



# Newsletter

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## Expert Insight

The prevalence of cancer is rising globally, especially in LMICs that are experiencing the highest rise. India too, has seen an upsurge in cancer incidences over the last several decades. An estimated 11.5 lakh new cases between the ages of 0 and 74 are reported each year in the country as per the National Cancer Registry Programme India, 1 in 9 Indians are expected to have cancer. In addition, patients in many LMICs lack access to high-quality cancer care, which results in a disproportionate burden on mortality and increased cancer death rates. Due to the wide variety of cancer types, diverse therapies across stages, and requirement for multidisciplinary care coordination, the diagnosis and treatment of cancer is far more complicated than that several other non-communicable diseases. They are responsive to early diagnosis and have excellent cure rates when discovered in their early stages. It is unfortunate that a nearly 2/3rds of patients in India are diagnosed in the advanced stage. To address the several risk factors that contribute to the growing burden of these cancers as well as to ensure universal cancer care and management, it is necessary to build a multi-sectoral strategy and collaborations.

An important step in enhancing the quality of diagnosis, treatment, and care for cancer patients is largely dependent on reducing service fragmentation, particularly in low-resource environments. Patients still frequently lack the assistance needed to navigate the healthcare system at a time when they are most at risk. Hence, collaborations at many levels of society are also necessary to increase the equitable availability and access to information, resources, healthy foods, safe areas for physical exercise, smoke-free surroundings, assistance for quitting tobacco, and cancer screening.

Further, experience has shown that including a wide variety of decision-makers and stakeholders from both the public and private sectors increases the likelihood that new health solutions will be set up and implemented successfully. Involving medical, technological, legal professionals and the patient community themselves to make sure that every facet of a new venture is addressed from the start fosters ownership and helps a project succeed in the long run.



**Dr Anil D'Cruz**

President, The Union for  
International Cancer Control  
Director-Oncology, Apollo Hospitals

## Advisor Insight

Despite the effects on women's health all around the world, there are still a lot of unmet needs in the areas of gynecologic cancer detection and treatment. Numerous cancers that affect the female reproductive system are referred to be "silent" because they are frequently discovered at an advanced stage when curative options are few. The numerous ways that stigma, cancer misconceptions, and cultural taboos might contribute to the delays that many women experience across the care route must also be acknowledged and addressed. False beliefs that gynecological malignancies including ovarian and womb cancer are related to sexual promiscuity are stigmatizing the illnesses that may be taking the lives of women. Apart from having access to the proper care, Indian women are more likely to acquire the highly avoidable cancers is due to the widespread reluctance of women to seek medical attention and the dearth of public discussion on reproductive sexual health. Furthermore, these obstacles affect not just women with breast or gynecological malignancies but also those with colon, lung, and other cancers, which are frequently considered to be exclusively male illnesses. For hundreds of thousands of women and their families

each year, the premature death and disability caused by cancer, particularly gynecological cancers, is a tragedy that could have been avoided.

Additionally, cancer exacerbates the cycle of poverty in areas with little resources and a shaky or disjointed health system. The majority of women have little opportunity to obtain life-saving measures like HPV vaccination and cervical cancer screening with prompt treatment of pre-cancerous lesions, despite the fact that there are effective and affordable methods to eliminate these inequalities. Cancer is not always inevitable. According to estimates, 40% of all cancer occurrences may be avoided if modifiable exposures, such quitting smoking, eating healthfully, and engaging in regular physical exercise, are optimized to reduce risk. There is an urgent need for significant and long-lasting investments in cancer control overall, including prevention and early detection programmes, capacity building for health service infrastructure, and human resources for cancer management across all disciplines, including pathology, surgery, radiotherapy, systemic therapy, and palliative care, that is highlighted by inequities in the cancer space.



**Dr Shona Nag**

Director, Oncology Department,  
Sahyadri Group of Hospitals, Pune

## Stories of Hope

My world shattered. Anagha, my wife, and my family started to look for treatment options. They were finally able to get me over to the James Cancer Hospital in Columbus (US). After reaching the US, I was scanned again. The doctor's there told me that it was difficult for me to survive over a month as the cancer was had now spread to my spine and there was nothing much that they could do. Nevertheless, the doctors planned to try aggressive Chemotherapy.

