ONCOLOGY IN THE TIME OF COVID

ASSESSING THE IMPACT OF THE COVID-19 PANDEMIC ON THE INDIAN ONCOLOGY MARKET

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INTRODUCTION

The COVID-19 pandemic turned the world upside down. For the last two years, local and global healthcare authorities have been working tirelessly to bring the pandemic under control; today, we continue to grapple with the concerns of new variants erupting every few months. It is now well accepted that the pandemic will continue to influence many aspects of our lives for the near future.

This period has been particularly challenging for healthcare systems worldwide, and the Indian healthcare system was no exception. Healthcare professionals, as well as patients, faced a lot of fear and uncertainty. The fact that SARS-CoV-2 is a highly infectious virus posed further challenges to the patients who suffered from diseases with compromised immune systems – cancer being one such disease. Patients with cancer are more vulnerable to COVID-19 infection and its complications[1], making cancer care management additionally challenging.

As India went into a complete nationwide lockdown in March 2020, all aspects of cancer care, including screening, investigations, treatments, clinical trials, and research, were affected as medical resources were diverted overnight to combat the pandemic. Reduction in cancer screenings and people continuing to stay away from the hospitals led to a drop in new cancer patient presentations, evidence of which will be highlighted in this paper. In addition, the delay, or lack of, treatment resulted in a backlog of cancer patients[2]. As we will illustrate in this paper using Ipsos data, impacts continued throughout the whole of 2020, even after the national lockdown was lifted in June 2020.

While other aspects of life have returned to normality, we believe that the same has not necessarily been as easy for cancer patients - in some respects, they may have experienced a significantly larger disruption due to the pandemic. Combining our market insight and expertise with historically trended data from Ipsos' India Oncology Monitor, our India Oncology Sales Audit and two waves of our India Oncology HCP COVID-19 Impact Assessment Study, this paper aims to highlight the ongoing impact of the COVID-19 pandemic against several facets of the Indian oncology market

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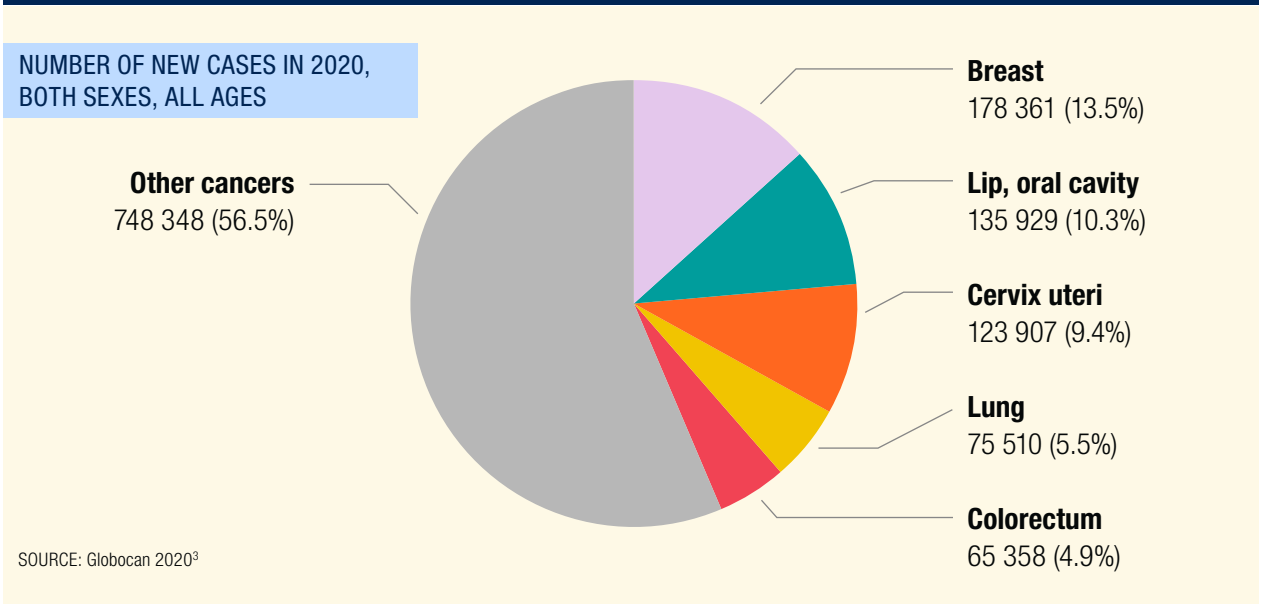
THE ONCOLOGY LANDSCAPE IN INDIA

