

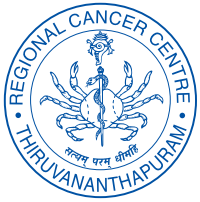
Annual Report 2021-22

Over Four Decades of Crusade Against Cancer



REGIONAL
CANCER
CENTRE

THIRUVANANTHAPURAM INDIA



REGIONAL CANCER CENTRE

THIRUVANANTHAPURAM INDIA

- Established as per Govt. of India letter No. T. 20012/5/79-R of October 1980 as one among 6 such Centres in India.
- Government of India letter No. T. 20012/5/79-R Dtd 31st January 1981 as an autonomous centre.
- Registered under Travancore Cochin Literary Scientific and Charitable Societies Registration Act 1955 vide No. 567/81 dated 02.09.1981.
- Designated as a Science & Technology Centre in health sector by State Government as per G. O. (Rt) No. 1521/85/11 H & FWD dated 18.11.1985.

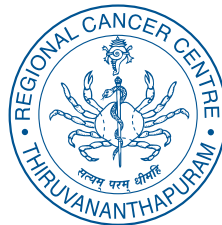
VISION

To emerge as a global leader in cancer control.

MISSION

- Deliver highest quality cancer care at affordable cost.
- Create cancer awareness among public and health professionals.
- Generate trained manpower in cancer control.
- Organize outreach programmes in cancer control.
- Conduct focused cancer research relevant to our society.
- Lead cancer control activities in the state.

ANNUAL REPORT 2021-2022



REGIONAL CANCER CENTRE
THIRUVANANTHAPURAM - 695 011, KERALA, INDIA.

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8	Dr. Rekha A. Nair Director, Regional Cancer Centre, Thiruvananthapuram	Convener



Dr. Rekha A. Nair
Director

DIRECTOR'S REVIEW

The Regional Cancer Centre, Thiruvananthapuram (RCC), is an autonomous scientific institution sponsored jointly by the Government of Kerala and the Government of India, receiving financial assistance from both. In this reporting period, which also marks 41 years since the inception of RCC, I would like to use the opening lines of this review to pay homage to our founding director, Professor Dr. M. Krishnan Nair (1939–2021), who left us on 28th October 2021. The Centre bids adieu to the Professor, whose pioneering efforts were instrumental in establishing and bringing up RCC as one of the leading cancer centres in India. As a renowned oncologist in India, he was a man of extraordinary vision who thought far ahead of his time and worked tirelessly against all odds to convert his vision to reality. Today, over four decades later, the Centre stands at the helm of affairs on a solid foundation laid by our visionary founder. For all his contributions to cancer care and control, he was bestowed with numerous awards, including the Padma Shri. The legacy he left behind will continue to inspire the RCC community and other well-wishers for years to come.

Challenges in cancer care during the COVID pandemic health crisis became unabated during the period too. However, the Centre has quickly adapted to the 'new norms' from the lessons of its immediate past. During the period under report, the Centre registered 14,183 new cases and provided follow-up services to 2,11,778 review cases. An increase of 22 % was observed in the number of patients covered under various welfare schemes, including Cancer Suraksha Scheme, Karunya Benevolent Fund Online, Karunya Benevolent Fund – KASP Rate, KASP – PMJAY Scheme (Reliance), KASP State Health Agency (KSHA), Thalolam, Snehasanthwanam for Endosulfan Victims, Scheduled Tribe Patient Fund, and Prime Minister's Relief Fund. A rise worth Rs. 15.87 crore (Rs. 48.72 crore in total) was found in the head of schemes as against Rs. 33.33 crore last year.

The report period was filled with a chain of events both in infrastructure development and the commencement of new diagnostic-therapeutic services. We commenced the services at our new campus at Pulayanarkotta with a Preventive Oncology OP and a training facility. Ambitious master plans are also in process for the effective utilisation of 11.68 acres of land allotted for the campus. The structure work of the new 14-story building has been completed and interior work is fast progressing. The Housekeeping division, created towards the end of the previous report period, has completed its first year of activities by successfully meeting the objectives set for its creation.

Improved cancer care infrastructure is a key pillar for standards of care and wellbeing for patients. In tune with the institutional objectives, various departments and divisions of the Centre integrated supportive elements for efficiency, sustainability, and good patient experience. We started Peptide Receptor Radionuclide Therapy (PRRT) for neuroendocrine tumours—a first time initiative ever from a hospital in the government sector in Kerala. A Gallium generator, which is a pre-requisite for this therapy, was acquired using the fund of Rs. 50 lakh received from Kerala State Industrial Development Corporation Ltd. under their Corporate Service Responsibility (CSR) scheme. This highly targeted and effective therapy system is a

relief because patients for Gallium scans were previously referred to the Radiation Medicine Centre in Mumbai or other private centres. Yet another proposal under the CSR scheme for a grant of Rs. 20 crore to acquire a Ring Gantry Linear Accelerator that can provide the most advanced and highly targeted radiotherapy at a lower cost is under consideration by Power Grid Corporation of India Ltd. As part of a comprehensive paediatric cancer management strategy, autologous stem cell transplantation was commenced during the period.

As a valuable diagnostic tool, automated electrophoresis, trinocular microscope with digital camera, ESR analyser and binocular microscopes constituted the diagnostic upgradation at the Clinical Laboratory division. A ventilator installed at the Medical Oncology department augmented the ICU needs. Diagnostics at the Pathology department were strengthened with a fully automated tissue processor and motorised microtome, a rapid multifunctional microwave tissue processor, and automated stainers. The Transfusion Medicine division has acquired fully automated grouping, cross-matching, and apheresis machines. Setting up of a molecular microbiology lab and upgrading of the Picture Archiving and Communication System (PACS) were in progress during the tenure. The Anaesthesiology department acquired a video bronchoscope for paediatric cases. The Community Oncology division was equipped with a binocular video colposcope to study gynaecologic pathologies. The management of various sub-systems in the networked environment is critical and, hence, the implementation of a new Enterprise Resource Planning (ERP) solution at the Information Systems division is also ongoing.

The Kerala Cancer Control Strategy envisages a state-wide uniform strategy for cancer control and it envisages the setting up of a State-wide cancer registry. RCC is coordinating with Malabar Cancer Centre and Cochin Cancer Research Centre to initiate this population-based cancer registry service. The Centre was chosen to play a lead role in this direction owing to its long cherished history of spearheading cancer control and registration systems at Hospital and Population levels. In this context, I would fail if I didn't mention the name of Shri. P. Gangadharan, a renowned epidemiologist who passed away on 27th May 2021. The history of our Hospital Cancer Registry is incomplete without a mention to his name. He served as head of our Hospital Cancer Registry and became a consultant at the Natural Background Radiation Cancer Registry, Karunagappally. His service and contributions were large and incredible in shaping the cancer registration system of the Centre.

As a result of the COVID-19 pandemic, several of our academic meetings were expected to thrive in virtual meeting spaces. One such international event under the aegis of the Foundation for Head and Neck Oncology (FHNO) was hosted at our Centre from 10–12 December 2021. The Department of Paediatric Oncology coordinated the 13th Kerala State Paediatric Haematology Oncology Conference of the Indian Association of Paediatrics (Kerala chapter) on 6th March 2022. A training programme on 'Current applications and future directions of CART cell therapy' (23rd November 2021) and ESMO Key Abstracts-2021 (29th December 2021) were organised by the Medical Oncology department. Along with various trainings on Basic Life Support and Advanced Cardiac Life Support (ACLS), events in connection with Breast Cancer Awareness Month, World No Tobacco Day and International Childhood Cancer Day have filled the traditional offline fervour.

The Centre fosters a continuum of cancer care by providing screening and early detection along with trainer-trainee programmes and prevention programmes at the community level. The training programme for frontline warriors of the Trivandrum District Cancer Control Programme and other similar sessions were the testimonies. A total of 62 cancer detection programmes and 38 cancer education programmes marked the period. RCC has played an important role in developing skilled labour through academic programmes at the superspeciality, postgraduate, post-doctoral, fellowship, graduate, and diploma levels. In terms of human resource development, 45 residents in Medical Oncology, Paediatric Oncology, Surgical Oncology, Head and Neck Surgery, and Gynaecological Oncology superspeciality courses; 42 residents in Anaesthesia, Pathology, and Radiotherapy postgraduate courses; and a number of 30 PhD scholars were at various stages of their learning experiences and exposures.

Awards and merits were bestowed on our faculty, other staff, and students. Dr. Priyakumari T (Professor & Head, Paediatric Oncology) received the Best Teacher award (Medical stream) from Kerala University of Health Sciences. Dr. Raghu Kumar P (Additional Professor & Head, Radiation Physics) was part of the team that received a patent for the invention of the 'Modified spacer balloon device' in collaboration with HLL Lifecare Ltd. (Indian Patent No. 379287 dated 13.10.2021, Application No. 584/CHE/2011). Dr. Jayasree K (Professor & Head, Pathology) was elected as the Founding President of Indian Association of Musculoskeletal Pathologists and Dr. Chandramohan K, Additional Professor, Department of Surgical Services, was elected as the National General Secretary of the Indian Association for Surgical Oncologists. Besides these, several of our faculty and students won best paper awards at various academic events elsewhere.

During this period, six PhDs—Ms. Preethi G. Nath, Ms. Preethi GU, Ms. Shiji R, Mr. Unnikrishnan BS (all from Cancer Research division), Mr. Jiju JS (Laboratory Technician, Sel.Gr., Pathology) and Mr. Shaiju VS (Assistant Professor, Radiation Physics) were awarded. We generated 180 publications as an academic outcome of faculty, residents, and researchers. It includes 112 journal articles and 32 conference papers, in addition to a share of chapters in books, academic dissertations, and theses. Out of the 241 extramural, pharma-sponsored, and in-house research projects, 48 were extramurally funded projects.

Distinguished visitors during the period included Dr. Shaji Kumar (Professor of Medicine at the Division of Hematology, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota) and Dr. Parameswaran N. Hari (Armand Quick William Stapp Professor of Hematology, Chief, Division of Hematology Oncology, Medical College of Wisconsin), and an official visit by Mr. Naveen Kumar IAS, Special Secretary, Ministry of Health, Govt. of Andhra Pradesh.

Philanthropy in various forms poured in during this period too. Blood donations, the 'Oxygen challenge', free circular bus services of KSRTC to connect RCC with nearby patient homes are worth mentioning.

To sum up, I am pleased to present the annual report of various departments, divisions, multidisciplinary clinics, outreach centres, and the audited accounts of RCC during the period 2021–22.



Dr. Rekha A. Nair

RCC Profile at a Glance

- 14,183 new cases
- 2,11,778 review cases
- 697 daily average patient visits
- 10,524 in-patient admissions
- 33,568 pathology reports
- 63,256 imaging studies
- 51,001 nuclear medicine studies
- 4,26,442 clinical laboratory investigations
- 45,145 microbiology investigations
- 32,852 units blood products issued
- 4262 cytogenetics, FISH & RT-PCR based diagnostic studies
- 6151 patients were treated with external beam radiotherapy
- 1386 brachytherapy procedures
- 4561 surgical and 1911 endoscopic procedures
- 18318 patients were administered chemotherapy
- 29 bone marrow transplantations
- 45 residents in Medical Oncology, Paediatric Oncology, Surgical Oncology, Head and Neck Surgery and Gynaecological Oncology superspeciality courses
- 42 residents in Anaesthesia, Pathology and Radiotherapy postgraduate courses
- 30 PhD scholars
- 62 cancer detection programmes and 38 cancer education programmes
- 241 research projects
- Hospital Based Cancer Registry
- Population Based Cancer Registry (South Kerala):Thiruvananthapuram (N=6687), Kollam (N=5149), Pathanamthitta (N=2425), Alappuzha (N=4553) and Kottayam districts

Major Diagnostic & Treatment Facilities

DIAGNOSTIC FACILITIES

Pathology

- Surgical pathology
- Cytopathology
- Haematopathology
- Molecular pathology: Flow cytometry, Immunohistochemistry, FISH, PCR, RT-PCR

Radiodiagnosis

- MRI scan
- Dual source dual energy CT scan
- Full-field digital mammography
- Prone breast biopsy table with stereotactic facility
- Xray units & Ultrasound machines
- Computed radiography system
- Picture Archiving and Communication System
- Dexa scan, Digital radiography and Fluoroscopy system

- Supersonic USG machine with Elastography
- Radiofrequency ablator system

Nuclear Medicine

- PET/CT Scan
- SPECT Dual head Gamma camera
- SPECT CT Scan
- Gallium scan
- Chemiluminescence assay system

Clinical Laboratory

- Vitros XT 7600 with IM middleware integrated system
- Vitros 5600 integrated system
- Vitros 5.1 FS chemistry system
- Beckman coulter Unicell DxH 800 5-part haematology analyser
- Beckman coulter Unicell DxH slide maker stainer haematology analyser
- Helena SAS /SAS 4 fully automated electrophoretic system
- Amax destiny plus fully automated coagulation analyser (TCoag)
- ABL flex blood gas analyser (Radiometer)
- Shimadzu HPLC system
- Thermo Fisher Scientific Megafuge 16R refrigerated centrifuge
- Thermo Fisher Scientific Sorvall ST-16R refrigerated centrifuge
- Helmer Deep freezers
- Panasonic VIP Series Deep freezer
- Helmer refrigerators

Microbiology

- Automated blood culture system (BacT/Alert)
- Automated identification and sensitivity testing (VITEK)
- Enzyme Linked Fluorescent Assay (VIDAS)
- Microscopy, routine culture & sensitivity tests, fungal culture, AFB culture, Surveillance culture
- GeneXpert: Cartridge Based Nucleic Acid Amplification System

Transfusion Medicine

- NACO approved fully automated blood bank
- Blood irradiator
- Cryofuge
- Platelet apheresis
- Plasma thaw bath
- Automatic component extractor T-ACE, for preparation of leucoreduced products
- Fully automated testing for transfusion transmissible diseases
- Hemonetics cell separator
- Leucofiltered blood products

Cancer Research

- Cytogenetic studies
- FISH, RT-PCR

TREATMENT FACILITIES

Radiation Oncology

- Five Linear accelerators
- Telecobalt unit
- IGRT, IMRT/Rapid Arc, SRS/SRT, SBRT, 3D conformal RT & portal imaging
- Total Body Irradiation (TBI), Total Skin Electron Therapy (TSET)
- Image guided brachytherapy
- Digital simulator & CT simulator
- Treatment planning systems
- HDR brachytherapy
- Quality assurance equipment

Surgical Services

- Seven modern operation theatres
- Operating microscope & video endoscopes
- Minimally invasive surgery
- Limb salvage surgery
- Sentinel lymph node biopsy
- State-of- the-art ICU
- Mobile C arm image intensifier
- Laser for microlaryngeal surgery
- Precision drill & saw system
- Rigid video endoscope for head and neck cancers
- High definition laparoscopic unit
- Cavitron Ultrasonic Surgical Aspirator (CUSA) for Liver Surgery
- Integrated Bipolar Ultrasonic Cutting and Coagulation Unit

Medical Oncology

- Facilities to administer chemotherapy for all types of cancers
- Four bedded bone marrow transplantation unit
- High dependency chemotherapy ward

Paediatric Oncology

- Facilities to administer chemotherapy for all types of cancers
- 39 bedded exclusive Paediatric Oncology ward
- A four bedded state-of-the-art ICU with two ventilators
- Paediatric autologous stem cell transplantation
- Paediatric palliative care services

Nuclear Medicine

- Thyrotoxicosis therapy
- High dose therapy for thyroid cancer
- Peptide Receptor Radionuclide Therapy for neuroendocrine tumours

Palliative Medicine

- Availability of oral morphine in liquid and capsule forms
- Inpatient service and hospice care
- Home care service, rehabilitation, support groups
- Networking of palliative care services throughout Kerala

DIAGNOSTIC, TREATMENT & OTHER FACILITIES ADDED DURING THE PERIOD

Anaesthesiology

ACQUIRED: Paediatric video bronchoscope

STARTED: Anaesthesia for radiofrequency ablation

Cancer Epidemiology and Biostatistics

ACQUIRED: Statistical Softwares: IBM SPSS Version 28.0 and Wolfram Mathematica Version 13.0.1

Cancer Research

ACQUIRED: Minus 80 degree deep freezer and Cage changing station

Clinical Laboratory Services

ACQUIRED: Automated electrophoresis, Trinocular microscope with digital camera, ESR analyser and Binocular microscopes

Community Oncology

ACQUIRED: Binocular video colposcope

Information Systems

ACQUIRED: Enterprise resource planning solutions, Computers and accessories

Library & Information Services

ACQUIRED: 50 cpm A3 colour copier/printer

Medical Oncology

ACQUIRED: Minus 80 degree freezer, ICU ventilator

Microbiology

ACQUIRED: Lab refrigerator, Horizontal cylindrical autoclave, Hot air oven, Brushless centrifuge and Micro controller based spectrophotometer.

STARTED: Fluorescent microscopy for detection of fungi

Setting up of Molecular microbiology lab in progress

Nuclear Medicine

STARTED: Gallium scan and ¹⁷⁷Lu- Dotatate therapy (Peptide Receptor Radionuclide Therapy) for metastatic neuroendocrine tumours

Nursing Services

ACQUIRED: Manual ICU coats, Multiparameter monitors, Syringe pumps, Infusion pumps and Pulse oximeters.

Pathology

ACQUIRED: Fully automated tissue processor, Fully motorised microtome, Tissue embedder and cold plate, Rapid multifunctional microwave tissue processor, Microscope with DP74 camera, Automated stainer and Walk-in cold room.

Paediatric Oncology

ACQUIRED: Non-invasive ventilation, Platelet agitator/incubator, Patient warmer, Infusion pumps and Syringe pumps.

STARTED: Paediatric autologous stem cell transplantation

Pharmacy

ACQUIRED: Walk-in cold room

Radiodiagnosis

Upgradation of PACS in progress

Surgical Services

ACQUIRED: Operation theatre table, Smoke evacuator, Colposcopy table with accessories, Table mounted abdominal retractor, Laparoscopic equipment and telescope, General surgical instruments, Teac recorder and Pneumatic sequential compression device.

Transfusion Medicine

ACQUIRED: Fully automated grouping cross matching machines, Apheresis machines and Cryobath.

PATIENT WELFARE SCHEMES

RCC has established a number of schemes supported by central and state governments and non-governmental agencies to offer patients and their families various rehabilitation facilities, free food, free medication, and financial aid. Patients have benefited from programmes including Prime Minister's Relief Fund, Cancer Suraksha Scheme, Karunya Benevolent Fund, Karunya Arogya Suraksha Padhathi-State Health Agency (KSHA), Tribal Patient Fund, and Snehasanthwanam for Endosulfan Victims. During the reporting period, these programmes helped 9930 new patients receive treatment worth Rs. 4871.64 lakhs. In addition, RCC's programmes like the Cancer Care for Life (CCL) scheme, the Free Drug Bank, and the Free Food Scheme (Akshayapatram), as well as financial assistance from the Indian Cancer Society, benefited patients.

State and Central Government Schemes (01 April 2021 to 31 March 2022)

Scheme	New cases enrolled during the period	Amount spent for the new cases (Lakhs)	Total number benefited up to 31 March 2022	Total Amount Spent up to 31 March 2022 (Lakhs)
State Government Schemes				
Cancer Suraksha Scheme	321	200.49	6505	6107.55
Karunya Benevolent Fund Online (KBFO)	659	409.05	1477	920.85
Difference of Karunya Benevolent Fund Online (DKBF)	23	00.07	77	02.18
Karunya Benevolent Fund – KASP Rate (KBKF)	0	0	1485	1118.16
KASP – PMJAY Scheme (Reliance)	01	00.50	5705	1812.97
Difference of KASP – PMJAY Scheme (KASD)	0	0	5683	1024.23
KASP State Health Agency (KSHA)	5003	3493.58	13523	8880.33
Difference of KASP State Health Agency (KSHA)	3851	730.13	9699	1727.69
Thalolam	04	00.43	131	40.04
Scheduled Tribe Patient Fund	30	21.60	484	362.88
Snehasanthwanam for Endosulfan Victims	01	00.02	63	47.13
Central Government Scheme				
Prime Minister's Relief Fund	37	15.77	2277	2153.42
Total	9930	4871.64	47,109	24197.43

RCC Initiatives

In addition to the Government supported schemes, RCC provides support to patients and families through various other schemes as detailed below:

- 1. Cancer Care for Life (CCL) Scheme:** Rs.1.76 crore was spent for 164 patients reported for treatment during the period. The scheme stopped enrolling new members in August 2014.

2. Free Drug Bank: The Free Drug Bank functions according to specific guidelines and is being monitored by a committee constituted by the Director, RCC. The drug bank provided full or partial help to 1307 patients during the reporting period.

3. Free Food ('Akshayapatram'): Free food was provided to 1995 patients belonging to low socio-economic status with financial support in the form of donations received from many philanthropic organisations and individuals.

Indian Cancer Society Support Scheme

RCC was selected for receiving financial support from the Indian Cancer Society for the treatment of cancer. During the reporting period, 77 new patients received support worth Rs.48.69 lakhs.