I had a tracheostomy tube in my throat to breathe, a peg/feeding tube in my nose and stomach, IVs in my arm. I was all prepared for the big battle. The feeling of guilt, correcting my mistakes & not letting my family suffer kept motivating me to keep fighting. Fortunately, my body started responding to the chemo. A month turned to two, four, and I was alive fighting the demon. Meanwhile, I kept reading a lot of books and kept researching my enemy, my cancer, so that I could get smarter. I was doing much better.

I was scanned again, and they still found some traces of cancer. I was given a choice to either remove my vocal cord (which they preferred, but I would never be able to talk again) or continue with chemo and radiation together. I chose the latter as I was confident by now that I will beat my cancer for sure. I wanted to talk again. That worked for me. Cancer started the fight, and I finished it! Cancer taught me to always be positive and optimistic. It made me realize that there are so many small things in life that you never think of and miss enjoying. My life after cancer is the best. I started working hard, got good jobs. I bought a house, car, learned to fly a plane, travel to different places, enjoy nature, and spend time with my family. Never knew before that life could be so beautiful.



**Mr Mehul Vyas**

Stage IV throat cancer survivor

# National Developments



## Policy Insight

### ■ **THEME:** Cancer Incidence

■ **UPDATE:** Prostate cancer second-most common cancer in urban India: Experts

### Key Highlights

- In places like Bengaluru, Delhi, and Pune, prostate cancer is now the second-most prevalent malignancy, according to urologists speaking at the Society of Genitourinary Oncologists' annual conference (SOGO). Majority of the cases are mouth and throat cancer cases due to traditional use of chewing tobacco by the natives in the region.
- Populations in urban areas are more likely to get prostate cancer than those in rural areas, and this incidence is rising in metropolitan areas. Due to a lack of knowledge and delayed detection, 65% of men with prostate cancer in India pass away from the disease, compared to 12% in Australia and the US.

## Policy Insight

### ■ **THEME:** Digital transformation

■ **UPDATE:** India's National Cancer Grid sets up digital cancer centre

### Key Highlights

- The Koita Centre for Digital Oncology has been developed by the National Cancer Grid in India, a government-backed network of organisations dedicated to cancer treatment and research. The center's mission is to advance the use of digital technology in India to improve cancer care.
- To solve issues in cancer care, it will assist in establishing a "innovation ecosystem" comprising hospitals, health-care technology firms, academic institutions, and research organisations. Additionally, the KCDO will make it possible for the NCG and its member universities to test and implement cutting-edge technologies including cloud computing, big data, AI, and machine learning. In turn, these technologies will fuel telemedicine and remote patient monitoring, increasing access to healthcare in semi-urban and rural areas.
- The Ayushman Bharat Digital Mission, a "major national goal" of the Indian government, might also be adopted more widely with the assistance of the KCDO.

## Policy Insight

- **THEME:** Drugs and Treatment
- **UPDATE:** Centre's virtual training in palliative care for North-East doctors starts in Tripura

### Key Highlights

- Tripura, a state where every 150 persons out of 3,000 are detected with cancer, started receiving the first-ever virtual training of doctors for palliative care in north-eastern India for providing better care for terminally-ill patients, including those suffering from cancer.
- The programme aims to train doctors and caregivers in providing necessary support to ensure optimisation of quality of life for the patients. Majority of the cases are mouth and throat cancer cases due to traditional use of chewing tobacco by the natives in the region.
- The training programme by NHM, in collaboration with Echo India and Tripura's Atal Bhari Vajpayee Regional Cancer Centre, is using training modules drawn from the spirit of central government's National Programme of Palliative Care, which caters to the needs of home-bound patients.

## Policy Insight

- **THEME:** Cancer Burden
- **UPDATE:** Lung Cancer Catastrophe In India: Rising Cases & Precautionary Measures.

### Key Highlights

- Data on cancer incidence were gathered by the National Centre for Disease Informatics of the ICMR from 28 population-based and 58 hospital-based registries. According to the institute, between 2012 and 2016, 22,645 people with lung cancer had records located. The analysis predicts that this number would most certainly climb to over 1.61 lakh in 2025, representing a seven-fold increase, with an estimated 81,000+ cases among males and 30,000+ cases among women.
- According to the same research on the "Burden of Cancers in India," seven cancers accounted for more than 40% of the overall disease burden: lung (10.6%), breast (10.5%), oesophagus (5.8%), mouth (5.2%), stomach (5.2%), liver (4.6%), and cervix uteri (4.3 per cent). The unpleasant fact still stands that around 45% of lung cancer patients in India have a diagnosis after the disease has already spread to other parts of the body, which often occurs in the mid-50s - a decade earlier than the general population in the west. Even more concerning is the fact that lung cancer is discovered between stages 3 and 4 in 75% of cases.