The Indian healthcare system typically manages a large number of cancer patients: an estimated 1.32 million new cancer cases are diagnosed each year with 0.85 million deaths annually[3] (see figure 1). According to Globocan data, lip, oral cavity, lung, and stomach cancers are the most diagnosed cancers in males, while breast, cervix, and ovarian cancers have higher diagnosis rates in females. The 5-year prevalence is estimated to be around 2.7 million[3]. Such high numbers make cancer one of the leading causes of death in India.

Figure 1: Cancer Incidence in India - 2020



India has one of the most complex cancer care systems and providing affordable and accessible cancer care is one of India's greatest public health challenges[4]. The Government of India realizes that the current cancer care infrastructure is inadequate to handle the ever-growing cancer burden and intends to bridge the gap by undertaking multiple initiatives to help cancer patients. These initiatives include:

- Increased cancer awareness and screening
- Ensured availability of affordable and accessible infrastructure (well-equipped hospitals and well-trained medical staff) for cancer diagnosis and treatment
- Ensured availability of affordable and novel therapies

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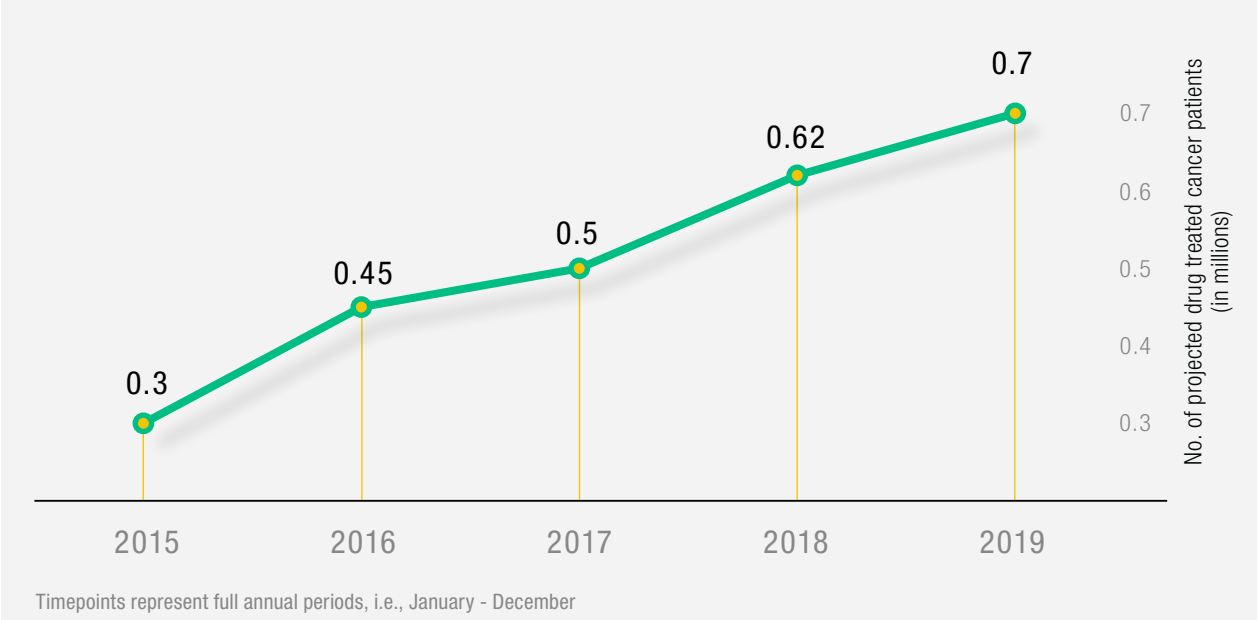
Private sector components, including the providers, pharma companies, and insurance companies, are also actively evolving to cater to the rising needs of cancer patients.