HUMAN RESOURCE DEVELOPMENT

By offering academic programmes at the superspecialty, postgraduate, post-doctoral, fellowship, graduate, and diploma levels, RCC has been instrumental in developing a skilled labour force for cancer control. Additionally, approximately 600 postgraduate students studying medicine and life sciences from various schools around the nation came for project training and rotation assignments as part of their coursework.

Academic programmes

Course name	Duration	Intake capacity
MCh (Surgical Oncology)	3-year Super speciality courses	6
MCh (Head & Neck Surgery)		2
MCh (Gynaecological Oncology)		2
DM (Medical Oncology)		8
DM (Paediatric Oncology)		2
MD (Radiotherapy)	3-year Broad speciality courses	8
MD (Anaesthesia)		6
MD (Pathology)		2
Fellowship in Head and Neck Surgical Oncology	2- year Fellowship courses	2
Fellowship in Breast Surgical Oncology		2
Fellowship in Gynae-Surgical Oncology		1
Fellowship in Head and Neck Clinical Oncology	1- year Fellowship courses	2
Fellowship in Haematooncology		4
Fellowship in Oncologic Imaging		4
Fellowship in Oncosurgical Anaesthesia		2
Post-Doctoral Certificate in Oncopathology		4
Post MSc Diploma in Radiological Physics	2- year Diploma course	4
Doctoral Research Programme	PhD Programme	30
Quality Excellence Programme in Pathology	1- year Training courses	6
Advanced Training in Diagnostic Imaging		2
Advanced Training in Clinical Laboratory Technology		8
Advanced Training in Blood Banking & Transfusion Technology		4
Advanced Training in Microbiology		5
Post-basic Diploma in Oncology Nursing		20
Speciality Training in Oncology Nursing		40
Cytotechnologist		4
Medical Documentation Training Programme		10
Cytotechnician		6 Months course

DEPARTMENTS & DIVISIONS

DEPARTMENT OF RADIATION ONCOLOGY

Ramadas K (till 06.08.2021)

Francis V. James (from 06.08.2021)

Professor & Head

Professor: Beela Sarah Mathew

Additional Professors: Aswin Kumar, Sivanandan CD, Rejnish Kumar R, Susan Mathews, Kainickal CT, Asha Arjunan, Sajeed A (Additional Director; Administration)

Associate Professors: Arun Sankar S, Roshni S, Malu Rafi (on

extraordinary leave from 01.02.2022), Rajeev KR, Geethi MH, John Joseph, Priya Balakrishnan

Assistant Professors: Lijeesh AL (Deputy Medical Superintendent), Geethu Babu (from 09.03.2022), Aparna MP (from 09.03.2022), Lekha M. Nair (from 09.03.2022)



The Department has been following the site-wise clinic system for the past 21 years, and its faculty are among the most experienced in their field in the country. The department follows a clinical oncology practice system and is responsible for the treatment, including radiotherapy and all forms of systemic therapy, including immunotherapy, for patients diagnosed with solid tumours. Evidence-based patient-tailored clinical decisions, with the aid of tumour boards, are being

carried out. Equipped with five Linear Accelerators and one Tele-cobalt Unit, and with the capability of high dose-rate flattening filter free (FFF) beam for rapid delivery of radiation, prone breast treatment, IGRT, and respiratory gated treatment with visual coaching device, more patients received CT-based precision radiotherapy including IMRT/IGRT. The number of patients receiving SRS, SBRT, and image-guided brachytherapy has increased over the years.

In view of the continuing COVID pandemic, the department's initiatives in facilitating safe treatment for patients as in the previous year were continued. The measures included a) guiding doctors at peripheral hospitals in providing chemotherapy and supportive care closer to patients' homes; b) tele-medicine consultations and providing oral medicines through couriers; c) appropriate sanitization of radiation treatment rooms; proper counselling and screening and testing of patients on radiation; d) hypofractionation, thereby reducing hospital visits-where appropriate; and e) aligning with hospital policies on sanitization, care of staff and patients, admission to wards, etc.

Clinical services

Included external radiotherapy for 6151 patients and 1386 brachytherapy procedures.

Radiotherapy services

Services	Number
CT based MLC planning & 3DCRT	2852
IGRT/IMRT	1024
SRS+SRT	27
SBRT	32
TSET	05
Extra-corporeal radiation	04
Total brachytherapy procedures	1386

Academic activities

- MD programme in Radiotherapy with an annual intake of eight seats
- Training was imparted to Postgraduate students from various Medical Colleges in the State various Medical Colleges in the State

DEPARTMENT OF SURGICAL SERVICES

Shaji Thomas

Additional Professor & Head

Additional Professors: Bipin T.Varghese, Paul Augustine, Chandramohan K, Elizabeth Mathew Iype, Balagopal PG (on deputation to Cochin Cancer Research Centre), Rema P, Madhu Muralee, Arun Peter Mathew, Kurian Cherian, Suchetha S

Associate Professors: Nebu Abraham George, Wagh Mira Sudam, Rexeena V. Bhargavan

Assistant Professors: Siva Ranjith J, Dhanya Dinesh, Saheer N (Temporary), Manu Paul (Temporary)



The Department provided specialised site-wise surgical expertise for the primary treatment of the majority of solid organ cancers. The Department works with three Divisions specialised in site-wise surgical expertise (Surgical Oncology, Head and Neck Surgery, and Gynecological Oncology). The Department performed 4561 surgical and 1911 endoscopic procedures by implementing the COVID-19 protocols, during the period.

New equipment acquired

Operation theatre table, Smoke evacuator, Colposcopy table with accessories, Table mounted abdominal retractor, Laparoscopic equipment and telescope, General surgical instruments, Teac recorder and Pneumatic sequential compression device.

Surgical & Endoscopic procedures

Procedure	Number
Major Surgical Procedures	
Head and Neck	1029
Breast	1042
Gastrointestinal	560
Gynaecological	401
Genito-Urinary + Skin	114
Bone and Sarcoma	134
Miscellaneous	194
Total	3474
Minor Surgical Procedures	
Minor cases	1010
LEEP	77
Total	1087
Endoscopy Procedures	
Nasopharyngolaryngoscopy	316
Nasal & Direct Laryngoscopy	175
Bronchoscopy	48
Oesophagoduodenoscopy	690
Oesophageal dilatation + stenting	06
Colonoscopy	629
Colposcopy	38
Hysteroscopy	09
Total	1911

Academic activities

- MCh programme in Surgical Oncology with an annual intake of six seats
- MCh programme in Gynaecological Oncology with an annual intake of two seats
- MCh programme in Head & Neck Surgery with an annual intake of two seats
- Fellowship in Head and Neck Surgical Oncology with an annual intake of two seats
- Organised International Conference of the Foundation for Head and Neck Oncology (FHNO), 10-12 December 2021

DEPARTMENT OF MEDICAL ONCOLOGY

Geetha N

Professor & Head

Professor: Sreejith G. Nair (from 29.01.2022)

Additional Professor: Prakash NP

Associate Professors: Anoop TM, Lakshmi Haridas K

Assistant Professors: Deepa Susan Joy Philip, Rona Joseph P, Sugeeth MT, George Abraham (from 04.03.2022)

Resident Medical Officer Sr Gr: Lali VS

The Department is responsible for the diagnosis and management of haematological and lymphoreticular malignancies, sarcomas, and other solid tumours under the "A" clinic. Medical oncologists are also involved in the diagnosis and systemic management of other solid tumours under the care of C, D, and E clinics.

2167 new cases and 37476 review cases were seen in the A Clinic during the reporting period, out of which 80% underwent chemotherapy. 2183 patients were admitted for the administration of intensive chemotherapy and management of emergencies and complications.

The Medical Oncology team has seen 850 new cases and 14560 review cases in the C clinic; 610 new cases and 5150 review cases in the D clinic; and 650 new cases and 8350 review cases in the E clinic. In the BMT unit, 57 apheresis procedures were performed. Stem cell transplantation following high-dose chemotherapy was performed for 29 patients. Many CML patients enrolled under the Novartis Patient Assistance (NOVA) programme were given

imatinib free of cost. Dose-intense protocols were used for the treatment of all leukaemias and lymphomas. Special procedures like bone marrow aspiration and biopsy, liver biopsy, intrathecal chemotherapy, and central venous and femoral catheter insertions were performed routinely.

New equipment acquired

Minus 80 degree freezer and ICU ventilator for the BMT unit

Academic activities

- DM Medical Oncology programme with an annual intake of eight seats
- Postgraduate students in Radiation Oncology, General Medicine and Transfusion Medicine were given training in Medical Oncology
- Organised a training programme on 'Current applications and future directions of CART cell therapy' (23 November 2021) and ESMO Key Abstracts-2021 (29 December 2021)

DEPARTMENT OF PAEDIATRIC ONCOLOGY

Priyakumari T

Professor & Head

Associate Professors: Manjusha Nair, Binitha R, Guruprasad CS

Assistant Professors: Prasanth VR, Kalasekhar VS



The Department provides comprehensive cancer care for childhood malignancies up to the age of 14 years. A four-bedded paediatric oncology ICU, with two ventilator beds and two step-down beds, has all the advanced facilities, including NAVA (neutrally adjusted ventilatory assist). During the COVID-19 pandemic, uninterrupted paediatric oncology care was ensured through decentralised care (by shared care approach) in co-operation with DHS doctors, peripheral paediatricians, and oncologists in the public and private sectors. During the period under report, 454 new cases and 16857 review cases were seen. Among the new cases, acute lymphoblastic leukaemia (32%) and brain tumours (14%) constituted the major cases. IP care was provided for 1154 children admitted to paediatric general wards and semi-private rooms.

New equipment acquired

Non-invasive ventilation, Patient warmer, Platelet agitator/incubator, Infusion pumps and Syringe pumps

New service started

Paediatric autologous stem cell transplantation (March 2022)

Patient Statistics	
Cases	Number
Acute lymphoblastic leukaemia	144
Acute myeloid leukaemia	19
Chronic myeloid leukaemia	01
Juvenile Myelomonocytic Leukemia	05
Brain tumour	62
Osteosarcoma	12
Ewing's sarcoma/Primitive Neuroectodermal Tumour (PNET)	19
Rhabdomyosarcoma	14
Soft tissue sarcoma	15
Hodgkin's lymphoma	11
Non-Hodgkin's lymphoma	17
Wilms' tumour	11
Neuroblastoma	23
Hepatoblastoma	06
Retinoblastoma	05
Germ cell tumour	17
Langerhans cell histiocytosis	10
Thyroid	07
Hemophagocytic lymphohistiocytosis (HLH)	04
Nasopharyngeal carcinoma	01
Miscellaneous	17
Non malignant	34
Total	454

Academic activities

- DM programme in Paediatric Oncology with an annual intake of two seats
- Regular training to the postgraduates of RCC
- Organised International Childhood Cancer Day on 15th February 2022
- Organised 13th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter) in association with IAP Thiruvananthapuram branch on 06 March 2022

DEPARTMENT OF PATHOLOGY

Jayasree K

Professor & Head

Professor & Director: Rekha A. Nair

Additional Professors: Anitha Mathews, Thara Somanathan, Nileena Nayak (on leave), Preethi TR

Associate Professors: Anila KR, Renu S, Priya Mary Jacob, Jayasudha AV, Sindhu Nair P, Neelima Radhakrishnan

Assistant Professors: Rari P. Mony, Simi CM

Senior Residents: Deepthy B, Gayathri G. Nair, Anjana M, Rahul C

The Department provided diagnostic services such as Surgical Pathology, Cytopathology, and Haematopathology along with advanced tests such as immunohistochemistry, FISH, flow cytometry, frozen section diagnosis, molecular (EGFR), and liquid-based cytology. Second opinion was provided for tissue samples referred from all over Kerala and neighbouring states. Faculty and students from the department were actively engaged in community-oriented cancer control programs, including screening and early detection of cancer.

New equipment acquired

Fully automated tissue processor, fully motorised microtome, Tissue embedder and cold plate, Rapid multifunctional microwave tissue processor; Microscope with DP74 camera, Automated stainer and Walk-in cold room.



Diagnostic Services

Surgical pathology	Cytopathology	Haematopathology	Total
19103	7112	7353	33568

Immunohisto-chemistry (Surgical pathology + Cytopathology+ Haematopathology)	Frozen section	FISH/ Her-2	FISH- Lymphoma	FISH- EWSR1	Flow cytometry	Molecular	LBC	Total
39361	1476	246	11	24	744	62	56	41980

Surgical Pathology

Specimens from RCC	Specimens for review	Specimens for second opinion
11753	6549	801

Cytopathology

FNAC + Fluids	Cervical smear (routine+projects)	Sputum	Second opinion to ECDC cases
5949	1099	41	23

Haematopathology

Bone marrow	Peripheral smear	Slide review	Flow cytometry
3119	3430	60	744

Academic activities

- MD programme in Pathology with an annual intake of two seats, Fellowship in Oncopathology, Quality Excellence Programme for Technicians, Cytotechnologist and Cytotechnician courses.
- Training was given to MCh Surgical Oncology, DM Medical Oncology, DM Paediatric Oncology, and MD Radiotherapy students from RCC, MD Pathology students from various Medical Colleges, MDS Pathology students from Dental Colleges, and MSc MLT, BSc MLT and Histotechnology/Immunohistochemistry trainees.

DEPARTMENT OF RADIODIAGNOSIS

Venugopal M

Professor & Head

Additional Professors: Sumod Mathew Koshy, Jiji V

Associate Professors: Anitha Sen, Priya A

Assistant Professors: Jubee Raj, Renuka G, Rakesh CA (from 09.03.2022)

Senior Resident: Jiju Zachariah



The Department has a DR X-ray unit, three portable X-ray units, three colour doppler ultrasound scanners with elastography facility, a Full-field digital mammography X-ray machine, Dual Source Dual Energy CT scanner, 1.5T MRI scanner with MR spectroscopy, a Prone Breast Biopsy Table with stereotactic facility, DEXA scan, Radiofrequency ablator system, Fluoro-DR machine, and Picture Archiving and Communication System. The PACS upgrade work is nearing completion.

Academic activities

- Fellowship in Oncologic Imaging with an annual intake of four seats
- One year programme, 'Advanced Training in Diagnostic Imaging' with an annual intake of two seats

Diagnostic & Interventional Studies

Investigations	Number
Plain X-rays	21365
Ultrasound scans	15000
Ultrasound guided intervention (FNA + Biopsy)	3600
Ultrasound guided prostatic biopsy	300
Doppler studies	1500
Digital mammography	4511
CT scans	12285
CT guided aspiration (FNA)	750
MRI scans	3432
Fluoroscopy	513
Total	63256

DEPARTMENT OF ANAESTHESIOLOGY

Rachel Cherian Koshy

Professor & Head

Additional Professors: Mary Thomas, Venugopal A, Mallika Balakrishnan, Viji S. Pillai

Associate Professors: Deepthi J. Prabhu, Bhagyalakshmi Ramesh, Rajasree O, Subha R, Frenny Ann Philip



The Department provided anaesthesia for major and minor surgical procedures, minor diagnostic and therapeutic procedures such as MRI scans, CT guided biopsies, radiofrequency ablation, endoscopy, radiotherapy, brachytherapy, and central venous access services. The department also provided acute pain service for post-operative patients and round-the-clock coverage for emergency surgeries and intensive care.

Academic activities

- MD programme in Anaesthesia with an annual intake of six seats
- Fellowship in Oncosurgical Anaesthesia with an annual intake of two seats
- Organised BLS/ACLS training sessions for new postgraduate students
- 256 nurses were given hands on training in BLS including airway management

New equipment acquired

Paediatric video bronchoscope

New service started

Anaesthesia for radiofrequency ablation

Anaesthetic Services	
Pre-anaesthesia Clinic	
New cases	4180
Review cases	7692
Total	11872
Anaesthesia Techniques	
Total Intravenous Anaesthesia	679
GA+Epidural	813
GA+Controlled Ventilation	1559
GA+Spontaneous Ventilation	19
Epidural block	75
Combined spinal + epidural	102
Subarachnoid Block	67
Monitored Anaesthesia Care	19
Endotracheal tubes	1829
Supraglottic airway devices	675
Plexus & other blocks	90
GA + Block	48
Anaesthesia for children (MRI, Radiotherapy, CT simulation)	609
Anaesthesia for brachytherapy	22
Anaesthesia for OGD scopy	01
Central venous access (Non-surgical patients)	11
Surgical ICU	
Patients ventilated	256
Total ventilator days	485
Acute pain service	
Patients with epidural catheters	990
Number of epidural days	2970

DIVISION OF NUCLEAR MEDICINE

Sreekumar A

Additional Professor & Head



PET-CT Scanner

The Division provided diagnostic and therapeutic services involving open radioactive sources. The Division has facilities for imaging (PET-CT, Dual Head SPECT Gamma camera, and SPECT CT) as well as therapy (thyrotoxicosis, high dose therapy for thyroid cancer, and radionuclide therapy for neuroendocrine tumours).

New services started

Gallium scan and ¹⁷⁷Lu-Dotatate therapy (Peptide Receptor Radionuclide Therapy/PRRT) for metastatic neuroendocrine tumours.

Diagnostic & Clinical Services

Investigations/Therapy	Number
PET Scan	1547
SPECT Gamma camera & SPECT CT	4259
Radio immunoassay	45195
Thyroid cancer therapy	431
Thyrotoxicosis therapy	112
¹⁷⁷ Lutetium – Dotatate therapy	24

DIVISION OF RADIATION PHYSICS

Raghu Kumar P (from 16.02.2022)
Additional Professor & Head

Professor: Thayal Singh Elias

Additional Professor: Saju B

Assistant Professors: Zhenia Gopalakrishnan, Debjani Phani, Shaiju VS, Sharika V. Menon, Sarin B

Activities of the Division included calibration and quality assurance of radiotherapy equipment, treatment planning and quality assurance for 3D CRT, IMRT, IGRT, TBI, TSET, prone breast, DIBH, dose computation, radiation safety in Radiation Oncology, Radiodiagnosis, and Nuclear Medicine departments, participation in intercomparison and external verification of

dose output of treatment machines using TLD in BARC/IAEA/Equal ESTRO programmes, daily maintenance, checking, and repair of all teletherapy and brachytherapy equipment, and CT/MRI guided conformal brachytherapy treatments such as intracavitary, intraluminal, and mould brachytherapy using Microselectron (V3) HDR.



Radiotherapy treatment provided Academic activities

Treatment given	Number
External Beam Radiotherapy	
CT Based Planning (Radical + Palliative)	2493
Single Radiation	420
3DCRT	2140
IMRT+IGRT	1024
SRS	31
SBRT/SRT	35
TSET	04
ECRT	04
Total	6151
Brachytherapy Procedures (Microselectron HDR)	
Gynaecologic (Total treatments)	1301
Esophagus	02
MUPIT	08
Ca Lip	36
Others (Urethra, BM, Mould)	39
Total	1386
Simulation	
CT simulation	5319
Conventional simulation	4332
Total	9651

Two years programme, 'Post MSc Diploma in Radiological Physics' with an annual intake of four seats

Ongoing Doctoral Research Programmes		
Research Scholar	Title of Study/University	Guide
Debjani Phani	Design and development of quality assurance protocol for ultrasound imaging/Meenakshi Academy of Higher Education and Research	Dr. Raghu Ram K.Nair
Sarin B	Application of Monte Carlo simulation in radiotherapy/Noorul Islam University	Prof. Bindhu B

DIVISION OF CLINICAL LABORATORY SERVICES

Raveendran Pillai K

Additional Professor & Officer in Charge



Renovated Clinical Lab

The Division is equipped with state-of-the-art fully automated analysers for delivering laboratory services in clinical chemistry, haematology, coagulation, blood gas analysis, serum and urine electrophoresis (EP), and immunofixation electrophoresis (IFE). Immunosuppressant drug monitoring for bone marrow transplant patients, 24-hour urine protein estimations, and serology for HIV and hepatitis were also done.

The laboratory processed 2,16,951 haematology samples, 2,03,513 biochemistry samples, and 5978 urine samples, and reported 2.24 million tests in the period under report. Eighty-seven EP and 69 IFE were referred to the division from government and private hospitals. During the COVID-19

pandemic, the phlebotomy section handled an average of 520 outpatients per day, and tests were reported with a turnaround time of 60 minutes or less.

Quality assurance

The Instrument Manager (IM) middleware system is used for streamlining the operation of biochemical investigations and to increase the quality of test results. Daily internal quality control is being carried out for haematology, clinical chemistry, and coagulation parameters. The division has been a participant in the External Quality Assurance Services (EQAS) of Bio-Rad Laboratories, USA.

New equipment acquired

Automated Electrophoresis, Trinocular microscope with digital camera, ESR Analyser and Binocular microscopes.