## Policy Insight

■ **THEME:** Cancer Burden

■ **UPDATE:** 8000 New cancer cases detected so far at B Borooah Cancer Institute

### Key Highlights

- In 2022, from January to August there were 8,318 cases of cancer detected at the Dr B Borooah Cancer Institute (BCCI). There were 815 cancer cases from Kamrup (M) district alone last year. Out of them 387 were males and 428 females.
- As per doctors from the institute, 28% of cancer cases in India are related to tobacco consumption, whereas in Assam the percentage rises to 48%.
- A joint study by BCCI and Public Health Foundation of India found that "chronic arsenic exposure in low moderate levels for a long term is a risk factor for gallbladder cancer. Smoke inhaled from burning firewood is also a factor for cancer.

## Policy Insight

■ **THEME:** Drugs and Treatment

■ **UPDATE:** Centre Plans To Include SII's qHPV Vaccine Against Cervical Cancer In National Immunization Programme

### Key Highlights

- The government is planning to include Serum Institute of India's indigenously-developed Quadrivalent Human Papillomavirus vaccine (qHPV) against cervical cancer in the National Immunization Programme.
- The health ministry is planning to roll out qHPV for girls aged 9-14 years under the National Immunization Programme. The roll out may take up to six months.
- The phase 2/3 clinical trial of the vaccine has been completed with support of the Department of Biotechnology. The government's advisory panel NTAGI recently approved qHPV after reviewing clinical trial data of the vaccine.

## Policy Insight

- **THEME:** Cancer Prevention
- **UPDATE:** Odisha to introduce HPV vax in 10 aspirational districts in the first phase

### Key Highlights

- Odisha is one of the states with rising cases of cervical cancer, which kills one woman in every eight minutes in the country. Around 90 per cent (pc) of cervical cancers are caused by HPV, types 16 and 18 which transmits sexually.
- With the Centre planning to roll out the first quadrivalent human papillomavirus vaccine (qHPV) against cervical cancer as part of the national immunisation programme by this year-end, the Odisha government has decided to introduce the vaccine in the 10 aspirational districts in the first phase.
- The vaccine manufactured by the Serum Institute of India (SII) will be introduced to adolescents as part of a routine immunisation programme. It will be administered to girl students of 9-13 years in Nuapada, Rayagada, Nabarangpur, Kandhamal, Kalahandi, Malkangiri, Balangir, Dhenkanal, Koraput and Gajapati districts.
- The State government has decided to expand screening and services for breast and cervical cancers from medical colleges to the district headquarters hospital (DHH)

## Policy Insight

- **THEME:** Mental Health
- **UPDATE:** Mental distress of caregivers often overlooked affecting care of cancer patients- AIIMS study

### Key Highlights

- The study was conducted from July 2020 to March 2021 at the Department of Radiation Oncology at AIIMS Patna to determine the quality of life of the caregivers of cancer patients.
- Dr Abhishek Shankar, Associate Professor at the Department of Radiation Oncology and one of the authors of the study, said 54 per cent of the respondents considered the cancer patient a burden while 55 per cent admitted to having major financial concerns over the treatment and disease management.
- Almost 62 per cent felt their daily routine has changed and around 38 per cent of respondents said they positively adapted to the changed situation over a period of time.
- Lead author Dr Rakesh said the study took longer than what was proposed in the protocol due to the COVID-19 pandemic which led to fewer people visiting the hospital for cancer treatment.