A well planned and multidisciplinary approach is crucial in the treatment of cancer. The course of treatment usually depends upon the type and stage of cancer diagnosis and the treatment plan includes one or more of these commonly used options to manage cancer:

- **Surgery**: A procedure in which a surgeon removes cancer from the body[5]
- **Radiation therapy**: A type of cancer treatment that uses high doses of radiation to kill cancer cells and shrink tumors[5]
- **Systemic drug therapy (chemotherapy, targeted therapy, hormonal therapy, and immuno-therapy)**: Cancer treatment that uses drugs to kill or slow down the replication of cancer cells[5]

According to projected patient universe estimates from Ipsos' India Oncology Monitor for the January – December 2019 timepoint, 0.7 million cancer patients received a systemic drug therapy, a figure that had been gradually increasing from an estimate of 0.3 million for the January – December 2015 annual timepoint (figure 2).

Figure 2: Projected number of drug-treated cancer patients in India over time



SOURCE: Ipsos India Oncology Monitor (January 2015 – December 2019), physicians reporting on ~7700 cancer patients seen in consultation (min-max range per wave), data collected both online and via pen and paper methodology. Participating physicians were primary treaters and saw a minimum number of patients per month. Sample data were projected to the wider clinical population. Data © Ipsos 2022, all rights reserved.

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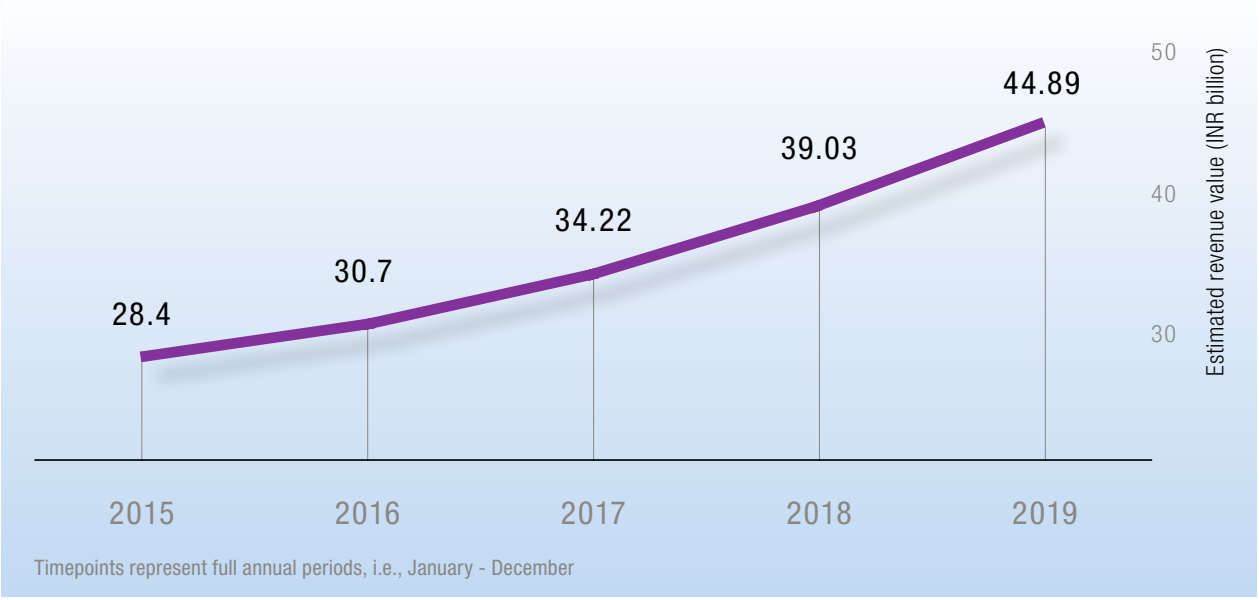
To cater to this ever-increasing number of drug-treated cancer patients, approximately 60+ pharmaceutical companies (Indian as well as multinationals) are actively involved in sales and marketing of anti-cancer drugs in India.