Investigations done	
Investigations	Number
Biochemistry	1017565
Haematology	1084755
Coagulation parameters	26476
Urinalysis	29890
Cerebrospinal Fluid (Sugar & Protein)	2217
HbA1c	425
Lipid profile	5260
Creatinine clearance test	1286
24 hour urine protein	1300
Methotrexate assay	2015
Cyclosporin assay	80
Serum Immunoglobulin Assay (IgG, IgA & IgM)	9150
Free Kappa	2800
Free Lambda	2800
Serum electrophoresis	3140
Immunofixation electrophoresis	3141
Blood gas (ABG)	645
Serology	
HIV	12500
HBsAg	12615
HCV	12683

Academic activities

- One year programme, 'Advanced Training in Clinical Laboratory Technology' with an annual intake of eight seats
- Short term student training programmes for undergraduates and postgraduates of Pathology, Biochemistry and Medical Laboratory Technology

Training provided	
Trainees	Number trained
MD Biochemistry	02
MSc MLT (Pathology)	04
BSc MLT	14

DIVISION OF MICROBIOLOGY

Swapna R. Nath
Additional Professor & Head

Associate Professor: Sagila SG



The Division provided round-the-clock services in Bacteriology, Mycology, Parasitology, Mycobacteriology, and Serology, in addition to supporting the laboratory needs of infection control programmes in RCC. BacT/ALERT-automated blood culture system, VITEK 2-automated identification and sensitivity systems, VIDAS-Enzyme Linked Fluorescent Assay system, GeneXpert, a Cartridge Based Nucleic Acid Amplification System, used for the diagnosis of tuberculosis and COVID-19, and fluorescent microscopy for the detection of acid-fast bacilli are some of the facilities available. The Division is recognised by the National Tuberculosis Elimination Programme for the detection of tuberculosis.

New equipment acquired

Setting up of Molecular Microbiology Lab is in progress. Lab refrigerator, Horizontal cylindrical autoclave, Hot air oven, Brushless centrifuge and Micro controller based spectrophotometer.

New service started

Fluorescent microscopy for detection of fungi

Investigations done	
Culture, Sensitivity & Other tests	Number
Blood	8616
Bone marrow	30
Exudate	1656
Urine	2557
Throat swab	1123
Sputum	758
Aspirate	428
Stool	424
Surveillance culture	1116
Cerebrospinal fluid	101
Acid-fast Bacilli culture	28
Fungus	61
Widal test	07
Serology (Procalcitonin, Troponin-I, Anti HBcIgM, Anti HBc Total, D- Dimer, Anti HBs antibody)	5264
Microscopy (Gram stain, AFB stain, KOH mount, etc.)	1660
CBNAAT (TB)	202
CBNAAT (COVID-19)	7211
COVID-19 Antigen test	13903
Total	45145

Academic activities

- One year programme, 'Advanced training in Microbiology' with an annual intake of five seats
- Classes for doctors and staff nurses on infection control

DIVISION OF TRANSFUSION MEDICINE

Vijayalakshmi K
Additional Professor & Head

Assistant Professor: Lekshmi Sudev (from 24.03.2022)
Resident Medical Officer: Rajesh R. Chandran (till 30.11.2021)

The Division is a Regional Blood Transfusion Centre with the most modern facilities for the collection, processing, and issue of blood products. Specialised services include 100% component separation, leucoreduction facility, plateletpheresis, and blood irradiation facility. The division signed an MoU with Government Medical College, Thiruvananthapuram for the exchange of surplus blood components between the blood banks of the two hospitals.

Blood components		
Components		Number
Irradiation done		1510
Apheresis done		1921
Packed Red Cells issued	Within RCC	9236
	Outside RCC	1994
Platelet concentrate		13893
Fresh Frozen Plasma		4298

New equipment acquired

Fully automated grouping cross matching machines, Apheresis machines and Cryobath.



Fully automated blood grouping cross matching machines

DIVISION OF PALLIATIVE MEDICINE

Sudha P

Additional Professor & Head

Resident Medical Officers Gr. I: Prasanth CV,
Manju Achamma Varghese

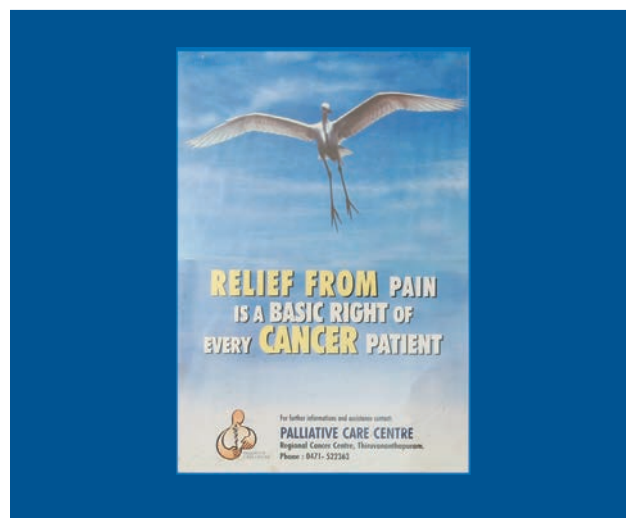
The Division offered services to a diverse patient population by working in close collaboration with other clinical services departments, the physiotherapist, and the nutritionist. The Division performed interventional procedures for the relief of difficult to manage or refractory pain in collaboration with the Department of Anaesthesiology and Radiodiagnosis.

Steps were initiated to collaborate with government and non-government agencies for the provision of accessible, affordable, and acceptable palliative oncology services in line with the Kerala State Palliative Care Policy, 2019. Measures were taken to include Methadone, TD Buprenorphine, and Tapentadol in the hospital drug formulary and started prescribing the medicines for managing cancer pain.

Patient services	
Cases	Number
New	3933
Review and ward consultations	12507
Total	16440
Interventional pain procedures	04
Total Oral Morphine consumption (in Kilograms)	12.361
Total Fentanyl consumption as 25µgm/hour Transdermal patch (in milligrams)	6090
Total Methadone consumption (in milligrams)	12,000

Other Services

Psychosocial counseling, financial assistance, reimbursement



of the cost of medicines, food kits, free drugs, and nutritional supplements were provided with the help of NGOs.

Academic activities

- Regular academic sessions were conducted for MD, DM, MCh, Nursing students and nursing staff of RCC and students posted from other institutions
- Started a six weeks Certificate Course on Essentials of Palliative Care (CCEPC) for doctors and nurses in September 2021.
- Observed World Palliative Care Day (10 October 2021)

DIVISION OF DENTAL CARE

Divya Raj

Assistant Professor

The Division works to maintain good oral health in cancer patients before, during, and after treatment through activities such as pre and post-treatment dental checkups, counselling of patients on oral care during and after treatment of head and neck cancers, dental prophylaxis, post-radiation dental care with fluoride gel application, odontoplasty, and management of trismus and osteoradionecrosis. During the COVID-19 pandemic, all dental procedures and treatments were done strictly adhering to the COVID-19 protocol.

Clinical Services	
Cases	Number
Total patient visits	6509
In patient consultation	05
Pre-treatment dental check up	2798
BMT/Stem cell therapy consultation	33
Dental extraction	05
Dental Prophylaxis	200
Management of trismus	45
Management of Osteoradionecrosis	05
Sodium fluoride gel application	3558
Odontoplasty	10

DIVISION OF NURSING SERVICES

Sreelekha R
Chief Nursing Officer



The division provided care in wards, daycare services, outpatient departments, high dependency units, operation theatres, and speciality units. The work includes coordination of patient care, documentation of all related medical reports, patient assessments, administration of chemotherapy, management and observation of patients during surgery, chemotherapy, and radiotherapy, and management of symptoms and side effects of treatment as per the oncologist's directives. Nurse-driven speciality clinics such as the Head and Neck rehabilitation clinic, Lymphoedema clinic, Stoma care clinic, and Central Venous Access Device clinic continued functioning.

The one-year programme on 'Specialty Training in Oncology Nursing' was started to meet the rising demand for nurses specially trained in the field of oncology nursing.

New equipment acquired

Manual ICU coats, Multiparameter monitors, Syringe pumps, Infusion pumps and Pulse oximeters.

Clinical services

Service	Patient visits
Chemotherapy administration (OP)	66,077
Central Venous Access Device Clinic	21,882
Lymphoedema Clinic	2639
Stoma Clinic	5464
Head & Neck Rehabilitation Clinic	7151
Brachytherapy Counseling	1115

DIVISION OF CLINICAL SERVICES & MEDICAL RECORDS

Chandrika D (till 30.11.2021)

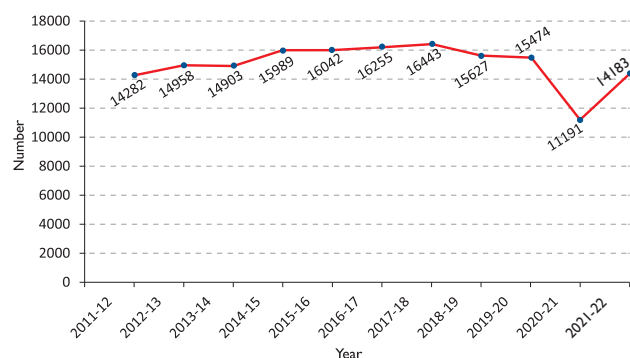
Medical Records Officer-I

Assistant Administrative Officer (Clinical Services): Sreekumar B (till 31.05.2021)

Medical Records Officer-II: Anilkumar K

This Division deals with new case registration and classification of patients according to their socio-economic status, management of multidisciplinary clinics, medical records, follow-up appointments, arranging admissions, issuing various certificates, railway concessions, and management of vehicles.

Figure 1: New cases registered (2011-12 to 2021-22)



Patient Statistics	
Item	Number
New cases	14183
Review cases*	211778
Total patient visits	225961
Daily average	697
In-Patient admissions	10524
In-Patient bed**	281
Total bed occupancy	68102
Average bed occupancy	187
Bed occupancy rate (%)	74
Average patient stay (in days)	8.5
Hospital death	483
Consultation at Peripheral Centres	546

* Follow-up of palliative care consultation from various clinics and review during treatment not included

** Day care chemotherapy wards and radio iodine ward admissions for overnight not included

Distribution of patients under different categories

Patients were grouped into categories according to their socio-economic status and payment capacities.

Distribution of patients under different categories		
Category	Number	%
F	1699	11.97
M	5234	36.90
O	3630	25.60
P	52	0.36
R	736	5.18
S	232	1.63
H	2600	18.33
Total	14183	100

F - Minimum payment; M - Subsidised payment; O - Normal rate; P - Private; R - Reimbursable; S - Cancer Suraksha Scheme; H- Karunya Arogya Suraksha Padhathi

New cases and Review cases (Speciality clinic wise)				
Clinic	New Cases		Review Cases	
	No.	%	No.	%
A	2167	15.27	37476	17.69
B	2259	15.92	28532	13.47
C	2387	16.83	43856	20.71
D	2514	17.72	31777	15.00
E	3490	24.60	40378	19.06
F	454	3.20	16857	7.95
G	912	6.43	12440	5.87
SO	--	--	462	0.21
Total	14183	100	211778	100

- A - Haematological, lymphoreticular, bone and soft tissue sarcoma
- B - Head & Neck
- C - Breast & Central Nervous System
- D - Gynaec, Genitourinary & others
- E - Chest & Gastrointestinal
- F - Paediatric (Patients upto the age of 14 years)
- G - Thyroid
- SO - Surgical Oncology

Referral System

RCC is a tertiary level referral hospital and patients were referred from other government or private medical college hospitals, other government hospitals, RCC's peripheral centres, other cancer centres, and private doctors and private hospitals.

Referred cases		
Referred from	Number	%
Government and Private Medical College Hospitals	3342	23.56
PHCs/ Taluk/ District/General Hospitals	1956	13.79
Other Government Hospitals	1118	07.88
VSSC/ECHS/ESI/CGHS/Railway Hospitals	361	02.54
ECDCs and Peripheral Centres	73	00.51
Other Cancer Centres	118	00.83
Private Doctors	445	03.13
Private Hospitals	5264	37.11
Self/RCC	1506	10.61
Total	14183	100

Training provided

Training in medical records and patients services was given to Medical Records trainees and MA/MSW students from various universities.

DIVISION OF COMMUNITY ONCOLOGY

Gigi Thomas

Additional Professor & Head

Additional Professor: Jayakrishnan R

The Division emphasises primary and secondary prevention of cancers and also takes key initiatives for cancer control activities through human resource development programmes.

New equipment acquired

Binocular video colposcope

New service started

As part of widening the services of the Community Oncology division, a 'Preventive Oncology OP and Training Centre' was inaugurated by Smt.Veena George, Hon'ble Minister for Health and Family Welfare, Govt. of Kerala on 4th February 2022, in the second campus at Pulayanarkotta. The clinic functions on Mondays and Wednesdays from 10.00 am to 12 noon.

Human resource development

Training in cancer control was given to 1219 people, including doctors (456), nurses (91), paramedicals (3), social workers (4), ASHA workers (153), and DISHA counsellors (512). While 24 doctors, 31 nurses, four medical social workers, and three paramedical staff were trained through in-house training programmes, 432 doctors, 60 nurses, 512 DISHA counsellors, and 153 ASHA workers were trained through online programmes conducted on World No Tobacco Day, World Cancer Day, and during Breast Cancer Awareness Month.

Early cancer detection clinic

During the period under report, 3043 people were examined as part of the cancer screening/early detection programme conducted by the Division, which included 2250 new cases and 793 patients who came for follow-up visits. A total of 450 cancers and 199 pre-cancers were detected in the clinic.

Cancers and Precancers detected		
Site	Cancers	Precancers/benign lesions
Oral	222	123
Breast	161	15
Cervix	07	61
Others	60	--
Total	450	199

Oral dysplasia clinic	
Cases detected	Number
Leukoplakia	46
Oral Submucous fibrosis	37
Other lesions	40
Total	123

Colposcopy clinic	
Procedures done	Number
Colposcopy	600
Colpodirected biopsy	312
Pap smear	638

Cancer detection programmes

There were 23 cancer detection programmes and 25 cancer awareness programmes conducted during the period. Out of 1275 people screened, two breast cancers, 65 oral pre-cancers, and 64 cervical pre-cancers were detected and put under follow-up.

Other activities

World No Tobacco Day (31 May 2021)

An exhibition on tobacco-related cancers, online training on 'Tobacco Cessation' for DISHA counsellors of the State Health Services Department, and online tobacco cessation training for undergraduate dental students of Noorul Islam College of Dental Sciences, Neyyatinkara, and Azeezia Dental College, Kollam were organised as part of World No Tobacco Day.



Binocular video colposcope

Breast Cancer Awareness Month (October 2021)

As part of breast cancer awareness month, free OPD services were conducted at the Division. Out of the 252 people who attended the breast clinic, three cancers were detected.

World Cancer Day (4 February 2022)

Five interactive training programmes in the online mode were conducted for the frontline warriors of the Trivandrum District Cancer Control Programme in collaboration with the State Health Services Department.



Preventive Oncology Clinic at Pulayanarkotta

DIVISION OF CANCER EPIDEMIOLOGY & BIOSTATISTICS

Aleyamma Mathew

Professor & Head

Additional Professor: Preethi Sara George

Associate Professors: Kalavathy MC, Jagathnath Krishna KM

The Division manages the Hospital and Population-Based Cancer Registries (HBCR & PBCR), conducts cancer surveillance programmes (Hospital-based pattern of care and cancer survival studies and population-based cancer survival studies), cancer epidemiologic studies (six numbers), biostatistics studies (six numbers), and cancer screening

programmes. The division teaches biostatistics to RCC students, provides training in cancer registry operations, conducts doctoral programmes in Epidemiology & Biostatistics, and provided 210 statistical consultancy services. The Division prepared hospital-based cancer registry annual reports for the year 2019.

Figure 2: Hospital Based Cancer Registry (HBCR), Regional Cancer Centre, Thiruvananthapuram (2021-2022): System-wise distribution (%) of invasive cancers by gender

Male (N = 5901) %	System Total=12089	Female (N = 6188) %
2.3	Brain & Nervous System	1.5
19.8	Oral Cavity & Pharynx	6.1
3.0	Thyroid	11.1
16.6	Respiratory System	3.9
0.2	Breast	31.6
7.8	Oesophagus & Stomach	2.6
16.1	Other Digestive Organs	8.2
4.4	Urinary Tract	1.0
6.0	Reproductive System	18.7
4.6	Bone, Conn. tissue & Skin	3.4
8.5	Leukaemia & Myeloma	6.7
6.0	Lymphoma	3.2
4.7	All Others	2

Figure 3: Geographical Distribution of New Patient Registration (2021-2022)

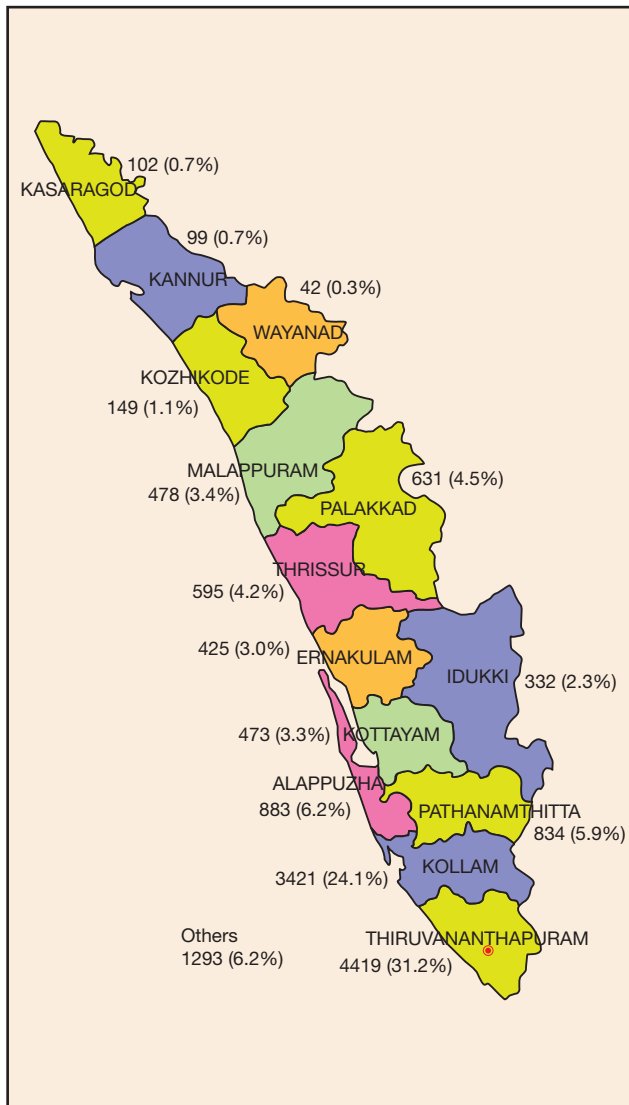
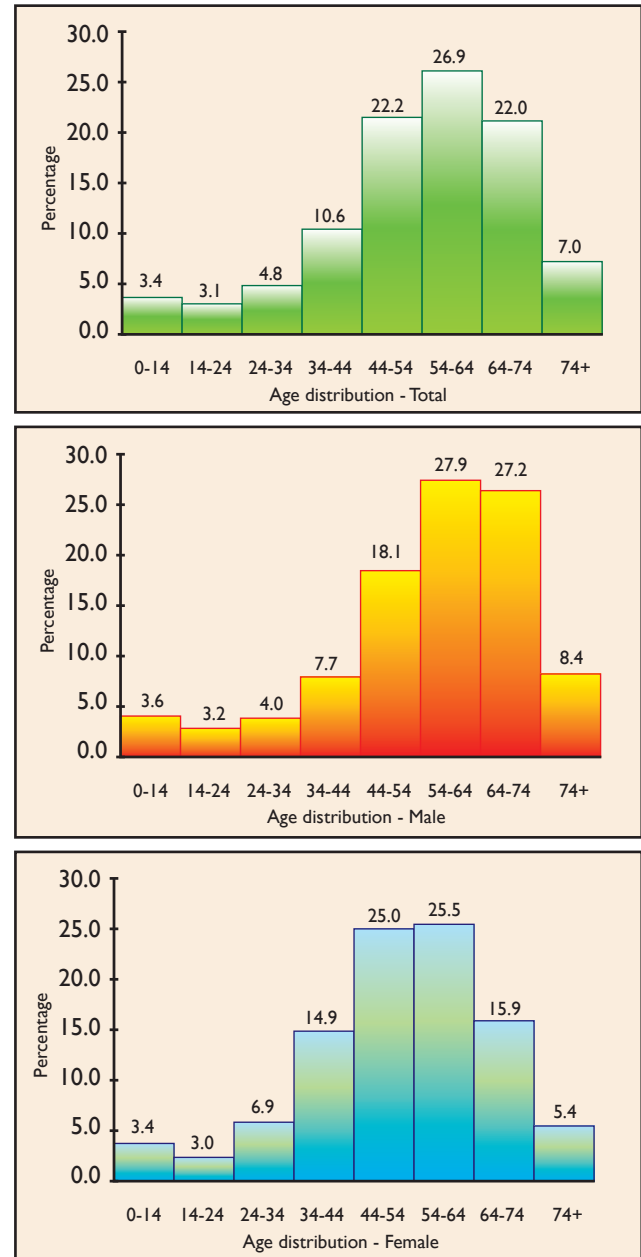


Figure 4: Age Distribution of New Patient registration (2021-2022)



Hospital Based Cancer Registry (HBCR), Regional Cancer Centre, Thiruvananthapuram (2021-2022): Site-wise distribution of patient registration by gender

