



Tata Memorial Centre Annual Report 2021-2022

**80 years on:
Radon to Proton**





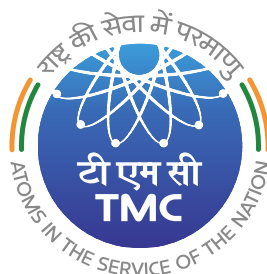
Dr Srikumar Banerjee
(25.04.1946–23.05.2021)

Chairman, Atomic Energy Commission (AEC)
&
Secretary, Department of Atomic Energy (DAE)
(30.11.2009–30.04.2012)

Director, Bhabha Atomic Research Centre (BARC), Mumbai
(30.04.2004–19.05.2010)

Recipient of the Padma Shri, 2005.

ANNUAL REPORT 2021–2022



Tata Memorial Centre

(A Grant-in-Aid Institute of the Department of Atomic Energy, Government of India.)

- **Tata Memorial Hospital, Mumbai**
- **Advanced Centre for Treatment, Research and Education in Cancer, Navi Mumbai**
- **Centre for Cancer Epidemiology, Navi Mumbai**
- **Homi Bhabha Cancer Hospital and Research Centre, Visakhapatnam**
- **Homi Bhabha Cancer Hospital, Sangrur**
- **Mahamana Pandit Madan Mohan Malaviya Cancer Centre, Varanasi**
- **Homi Bhabha Cancer Hospital, Varanasi**
- **Dr Bhupaneswar Borooah Cancer Institute, Guwahati.**



The TMC-DAE Cancer Centres & Hospitals across India

Director, TMC; Dr. RA Badwe

Director, Academics-TMC; Dr. SD Banavali

Deputy Director, Academics-TMC; Dr. SS Laskar

Director, Admin. (Projects)-TMC; Mr Sanjeev Sood (till 28.02.2021)

Chief Administrative Officer, TMC; Mr. AN Sathe

Chief Engineer, TMC; Mr. GS Dhanoa

Chief Security Officer, TMC; Mr Johnson Lukose

Joint Controller of Finance & Accounts, TMC; Mr Suryakant Mohapatra

Head Information Technology, TMC; Mr. VN Marathe.

*** Other than the above mentioned, only the permanent medical staff of TMH, ACTREC & CCE are directly affiliated to TMC.**

Tata Memorial Hospital (TMH), Mumbai

Director, Dr. CS Pramesh

Deputy Director, Dr. SV Shrikhande.

Advanced Centre for Treatment, Research & Education in Cancer (ACTREC), Navi Mumbai

Director, Dr Sudeep Gupta

Deputy Director, Cancer Research Institute, Dr Prasanna Venkatraman

Deputy Director, Cancer Research Centre, Dr Navin Khattry.

Centre for Cancer Epidemiology (CCE), Navi Mumbai

Director, Dr Rajesh Dikshit

Deputy Director, Dr Pankaj Chaturvedi.

Homi Bhabha Cancer Hospital & Research Centre (HBCHRC), Visakhapatnam

Director, Dr. Umesh M. Mahantshetty

Officer in Charge, Dr. DC Chaukar (TMH).

**Homi Bhabha Cancer Hospital & Research Centre (HBCHRC), Mullanpur
& Homi Bhabha Cancer Hospital (HBCH), Sangrur**

Director, Dr Rakesh Kapoor (till 31.01.2022)
Deputy Director, Dr Ashish Gulia (from 30.12.2021)
Officer in Charge, Dr. PS Pai (TMH).

Mahamana Pandit Madan Mohan Malaviya Cancer Centre (MPMMCC), Varanasi

Director, Dr Satyajit Pradhan
Deputy Director, Dr Durgatosh Pandey
Dean, Academics (MPMMCC & HBCH), Dr. Shashikant CU Patne
Officer in Charge, Dr Pankaj Chaturvedi (CCE).

Homi Bhabha Cancer Hospital (HBCH), Varanasi

Director, Dr Satyajit Pradhan
Deputy Director, Dr Bal Krishna Mishra
Officer in Charge, Dr Pankaj Chaturvedi (CCE).

Homi Bhabha Cancer Hospital & Research Centre (HBCHRC), Muzaffarpur

Officer in Charge, Dr Pankaj Chaturvedi (CCE).

Dr Bhubaneswar Borooah Cancer Institute (BBCI), Guwahati

Director, Dr. Amal Ch. Kataki
Officer in Charge, Dr Sarbani Ghosh-Laskar (TMH).



The Governing Council



Chairman

Shri Kamlesh Nilkanth Vyas
Chairman, Atomic Energy Commission &
Secretary, Department of Atomic Energy,
Government of India (GOI).

Members, Ex Officio

Mr Sanjay Kumar
Joint Secretary (Admin & Accounts),
Department of Atomic Energy, GOI.

Dr. RA Badwe
Director, Tata Memorial Centre (TMC),
Mumbai.

Co-opted Members

Mrs Richa Bagla
Joint Secretary (Finance),
Department of Atomic Energy, GOI.

Dr Snehalata Deshmukh
Ex-Vice Chancellor,
University of Mumbai.

Members

Dr. NK Ganguly
Former Director General,
Indian Council of Medical Research (ICMR),
New Delhi.

Shri Jayant Kumar Banthia
Ex-Chief Secretary,
Government of Maharashtra.

Mr Lakshman Sethuraman (till 13.10.2021)
Head of Support Services,
Sir Dorabji Tata Trust, Mumbai.

Mr. N Srinath (from 13.10.2021)
Sir Dorabji Tata Trust,
Mumbai.

Mr. RA Mashelkar (from 13.10.2021)
Sir Dorabji Tata Trust,
Mumbai.

Mr Vijay Singh
Vice Chairman, Sir Dorabji Tata Trust,
Mumbai.

Permanent Invitees

Shri AR Sule (from 13.10.2021)

Joint Secretary (I&M), Department of Atomic Energy, GOI.

Mr Sanjeev Sood (till 28.02.2021)

Director Admin. (Projects), Tata Memorial Centre (TMC), Mumbai.

Dr. SD Banavali

Director of Academics, Tata Memorial Centre (TMC), Mumbai.

Dr. CS Pramesh

Director, Tata Memorial Hospital (TMH), Mumbai.

Dr Sudeep Gupta

Director, Advanced Centre for Treatment, Research & Education in Cancer (ACTREC),
Navi Mumbai.

Dr Rajesh Dikshit

Director, Centre for Cancer Epidemiology (CCE), Navi Mumbai.

Dr Satyajit Pradhan

Director, Mahamana Pandit Madan Mohan Malaviya Cancer Centre (MPMMCC) & Homi Bhabha
Cancer Hospital (HBCH), Varanasi.

Dr. Amal Ch. Kataki

Director, Dr. B. Borooah Cancer Institute (BBCI), Guwahati.

Dr. Umesh M. Mahantshetty

Director, Homi Bhabha Cancer Hospital &
Research Centre (HBCHRC), Visakhapatnam.

Dr Rakesh Kapoor (till 31.01.2022)

Director, Homi Bhabha Cancer Hospital & Research Centre (HBCHRC), Mullanpur.

Secretary

Mr. AN Sathe

Chief Administrative Officer,
Tata Memorial Centre (TMC), Mumbai.



Mission and Vision of Tata Memorial Centre



Mission

The Tata Memorial Centre's mission is to provide comprehensive cancer care to one and all, through its motto of excellence in service, education and research.

Vision

As the premier cancer centre in the country, we will provide leadership in guiding the national policy and strategy for cancer care by:

- Promoting outstanding services through evidence-based practice of oncology.
- Commitment of imparting education in cancer to students, trainees, professionals, employees, and the public.
- Emphasizing on research that is affordable, innovative, and relevant to the needs of the country.

Contents

The TMC-DAE Cancer Centres & Hospitals across India.....	ii
The Governing Council.....	iv
Mission & Vision of TMC.....	vi
Message, TMC Director.....	1
The Progress	
Funding	4
Happenings.....	6
Summarization	
Abstract.....	12
Specifics.....	26
Scientific Methodology	
Clinical Research Secretariat.....	31
Research Administrative Council.....	36
Scholarly	
Message, TMC Academics Director.....	40
The Academia.....	42
University Degrees.....	45
National Cancer Grid	
National Cancer Grid (NCG).....	47
Financial Audit	
Accounts, Statement.....	52
Action Taken Report.....	75
Auditor's Report.....	79
Finance, Simplified.....	82

TMC Director, Message



The year 21-22 marked recovery from the Covid pandemic and shifting focus back to the mission of TMC. During the pandemic TMC looked after Covid cases with cancer at all its centres reserving close to 40% of services for the purpose. In spite of most trying times during the pandemic we were able to deliver 60% of cancer care that we would otherwise deliver annually before pandemic. Ours was one of the few cancer hospitals across the globe that continued cancer care over and above caring for Covid patients. The friends of TMC across the globe rallied to support during the pandemic. We were able to get over 10000 portable oxygenators and 15 oxygen generators of larger volume capable of supporting ICU and wards. These were distributed across India in all states and saved many lives. Air India offered unconditional and sustained support airlifting the freight at no cost to various destinations across India so that much needed oxygen reached where it was most needed.

As the venom in the virus dissipated and severity of disease reduced we changed our focus to cancer care for India. Centres in Varanasi, Punjab, Bihar, Andhra Pradesh, Assam and Maharashtra resumed cancer care full throttle and had a surge of patients who could not be treated during the pandemic. At times the monthly registration exceeded 130% of what was expected compared to the numbers before the pandemic. The staff deserved huge appreciation for working beyond the call of duty to look after suffering men and women.

Over and above commissioning of services at all the centres across India, a lot of firsts for the region and globally were recorded during this year. The first bone marrow transplant for leukemia in adult as well as the first in children in UP was successfully carried out in Homi Bhabha Cancer Hospital and research centre in Varanasi. Over 10 patients received CAR T cell therapy each at a cost less than rupees 25 lacs. The cost of each such therapy in USA is half a million dollars (Rs 4 crores). This was possible due to cross talk between IIT Mumbai and ACTREC with generous support from Tata Trust. A similar crosstalk has been initiated with

Ayurvedic medicine and some landmark studies have begun. Harnessing internet and AI, Navya our second opinion service crossed 30,000 mark this year offering uniform evidence based care across not only India but globally at the doorstep of patient.

Looking after the national need for cancer related manpower, almost all centres running under the DAE increased their uptake for students in surgical, medical and radiation oncology. Need based creation of new manpower for niche areas served all our centres. The Kevat Navigator was the most successful course and at the ground level improved the quality of care for our patients and their compliance to treatment. A new cadre was also created called Kevat Assistant through a consolidated and compressed course of 1 year while HBNI granted a masters course in navigation which will begin next year. Many publications in high impact journals and podium presentations in prestigious meetings across the globe made a mark for TMC.

A handwritten signature in black ink, appearing to read 'Dr. RA Badwe', is positioned above the name.

Dr. RA Badwe

Progress

- Funding
- Happenings



Funding

The details (subject to audit) of Capital Projects sanctioned, Grants released and Expenditure incurred from April 2012 to March 2022.

(All figures in INR lakh)

Name	Sanctioned Cost	Grant Released	Expenditure Incurred
Tata Memorial Hospital, Mumbai, Maharashtra			
• Augmentation of Healthcare services & the Construction of new hospital building (to be called the Platinum Block)	93,800	3600	2777.64
• Advanced Facilities for Diagnostics & Services	29,755	29,755	26,996.21
• Infrastructure development	3658	0	0
• Augmentation & Upgradation of Medical equipment	45,087	0	0
• Information Technology Upgradation	3533	0	169.50
• Dharamshala & Doctors residential complex	8000	4949	7004.5
Total	1,83,833	38,304	36,947.85
ACTREC, Kharghar, Navi Mumbai, Maharashtra			
• Capacity building & development of Novel Cutting-edge Research activities	5655	0	0
• Basic & Translational Research in Cancer	7868	0	0
• Augmentation & Upgradation of equipment	27,501	0	0
• General Infrastructure	5857	70	68.20
• Repair & Maintenance of appliances & fixtures	3250	0	0
• Information Technology Upgradation	1800	155	38.10
• Animal Imaging	5355	300	392.34
• New Residential Hostel building (G+17) stand alone RCC structure	8627	0	0
• Advanced facilities for Cancer research & Nuclear medicine	24,960	19,275	19,392.65
• Programme to Control common women Cancers in Northeast India	4999	150	155.88
Total	95,872	19,950	20,047.17

Name	Sanctioned Cost	Grant Released	Expenditure Incurred
Dr Bhubaneswar Borooah Cancer Institute, Guwahati, Assam			
• Strengthening/Renovation/Refurbishing/Replacement, etc.	19,162	50	0
• New Ancillary building/Refurbishing/Retrofitting	13,185	100	82.66
Total	32,347	150	82.66
National Hadron Beam Therapy, ACTREC	46,800	43,700	44,464.25
Radiological Research Unit (RRU), ACTREC	2400	2400	2400
Women & Children Cancer Wing, ACTREC	3800	3734	3731.89
National Cancer Grid (NCG) - Upgradation of Major Nodes	7200	7200	7200
Establishment of HBCHRC, Visakhapatnam, Andhra Pradesh	55,678	39,398	39,590.76
Establishment of HBCH (Sangrur) & HBCHRC (Mullanpur), Punjab	66,374	33,037	32,734.37
Establishment of HBCH & MPMMCC, Varanasi, Uttar Pradesh	65,000	61,581	62,355.85
Establishment of HBCHRC, Muzaffarpur, Bihar	19,815	707	600.25
Grand Total	5,79,119	2,50,161	2,50,155.05



Happenings

Month	Events	Place
January, 2021	The Covid vaccination for TMH staff started at the KEM Hospital, Parel from the first week of January	TMH, Mumbai
	The process was initiated for the establishment of Institutional Ethics Committee (IEC) at HBCH, Sangrur and for HBCHRC, Mullanpur	HBCH, Sangrur & HBCHRC, Mullanpur
	According to PLoS One, a Stanford scientific journal, Dr Pankaj Chaturvedi was rated in the top 2% of the scientists in the world	CCE, Navi Mumbai
	The Outpatients clinic was started for HBCHRC, Muzaffarpur in the premises of SKMCH	HBCHRC, Muzaffarpur-Bihar
	A new Digital Radiography x-ray machine was installed on January 1	TMH
	Dr. CS Pramesh, Director TMH thanked the staff for their selfless work during the covid pandemic, in a letter dated January 6	
	Dr Nikhil Patkar isolated the Covid strain S-E484K for the first time in India, in three persons outside Mumbai on January 9. It was linked to the South Africa strain	ACTREC, Navi Mumbai
	Dr. RA Badwe, Director TMC was conferred the Pune Bhushan Puraskar by the Indian Medical Association, Pune on January 17	TMC
	Mr. SH Jafri, Senior PRO TMH was appointed as chairman of Mumbai chapter of the Public Relations Council of India (PRCI) on January 17	TMH
February	A letter of appreciation by Punjab government was given to HBCH for adherence to the Quality Certification standards of Ayushman Bharat-Sarbat Sehat Bima Yojna (AB-SSBY) of the PM-JAY scheme on January 26.	Sangrur
	The 15th issue (October 2019-March 2020) of the in-house SPANDAN e-magazine was released on February 1	TMH
	Mr. SH Jafri, Senior PRO TMH, was conferred with Honorary Doctorate in Humanities by the UN affiliated Baptista Peace University, on February 4	
	On the occasion of the World Cancer Day (February 4), the Indian Post, Mumbai Region, in collaboration with Tata Memorial Centre, released a Special Cover on cancer	TMC/TMH
	The Pulmonary Simulation Laboratory was inaugurated by Dr Anand Bang of Tata Trusts on February 8	TMH
	The first surgery for HBCHRC, Muzaffarpur was performed in SKMCH on February 11 by TMC Director, DR. RA Badwe	HBCHRC, Bihar
	The Minister of State for Health, Mr Ashwini Kumar Choubey was the Chief Guest for the Annual Day celebrations of MPMCC & HBCH on February 19-20	Varanasi

Month	Events	Place
February	The first 20-year Clinical Study, a landmark study proving that “Clinical Breast Examination should be the preferred screening method for breast cancer” Published in BMJ; ‘Effect of screening by clinical breast examination on breast cancer incidence and mortality after 20 years: prospective, cluster randomized controlled trial in Mumbai.’ Authors: Indraneel Mittra, Gauravi A Mishra, Rajesh P Dikshit, Subhadra Gupta, Vasundhara Y Kulkarni, Heena Kauser A Shaikh, Surendra S Shastri, Rohini Hawaldar, Sudeep Gupta, C S Pramesh, Rajendra A Badwe	ACTREC/TMH
	Mr Sanjeev Sood retired as Director Admin. (Projects), TMC on February 28	TMC
	The TMH annual Hospital Day celebrations were cancelled and the annual TMC Evidence-based Medicine conference was conducted virtually.	TMH/TMC
March	Contrast Enhanced Spectral Mammography machine with Digital Tomosynthesis was inaugurated by IPS officer, Smt. N. Ambika, Deputy Commissioner of Police, HQ 1, Mumbai on March 8 that marked the International Women’s Day	TMH
	In place of the TMH hospital day celebrations, a limited function was held on March 12 to felicitate employees who were in TMH service for more than 30 years	
	TMH began Covid vaccination for its staff members and their families (over 45 years of age) at the St. Xavier’s ground, Parel from March 23 onwards	
	The Maharashtra Housing & Area Development Authority (MHADA) promised to donate 200 flats to accommodate free of cost, out of station cancer patients and their relatives on March 24	
	Vaccum Assisted Biopsy machine for mammography was commissioned in the department of Radiodiagnosis (third in Mumbai city) on March 24	
	Private Outpatients, Intensive-care & Casualty services were started in the RT Block from March	HBCHRC, Vizag
	Cryoablation machine for Interventional Radiology was commissioned in the department of Radiodiagnosis on March 24.	TMH
April	3T MRI facility was commissioned from April 1	Vizag
	From the first week, TMH was designated as a vaccination centre for the general public in Mumbai	TMH
	Interventional services started at HBCH, Sangrur with DSA, RFA machine, and a new CT scanner from April 8	Sangrur
	The revision of the TMC Schedule of Charge (SoC) was approved by the Governing Council of TMC on April 8, during its 124 th meeting. The last change in the SoC was done in the year 2018	TMC
	The HBCH in Varanasi started admitting any Covid infected/suspected individual, as per the guidelines from the Central Covid Control room of Varanasi (one of the 43 centres in Varanasi) from April 22.	HBCH, Varanasi