It is not only Ipsos' drug-treated patient cohort data that suggests growth: Ipsos' Oncology Sales Audit data estimated the revenue size of the Indian oncology drug market to stand at ~INR 45 billion in 2019, exhibiting a compound annual growth rate (CAGR) of 12% during the last 4 years, since 2015 (figure 3).

Figure 3: Indian oncology market revenue estimates in INR billion over time



SOURCE: Ipsos India Oncology Sales Audit (Jan 2015 – Dec 2019), reporting Net Realized Value of all brands marketed by ~ 60 Oncology companies across India. Data collected using open-source intelligence and telephone interviews. Participants include sales/marketing personnel from pharmaceutical companies and pharmaceutical distributors. Data © Ipsos 2022, all rights reserved.

Based on trended data from both our India Oncology Monitor and the India Oncology Sales Audit, at the beginning of 2020 we had also extrapolated two further estimates: the number of drug-treated cancer patients in India in 2020 would reach approximately 0.83 million, and the estimated revenue value from the corresponding oncology drugs market would reach a value of INR 50 billion, for the same time period.

However, these estimates could obviously not account for the advent of the COVID-19 pandemic that started to take hold within India in March 2020. Using a third study type conducted by Ipsos, the following section outlines key examples of specific areas of impact the pandemic had on the oncology treatment market in India and how this affected total drug-treated patient and revenue estimates.

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THE IMPACT OF THE COVID-19 PANDEMIC

The COVID-19 pandemic radically altered the landscape of healthcare systems, leading to concerns about its subsequent impact on non-COVID disease conditions, such as cancer.

During the complete nationwide lockdown in India between 25th March – 31st May 2020, nearly 70% of cancer patients could not access life-saving surgeries and treatment[6]. Chemotherapy treatments and follow-ups were postponed[7], and private clinics in major Indian cities reported a ~50% decrease in patient footfall for cancer care[8]. Even after restrictions were downscaled in a phased manner from June 2020, there remained a backlog of patients with cancer who needed urgent care.

To help understand the breadth and depth of these unprecedented events, Ipsos conducted the India Oncology HCP COVID-19 Impact Assessment Study – a research study consisting of approximately 50 sampled oncologists completing an online perceptual survey to gauge specific effects of the pandemic they anticipated, or had experienced, on their managed cancer patient workload. The study consisted of two waves: the first wave being conducted in May 2020 and the second during December 2020.

When analyzing the stated cancer patient numbers managed pre- and during the pandemic, participating oncologists reported seeing, on average, 65% fewer patients in May 2020 compared to pre-COVID levels. One may have imagined a regular flow of patients to start after the initial lockdown, but this was not reflected in our data. Whilst our data showed the reported patient footfall to improve by December 2020, it was not close to pre-COVID-19 levels despite it being six months after lifting of the lockdown restrictions: sampled oncologists reported a 25% lower patient footfall in December 2020 compared to their pre-pandemic practice. The reported percentage decline amongst new cancer patients being managed was even more pronounced: new patient presentations in the December 2020 wave of the Impact study were 34% lower than pre-pandemic levels, as reported by sampled oncologists (figure 4).

Figure 4: Sampled physician reported impact on weekly cancer patient case load due to COVID-19 pandemic

Impact on total patient caseload/per week: ALL CANCER PATIENTS					
	PRE COVID-19	Study wave 1 (May 2020)	% change vs pre-COVID-19	Study wave 2 (Dec 2020)	% change vs pre-COVID-19
Average # patients seen per week (Dr reported)	158	55	↓-65%	118	↓-25%

Impact on total patient caseload/per week: NEW CANCER PATIENTS					
	PRE COVID-19	Study wave 1 (May 2020)	% change vs pre-COVID-19	Study wave 2 (Dec 2020)	% change vs pre-COVID-19
Average # patients seen per week (Dr reported)	47	13	↓-72%	31	↓-34%

SOURCE: Ipsos India Oncology HCP COVID-19 Impact Assessment Study (wave 1: May 2020, wave 2: December 2020, ~50 physicians each wave, data collected online. Participating physicians were primary treaters and saw a minimum number of patients per month). Data @ Ipsos 2022, all rights reserved.