ICD-10	Site	Male (6828)		Female (7355)		Total (14183)	
		No.	%	No.	%	No.	%
C00	Lip	8	0.1	10	0.2	18	0.1
C01	Base of tongue	14	0.2	1	0	15	0.1
C02	Tongue	434	7.4	149	2.4	583	4.8
C03	Gum	112	1.9	40	0.6	152	1.3
C04	Floor of mouth	79	1.3	10	0.2	89	0.7
C05	Palate	44	0.7	21	0.3	65	0.5
C06	Other mouth	243	4.1	91	1.5	334	2.8
C07	Parotid gland	24	0.4	10	0.2	34	0.3
C08	Salivary gland	13	0.2	12	0.2	25	0.2
C09	Tonsil	22	0.4	3	0	25	0.2
C10	Oropharynx	81	1.4	2	0	83	0.7
C11	Nasopharynx	17	0.3	10	0.2	27	0.2
C12	Pyriform sinus	41	0.7	4	0.1	45	0.4
C13	Hypopharynx	38	0.6	12	0.2	50	0.4
C14	Pharynx unspecified	6	0.1	3	0	9	0.1
C15	Oesophagus	206	3.5	64	1	270	2.2
C16	Stomach	253	4.3	102	1.6	355	2.9
C17	Small intestine	15	0.3	4	0.1	19	0.2
C18	Colon	177	3	151	2.4	328	2.7
C19	Rectosigmoid colon	49	0.8	20	0.3	69	0.6
C20	Rectum	268	4.5	161	2.6	429	3.5
C21	Anus & anal canal	8	0.1	12	0.2	20	0.2
C22	Liver	299	5.1	76	1.2	375	3.1
C23	Gall bladder	13	0.2	18	0.3	31	0.3
C24	Other biliary tract	24	0.4	12	0.2	36	0.3
C25	Pancreas	93	1.6	53	0.9	146	1.2
C26	Other digestive organs	4	0.1	1	0	5	0
C30	Nasal cavity	23	0.4	10	0.2	33	0.3
C31	Accessory sinus	18	0.3	9	0.1	27	0.2
C32	Larynx	229	3.9	10	0.2	239	2
C33	Trachea	3	0.1	0	0.0	3	0
C34	Lung	680	11.5	203	3.3	883	7.3
C37	Thymus	3	0.1	0	0.0	3	0
C38	Heart & mediastinum	19	0.3	4	0.1	23	0.2
C40	Bone of limbs	53	0.9	36	0.6	89	0.7
C41	Other bone	39	0.7	20	0.3	59	0.5
C42	Hematopoietic & Reticuloendothelial system	1	0	0	0.0	1	0

C43	Skin Melanoma	0	0.0	0	0.0	0	0.0
C44	Skin other	87	1.5	72	1.2	159	1.3
C45	Mesothelioma	0	0.0	0	0.0	0	0.0
C47	Peripheral nerves	5	0.1	3	0	8	0.1
C48	Retroperitoneum	2	0	6	0.1	8	0.1
C49	Connective tissue	84	1.4	80	1.3	164	1.4
C50	Breast	11	0.2	1956	31.6	1967	16.3
C51	Vulva	0	0.0	9	0.1	9	0.1
C52	Vagina	0	0.0	24	0.4	24	0.2
C53	Cervix uteri	0	0.0	359	5.8	359	3
C54	Corpus uteri	0	0.0	377	6.1	377	3.1
C55	Uterus, nos.	0	0.0	49	0.8	49	0.4
C56	Ovary	0	0.0	337	5.4	337	2.8
C57	Other Female genital org.	0	0.0	6	0.1	6	0
C60	Penis	21	0.4	0	0.0	21	0.2
C61	Prostate	304	5.2	0	0.0	304	2.5
C62	Testis	24	0.4	0	0.0	24	0.2
C63	Other & unspecified male genital organs	0	0.0	0	0.0	0	0.0
C64	Kidney	113	1.9	43	0.7	156	1.3
C65	Renal pelvis	0	0.0	0	0.0	0	0.0
C66	Ureter	4	0.1	1	0	5	0
C67	Urinary bladder	140	2.4	21	0.3	161	1.3
C68	Other urinary organs	1	0	0	0.0	1	0
C69	Eye	4	0.1	5	0.1	9	0.1
C70	Meninges	0	0.0	0	0.0	0	0.0
C71	Brain	134	2.3	91	1.5	225	1.9
C72	Spinal cord	2	0	1	0	3	0
C73	Thyroid gland	175	3	688	11.1	863	7.1
C74	Adrenal gland	7	0.1	11	0.2	18	0.1
C75	Other endocrine gland	2	0	2	0	4	0
C76	Ill-defined sites	7	0.1	11	0.2	18	0.1
C77	Secondary lymph node	17	0.3	10	0.2	27	0.2
C78	Sec. resp.& digestive	3	0.1	0	0.0	3	0
C79	Secondary Other sites	1	0	1	0	2	0
C80	Primary unknown	240	4.1	69	1.1	309	2.6
C81	Hodgkin's disease	67	1.1	37	0.6	104	0.9
C82	Follicular NHL	66	1.1	33	0.5	99	0.8
C83	Diffuse NHL	125	2.1	82	1.3	207	1.7
C84	T-cell lymphoma	33	0.6	14	0.2	47	0.4
C85	Other NHL	55	0.9	32	0.5	87	0.7

C88	Malig. Immunoproliferation	0	0.0	0	0.0	0	0.0
C90	Multiple myeloma	143	2.4	83	1.3	226	1.9
C91	Leukaemia, lymphoid	138	2.3	100	1.6	238	2
C92	Leukaemia, myeloid	143	2.4	127	2.1	270	2.2
C93	Leukaemia, monocytic	17	0.3	30	0.5	47	0.4
C94	Other specif. leukaemia	0	0.0	4	0.1	4	0
C95	Leukaemia, unspecified	64	1.1	65	1.1	129	1.1
C96	Oth. lymphoid neopl.	9	0.2	5	0.1	14	0.1
	Total (Invasive)	5901	100	6188	100	12089	100
	Benign tumours	106	11.5	202	17.4	308	14.8
	Borderline malignancy	78	8.4	121	10.4	199	9.5
	In-situ	12	1.3	62	5.3	74	3.5
	Non-neoplastic (pre-malig. Cond. & others)	427	46.2	509	43.8	936	44.8
	Diagnosis not confirmed	304	32.6	273	23.1	570	27.3
	Total (non-invasive)	927	100.0	1167	100.0	2087	100.0

Population Based Cancer Registry (PBCR), Thiruvananthapuram District (2019)

(Number (#), Crude Incidence Rate (CR), and Annual Age – adjusted Incidence Rate (AAR) per 100,000 persons of leading cancer sites)

ICD_10	SITE	MALE			FEMALE		
		#	CR	AAR	#	CR	AAR
C00-C06	Oral cavity	303	19.0	13.7	151	8.5	5.9
C01 -C02	Tongue	162	10.2	7.4	81	4.6	3.3
C03 -C06	Mouth	137	8.6	6.2	62	3.5	2.3
C09- C14	Pharynx	104	6.5	4.8	19	1.1	0.8
C15	Oesophagus	78	4.9	3.5	26	1.5	1.0
C16	Stomach	148	9.3	6.7	73	4.1	2.9
C18	Colon	127	8.0	5.8	109	6.2	4.2
C19 -C21	Rectum	154	9.7	7.0	136	7.7	5.3
C22	Liver	178	11.2	8.2	51	2.9	2.1
C25	Pancreas	73	4.6	3.3	57	3.2	2.3
C32	Larynx	131	8.2	5.9	10	0.6	0.4
C33 -C34	Lung	404	25.4	18.3	154	8.7	6.1
C40-C41, 49	Bone & Conn.Tissue	50	3.1	2.8	44	2.5	2.1
C43 -C44	Skin	61	3.8	2.7	58	3.3	2.2
C50	Breast	15	0.9	0.7	1131	64.0	44.8
C53	Cervix Uteri	-	-	-	172	9.7	6.7
C54	Corpus Uteri	-	-	-	190	10.8	7.4
C56	Ovary	-	-	-	179	10.1	7.6
C61	Prostate	279	17.5	12.4	-	-	-
C64-66, 68	Kidney etc.	80	5.0	3.7	25	1.4	1.1

C67	Urinary bladder	93	5.8	4.2	25	1.4	0.9
C70 -C72	Brain & other CNS	62	3.9	3.2	44	2.5	2.0
C73	Thyroid	92	5.8	4.6	358	20.3	16.1
C81-C85, C96	Lymphoma	139	8.7	6.9	130	7.4	5.3
C90	Multiple Myeloma	82	5.2	3.7	54	3.1	2.1
C91 - 95	Leukemia	77	4.8	4.2	72	4.1	4.1
C00-96	All sites	3126	196.4	145.3	3561	201.5	145.1

Population Based Cancer Registry (PBCR), Kollam District (2019)

(Number (#), Crude Incidence Rate (CR), and Annual Age – adjusted Incidence Rate (AAR) per 100,000 persons of leading cancer sites)

ICD_10	SITE	MALE			FEMALE		
		#	CR	AAR	#	CR	AAR
C00-C06	Oral cavity	243	19.5	13.9	110	7.7	5.1
C01 -C02	Tongue	109	8.8	6.2	52	3.6	2.5
C03 -C06	Mouth	133	10.7	7.7	57	4.0	2.6
C09- C14	Pharynx	80	6.4	4.8	10	0.7	0.5
C15	Oesophagus	87	7.0	5.2	37	2.6	1.8
C16	Stomach	102	8.2	5.9	55	3.8	2.6
C18	Colon	103	8.3	6.1	79	5.5	3.9
C19 -C21	Rectum	124	10.0	7.2	94	6.6	4.5
C22	Liver	156	12.5	9.1	32	2.2	1.5
C25	Pancreas	57	4.6	3.2	35	2.4	1.6
C32	Larynx	130	10.4	7.5	9	0.6	0.4
C33 -C34	Lung	389	31.3	22.7	90	6.3	4.2
C40-C41, 49	Bone & Conn.Tissue	43	3.5	3.2	31	2.2	1.8
C43 -C44	Skin	40	3.2	2.3	42	2.9	1.9
C50	Breast	19	1.5	1.2	791	55.2	39.2
C53	Cervix Uteri	-	-	-	108	7.5	5.1
C54	Corpus Uteri	-	-	-	108	7.5	5.3
C56	Ovary	-	-	-	107	7.5	5.5
C61	Prostate	169	13.6	9.9	-	-	-
C64-66, 68	Kidney etc.	55	4.4	3.2	18	1.3	0.9
C67	Urinary bladder	97	7.8	5.6	13	0.9	0.7
C70-C72	Brain & other CNS	37	3.0	2.4	40	2.8	2.3
C73	Thyroid	69	5.5	4.8	268	18.7	15.1
C81-C85, C96	Lymphoma	133	10.7	8.4	96	6.7	4.8
C90	Multiple Myeloma	56	4.5	3.2	52	3.6	2.6
C91-95	Leukemia	79	6.3	6.0	69	4.8	4.6
C00-96	All sites	2585	207.7	154.6	2564	178.8	129.0

Population Based Cancer Registry (PBCR), Alappuzha District (2019)

(Number (#), Crude Incidence Rate (CR), and Annual Age – adjusted Incidence Rate (AAR) per 100,000 persons of leading cancer sites)

ICD_I0	SITE	MALE			FEMALE		
		#	CR	AAR	#	CR	AAR
C00-C06	Oral cavity	187	18.5	12.4	68	6.0	3.7
C01-C02	Tongue	95	9.4	6.5	35	3.1	1.9
C03-C06	Mouth	89	8.8	5.7	33	2.9	1.8
C09-C14	Pharynx	103	10.2	6.7	8	0.7	0.5
C15	Oesophagus	90	8.9	6.2	13	1.1	0.6
C16	Stomach	107	10.6	7.1	38	3.4	2.3
C18	Colon	83	8.2	5.3	63	5.6	3.7
C19-C21	Rectum	92	9.1	6.2	86	7.6	4.8
C22	Liver	111	11.0	7.7	31	2.7	1.8
C25	Pancreas	47	4.6	3.2	28	2.5	1.6
C32	Larynx	102	10.1	6.7	7	0.6	0.5
C33-C34	Lung	396	39.1	26.4	87	7.7	5.2
C40-C41, 49	Bone & Conn.Tissue	41	4.1	3.4	20	1.8	1.3
C43-C44	Skin	35	3.5	2.3	37	3.3	2.0
C50	Breast	28	2.8	2.0	656	58.0	37.9
C53	Cervix Uteri	-	-	-	85	7.5	5.0
C54	Corpus Uteri	-	-	-	79	7.0	4.8
C56	Ovary	-	-	-	122	10.8	7.3
C61	Prostate	151	14.9	10.0	-	-	-
C64-66, 68	Kidney etc.	48	4.7	3.2	10	0.9	0.6
C67	Urinary bladder	74	7.3	5.1	8	0.7	0.4
C70 -C72	Brain & other CNS	32	3.2	2.5	29	2.6	2.4
C73	Thyroid	35	3.5	2.6	126	11.1	9.4
C81-C85, C96	Lymphoma	107	10.6	8.2	69	6.1	4.4
C90	Multiple Myeloma	74	7.3	5.0	53	4.7	3.3
C91 - 95	Leukemia	67	6.6	6.5	56	4.9	5.4
C00 -96	All sites	2432	240.3	167.1	2121	187.4	126.7

Population Based Cancer Registry (PBCR), Pathanamthitta District (2019)

(Number (#), Crude Incidence Rate (CR), and Annual Age – adjusted Incidence Rate (AAR) per 100,000 persons of leading cancer sites)

ICD_10	SITE	MALE			FEMALE		
		#	CR	AAR	#	CR	AAR
C00-C06	Oral cavity	109	20.2	12.8	52	8.3	4.5
C01-C02	Tongue	56	10.4	6.7	15	2.4	1.4
C03-C06	Mouth	52	9.6	5.9	35	5.6	2.9
C09-C14	Pharynx	56	10.4	5.8	4	0.6	0.5
C15	Oesophagus	54	10.0	5.6	14	2.2	1.3
C16	Stomach	55	10.2	6.2	13	2.1	1.3
C18	Colon	33	6.1	3.1	28	4.5	2.6
C19-C21	Rectum	56	10.4	6.5	31	4.9	3.0
C22	Liver	67	12.4	7.1	22	3.5	1.9
C25	Pancreas	17	3.2	2.0	14	2.2	1.4
C32	Larynx	44	8.2	4.7	2	0.3	0.2
C33-C34	Lung	153	28.4	16.6	31	4.9	2.9
C40-C41, 49	Bone & Conn.Tissue	7	1.3	0.9	12	1.9	1.0
C43-C44	Skin	19	3.5	2.0	12	1.9	1.0
C50	Breast	7	1.3	0.8	292	46.5	28.6
C53	Cervix Uteri	-	-	-	46	7.3	4.3
C54	Corpus Uteri	-	-	-	69	11.0	6.9
C56	Ovary	-	-	-	69	11.0	7.1
C61	Prostate	67	12.4	6.7	-	-	-
C64-66, 68	Kidney etc.	26	4.8	3.0	6	1.0	1.6
C67	Urinary bladder	41	7.6	4.3	6	1.0	0.5
C70-C72	Brain & other CNS	18	3.3	2.6	20	3.2	2.4
C73	Thyroid	25	4.6	3.4	84	13.4	10.3
C81-C85, C96	Lymphoma	67	12.4	8.4	44	7.0	4.8
C90	Multiple Myeloma	26	4.8	3.0	30	4.8	2.6
C91 - 95	Leukemia	50	9.3	8.6	40	6.4	5.9
C00 -96	All sites	1265	234.4	142.0	1160	184.6	115.5

Academic activities

Ongoing doctoral research programme

Research scholar	Title of study/University	Guide
Sreelekha KR	Bayesian modelling and posterior inference for breast cancer survival data in Kerala/Mahatma Gandhi University	Dr. Preethi Sara George

DIVISION OF CANCER RESEARCH

Kannan S

Professor & Head

Additional Professors: Lakshmi S, Hariharan S

Associate Professors: Sreelekha TT, Guruvayoorappan C

Five research groups are working in this Division.

The Laboratory of Cell Cycle Regulation and Molecular Oncology is focusing on the molecular mechanisms involved in cancer development and progression and also on identifying molecular signatures capable of predicting disease prognosis to aid personalized and risk-adjusted therapy. Currently, four studies are progressing. The first one focuses on the biology of metabolic reprogramming in oral cancer metastasis using cell lines to identify some reliable metabolic biomarkers which may be efficient targets for tumour specific therapy. Another study is on the functional validation of miRNA signature identified for uterine cervical cancer; to identify the biological significance of these altered miRNAs in cervical cancer cell lines. The third one is to find out the signature of circulating cell-free nucleic acid (CFNAS) of oral cancer patients to formulate a liquid biopsy methodology for the diagnosis and prognosis of oral cancer. The last one is on

the biology of BRAF and TERT gene mutations in thyroid cancer to identify novel targets for the better management of aggressive papillary thyroid carcinoma.

The Laboratory of Molecular Medicine has been undertaking studies on the cellular and molecular mechanisms of the development of breast cancer. Ongoing extramural projects include the ICMR Task Force project on the genetic and epidemiological factors involved in breast cancer in collaboration with AIIMS, the National Institute of Pathology, and the National Institute of Cancer Prevention and Research, New Delhi. Another study on triple-negative breast cancer under the DBT-funded scheme is a multi-institutional research involving the Rajiv Gandhi Centre for Biotechnology to understand the biology of TNBC. Post-doctoral studies funded by DBT under the Women Scientist scheme and KSCSTE under the Back to Lab scheme are ongoing which analyse the therapeutic potential of natural plant products.



Digismear (Cerviscan)

The Laboratory of Cytogenetics and Molecular Diagnostics is mainly concentrating on the chromosomal abnormalities in various types of haematological malignancies. Studies identified novel and rare chromosomal abnormalities and correlated with clinical outcomes. Various studies including mutation studies of FLT3, NPM1, CEBPA, DNMT3A, WT1, IDH1, IDH2 genes were performed and correlated with treatment response and survival in AML-NC patients. Mutation analysis of STAG1, STAG2, RAD21, SMC1, and SMC3 genes are being carried out in AML patients with t(8;21). Cytogenetic and molecular studies on paediatric leukemia, imatinib resistance in CML patients, molecular mechanism in advanced stages of CML patients, and drug resistance in AML patients are also ongoing. RCC and C-DAC have jointly developed an automated cervical cancer screening system (Cervi SCAN) which is to be validated. Another project aims at developing an efficient and cost-effective artificial intelligence-based oral cancer screening system, to evaluate the significance of oral brush biopsy in the early detection of oral cancer and the possibility of image analysis for the identification of HPV. Apart from these, this Lab is rendering diagnostic Cytogenetic and FISH services for leukaemia and other genetic diseases.

The Laboratory of Biopharmaceuticals & Nanomedicine aims to develop plant polysaccharide-based nano-constructs for tumour targeting and biomaterials for theranostic applications. Polysaccharide-based metal nano-constructs were developed for targeted drug delivery, imaging, photothermal therapy, and wound healing. Tumour-targeted drug delivery using specific antibodies and siRNA tagged nanoconjugates for gene silencing and targeted drug delivery has been developed. Spherical

silver nanoparticles (SNP@PSP) were fabricated using galactomannan from the fruit rind of *Punica granatum* with inherent cancer-preventive and immunostimulatory properties. Further, the antimicrobial PSP@SNP doped cream was established for wound healing applications. Work is in progress on the fabrication of a polysaccharide Selenium PTX (PST-SNP-PTX) nano formulation for oral and intravenous administration in gastric cancer.

The Laboratory of Immunopharmacology and Experimental Therapeutics is involved in the identification of natural products having radioprotective and chemoprotective potential as well as identifying molecules that can specifically target key pathways in tumour-specific angiogenesis and cancer metastasis. Apart from this, the laboratory also focuses on developing nanoliposomes carrying molecules of chemopreventive potential, exploring their mechanisms of action and validating them through pre-clinical models.

New equipment acquired

Minus 80 degree deep freezer and Cage changing station.

