

Cancer treatment landscape in India

Kelvin Xavier*

Department of Medicine and Health, the University of Sydney, Sydney, Australia

AUTHORS' CONTRIBUTION: (A) Study Design · (B) Data Collection · (C) Statistical Analysis · (D) Data Interpretation · (E) Manuscript Preparation · (F) Literature Search · (G) No Fund Collection

ABSTRACT

Cancer treatment comes in a variety of forms. Your cancer's kind and degree of advancement will determine the sort of treatment you get. Some cancer patients receive just one therapy. The majority of patients, however, have several therapies, such as surgery along with chemotherapy and/or radiation therapy. Immunotherapy, targeted treatment, and hormone therapy are other options. Cancer is a condition in which a few of the body's cells grow out of control and spread to other bodily regions. The human body, which contains billions of cells, may develop cancer practically everywhere. Human cells often divide to create new cells as needed by the body. This process is known as cell growth and multiplication. A new cell replaces an old one when it dies or is damaged. Sometimes, this systematic process fails, causing damaged or aberrant cells to proliferate when they shouldn't. Tumours, which are tissue masses, might develop from these cells. Tumours can be malignant or not (benign).

Keywords: Cancer; Treatment; Immunotherapy; Cancer diagnoses; Screening

INTRODUCTION

India's population is primarily concentrated in rural areas. However, there is a substantial discrepancy between demand and availability for healthcare in India's rural areas. Lack of basic infrastructure prevents many district hospitals and even regional cancer centres from offering high-quality cancer care. Because there are few substantial cancer centres, most of which are in major cities, a sizable fraction of affected individuals must travel long distances to access them. The patient's financial burden is considerably increased by this movement, and the cancer centres' ability to give effective care is hampered by the unbalanced patient load. India has a high incidence to mortality ratio when compared to the industrialized countries. Less than 30% of cancer patients live for five or more years after being diagnosed. One of the main causes of the nation's inadequate access to cancer care is the lack of timely and cheap cancer diagnoses, as well as the high cost of cancer treatments and the disparity between urban and rural areas. The major point of India's cancer treatment system is a lack of infrastructure and human resources. Overall, a key hurdle is the density and dispersion of trained primary and secondary healthcare staff. There is a startling disparity in the country's doctor population distribution, with metropolitan regions having 4 times as many physicians as rural ones. Cancer patients in India frequently need to consult a medical oncologist for palliative treatment due to their advanced stage of disease. Less than 350 medical oncologists are thought to treat an astonishing 3000 new cases annually, mostly in private settings. Along with the lack of human resources, the nation lacks the necessary physical infrastructure to provide optimum cancer care [1-5]. Although the causes of the incidence's sharp increase are multifaceted, population growth and aging may be experimentally linked to it. Importantly, rising risk behaviours like poor eating habits, inactivity, and hazardous alcohol and cigarette use all contribute to the increase in instances. Around 70% of cancer-related fatalities, according to the World Health Organization (WHO), take place in low- and middle-income nations. More than half of fatalities in India are attributable to non-communicable diseases (NCDs), with cancer being one of the main causes. The burden of cancer-related morbidity and death in the nation is growing, and factors such as late-stage presentation, limited access to appropriate diagnosis and treatment, and cost all contribute to this trend. The gaps in cancer care have grown even worse with the current COVID-19 epidemic. Patient outcomes are likely to be affected both directly and indirectly by changes in health-seeking behaviour as well as the accessibility and availability

Address for correspondence:

Kelvin Xavier
Department of Medicine and Health, the University of Sydney,
Sydney, Australia
E-mail: xavierkelvin@rediff.com

Word count: 1294 **Tables:** 00 **Figures:** 00 **References:** 10

Received: 01.07.2023, Manuscript No. ipacr-23-13973; **Editor assigned:** 03.07.2023, PreQC No. P-13973; **Reviewed:** 17.07.2023, QC No. Q-13973; **Revised:** 22.07.2023, Manuscript No. R-13973; **Published:** 28.07.2023

of critical services from screening through treatment. It is crucial to raise public knowledge of prevention, especially given the nation's resource constraints. Patients who are less likely to recognize cancer symptoms and warning signs are more likely to wait longer to seek medical attention. Furthermore, psychological obstacles like anxiety, fear, and stigma have a significant impact on the behaviour of those seeking assistance. There is evidence to support the claim that the Indian people have little knowledge about screening's accessibility.

The diagnosis's stage has a significant impact on the course of treatment and long-term prognosis. In primary care settings, cancers are often found or at least assumed to exist. General practitioners (GPs) serve as "gatekeepers" by determining early presentations, gauging presymptomatic risk, compiling crucial patient data, and making decisions about further research or referrals. However, GPs lack the education and tools necessary to recognize malignancies in their early stages or to analyse data from a patient's presentation. This lack of knowledge among the general population and primary care professionals may account for the advanced disease state at diagnosis that is frequently seen in cancer patients in India.