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During the complete nationwide lockdown in India, nearly 70% of cancer patients were unable to access life-saving surgeries and treatment.

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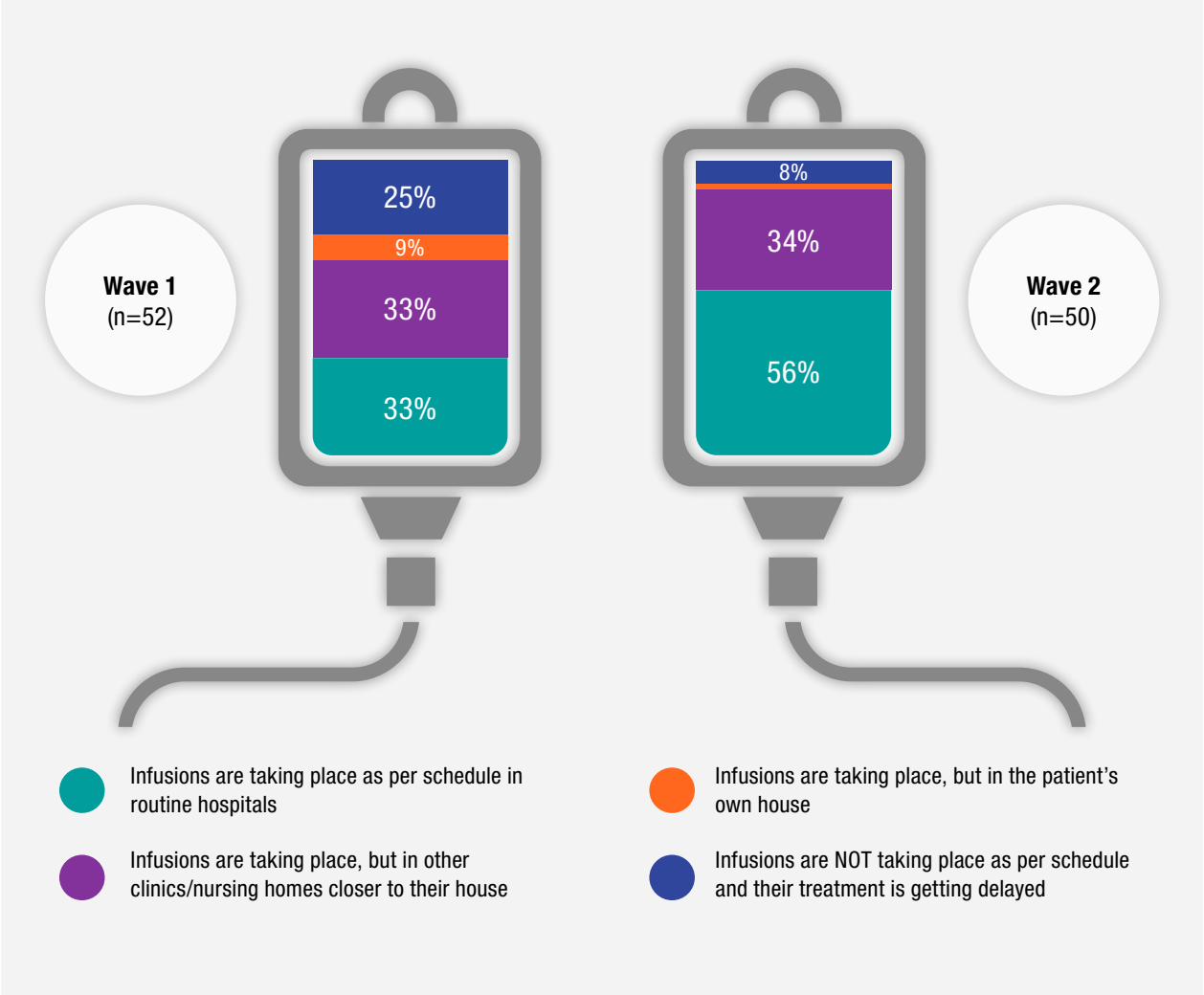
Even after being able to consult with their physicians, there was evidence in our data that managed patients were still facing delays in receiving specific cancer treatment: figure 5 below shows that during wave 1 of the Impact Study, sampled oncologists indicated that 25% of cancer infusion treatments were not taking place and were delayed. This dropped to 8% by wave 2 but continued to highlight that normality had not necessarily returned for all treatments.