Diagnostic services provided	
Services	Number
Karyotype analysis	
Bone marrow samples	300
Peripheral blood samples	04
Fluorescent In Situ Hybridization	1991
Quantitative RT-PCR for bcr-abl	1250
Qualitative RT-PCR for bcr-abl & pml-rara	717
Total	4262

Academic activities

Ongoing Doctoral Research Programmes			
Sl. No.	Research scholar	Title of the study/University	Guide
1	Joseph Vimal	Biology of metabolic reprogramming in metastatic oral cancer/ University of Kerala	Dr. Kannan S
2	Sinto MS	Biology of NFκB and STAT3 transcriptional factors in oral carcinogenesis/University of Kerala	Dr. Kannan S
3	Manasa VG	Biological significance of miRNAs altered in oral carcinoma/ University of Kerala	Dr. Kannan S

4	Iris Himall	Functional validation of miRNA signature identified for uterine cervical cancer/University of Kerala	Dr. Kannan S
5	Noble T. Baby	Formulation of circulating cell free DNA-RNA signature (CFNAS) and validating the potential of liquid biopsy in diagnosis and prognosis of oral tongue cancer/University of Kerala	Dr. Kannan S
6	Dhanya Krishnan	Biology of BRAF and TERT mutations in Thyroid carcinoma/ University of Kerala	Dr. Kannan S
7	Akhil BS	Phytochemical and biological studies of selected plants of Verbenaceae/Manipal University	Dr. Sujathan K
8	Jeethi Ram	Galectin driven stem cell regulation in triple negative breast cancers/Manipal University	Dr. Sujathan K
9	Neeraja P	Study of mini-chromosome maintenance proteins in lung cancer cells: Its significance in the diagnosis and prognosis of non-small cell lung cancers/Manipal University	Dr. Sujathan K
10	Shanaz S. Sharaf	Identification of a panel of prognostic markers and development of a multiplex platform for the histoclinical classification of breast cancer/ Manipal University	Dr. Sujathan K
11	Sulfath TP	Exploring eccentric roles of hippo pathway in the progression and survival of triple negative breast cancer (TNBC) to ascertain molecular therapeutic target/University of Kerala	Dr. Lakshmi S
12	Ajeesh BL	Characterisation of glucose metabolism in breast cancer and its therapeutic implications/University of Kerala	Dr. Lakshmi S
13	Gisha Rose Antony	Exploring the key regulators of PD-1/PD-L1 pathway in breast cancer and its clinical relevance as therapeutic targets for immunotherapy/University of Kerala	Dr. Lakshmi S
14	Akhila Raj TV	Molecular studies on genes responsible for drug resistance: A study on <i>de novo</i> and relapsed acute myeloid leukaemia patients/ University of Kerala	Dr. Hariharan S
15	Geetha Raj	Cytogenetic abnormalities and risk stratification of multiple myeloma patients by FISH technique/University of Kerala	Dr. Hariharan S
16	Mahitha MS	Clinical significance of advanced stages of CML patients/ University of Kerala	Dr. Hariharan S
17	Amritha P. Kumar	A study of cytogenetic and molecular abnormalities in children with ALL and its clinical significance/University of Kerala	Dr. Hariharan S
18	Devipriya P	A study of miRNA profiling in different cytogenetic subtypes of acute myeloid leukaemia patients/University of Kerala	Dr. Hariharan S
19	Archana MG	Polysaccharide based nano-constructs facilitated co-delivery of drug and gene for effective cancer therapy/University of Kerala	Dr. Sreelekha TTT

20	Abeesh P	Liposome encapsulation of phytochemicals from Ashwagandha (<i>Withania somnifera</i> L.) for improved bioavailability and its potential application in lung cancer treatment by targeting EGFR, STAT3 and NF- κ B signaling pathways/University of Kerala	Dr. Guruvayoorappan C
21	Vishnu Walsan	Investigation of radioprotective effect of mangroves and its potential application in mitigating radiation-induced esophagitis/University of Kerala	Dr. Guruvayoorappan C
22	Drishya Sudarsanan	Antitumour and radioprotective effect of medicinal plants and its possible therapeutic application to mitigate detrimental effect of radiotherapy/University of Kerala	Dr. Guruvayoorappan C
23	Dhanisha SS	Investigation of the immunomodulatory efficacy of medicinal plants and its potential application in preventing cancer metastasis/University of Kerala	Dr. Guruvayoorappan C
24	Arya RS	Effect of mangrove phytochemicals in inducing apoptosis in thyroid carcinoma cells and their role in regulating intracellular signaling pathways/University of Kerala	Dr. Guruvayoorappan C

Training provided	
Trainees	Number trained
MD/MS/DM students (Dissertation work)	30
MSc (Biotech)/Life Science students (3/6 months project work)	50
MSc (MLT) students	04
BSc (MLT) students	60
Trainee in Cytogenetics	01

DIVISION OF LIBRARY AND INFORMATION SERVICES

Vishnu V

Librarian cum Information Officer Gr: I & Head

The Division is the knowledge management centre, providing a wide range of services in support of the Centre's clinical, academic, and administrative activities.

New equipment acquired

50 cpm A3 colour copier/printer

Journals and Databases

Institution-wide and remote-based full-text access to the subscribed content as well as to the resources provided by the National Cancer Grid (NCG) library services were continued. This included UpToDate, ScienceDirect, Wiley Online Library, Oxford University Press, Springer Nature, American Society of Clinical Oncology, ClinicalKey, and OVID platforms.

Plagiarism service

NCG library services were utilised to provide 'Ithenticate' software-based plagiarism checking for 42 manuscripts, including journal articles, postgraduate, superspeciality, and PhD theses received from faculty, research scholars, and postgraduate/superspeciality students.

Web-based information services

The Library home page was updated frequently for the provision of information services. Links were provided to each journal, which enabled direct access to the full-text of articles. Details of books, RCC publications, reprints, journal holdings, e-books, and university examination question papers of ongoing postgraduate/superspeciality programmes in the Centre were made accessible through various links provided on the library page.

Information sources	
Document type	Collection as on 31 March 2022
Books, Monographs and Back Volumes	13526
Current Journals	137
E-Journals	132
E-Books	144
Reprints	8360



DIVISION OF INFORMATION SYSTEMS

Neelima N

Systems Manager & Head

The Division's primary responsibilities include developing and implementing hospital policy using information and related computer technology, undertaking extensive system development, and maintaining operational systems. The Division is in charge of the Hospital Information System, web, mail, and proxy servers, Oracle database administration, LAN and WAN management, data management for the Cancer Care for Life scheme, PC maintenance and troubleshooting, administration and maintenance of telemedicine software and equipment, and scanning of case sheets. The division also maintains the disaster recovery site with IT infrastructure redundancy and data center components with 24/7 site availability. Major activities undertaken during the reporting period are:

Enterprise Resource Planning (ERP) Solution

Processes are ongoing for the implementation of the ERP solution. This is a major IT initiative to automate and streamline institutional business processes through the seamless and integrated flow of information. Its main objectives are standardisation and strengthening of key functions by mapping key business processes; automation of the functional operations using workflows and electronic approval processes; monitoring key performance indicators; and better forecasting and reporting. It also helps to manage tactical and strategic decisions.

Upgradation of PACS

Upgradation of the existing Picture Archiving and Communication System (PACS) with a new PACS viewer is in progress.

DIVISION OF HOUSEKEEPING

Jaya TS

Head Nurse & In-charge

This Division was created as per the Executive Committee resolution dated 14th December 2020 with the view that housekeeping services are of paramount importance in providing a clean, safe, pleasant, orderly, and functional environment for both patients and staff. The following services are included under the Housekeeping Division:

- Laundry
- All the regular cleaners and helpers
- Outsourced manpower for daily housekeeping work
- All casual labours engaged in various Departments/ Divisions

The major activities undertaken by the division during the period were:

Implemented the green protocol system and undertook

regular sanitary rounds and preventive measures. The OPD, IPD, and hospital premises were cleaned and disinfected according to the COVID protocol. Observed monthly dry days to prevent mosquito menace and other contagious diseases. The division actively participated in the Code Red and internal disaster drills. Furniture coding was completed as part of the preventive maintenance plan. As part of cleaning the hospital premises, a condemnation policy was implemented, scrap materials were removed, and recycled plastic waste generated in the hospital. In addition to the above activities, the second campus at Pulayanarkotta was made functional by cleaning the building and premises.

OUTREACH CENTRES

EARLY CANCER DETECTION CENTRE (ECDC)

ECDC, Ernakulam

Latha A

Cytopathologist

This Centre primarily aims at screening and early diagnosis of cancers through cervical smear examination, oral scrape smear examination, fine needle aspiration cytology, colposcopy, and fluid cytology. The monthly follow-up clinics, conducted every 3rd Saturday, were attended by 677 patients during the period. The centre also conducted cancer awareness classes and cancer detection camps.

Screening services	
Services	Number
Cancer awareness classes	03
Cancer detection camps	07
Persons screened	3771
Cancers detected*	371
Pre-cancers detected	90

*Oral-31, Breast-176, Cervix-7, Lymphoma-15, Thyroid-36, Metastatic lymphnode-89, Others-17

Clinical activities			
Tasks	ECDC	Camp	Total
Cervical smear	1069	155	1224
Oral smear	80	0	80
Fine Needle Aspiration Cytology	1425	75	1500

ECDC, Palakkad

Rekha SR

Resident Medical Officer

The major activities of this Centre are primary and secondary prevention of cancers through cancer awareness and education programmes organised at the Centre and District Hospital, Palakkad. The Centre extended its activities to Attapadi and organised programmes in the rural and urban areas of Palakkad. Short-course chemotherapy and other minor procedures like CVAD dressing, pump removal, ascitic tapping, and pleural tapping referred to by RCC were also done. Follow-up clinics were conducted for patients from Palakkad, Thrissur, and Malappuram districts through telemedicine mode and were attended by 1212 patients.

Screening services	
Services	Number
Cancer awareness classes	07
Cancer detection camps	21
Persons screened	2235
Cancers detected*	50
Pre-cancers detected	91

*Oral-14, Breast-18, Cervix-3, Thyroid-3, Others-12

Clinical activities			
Tasks	ECDC	Camp	Total
Cervical smear	429	587	1016
Oral smear	23	01	24
Fine Needle Aspiration Cytology	93	48	141
Sputum cytology	11	0	11
Nipple discharge	03	05	08
Fluid cytology	23	0	23

CANCER CARE CENTRE, NEENDAKARA

Jayalekshmi P (till 31.05.2021)

Additional Professor & Officer-in-charge

Sajeed A (from 01.06.2021)

Additional Director (Administration) & Officer-in-charge

Patient services

The Cancer Care Centre carries out district cancer registration, review clinics, clinical services including cytology investigations, and community-based cancer control activities.

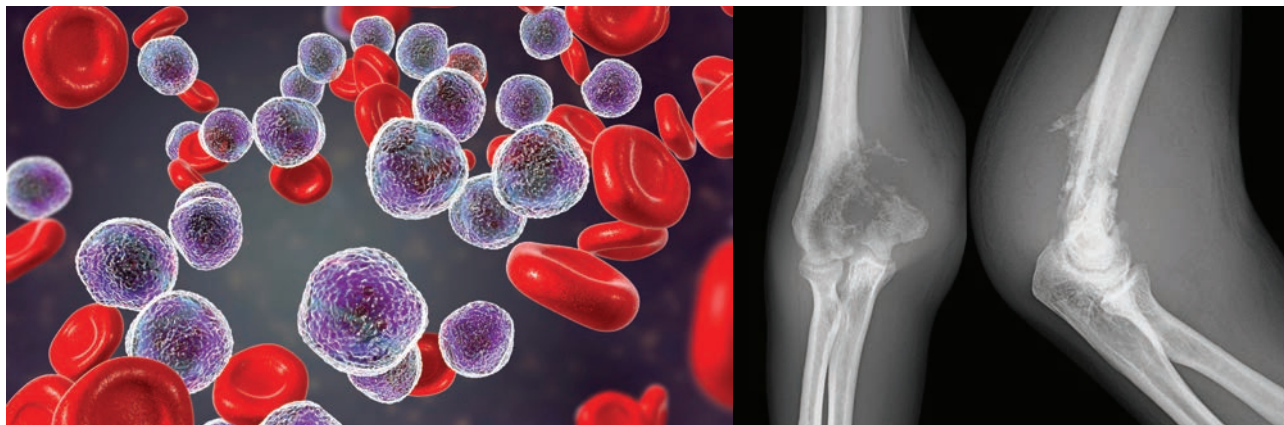
Patient services		
Services	Number	Persons attended
Review clinics	06	334
Cancer supportive clinics with day care & home care	Daily	5999
Cancer awareness classes & cancer control training programmes	03	140
Cancer detection camps	11	431
Pap smear screening	11	148
Other cytology investigations	--	34
Cancers detected*	57	--

*Oral-07, Breast-20, Cervix-2, Thyroid-2, Others-26

MULTIDISCIPLINARY CLINICS

'A' CLINIC

(HAEMATOLOGICAL, LYMPHORETICULAR, BONE & SOFT TISSUE SARCOMA)



The 'A' Clinic is responsible for the diagnosis and management of haematological and lymphoreticular malignancies, sarcomas, and other solid tumours where intensive chemotherapy is indicated. 2183 patients were admitted for the administration of high-profile chemotherapy and the management of emergencies and complications. In the BMT unit, autologous bone marrow transplantation following high-dose chemotherapy was performed in 29 patients. The transplant programme was restricted to autologous transplants in view of the COVID pandemic. Clinical training was given to postgraduate students in Radiation Oncology, Surgical Oncology, and Medical Oncology at RCC and other medical colleges.

Clinical Services/Procedures

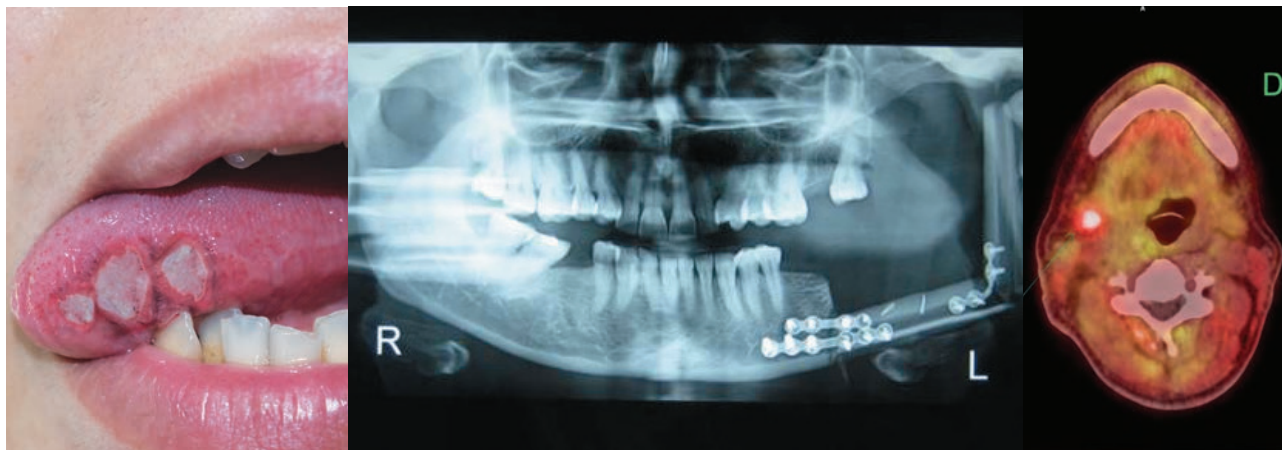
Patients consulted		
Patients	Number	
New cases	2167	
Review cases	37476	
Total	39643	
Specialised services		
High dose chemotherapy	Apheresis procedure	Autologous BMT
1500	57	219

Major surgical procedures: Bone and Sarcoma - 199

Others - 8

Observers/Trainees: 15

'B' CLINIC (HEAD & NECK)



The 'B' Clinic comprises a multidisciplinary team of clinical oncologists and surgical oncologists working together for the comprehensive evaluation, management, post-treatment care, and follow-up of patients with head and neck cancers. Daily tumour boards comprising various specialists were conducted for this purpose. The team also comprises trained nurses who provide advice and rehabilitation services for patients undergoing complex surgeries, reconstruction, and radiotherapy. There is a closely associated dental division providing pre and post-radiotherapy dental care. The clinic offered cutting-edge radiotherapy treatments such as IMRT, 3D conformal radiotherapy, and remote after-loading HDR brachytherapy. The clinic also provided training to postgraduates in surgery, ENT, radiation oncology, and various dental specialties from various colleges across South India.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	2259
Review cases	28532
Total	30791

Radiotherapy Procedures

Radical			Palliative
3D CRT	IMRT + IGRT	2D Planning	
254	195	541	222

Surgical Procedures

Oral cancer	Laryngo-pharyngeal	Salivary glands	Sino-nasal	Miscellaneous
718	48	38	15	181

Academic activities

- One year Fellowship programme in Head and Neck Clinical Oncology, with an annual intake of two seats
- Provided training to postgraduate students in Radiation Oncology from Government Medical College, Thiruvananthapuram, and residents of Oral Medicine and Radiology from Government Dental College, Thiruvananthapuram.

'C' CLINIC

(BREAST & CENTRAL NERVOUS SYSTEM)



The 'C' Clinic offers state-of-the-art treatments for breast cancers and malignant as well as benign brain tumours in adults and children. A multi-disciplinary team comprising well-trained surgeons, radiation and medical oncologists works in collaboration with radiologists and pathologists. Treatment decisions are carried out based on regular multi-disciplinary tumour board discussions. The services provided include conservative and reconstructive surgeries for breast cancer, sentinel lymph node biopsy procedures, modern radiotherapy treatments such as 3D conformal radiotherapy, IMRT/IGRT, SRS/SRT, cardiac sparing techniques including deep inspiratory breath hold (DIBH), prone breast radiotherapy, and all forms of systemic treatments such as chemotherapy, endocrine therapy, and targeted therapy. Experienced nurses provide counselling regarding treatment side effects. Training in breast and neuro-oncology is provided for Oncology specialty MD and Super-specialty students of RCC and other medical colleges.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	2387
Review cases	43856
Total	46243

Radiotherapy procedures				
Radical				Palliative
Conformal	Conventional	IGRT/IMRT	SRS/SRT	
1110	2	161	21	342

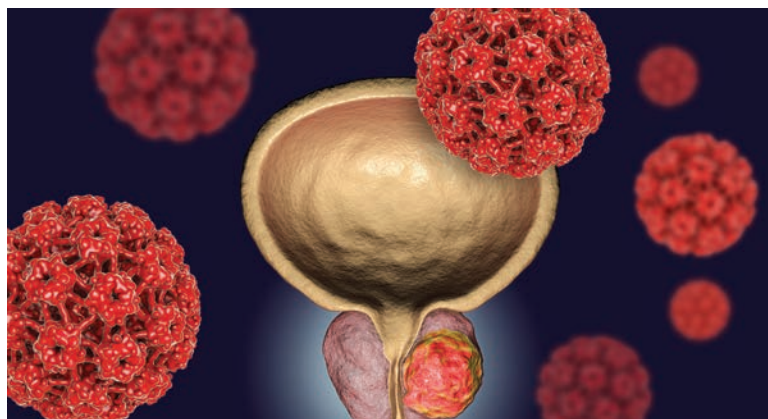
Surgical Procedures		
Mastectomy +/- Reconstruction	Breast conservation & Oncoplasty	Others
468	327	19

Chemotherapy

Most of the chemotherapy is delivered on an out-patient basis. In the reported year over 15,000 patients received chemotherapy.

'D' CLINIC

(GYNAEC, GENITOURINARY & OTHERS)



The 'D' Clinic manages patients with gynaecological and urological cancers, skin cancers, and cancers of unknown primary. This clinic consists of radiation oncologists, gynecologic cancer surgeons, medical oncologists, and surgical oncologists. Patients were treated with surgery, precision radiotherapy (IGRT, IMRT, and 3D conformal RT), chemotherapy, targeted therapy, immunotherapy, and hormonal therapies. Surgical oncology services range from extensive pelvic surgery to minimally invasive laparoscopic procedures and colposcopy. Apart from external beam radiotherapy, a facility for intracavitary, intraluminal and interstitial image guided brachytherapy is there. Clinical training was given to postgraduate students from Radiation Oncology, Surgical Oncology, Medical Oncology, and Gynecologic Oncology programmes from RCC.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	2514
Review cases	31777
Total	34291

Radiotherapy procedures					
Radical				Palliative	Brachytherapy
3DCRT	IMRT	IGRT	2D Planning		
222	62	218	58	314	1274

Surgical Procedures		
Gynaecological cancers	Ovarian	232
	Endometrial	157
	Cervical	12
Urological cancers	Nephrectomy	37
	Penectomy	10
	Bladder	24
Skin		43
Others		85

Minor cases	
Uro and Skin	31
LEEP	77
Colposcopy	38
Miscellaneous	65

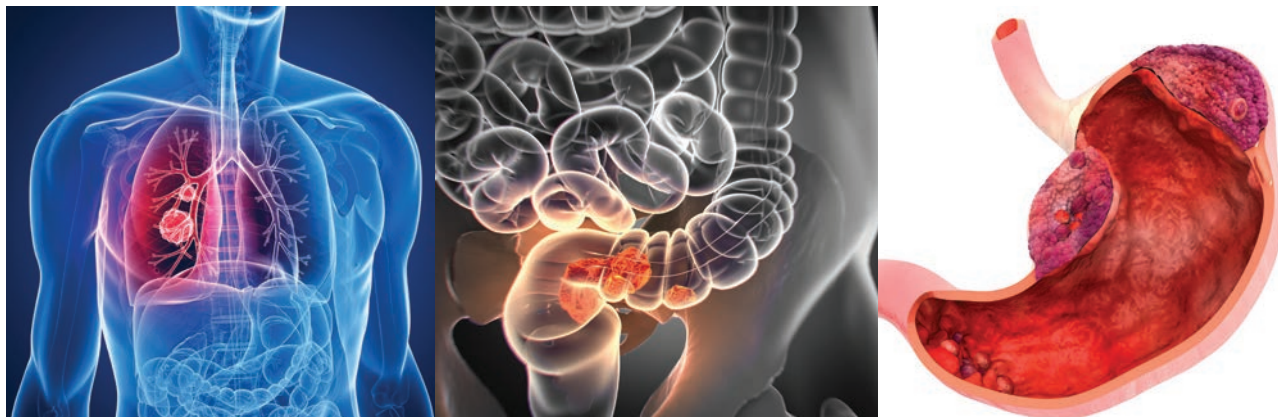
Chemotherapy	
Concurrent chemo-radiotherapy	200
Neoadjuvant chemotherapy/Hormone therapy	450

Observers/Trainees: Post graduate students from Radiotherapy department of Government Medical College, Thiruvananthapuram regularly comes for training.

