had a 72 percent lower risk of developing metastatic cancer than those who did not exercise.

- Because the animal model produced a comparable result, the researchers were also able to determine the underlying process. They discovered that aerobic exercise dramatically decreased the growth of metastatic tumours in the lymph nodes, lungs, and liver by sampling the internal organs of the physically fit animals before and after exercise as well as after the injection of malignancy. The beneficial consequence, according to the researchers' theory, is due to the increased rate of glucose intake brought on by exercise in both people and model animals.