Month	Events	Place
May	3800 oxygen concentrators were donated to TMC by California-based humanitarian organization (Community Partners International) & founders of Navya, May 9 The New York Presbyterian/Weill Cornell Medicine donated 2800 concentrators, medical supplies, 3400 portable concentrators, N95 masks, nasal cannulas, etc. worth US\$ 2 million All the above items were to be distributed to the needy NCG centres and other hospitals in the country, especially in the States of Maharashtra, Delhi, Uttar Pradesh, Assam & West Bengal	TMC
	The President of Nationalist Congress Party (NCP), Mr Sharad Pawar donated 100 MHADA houses for TMH patients' families to Director TMC, Dr. RA Badwe on May 15 in the presence of Home Minister Jitendra Awhad and MHADA Vice President Mr Anil Diggikar	TMH
	The National Anti-terrorism Day was observed on May 21	TMC
	Demise of ex-AEC Chairman, Dr Srikumar Banerjee (25.12.1946 – 23.05.2021) in Navi Mumbai on May 23 following a heart attack. He was director of BARC (30.04.2004 –19.05.2010) and retired as Chairman, AEC & Secretary, DAE on 30.04.2012. He was recipient of the Padma Shri in Science & Engineering category (2005)	DAE
	The World Health Organization Regional Directors Special Award was presented to Dr B Borooah Cancer Institute for its Tobacco Control policy on May 31.	BBCI, Guwahati
June	The 16 th issue of in-house SPANDAN e-magazine was released for period April 2020 – March 2021 on June 14	TMH
	On the International Yoga Day, a one-week virtual 45-minute program for TMC Staff, called 'Kaivalyadhama Yoga' was inaugurated on Monday, June 21. The sessions were named as, 'Yoga se Hoga' and the theme for the year was 'Yoga for well-being'	TMC
	TMH & Dr Abhishek Mahajan received the Radiology & Imaging Excellence award 2021 on June 23, for leading AI technology solution in Imaging, by eHealthcare & Elets Technomedia Ltd	TMH
	Drs. Sheela Sawant & Anuprita Daddi were successful in the International Cardiology Oncology Society's Board Certification exams	
	In the world, India ranked 5 th in Covid publications after USA, China, UK and Italy, with 6223 articles. The 91 publications from TMH were the highest numbers from the State of Maharashtra.	
August	Proton Beam therapy trials began on Phantoms from August 2	ACTREC
	BBCI awarded Certificate of Appreciation for exemplary performance under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PMJAY) by Hon'ble Chief Minister of Assam Dr Himanta Biswa Sarma during the Independence Day celebrations in Guwahati on August 15	BBCI

Month	Events	Place
August	Release of 1 st issue of the journal, Annals of Oncology Research and Therapy of BBICI (Editor-in-Chief, Dr. AC Katak, Director BBICI) by Dr. RA Badwe on August 16	
	The Sadbhavna Diwas on August 20 was marked by taking the Pledge followed by singing of the national anthem	DAE-TMC
	The “Interventional Radiology Block” in HBCH, Sangrur was inaugurated on August 21 by Mr Vijay Inder Singla, PWD & Education Minister, Government of Punjab & Dr. RA Badwe, Director TMC.	HBCH, Sangrur
September	Ms Deepika Mundle donated her ancestral land of around 30,000 sq. ft. in Parel to TMH	TMH
	To commemorate the “Hindi Diwas 2021” on September 14, the Home Minister of India, Shri Amit Shah and the Chairman AEC & Secretary DAE, Shri KN Vyas, requested all staff to increase all modes of communication in the national Hindi language	DAE/TMC
	The Ministry of Science & Technology, GOI recognized TMC, Mumbai as a Scientific and Industrial Research Organization (SIRO) under the Scheme of Recognition of Scientific and Industrial Research Organizations (SIROs) - 1988, from 27.09.2021 – 31.03.2024.	TMC/TMH
October	Dr. VK Saraswat, member of NITI Ayog (Science & Technology) & Chancellor, JNU, Delhi delivered the first Dr Sekhar Basu Memorial Lecture on October 1. The Dr Sekhar Basu Memorial Awards would be presented to outstanding young engineers who made exemplary contribution to DAE projects	DAE/TMC
	The ‘Asha Nivas’ was inaugurated on October 7. It was a patients’ hostel of 268 rooms across 13 storeys, donated by Infosys Foundation in ACTREC campus	ACTREC
	Hand-made A3 sized Poster Competition was organized by HBNI as part of DAE celebration of “Azadi Ka Amrit Mahotsav” on these topics: India’s achievements in Science & Technology; Atoms in the Service of the Nation; and, Reducing our Carbon Footprint	HBNI
	The 3rd webinar of HBNI, the Eminent Lecture Series, was held on October 21, as part of the celebrations of ‘Azadi Ka Amrit Mahotsav’ by Dr. V. S. Ramamurthy, Emeritus Professor, National Institute of Advanced Studies, Bengaluru and Former Secretary, Department of Science & Technology, Govt. of India, on “Managing Public Perceptions of Public Risks”	
	A new High-end Ultrasonography machine with Fusion & Navigation was commissioned by Shri Ramesh Tulsiani of Suman Tulsiani Charitable Trust on October 22	TMH
	The theme for the Vigilance Awareness week was “Independent India@75: Self-reliance with Integrity”. The Pledge was given by Chief Guest, Shri Vishwas Nangare Patil, IPS, Jt. Commissioner of Police (Law & Order), Greater Mumbai	
	Uniform schedule of charges for patients across all TMC centres in India, to be in force from November	TMC

Month	Events	Place
October	Mr. Rajendra A. Patil (Deputy Administrative Officer) & his family were felicitated for their exemplary work at TMH by Smt. Hema Malini & Mumbai Suburban Collector, Smt. Nidhi Choudhary at the Diwali Sneh Sammelan of Parmarth Ratna Awards 2021 on October 30	TMH
	Director TMC, Dr. RA Badwe was conferred the Nelson Mandela Nobel Peace award 2021 on October 30. He was also bestowed with the Honorary Doctorate of Philosophy for Humanitarian services.	TMH/TMC
November	The Rashtriya Ekta Diwas was celebrated on November 2 as October 31, the birthday of Sardar Vallabhbhai Jhaverbhai Patel was a Sunday	DAE/TMC
	The Public Relations Office organized an hour of Musical program, "Deepsangam" by the TMH staff on occasion of Diwali for its staff on November 3	TMH
	Inauguration of Medical Gas Manifold Room (Oxygen Plant) donated by Tata Trusts on November 19 in ACTREC for COVID patients	ACTREC
	The Constitution Day (Samvidhan Divas) of India observed on November 26	DAE/TMC
	The Main Hospital building was operational from November	Vizag
	The 2 nd Annual North-East India EBM, a virtual conference was held on November 26-27.	BBCI
December, 2021	Book Release of the "Principles and Practice of Oncology", first Edition authored by Dr Amal Chandra Kataki, Director BBCI at the Raj Bhavan Guwahati on December 14 by Prof. Jagdish Mukhi, the Honorable Governor of Assam. The Guest of Honor was Shri Keshab Mahanta, Health Minister, Assam. Dr. RA Badwe, Director, TMC was the Distinguished Guest	BBCI
	The Maharashtra government strictly enforced previous Covid guidelines for the emergence of Omicron variant from 24 December 2021 till 15 January 2022	TMH/ACTREC
	The AERB organized an Online awareness program on "Radiation Protection in Diagnostic Radiology" in Hindi language was held on December 28	AERB/DAE/TMC
	Dr Ashish Gulia was appointed Deputy Director for both the cancer hospitals in Punjab (Sangrur & Mullanpur) from December 30, 2021.	Punjab



Summarization

- Abstract
- Specifics



Abstract

The year 2021 began on an optimistic note following the abatement of the first Covid wave. All cancer hospitals under DAE-TMC continued to function normally. Despite the scare of the second wave, there was increased load of patients at all the cancer centres.

Gloom enveloped DAE-BARC-TMC once again in mid 2021. The Department of Atomic Energy lost another stalwart, Dr Srikumar Banerjee (25.04.1946–23.05.2021) in the wee hours of the morning following a heart attack. He was known as a great physical metallurgist and was the Chairman, Atomic Energy Commission & Secretary Department of Atomic Energy (30.11.2009–30.04.2012) and the Director, Bhabha Atomic Research Centre, Mumbai (30.04.2004–19.05.2010). He was awarded the Padma Shri in 2005 in the Science & Engineering category.

In fond memory of Dr Sekhar Basu (1952–2020), the Homi Bhabha National Institute (HBNI) instituted the Dr Sekhar Basu Memorial Award for young scientists. The first Sekhar Basu Memorial lecture was given by Dr. VK Saraswat, Chancellor of Jawaharlal Nehru University, New Delhi on October 1, 2021.

All the cancer centres across India functioned full-staffed and offered all facilities to cancer patients during the waves of Covid-19 pandemic. Designated cancer centres like TMH in Mumbai and HBCH in Varanasi, were open to diagnose, admit, and treat individuals suspected of Covid infection in the local population. Most of the centres also administered the primary and booster vaccinations to their staff, patients, and senior citizens of their locality. The TMC centres carried out more than 1 lakh vaccinations.

All precautionary and preventive measures continued to be in place to reduce the chance of infecting the patients and the staff members with corona virus. At all centres, efforts were made to prevent crowding of patients, especially in the common hold and service areas.

The new & unique to TMC speciality in Healthcare, the Patient Navigators called Kevats were of immense help to patients during this pandemic when new preventive & safety protocols were in place across all TMC hospitals in India. The Kevats participated in screening duties contributing towards screening almost 1.5 lakh patients on entry into the Hospital. Kevats facilitated the process of entering patient data in the Clinical Information System (CIS) and maintained meticulous records of the tele-consult, thereby reducing the workload of the clinicians considerably. Other initiatives such as pharmacy queue management, training to administrative staff and management of documentations enabled 100% functionality of the hospital. Empowered to address multitude of patient needs including communication and counselling, the Kevats, fellows and assistants reached out to more than 50,000 cancer patients in need.

The total number of tests performed to detect Covid was over 65,000 and more than 5000 individuals tested positive. There were almost 3500 cancer patients who contracted Covid infection and 285 succumbed to the infection.

Wherever feasible, online consultations were encouraged and appointments could be obtained online. Almost 4500 new patients availed of the teleconsultation facilities.

The annual figures for referrals for investigations only, fell around 40% due to re-starting of private hospitals & diagnostic centres after the first Covid wave. The total new patients registration rose by 20% over the previous year to 81,033. The total patients' registrations crossed 1,10,000. More than 13,000 patients registered online.

Almost 10 lakh Smart Card transactions were made by the patients to avail of various hospital services, including those for the purchase of drugs & consumables, that amounted to over INR 350 crore.

The number of patients who availed of the Preventive Oncology services surged by 100%. The Preventive Oncology department conducted several virtual cancer prevention awareness activities for communities across the country. Under the “Collaborative Action for Control of Cancer and Other Non-Communicable Diseases among Mumbai Police”, a total of 1103 health education sessions and 415 screening camps were organized and conducted for the Mumbai police. The department was actively involved in Covid-19 vaccination duties at TMH Vaccination Centre for general population, staff & their family members, patients and attendants and various corporates.

Over 25% of the new patients availed of the subsidized government health benefit schemes. In Varanasi, more than 60% of the registered patients benefitted from these schemes.

The HBCH in Sangrur deserved a special mention. Almost all of the over 5000 new patients had registered online and, more than 80% of those, availed of the Mukh Mantri Punjab Cancer Raahat Kosh (MMPCRK) or of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) schemes.

Besides the local/ State/ Central government beneficiary schemes, the Medical Social service played a pivotal role in further guiding and helping the needy cancer patients and their care-givers. They provided further 14,000 patients with financial support and, accomodation to around 10,000 of them. The Palliative Medicine departments made home visits to over 10,000 cancer-stricken families to provide socio-psychological support.

The “ImPaCCT Foundation” (Improving Paediatric Cancer Care and Treatment Foundation), one of the organizations closely associated with the Paediatric Cancers Department, ensured that every child with cancer coming to TMC (~ 4500 per year) received treatment along with complete holistic support, regardless of their family background. The foundation mobilized more than INR 35 crore worth of funds for extended educational, nutritional and psycho-social support to scores of children and their families, effecting a significant reduction in Treatment Refusal & Abandonment rates (under 5% for the last 5 years).

The Brain Tumor Foundation (BTF) of India was another organization that was established with a mission to help and support patients with tumors of the brain and central nervous system. The BTF, in 2021, featured in the International Brain Tumor Alliance (IBTA) News Magazine and, was recognised as

member of the Asia-Pacific Brain Tumor Alliance (APBTA). In addition to the expertise provided in preparing guidelines for Covid-19 vaccination for brain tumor patients, the web-based information portal and brain tumor helpline provided succour to numerous patients during the pandemic when physical access to the hospital was hampered.

TMC-Navya, the expert second opinion services for cancer patients, counseled more than 62,000 patients from India and other Low and Middle Income Countries like Bangladesh, Indonesia, Nepal, Malaysia, etc. Free evidence-based guidance and expert cancer opinions by TMC experts were provided to more than 50,000 patients.

From the complete Medical Records compiled for the year 2018, the leading cancers in men included; mouth cancers, lymphomas & leukemia; in women, of the breast, uterine cervix & the ovary.

A total of 221 doctoral and post doctoral degrees were awarded to the students under the Homi Bhabha National Institute. There were 330 new research projects. The staff members contributed to over 1000 publications that included more than 7 text-books and 75 book-chapters. Most of the academic conferences and seminars were conducted online or were hybrid in nature; about 130 conferences with physical attendance were held. The 3rd International Peer Review was deferred again due to uncertainty of the Covid pandemic across the globe.

An online awareness program on “Radiation Protection in Diagnostic Radiology” was broadcasted in Hindi language by the Atomic Energy Regulatory Board (AERB), under the aegis of DAE on December 28.

With a view to promote good spiritual, mental and physical health of all TMC employees, a week-long daily 45-minute of online yoga sessions, “Yoga se Hoha” were conducted to mark the occasion of the International Yoga Day on June 21.

The TMC-DAE managed various cancer hospitals in Tiers I, II and III cities in India: the Tata Memorial Hospital (TMH) in Mumbai, Maharashtra; the Advanced Centre for Treatment, Research & Education in Cancer (ACTREC) in Navi Mumbai, Maharashtra; the Homi Bhabha Cancer Hospital & Research Centre (HBCHRC) in Visakhapatnam, Andhra Pradesh; the Homi Bhabha Cancer Hospital & Research Centre (HBCHRC) in Mullanpur, Punjab (to be operational soon); the Homi Bhabha Cancer Hospital (HBCH) in Sangrur, Punjab; the Mahamana Pandit Madan Mohan Malaviya Cancer Centre (MPMMCC) and the Homi Bhabha Cancer Hospital (HBCH) in Varanasi, Uttar Pradesh; the Dr Bhubaneswar Borooah Cancer Institute (BBCI) in Guwahati, Assam; and, the Homi Bhabha Cancer Hospital & Research Centre in the campus of the Sri Krishna Medical College & Hospital at Muzaffarpur in Bihar. The Centre for Cancer Epidemiology (CCE) in Navi Mumbai, Maharashtra was not a treatment centre.

The Schedule of Charges for services offered to patients were revised in this year, since its last revision in 2018. These were uniformly implemented across all centres.

TMC had staff strength of about 4200 with male to female ratio at 47:53. There were approximately 30% employees in the reserved category, the majority being from the Other Backward Class and the

Scheduled Caste. There were fourteen differently challenged persons in employment. Seventy-six (76) employees availed each of the Maternity & Child-Care Leaves. Paternity leave was availed by 79 employees.

Across all centres, 140 employees were promoted and 65 retired or resigned.

More than 1500 staff members were afflicted with Covid infection and all of them recovered.

There were three committees in every hospital that addressed staff (all categories) grievances and for their protection, namely: the Internal Complaints Committee, the Grievance Redressal Committee, and the Radiation Safety Committee.

Parliamentary Queries:

The TMC management provided prompt and satisfactory replies on 11.02.2021 to the Questionnaire asked for, 'on Demands from Grants (2021-2022) of DAE from Parliamentary Standing Committee on Science & Technology, Environment & Forest', vide their letters dated 01.02.2021 & 09.02.2022.

The Right to Information (RTI):

For the general public who sought information, the Medical Superintendent of the hospital was the Public Information Officer (PIO) for all medical & dispensary issues and those related to patient services; the Chief Administrative Officer of the hospital for issues other than the aforementioned.

The Public Relations Officer (PRO) was the Grievance Officer for all the patient's complaints filed through the Centralized Public Grievance Redress And Monitoring System (CPGRAMS) of the Department of Administrative Reforms & Public Grievances, Government of India.

The Director of the hospital was the Appellate Authority.

The Transparency Officer looked into all issues related to advertisements and Public information.

In the year 2021 for all TMC cancer centre except those in Varanasi, one hundred eighty-one (181) RTI applications were received by RTI cell. All the applications were replied in prescribed time. Out of these 181 applicants, thirty-six (36) preferred appeal (First Appeal) to the First Appellate Authority (FAA). A total three (03) Central Information Commission (CIC) hearings (Second Appeal) were attended before the CIC and compliance as per CIC orders were completed on time.

In the year 2021, thirty-nine (39) applications were received by RTI Cell, HBCH/MPMMCC, Varanasi. All the applications were replied in prescribed time. Out of these 39 applicants, six (06) preferred Appeal (First Appeal) to the First Appellate Authority (FAA); all the appeals were disposed off on time. No applicants went for the Second Appeal.

Andhra Pradesh



There were many developments at the Homi Bhabha Cancer Hospital & Research Centre (HBCHRC) in Visakhapatnam, along with introduction of new clinical services that included Molecular Pathology, Psychobiological counselling, Endoscopic services and a Nutritional clinic.

The centre catered to the cancer patients from coastal and central parts of Andhra Pradesh State, and those from the neighboring States of Telangana, Orissa, West Bengal and Jharkhand. The Oncological services were also extended to BARC, Visakhapatnam Port Trust (VPT) and Rashtriya Ispat Nigam Limited (Vizag Steel Plant) beneficiaries.

The new main hospital building was also operationalized in a phased-manner for out-patient services. All outpatient and day care services from the temporary porta cabins were shifted to Main Hospital block from end of November 2021. The surgical operations were yet performed in the Port Trust hospital. The number of surgical procedures and chemotherapy patients increased by 30%. The Laboratory diagnostic investigations increased by over 60% and of Imaging by about 20%.

A new 3T MRI machine was commissioned during the same period.

The Covid-19 vaccination drive was started in February 2021 for the hospital staff and in May 2021, the services were extended for the cancer patients, CHSS beneficiaries (BARC & other DAE Units) in Visakhapatnam. The centre was recognized by the Andhra Pradesh State Health Department for management of cancer patients with Covid-19 since May 2021. A six (06) bedded Covid ward and three (03) bedded Covid ICU was commissioned in RT Block. There were 34 cancer patients and 49 members of the staff who contracted Covid infection; all of them recovered.

About 1500 cancer patients availed of the subsidy offered by the Yuva Janya Smarika Rythu (YSR) Aarogyasri scheme of the State of Andhra Pradesh that was implemented from year 2020.

Many cancer awareness and anti-tobacco camps were organized by the Preventive Oncology services.

There were 25 research projects underway and the staff members published 76 medical articles in renowned journals.

Assam



There was 23.06% increase in turnover of new patient registration at the Dr Bhubaneswar Borooah Cancer Institute (BBCI) in 2021. The patient admissions increased by about 29%. There was an increase of around 60% in the patients for day-care chemotherapy and of 59% in surgeries performed.

Almost 500 cancer patients were tested positive for Covid-19 infection; of them 16 succumbed. There were 33 members in the staff who tested positive for Covid-19 infection and all recovered.

Bone Marrow Transplantation was started in the year 2021; a first of its kind in the public sector hospital in the entire North Eastern Region. Stereotactic Body Radiotherapy was also started for the first time in the Institute.