Visitors: Residents from Gynecology department of Government Medical College, Thiruvananthapuram visited for training in surgical oncology and radiotherapy treatment including brachytherapy.

'E' CLINIC

(CHEST & GASTROINTESTINAL)



The 'E' Clinic cares for patients with cancers of the lung, mediastinum, gastro-intestinal tract, and hepato-biliary tract. The multidisciplinary team offers comprehensive state-of-the-art surgery, radiotherapy, chemotherapy, and immunotherapy services. Image-guided and respiration-gated radiotherapy and stereotactic body radiotherapy (SBRT) are being practised where clinically indicated. For patients who were unable to come to RCC due to the COVID pandemic, the clinic had arranged tele-consultation and guidance for doctors at peripheral centres to treat them. Clinical training is being given to post-graduate students in Radiation Oncology, Surgical Oncology, and Medical Oncology from within RCC and other medical colleges.

Radiotherapy procedures

Radical					Palliative
Conformal	IMRT/IGRT	CT/2D Plan	SRS/SBRT	Brachytherapy	
290	280	17	27	04	786

Surgical procedures

Esophagus	Stomach	Hepatobiliary and Pancreas	Colorectal	Thoracic	Others
22	38	36	252	23	120

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	3490
Review cases	40378
Total	43868

'F' CLINIC

(PAEDIATRIC ONCOLOGY)



The 'F' Clinic manages childhood malignancies up to the age of 14 years. The clinic provided outpatient and inpatient services, including ICU care with ventilatory support. Paediatric patients with malignancy from Kerala, southern Tamil Nadu, southern Karnataka, Andamans, Lakshadweep, and children of migrant workers in Kerala came to this division for medical care. The clinic offered supportive care, psychosocial counseling, nutritional support, informal education, and organised cultural programmes for patients and parents.

Clinical Services/Procedures

Procedures	
Intrathecal medications	2154
Lumbar puncture & CSF Analysis	274
Bone marrow aspiration/biopsy	478
PICC line insertion	06
PICC line resuturing	13
Trucut biopsy	15
FNAC	22
Pleural/ascitic tapping	10
Femoral Line Insertion	08
Ventilator support	20
Wound C&D, aspiration for C&S	20
Bone Biopsy	14
PICC Removal	06
Suture /Stapler Removal	10

Patients consulted

Patients	Number
New cases	454
Review cases	16857
Total	17311

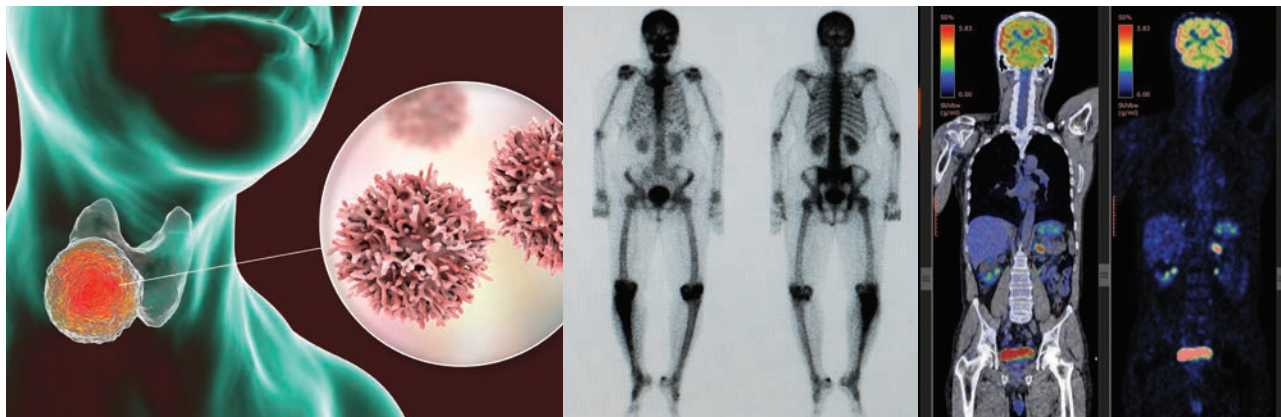
Academic activities

- DM programme in Paediatric Oncology with an annual intake of two seats.
- Provided regular training to postgraduate students in Paediatric Oncology, Radiotherapy, and Medical Oncology in RCC and also from various Medical Colleges and private institutions like Kerala Institute of Medical Sciences and Ananthapuri Hospitals and Research Institute, Thiruvananthapuram.

Visitor

Mr. Naveen Kumar IAS, Special Secretary, Ministry of Health, Govt. of Andhra Pradesh, and a team of officials visited Paediatric Oncology ward on 29th March 2022 to have a look at the facilities available in the Department and to incorporate them in Andhra Pradesh.

'G' CLINIC (THYROID)



The 'G' Clinic is a multidisciplinary clinic comprising experts from Nuclear Medicine, Surgical Oncology, and Radiation Oncology divisions. The clinic managed thyrotoxicosis and thyroid cancer and started to provide radionuclide therapy (PRRT) for neuroendocrine tumours and prostate cancer during the period.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	912
Review cases	12440
Total	13352

Nuclear Medicine services

Immunoassays	PET-CT Scan	SPECT & SPECT CT
45195	1547	4259
Peptide Receptor Radionuclide Therapy (PRRT)	Radio-iodine therapy	
24	Thyroid cancer 431	Thyrotoxicosis 112

Surgical Procedures

Total	Hemi	Revision/
Thyroidectomy	Thyroidectomy	Completion
		Thyroidectomy
185	15	36

Academic activities

Provided training to Postgraduate students from RCC, Government Medical College, Thiruvananthapuram, other private medical colleges, and DRT students from Medical College, Kottayam, and School of Medical Education, Kottayam.

Awards, Honours and Recognitions Received

Faculty and other Staff

Patent Awarded

Raghukumar P (Additional Professor & Head, Radiation Physics): for the invention of the 'Modified spacer balloon device' in collaboration with HLL Lifecare Ltd. (Indian Patent No. 379287 dated 13.10.2021, Application No. 584/CHE/2011).

Awards/Honours/Fellowships

Anoop TM (Associate Professor, Medical Oncology): completed the Trialect Fellowship in Metanalysis and Biostatistics. University of Foggia, Italy/Online. (May 2021–January 2022).

Jayasree K (Professor & Head, Pathology): Founding President of Indian Association of Musculoskeletal Pathologists (2021).

Jiju JS (Lab. Technician Sel.Gr., Pathology): awarded PhD by the Meenakshi Academy of Higher Education and Research, Chennai for the thesis, 'Somatic DNA damages in modifiable and non-modifiable risk factors in coronary artery disease'. (December 2021).

Priyakumari T (Professor & Head, Paediatric Oncology): received the Best Teacher award for 2021 (Medical stream) of Kerala University of Health Sciences.

Rachel Cherian Koshy (Professor & Head, Anaesthesiology): nominated as a member of the Specialist Board of Onco Anaesthesia by the National Board of Examinations, Ministry of Health and Family Welfare, Govt. of India.

Sarin B (Assistant Professor, Radiation Physics): received first prize for best oral paper presentation, 'Montecarlo simulation of lung SBRT plans using PRIMO Monte Carlo Code and its validation against Acuros® XB', at the Conference on Radiation in Health Care (CRHC 2021) conducted by the Department of Radiological Physics, SMS Medical College and Hospitals, Jaipur on 26-27 April 2021.

Shaiju VS (Assistant Professor, Radiation Physics): awarded PhD by the Meenakshi Academy of Higher Education and Research, Chennai for the thesis, 'Design and fabrication of a head phantom for the dosimetric evaluation of radiotherapy treatment plans'. (October 2021).

Sudha P (Additional Professor & Head, Palliative Medicine): awarded Fellowship in Regional Anaesthesia & Pain management by the Indian Society of Anaesthesiologists.

Trainees

Archana MG (Research Scholar, Cancer Research):

- received Second Prize for the best oral presentation, 'Combinatorial delivery of EGFR siRNA and doxorubicin: a dual-targeting in vivo therapeutic approach for lung

tumour management', at the 3rd National Biomedical Research Competition (NBRCOM 2021), Society of Young Biomedical Scientists, India, held on 06-10 December 2021.

- received Second Prize for the best oral presentation, 'Bio-fabricated metallic nanosystem conjugated with siRNA: a promising gene delivery system for tumour management', at the Symbiot-Celebrating Biotech: International Biotechnology Conclave, College of Agriculture, Thiruvananthapuram, 14–15 December 2021.

Asha Lekshmi (Post-doctoral fellow, Cancer Research): received first prize in best paper presentation (Scientist category) for the paper, 'Immunohistochemical profiling of p53 mutation status: a propitious approach for TNBC prognostication', at the 34th Kerala Science Congress, Thiruvananthapuram, 10-12 February 2022.

Joseph Vimal (Research Scholar, Cancer Research): received the best paper award in disease biology and bioinformatics at the International Conference on Advanced Biology 2022, organised by the Inter-University Centre for Evolutionary and Integrative Biology, University of Kerala. (February 2022).

Preethi G. Nath (Research Scholar, Cancer Research): was awarded PhD in Biotechnology by the University of Kerala for the thesis, 'Prognostic significance of cytogenetic and molecular studies in paediatric acute leukaemia patients'. (January 2022).

Preethi GU (Research Scholar, Cancer Research): was awarded PhD by the University of Kerala for the thesis, 'Chemotherapeutics loaded polysaccharide scaffold as a novel tool to fight against cancer'. (June 2021).

Shiji R (Research Scholar, Cancer Research): was awarded PhD by the University of Kerala for the thesis, 'Evaluation of Punica granatum fruit rind polysaccharide nano-constructs for theranostic applications in cancer'. (December 2021).

Unnikrishnan BS (Research Scholar, Cancer Research):

- awarded PhD by the University of Kerala for the thesis, 'Application of polysaccharide metal nanoconjugates in cancer detection and therapy'. (August 2021).
- received Dr. Divya Ravindran Memorial Award 2020 for the best research paper of the 2020-2021 academic year: 'Unnikrishnan BS, Anitha Sen, Preethi GU, Joseph MM, Maya S, R. Shiji, Anusree KS, Sreelekha TT. Folic acid-appended galactoxylglucan-capped iron oxide nanoparticles as a biocompatible nanotheranostic agent for tumour-targeted delivery of doxorubicin. International Journal of Biological Macromolecules, 168, 130-142, 2021'. (awarded on 16th October 2021).

Functions & Conferences organised

Sl. No.	Name of Programme	Date
1	World No Tobacco Day 2021: an exhibition on tobacco related cancers	31 May 2021
2	Breast Cancer Awareness Month	October 2021
3	International Conference of the Foundation for Head and Neck Oncology (FHNO)	10-12 December 2021
4	Inauguration of Training Programme for Frontline Warriors of Trivandrum District Cancer Control Programme, Preventive Oncology OP and Training Centre at Pulayanarkotta Campus of RCC by Smt. Veena George, Hon'ble Minister for Health and Family Welfare, Govt. of Kerala	04 February 2022
5	International Childhood Cancer Day	15 February 2022
6	13th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter)	06 March 2022

Distinguished Visitors/Talks delivered

Sl. No.	Visitor	Date
1	Dr. Shaji Kumar MD, Professor of Medicine, Consultant, Division of Hematology, Department of Internal Medicine, Mayo Clinic, Rochester, Minnesota. Interaction with Doctors at RCC presided over by Director.	02-03 November 2021
2	Dr. Parameswaran N. Hari, Armand Quick William Stapp Professor of Hematology, Chief, Division of Hematology Oncology, Medical College of Wisconsin. Talk: Current Applications and Future Directions of CAR-T cell therapies for Heme Malignancies . Chaired by Dr. Shaji Kumar MD.	03 November 2021
3	Mr. Naveen Kumar IAS, Special Secretary, Ministry of Health, Govt. of Andhra Pradesh & team of officials visited Paediatric Oncology Division	29 March 2022

GALLERY



Prof (Dr) M. Krishnan Nair, Founder Director
(Expired on 28 October 2021)



Dr. Shaji Kumar MD, Prof. of Medicine, Mayo Clinic and
Dr. Parameswaran N. Hari, Prof. of Hematology, Medical College
of Wisconsin during their visit to RCC (02-03 November 2021)



International Childhood Cancer Day (15 February 2022)

Conferences, Training Programmes And Meetings Attended & Papers Presented By Staff & Students

INTERNATIONAL LEVEL

Sl. No.	Delegate/s	Name of Conference/Meeting, Date & Venue (Paper/Talk/Poster/Video presented/Delegate's status)
1	Anoop TM	9 th Asia-Pacific Breast Cancer ESMO Congress. 08-10 Jan 2021, Singapore/Webinar. (Delegate).
		ESMO Congress. 16-21 Sep 2021, Lugano/Virtual. (Delegate).
2	Arun Prasanth	ESH 3 rd Conference on 'How to Diagnose and Treat Multiple Myeloma'. 15-18 Apr 2021, Paris/Webinar. (E-poster: Plasmacytoma involving upper airway: a case series).
3	Bhavya S. Kumar	ESH 3 rd conference on 'How to Diagnose and Treat Multiple Myeloma'. 15-18 Apr 2021, Paris/Webinar. (E-poster: Multiple myeloma associated with Type 1 cryoglobulinemic vasculitis: a case report).
4	Chandramohan K	Society of Surgical Oncology Meeting. 09-12 Mar 2022, Texas, USA. (Represented Indian Association of Surgical Oncology).
5	Divya V. Gladston	13 th Pan Arab Congress of Anaesthesia: Intensive Care and Pain Management. 22 May 2021/ Webinar. (Delegate).
		17 th World Congress of Anaesthesiologists. 01-05 Sep 2021, Prague, Czech Republic/Webinar. (E-poster: Prospective observational analysis of epidural analgesia in oncosurgeries in a tertiary cancer centre).
6	Elizabeth Mathew Iype	International Collaborative Oral, Head and Neck Cancer Teleconference Organised by Philippines Academy of Head and Neck Surgeons. 18 Apr 2021. (Panelist: Cancer surgery during COVID pandemic).
		Excellence in Oncology Care Annual Virtual meeting. 21 Oct 2021, Dubai. (Delegate).
7	Sudha P, Geethi MH, Ancy George	American Society of Clinical Oncology: 4 days virtual Palliative care e-course (APCeC). 02, 03, 09-10 Oct 2021/Webinar. (Delegates).
8	Jayakrishnan R	Essentials of Global Health by Yale School of Public Health, USA. August 2021/Online. (Trainee).
		Essential Epidemiologic tools for Public Health practice by Johns Hopkins University, USA. Sep 2021/ Online. (Trainee).
9	Priyakumari T, Prasanth VR, Ajay Sankar, Thirumala CR, Nandakumar R	St. Jude VIVA FORUM 2022. 12-13 Mar 2022/Webinar. (Delegates).
10	Rona Joseph P	ESMO Breast Cancer Virtual Congress 2021. 05 - 08 May 2021. (Talk: Breast cancer as second primary malignancy in cancer survivors: Experience from a tertiary cancer center in India).
		San Antonio Breast Cancer Symposium 2021. 08-12 Dec 2021/Virtual. (Delegate).
11	Saikumar S	ESH 3 rd Conference on 'How to Diagnose and Treat Multiple Myeloma'. 15-18 Apr 2021, Paris/Webinar. (E-poster).
		ESMO Congress. 16-21 Sep 2021, Lugano/Virtual. (E-poster: Elderly breast cancer treated with standard curative intent: An analysis on predictors of disease-free survival).
		6 th ESH Translational Research Conference: Lymphoid Malignancies. 14-17 Oct 2021. (Poster: Prognostic significance of serum ferritin in classical Hodgkin's lymphoma and its correlation with PET response).
12	Sherry Abraham	ESH 3 rd conference on 'How to Diagnose and Treat Multiple Myeloma'. 15-18 Apr 2021, Paris/Webinar. (Talk: Castleman disease: A review of eight cases from a single centre).

Conferences

13	Subha R	17 th World Congress of Anaesthesiologists. 01-05 Sep 2021, Prague, Czech Republic/Webinar: (E-poster: Effect of preoperative warming on post induction core temperature and incidence of postoperative shivering in patients undergoing general anaesthesia). International Symposium on Spine and Paravertebral Sonography organised by Dept. of Anaesthesia and Intensive Care, the Chinese University of Hong Kong. 13-27 Nov 2021/Webinar (Delegate).
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NATIONAL LEVEL

Sl. No.	Delegate/s	Name of Conference/Meeting, Date & Venue (Paper/Talk/Poster/Video presented/Delegate's status)
1	Abeesh P	International Conference on Advanced Biology 2022. 23-25 Feb 2022/Webinar: (Paper: The antitumor activity of Withaferin A encapsulated PEGylated nanoliposomes against Dalton's lymphoma ascites tumor models: In vitro and in vivo evaluation).
2	Abhilash Menon	ESMO Virtual Preceptorship: Head and Neck Cancer. Sep 2021. (E-poster: Recurrent nasopharyngeal carcinoma). ESMO Virtual Preceptorship: Breast Cancer. November 2021. (E-poster: Synchronous Ca breast and DLBCL). 8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar: (Talk: Clinical landscape of low HER2 breast cancer patients). 46 th Indian Cooperative Oncology Network (ICON) Conference. 24-25 Feb 2022. (Talk: Prognostic significance of serum ferritin in AML).
3	Abhina Nahas	45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/Webinar: (E-poster: Anaesthetic considerations in a new born for tracheoesophageal fistula repair and management of post-op tracheal suture site leak).
4	Ajeesh BL	41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. 02-05 Mar 2022/Webinar: (Paper: Glut-1 and hypoxia modulates the expression of PDK-1 in breast cancer cells in vitro).
5	Aleyamma Mathew	International webinar on Recent Trends in Statistical Theory & Applications. 29 June-02 July 2021, Department of Statistics, University of Kerala. (Talk: Comparison of propensity score methods and covariate adjustment on the risk estimation of breast cancer). 39 th Annual Conference of Indian Society for Medical Statistics. 09-11 Dec 2021, Rajendra Institute of Medical Sciences, Ranchi. (Talk: Comparison of conventional and propensity score matched methods for reducing confounding effect for breast cancer risk estimation). International Conference on Statistics for Twenty-first Century-2021. 15-19 Dec 2021, University of Kerala/Webinar: (Talk: Pattern and risk assessment among patients with history of cancer in the family using decision tree model: data mining technique).
6	Amina S	RACE 2022. 28-30 Jan 2022/Webinar: (E-poster: Anaesthetic management of a case of paediatric rhabdomyosarcoma).
7	Amritha P. Kumar	41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. 02-05 Mar 2022/Webinar: (Poster: An assessment of cytogenetic analysis as a risk stratification tool for the prognosis prediction of pediatric acute lymphoblastic leukemia patients).
8	Amitha Sherief P	44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar: (Talk: Ewing's sarcoma of the spine: A tertiary centre experience). Conference by Cancer Research And Statistic Foundation. 24-25 Sep 2021. (Delegate). ESMO-ASIA Virtual Oncology Conference. 17-23 Nov 2021. (Delegate). 8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar: (Talk: Prognostic significance and survival of patients with mCRC in relation to high versus normal serum CEA).

