



Evolution of Cancer Care in Karnataka

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Abstract

Cancer care in Karnataka started in the nineteenth century with the foundation stone of Victoria Hospital in Bangalore. After that the regional cancer center Kidwai in Bangalore and now almost 44 AERB-approved Radiotherapy centers available all over Karnataka. Karnataka, especially Bangalore, have all the high-end cutting-edge technology for cancer care from robotic surgery, Tomotherapy, and CyberKnife Radiosurgery. With initiatives from the government, in all the medical colleges and private hospitals, poor patients are getting higher-end cancer treatment for free under the Ayushman Bharath scheme. We wish cancer care in Karnataka sees more and more new technologies and treatment to conquer the disease, which human battling for centuries.

Keywords Cancer · Karnataka · Bangalore

Cancer care in Karnataka started in the nineteenth century with the foundation stone of Victoria Hospital. The department of Radiotherapy at Victoria Hospital was inaugurated by then Prime Minister Shri Lal Bahadur Shastri on 23 January 1965, in the presence of Chief Minister Shri Kengal Hanumanthaiah. The Telecobalt (Theratron 60 with Beam Stopper) machine was a gift from the Canadian Government to this state. It is the first cancer center with a Radiotherapy facility in Karnataka. The first deep X-ray therapy (400 kV) unit was installed, and patients were treated here. Radium was used here for brachytherapy procedures. Postgraduate courses started in 1973, and in 1976–1977, the Radio diagnosis and Radiotherapy specialty was bifurcated. The first head of the department (HOD) for the combined Radiognosis and Radiotherapy was Dr. Gurudas; further, Dr. Chandrashekar R was the first Radiotherapy HOD. Now, the department has a Telecobalt (Theratron 780c) commissioned in 2002 and a high-dose-rate brachytherapy machine.

KMIO [1] was conceived by the city fathers as far back as 1957 as a private venture; it was the taking over of the project by the government of Karnataka in 1971 that finally set

the ball rolling to the inauguration of the institute on 26 June 1973. Then, it became autonomous and was inaugurated by the union minister of education, health, and social welfare Sri. B. Shankaranand in 1980, and the first director of the institute, Dr. M. Krishna Bhargava, took charge. Kidwai become the population-based cancer registry in December 1981 under the auspices of the National Cancer Registry Programme of the Indian Council of Medical Research. The postgraduation courses for surgical, medical, and Radiation oncology were started by Padma Shri awardee Dr. K.S. Gopinath (Surgical oncologist) and Dr. G. Kilara (Radiation oncologist). The hospital has an inpatient bed strength of 640 apart from the Dharmashala—a unique project of its kind in the country providing accommodation to about 250 ambulatory cancer patients along with 250 patients' attendants. These patients and attendants at Dharmashala are provided with free food through the Perpetual Free Feeding Endowment Donation Scheme.

On average, 700 patients attend this hospital every day for their follow-up treatment. Patients from all over Karnataka as well as from the 100 adjoining areas of neighboring states of Andhra Pradesh, Tamilnadu, Kerala, and other regions attend this hospital. Of the total cases registered every year, about 20% are from outside Karnataka. To start with the Radiation department, it had a cobalt machine only, but now in 2022, it holds 7 linear accelerators, 2 cobalt machines, and 2 HDR brachytherapy machines, and with an 800-bedded hospital [2].

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Ostomates group was started first in India with Bangalore as a headquarter in 1981 under the leadership of Dr. A.J. Narendran and Dr. K.S. Gopinath, which is a national body rehabilitating colostomy patients.

In Bangalore, Karunashraya has the distinction of being the first hospice in India to provide free home care for terminally ill cancer patients, which started in 1994 with a 73-bed inpatient facility. Karunashraya—literally meaning “abode of compassion”—is a joint project of the Indian Cancer Society (Karnataka chapter) and Rotary Bangalore Indiranagar. Karunashraya provides free-of-cost quality palliative care to advanced-stage cancer patients who are beyond curative medical treatment.

The Indian Cancer Society began its Karnataka chapter in 1986. It was started by Kishore Rao with a handful of volunteers, and today, with its base in Bengaluru, ICS Karnataka has two outreach offices in Mangaluru and Kalaburagi. The Indian Cancer Society Karnataka has spread its wings to 18 districts in Karnataka and touched the lives of over 35,000 beneficiaries in the last 5 years.