There are several methods and medications for treating cancer, and many more are being researched. Some therapies, like as surgery and radiation therapy, are "local" and are used to treat a particular tumour or region of the body. Because they can have an impact on the entire body, drug therapies (such as chemotherapy, immunotherapy, or targeted therapy) are sometimes referred to as "systemic" treatments. The most typical cancer treatment options here.

1. Surgery
2. Chemotherapy
3. Radiation treatment
4. Targeted Treatment
5. Immunotherapy
6. Bone marrow or stem cells
7. Hormone Replacement Therapy

Primary treatment is to completely remove the cancer from your body or kill all the cancer cells. Any cancer treatment can be used as a primary treatment, but the most common primary cancer treatment for the most common types of

cancer is surgery. If your cancer is particularly sensitive to radiation therapy or chemotherapy, you may receive one of those therapies as your primary treatment [6-8].

In order to lessen the likelihood that the cancer may recur, adjuvant therapy involves eliminating any cancer cells that could still be present after initial treatment. Adjuvant therapy can be used to any cancer treatment. Chemotherapy, radiation therapy, and hormone therapy are examples of common adjuvant treatments. Neoadjuvant therapy is similar, but it involves administering medications before to the primary therapy in an effort to facilitate or improve the effectiveness of the latter [9,10].

Palliative care can help with cancer-related symptoms as well as adverse effects from therapy. Symptom relief techniques include hormone treatment, chemotherapy, radiation, and surgery. Other drugs may help with symptoms including pain and breathlessness. Palliative care can be administered along with other cancer-curing procedures.

CONCLUSION

Making cancer treatment inexpensive requires pragmatic cancer care guidelines that encourage the best possible use of resources and minimize excessive dependence on and consumption of tests. Across the spectrum of cancer treatment, an evidence-based strategy with the deployment of harmonised and standardized clinical protocols should be encouraged. The optimum use of treatment resources should be taught to medical professionals and support employees without sacrificing patient safety or service quality. To eventually become less resource-intensive, more thorough, and more precise, they should integrate early diagnosis with precision medicine. Palliative care should begin as early as feasible in the patient's medical journey and be provided for the duration of the illness. Palliative care should take a comprehensive, multidisciplinary approach and address the patient's psychological, emotional, coping, and caregiver needs in order to enhance their overall quality of life. During or after cancer treatment, digitally driven patient support programs can successfully augment outpatient care with in-home care, such as that needed for pain management or rehabilitation.

REFERENCES

1. Hage WD, Aboulafia AJ, Aboulafia DM. Incidence, location, and diagnostic evaluation of metastatic bone disease. *Orthop Clin North Am.* 2000; 31(7): 515-528.
2. Forsberg JA, Sjoberg D, Chen QR, et al. Treating metastatic disease: Which survival model is best suited for the clinic? *Clin Orthop Relat Res.* 2013; 471(6): 843-850.
3. Kachnic LA, Pugh SL, Tai P, et al. RTOG 0518: Randomized Phase III Trial to Evaluate Zoledronic Acid for Prevention of Osteoporosis and Associated Fractures in Prostate Cancer Patients. *Prostate Cancer Prostatic Dis.* 2013; 16(2): 1-10.
4. Kumar S, Kashyap P. Antiproliferative activity and nitric oxide production of amrthanolic extract of *Fraxicus micrantha* on michigan cancer foundation-7 mammalian breast carcinoma cell line. *J Intercult Ethnopharmacol.* 2015; 4(8): 109-113.
5. Coleman RE, Lipton A, Roodman GD, et al. Metastasis and bone loss: advancing treatment and prevention. *Cancer Treat Rev.* 2010; 36(9): 615-620.
6. Ruggieri P, Mavrogenis AF, Casadei R, et al. Protocol of surgical treatment of long bone pathological fractures. *Injury.* 2010; 41(6): 1161-1167.
7. Selvaggi G, Scagliotti GV. Management of bone metastases in cancer: a review. *Critical reviews in oncol hematol.* 2005; 56(8): 365-378.
8. Bauer HC. Controversies in the surgical management of skeletal metastases. *J Bone Joint Surg Br.* 2005; 87(7): 608-617.
9. Kachnic LA, Pugh SL, Tai P, et al. RTOG 0518: Randomized Phase III Trial to Evaluate Zoledronic Acid for Prevention of Osteoporosis and Associated Fractures in Prostate Cancer Patients. *Prostate Cancer Prostatic Dis.* 2013; 16(2): 1-10.
10. Toma CD, Dominkus M, Nedelcu T, et al. Metastatic bone disease: a 36-year single centre trend-analysis of patients admitted to a tertiary orthopaedic surgical department. *J Surg Oncol.* 2007; 96(5): 404-410.