9	Ancy George	Refresher course in pain and palliative medicine conducted by Trivandrum Institute of Palliative Sciences: Extension for Community Healthcare Outcomes. 10-28 Apr 2021. (<i>Delegate</i>).
10	Anila KR, Priya Mary Jacob	TAPCON: Tamil Nadu chapter of IAPM. 04-06 June 2021/Webinar: (<i>Delegates</i>).
11	Anila KR, Renu S, Sindhu Nair P, Neelima R	Nuances of Thoracic Pathology: A Paradigm Shift. 04-05 Sep 2021, TMH, Mumbai/Webinar: (<i>Delegate</i>).
12	Anila KR	50 th Annual Conference of Indian Academy of Cytologists. 19-21 Nov 2021/Webinar: (<i>Delegate</i>).
		4 th Kerala State Triple O Conference organised by Azeezia College of Dental Sciences and Research. 25-27 Nov 2021. (<i>Keynote lecture: Practical approach to diagnosis of salivary gland neoplasms: Pathologist's perspective</i>).
		Annual Conference of the International Academy of Pathology-Indian Division-2021. 02 Dec 2021/Webinar: (<i>Delegate</i>).
		CME on Grossing Techniques and Minimum Dataset Reporting in Oncopathology. 11-12 Dec 2021, TMH/Webinar: (<i>Delegate</i>).
		IAPM, Kerala Chapter: 13 Mar 2022/Webinar: (<i>Delegate</i>).
13	Anila KR, Renu S, Priya Mary Jacob, Jayasudha AV, Simi CM	APCON 2021: 69 th Annual Conference of IAPM. 03-05 Dec 2021/Webinar: (<i>Delegates</i>).
14	Anitha Mathews, Neelima R	5 th Annual National Conference of Neuropathology Society of India (NPSICON 2021) with Asia-Oceanian Society of Neuropathology. 10-11 Sep 2021, NIMHANS, Bangalore. (<i>Delegates</i>).
		12 th Annual Conference of the Indian Society of Neuro-Oncology. 15-17 Apr 2021, CMC Vellore/Webinar: (<i>Delegates</i>).
15	Anoop TM	7 th Edition of Year in Review Breast Cancer Conference. 10-15 Jan 2022, Mumbai/Webinar: (<i>Speaker</i>).
16	Archana MG	3 rd National Biomedical Research Competition (NBRCOM 2021), Society of Young Biomedical Scientists, India. 06-10 Dec 2021/Webinar: (<i>Paper: Combination of siRNA-directed gene silencing coupled with doxorubicin delivery for lung cancer therapy</i>).
		International Seminar on Recent Biochemical Approaches in Therapeutics (RBAT-VIII). 18-21 Jan 2022, Dept. of Biochemistry, Kerala University/Webinar: (<i>Paper: Combinatorial delivery of EGFR siRNA and doxorubicin: A dual-targeting in vivo therapeutic approach for lung tumor management</i>).
		National Webinar on Advances in Industrial Biotechnology. 03-04 Feb 2022. (<i>Paper: Chemotherapeutic tethered green synthesised gold-nanosystem: A potential candidate for breast cancer therapy</i>).
		34 th Kerala Science Congress. 10-12 Feb 2022, Thiruvananthapuram/Webinar: (<i>Paper: siRNA and anti-neoplastic agent tethered gold nanosystem: A promising in vivo co-delivery system for breast cancer management</i>).
		41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. (<i>Paper: HER2 siRNA facilitated gene silencing coupled with doxorubicin delivery: A novel nanoplatform for synergistic management of hormone-mediated breast cancer</i>).
17	Arun Prasanth	44 th Indian Cooperative Oncology Network Conference. 06, 13 & 20 June 2021/Webinar: (<i>Talk: Clinical characteristics and treatment outcomes of double expressor lymphomas: Single centre experience</i>).
		8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar: (<i>Talk: Clinicopathological characteristics and treatment response of breast cancer patients treated with dose dense neoadjuvant chemotherapy</i>).
		46 th Indian Cooperative Oncology Network Conference. 25-27 Feb 2022. (<i>Talk: Folfox Vs Cape Ox chemotherapy in colon cancer-Comparative analysis: Single centre experience</i>).

Conferences

18	Asha Lekshmi	34 th Kerala Science Congress. 10-12 Feb 2022, Thiruvananthapuram/Webinar: (Paper: Immunohistochemical profiling of p53 mutation status: a propitious approach for TNBC prognostication).
19	Ashish Mathew	45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/Webinar: (E-poster: Acute onset intraoperative QTc prolongation: An ominous sign to watch out for).
20	Beela Sarah Mathew	42 nd Indian Cooperative Oncology Network Conference. 6 th , 13 th & 20 th June 2021/Webinar: (Delegate).
		14 th Annual Short Course in Clinical Research Methodology. 9 th , 16 th , 23 rd & 30 th Oct 2021, Tata Memorial centre, Mumbai/Webinar: (Delegate).
		CME programme of IMA, Kerala State Branch Women Doctors Wing. 29 Oct 2021/Webinar: (Talk: Breast cancer: What you should know?).
21	Bhagyalakshmi R, Subha R, Frenny Ann Philip	45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/Webinar: (Delegates).
22	Bhavya S. Kumar	44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar: (Talk: Plasma cell leukemia: a tertiary Centre experience).
		8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar: (Paper: A prospective study to evaluate the role of cell free DNA in assessing the response to neoadjuvant chemotherapy in patients with carcinoma breast).
		46 th Indian Cooperative Oncology Network (ICON) Conference. 24-25 Feb 2022. (Talk: Prognostic significance of intestinal obstruction at presentation in patients with metastatic colorectal cancer).
23	Binitha R	13 th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter). 06 Mar 2022, RCC, Thiruvananthapuram. (Panelist: Paediatric Oncology Session).
24	Bipin T. Varghese	Virtual CME on Parotid tumours: an update. 06 Nov 2021, Malabar Cancer Centre, Thalassery. (Chaired session).
		21 st Annual Conference of 'Foundation of Head and Neck Oncology'. 10-12 Dec 2021, RCC, Thiruvananthapuram/Webinar: (Scientific committee member and faculty).
25	Chandramohan K	KASO Online Meeting. 11 Sep 2021. (Operative video: Thoracic mobilisation for carcinoma esophagus).
		National webinar on 'Decoding GI-HPB Oncology'. 15 Sep 2021, Max Hospital Saket, New Delhi. (Talk: Surgical principles and lymphadenectomy and participated in panel discussion).
		NATCON-IASO Delhi. 30-31 Oct 2021, New Delhi/Webinar: (Video talk: Laparoscopic D2 lymphadenectomy for stomach cancer).
		ASICON 2021. 17 Dec 2021/Webinar: (Moderated panel discussion: Stage IV cancer rectum: What is new?).
		Midcon IASO 2022. 26-27 Mar 2022, Shillong. (Faculty and Judge).
26	Deepu S	ISA Kerala Chapter PG Update. 01 May 2021. (Case Presentation: Carcinoma breast post chemo for mastectomy).
		45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/Webinar: (E-poster: Airway considerations in obstructing oral tumours).
27	Devipriya P	41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. 02-05 Mar 2022/Webinar: (Poster: Clinical relevance of conventional and molecular cytogenetic techniques in risk refinement of acute myeloid leukemia patients).
28	Dhanisha SS	International Conference on Advanced Biology 2022. 23-25 Feb 2022/Webinar: (Paper: Naringenin loaded biomimetic proteolipid vesicles (leukosomes) inhibits lung metastasis via regulating Cyclin D1 expression).
29	Dhanya Dinesh	IFCPC International Annual Conference. June 2021, Hyderabad. (Papers: 1. Impact of COVID-19 pandemic on the care of patients with gynecologic cancers. 2. Predictive factors of lymph node positivity in cervical cancer).

30	Dhanya Krishnan	National Institute of Physical Medicine and Rehabilitation: Workshop on Academic Writing and Communication skills, Research Methodology, Reference Management and Academic Publishing. 23 Nov-31 Dec 2021/Webinar: (Delegate) .
31	Divya Raj	Certificate Course in Essentials of Palliative Care. 08 Jan- 30 Jan 2022, RCC/Webinar: (Trainee) .
32	Divya V.Gladston	SPARC 2021:Academic Anaesthesia Teaching Program and Update. 04-10 Apr 2021/Webinar: (Delegate) .
33	Drishya Sudarsanan	International Conference on Advanced Biology 2022. 23-25 Feb 2022/Webinar: (Paper:Black cardamom mitigates experimental thoracic radiotherapy-induced lung injury by enhancing antioxidant defense and regulating pro-inflammatory cytokines) .
34	Elizabeth Mathew Iype	21 st Annual Conference of 'Foundation of Head and Neck Oncology'. 10-12 Dec 2021, RCC, Thiruvananthapuram/Webinar: (Organising secretary and faculty) .
35	Francis V. James	46 th Indian Cooperative Oncology Network Conference. 25-27 Feb 2022. (Delegate) .
36	Frenny Ann Philip	SOAPCCON-2021:The 3 rd Annual Conference of the Society of Onco-Anaesthesia and Perioperative Care (SOAPC). 25-26 Sep 2021/Webinar: (Talk: Comparison of preoperative assessment tools in geriatric patients undergoing cancer surgery: a prospective study) .
37	GeenaMarian George	RACE 2022. 28-30 Jan 2022/Webinar: (E-poster:Anaesthesia for HIPEC surgery) .
38	Geetha Kumari BS	National Health Mission Palliative care Programme: Training Programme for Secondary Staff Nurses. 27 Oct 2021/Webinar: (Talk: Stoma care) .
39	Geetha Raj JA	National Webinar on Advances in Industrial Biotechnology. 03-04 Feb 2022. (Paper:Prognostic significance of FLT3 ITD mutation in the development of drug resistance in acute myeloid leukemia patients with normal cytogenetics) .
		41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. 02-05 Mar 2022/Webinar: (Poster: Prognostic relevance of FLT3 ITD,WT1 and ASXL1 mutations to assess risk status and possibility of induction failure in cytogenetically normal acute myeloid leukemia patients) .
40	Geetha Raj, Amritha P.Kumar, Devipriya P, Mahitha MS, Saritha VN	Workshop on Cytogenetics. 07-10 Mar 2022, RGCB Thiruvananthapuram. (Technical support persons) .
41	Geethi MH	Refresher Course on Medical Education Technology. 2 nd Aug & 30 th Oct 2021, Academic Staff College, Kerala University of Health Sciences. (Delegate) .
42	Geethu Babu	21 st Annual Conference of 'Foundation of Head and Neck Oncology'. 10-12 Dec 2021, RCC, Thiruvananthapuram/Webinar: (E-poster:Treatment outcomes of carcinoma buccal mucosa treated with definitive hypofractionated accelerated radiotherapy: a retrospective analysis) .
43	Gireesh Kumar S	Critical Care & Rehabilitation Nurses Forum. 26 July 2021/Webinar: (Talk:Nutrition:Nursing perspectives) .
44	Guruprasad CS	IAP Kottayam Academic Program: World Cancer Day. 04 Feb 2022/Webinar: (Speaker: Empowering general practitioners) .
		National Conference for Management of Genetic Disorders. 26-27 Feb 2022/Webinar: (Delegate) .
		13 th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter). 06 Mar 2022, RCC, Thiruvananthapuram. (Organising Secretary & Faculty. Panelist: Paediatric Oncology Session) .
45	Guruvayoorappan C	Green Revolution Global Certification Program organised by United Nations Framework Convention on Climate Change. 07 Aug 2021/Webinar: (Delegate) .
		International Conference on Advanced Biology 2022. 23-25 Feb 2022/Webinar: (Paper: Mitigation of radiation stress induced thoracic esophagitis in experimental animal models using therapeutic molecules from marine mangroves) .

Conferences

46	Hariharan S	8 th CEIB day meeting of Inter University Centre for Evolutionary and Integrative Biology. 21 Dec 2021, Thiruvananthapuram. (Talk: Clinical significance of classical and molecular cytogenetics in oncology).
		Workshop on Cytogenetics. 07-10 Mar 2022, RGCB Thiruvananthapuram. (Resource person).
47	Haseena AN	45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/ Webinar. (E-poster: Anaesthesia induced myoglobinuria).
48	Jagathnath Krishna KM	International Webinar on Recent Trends in Statistical Theory & Applications. 29 June - 02 July 2021, Department of Statistics, University of Kerala/Webinar. (Talk: Estimation methods for survival function: A loss to follow-up approach).
		39 th Annual Conference of Indian Society for Medical Statistics. 09-11 Dec 2021, Rajendra Institute of Medical Sciences, Ranchi. (Talk: Cancer survival risk estimation using gamma frailty model).
		International Conference on Statistics for Twenty-first Century-2021. 15-19 Dec 2021, University of Kerala/Webinar. (Talk: Joint frailty modeling of recurrent and terminal events for cancer survival).
49	Jayakrishnan R	Tobacco Cessation in India: Policies, Practices and Challenges. Organised by Salam Mumbai Foundation. 31 May 2021/Webinar. (Delegate).
		4 th Kerala State Triple O Conference 2021 Organised by Azeezia College of Dental Sciences and Research, Kollam. 25-27 Nov 2021/Webinar. (Delegate).
50	Jayasree K	TAPCON: Tamil Nadu chapter of IAPM. 05 June 2021 /Webinar. (Slide seminar on bone tumours and tumour like lesions).
		APCON 2021 Online Conference. 03-05 Sep 2021. (Faculty).
		National CME on Pearls, Perils and Pitfalls in Bone and Soft Tissue Tumours. 18-19 Sep 2021/Webinar. (Faculty. Talk: Bone and soft tissue tumours).
		8 th Annual Virtual Conference of the Indian Musculoskeletal Oncology Society (IMSOS 2022). 04-06 Mar 2022. (Faculty).
51	Jayasudha AV, Simi CM	Online course on Flow cytometry: Principles, applications, experimental designing and data analysis conducted by Flow cytometry solutions (P) Ltd, Jaipur, India. 05-09 May 2021. (Delegates).
52	Jayasudha AV, Priya Mary Jacob, Simi CM	PCR/qPCR online course conducted by Flow cytometry solutions (P) Ltd, Jaipur, India. 08-11 Aug 2021. (Delegates).
53	Jayasudha AV, Simi CM	Annual conference of IAP-ID. 02 Dec 2021, Raipur, Chattisgarh/Webinar. (Delegates).
54	Joseph Vimal	International Conference on Advanced Biology. 23-25 Feb 2022, Inter University Centre for Evolutionary and Integrative Biology, University of Kerala. (Paper: Utilisation of salivary metabolites as diagnostic markers in oral tongue cancer).
55	Kainickal CT	Oncology Academic Forum (Webinar). 11 Apr 2021 (Talk: Role of anti EGFR therapy in LAHNSCC), 20 Apr 2021 (Talk: MACH-NC update), 28 May 2021 (Talk: Induction chemotherapy in LAHNSCC), 21 Sep 2021 (Talk: Management of Ca hypopharynx), 12 Oct 2021 (Talk: Adjuvant treatment for salivary gland tumours), 19 Oct 2021 (Talk: Treatment metastatic neck node unknown primary).
		Chart Rounds India (Webinar). 13 May 2021 (Talk: Imaging in Ca oropharynx: An oncologists perspective), 08 July 2021 (Talk: Ca oropharynx: Treatment and contouring guidelines), 28 Oct 2021 (Talk: Imaging in Ca larynx: Oncologists perspective).
		Wolters Kluwer Yearly Update. 19 Aug 2021/Webinar. (Talk: Role of targeted therapy in LAHNSCC).
		4 th Kerala State Triple O Conference organised by Azeezia College of Dental Sciences and Research. 25-27 Nov 2021/Webinar. (Talk: Non surgical management of salivary gland tumours).
		21 st Annual Conference of 'Foundation of Head and Neck Oncology'. 10-12 Dec 2021, RCC, Thiruvananthapuram/Webinar. (Debate: Nimozutumab plus chemoRT is the new standard).
		National Dental Conference organised by A.B. Shetty Memorial Institute of Dental Sciences, Manglore. 03 Feb 2022/Webinar. (Talk: Role of radiotherapy in oral cancer).

56	Kalasekhar VS	13 th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter). 06 Mar 2022, RCC, Thiruvananthapuram. (Faculty. Moderator: Paediatric Oncology Session).
		44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar: (Panelist: Challenges in abandonment of therapy in curable paediatric cancers).
57	Kannan S	41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. (Talk: Novel tumor suppressive role of miR-1237-3p in oral carcinoma).
58	Lakshmi S	41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. 02-05 Mar 2022/Webinar: (Delegate)
		2 nd International Online Flow Cytometry Course: Flow Cytometry and its Applications in Biomedical Sciences conducted by Trust for Education and Training in Cytometry (TETC). 01-04 Sep 2021/Webinar: (Delegate).
59	Lakshmi S, Hariharan S, Sreelekha TT	34 th Kerala Science Congress. 10-12 Feb 2022, Thiruvananthapuram/Webinar: (Delegates).
60	Madhu Muralee	NATCON-IASO Delhi. 30-31 Oct 2021, New Delhi/Webinar: (Talk: Neoadjuvant treatment in rectal cancer).
		ASICON 2021. 17-19 Dec 2021/Webinar: (Talk: Biology is king in oncology).
		MIDCON-IASO. March 2022, Shillong. (Moderator on panel discussion: Esophageal cancers).
61	Mahitha MS	National Webinar on Advances in Industrial Biotechnology. 03-04 Feb 2022. (Paper: The role of cytogenetics for the better pharmacological effect of targeted therapy in chronic myeloid leukemia patients).
62	Binitha R, Manjusha Nair, Prasanth VR, Kalasekhar VS, Tandra Harish Varma, Raghwesh Ranjan, Thirumala CR, Ajay Sankar, Nandakumar R, Sai Shiva G	PHOCON-2021: Paediatric Haematology Oncology National Conference. 10-11 Dec 2021/Webinar: (Delegates).
63	Manjusha Nair	IAP Presidential Action Plan 2022. 04 Feb 2022/Webinar: (Talk: Childhood cancer: an overview).
		IAP Academic Series 2022. 08 Feb 2022. (Chaired session: Paediatric palliative care: an introduction).
		13 th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter). 06 Mar 2022, RCC, Thiruvananthapuram. (Panelist: Paediatric Oncology session)
64	Manu Paul	8 th Annual Virtual Conference of the Indian Musculoskeletal Oncology Society (IMSOS 2022). 04-06 Mar 2022. (E-poster: Sacral resections for primary sacral tumour: an experience from a tertiary care cancer centre in India).
65	Mary Thomas	SOAPCCON-2021: The 3 rd Annual Conference of the Society of Onco-Anaesthesia and Perioperative Care (SOAPC). 25-26 Sep 2021/Webinar: (Talk: Role of regional anaesthesia in oncosurgery).
		12 th National Airway Conference (NAC) of All India Difficult Airway Association. 29 Oct 2021/Webinar: (Talk: Awake intubation: Techniques and troubleshooting workshop: blind nasal intubation).
		45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/Webinar: (Chaired Scientific session).
66	Neeraja P	4 th Virtual Conference on Cancer Science and Oncology. 27-28 Sep 2021. (Paper: Mini-Chromosome Maintenance (MCM) proteins in early lung cancer detection: a case study).
67	Noble T. Baby	34 th Kerala Science Congress. 10-12 Feb 2022, Thiruvananthapuram/Webinar: (Paper: Oral presentation: Evaluating the diagnostic potential of liquid biopsy by next generation sequencing in oral tongue carcinoma).

Conferences

68	Prasanth VR	IAP Kollam Academic Program: World Cancer Day. 08 Feb 2022/Webinar. (<i>Speaker: Paediatric cancers: When to suspect and how to approach</i>).
69	Preethi Sara George	International Webinar on Recent Trends in Statistical Theory & Applications. 29-June to 02 July 2021, Department of Statistics, University of Kerala. (<i>Talk: Spatial distribution of cancer incidence in south Kerala</i>). International Conference on Statistics for Twenty-first Century-2021. 15-19 Dec 2021, University of Kerala/Webinar. (<i>Talk: Cancer incidence spatial data in Thiruvananthapuram district, Kerala: Geospatial Artificial Intelligence (GeoAI) techniques</i>).
70	Preethi TR	17 th Annual meeting of British Association of Gynaecologic Pathologists. 10-11 June 2021/Webinar. (<i>Delegate</i>). 1 st ISGyP Annual Conference: A one-day conference on 'WHO 2020 and Beyond: Refinements in Diagnosis of Selected Female Genital Tumours'. 16 Oct 2021/Webinar. (<i>Delegate</i>). 27 th AIPNA ICP International CME in Pathology. 04-06 Feb 2022/Webinar. (<i>Delegate</i>).
71	Priyakumari T	44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar. (<i>Delegate</i>).
72	Priyakumari T, Manjusha Nair, Binitha R, Guruprasad CS, Prasanth VR, Kalasekhar VS, Tandra Harish Varma, Raghwesh Ranjan, Thirumala CR, Ajay Sankar, Nandakumar R	SIOP 2021: 53 rd Congress of the International Society of Paediatric Oncology. 21-24 Oct 2021, Mumbai/Webinar. (<i>Delegates</i>).
73	Priyakumari T	PHOCON-2021: Paediatric Haematology Oncology National Conference. 10-11 Dec 2021/Webinar. (<i>Faculty. Moderator for session: Relapsed refractory germ cell tumours</i>). IAP Academic Series 2022. 08 Feb 2022. (<i>Faculty. Speaker: Acute lymphoblastic leukaemia: What the paediatrician needs to know?</i>). 13 th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter). 06 Mar 2022, RCC, Thiruvananthapuram. (<i>Patron & Faculty. Panelist: Paediatric Oncology session</i>).
74	Priya Mary Jacob, Jayasudha AV, Simi CM	13 th Annual Conference-cum-Workshop of the Cytometry Society (TCS), India. 29- 30 Oct 2021/ Webinar. (<i>Delegates</i>).
75	Priya Mary Jacob	Full Flow Cytometry: A Better Way of Doing Flow Cytometry. 08 June 2021. (<i>Delegate</i>). Workshop on Lymphoma and Leukaemia Immunophenotyping. 26 Nov 2021, CMC Vellore/Webinar. (<i>Talk: Flow cytometry in CLPD- fundamentals, markers and their relevance</i>).
76	Rachel Cherian Koshy	ISA Midkon 2022. 26-27 Mar 2022/Webinar. (<i>Faculty for case presentation, PG Quest and CME</i>).
77	Raghukumar P, Saju B, Zhenia Gopalakrishnan, Sharika V. Menon, Sarin B	Association of Medical Physicists of India: 14 th Annual Conference of Northern Chapter: Emerging Challenges and New Frontiers in Medical Physics. 12 Mar 2022, Jodhpur. (<i>Delegates</i>).
78	Rajesh KR	An Insight into Technological Innovations in Diagnostics. 15 Dec 2021, Kochi. (<i>Delegate</i>).