## Policy Insight

- **THEME:** Drugs and Treatment
- **UPDATE:** West Bengal- Cancer drug rates under Swasthya Sathi capped

### Key Highlights

- The West Bengal government starting with July has been Settling Swasthya Sathi claims Directly instead of rerouting it through insurance company and has now decided to cap package rates for cancer orthopaedic neurosurgery and pain management procedures.
- It has also fix rates for 129 cat cancer drugs while reading out several expensive ones from the treatment protocol under the scheme beside capping hospitalisation rates for chemotherapy
- These recommended modifications or to be implemented with immediate effect

## Policy Insight

- **THEME:** Drugs and Treatment
- **UPDATE:** Karnataka government grants Rs 10 crore to cancer institute

### Key Highlights

- The Karnataka Cancer Therapy and Research Institute Institute, a 45-year-old Hospital serving cancer patients in north Karnataka and a Goa region has got a much needed government grant of Rs.10,00,00,000 to upgrade technology.
- Procuring some radiotherapy equipment and renovation of the OPD block is being planned as well as the requirement of a mobile detection van procuring machines for memo Graffi and ultrasound and setting up a diagnostic Centre are in the pipeline
- The hospital treats nearly 1800 cases a year

## Policy Insight

- **THEME:** Drugs and Treatment
- **UPDATE:** Arunachal Pradesh To Establish 'Tertiary Care Cancer Centre'; Effort To Eliminate Cancer Menace

### Key Highlights

- In an effort to transform Arunachal Pradesh into cancer-free state and eliminating the cancer menace, the state administration has decided to establish a state-of-the-art Comprehensive Tertiary Care Cancer Centre through a phased manner.
- This state-of-the-art health facility will incorporate of advanced technologies, including – linear accelerator (True Beam), Brach therapy Unit, and PET CT scan.

## Policy Insight

- **THEME:** Risk Factor
- **UPDATE:** '106 out of 1,00,000': Deaths by PM2.5 in Delhi well above global median, study finds

### Key Highlights

- The national capital tops the list of 103 cities across the world with the highest annual average PM2.5 exposure level. The number of deaths attributable to PM2.5 in Delhi is 106 out of 1,00,000 people in 2019, according to the 'Air Quality and Health in Cities' report released Wednesday.
- To calculate the burden on health caused by PM2.5, mortality from six illnesses were taken into account: ischemic heart disease, stroke, lower respiratory infections, lung cancer, type 2 diabetes, and chronic obstructive pulmonary disease.
- Delhi's population-weighted annual average PM2.5 exposure in 2019 was 110 µg/m<sup>3</sup>. Kolkata came second on the list with 84 µg/m<sup>3</sup>, followed by Kano (Nigeria), Lima (Peru), and Dhaka (Bangladesh). The PM2.5 annual average concentration in 2010 in Delhi was slightly higher – 114.9 µg/m<sup>3</sup>. The World Health Organisation guidelines for annual PM2.5 concentration is 5 µg/m<sup>3</sup>.

## Policy Insight

■ **THEME:** Cancer Infrastructure

■ **UPDATE:** Prime Minister Modi launches cancer hospital, terms health care a priority

### Key Highlights

- In the last eight years, holistic healthcare has elevated to a national priority, according to Prime Minister Narendra Modi, who spoke on Wednesday at the inauguration of a hospital in Punjab.
- The Amrita Hospital in Faridabad was opened by the Prime Minister earlier in the day. The super-speciality hospital in Faridabad, which will be run by Mata Amritanandamayi Math, would have 2600 beds. Modern healthcare services will be made available to residents of Faridabad and the wider NCR region by the hospital, which is being built at an estimated cost of approximately 6000 crore.
- The Homi Bhabha Cancer Hospital and Research Centre is a 300-bed facility outfitted with MRI, mammography, digital radiography, and brachytherapy equipment for the treatment of all cancer types using available treatment modalities like surgery, chemotherapy, immunotherapy, and bone marrow transplant. Patients from Rajasthan, Jammu and Kashmir, Himachal Pradesh, Haryana, Uttarakhand, and Punjab will also be able to receive tertiary treatment at the facility.

## Policy Insight

■ **THEME:** Cancer Accessibility

■ **UPDATE:** AYUSH making cancer care in India more accessible and affordable since 2014; over 15 cr screenings so far

### Key Highlights

- Under AYUSH Bharat, hospitalisation requiring secondary or tertiary treatment is covered by health insurance to the sum of Rs 5 lakhs per household each year.
- Under PMSSY, cancer treatment facilities are being built in all medical colleges.
- More than 10.33 crore oral cancer screenings, more than 3.41 crore cervical cancer screenings, and more than 5.06 crore breast cancer screenings have been conducted at the operational Ayushman Bharat Health & Wellness Centers.