Figure 5: Sampled physician reported impact on continuity of infusions due to COVID-19 pandemic



SOURCE: Ipsos India Oncology HCP COVID-19 Impact Assessment Study (Wave 1: May 2020, wave 2: December 2020, ~50 physicians each wave, data collected online. Participating physicians were primary treaters and saw a minimum number of patients per month). Data @ Ipsos 2022, all rights reserved.

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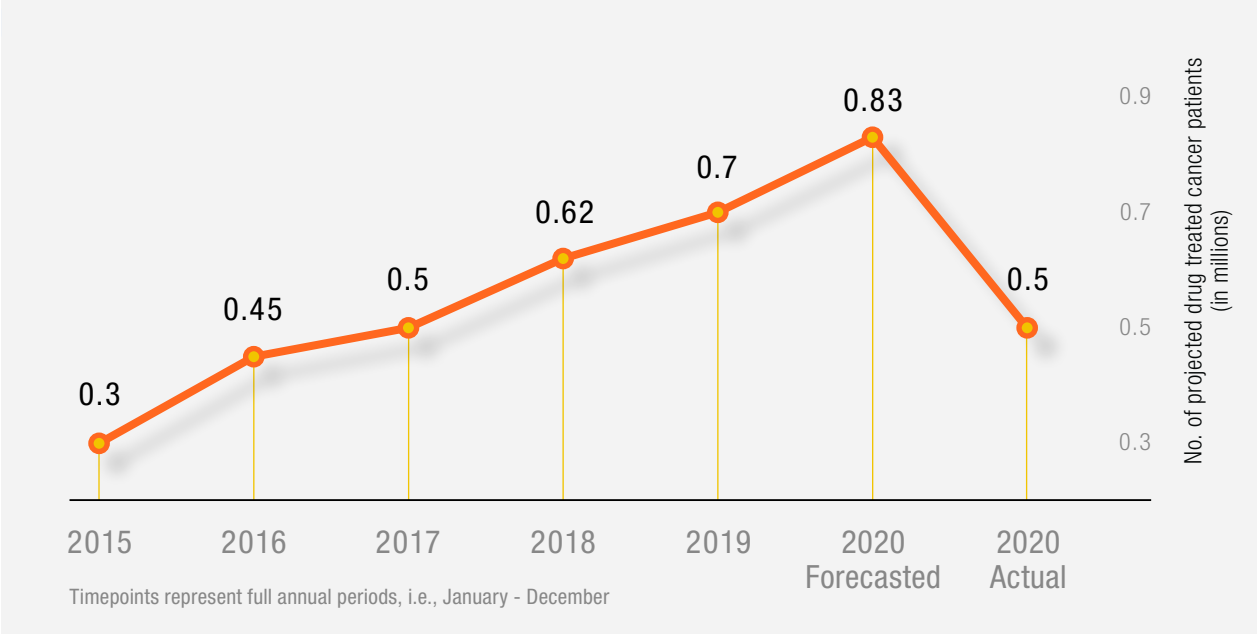
As a result of such disruptions to the oncology market due to the pandemic, we adjusted our original estimate of 0.83 drug treated cancer patients in 2020 in the India Oncology Monitor to 0.5 million, i.e., 40% lower than originally estimated (figure 6).