The World Health Organization Regional Directors Special Award for Tobacco Control was presented to Dr B Borooah Cancer Institute. The Institute was also presented Award of Appreciation for Merck BBCI-TMC Fellowship during Merck Asia Africa Luminary in Zambia. The Swachh Hospital Award was presented to BBCI by Hon'ble Minister of Guwahati Metropolitan Development Authority. The Hon'ble Health Minister of Assam presented Award of Appreciation to BBCI for significant contribution during the COVID-19 pandemic. The Chief Minister of Assam Dr Himanta Biswa Sarma during the Independence Day Celebration presented BBCI Award of Appreciation for exemplary performance in implementation of AB-PMJAY scheme.

On the academic front, the first issue of the new journal, “Annals of Oncology Research and Therapy” of BBCI with its Director Dr. AC Kataki as the Editor-in-Chief, was released by Dr. RA Badwe, Director TMC on August 16, 2021. The book on “Principles and Practice of Oncology” authored by Dr AC Kataki, Director BBCI was released at the Raj Bhavan, Guwahati on December 14, 2021 by Professor Jagdish Mukhi, the Honorable Governor of Assam.

A separate 150-bed Pediatric & Hematolymphoid cancer centre was under consideration along with an Ancillary building within the BBCI campus.

Bihar



The Homi Bhabha Cancer Hospital & Research Centre (HBCHRC) in Muzaffarpur was the 9th cancer centre approved by the DAE that would be constructed on the 14 acre land in the campus of the existing Sri Krishna Medical College & Hospital (SKMCH). Though the construction work had yet to begin, the preventive oncology and clinical care services were started from February 4, 2021 from the modular prefabricated hospital structure. The structure contained the out-patients department, a 50-bed day-care facility and the required basic administrative facilities. The SKMCH graciously provided HBCHRC with 10-bed ward and one operating room for in-patient services; the first surgery being performed on February 11. The patient footfalls were more than 13,000 and almost 2000 patients registered with the hospital. Surgeries (almost 400) were performed and day-care chemotherapy (~5000) offered in the premises of SKMCH.

More than 2180 camps were organized for cancer screening and to spread cancer awareness among the local population.

Under the cancer screening program with the health department of Bihar Government, 16 districts and more than 1.5 lakh individuals were screened; almost 200 cancers (mouth, breast and uterus) were detected.

Maharashtra

The three cancer centres in the State of Maharashtra included; the Tata Memorial Hospital (TMH) in Mumbai, the Advanced Centre for Treatment, Research & Education in Cancer (ACTREC) and the Centre for Cancer Epidemiology (CCE) in Navi Mumbai. Of these, the CCE was not a cancer treatment centre.

Tata Memorial Hospital (TMH)



The hospital saw an increase in the new patient's registrations by over 40% and more than 8000 patients registered online. Teleconsultation facilities were utilized by more than 3000 patients. The diagnostic investigations increased by more than 40%. The patient foot-fall in the OPD increased to about 2000 per day.

Almost 5000 patients availed of the government subsidized health schemes.

The hospital continued to utilize the nearby St. Xavier's ground and the building of the Indian Cancer Society for Covid patients and vaccination. Over 1900 of the hospital's cancer patients had Covid infection that resulted in the deaths of about 100 of them. There were around 1300 staff members who contracted Covid infection and all of them recovered. The TMH started vaccinating their staff members with Covishield at the St. Xavier's ground from March 2021 and for the general public from the month of April onwards.

The residential doctor's accommodation in Haffkine's campus was completed & occupied by the resident doctors. The Dharamshala was ready for occupation; the Occupational Certificate was awaited.

The Platinum Jubilee Block Hospital was in the preconstruction stage. Architects M/s Hosmac India Private Limited and Management consultants M/s iDeCk were appointed for the same.

In view of the pandemic, the Annual Day celebratory functions were not held. The Evidence-based Medicine conference was conducted online.

The department of Radiodiagnosis and Pulmonary Medicine augmented their equipments for betterment in patient care.

The hospital staff contributed more than 200 research projects and over 700 publications.

Advanced Centre for Treatment, Research & Education in Cancer (ACTREC)



The Clinical Research Centre (CRC), the Cancer Research Institute (CRI) and the Centre for Cancer Epidemiology (CCE) form the Advanced Centre for Treatment, Research and Education in Cancer (ACTREC) of the Tata Memorial Centre in Kharghar, Navi Mumbai.

During the Covid pandemic, Covid-19 infected patients were isolated in a 36 bed ward. A separate 6-bed ICU was also created to manage those patients who required life-support. In the year

2021, a total of 257 individuals with Covid infections were treated. Nine cancer patients died following Covid infection. Covid vaccination was started in January 2021 in association with the Panvel Municipal Corporation (PMC) and the beneficiaries included the ACTREC staff, patients and their care-givers, senior citizens and to the residents who resided in the vicinity of ACTREC. A total of 52,456 Covid vaccines were given in the year 2021.

The Cancer Research Centre had a total of 132 beds that included 13 ICU, 6 Bone marrow transplant and 16 Day care beds. More than 2000 new cancer patients were registered and more than 15,000 cases were transferred to ACTREC from TMH. Besides managing cancer patients, numerous basic, applied, translational and clinical research projects on cancer were also undertaken by the Clinicians and Scientists of ACTREC. Forty-eight (48) Bone Marrow transplants were performed in the year.

Many new projects were initiated in the area of basic and applied research on cancer by the scientists of Cancer Research Institute (CRI). Several accolades were won by the scientists and students of the Cancer Research Institute during the year 2021.

The novel Proton Beam Therapy facility was expected to be commissioned for use by the first quarter of 2023. This facility would include three patient treatment rooms having 360 degree rotation gantries incorporated with the latest Pencil Beam Scanning (PBS) technology capable of delivering Intensity Modulated Proton Therapy (IMPT) using a 230 MeV cyclotron. In keeping with the efforts of the Government of India to encourage indigenous development of technology, 20% of the equipment being installed was manufactured in India. The facility at ACTREC would benefit patients in both paying & non-paying categories (40:60) and around 800 cancer patients could be treated annually.

More than 95% of the structural work of the Hematolymphoid Women & Children Cancer (HWCC) wing was completed.

The physical structure of the Radiological Research Unit (RRU), a joint venture between TMC, RMC, RPAD and BARC for innovative and cheaper isotopes for cancer diagnosis and treatment, was due to be completed by first quarter 2023.

The patient hostel, 'Asha Niwas', a thirteen storey building with 268 rooms generously donated by the Infosys Foundation was inaugurated in October 2021.

The Medical Gas Manifold Room (Oxygen Plant) donated by the Tata Trusts, was inaugurated on November 19, 2021.

The ACTREC Diagnostic Laboratories were granted continued accreditation with validity until May 19, 2022. New advanced diagnostic tests were introduced at ACTREC in Dental surgery, Flow Cytometry, Molecular Hematology, Cancer Cytogenetics, Transplant Immunology & Immunogenetics laboratories, and in Transfusion Medicine.

The year also produced two landmark studies by clinicians that clarified and refined the role of radiotherapy in prostate and in uterine cervical cancer.

Centre for Cancer Epidemiology (CCE)



The Centre for Cancer Epidemiology focused on research at community level that identified the burden, the life style and the genetic risk factors in screening strategies for cancer prevention/early detection. The Center conducted PhD programme in Epidemiology and MSc in Epidemiology and Public health. The CCE collaborated with numerous International and National (IITs, IIPS) organizations. The major achievements of the Centre in the year 2021 included demonstrating the effectiveness of clinical breast examination in reducing mortality from breast cancer; establishing a platform for Molecular Epidemiology research; identification of lifestyle and genetic risk factors of gall bladder cancer; and, the establishment of Cancer Registries at various locations in North India and at the sites of Nuclear Power Centres.

Punjab



The Homi Bhabha Cancer Hospital (HBCH), Sangrur was the cancer referral centre for the locals as well as for the patients from other parts of Punjab and from the neighboring States of Haryana, Himachal Pradesh and Jammu & Kashmir.

The hospital accounted for about 80 cancer patients who recovered from Covid-19 infection. None of the staff members were infected with Covid-19.

It was remarkable to note that all the new patients who had registered in the year 2021, did so Online; a total of 5136 that included 5026 in General and 110 in Private categories. More than 80% of these patients availed of the Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) & the local Mukh Mantri Punjab Cancer Raahat Kosh (MMPCRK) schemes. A letter of appreciation by Punjab government was given to HBCH, Sangrur for adherence to the Quality Certification standards of Ayushman Bharat-Sarbat Sehat Bima Yojna (AB-SSBY) of the PM-JAY scheme, on January 26.

From April 2021, Interventional Radiology services were commissioned with new Digital Subtraction Angiography (DSA), Radio-Frequency Ablation (RFA), and a Computed Tomography (CT) scanner. The Interventional Radiology Block was inaugurated by Mr Vijay Inder Singla, PWD & Education Minister, Government of Punjab in presence of Dr. RA Badwe, Director, TMC on August 21, 2021. The Electrocardiography facilities were also initiated from the same period. The year saw more than 40% increase in the number of diagnostic tests. The surgeries increased by over 20% and the Day-care patients for chemotherapy to more than 30%.

The Population Based Cancer Registry (PBCR) in Sangrur & Mansa district was a collaborative project of TMC, PGIMER-Chandigarh and the Punjab Government started in 2013. Till date, the average population covered in the districts of Sangrur & Mansa was 17,28,908 and 8,03,322 respectively. The funding source for this PBCR was the Department of Atomic Energy, GOI.

The Homi Bhabha Cancer Hospital & Research Centre (HBCHRC) in Mullanpur was scheduled to be



commissioned by August 2022. In view of the imminent retirement of Director, Dr Rakesh Kapoor in January 2022, Dr Ashish Gulia, Orthopedic surgeon in TMH was appointed as Deputy Director from December 2021.

The Institutional Ethics Committee for HBCH, Sangrur was formed on March 22, 2021.

Uttar Pradesh



The two cancer hospitals in the city of Varanasi included the Homi Bhabha Cancer Hospital (HBCH) that was operational from mid 2018 and the Mahamana Pandit Madan Mohan Malaviya Cancer Centre (MPMMCC) that was inaugurated on February 19, 2019.

Both the hospitals served as major cancer referral center for patients from within Varanasi region, as well as from neighboring districts in central, southern and eastern Uttar Pradesh, north-eastern / central and eastern Madhya Pradesh and from Bihar, Jharkhand, Chhattisgarh, and West Bengal.

During the second wave of the Covid-19 pandemic, the HBCH was designated to treat only the Covid patients in Varanasi from April to July 2021. The HBCH admitted and treated more than 300 Covid patients from the city of Varanasi. The cancer patients in HBCH were provided treatment at the MPMMCC that functioned as the sole cancer centre in the Purvanchal region during that period.

Over 7500 tests were performed for detection of Covid infection. There were 669 cancer patients with Covid infection, of which, 151 succumbed to the infection. More than 450 staff members were infected with Covid and all of them recovered.

Among all the TMC's hospitals across India, maximum number of patients (more than 6500) availed of the Government subsidized Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) scheme at these two centers in Varanasi.

Newer diagnostic modalities started in year 2021 included SPECT-CT, 2D Echo-cardiography, Molecular Pathology, and Speech therapy.

The National Medical Council conducted inspection at HBCH, Varanasi for MD (Radiation Oncology) and M. Ch. (Surgical Oncology) in 2021 and granted Letter of Intent and Letter of Permission for starting the above two courses from the Academic Session 2021-2022. The Indian Nursing Council gave permission to start Post-basic Diploma in Oncology Nursing. Nursing short-term courses in CVAD and Stoma Care were initiated in the year 2021. Short Term Certified training courses in Dental & Prosthetics Surgery, Physiotherapy, Advanced CT/MRI techniques were started that added to the existing training courses in Hematopathology, Transfusion Medicine, Microbiology, and in OT/ICU technology.

The Clinical Research Secretariat (CRS) at MPMMCC was officially inaugurated by Dr. RA Badwe, Director, TMC in October 2021. The Institutional Ethics Committee (IEC) launched the "Online IEC Portal"

for the Investigators in MPMMCC and HBCH in March 2021 for Online submission, review, and tracking status of research projects.

There was a visit by the Minister of State for Health, Mr Ashwini Kumar Choubey.

The construction of accommodation for doctors and nurses, and that of the Dharamshala for patients benefit in the campus of MPMMCC was scheduled to be completed by mid 2022.

National Cancer Grid



The National Cancer Grid (NCG) was a network of major cancer centres, research institutes, patient groups and charitable institutions across India with the mandate of establishing uniform standards of patient care for prevention, diagnosis, and treatment of cancer, providing specialized training and education in oncology and facilitating collaborative basic, translational and clinical research in cancer. The strength of NCG was more than 250 members in India and treated about 60% of all cancer cases in India.

A new NCG National Cancer Research Initiative was formed to further collaborative multicentric research studies on cancers of relevance to India with the aim to develop cost-effective treatment.

The NCG partnered with the Ayushman Bharat-Pradhan Mantri Jan Arogya Yojana (AB-PMJAY) that ensured evidence-based cancer care and rationalized tariff packages under the scheme.

Academia



Due to the Covid pandemic, majority of the educational and research meetings, and conferences were conducted online.

Two hundred twenty-one (221) students completed their post graduate and super specializations in the year 2021.

The HBNI graduation ceremony, the annual “Summer School in Oncology” between King's College, London (UK) and TMC for the year 2021, and the third International Peer Review were deferred due to uncertainty of Covid pandemic.

Three (03) students appeared and all successfully passed the first DM Oncopathology course examination in India, conducted by the HBNI in 2021. The first such examination in India, in Interventional Radiology was conducted in the year 2020.

In the year 2021, only about 130 conferences were conducted that had physical attendance; many were conducted virtually or were hybrid in nature. The 19th Annual Evidence Based Medicine (EBM) conference of TMC was spread over 6 days from February 26 to March 7. The focus was on technology and cancer care—The Promise and Reality of the Brave New World.

The three Pre-conference parallel Workshops included: Radiology; NGS data analysis and live Molecular Tumor Board; and, Beyond Microscopy—the Pathology informatics.

The six main conference modules included: Surgical Oncology, Precision Oncology, Radiation Oncology, Theranostics in Nuclear Medicine), Radiology, and Pathology.

The Hospital Day Oration was given by Prof. David Jaffray (Vice President & Chief Technology and Digital Officer, Professor of Radiation Physics and Imaging Physics, University of Texas MD Anderson Cancer Center, USA) on “Cancer and Technology—from bridging gaps to connecting for value”.

Six (06) e-books and one e-leaflet were published in the course of this conference.

There were 230 medical observers from within the country and abroad, who visited the cancer hospitals under TMC.

Research

The sixth Institutional Ethics Committee (IEC) of Tata Memorial Centre was initiated at the HBCH, Sangrur in March 2021.

There were more than 300 new research projects and over 1000 scientific publications. Seven text books were published and more than 80 book chapter contributions were made.

The majority of laboratory, animal, and clinical research studies were conducted at ACTREC. The TMC provided financial support for more than 50% of the research projects through the grants available from DAE.

Finance

The grant received from DAE for Capital Budget (2021–2022) was INR 486 crore; for recurring expenditure (salary), INR 520.27 crore.

For Capital items, the sanctioned budget for 2022–2023 was INR 707 crore. The sanctioned recurring (salary) expenditure budget was INR 563.74 crore.

Awards

- Dr. RA Badwe, Director TMC was conferred the Pune Bhushan Puraskar by the Indian Medical Association, Pune on January 17
- Director TMC, Dr. RA Badwe was the recipient of the Nelson Mandela Nobel Peace award 2021 on October 30, 2021. He was also conferred the Honorary Doctorate of Philosophy for Humanitarian services
- Dr Rohan Khadilkar was honored with the Ramlingaswami Re-entry Fellowship by DBT India and with the Har Gobind Khorana Innovative young Biotechnologist Award

- Ms Tarang Gaur, an ACTREC student, was selected for the 'Newton Bhabha Ph.D. placement program for the year 2019-20 coordinated by Department of Biotechnology, Govt. of India and British Council U.K.
- The Tata Memorial Hospital & Dr Abhishek Mahajan were recipients of the Radiology & Imaging Excellence award 2021 by eHealthcare & Elets Technomedia Ltd.

New avenues

- Prostate-only versus Whole-Pelvis Radiation Therapy in high-risk and very high-risk Prostate cancer (POP-RT): Outcomes from Phase III Randomized Controlled Trial by Dr Vedang Murthy et al.
- Late toxicity after Adjuvant Conventional Radiation versus Image-guided Intensity-modulated Radiotherapy for Cervical cancer (PARCER): A Randomized Controlled Trial by Dr Supriya Chopra et al.
- The first 20-year Clinical Study, a landmark study proving that the Clinical Breast Examination should be the preferred screening method for breast cancer, was published in BMJ; 'Effect of screening by clinical breast examination on breast cancer incidence and mortality after 20 years: prospective, cluster randomised controlled trial in Mumbai.' by Dr Indraneel Mitra et al.
- For the first time in India, the Covid strain S-E484K was isolated in three persons outside Mumbai by Dr Nikhil Patkar in January 2021
- Proton Beam therapy trials on Phantoms began. Soon to start this novel treatment on cancer patients.

Recognitions

- The Ministry of Science & Technology, GOI recognized TMC, Mumbai as a Scientific and Industrial Research Organization (SIRO) under the Scheme of Recognition of Scientific and Industrial Research Organizations (SIROs)-1988, from 27.09.2021–31.03.2024
- According to the Times of India publication, TMH was the 4th highest publication contributor about Covid-19 infection in India (~100)
- A letter of appreciation by Punjab government was given to HBCH, Sangrur for adherence to the Quality Certification standards of Ayushman Bharat-Sarbat Sehat Bima Yojna (AB-SSBY) of the PM-JAY scheme
- The BBICI, Guwahati was awarded Certificate of Appreciation for exemplary performance under Ayushman Bharat Pradhan Mantri Jan Arogya Yojana (AB PMJAY) by Hon'ble Chief Minister of Assam Dr Himanta Biswa Sarma during the Independence Day celebrations in Guwahati

- The World Health Organization Regional Directors Special Award was presented to Dr B Borooah Cancer Institute for Tobacco Control on May 31, 2021
- Special Cover was launched by India Post to Commemorate the World Cancer Day of February 4, 2021. The Special Cover was released by the Chief Postmaster General, Maharashtra & Goa Circle—Shri HC Agrawal and Postmaster General, India Post, Mumbai Region—Ms Swati Pandey, in the presence of TMC Director, Dr. RA Badwe
- According to PLoS One, a Stanford scientific journal, Dr Pankaj Chaturvedi was in the top 2% of all the scientists in the world
- Mr. Rajendra A. Patil (Deputy Administrative Officer, TMH) & his family felicitated for exemplary work at TMH by Smt. Hema Malini & the Mumbai Suburban Collector, Smt. Nidhi Choudhary at the Diwali Sneh Sammelan of Parmarth Ratna Awards 2021.

Future Plans

- To complete the projects in Punjab, Guwahati, and Mumbai that were delayed due to the Covid pandemic
- To start Preventive Oncology services in the rural area of Khopoli in the Raigad district of Maharashtra State
- To process ahead with the recent Memorandum of Understanding (MoU) with the Maharashtra, Bihar, and West Bengal Governments to strengthen the oncology services in these States
- Establishment of Multi-ion Medical Accelerator and of Indigenous Medicinal Plant Research facility at ACTREC
- National Cancer Grid's initiative for collaborative research study on Cancers of relevance to India.