## Policy Insight

■ **THEME:** Cancer Prevention

■ **UPDATE:** AP govt to vaccinate girls to prevent cervical cancer

### Key Highlights

- As part of a trial initiative, the State government of Andhra Pradesh is prepared to offer 90 percent off Bivalent Human Papilloma Virus (HPV) vaccinations to females between the ages of 9 and 14. The choice was made to save women by avoiding cervical cancer since cervical cancer is brought on by chronic high-risk HPV infection of the lower genital tract.
- A different study conducted by Andhra University and Mahatma Gandhi Cancer Hospital in 2019–2020 on 200 women from Visakhapatnam's urban and rural areas found that while 41.4% of them were aware that cervical cancer is a type of cancer that affects women, only 10% were aware that cervical cancer screenings are available.
- According to official APSACS sources, the immunisation will be administered through primary and urban health centres as well as schools. The APSACS intends to supply it with a 90% discount, making the vaccine available for just Rs 400 to Rs 500, even though the vaccination dosage costs Rs 4,000 to Rs 5,000 in the market.

## Policy Insight

■ **THEME:** Risk Factor

■ **UPDATE:** The global burden of cancer attributable to risk factors, 2010–19: a systematic analysis for the Global Burden of Disease Study 2019

### Key Highlights

- Smoking, alcohol use, high BMI and other known risk factors were responsible for over 37% of cancer deaths in 2019, as per a new research published in the Lancet.
- Globally 44.4% (4.5 million) of all cancer deaths were attributable to risk factors, says the study.
- The leading risk factors contributing to global cancer burden in 2019 were behavioural, whereas metabolic risk factors saw the largest increases between 2010 and 2019.
- Reducing exposure to these modifiable risk factors would decrease cancer mortality and DALY rates worldwide, and policies should be tailored appropriately to local cancer risk factor burden.

## Pipeline News

■ **THEME:** Drugs and Treatment

■ **UPDATE:** Delhi institute develops 3D printed spinal orthosis for disabled people suffering from cancer

### Key Highlights

- Pandit Deendayal Upadhyaya National Institute for Persons with Physical Disabilities (Divyangjan) has developed a three-dimensional printed spinal orthosis for people with disabilities suffering from cancer.
- The first such instrument was fitted in a patient on Thursday in presence of Social Justice and Empowerment Minister, Virendra Kumar
- An orthosis is an externally applied device used to influence the structural and functional characteristics of the neuromuscular and skeletal system.

## Pipeline News

■ **THEME:** Cancer Infrastructure

■ **UPDATE:** Goa Govt to sign MoU with Tata hospital, Centre for cancer institute

### Key Highlights

- The state government would sign a Tripartite MoU with Tata Memorial Cancer Institute and the Government of India for mentoring purposes and guidance for the proposed State Cancer Institute of Goa.
- The minister informed that the Union Ministry of Health would send a team of officials to understand the unique needs of Goa, including upgrading South Goa District Hospital with a separate medical college as recommended by NITIAayog.

## Pipeline News

- **THEME:** Cancer Infrastructure
- **UPDATE:** PM will dedicate 'Homi Bhabha Cancer Hospital and Research Centre' to the Nation

### Key Highlights

- PM will dedicate 'Homi Bhabha Cancer Hospital and Research Centre' to the Nation at Mullanpur, New Chandigarh, Sahibzada Ajit Singh Nagar District (Mohali) in the afternoon at 2:15 pm.
- The Hospital has been built at a cost of over Rs. 660 Crore by Tata Memorial Centre in an endeavour to provide world class Cancer care to the residents of Punjab and neighbouring states and UTs.
- The cancer Hospital is a tertiary care hospital of 300 bed capacity and is equipped with modern facilities to treat all types of cancers using every available treatment modalities like Surgery, Radiotherapy and Medical oncology - Chemotherapy, immuno-therapy and Bone marrow transplant.

## Policy Insight

- **THEME:** Cancer Infrastructure
- **UPDATE:** Roche India partners with Sidney Kimmel Cancer Center (SKCC) to launch Advanced Certification Programme in Molecular Oncology in India

### Key Highlights

- Roche India on Monday announced that it is partnering with Sidney Kimmel Cancer Center (SKCC) – Jefferson Health, Pennsylvania, USA and BioQuest Solutions Pvt. Ltd. and launched an Advanced Certification Program in Molecular Oncology (ACMO) to equip oncologists and pathologists in the country with methods of genomic/personalised medicine.
- According to a press statement, around 100 healthcare professionals including 70 oncologists and 30 pathologists from across the country will be trained under this programme.
- Precision oncology is based on using an individual's genetic profile to make the best therapeutic choice and will help to decipher whether a treatment will be beneficial for the patient or not, the company claims.