Figure 6: Projected number of drug-treated cancer patients in India over time



SOURCE: Ipsos India Oncology Monitor (January 2015 – December 2019), physicians reporting on ~7700 cancer patients seen in consultation (min-max range per wave), data collected both online and via pen and paper methodology. Participating physicians were primary treaters and saw a minimum number of patients per month. Sample data were projected to the wider clinical population. Data © Ipsos 2022, all rights reserved.

Cancer management is time sensitive, and it is therefore reasonable to presume that the aforementioned disruptions in patient-to-physician consultations led to delays in diagnosis of cancers. Our data suggested that any delay in diagnosis led to more patients being diagnosed with advanced cancers, vs pre-pandemic levels. For example, when reviewing our India Oncology Monitor data, 34% of reported breast cancer patients in the July 2019 – June 2020 annual timepoint were considered 'de novo', i.e., already deemed metastatic/stage IV at time of diagnosis[9], vs. 44% in the January – December 2020 annual timepoint and 54% in the July 2020 – June 2021 annual timepoint (unprojected patient base sizes ranging from 647 – 721).

Oncology drug revenue values were not spared either from the COVID-19 impact. Using Ipsos' Oncology Sales Audit data in India, estimated annual market revenue values dropped for the first time in our recorded history to achieve a projected estimate of INR 39.6 billion for the 2020 annual timepoint – this represents a 12% decline compared to our estimated 2019 value (and a 21% dip compared to our original 2020 annual pre-pandemic estimate) (see figure 7).

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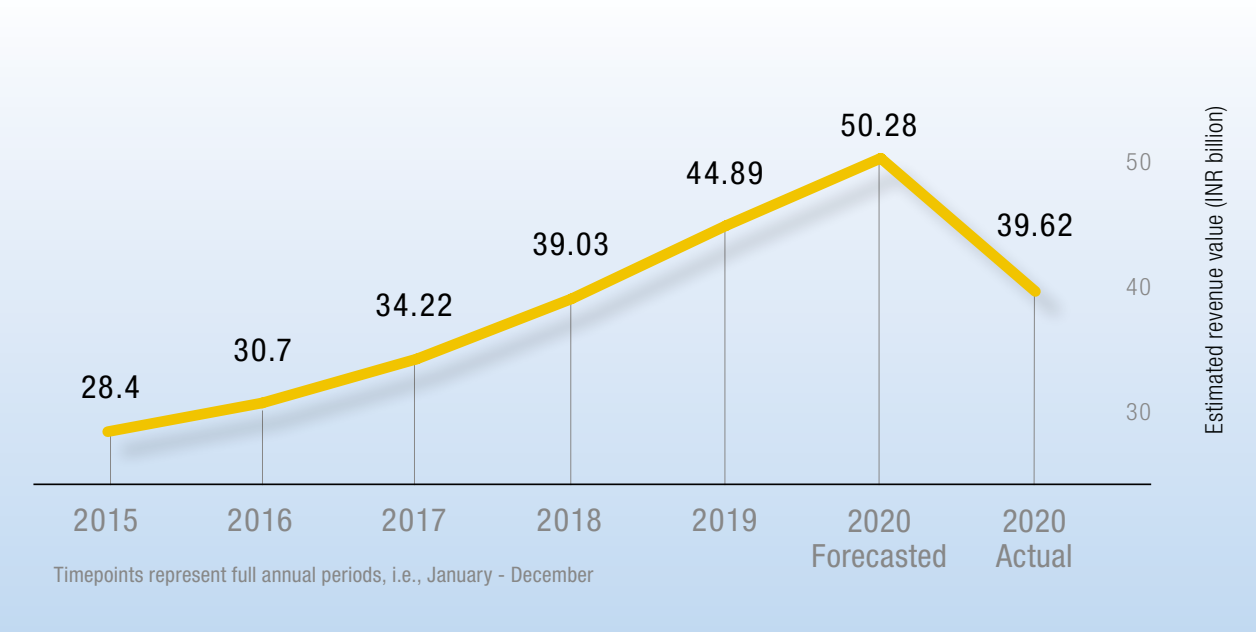
Figure 7: Indian oncology market revenue estimates in INR billion over time



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In April 2021, a second wave of the pandemic hit India. However, this time around cancer care was less impacted as healthcare systems had modified their ways of delivering cancer care based on learnings and knowledge acquired from the first wave. Government authorities regulated the lockdowns locally instead of nationally.