Specifics

Cancer Centres/Hospitals	TMH	ACTREC	Vizag	Sangrur	Varanasi	BBCI	Total
Covid-19 Data							
Number of tests performed for Covid-19	31,176	6801	392	-	7783	19,087	65,239
Number of Covid-19 Positive cases	2379	515	88	-	1141	817	4940
Number of cancer patients with Covid infection	1926	274	34	82	669	494	3479
Number of Staff with Covid infection	1470	241	49	-	472	323	2555
Cancer Data							
Teleconsultation	3319	DNA	SNA	SNA	874	301	4494
Patient Registration							
Chart Files (1)	37,698	2344	5631	5136	17,893	12,331	81,033
Referred for Diagnostic/Supportive services (2)	15,675	3892	0	1143	417	180	21,307
Preventive Oncology (3)	7171	0	0	113	725	563	8572
Total Registered Patients (1+2+3)	60,544	6236	5631	6392	19,035	13,074	1,10,912
Inpatient Services							
Bed Strength	639	132	136	50	337	278	1572
Number of Admissions	26,670	6249	3274	3717	12,707	7030	59,647
Average Length of Stay (Days)	5.57	5.15	7.4	3.56	7.5	13	7.03
Bed Occupancy (Percentage)	79.26	83.74	61	78.1	77.5	54.45	72.34

Cancer Centres/Hospitals	TMH	ACTREC	Vizag	Sangrur	Varanasi	BBCI	Total
Surgical Oncology							
Major Operations	8599	2593	799	1167	3906	1968	19,032
Minor Operations	21,238	1058	950	929	7677	1426	33,278
Total Surgeries performed	29,837	3651	1749	2096	11,583	3394	52,310
Medical Oncology							
Day Care: General patients	1,20,540	19,230	2786	14,796	48,911	20,006	2,26,269
Day Care: Private patients	29,407	3068	534	654	12,530	3419	49,612
Total Day-care Patients	1,49,947	22,298	3320	15,450	61,441	23,425	2,75,881
Radiation Oncology							
External Beam Therapy (Patients)	6711	1161	1161	1444	3050	3023	16,550
Brachytherapy (Applications)	2308	86	161	205	474	-	3234
Treatment Planning / Beam Modification	18,930	1137	0	1458	4089	838	26,452
Imaging Services							
Conventional Radiography	56,117	3619	1913	2047	12,831	9994	86,521
Ultrasound / Color Doppler	44,809	2625	3235	2632	7062	5276	65,639
Mammography	13,094	1988	1836	1611	2286	645	21,460
C.T. Scan (Diagnostic)	64,423	7439	3592	6814	16,540	17,275	1,16,083
M.R.I Scan	19,134	2897	662	1613	4447	05	28,758
Interventional Radiology	5171	863	SNA	2140	SNA	SNA	8589
Nuclear Medicine							
PET-CT Scan	18,066	2782	0	SNA	4717	0	25,565
SPECT-CT Scan	6368	SNA	0		0	1196	7564

Cancer Centres/Hospitals	TMH	ACTREC	Vizag	Sangrur	Varanasi	BBCI	Total
General Medicine							
Electrocardiography (ECG)	36,484	3933	0	0	10,565	6047	59,570
Echo Cardiography	9849	2438	SNA	SNA	0	SNA	12,287
Pulmonary Function Test (PFT)	2510	SNA			SNA		2510
Laboratory Diagnostics							
Pathology : Histopathology + IHC + Frozen Section	1,21,213	16,696	8313	10,115	27,462	9456	1,93,255
Biochemistry	40,28,140	67,295	22,819	1,82,239	1,46,934	6,22,888	5,07,0315
Cytopathology	16,308	SNA	1846	2450	3693	2467	26,764
Molecular Pathology	7964	SNA	131	SNA	57	9098	17,250
Microbiology	2,08,375	18,613	10,477	15,839	32,503	41,531	3,27,338
Bacteriology	42,869	8554	0	DNA	10,726	2222	64,371
Mycobacteriology	5458	93	0		288	29	5868
Mycology	3516	184	0		113	0	3813
Serology	1,25,350	7191	0		10,332	13,327	1,72,039
Clinical Microbiology	12,282	2591	0		3291	140	18,304
Hematopathology	4,36,161	61,046	22,780	42,609	1,41,810	2,49,675	5,17,920
Cytogenetics	SNA	7352	SNA	SNA	974	0	8326
Transfusion Medicine							
Specialized Procedures	32,895	5235	0	0	07	0	38,137
Blood Units Collected	16,944	3446	0	0	8182	7309	35,881
Platelet Pheresis	4369	1160	0	0	2110	0	7639
Education							
Post-graduate (PG) Student admissions	83	21	0	0	0	6	110
Ph.D awards/PG	189	14	0	0	0	18	221

Cancer Centres/Hospitals	TMH	ACTREC	Vizag	Sangrur	Varanasi	BBCI	Total
Research Profile							
New projects (Intramural & Extramural)	217	27	0	0	47	39	330
Papers in reputed journals	659	285	0	10	32	46	1032
Conferences / Workshops / Seminars							
Hybrid with Physical attendance	32	46	61	-	-	-	139
Value of Medicines Dispensed (INR Lakh)							
Amount	24,993	3787	631.16	1532	7733.24	2003	40,679.4

***Cancer hospitals in Mullanpur and Muzaffarpur are not commissioned. The Centre for Cancer Epidemiology is not a treatment centre.**

DNA: Data Not Available

NA: Not Applicable

SNA: Service Not Available.

CT, Computed Tomography; **ICU,** Intensive Care Unit;

IHC, Immunohistochemistry; **MRI,** Magnetic Resonance Imaging;

PET, Positron Emission Tomography; **SPECT,** Single-Photon Emission Computed Tomography.

ACTREC: Advanced Centre for Treatment, Research & Education in Cancer, Navi Mumbai

BBCI: Dr. B. Borooah Cancer Institute, Guwahati

Sangrur: Homi Bhabha Cancer Hospital

TMH: Tata Memorial Hospital, Mumbai

Varanasi: Both hospitals; the Homi Bhabha Cancer Hospital & the Mahamana Pandit Madan Mohan Malaviya Cancer Centre

Vizag: Homi Bhabha Cancer Hospital & Research Centre, Visakhapatnam.



Scientific Methodology

- Clinical Research Secretariat & the DAE-CTC
- Research Administrative Council (TRAC)





Clinical Research Secretariat & Department of Atomic Energy–Clinical Trials Centre

The Clinical Research Secretariat (CRS) along with Department of Atomic Energy Clinical Trials Centre (DAE-CTC) played a key role in facilitating research in field of oncology at Tata Memorial Centre since its inception in 1997. The mandate of CRS included promoting clinical research, training and education of researchers and research staff, ensuring scientific and ethical conduct of clinical trials and propagation of the practice of Evidence-based Medicine across the country. In the year 2021, the following activities were conducted in each of the above mentioned domains.

Promoting Clinical Research

1. Augmentation of Infrastructure:

- A dedicated **Central Biostatistics Cell** was created in CRS with 2 in-house statisticians supported by senior Biostatisticians from ACTREC and CCE.
- **Central Research Pharmacy:** This was a controlled access facility for storage of trial drugs at required temperature in compliance with Schedule Y (Investigator Product Management), ICH-GCP (E6). Also installed was a walk-in cooler along with automated alarm system for temperature deviations. A dedicated Research Pharmacist was appointed.
- **Filing Storage space:** There were two filing storage spaces to store all the clinical trial records in compliance with ICH-GCP. These dedicated storage spaces had controlled access only to authorized trial personnel.
- **Monitoring Room:** CRS now had 2 dedicated well-equipped trial monitoring rooms. In addition to CRS Monitoring Room situated at Main Building, an additional Monitoring Room was provided in the expanded CRS area at Homi Bhabha Block (HBB), 2nd floor. This facilitated the monitoring of visits and interactions between sponsors and investigators of clinical trials.
- **Consenting Room:** There was a dedicated consenting room in the CRS to facilitate Patient Audio Video Consenting.
- **CRS Hub:** There was a Clinical Trial Coordinators Hub wherein the CRS, the National Cancer Grid and the BIRAC staff were provided desk space and infrastructural support.

2. Statistical support for the Clinical Trials:

The statisticians at CRS offered expert help to clinical researchers in designing trials, sample size calculation, randomization list generation and data analysis. CRS also provided the statistical analysis software (SPSS version 25.0+) to all investigators on request.

In the year 2021, statistical support to 633 clinical trials/projects was provided for:

Analysis–234

Randomization list generation–17

Sample size/ Statistical Analysis Plan/ Design–106

e-CRF generated on REDCap–276.

In addition, the CRS supported the process of central randomization on an ongoing basis for 48 trials. Besides the in-house statisticians, CRS coordinated and provided on-site services and consultations of senior biostatisticians from ACTREC and CCE to expedite and resolve statistical queries and address the needs of researchers on a timely basis. All this work was routed through and coordinated by the Central Biostatistics Cell.

3. Financial support for the clinical trials:

A total of 11 Intramural trials (ongoing and new) were supported through the DAE-CTC and a total of INR 69,93,489 was provided as financial grant. Over the years, many of the DAE-CTC supported studies led to significant publications in major journals and also resulted in practice-changes.

4. Translation facilities for Informed Consent Forms (local/ vernacular languages) for Clinical Trials:

A dedicated Translator supported the constantly increasing translation work. The Translator provided expert help to clinical researchers in Informed consent translation and back translations in both Marathi and Hindi languages. A total of 78 clinical trial consent forms were translated in Hindi and Marathi languages.

5. Network and Database Administrator:

CRS had a dedicated Network administrator responsible for designing, development and testing of new features in the Clinical trial applications that included:

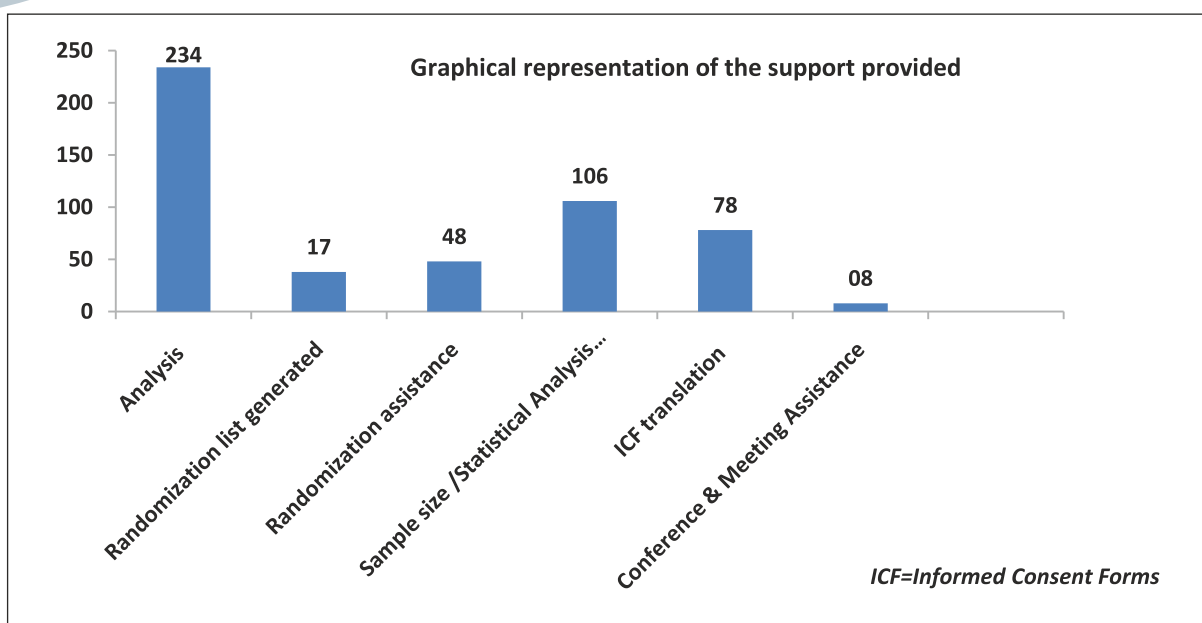
- Designing and implementation of software projects using C# Visual Studio 2017
- To design, create, and implement database systems based on the end user's requirements
- Creating new tables and procedures using SQL server 2012.

New software developed included: Pharmacy stock management system (CRS Department), Proluton Study (Breast DMG), Cosmesis Study (Breast DMG), Conference Data Management Software, and DMG application.

The CRS also initiated the process of setting up of a centralized Clinical Trial Database Management System (CTMS).

6. Support to Conferences and Meetings:

A total of 8 conferences and meetings were supported for the year 2021. In addition, CRS provided logistical and advisory inputs to many other meetings and events. Further assistance was provided while availing MMC CPD/ CME Credit points' application and submission.



7. Standard Operating Procedure:

CRS was involved in facilitating the conduct of numerous trials including Investigator initiated, pharma sponsored, collaborative multicenter studies (International and National) and the thesis of postgraduate students.

A detailed SOP was designed for conducting research at TMC. The SOP's were designed to have uniform standard, quality assurance, and quality control for conducting clinical studies/research at TMC.

The key elements of the SOP were: Assessing Protocol Feasibility; clinical trial agreement with sponsors or CRO; interaction with IEC; study/ research team responsibilities; communication with a sponsor or CRO; site initiation, activation, conduct and closeout; reviewing and obtaining Informed Consent form; recruiting study subjects; source documentation; managing investigational product; archival of essential documents; safety reporting; Clinical Research Pharmacy Management; managing biological samples; reimbursement policies; study team training; and, the study handover and the transfer of patients between TMH and ACTREC.

The SOPs were designed to assure execution of research in accordance with Institutional guidelines, updated applicable national guidelines and regulations (e.g. NDCT Rules 2019, Indian GCP, ICMR guidelines, ICH GCP).

All SOPs were updated in 2021 to reflect the current change in clinical trial rules and regulations, and to refine the current practices. SOP training and education was given to the research team of TMC. It was mandatory that every research staff should be trained and must be aware of the TMC SOP before conducting research.

The CRS was also developing SOPs for statistical support. This would help streamline the statistical services at TMC.

Training and Education of Researchers

1. **Good Clinical Practice workshop** was organized to train TMC Staff on ICH-GCP principles on April 17 and 24, 2021. The Advanced GCP course module was attended by 321 participants and the Basic GCP course was attended by 213 delegates. This course was conducted annually.
2. **Clinical Research Methodology workshop** was organized over last four Saturdays in the month of October 2021, in a virtual format to train researchers on various aspects of trial design and analysis. A total of 465 delegates (local and national) attended the conference. This course was also conducted annually.

3. **M.Sc. Clinical Research:**

The CRS was actively involved in M. Sc. Clinical Research course. At present there were total 30 students. Twenty (20) students in first year of their courses and ten (10) students were doing Internship training in various Disease Management Groups after successfully completing their M. Sc.

CRS provided the following support for this program:

- Coordinating entrance exam and interviews
- Coordinating lectures and study material
- Managing lectures, invigilating exams
- Managing honorarium payments to invited faculties for conducting lectures
- Managing mini library and arranging for the study books
- Rotations through various external postings for comprehensive training
- Maintaining leave records and attendance.

Evidence Based Management (EBM) Meeting 2021

The important aim of CRS/ DAE-CTC was to propagate and promote the practice of evidence-based medicine especially in oncology. In this regard, Evidence Based Management meetings were started from 2003 onwards.

Due to the Covid pandemic, the EBM 2021 was held in an online format over 6 days: February 26-28 and March 5-7, 2021.

The theme was on Technology and Cancer Care—"The Promise and Reality of the Brave New World." The application of technology encompassed all disciplines of diagnostic and therapeutic oncology. The XIX Annual EBM had **3 parallel pre-conference workshops** held on February 26 and March 5, 2021 viz. (1) Radiology Workshop (2) NGS data analysis and live Molecular Tumor Board Workshop (3) Beyond Microscopy: Pathology Informatics Workshop. **The main conference had 6 tracks/ modules** viz.

a) Surgical Oncology b) Precision Oncology c) Radiation Oncology d) Theranostics (Nuclear Medicine) e) Radiology f) Beyond Microscopy: Pathology Informatics, which was organized as a parallel sessions from February 27-28 and March 6-7, 2021.

The **Hospital Day Oration** was given by **Prof. David Jaffray** (Vice President & Chief Technology and Digital Officer, Professor of Radiation Physics and Imaging Physics, University of Texas MD Anderson Cancer Center, USA) on “**Cancer and Technology-from bridging gaps to connecting for value**” which was highly appreciated for simplifying a complex topic for a mixed audience.

There were two **Plenary Sessions on Artificial Intelligence** and **Health Technology Assessment** by renowned International and National faculty.

The meeting was a huge success with 2000 participants that included International, National, & Local medical faculties.

During the course of the EBM, six (06) e-books and one (01) e-leaflet were published:

1. Evidence Based Management of Cancer In India: Surgical Oncology (Part A)
2. Evidence Based Management of Cancers In India: Precision Oncology (Part B)
3. Evidence Based Management of Cancers In India: Radiation Oncology (Part C)
4. Evidence Based Management of Cancers In India: Theranostics (Part D)
5. Evidence Based Management of Cancers In India: Radiology (Part E)
6. Evidence Based Management of Cancers In India: Beyond Microscopy: Pathology Informatics (Part F)
7. Evidence Based Management of Cancers In India: NGS data analysis and live Molecular Tumor Board (Part G).



TMC Research Administrative Council (TRAC)

TRAC was constituted in the year 2008 and had a broad mandate to oversee and improve all administrative aspects of basic, translational and clinical research in TMC.

The focus in specific was on the following areas:

- Establishment of Human Research Protection Program and its implementation
- Set directions, priorities and thrust areas for research as per institute's mandate
- Suggest and review proposals for collaborations between TMC and other Indian or International Institutions, Groups, Individuals or Industry. When required suggest the names of possible Principal and Co-investigators within TMC for this collaboration
- Review pre-proposals for sponsored research and suggest the names of possible Principal and Co-investigators within TMC
- Review the expenditure and income incurred on hospital services, laboratory and administrative functions for investigator initiated and sponsored research conducted in TMC.

Policy Decisions:

- Upper limit for ongoing interventional and investigator initiated studies
- Augmentation of Data Safety Monitoring Unit (DSMU).

Activities:

1. From October 2019, TRAC supported the constitution of the Institutional Ethics Committee at the newly established cancer centres of TMC at Varanasi, Sangrur and Vizag.
 - a. The IEC at Mahamana Pandit Madan Mohan Malaviya Cancer Centre (MPMMC), Varanasi was established and functional since December 2019. In September 2020, the IEC at Homi Bhabha Cancer Hospital & Research Centre, Visakhapatnam was established and was functional since then. On March 22, 2021, the IEC at Homi Bhabha Cancer Hospital, Sangrur was established. Required human resources (IRB administrators) were appointed at each satellite centre.
 - b. The BBCL centre at Guwahati had functional Ethics committee since 2002. In order to have the uniform Standard Operating Procedures (SOP) across all centres of TMC, the IEC adopted the SOPs with reconstitution of its IEC in October 2021.
 - c. Clinical Research Unit was an important facility that provided overall supervision, advised and guided the investigators in carrying out research projects at the institute. The unit comprised trial coordinators, data managers, statisticians, and administrators appointed to manage the individual disease-specific projects. In the year 2021, the facility was augmented with generous financial support from the DAE for the centres in Varanasi, Sangrur and Vizag. The minimum human research support was provided at each centre.