## Pipeline News

- **THEME:** Drugs and Treatment
- **UPDATE:** 'Cervavac' by Serum Institute to prevent cervical cancer; gets DCGI nod

### Key Highlights

- Cervavac- country's first quadrivalent human papillomavirus vaccine (qHPV), manufactured by Pune-based, Serum Institute of India (SII)

Has been approved by the Drug Controller General of India for Market authorisation;

- estimated to be launched by end of 2022.

The vaccine as noted by SII CEO Adar Poonawalla, is going to be affordable and accessible.

- In India, cervical cancer accounted for 9.4 per cent of all cancers and 18.3 per cent of new cases in 2020 (Indian Journal of Gynaecologic Oncology, December 2021).

## Pipeline News

- **THEME:** Cancer Infrastructure
- **UPDATE:** Ministries' health facilities can be pooled to offer better healthcare delivery: Rajesh Bhushan

### Key Highlights

- Tertiary health facilities of various central government ministries such as labour, railways, steel, ONGC, atomic energy, among others, can be pooled to make a significantly large and sustainable network of healthcare for exponentially better healthcare delivery, said Rajesh Bhushan, Union health secretary on Tuesday while addressing the National Workshop on "Roadmap for Cancer Treatment".
- In a day-long workshop, Bhushan along with other medical experts discussed infrastructure and human resources for cancer care in India, affordability, best practices and review of ongoing projects related to cancer treatment.
- Bhushan identified framing, sharing and adherence of evidence-based common standards of protocols for critical care management as another learning for cancer management.

## Pharma and Medical Device

■ **THEME:** Cancer Infrastructure

■ **UPDATE:** iBreastExam, developed by Indo-U.S. teams, helps make early detection of breast cancer accessible, affordable and painless.

### Key Highlights

- A device developed by teams from the United States and India might hold the key to improving the situation. Its ultra-portable, wireless, handheld iBreastExam device has helped thousands of women around the world receive crucial information about their health.
- The device's transportability and affordability are critical because survival rates are closely tied to geography, as women in rural areas may not be able to travel to a city to receive a traditional mammogram.
- Feedback received from both patients and health care professionals has been very positive so far. The company has also conducted multiple international clinical studies, with over 7,500 women enrolled.

# International Developments



## Policy Insight

■ **THEME:** Risk Factor

■ **UPDATE:** 'Forever chemicals' on kitchen utensils can increase the risk of liver cancer, study finds

### Key Highlights

- Researchers at the University of Southern California in Los Angeles have found that exposure to synthetic chemicals, common on several household goods and some kitchen utensils, can increase a person's risk of getting liver cancer.
- The 'forever chemicals' that are common on some kitchenware and food packaging may quadruple the risk of cancer, the study warned. The chemicals, according to the Centre of Disease Control and Prevention, are almost everywhere from non-stick kitchen utensils to tap water, waterproof clothing, cleaning products and shampoo.
- The researchers studied data of 50 people who developed liver cancer and 50 others who did not. This was followed by an analysis of blood samples from the cancer patients before the diagnosis and compared with the people who never developed the disease. Several types of chemicals were found in the blood-streams of people who eventually developed cancer.

## Policy Insight

■ **THEME:** Risk Factor

■ **UPDATE:** Study: High-Dose Insulin Linked to Cancer Risk for Type 1 Diabetes

### Key Highlights

- A recent study has linked high insulin use to cancer risk in people with type 1 diabetes.  
  
Previous studies have linked having type 1 diabetes to a higher risk for cancer.
- It is unclear how much of a role insulin plays in the link between the two conditions. Needing higher levels of insulin could be a marker of insulin resistance (when the body's cells do not respond well to insulin) that's being caused by something else.
- When it comes to the risk of cancer for women with type 1 diabetes, the findings from Mao's study lined up with previous research that had also shown a higher cancer risk among women with type 1 diabetes who took insulin.