As the majority of healthcare staff were already vaccinated, systems were largely able to work at full capacity. Cancer care protocols were remodeled to ensure treatments were delivered with similar intensity but required fewer hospital visits. These modifications helped cancer treatment to continue through the second wave of COVID-19, resulting in an increase in the total estimated projected number of drug-treated patients in the India Oncology Monitor for the annual timepoint July 2020 - June 2021 of 0.56 million, compared to the Jan - Dec 2020 timepoint estimate of 0.5 million. Whilst the July 2020 – June 2021 estimate continues to show variance compared to the pre-pandemic levels, we at Ipsos believe the outlook for cancer care in India is now holding more promise.

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As India increases its COVID-19 vaccine coverage – with over 80% of its eligible population being vaccinated with both doses by mid-February 2022 – the overall outlook is positive.

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LOOKING FORWARD

The COVID-19 pandemic did cause serious damage to cancer care; however, the way healthcare systems, healthcare workers and patients have adapted to the new normal is no less than a miracle. India's story of triumph is even more inspiring given the challenges it faces due to its huge population and an already overburdened healthcare system.

We feel the COVID-19 pandemic served as a much-needed wake up call for the Government agencies to understand the importance of healthcare and its inter-linkages with other key sectors of the economy[10]. The Government of India has set the target of increasing health expenditure to 2.5% of GDP by 2025 to fulfill the healthcare needs[10]. It has also strengthened its resolve to address unmet needs and long-term survival in cancer patients by launching multiple initiatives and schemes to help patients. The Ayushman Bharat scheme is one such major flagship initiative which provides comprehensive insurance coverage to 100 million poor and vulnerable families. It also seeks to establish 150,000 health and wellness centers throughout India[11].

There has also been a significant change in the way care is delivered. The rapid implementation of telehealth within cancer services – the adoption of which has previously been slow and fragmented – has largely been successful and may offer permanent and long-term value in enhancing cancer care quality and access. As a result, India has witnessed a most significant change in terms of the care moving towards patients in tier-2 and tier-3 cities. Prior to the pandemic, patients from these cities would come to tier-I cities for treatment; with COVID-19 that was not possible, and so access has been opened up via telehealth. Much of this is happening through the Internet and often manifests itself in the form of e-consultations, tele medicine and other such forms of intervention. The launch of the National Digital Health Mission (NDHM) and National Digital Health Blueprint (NDHB) underscores the value that the government attaches to the digitization of healthcare.

As India increases its COVID-19 vaccine coverage - with over 80% of its eligible population being vaccinated with both doses by mid-February 2022[12], and vaccination coverage crossing 178.9 crore (unit of value equal to 10 million) as of 7th March 2022[13] - the overall outlook is positive.

A lesson learned for the future is that sufficient and significant resources in terms of funding, staff and technology are required to address the gaps in cancer care and the disruptions to services caused by the pandemic and to avoid a future health crisis of late diagnoses and increased cancer mortality.

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About the Research

The Ipsos India 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. Data used in this article were collected both online and via pen and paper. Sample patient data are projected to the wider clinical population. Sample sizes are provided alongside the relevant charts. The India 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

The Ipsos India Oncology Sales Audit reports the Net Realized Sales Value of approximately 185 anti-cancer drugs and their ~1400 brands at a Stock Keeping Unit (SKU) level, marketed by ~ 60 Oncology companies across India. Data is collected using open-source intelligence (secondary research) and telephone interviews (n=~250). Participants for primary interviews are sales/marketing personnel from pharmaceutical companies and pharmaceutical distributors.

The Ipsos Oncology HCP COVID-19 Impact Assessment Study is a syndicated perceptual study gathering perspectives of cancer-treating physicians on the impact of COVID-19 on key aspects of treatment and patient management in oncology. Participating physicians were primary treaters and saw a minimum number of patients per month. Data were collected online. Sample sizes are provided alongside the relevant chart.

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