2. TRAC organized lectures to train the investigators and IEC members of these centres through Zoom meetings:

Date	Topic	Faculty/Invitee
March 22	Institutional Ethics Committee – Roles and Responsibilities of members (For Sangrur IEC)	Ms Rohini Hawaldar
May 29	Research Study submission w.r.t. IEC submission form	Dr Girish Chinnaswamy
June 26	Conducting A Research Study – PI's Role & Responsibility	Dr Pallavi Parab,
July 24	An introduction to assessment of Serious Adverse Events and Monitoring of Research Studies	Dr Maya Prasad
October 23	Institutional Ethics Committee – Roles and Responsibilities of members (For BCCI IEC)	Ms Rohini Hawaldar Ms Abhidnya Desai

Due to the pandemic situation, the visits in person could not be done. The online-review of the IEC's functioning and documentation was arranged for Vizag IEC on March 4 and September 16, 2021 by the IEC-II administrator Ms Uthara Iyer.

The IEC at Varanasi was functional since late 2019, and as per the SOP, the audit of IEC was conducted online on November 18, 2021 by the DSMU TMH coordinator Ms Sapna Ambre.

The cloud based IRB portal was functional for IEC at Varanasi since January 2021 with the help of Mr Sandeep Kalsekar, the IT programmer of TMH.

3. TRAC continued to review the requests for funding for the research projects at TMH, ACTREC, Varanasi, Vizag, and Sangrur; research grant to them was provided as per the TRAC committee's decision.
4. The IEC-I, IEC-II and IEC-III were assessed virtually by NABH for reaccreditation on June 14-15, 2021. The NABH granted the accreditation to all the IECs that were valid till December 10, 2023.
5. In order to maintain the good quality research at TMC, TRAC committee set-up a sub-unit for DSMU that would help DSMU members to conduct the data safety monitoring of the ongoing research studies. This was much required as there were around 200 intervention studies and more than 50 had large sample size (more than 500). The quality of the studies was very important in view of implementation of outcome of these studies in treating the patients in future.

The subunit would have a staff group of 5 persons {Medical#1, and scientific staff (Jr/Sr) #4} who were trained in monitoring. This unit would work under the Secretary, DSMU (TMH & ACTREC). The required financial support was granted and two personnel (Medical and scientific) were appointed in December 2021. The sub-unit will start monitoring from January 2022.

6. The research projects submitted to the IECs contained legal documents such as MoU, Agreements. These documents required approval from TMC's legal cell and legal member of IEC. The IEC legal members had suggested standard template for these, which were finalized in consultation with the TMC legal cell. The meeting was held virtually to finalize the templates and process of the submission to avoid in delays for project approval. The templates for legal documents were now available on IRB portal.
7. The lists of Completed and Ongoing research projects in last 3 years were made available on the TMC's website. This would help many researchers planning similar research at the same site and will also avoid the duplication of research at other centres of the TMC.

Publications:

Approximately 20 publications in peer review journals of the research studies were supported through institutional grants.

Future Goals:

- Phase-III of IRB Portal for research projects life cycle
- Implementing IRB portal for online project submission to all satellite centres like of TMC
- The quality control program for research projects
- To monitor the progress of research studies supported by institutional funds
- To develop online education models for researchers and staff
- Capacity building for Scientific and Ethical review process
- Training sessions for IEC members and investigators.



Scholarly

- Academics Director's Message
- The Academia
- University Degrees



Message, from the desk of TMC Director Academics



Tata Memorial Centre (TMC) is a Grant-in-aid institute under Department of Atomic Energy and is a stand-alone post-graduate institute under Homi Bhabha National Institute (HBNI), which is deemed to be University under Department of Atomic Energy. TMC stands tall on 3 pillars of Service, Education & Research. For the last more than 75 years now, TMC has been contributing in the development of trained manpower in the field of oncology for the entire nation by imparting knowledge through various educational and research activities.

Most of the teaching activities are carried out under HBNI and all our medical courses are NMC recognized. Additionally, we conduct HBNI Certified PG courses and certain one year TMH Certificate courses. We also offer various Technical courses which are conducted under the aegis of MSBTE (Maharashtra State Board of Technical Education). Considering the need for development of additional manpower, TMC has proposed a plan to expand the skill development work which will provide MSc, Diploma and certification courses in oncology related subjects at TMH as well as all its peripheral centres across the country. All these courses will not only create trained manpower to better take care of cancer patients across India, but also provide patients' value-added-services which will help improve their quality of life.

Keeping with the tradition of TMC, we have taken HBNI approval to start multiple new courses this year; the most important among those being the Integrated MD (MD/ DM/ MCh)-PhD Program and the Masters in Patient Navigation (Oncology) course. At the same time, we have also started many oncology specific TMH Fellowships like in geriatric oncology; pediatric palliative care; musculoskeletal onco-radiology; etc. We hope to start some ambitious courses like Physician Assistant course and Masters in Health Care Management soon. Apart from our centers in Mumbai, full-fledged academic activities are also taking place at Dr. B. Borooah Cancer Hospital in Guwahati, Assam. We are happy to announce that this year NMC approved academic activities have also begun in our other branches like HBCH in Sangrur (Punjab) and HBCH & MPMMCC in Varanasi (UP). We hope next year they will also start in HBCHRC, Vizag (AP).

We want to give the students being trained at TMC a better experience to cherish for lifetime. Over the last one year, we have consolidated all the Academics related activities at one place. The old PG-hostel has been completely renovated and a brand new hostel has been started in

the Haffkine compound which will house 402 students. Additionally, we have already leased 2 towers in Kharghar for our students. We have started the in-house Gymnasium for the students and also conducted “Conquest 21” a sports meet involving both students and staff of TMH, which was a great hit. We hope to start literature/ movies/ music clubs/ events from this year, so as to nourish the talent of our students.

TMC as well as its individual departments and Disease Management Groups (DMGs) conduct various CME activities all throughout the year, including our Annual Meeting on Evidence Based Medicine. These CMEs are very popular amongst the oncology community. In keeping with our effort to provide value based education, a number of special lectures were organized in the field of Medical Humanities. We also hope to conduct courses for students to develop soft skills, especially in the field of effective communication.

I take this opportunity to thank all our students who work really hard and are the lifeline of this hospital & without whose support we would not be able to take care of the thousands of patients who come to TMH and at our peripheral centers in Varanasi, Sangrur, Vizag, Mullanpur, Guwahati, etc. This year, extra thanks to them, since the residents are working with 25% less numbers because last year's Resident batch, which normally joins in August, has still not joined because of NEET related issues! I also take this opportunity to thank Director TMC, Dr. RA Badwe & the entire administration of TMC for their constant support. I also take this opportunity to thank the Vice Chancellor, Dean and the entire HBNI Team for all their help and cooperation over the years. I would also personally like to thank Dean Academics (Projects), Dr Kailash Sharma, for his constant support & guidance; Dr Siddharth Laskar my deputy; & the entire staff of Academics Section for all their help and support.



Dr. SD Banawali



The Academia

Director Academics, TMC
Prof. Shripad D. Banavali

Dean Academics (Projects)
Prof. Kailash Sharma

Dy. Director Academics, TMC
Prof. Siddhartha Laskar

In-charge, Students Affairs
Prof. Sarbani Ghosh Laskar

Tata Memorial Centre (TMC) is a Grant-in-aid institute under Department of Atomic Energy and is a stand-alone post-graduate institute under Homi Bhabha National Institute (HBNI), which is a deemed to be University under Department of Atomic Energy. For the last more than 75 years now, TMC has been contributing in the development of trained manpower in the field of oncology for the entire nation by imparting knowledge through various educational activities

For academic purposes, the Mumbai units of TMC comprising of Tata Memorial Hospital (TMH), Advanced Centre for Treatment, Research and Education in Cancer (ACTREC), and Centre for Cancer Epidemiology (CCE), are clubbed together. We have post-graduate courses like MSc in oncology nursing, patient navigation (Kevat), clinical research, radio-physics, etc. Eighty-five (85) students were registered in all these courses in 2021. We offer MD courses in 8 subjects namely anesthesiology, microbiology, nuclear medicine, palliative medicine, pathology, radio-diagnosis, radiotherapy and transfusion medicine. The admission of MD students for the year 2021 has been delayed this year because of various reasons and students are just joining in March 2022. The same is also true for our DM & MCh students. We offer DM in 6 subjects—critical care, gastroenterology, interventional radiology, medical oncology, onco-pathology & pediatric oncology; and MCh. in 4 subjects—gynecological oncology, head & neck surgery, plastic surgery & surgical oncology. Every year 156 students join TMH for MD/ DM/ MCh courses. We also offer PhDs in both health-sciences and life-sciences. There are 18 Principal Investigator (PI) Labs in the Advanced Centre for Treatment, Research & Education in Cancer (ACTREC) at Kharghar, Navi Mumbai who take in up to 20 to 25 new PhD students each year.

TMC also runs various HBNI certified Fellowships as well as TMH Fellowships. Sixty-six (66) students join these various Fellowships every year. Last year we started 3 new HBNI Certified courses: MSc in Public Health & Epidemiology; Masters in Occupational Therapy Oncology; and, Fellowship in Immuno-Oncology. And, we have received HBNI approval for 3 new courses: Masters in Patient Navigation (Oncology); Fellowship in Pediatric Palliative Care; and, MD-PhD Program. In addition, we have also started 7 new TMH Fellowships: Fellowship in Geriatric Oncology; Fellowship in Immuno-Oncology; Fellowship in Pediatric Oncosurgery; Fellowship in Head & Neck & Neuro-Oncology Imaging; Fellowship in Pediatric Interventional Radiology; Fellowship in Women Cancer Imaging; and, Fellowship in Musculoskeletal Oncology Imaging.

We also run technological and skill development courses. We offer 6 months' trainee / observership in all the fields of oncology. TMC is recognized as a Training Centre in Cancer Education and Research by several National & International Organizations including WHO, IAEA, INCTR, and Governments of various African & SARC countries. Because of the Covid-19 Pandemic and the ensuing travel restrictions, we had to keep our International training on hold in 2021. Yet, three overseas specialists visited TMC in 2021. In spite of the pandemic related lockdown & travel restrictions, 229 specialists from various parts of India have visited Tata Memorial Centre as Observers from all over India in the year 2021.

Like all across the Globe, Covid-19 really changed the way academics was done even at TMH. Not only all the Teaching was web-based, we even conducted most of the MD / DM / MCh exams online as per the NMC guidelines. Even most of our Entrance Exams for technical courses & Fellowships were successfully done through web-based proctored exams. In addition to the courses, TMC as well as individual departments and Disease Management Groups (DMGs) conduct various CME activities all throughout the year, including our Annual Meeting on Evidence Based Medicine. Even most of these were done on web-based platforms.

Our residents always work hard, however this year was more important since they have been working with 25% less numbers, since last year's batch of residents have still not joined. I would take this opportunity to thank all our residents. At the same time, to improve their experience here, we have started the in-house Gymnasium last year. We also conducted "Conquest 21" a sports meet involving both students and staff of TMH, which was a great hit. We have also taken this opportunity of having less residents to renovate our PG Hostel located in BARC Campus and will soon inaugurate the new 14 storey Resident Hostel in the Haffkine Campus.

Additionally, Academic activities are also taking place at Dr. B. Borooah Cancer Hospital in Guwahati, Assam. TMC now has begun the process of starting similar academic activities at its various other centres like HBCH in Sangrur (Punjab), HBCH & MPMMCC in Varanasi (UP), and HBCH in Vizag (AP).



Haffkine Campus Hostel for Residents



Students & Faculty Participation in "ConQuest 21" Sports Meet



Training in state-of-the-art: Surgery



Training in state-of-the-art RT: Proton Therapy



University Degrees

Name of the Course	Duration	Approved By	Recognized University	Passed
MCh (Surgical Oncology)	3 - Year Superspeciality courses (Post MD)	Medical Council of India (MCI)	Homi Bhabha National Institute	17
MCh (Gynecological Oncology)				02
MCh (Plastic Surgery)				02
MCh (Head & Neck Oncology)				04
DM (Medical Oncology)				12
DM (Critical Care)				03
DM (Paediatric Oncology)				03
DM (Gastroenterology)				02
DM (Interventional Radiology)				02
DM (Onco-pathology)				03
MD (Pathology)	3 - Year broad speciality (MD) courses Homi Bhabha National Institute (HBNI) approved			11
MD (Anesthesiology)				19
MD (Radiodiagnosis)				18
MD (Radiation Oncology)				16
MD (Microbiology)				-
MD (Immuno-Hematology & Blood Transfusion)				05
MD (Nuclear Medicine)				06
MD (Palliative Medicine)				03
Post Graduate Diploma in Fusion Imaging Technology	1-year & 1-year Internship	HBNI approved	Homi Bhabha National Institute	10
MSc (Clinical Research)	2-year & 1-year Internship (Bond)			11
MSc (Nursing)	2-year course			05
MSc (Nuclear Medicine & Imaging Technology)	2-year & 1-year Internship (Bond)			05
MSc (Occupational Therapy in Oncology)	2-year			-
MSc (Public Health & Epidemiology)				-
PhD (Life Science)	5-year			14
Total				163

**In the year 2021, a total of thirty-three (33) students were selected for the 2-year (plus one-year internship) Advanced Diploma courses in Radiotherapy Technology (ADRT) and in Medical Imaging Technology (ADMIT), conducted under the Maharashtra State Board of Technical Education (MSBTE), Directorate of Technical Education, Government of Maharashtra. For the above exams held in 2021, twenty-nine (29) students passed the exams.*

National Cancer Grid



NCG Vishwam

**Cancer
Care
Connect**

Eliminating Disparities in
Cancer Care



National Cancer Grid

National Cancer Grid (NCG), a large network of cancer centres, research organizations, professional societies, charitable institutions and patient groups, was established in 2012 with the mandate of improving cancer care in India. The network was established with funding support from Department of Atomic Energy. Since its inception, NCG has worked towards uniform standards of cancer care, developing trained workforce in oncology and supporting high-quality multi-centric cancer research to develop cost-effective solutions for prevention and treatment of cancer. As of today, there are 236 centres and organizations which are members of the NCG.

Over the last year, the NCG has achieved several milestones as listed below:

Health Technology Assessment (HTA) of high-value interventions

To ensure uniform yet resource stratified delivery of optimal care, NCG has developed resource stratified guidelines for common cancers. These guidelines were based on the opinion of subject experts and the available evidence for individual interventions. The “optimal” category of guidelines has been linked with AB-PMJAY for reimbursement. In order to ensure the provision of value-based care, NCG has taken up the HTA for these interventions. A total of 10 high-cost interventions have been evaluated till date. These will form the basis of revisions of NCG guidelines.

Group negotiation of drugs

NCG has successfully completed the group-negotiation for high-value drugs. A total of 87 Stock Keeping Units (SKUs) were part of this cycle. We have been able to achieve remarkable savings with 20-80% reduction from MRP of these drugs. This pilot run has laid down the processes which will be used for all the future group negotiations for more cancer drugs. This will not only ensure savings but also the quality of drugs, and help mitigate the issue of frequent stock-outs at smaller cancer centres.

Patients' Health Record integration

Enabling patients to become the owner of their health records has been one of the objectives of NCG. This will allow seamless care of patients across different centres irrespective of their geographical location. A proof of concept has been completed linking the electronic medical records of 3 cancer centres for dummy patients. The pilot has demonstrated the feasibility of linking the EMR data as well as the PACS data. This open-source work has contributed to the framework of the National Digital Health Mission (ABDM). As part of phase II, the NCG is now working towards development of a low-cost EMR solution.

NCG “Vishwam” Global Cancer Network

The NCG is working towards global cancer control by working with other low and middle income countries (LMICs) grappling with problems with their healthcare systems and infrastructure. Challenges in many countries are remarkably similar and include inadequate public health expenditure, socioeconomic disparities, lack of awareness amongst the general public, late stages of presentation, lack of access to even basic cancer care facilities, inadequate infrastructure, and almost non-existent healthcare regulations and standards. Partner countries and organizations will be able to share best practices from the National Cancer Grid, and also benefit from some of its resources. The NCG Global Cancer Network partners with several countries across the world, working towards reducing the burden of cancer globally.

So far, the following countries have partnered with the NCG and/or expressed interest in being members of NCG Vishwam: Sri Lanka, Vietnam, Nepal, Afghanistan, United Arab Emirates, Myanmar, Bangladesh, Zambia, Kazakhstan, Russia, Ghana. The extent of engagement involves sharing of evidence-based treatment guidelines, education and training of oncologists and paramedical staff, participation in Virtual Tumor Boards, expert second opinion service, and assistance with setting up cancer registries.

Biotechnology Industry Research Assistance Council's (BIRAC) Clinical trial network

The NCG successfully secured a highly competitive grant of Rs 16 crores for strengthening the clinical trials network involving 11 cancer centres. Over the last one year, the NCG has developed common SOPs for clinical trials and Ethics Committee through this grant. The grant has enabled development of a trained workforce for research support. The network of 11 centres is now ready to rollout multi-centric clinical trials. As part of this grant, the NCG has developed training modules for all aspects of clinical trial conduct which are open access through the NCG MOOCs platform.

Funding for multi-centric clinical trials

Supporting the conduct of multi-centric clinical research has been one of the NCG mandates. This year NCG has funded three new studies, bringing the total number of collaborative practice-changing studies funded by the NCG to 12.

NCG Clinical Research Organization (CRO)

The CRO assisted in the international peer review of eight research protocols submitted to NCG for funding and facilitated fund disbursement for the three selected studies. The CRO has conducted the annual status review of all the ongoing NCG studies. The CRO SOPs were revised, reviewed and approved. Monitoring of studies was undertaken in TMH by physical visits at TMH or ACTREC. For other sites, where visits for monitoring were not possible due to the pandemic, remote monitoring was conducted after permission for the same from the PI and the Institute EC. The CRAs assisted PIs to create guidance documents for the management of patients during this period. To handle the unique situation of Covid-19, the CRO created remote monitoring plans and shared them with PIs for finalization.

The NCG CRO conducted training for a site team on aspects of GCP and Informed Consent. In the latter part of 2021, where site visits were permitted by the site policies, site visits were also conducted.

NCG Library services

The library continued to provide access to medical journals and books to the registered members of NCG. It also provided plagiarism check services for 300+ manuscripts and theses. The library launched a discovery tool–Akshara—which provides access to browse and search at article level for 17000 indexed journals, videos, monographs, and presentations. The required full-text articles can be requested from the local libraries.

NCG External Quality Assessment Scheme (EQAS)

Surgical Pathology and histopathology practices in India are heterogeneous and are driven by patient affordability. The result of this is that test results are variable. The National Cancer Grid External Quality assurance program is being run under the auspices of the National Cancer Grid. The NCGEQAS aims to standardize histopathology and oncopathology practices across the country and our motto is “Towards One practice for all”. NCGEQAS started on 18th February 2017. NCGEQAS is the only affordable program for immunohistochemistry evaluation in the country. Presently there are 149 centres actively participating in H&E EQAS and IHC. More recently, this has been expanded to include EQAS for molecular pathology also.

NCG annual meeting

The NCG annual meeting was conducted virtually and was attended by the directors and other faculty members of the NCG centres. During the meeting, the annual report of all the NCG activities was presented. In addition, key discussions included value-based cancer care incorporating health technology assessment, integrating primary care in oncology, patient record integration, and National Digital Health Mission and palliative care augmentation. The NCG presented the NCG lifetime achievement award to Prof V. Shanta and Late Dr. S. Krishnamurthy to recognize their outstanding contribution and leadership in the field of oncology in India.