## Policy Insight

- **THEME:** Cancer Treatment
- **UPDATE:** University Of New South Wales: Empowering Childhood Cancer Survivors To Engage In Physical Activity

### Key Highlights

- Around 750 children are diagnosed with cancer in Australia each year. Advancements in treatments have led to rising survival rates. But for survivors of childhood cancer, recovery can continue long after treatment finishes.
- Poor health behaviours today can exacerbate the risk of late effects, including cardiovascular disease, metabolic syndrome and obesity, meaning healthy lifestyle behaviours like exercise are vital.
- Healthy behaviours, particularly physical activity, are crucial for preventing or minimising the impact of late effects of cancer. But an estimated 85 per cent of childhood cancer survivors do not meet the minimum physical activity guidelines of 60 minutes per day for children.

Thirty participants from Sydney Children's Hospital undertook the iBounce program in the pilot study, conducted at the height of the COVID-19 pandemic when schools, parks and social sports were closed and social distancing measures enforced. Thirty participants from Sydney Children's Hospital undertook the iBounce program in the pilot study, conducted at the height of the COVID-19 pandemic when schools, parks and social sports were closed and social distancing measures enforced.

Over 12 weeks, the survivors and their families used the program and tracked their physical activity using an activity tracker device. At the end, participants showed significant improvements in their aerobic fitness.

## Policy Insight

■ **THEME:** Risk Factor

■ **UPDATE:** Washington University In St. Louis: Study Offers Insights Into How Pancreatic Cancer Develops

### Key Highlights

- A detailed analysis of pancreatic cancer by researchers at Washington University School of Medicine in St. Louis has revealed details of two key transition points in the development of these tumors – the shift from normal cells to pre-cancerous cells, and the change from precancerous to cancerous cells. Understanding these transitions will help lead to the development of novel therapies. The study also provides insights into treatment resistance and how immunotherapy could be harnessed to treat this aggressive tumor type.
- The study, published Aug. 22 in the journal Nature Genetics, is part of the Human Tumor Atlas Network, funded by the National Cancer Institute's Cancer Moonshot program, all part of the National Institutes of Health (NIH).
- Also, as part of an ongoing phase 1 immunotherapy clinical trial at Siteman Cancer Center – based at Barnes-Jewish Hospital and Washington University School of Medicine – the researchers are conducting the same detailed analyses performed in the current study to see how tumors from patients respond to two investigational drugs that prime the immune system to attack the cancer.

## Policy Insight

■ **THEME:** Cancer research

■ **UPDATE:** Miami Cancer Institute Launches Global Consortium to Speed and Improve Bladder Cancer Care Worldwide

### Key Highlights

- Miami Cancer Institute has spearheaded the creation of the Global Bladder Cancer Consortium (GBCC), a collaboration between the world's top experts in bladder cancer.
- Among the GBCC's priorities are creating a large and diverse patient database, launching clinical trials at multiple sites throughout the world and sharing information – all initiatives that will impact patient outcomes and improve care for those with bladder cancer.
- Data compiled by the GBCC and maintained by Miami Cancer Institute will be de-identified, meaning that a patient's identity will not be shared. If physician scientists want to look at outcomes based on gender, ethnicity or some other demographic, it will be possible to break down the data accordingly.

## Pharma and Device

- **THEME:** Drugs and Treatment
- **UPDATE:** AI-based tool for lung cancer treatment developed in Jerusalem

### Key Highlights

- A new innovative tool that can predict the effects of immunotherapy on patients suffering from lung cancer is under development at Shaare Zedek Medical Center, the Jerusalem hospital announced Tuesday. The AI (artificial intelligence)-based technology, named I3LUNG, will make use of the machine and deep learning to analyze a wide variety of patient information in order to formulate a treatment plan that is best suited to the specific medical situation of every patient.
- Roisman explained that the information gathered by I3LUNG will come from a retrospective analysis of 2,000 lung cancer patients from oncology departments across the globe.