Karnataka Cancer Therapy and Research Institute Hubballi—comprehensive cancer care center was established in 1977 by R.B. Patil (Padma Shri awardee) and was inaugurated by then vice president of India Shree B.D Jatti. To start with, it was a 30-bedded hospital and currently has 150 beds. The institute included a cobalt radiotherapy unit, well-equipped OT, a pathology and chemotherapy section, along with *chatra* and *annadana*. The goal was to provide affordable treatment, free food, and accommodation for the patients.

To provide advanced technological investigations like CT, MRI, and nuclear scans for the people of the north Karnataka region, he established an NMR scan center in Hubballi. Now in 2022, the Radiation department holds a modern linear accelerator with image-guided radiation and a HDR brachytherapy machine.

The Department of Radiotherapy at Kasturba Medical College, Manipal, was the second center in Karnataka to offer dedicated treatment facilities for oncology when it was established in 1974. In 1992, with philanthropic support from the Shamdasani Foundation for the care of cancer patients, Shirdi Saibaba Cancer Hospital was established, and the department was one of the earliest centers in the state to acquire a linear accelerator. It was also among the earliest centers in the country to implement high-dose-rate brachytherapy. The department has had a well-established postgraduate program in Radiation oncology (MDRT) since 1976, with its alumni spread across the globe. In 1992 and 1993, the surgical oncology department and the medical oncology department started, respectively.

Belgaum Cancer Hospital was started by Dr. Sandeep Madwapathy in 1986. His vision is to have all the cancer facilities in Belgaum and wants to make it a mini Tata

Memorial Hospital. Now, it became KLE Hospital, which has Radiation oncology with a linear accelerator and HDR brachytherapy, medical oncology, and surgical oncology with all tertiary care.

In 1989, the first physician-driven private hospital for oncology started in Bangalore, the first of its kind in the country with the name Banashankari Medical and Oncology Research Centre, which later became Bangalore Institute of Oncology, started by a group of oncologists and now become a corporate chain of hospitals named as HealthCare Global (HCG), (Dr. B.S. Ajaikumar as chairman), which now has 27 oncology centers all over India and also overseas [3].

To start with, it was a 50-bedded hospital serving only oncology patients with a cobalt-60 radiotherapy unit and a manual after-loader brachytherapy unit. In 2003, a modern linear accelerator followed, which was able to give conformal radiation now with 250 beds, and all the latest technology under one roof goes with CyberKnife (robotic radiosurgery), Tomotherapy, and Robotic surgery.

The other medical colleges in Karnataka, which have a separate oncology department with all three specialities in Bangalore are M.S. Ramaiah Medical College has a modern linear accelerator, HDR brachytherapy machine, and IORT. St. John’s Medical College has a linear accelerator and HDR brachytherapy. Vydehi Medical College has a linear accelerator and brachytherapy machine. Baptist Hospital has a linear accelerator. Kolar Medical College has a cobalt machine and HDR brachytherapy machine. Mysore Medical College has a cobalt machine, while the other private hospitals in Bangalore that have an oncology department are Shankara, Apollo, Aster, Cytecure, BGS Hospital, Mazumdar Shaw Cancer Centre, Bangalore Cancer Centre, Oncoville, and many in the pipeline to come. Many small nursing homes also have oncofacility in terms of oncosurgery and chemotherapy.

New cancer cases in Karnataka are likely to increase to 97,130 cases by 2025—an 11.4% increase from the incidence of 85,968 cases in 2020 based on the current trends. In Karnataka, 44 AERB-approved radiotherapy centers are there, out of which, 20 centers are in Bangalore itself. In Bangalore, 13 oncology hospitals come under the National Cancer Grid [4], which is the national body of a network of major cancer centers, research institutes, patient groups, and charitable institutions across India with the mandate of establishing uniform standards of patient care for the prevention, diagnosis, and treatment of cancer, providing specialized training and education in oncology and facilitating collaborative basic, translational, and clinical research in cancer.

So, Karnataka, especially Bangalore, has all the high-end cutting-edge technology for cancer care from robotic surgery, tomotherapy, and CyberKnife radiosurgery. As an initiative from the government, in all the medical colleges and

private hospitals, poor patients are getting higher-end cancer treatment for free under the Ayushman Bharath scheme. We wish cancer care in Karnataka sees more and more new technologies and treatments to conquer the disease, which human battling for centuries.

Declarations

Competing Interests The authors declare no competing interests.

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