Covid-19 webinars and NCG guidelines for cancer care during Covid-19

Since the beginning of the Covid-19 pandemic, NCG took the initiative to help all the members centres to provide periodic updates on various aspects of Covid-19, including the overview of SARS COV-2, judicious use of PPE, testing methods, treatment of Covid-19, sero-immunology, psycho-social issues, public health implications, the role of nurses, administrator's role, vaccines, research priorities, and patient's perspective. Several experts, both national and international, participated in these webinars to explain each of these aspects as the pandemic evolved. A total of 16 webinars were conducted on various aspects of Covid-19 during the pandemic, which are available on the NCG website for free viewing.

Virtual research board

NCG trains early career oncologists for research methods in a week-long residential workshop. However, this requires a continuation of support for the researchers to help with their ongoing research. To address this, the NCG conducts virtual research boards at regular intervals. Internationally renowned clinical researchers and biostatisticians provide ongoing mentoring to early career researchers beyond the CReDO workshop.

Palliative care and EQUIP India

NCG has built capacity in quality improvement for member cancer centres through the EQulP-India program (Enable Quality, Improve Patient care). The Integrated Modules on Palliative care in Cancer Training, (IMPACT-HN) for surgical fellows has been another initiative towards improving survivorship care. The NCG website displays the palliative care guidelines developed by the core-team, providing an algorithmic approach to symptom clusters seen commonly in patients with advanced cancer. NCG-PC division also coordinated the Ayushman Bharat packages relevant to palliative care for deserving patients from the low socio-economic strata. To augment access to palliative care services and cancer pain relief, the NCG has been coordinating with several states to ensure training and opioid availability.



Financial Audit

- Accounts, Statement
- Action Taken Report
- Auditor's Report
- Finance, Simplified



Accounts, Statement

TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER. INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31 MARCH 2022				In ₹
		Year Ended 31.03.2022	Year Ended 31.03.2021	
A) INCOME				
Grant in Aid - Govt of India	7	4,93,68,46,900	5,60,27,53,000	
Hospital Income		4,76,41,73,038	2,30,15,07,588	
Sale of Drugs and Surgical Goods		4,32,65,85,239	2,57,43,13,305	
Interest Income	8	33,73,85,633	22,81,85,690	
Other Income	9	9,17,43,741	8,43,74,799	
TOTAL (A)		14,45,67,34,550	10,79,11,34,382	
B) EXPENDITURE				
Academic Expenses		9,87,55,022	5,04,92,185	
Consumption of drugs and Surgical Goods	10	3,95,93,88,896	2,70,05,31,541	
Consumables		1,53,22,54,057	99,29,37,351	
Staff Cost / Salaries	11	8,67,90,99,802	6,91,27,19,270	
Other Administrative Expenses	12	1,76,23,76,056	1,63,86,16,687	
TOTAL (B)		16,03,18,73,834	12,29,52,97,034	
Excess of Income over expenditure before Depreciation and Provisions on retirement benefits of employees (A-B)		(1,57,51,39,284)	(1,50,41,62,652)	
Less : Depreciation		59,93,92,273	56,25,95,168	
Add : Deferred Income (As per AS 12 for Govt Grant for Dep on Equipment)		59,93,92,273	56,25,95,168	
Less : Provision for Retirement Benefits				
Gratuity		11,46,92,409	4,95,74,145	
Pension		1,44,13,44,541	47,24,27,195	
Leave Encashment		29,79,54,468	13,09,96,828	
Balance being deficit / (surplus) for the year trf to Balance Sheet		3,42,91,30,702	2,15,71,60,820	
Significant Accounting Policies				
Notes on Accounts				

As per our report of even date attached

For Batliboi & Purohit

Chartered Accountants

Firm Reg No. 101048W

CA Parag Hangekar

Partner

Membership No. : 110096

Mumbai



For and on behalf of the Governing Council

 Mr. S Mohapatra
 Mr. Anil Sathe
 Dr. R A Badwe
 ICFA, TMC CAO, TMC Director, TMH Director, TMC

TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER. BALANCE SHEET AS AT 31ST MARCH, 2022				in ₹
PARTICULARS	Schedule	As at 31.03.2022	As at 31.03.2021	
CAPITAL FUND AND LIABILITIES				
Capital Fund	1	1,13,18,92,312	-	
Earmarked / Endowment Fund	2	3,90,09,97,043	3,65,31,41,842	
Academic Fund	3	26,37,95,099	18,53,17,706	
Current Liabilities & Provisions	4	26,52,70,94,903	23,97,80,78,801	
TOTAL		31,82,37,79,358	27,81,65,38,349	
ASSETS				
Fixed Assets				
Gross Block		12,16,90,26,402	10,99,84,90,875	
Less: Provision for Depreciation		5,42,31,82,985	4,98,15,19,286	
Net Block		6,64,58,43,417	6,01,69,71,589	
Capital Work - in - Progress		13,63,80,78,966	11,07,50,12,739	
Total	5	20,28,39,22,383	17,09,19,84,328	
Current Assets, Loans and Advances	6	11,53,98,56,975	10,41,49,07,692	
Capital Fund	1	-	30,96,46,329	
TOTAL		31,82,37,79,358	27,81,65,38,349	
Significant Accounting Policies				
Notes on Accounts				

As per our report of even date attached

For Batliboi & Purohit
Chartered Accountants
Firm Reg No. 101048W

CA Parag Hangekar

Partner

Membership No. : 110096

Mumbai

For and on behalf of the Governing Council

Mr. S Mohapatra
JCFA, TMC

Mr. Anil Sathe
CAO, TMC

Dr. C S Pramesh
Director, TMH

Dr R A Badwe
Director, TMC



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER			
SCHEDULE 1 - CAPITAL FUND			
PARTICULARS	As at 31.03.2022	As at 31.03.2021	in ₹
CAPITAL FUND			
Balance at the beginning of the Year	(309,646,329)	(1,749,523,563)	
Add: Non Recurring Grant Utilised during the year	4,909,836,227	3,771,193,225	
Add: Recurring Grant utilised for Capital Expenditure	-	-	
Add: Assets purchased from Donation & csr	545,028,845	345,191,462	
Add: Assets purchased out of Sponsored Project & Workshop Fund and HBNI	15,196,544	39,521,269	
Add: Actrec - Assets Plan to Donation		3,727,266	
Add : Others		0	
Less: Deficit/ (surplus) Transferred from the Income & Expenditure Account	5,160,415,286	2,410,109,659	-
Less: Deferred Income (As per AS 12 for Govt Grant)	3,429,130,702	2,157,160,820	
	599,392,273	562,595,168	
Total	1,131,892,312	(309,646,329)	



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER.						
SCHEDULE I-B - WOMEN AND CHILDREN WELFARE GRANT						
PARTICULARS	TMH	ACTREC	VARANASI	VIZAG	SANGRUR	TOTAL
						in ₹
Balance at the beginning of the Year	6,200,195	-	2,500,000	547,465	3,674,330	12,921,990
Add: Re grouping	-	398,365				398,365
Add: Unutilised patients Bal trf to fund	52,577,118				630,000	53,207,118
Add: Grant Received During the year	113,500,000	18,000,000	23,500,000	5,000,000	2,500,000	162,500,000
Total	172,277,313	18,398,365	26,000,000	5,547,465	6,804,330	229,027,473
Less: Grant Utilised for Women and Children Welfare	169,460,608	14,148,423	23,482,106	4,077,476	6,747,829	217,916,442
Balance	2,816,705	4,249,942	2,517,894	1,469,989	56,501	11,111,031
Less: Grant Utilised for Revenue Expenditure						
Total	2,816,705	4,249,942	2,517,894	1,469,989	56,501	11,111,031



TATA MEMORIAL CENTRE

IN 3

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As of 31.03.2021

As of 31.03.2022

PARTICULARS



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER			in ₹
SCHEDULE 3 - ACADEMIC FUND			
PARTICULARS	As at 31.03.2022	As at 31.03.2021	
Opening Balance	185,317,706	152,398,767	
Add :- Addition During the year	98,755,022	50,492,185	
	284,072,728	202,890,952	
Less : Deduction During the year	20,277,629	17,573,246	
Total	263,795,099	185,317,706	



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER SCHEDULE 4 - CURRENT LIABILITIES AND PROVISIONS					in ₹
PARTICULARS	As at 31.03.2022	As at 31.03.2021			
A) CURRENT LIABILITIES & DEPOSITS					
Deposits					
- From Student	26,716,989	23,722,169			
- From Patient	3,219,140,006	2,556,091,849			
- From Suppliers & Contract	173,563,936	205,333,548			2,785,147,566
Other Current Liabilities					
Undisbursed and Unclaimed Salaries		212,336			-
New pension scheme liability		8,543,670			668,198
Sundry Creditors-Capital		114,026,762			181,266,303
Other Liabilities		373,354,014			423,527,553
Inter Unit Adjustment		93,258,516			555,976,132
Statutory Liabilities		71,705,656			20,685,669
Outstanding Expenses					
- Salary	1,081,513,974	667,445,166			
- Operational Expenses	1,223,375,815	1,049,714,443			1,717,159,609
Unutilised Grant from Govt of India e/f					
- Recurring Grant	-	4,147,000			
- Women & Children Welfare Fund	11,111,031	12,921,990			
- Non Recurring Grant	-	-			17,068,990
TOTAL (A)	6,396,524,705	5,701,500,021			
B) PROVISIONS(for retirement benefits of employee)					
Gratuity					
a) Current	210,039,377	236,314,016			
b) Non current	1,564,729,439	1,423,762,392			1,660,076,408
Leave Encashment					
a) Current	274,001,282	247,546,854			
b) Non current	1,753,248,524	1,481,748,483			1,729,295,337
Pension					
a) Current	643,724,613	533,869,585			
b) Non current	15,684,826,963	14,353,337,450			14,887,207,035
TOTAL (B)	20,130,570,198	18,276,578,780			
TOTAL (A+B)	26,527,094,903	23,978,078,801			



DESCRIPTION	GROSS BLOCK					DEPRECIATION					NET BLOCK	
	Cost / Valuation as at the beginning of the year (01/04/2021)	Total Additions / adjustments during the year	Deletions / Adjustment	Cost / Valuation as the end of the year (31/03/2022)	As at the beginning of the year (01/04/2021)	Depreciation on the opening balance	Depreciation on Additions during the year	Total Depreciation during the year	The Balance : Adjustment	Total up to the year end (31/03/2022)	As at the Current year- Ended 31/03/2022	As at the Previous year- Ended 31/03/2021
A. FIXED ASSETS :												
1. LAND :												
a) Freehold	197,608			197,608	-						197,608	197,608
2. BUILDINGS :												
a) On Freehold Land	1,877,971,278	30,784,314		1,908,755,592	148,120,607		183,476	30,794,488		818,915,079	1,549,810,317	1,529,850,611
3. PLANT MACHINERY & EQUIPMENT	7,642,785,410	1,011,007,589	48,005,090	8,694,882,409	3,834,207,440	435,418,945	33,100,266	468,519,211	40,173,011	4,282,653,640	4,657,228,770	4,098,477,970
4. VEHICLES	57,199,548	10,133,263	854,263	66,498,548	35,075,955	3,479,064	807,481	4,286,545	854,262	38,508,238	27,990,310	22,121,593
5. FURNITURE, FIXTURES	294,572,273	65,166,897	965,527	359,169,643	180,274,414	18,730,836	2,784,397	21,019,193	569,390	200,724,217	138,443,426	114,297,899
6. OFFICE EQUIPMENT	34,361,313	9,635,555	140,289	43,856,579	28,881,635	4,193,705	232,701	4,426,406	237,609	31,070,432	50,586,147	45,479,678
7. COMPUTER/ PERIPHERALS	761,403,444	80,238,297	18,736,218	823,895,023	554,859,175	65,305,418	7,882,035	73,188,250	18,736,041	605,311,364	226,584,639	206,544,269
TOTAL (A)	10,918,095,875	1,239,940,915	69,405,387	12,169,026,402	4,981,319,280	537,738,896	44,495,116	602,234,012	60,576,313	5,523,182,985	6,645,842,417	6,010,971,388
CWIP	11,075,815,109			11,638,881,316							17,638,881,316	8,950,784,623
LESS: PROVISION FOR DOUBTFUL CAPITAL ADV (LAND)	802,370			802,370							802,370	802,370
NET CAPITAL WIP (B)	11,075,012,739			11,638,078,946							11,638,078,946	8,049,982,253
TOTAL (A + B)	22,073,903,614	1,239,940,915	69,405,387	23,887,185,948	4,981,319,280	537,738,896	44,495,116	602,234,012	60,576,313	5,523,182,985	26,283,922,483	14,866,953,641
PREVIOUS YEAR (TMC)	19,103,015,603	3,381,837,133	411,353,162	22,071,403,411	3,473,963,817	325,450,290	37,144,025	562,594,371	37,043,701	4,081,319,246	14,980,139,361	14,647,044,811

Note: Capital work in progress includes freehold land amounting to Rs. 802370 (previous year: Rs. 802370) which is disposed and hence provided as doubtful from the financial year 2020-21



TATA MEMORIAL CENTRE				
TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER				
SCHEDULE 6 - CURRENT ASSETS, LOANS AND ADVANCES				
PARTICULARS	As at 31.03.2022		As at 31.03.2021	
A. CURRENT ASSETS				in ₹
1. Inventories				
Stock of Drugs, Medical and Surgical Goods	506,704,161		443,877,849	
Stores & stationery	19,864,457	526,568,618	6,331,556	450,209,405
2. Sundry Debtors				
a) Outstanding more than six months	133,151,944		226,981,121	
Considered Good	40,686,584		27,831,688	
Considered Doubtful	173,838,528		254,812,809	
Outstanding less than six months	461,188,351		366,144,678	
Considered Good	635,026,879		620,957,487	
Considered Doubtful	40,686,584	594,340,295	27,831,688	593,125,799
b) Less: Provision for Doubtful Debts				
3. Cash Balances				
Cash in Hand	6,148,971		3,448,339	
Cheques on Hand				
Banking Balance	248,066	6,397,037	42,756	3,491,095
4. Bank Balances				
With Scheduled Banks :				
- Current Accounts	682,732,978		245,983,338	
- Fixed Deposit Accounts	8,448,664,667		7,809,321,475	
- Margin Money Deposit Accounts	72,432,983		279,164,198	
- Fixed Deposits Projects	815,584,643		698,441,664	
- On Savings Accounts	38,622,618	10,058,037,889	6,801,941	9,039,712,615
TOTAL (A)		11,185,343,839		10,086,538,915

contd.....



TATA MEMORIAL CENTRE			
TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER			
SCHEDULE 6 - CURRENT ASSETS, LOANS AND ADVANCES			
in ₹			
PARTICULARS	As at 31.03.2022		As at 31.03.2021
B. LOANS AND ADVANCES			
1. Advances recoverable in cash or in kind or for value to be received (unsecured, considered good)	43,867,946		35,100,474
Considered Good	-		-
Considered Doubtful	43,867,946	43,867,946	35,100,474
Less: Provision for Doubtful Advances:			
b) Prepaid expenses		44,668,873	28,996,131
c) Other Deposits		52,957,076	50,661,142
			35,100,474
2. Loans & Advances to staff			
Interest Bearing Advances	9,831,583		10,221,360
Non Interest Bearing Advances	(571,550)	9,260,033	2,485,373
3. Interest Accrued			
Interest Accrued on Fixed Deposits	146,694,076		139,633,588
Interest Accrued on Corpus Deposits	5,073,340		5,073,340
Interest Accrued on Sam Jal Deposits	564,820	152,332,236	564,820
4. Interest Accrued but not due		7,622,510	7,944,016
5. Tax Deducted at Source		43,804,461	47,688,533
6. Inter Unit Adjustment accounts		-	-
TOTAL (B)		354,513,135	328,368,777
TOTAL (A+B)		11,539,856,975	10,414,907,692



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER.			
SCHEDULE 7 - RECURRING GRANT			
PARTICULARS	As at 31.03.2022	As at 31.03.2021	in ₹
Balance at the beginning of the Year	4,147,000	327,800,000	
Add: Grant Received During the year	4,932,699,900	5,279,100,000	
Total	4,936,846,900	5,606,900,000	
Less: Grant Utilised for Capital Expenditure (A)			
Balance	4,936,846,900	5,606,900,000	
Less: Grant Utilised for Revenue Expenditure (B)	4,936,846,900	5,602,753,000	
Unspent Balance c/f		-	4,147,000

Capital Expenditure utilised from Minor equipment which cost more than 5000/- and life is more than a year.



TATA MEMORIAL CENTRE

TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER

SCHEDULE 8 - INTEREST INCOME

PARTICULARS	Year Ended 31.03.2022	Year Ended 31.03.2021	in ₹
Interest : (gross) (includes tax deducted at source)			
from banks :			
on fixed deposits/ margin money deposits	327,980,766	223,608,858	
on saving accounts & Others	7,848,258	2,779,293	
		335,829,024	226,388,151
from others :			
on Vehicle Advances	1,648	879	
on House Building Advances	460,837	828,854	
on Computer Advances	2,825	1,504	
		465,310	831,237
Interest accrued but not Due on staff Advances	1,091,299		966,302
	-		-
Total	337,385,633		228,185,690



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER.		
SCHEDULE 9 - OTHER INCOME		
PARTICULARS	Year Ended 31.03.2022	Year Ended 31.03.2021
Miscellaneous Receipts	76,987,638	67,372,540
Animal House Receipts	8,247,035	5,927,060
Project Overheads	4,998,889	4,500,024
Effect of exchange fluctuation (net)	42,171	1,074,294
Mobilisation Interest	1,468,008	5,500,881
TOTAL	91,743,741	84,374,799

in ₹



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER			in ₹
SCHEDULE 10 - CONSUMPTION OF DRUGS & SURGICAL GOODS			
PARTICULARS	Year Ended 31.03.2022	Year Ended 31.03.2021	
Opening stock of Drugs / Surgical goods	436,974,259	427,816,066	
Add: Purchases	4,075,482,233	2,740,650,858	
Less: Closing stock of Drugs / Surgical goods	506,704,161	436,974,259	
Less: Return/ Rejected / Expired Drugs / Surgical goods	46,363,434	30,961,124	
TOTAL	3,959,388,896	2,700,531,541	



TATA MEMORIAL CENTRE TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER.		
SCHEDULE 11 - STAFF COST / SALARIES		
in ₹		
PARTICULARS	Year Ended 31.03.2022	Year Ended 31.03.2021
a) Salaries and Wages	2,807,682,979	2,543,970,456
b) Allowances and Bonus	3,084,888,526	2,047,730,594
bi) Outsource Salary	1,200,434,106	882,853,987
c) Expenses on Employee's Retirement and Terminal Benefits	205,734,710	173,466,999
d) Pension scheme	709,720,498	637,997,001
e) Fellowships	670,638,983	626,700,234
TOTAL	8,679,099,802	6,912,719,271



TATA MEMORIAL CENTRE

TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND
EDUCATION IN CANCER

SCHEDULE 12 - OTHER ADMINISTRATIVE EXPENSES

		In ₹	
PARTICULARS	Year Ended 31.03.2022	Year Ended 31.03.2021	
a) Linen and Laundry	76,956,986	68,174,596	
b) Library Expenses	74,553,450	147,860,171	
c) Electricity	524,118,236	417,174,551	
d) Water Charges	32,102,382	14,981,606	
e) Repairs and Maintenance	579,047,612	453,037,823	
f) Animal House Expenses	841,008	3,592,632	
g) Rates and Taxes	17,373,927	58,294,756	
h) Insurance	11,361,773	14,316,923	
i) Minor Equipments and Replacement of Capital Equipments	1,127,693	5,341,320	
j) Postage, Telephone and Communication Charges	11,224,923	12,664,495	
k) Printing and Stationery	47,336,250	41,447,290	
l) Travelling and Conveyance Expenses	27,320,457	33,249,426	
m) Intra Mural Research Expenses	21,029,936	1,920,579	
n) Cancer Registry Program Expenses	61,112,961	204,814,811	
o) Auditors Remuneration	247,000	102,500	
Audit fees	76,140	41,400	
GST		1,314,815	
p) Symposium and Training	3,326,209	537,964	
q) Professional Charges	33,050,228	23,251,349	
r) Advertisement Expenses	25,422,919	3,694,329	
s) Provision for Doubtful Debts	12,854,896	16,980,121	
t) Hostel maintenance expenses	3,313,420	28,871,930	
u) Miscellaneous Expenses	113,137,522	85,458,287	
v) Covid Expenses	84,968,250	-	
w) Bad debts written off	471,879	1,493,014	
x) Loss / (Profit) on sale of Assets			
TOTAL	1,762,376,056	1,638,616,687	



TATA MEMORIAL CENTRE

[TATA MEMORIAL HOSPITAL AND ADVANCED CENTRE FOR TREATMENT, RESEARCH AND EDUCATION IN CANCER]

The Tata Memorial Centre (TMC) comprising of the Tata Memorial Hospital (TMH) and the Advance Centre for Treatment, Research & Education in Cancer (ACTREC) functions as a grant-in-aid Institute under the administrative control of the Department of Atomic Energy, Government of India and recognized as the national cancer centre with a mandate for Service, Education and Research in Cancer. Four new hospitals in Visakhapatnam, Andhra Pradesh and Mullanpur District Punjab, two in Varanasi as HBCH and MPMMMCH. The satellite centre in Sangrur is functional. The hospital in Visakhapatnam is providing OPD and day care services. The Centre is registered under the Societies Registration Act (1860) and the Bombay Public Trust Act (1950).