## Pharma and Device

- **THEME:** Drugs and Treatment
- **UPDATE:** Researchers Finds Association Between High Insulin Dosage and Cancer in Patients with T1DM

### Key Highlights

- In a study published in the Journal of the American Medical Association (JAMA) Oncology, a research found that higher insulin dose is positively associated with cancer incidence in certain as well as this association is stronger among those with insulin resistance.
- The researchers acquired and analyzed data from the National Institute of Diabetes and Digestive and Kidney Diseases Central Repository.
- The aquired data included data from the Diabetes Control and Complications Trial (DCCT), which was designed to test the glucose hypothesis and determine whether the complications of T1DM could be prevented or delayed,

## Pharma and Device

- **THEME:** Drugs and Treatment
- **UPDATE:** Guided Surgical System Will Improve Lumpectomy Outcomes for Breast Cancer Patients

### Key Highlights

- Breast surgeons at Sentara Northern Virginia Medical Center are the first in Virginia to adopt a new guided surgical system to improve clinical and cosmetic outcomes for breast cancer patients undergoing lumpectomies.
- "Approximately one in eight women in the U.S. will develop breast cancer," says Jeffrey Sinclair, MD, a surgeon with Sentara Surgery Specialists at Sentara Northern Virginia Medical Center. "It is vital that we continue to innovate and raise the standard of care for this growing population
- The Elucent EnVisio™ Surgical Navigation System and SmartClip™ technology increases surgical accuracy and reduces post-surgical pain by more precisely targeting tumors and preserving more healthy breast tissue than the traditional marker system, called hook-and-wire, which has been used since the 1970s.

## Pharma and Device

- **THEME:** Early detection
- **UPDATE:** Smart contact lenses can diagnose cancer from tears

### Key Highlights

- US scientists have developed a contact lens that can help in the early detection of cancer using tears and help in the treatment.
- The novel lens, developed by the team at the Terasaki Institute for Biomedical Innovation (TIBI) in California, is able to capture and detect exosomes, the nanometer-sized vesicles found in bodily secretions that have the potential for being diagnostic cancer biomarkers.
- The lens was designed with microchambers bound to antibodies that can capture exosomes found in tears. This antibody-conjugated signalling microchamber contact lens (ACSM-CL) can be stained for detection with nanoparticle-tagged specific antibodies for selective visualisation.



## Pharma and Device

### ■ **THEME:** Drugs and Treatment

- **UPDATE:** Philadelphia-based Biotech Company AUM LifeTech Awarded \$400,000 NCI/NIH Grant to Advance Their Lung Cancer Immunotherapy Program Using RNA-Targeting Gene Therapy with Checkpoint Inhibitors

### Key Highlights

- UM LifeTech, Inc., a Philadelphia-based preclinical stage biotechnology company, has received a Small Business Innovation Research (SBIR) grant from the National Cancer Institute (NCI) of the National Institutes of Health (NIH) to advance their preclinical program in lung cancer immunotherapy using a non-viral RNA-targeting gene therapy approach. The federal funding in the amount of US \$400,000 is funded under the award number R43CA275470.
- AUM LifeTech will use the funds to advance the development of their new form of cancer immunotherapy that involves targeting the messenger RNA (mRNA) of a gene, FOXP3, and thereby inhibiting the function of immune cells, called T-regulatory (Treg) cells. Tregs are known to have an immunosuppressive function and, in some instances, prevent the body from fighting cancer and lead to cancer progression. The functions of Tregs are critically dependent upon their expression of FOXP3. By reducing the levels of FOXP3, the biological function of Tregs is inhibited, and many cancers can be eliminated.

## Pipeline News

### ■ **THEME:** Cancer Infrastructure

- **UPDATE:** Apollo Hospitals, Eclipse Group Africa build diagnostic, cancer centre

### Key Highlights

- India's Apollo Hospitals and Dar es Salaam based Eclipsed Group Africa have signed a Memorandum of Understanding (MoU) to construct a state of the art diagnostic and cancer centre in the country.
- The centre is to be built in Msasani area in Dar es Salaam will provide advanced and comprehensive diagnostic and cancer treatments.
- Africans from different countries will get a chance to receive quality cancer treatment as well as other health services in Tanzania.

## Pipeline News

■ **THEME:** Drugs and Treatment

■ **UPDATE:** How does cancer grow?  
Genetic mapping reveals new secret

### Key Highlights

- Individual prostate tumours include a hitherto unrecognised spectrum of genetic diversity, according to research from the University of Oxford, the Karolinska Institutet, Solna, Sweden, and KTH Royal Institute of Technology. They employed spatial transcriptomics, which enabled them to see genetic alterations without dissecting the tissue under study.
- Older methods require obtaining a sample from the diseased area and analysing the DNA to investigate the genetics of cells with tumours, thus the new approach may open the door for improved therapy. However, because some malignancies, like prostate cancer, are three-dimensional, a single sample would only provide a very brief overview of the tumour.