SCHEDULE 13 : SIGNIFICANT ACCOUNTING POLICIES

1. Basis of Preparation of Financial Statements

The financial statements are prepared on historical cost convention, unless otherwise specifically stated, on the accrual basis of accounting and comply with the framework and format laid down by the Controller General of Accounts, Government of India and applicable accounting standards issued by the Institute of Chartered Accountants of India (ICAI) to the extent applicable and in the manner so required.

Revenues and costs are accrued, that is, recognized as they are earned or incurred and recorded in the financial statements of the periods to which they relate. The Centre follows accrual basis of accounting, except for Grants, Donations, Workshops / Projects and Commuted Pensions (in case of existing pensioners), which are accounted for on cash basis.

2. Use of Estimates

The preparation of the financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amount of assets and liabilities as of the Balance Sheet, reported amounts of revenues and expenses for the year ended and disclosure of contingent liabilities as of the balance sheet date. The estimates and assumptions used in these financial statements are based upon management's evaluation of the relevant facts and circumstances as on the date of the financial statements. Actual results may differ from those estimates. Any revision to accounting estimates is recognized prospectively.

3. Revenue Recognition

- i) Hospital income from services rendered to patients is recognized as and when the bills for the services are generated.
- ii) Interest income is recognized on a time proportion basis taking into account the amount invested and the rate of interest.
- iii) Interest on employee advances are recognized in the year on accrual basis.
- iv) Other Revenue items are recognized only when it is reasonably certain that the ultimate collection will be made. Deposits from students in excess of 3 years and



deposits from suppliers in excess of 4 years written back are recognized under miscellaneous income.

- v) Interest earned on general fixed deposit pertaining to donation allocated as per average interest rate among respective donation.

4. Fixed Assets and Depreciation

- i) Fixed assets are capitalized at acquisition cost (net of duty / tax credits availed, if any), including directly attributable costs such as freight, insurance and specific installation charges for bringing the assets to working condition for use.
- ii) Expenditure relating to existing fixed assets is added to the cost of the assets, where it increases the performance / life of the asset as assessed earlier.
- iii) Fixed Assets are stated at cost less accumulated depreciation.
- iv) Fixed assets purchased on non-government funded projects and from donations are transferred to the assets of the Centre at purchase price.
- v) Fixed assets are eliminated from financial statements only on disposal.

Depreciation on fixed assets is provided under straight line method based on useful life of the asset determined by the management at the following rates :

Asset	Rate of depreciation
Buildings	1.63%
Electrical & Gas Installation	4.75%
Plant & Machinery	7.07%
Furniture and Fixtures	9.50%
Office Equipment	4.75%
Computers and peripherals	16.21%
Vehicles - Buses	11.31%
- Car, Jeep	9.50%

- i) Depreciation on assets purchased during the year is provided from the date of its purchase / installation
- iii) Individual assets costing less than Rs.5,000/- are expensed out in the year of purchase or WDV.
- iii) Where any asset has been sold, the depreciation on such asset is calculated on pro-rata basis up to the date, on which such asset has been sold.

5. Inventories

- i) Inventories consist of Drugs and Surgical meant for sale purpose and are valued at lower of cost or Net Realisable Value. Cost is determined on first-in-first-out basis.
- ii) Stock of consumables, stationery are valued at cost



- ii) Stock of linen, laundry, cutlery and crockery, are treated as consumed as and when purchased

6. Government Grant

- i) Recurring and Non-recurring grant related to the revenue are recognized on systematic basis in the income and expenditure account over the period, necessary to match them with the related costs which they are intended to compensate.
- ii) Non-recurring grant to the extent utilised for capital expenditure are transferred to Capital Fund. Unutilised grants are carried forward as Current Liabilities in the Balance Sheet.

7. Donation

Donations in kind received prior to 1st April, 2003 are included under 'Earmarked / Endowment Funds' at comparable purchase price. With effect from 1st April, 2003, donations received in kind are being recorded in the books at nominal value. Donations are received for patient care and cancer research. Assets purchased on donations are treated as assets of the Centre and capitalised accordingly. Donation includes amount received as Corporate Social Responsibility (CSR).

8. Foreign Exchange Transactions

- a. Transactions in foreign currencies are recorded at the exchange rates prevailing on the transaction dates.
- b. Monetary items denominated in foreign currencies remaining unsettled at the year-end are translated at the year-end exchange rates.
- c. All exchange gains / losses on settlement / translation, are recognized in the Income & Expenditure account

9. Employee Benefits

Short Term Employee Benefits:

All employee benefits wholly payable within twelve months of rendering the service are classified as short term employee benefits. Benefits such as salaries, wages, bonus, etc are recognized in the period in which the employee renders the related service.

Post Employment Benefits:

i) Defined Contribution Plans:

Employee benefits in the form of Contributory Provident Fund and New Pension Scheme (for employees joined from 1st January, 2004) are considered as defined contribution plans. The contribution paid / payable under the scheme is recognized in the period in which the employee renders the related service.

ii) Defined Benefit Plans:

Retirement benefits in the form of gratuity to eligible employees, leave encashment and pension scheme (other than employees covered in (i) above) are considered as defined benefit plans. The present value of the obligation under such defined benefit plans is determined based on actuarial valuation using the



Projected Unit Credit Method, which recognizes each period of service as giving rise to additional unit of employee benefit entitlement and measures each unit separately to build up the final obligation.

The obligation is measured using at the present value of the estimated future cash flows. The discount rates used for determining the present value of the obligation under defined benefit plans, is based on the market yields on Government securities as at the Balance Sheet date, having maturity periods approximating to the terms of related obligations.

10. Provision, Contingent Liabilities and Contingent Assets

- a. Provisions are recognized for liabilities that can be measured only by using a substantial degree of estimation, if
 1. The Centre has a present obligation as a result of past event.
 2. A probable outflow of resources is expected to settle the obligation.
 3. The amount of obligation can be reliably estimated.
- b. Contingent liability is disclosed in the case of :
 1. A present obligation arising from past event, when it is not probable that an outflow of resources will be required to settle the obligation.
 2. A possible obligation, unless the probability of outflow of resources is remote.
- c. Provisions, Contingent Liabilities are reviewed at each Balance Sheet date.
- d. Provision for doubtful debts has been made in respect of debtors which remains outstanding for more than 3 years.

11. Events occurring After the Balance Sheet Date

Where material, events occurring after the date of the Balance Sheet are considered upto the date of approval of accounts by the members of the Governing Council.

12. Academic Fund

A percentage as prescribed by the Governing Council of Tata Memorial Centre is transferred from the Hospital Income to a separate fund named as the "Academic Fund". The expenditure incurred towards fulfillment of the objectives is debited to the said fund.

13. Science & Research Fund

The Science & Research Fund / Corpus is created in 2000 with the purpose of utilising the interest in the Fund for (i) Support of preventive oncology activities in the country (ii) Support for attending international conferences and training programmes on cancer related topics and (iii) Any other purpose with the approval of the Committee.

14. Samjal Mistry Fund

The fund is created as per the will of Late Sam Jal Mistry and Late Alice Sam Mistry in 1999. As per the will, the interest and dividend on shares generated from the fund will be utilised equally for treatment to poor cancer patients and scholarship to PG students.



SCHEDULES FORMING PART OF ACCOUNTS

SCHEDULE 14: NOTES ON ACCOUNTS

1. Contingent liabilities not provided for in respect of :
 - a. LC's outstanding as on 31st March, 2022 is Rs.7,24,32,983/-
 - b. Claims against the hospital made by patients are not acknowledged as debts, since the same are not quantifiable.
2. Estimated amount of contracts remaining to be executed on capital account is not ascertained.
3. Sundry debtors, and creditors' balances, and balances of certain liabilities are subject to confirmation, reconciliation and consequent adjustments, if any. Inter unit Adjustment Account balance an amount of Rs. 9,32,58,516 /- (Pr Year Rs.55,59,76,132/-).
4. Fixed Deposits of the Centre includes an amount of Rs. 7,24,32,983 /- (Pr Year Rs. 27,91,64,198/- which represents Earmarked Funds kept aside for the capital commitments.
5. The Centre is covered by a system of internal audit conducted by the Department of Atomic Energy and Indian Audit and Accounts Department. However, during the year the said audit was conducted for the period 2021-22.
6. The Centre has filed a writ petition in the Honorable High Court Bombay for non-applicability of Bombay Labour Fund Act, 1956 in the year 2001-02, the final verdict for which is still pending. Each year the centre recovers the LWF amount from employees and also contributes towards the said liability amounting to Rs.1,12,10,025/- (incl interest of Rs 5,32,873/-) respectively which is disclosed under current liabilities in the financial statement. The centre has also kept as deposit Rs. 5, 50,000/- with Hon'ble Bombay High Court.
7. "Unclaimed NPS A/c" of Rs. 12, 87, 463/- is due for more than 3 years and is being shown under "Other Current Liabilities". As and when the claims will be made by the employees then the payments will be made from this account head.
8. The disclosures pursuant to Accounting Standard 15 (Revised) on "Employee Benefits" are as follows:

(in Rs.)
Defined Contribution Plan :
Contribution to Defined Contribution Plan, recognised as an expense and included in "Staff and Welfare" - Schedule 11 in the Income and Expenditure Account are as under :
- Employers contribution to Provident Fund - Rs.12,03,720/-



- Employer's Contribution to New Pension Scheme - Rs 21,15,94,227/-

			Gratuity	
			31-3-2022	31-3-2021
I	Change in obligation during the year			
1	Liability at the beginning of the year		166,00,76,408	161,05,02,263
2	Interest Cost(gratuity report as15r table 3)		11,03,39,779	108,801,607
3	Current Service Cost		8,07,24,412	75,703,657
4	Past Service Cost		0	0
5	Benefit Paid		(14,78,83,782)	(108,827,189)
6	Actuarial (Gain)/ Loss		7,15,11,999	(26,103,930)
7	Liability at the end of the year		177,47,68,817	166,00,76,408
II	Net asset / (liability) recognised in the Balance Sheet			
1	Liability at the end of the year		177,47,68,817	166,00,76,408
2	Plan assets at the end of the year		0	0
3	Liability recognised in the Balance sheet		177,47,68,817	166,00,76,408
III	Expenses recognized in the Income and Expenditure account			
1	Current Service Cost		8,07,24,412	75,703,657
2	Interest Cost		11,03,39,779	108,801,607
3	Expected Return on Plan Assets			
4	Actuarial (Gain)/ Loss		7,15,11,999	(26,103,930)
5	Past service cost		0	0
6	Total expenses recognised in the Income and Expenditure Account		26,25,76,190	158,401,334
IV	Principal actuarial assumptions at the Balance Sheet date			
1	Discount rate at		7.25%	6.80%
2	Expected return on plan assets		0.00%	0.00%
3	Salary escalation		7.00%	7.00%
General description of the defined benefit plan :				
1	<p>The Centre operates a gratuity scheme, which is an unfunded scheme for qualifying employees. The Scheme provides for lump sum payment to employees on retirement, death while in employment or termination of employment of an amount equivalent to 15 days salary for every completed year of service or part thereof in excess of six months, provided the employee has completed five years in service.</p> <p>Vide Order No. 7/5/2012-P&PW(F)/B dated 26th August, 2016, the Ministry of Finance has extended the benefits of 'Retirement Gratuity and Death Gratuity' to the Central Government employees covered by new Defined Contribution Pension System on the same terms and conditions, as are applicable to employees covered by Central Civil Service (Pension)</p>			



	Rule, 1972.
2	The Centre operates a leave encashment scheme, which is an unfunded scheme. The present value of obligation under this scheme is based on an actuarial valuation, using the Projected Unit Credit Method, which recognizes each period of service as giving rise to additional unit of employee benefit entitlement and measures each unit separately to build up the final obligation. Based on the actuarial valuation, the liability as at 31 st March, 2022 works out to Rs. 202,72,49,806/-.
3	The Centre operates a Pension scheme which is an unfunded scheme for employees, who have joined prior to 1 st January, 2004. The benefit is payable at the time of superannuation or voluntary retirement after completion of minimum of 20 years service. Based on the actuarial valuation, the liability as at 31 st March, 2022 works out to Rs. 16,328,551,576/-.

9. Unknown inward remittances outstanding as on 31st March, 2022, is Rs.20,55,70,270/- which are under identification/reconciliation. Unknown inward remittance more than 3 years book under Patients Welfare Fund with Approval of Management.
10. The Centre has projects under development at Varanasi, Vizag and Sangrur. The expenses incurred on behalf of them are shown as Inter Unit Adjustment account under Current Assets. The balance shall be transferred to the respective locations on completion of the project.
11. Figures for the previous year have been regrouped / reclassified wherever necessary to make them comparable with those of the present year.

For Botliboi & Purohit
Chartered Accountants
ICAI Registration No. : 101048W

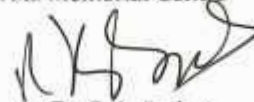

CA Parag Hangekar
Partner
Membership No. 110096
Date:
Place : Mumbai




Mr. Anil Sathe
CAO, TMC



For Tata Memorial Centre


Dr. R.A. Badwe
Director



Action Taken Report



ACTION TAKEN REPORT ON AUDITOR'S OBSERVATIONS FOR THE YEAR 2021-22

Paragraph No of Auditor's Report	Auditor's comments (to be reproduced in full)	Action Taken	Expected month and year for completion of Action
(1)	(2)	(3)	(4)
1	<p>We have audited the accompanying Financials Statements of Tata Memorial Centre ("the Centre") which comprise the Balance Sheet as at 31st March, 2022 and the statement of Income and Expenditure Account and the notes to the Financial Statements for the year then ended on that date including a summary of significant accounting policies and other explanatory information, as required by the Bombay Public Trust Act, 1950 ("the Act").</p> <p>In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Financial Statements give the information required by the act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India of the financial position of the Centre:</p> <p>(a) In the case of the Balance Sheet, of the state of affairs of the Centre as at 31st March, 2022.</p> <p>(b) In the case of Income and Expenditure Account, of the Excess of Expense over Income of the Centre for the year ended on that date.</p>	<p>This is a statement of fact and information. No action required</p>	
2	<p>In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Financial Statements give the information required by the act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India of the financial position of the Centre:</p> <p>(a) In the case of the Balance Sheet, of the state of affairs of the Centre as at 31st March, 2022.</p> <p>(b) In the case of Income and Expenditure Account, of the Excess of Expense over Income of the Centre for the year ended on that date.</p>	<p>This is a statement of fact and information. No action required.</p>	
3	<p>We conducted our audit in accordance with the Standards on Auditing ("SAs") issued by Institute of chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the ethical requirements that are relevant to audit of financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.</p>	<p>This is a statement of fact and information. No action required</p>	

Jeehalata

4	<p>The Trustees are responsible for the preparation and presentation of these financial statements that give a true & fair view of the financial position and financial performance of the trust in accordance with the accounting principles generally accepted in India, including the accounting standards issued by ICAI.</p> <p>This responsibility also includes maintenance of adequate accounting records for safeguarding the assets of the Trust and for preventing and detecting fraud and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true & fair view and are free from material misstatement, whether due to fraud or error.</p>	<p>This is a statement of fact and information. No action required</p>	
5	<p>In preparing the financial statements, trustees are responsible for assessing the Trust's ability to continue as a going concern, unless trustees either intends to surrender the trust or to cease operations, or has no realistic alternative but to do so. Those trustees are also responsible for overseeing the Trust's financial reporting process.</p>	<p>This is a statement of fact and information. No action required</p>	
6	<p>Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material statements, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of the users taken on the basis of these financial statements. As part of an audit in accordance with SAs, we exercise professional judgement and maintain professional scepticism throughout the audit.</p>	<p>This is a statement of fact and information. No action required</p>	

Sushalakra



7	Identify and assess the risks of material misstatements of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.	This is a statement of fact and information. No action required	
8	Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Trust's internal control.	This is a statement of fact and information. No action required	
9	Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by trustees. Conclude on the appropriateness of trustees' use of going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on Trust's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the trust to cease to continue as a going concern.	This is a statement of fact and information. No action required	
10	We refer to Note 9 of schedule 14 Notes to Accounts which state that Unknown/Unreconciled inward remittances outstanding as on 31 st March, 2022, is Rs.20,55,70,270/- which are under identification. /unknown inward remittance outstanding for more than 3 years will be booked under patient welfare fund with the approval of management.	This is a statement of fact and information. This is unknown credit and after 3 years will book as donation to patient welfare fund..	More than 3 years unknown credit transferred to Patient Welfare Fund.

Santhosh Kumar

CPA



11	<p>Report on Other Regulatory Requirements</p> <p>We report that:</p> <ul style="list-style-type: none"> • We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit; • In our opinion proper books of accounts as required by law have been kept by the Trust so far as it appears from our examination of books of the trust; • The Balance Sheet and Income & Expenditure Account dealt with by this Report are in agreement with the books of account. 	<p>This is a statement of fact and information. No action required</p>
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File

Rachalata



Auditor's Report



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INDEPENDENT AUDITORS' REPORT

To,
The Chairman,
Governing Council of Tata Memorial Centre,

Report on the Audit of the Financial Statements:

Opinion:

We have audited the accompanying Financials Statements of **Tata Memorial Centre ("the Centre")** which comprise the Balance Sheet as at 31st March, 2022 and the statement of Income and Expenditure Account and the notes to the Financial Statements for the year then ended on that date including a summary of significant accounting policies and other explanatory information, as required by the Bombay Public Trust Act, 1950 ("the Act").

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid Financial Statements give the information required by the act in the manner so required and give a true and fair view in conformity with the accounting principles generally accepted in India of the financial position of the Centre:

- A) In the case of the Balance Sheet, of the state of affairs of the Centre as at 31st March, 2022.
- B) In the case of Income and Expenditure Account, of the Excess of Expense over Income of the Centre for the year ended on that date.

Basis for Opinion:

We conducted our audit in accordance with the Standards on Auditing ("SAs") issued by Institute of chartered Accountants of India. Our responsibilities under those Standards are further described in the Auditors' Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the ethical requirements that are relevant to audit of financial statements, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the Code of Ethics. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Emphasis of Matter Paragraph:

1. We refer to Note No. 9 of Schedule 14 Notes to Accounts which states that Unknown inward remittances outstanding as on 31st March, 2022 are at Rs. 20,55,70,270/- which are under identification. Unknown



BRANCHES :

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inward remittances outstanding for more than 3 years will be booked under patient welfare fund with the approval of management.

Our opinion is not modified in respect of these matters.

Management's (Trustee's) Responsibility for the Financial Statements:

The Trustees are responsible for the preparation and presentation of these financial statements that give a true & fair view of the financial position and financial performance of the trust in accordance with the accounting principles generally accepted in India, including the accounting standards issued by ICAI.

This responsibility also includes maintenance of adequate accounting records for safeguarding the assets of the Trust and for preventing and detecting fraud and other irregularities; selection and application of appropriate accounting policies; making judgments and estimates that are reasonable and prudent; and design, implementation and maintenance of adequate internal financial controls, that were operating effectively for ensuring the accuracy and completeness of the accounting records, relevant to the preparation and presentation of the financial statements that give a true & fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, trustees are responsible for assessing the Trust's ability to continue as a going concern, unless trustees either intends to surrender the trust or to cease operations, or has no realistic alternative but to do so. Those trustees are also responsible for overseeing the Trust's financial reporting process.

Auditor's Responsibilities for the Audit of Financial Statements:

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material statements, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with SAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of the users taken on the basis of these financial statements. As part of an audit in accordance with SAs, we exercise professional judgement and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatements of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher



than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of Trust's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by trustees. Conclude on the appropriateness of trustees' use of going concern basis of accounting and, based on the audit evidence obtained, whether a material certainty exists related to events or conditions that may cast significant doubt on Trust's ability to continue as a going concern. If we conclude that a material certainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the trust to cease to continue as a going concern.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Report on Other Regulatory Requirements

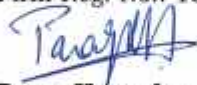
We report that:

- We have obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
- In our opinion proper books of accounts as required by law have been kept by the Trust so far as it appears from our examination of books of the trust;
- The Balance Sheet and Income & Expenditure Account dealt with by this Report are in agreement with the books of account.

For Batliboi & Purohit

Chartered Accountants

Firm Reg. No.: 101048W



Parag Hangekar

Partner

Membership No. 110096

UDIN: 22110096APREQA2122

Date: 23-August-2022



Finance, Simplified

The nine (09) cancer hospitals of Tata Memorial Centre across India employed about 3500 full time staff members and resident doctors.

The ministrations provided by TMC included those of Service, Education and Research with the bulk of research being carried out at Advanced Centre for Treatment, Research & Education in Cancer (ACTREC) and at the Centre for Cancer Epidemiology (CCE).

It was roughly estimated that the individual percentage expenditure of the above three components of TMC ministrations would approximately be: Service 62%, Education 14%, and, Research 24%.

The TMC generated funds from hospital receipts (income from patients), marginal profits from the sale of drugs & consumables, grant from the DAE, and from other sources like fixed deposits, etc.

The TMC expenses included the salary of staff, maintenance of the physical assets, the investments in research & education, the cost of drugs & consumables, and other administrative outgoings.

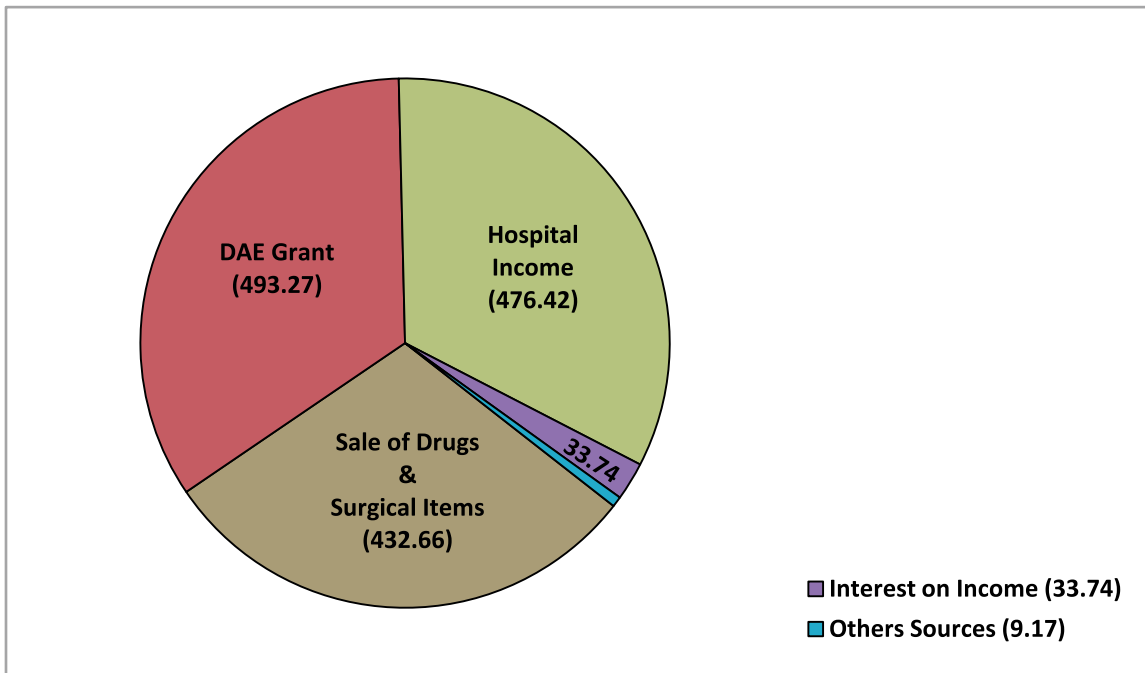
Tata Memorial Centre's Expenses (in INR crore) \cong 1603				
DAE Grant	Income from Patients	Sale of drugs & surgical Items	Interest on Income	Other sources
493.27	476.42	432.66	33.74	9.17

Tata Memorial Centre's Expenses (in INR crore) \cong 1603					
Covid Expenses	Drugs & Surgical Items	Staff salary	Administrative	Academic	Consumables
8.49	395.94	867.91	167.75	9.88	153.23

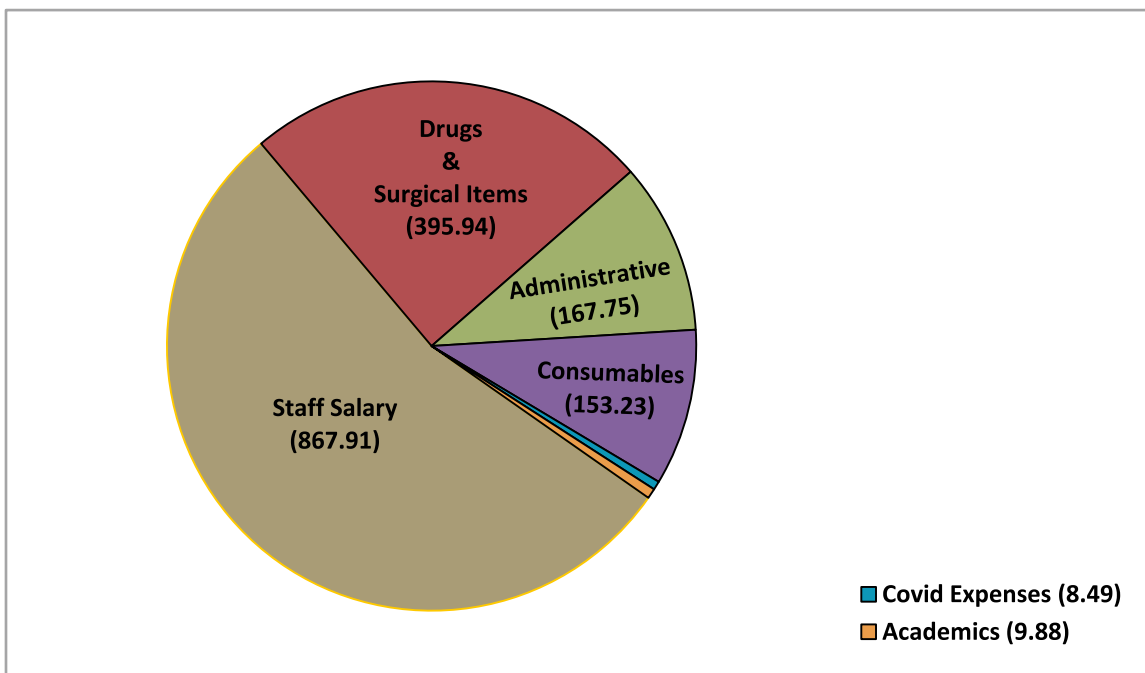
**Exclusive of income/expenditure of BBCT in Guwahati.*

- The **Centre for Cancer Epidemiology** (CCE) in Navi Mumbai is not an income generating centre.
- The **Dr Bhubaneswar Borooah Cancer Institute** in Guwahati has its own government PAN number for auditing their balance statements.
- The cancer hospitals in **Mullanpur & Muzaffarpur** in the States of Punjab & Bihar were not yet operational.

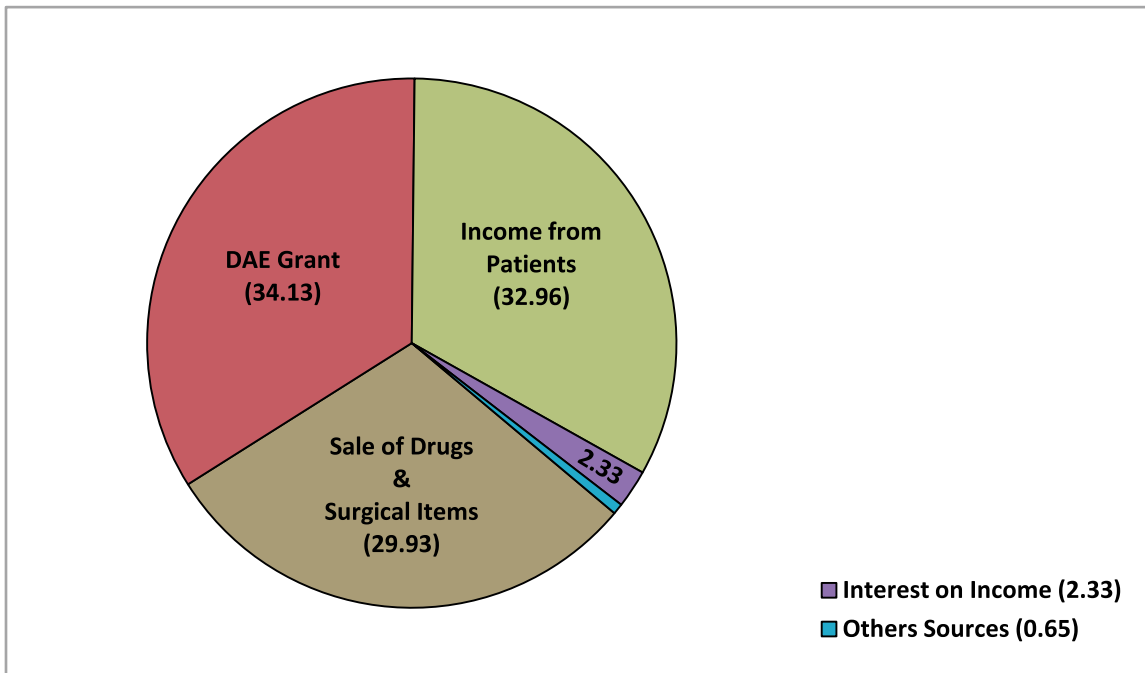
**Income, \cong INR 1445 crore
(2021 - 2022)**



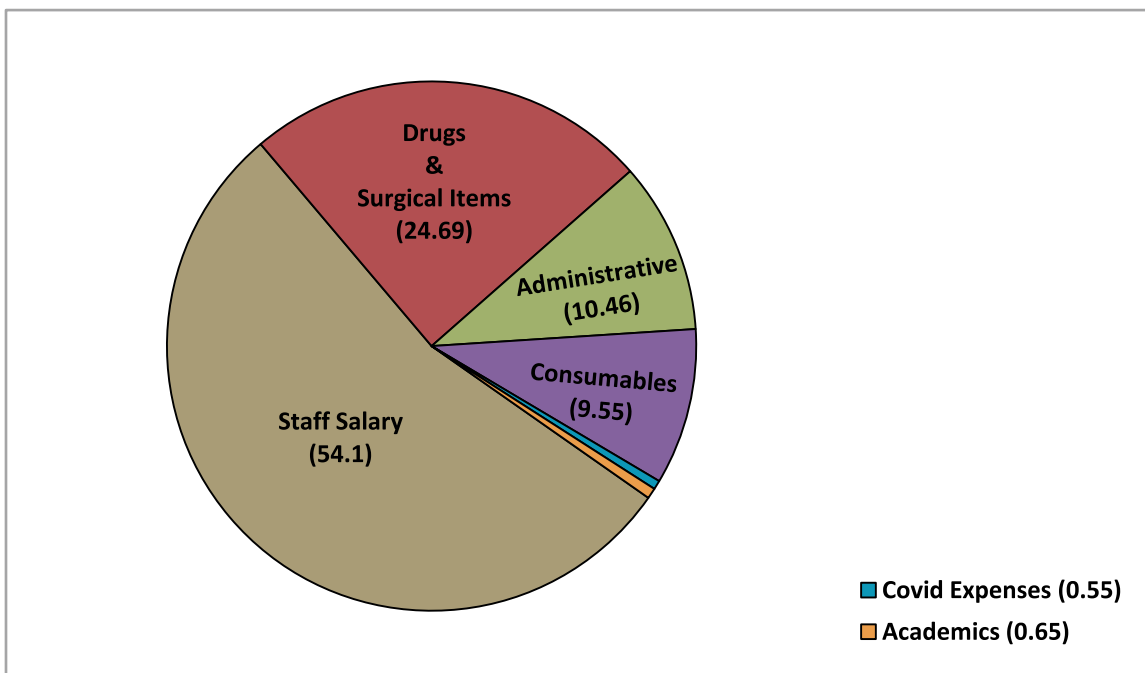
**Expenditure, \cong INR 1603 INR crore
(2021 - 2022)**



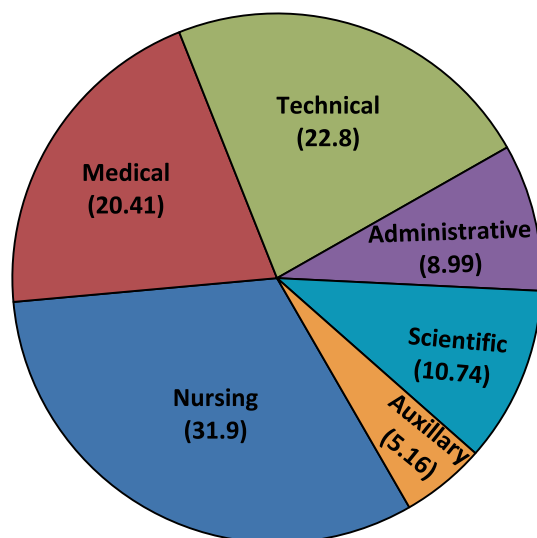
How the Paisa in a Rupee was earned



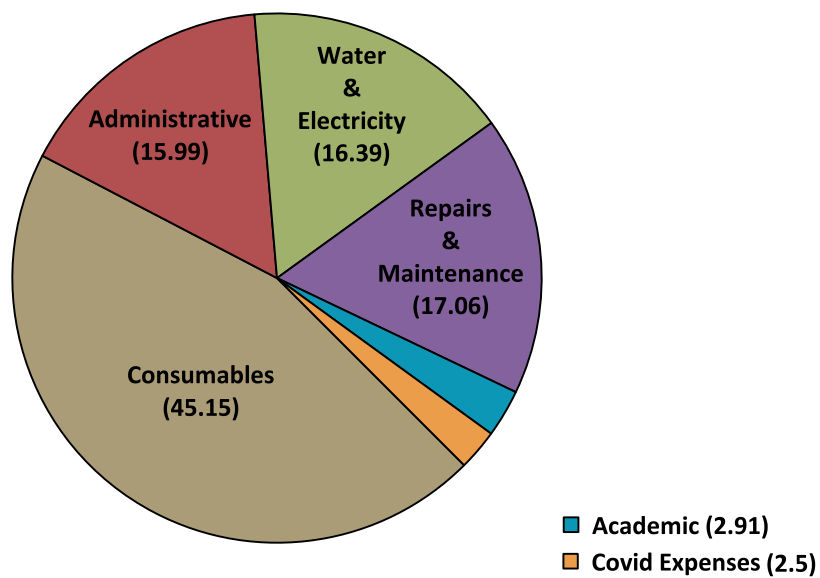
Where the Paisa from the Rupee went



Staff Salary of \cong INR 867 crore; Staff category salary (%)



Percentage Expenses of \cong INR 339 crore other than Staff salary & Sale of Drugs & Surgical items





The Tata Memorial Hospital's Covid-19 screening facility at the St. Xavier's ground in Parel, Mumbai.



Dr. RA Badwe (Director TMC) with Shri HC Agrawal (Chief Postmaster General, Maharashtra & Goa Circle) and Ms Swati Pandey (Postmaster General, Mumbai Region), at the release of Special Cover by the Maharashtra Postal Circle on the occasion of World Cancer Day on February 4, 2021.

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Tel: +91 22 2417 7000
Fax: +91 22 2414 6937
Email: msoffice@tmc.gov.in
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Advanced Centre for Treatment, Research &
Education in Cancer (ACTREC)
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Maharashtra.
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Fax: +91 2202740 5085
Email: mail@actrec.gov.in
Website: <http://actrec.gov.in>

Centre for Cancer Epidemiology (CCE)
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Maharashtra.
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Email: cce.dept@actrec.gov.in
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aovizaghbchrc@gmail.com
Website: [https://tmc.gov.in/tmh/index.php/en/
hbchrc-vizag](https://tmc.gov.in/tmh/index.php/en/hbchrc-vizag)

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en/hbch-sangrur](https://tmc.gov.in/tmh/index.php/en/hbch-sangrur)

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Website: [https://tmc.gov.in/tmh/index.php/en/
hbch-sangrur](https://tmc.gov.in/tmh/index.php/en/hbch-sangrur)

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cao@mpmmcc.tmc.gov.in
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Email: cao@mpmmcc.tmc.gov.in
Website: [https://tmc.gov.in/tmh/index.php/en/
hbch-varanasi](https://tmc.gov.in/tmh/index.php/en/hbch-varanasi)

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