79	Rema P	IFCPC India 2020ne: 17 th World Congress of International Federation of Colposcopy and Cervical Pathology. 01-05 July 2021, New Delhi/Webinar. (1. Panelist: One stop treatments: Challenges. 2. Oral paper: Feasibility of ERAS protocols in management of patients with gynaecological cancers during COVID. 3. Oral poster: Effectiveness and safety of thermal ablation in treating cervical intra epithelial neoplasia in a low resource setting.)
		AGOICON 2021: 28 th National Conference of Association of Gynaecologists of India. 12-14 Nov 2021. (Talk: 1. Frontline management of ovarian cancer. 2. ERAS in Gynaecology.)
		AOGIN-India 2021. 03-05 Dec 2021/Webinar. (Talk: Management of precancer cervix, vulva, vagina.)
80	Renu S, Sindhu Nair P	National CME on Pearls, Perils and Pitfalls in Bone and Soft Tissue tumours. 18-19 Sep 2021/Webinar. (Delegates).
81	Renu S, Sindhu P. Nair, Rari P. Mony, Neelima R	Recent updates in salivary gland tumors: Clinicopathological perspectives. 15 Feb 2022, SRM Medical College Hospitals and Research Centre, Chennai/Webinar. (Delegates).
82	Reshma PL	41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. (Paper: Crosslinked galactoxyloglucan selenium nanoparticles tagged with chemotherapeutic drug paclitaxel for colon cancer management.)
83	Roja S. Anand, Jijimol SK	Hospital Infection control Meet 2021. 04 Sep 2021, Thiruvananthapuram. (Delegates).
84	Rona Joseph P	7 th Edition of Year in Review Breast Cancer Conference. 10-15 Jan 2022, Mumbai/Webinar. (Delegate).
85	Sabaha Shabnam	45 th Annual State Conference of the ISA Kerala State: ISACON KERALA 2021. 11-12 Dec 2021/Webinar. (E-poster: Low oxygen saturation, a diagnosis of surprise for anaesthesiologist.)
86	Sagila SG	Webinar on Evolution of COVID-19 in India: Impact on Diagnosis, organised by FIND and supported by PATH and the Rockefeller Foundation. 11 June 2021/Webinar. (Delegate).
		HISICON-2021: Workshop on HISIEPAMS Activity on AMS: Preventing Surgical Site Infections & AMSP. 27 July 2021/Webinar. (Delegate).
		Virtual symposium on Sepsis Management: What has changed? Organised by Indian Association of Medical Microbiologists, Delhi Chapter. 13 Sep 2021/Webinar. (Delegate).
		National CME- CHET HICCON 2022 on Hospital Associated Infection: A Global Threat. 09 Mar 2022, Chettinad Hospital and Research Institute/Webinar. (Delegate).
87	Saheer N	NATCON-IASO. 30-31 Oct 2021, New Delhi/Webinar. (First place in quiz competition).
88	Saikumar S	COG Meet 2021. 17 June 2021. (Talk: Expanded safety efficacy on Check Mate 577 trial.)
		44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar. (Talk: Predictive and prognostic significance of serum CEA in metastatic breast cancer.)
		8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar. (Poster: Clinical profile and complications of patients with hyperleucocytosis.)
89	Sandeep TV	44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar. (Talk: Acute myeloid leukemia M6: A review of 10 cases from a single centre.)
		8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar. (Talk: Cardiotoxicity of 1 year of trastuzumab in HER2-positive (Her2+) breast cancer patients: A retrospective analysis from a tertiary care center in South India.)
90	Sangeetha K S	Training Programme on Speech and Swallowing. 21 Mar-02Apr 2022, TMH, Mumbai. (Delegate).
91	Sarin B	Conference on Radiation in Health Care (CRHC 2021). 26-27 Apr 2021, SMS Medical College and Hospitals, Jaipur. (Delegate).
92	Shaji Thomas	Indian Association of Surgical Oncology: Master class. 09 Sep 2021, RCC. (Master class: Carcinoma larynx).
		21 st Annual Conference of 'Foundation of Head and Neck Oncology'. 10-12 Dec 2021, RCC, Thiruvananthapuram/Webinar. (Faculty: Symposium on 'Reconstructive options in head & neck cancers).

Conferences

93	Shanaz S. Sharaf	4 th Virtual Conference on Cancer Science and Oncology. 27-28 Sep 2021/Webinar. (Paper: Prognostic role of immunohistochemical markers in triple negative breast cancer.).
94	Sheeja K	4 th Virtual Conference on Cancer Science and Oncology. 27-28 Sep 2021/Webinar. (Paper: NLRP3 inhibition prevents invasion and migration of melanoma cells.).
95	Sheela Rodriguez, Ajitha S	3 rd National workshop on Hospital Infection Control. 21-23 Mar 2022, JIPMER, Pondicherry. (Delegates).
96	Sherry Abraham	44 th Indian Cooperative Oncology Network Conference. 06, 13, 20 June 2021/Webinar. (Paper: Epithelioid sarcoma: a review of 20 cases from a single centre.).
		ESH 6 th Translational Research E-Conference on Lymphoid Malignancies. 14-17 Oct 2021. (Audio E-poster: Prognostic significance of Ki 67 in DLBCL.).
		TYSA ISMPO Oncology Zonal Round. 15 Jan 2022. (Talk: A study on the pattern and outcome of healthcare associated infections in patients with acute myeloid leukaemia.).
		8 th National Annual Conference: ISMPOCON 2022. 21-23 & 28-30 Jan 2022/Webinar. (Talk: A study on the pattern and outcome of healthcare associated infections in patients with acute myeloid leukaemia.).
		46 th Indian Cooperative Oncology Network (ICON) Conference. 24-25 Feb 2022. (Talk: Clinical Characteristics and treatment outcome of pregnancy associated breast cancer: Experience from a tertiary cancer centre in India.).
97	Sindhu Nair P	TAPCON: Tamil Nadu chapter of IAPM. 04-06 June 2021 /Webinar. (Poster: KMiT family translocation renal cell carcinoma: A report of two cases.).
		8 th Annual Virtual Conference of the Indian Musculoskeletal Oncology Society (IMSOS 2022). 04-06 Mar 2022. (Poster: An unusual clavicular lytic lesion: the mystery unveiled.).
98	Siva Ranjith J	NATCON-IASO. 30-31 Oct 2021, New Delhi/Webinar. (Expert Talk: Partial nephrectomy.).
99	Sreelekha R	An International Malayalee Nurses Assembly Platform. 28 Oct 2021/Webinar. (Talk: Breast cancer awareness programme.).
		National Association of Indian Nurses of America: Resilient option Training. 13 Nov 2021/ Webinar. (Delegate).
100	Sreelekshmi PR	ISAMIDKON 2022. 26-27 Mar 2022/Webinar. (Case presentation on diabetic foot.).
101	Suchetha S	Basic Course in Biomedical Research. Sep 2021/Online. (Trainee).
102	Sudha P, Ancy George	Basics in Paediatric Palliative Care. 24 July-28 Aug 2021, TMH, Mumbai /Webinar. (Delegates).
103	Sudha P	National Fellowship in Palliative Medicine (1 year). Sep 2020-Aug 2021. (Course completed).
		Education in Cancer & Acute pain-ECAP 2021. 12 June 2021, TMH, Mumbai/Webinar. (Delegate).
		Webinar on Cancer Rehabilitation 2021. 26 Sep & 03 Oct 2021, TMH, Mumbai/Webinar. (Delegate).
		IAPCON 2022: 29 th International Conference of Indian Association of Palliative Care. 11-13 Feb 2022/ Webinar. (Delegate).
104	Sulfath TP	6 th Annual International Conference of the Board of Genetic Counseling India on Genomics and Genetic Counseling: Value in Health Care. 02-04 July 2021/Webinar. (Delegate).
		34 th Kerala Science Congress. 10-12 Feb 2022, Thiruvananthapuram/Webinar. (Poster: Yes associated protein-coordinately modulate TNBC cellular fate via lyn-dependent EGFR activation.).
		41 st Annual Conference of the Indian Association for Cancer Research. 02-05 Mar 2022, Amity University, Noida. 02-05 Mar 2022/Webinar. (Paper: Yes-associated protein transduction impelled Triple-negative breast cancer aggressiveness orchestrated by Lyn-dependent EGFR activity in PDXCs model.).

105	Sumod Mathew Koshy	Hologic Webinar on 'Role of Shear Wave Elastography in Breast Imaging'. 11 Aug 2021. (<i>Delegate</i>).
		Hologic Webinar on 'Breast Tomosynthesis for Cancer diagnosis & Intervention: A case-based review'. 06 Oct 2021. (<i>Delegate</i>).
		Hologic Webinar on 'Vacuum Assisted Breast Biopsy'. 01 Dec 2021. (<i>Delegate</i>).
106	Syama HP	Paper Presentation competition as a part of International Biotechnology conclave 'SymBiot Celebrating Biotech'. 14-15 Dec 2021, College of Agriculture, Thiruvananthapuram/Webinar: (<i>Paper: Wound healing potential of cream containing silver nanoparticle coated with natural polysaccharide in Balb/C mice</i>).
107	Swapna R Nath, Sagila SG	Clinico Mycology Update. 21 Oct 2021, SRMCRI, Chennai/ Webinar: (<i>Delegates</i>).
		Practical surveillance to improve IPC practices. 16 Sep 2021, KMC, Manipal/Webinar: (<i>Delegates</i>).
108	Swapna R. Nath	XVII Annual Conference of Hospital Infection Society of India. 29-31 July 2021/Webinar: (<i>Delegate</i>).
		Diagnostic Stewardship: A first step towards effective patient management. 09 Oct 2021, KMC, Mangalore/Webinar: (<i>Delegate</i>).
109	Tandra Harish Varma, Raghvesh Ranjan, Thirumala CR, Ajay Sankar, Nandakumar R, Sai Shiva G	13 th Kerala State PHOCON: Paediatric Haematology Oncology Conference of Indian Association of Paediatrics (Kerala chapter). 06 Mar 2022, RCC, Thiruvananthapuram. (<i>Delegates</i>).
110	Venugopal A	National Airway Conference. 29-31 Oct 2021, AIIMS, Jodhpur/Webinar: (<i>Delegate</i>).
		ISACON 2021: Annual National Conference of ISA. 25-28 Nov 2021, Ahmedabad. (<i>Chaired session: Sterilisation of anaesthesia equipments and hospital infection control policy</i>).
111	Venugopal M	IRIA: A year-long teaching program on every wednesday and Saturday. (<i>Academic chairman, started in January 2022</i>).
112	Viji S.Pillai, Bhagyalakshmi R, Frenny Ann Philip, Divya V. Gladston, Ambili	AORA National Conference 2021. 16-18 Apr 2021/Webinar: (<i>Delegates</i>).
113	Wag Mira S	20 th Annual Conference of the Association of Surgeons of India Jharkhand chapter (JASICON 2021). 20 Nov 2021/Webinar: (<i>Talk: Abdomino-perineal excision: transition from a traditional surgery</i>).
		NATCON-IASO. 30-31 Oct 2021, New Delhi/Webinar: (<i>Delegate</i>).
		ASICON 2021. 17-19 Dec 2021/Webinar: (<i>Delegate</i>).

RESEARCH PROJECTS

EXTRAMURAL

Sl. No.	Principal Investigator. Project Title. Funded by. (Status).
BREAST	
1	Rajeev KR.ADD-ASPIRIN:A phase III, double blind, placebo-controlled, randomised trial assessing the effects of aspirin on disease recurrence and survival after primary therapy in common non-metastatic solid tumours. <i>MRC, UK Cancer Research, NHS, NCRI and TMH, Mumbai.</i> (Ongoing). <i>50 Patients registered, 42 patients randomized.</i>
2	Thara Somanathan. Randomised controlled evaluation of clinical early detection in the control of breast cancer in low-and medium- resource settings. <i>International Agency for Research on Cancer, Lyon, France.</i> (Ongoing).
3	Beela Sara Mathew.To establish a ready network of clinical trial units across the National Cancer Grid to promote multi-centric collaborative research in the field of drug and device development. <i>Biopharma Mission, Dept. of Biotechnology, Govt. of India.</i> (Ongoing).
CHEST & GASTRO-INTESTINAL	
4	Sajeed A. Aspirin for Dukes C and high risk Dukes B colorectal cancers: An international, multi-centre, double blind, randomised placebo controlled Phase III trial. <i>Singapore Clinical Research Institute.</i> (Ongoing). <i>23 patients screened and 18 patients randomized.</i>
5	Chandramohan K. Molecular and genetic analysis of sub-type specific alterations in human liposarcomas. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Ongoing). <i>Looking for genetic subtypes of liposarcoma.</i>
GYNAEC & GENITO-URINARY	
6	Lakshmi Haridas K. Prognostic significance of p53 mutation in metastatic prostate cancer. <i>ICON.</i> (Ongoing).
HEAD & NECK	
7	Bipin T.Varghese. Development of indigenous voice prosthesis for rehabilitation of laryngectomies and its clinical evaluation. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Ongoing). <i>Developed few novel valve designs for voice prosthesis of which one is filed for patent. Developed 3 anterograde and 1 retrograde inserter mechanism.</i>
8	Rejnishkumar R. Biomarkers of oral cancer risk prediction. <i>Department of Biotechnology, Govt. of India.</i> (Ongoing).
CANCER EPIDEMIOLOGY	
9	Rekha A. Nair: Comparative study of genetic, clinical and epidemiological factors of breast cancer in Indian population. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing). <i>It is a Multi centric Epidemiological study to evaluate the risk factors and genomic basis of breast cancer in India with the specific objective to determine Life-style, clinical, Hormonal and other factors associated with breast cancer & to identify the mutational landscape of breast cancer (exome & transcriptome with validation).</i>
10	Aleyamma Mathew. Pattern of care and survival studies in cancers of cervix, female breast and head and neck. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing). <i>Hospital based cancer survival rates are used to evaluate the care provided in the hospital and it is named as, Pattern of Care and Survival Studies (POCSS). Systematic data abstraction on patterns of care and survival in cancers of the uterine cervix, breast and head and neck cancer patients reporting to the RCC has been started since 2006 in collaboration with the NCRP of ICMR and expanded to obtain survival of ovarian cancer by the NCRP in 2017. On an average 30,000 patient data is abstracted & follow up information is updated regularly.</i>
11	Aleyamma Mathew. Hospital based cancer registry. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing). <i>HBCR of RCC, Thiruvananthapuram is in its 39th year under the network of National Cancer Registry Programme (NCRP), Indian Council of Medical Research (ICMR), Govt. of India.</i>

12	<p>Aleyamma Mathew. Population based cancer survival studies (PBCSS). <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).</p> <p><i>Population based cancer survival (PBCS) provides an idea of the effectiveness of the overall cancer control strategy in the registry area. It gives a baseline on impact of cancer and its treatment on the population and help plan health services facilities for improvement of survival. Population Based Cancer Survival Study on Cancers of the Breast, Cervix, Head & Neck, started in the division in 2017 in collaboration with NCRP of ICMR.</i></p>
13	<p>Aleyamma Mathew. Population based cancer registry, Thiruvananthapuram. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).</p> <p><i>Cancer registry covering the Thiruvananthapuram Taluk and Kollam has been included under the network of national cancer registry programme (NCRP) of Indian council of medical research (ICMR) since 2006. Thiruvananthapuram Taluk registry has been expanded as Thiruvananthapuram District registry and has been included it under the network of NCRP since 2012. Pathanamthitta and Alapuzha districts have been under this network since 2018. Kottayam district is also covered since 2019.</i></p>
14	<p>Aleyamma Mathew. Reasons for diagnostic delay, treatment refusal/incompleteness, and loss to follow-up: A Hospital-based cancer registry study in Trivandrum, India. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Ongoing).</p> <p><i>The objective of this study is to assess the reasons for Treatment Refusal/Incompleteness and Loss to Follow-up using the hospital-Based Cancer Registry, RCC data of patients reported during 2014-2015.</i></p>
15	<p>Preethi Sara George & Aleyamma Mathew. Assessment of cancer density maps for cancer control in Trivandrum, South India. <i>New India Assurance Company LTD.</i> (Completed).</p> <p><i>The objective of this study is to obtain density maps of cancer patients by using Global Positioning System (GPS) and examine the relationship between cancer incidences and its land cover as well as elevation of Trivandrum district. The company donated a 5-seater vehicle and the GPS systems for doing the work. This kind of spatial analysis by utilising sophisticated mapping techniques and cancer registry data was first of its kind in India.</i></p>
16	<p>Preethi Sara George. Artificial neural network model based on geographical information system for predicting spatial distribution of cancer incidence in South Kerala. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).</p> <p><i>The objective of this study is to obtain density maps of cancer patients by using Global Positioning System (GPS) and examine the relationship between cancer incidences and its land cover as well as elevation of Trivandrum district. This kind of spatial analysis by utilising sophisticated mapping techniques and cancer registry data was first of its kind in India.</i></p>
17	<p>Preethi Sara George. Artificial neural network model based on geographical information system for predicting spatial distribution of cancer mortality in South Kerala. <i>Department of Health Research, Govt. of India.</i> (Ongoing).</p> <p><i>Aim of the present study is to quantify the magnitude and geographical distribution of disease burden in terms of mortality attributable to different type of risk factors by using the integration of the Geographic Information System (GIS) and advanced tools of machine learning techniques Artificial Neural Networks (ANN) for analysing and modelling for predicting the cluster of the cancer mortality in South Kerala.</i></p>
18	<p>Kalavathy MC. Pap-smear screening programme among women with gynecological problems reported in a hospital. <i>Thiruvananthapuram Corporation & Panchayats.</i> (Completed).</p>
19	<p>Jagathnath Krishna KM. Joint frailty modelling of longitudinal time-to-event data in cancer survival. <i>Department of Health Research, Govt. of India.</i> (Ongoing).</p> <p><i>The project aimed to model the multiple time to event outcomes simultaneously using joint modeling approach. In addition to model the unobserved random heterogeneity factor using frailty models. Currently the data abstraction to identify the factors and nature of the multiple events has been done. Further follow-up updation is going on. Algorithm has been developed to estimate the risk for survival.</i></p>
CANCER RESEARCH	
20	<p>Kannan S. Utilisation of salivary metabolites in prognosis and diagnosis of oral and tongue cancer. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).</p> <p><i>Oral cancer is the one of the main health issue in India, most of the cases were diagnosed comparatively in late stage and that resulted in low survival. The initial phase of the study identifies the signature metabolites from the untargeted metabolomics to formulate the feasible biomarker. The upregulated metabolites were selected from the differentially expressed metabolites with the help of statistical analysis for further validation. The validation analysis indicating that the results from the first phase are reliable and could be taken for the next phases of formulation of the biomarker. This study validated the presence of the feasible metabolites that can be used to formulate as biomarkers for oral tongue cancers. These finding leading towards to a biomarker(s) for early diagnosis of oral tongue cancer, which is, more reliable, cost effective and non-invasive.</i></p>

Research Projects

21	<p>Sujathan K. Nano biosensors and microfluidics for health care. <i>Council for Scientific and Industrial Research, Govt. of India.</i> (Completed).</p> <p><i>A portable hand-held Raman spectroscope has been developed by the CSIR NIIST for the multiplex detection of breast and lung cancer biomarkers. Validation of the system using tissue samples is on progress.</i></p>
22	<p>Sujathan K. Development of a low cost automated screening system for cervical cancer (Cervi-SCAN-II). <i>Ministry of Electronics and Information Technology & Dept. of Health Research.</i> (Completed).</p> <p><i>Computerised Pap smear screening system developed in collaboration with CDAC, Trivandrum is being validated in a multi-centric way.</i></p>
23	<p>Lakshmi S. Comparative study of genetic, clinical and epidemiological risk factors of breast cancer in Indian population. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).</p> <p><i>Aim of this project is to evaluate the risk factors and genomic basis of breast cancer in India. Exome sequencing data was analysed for identifying somatic mutations. Analysis revealed the occurrence of missense mutations at highest level followed by In- frame insertions and Frame- shift deletions. From the somatic mutation analysis of 85 samples; TTN, TPP53, PZP, MUC4, MUC16, OBSCN, PKD1, PIK3CA, DNAH11 are found to be the top 10 genes. Validation of a set of genes (TP53, PIK3CA, ACTN1, and KTN1) has been initiated.</i></p>
24	<p>Lakshmi S. Global high-throughput methylome and transcriptome profiling for the identification of novel therapeutic targets in TNBC and experimental validation. <i>Dept. of Biotechnology, Govt. of India.</i> (Completed).</p> <p><i>Based on the data-mining, YAP/TAZ belongs to Hippo-pathway of cell signaling that is known to play a key role in diverse aspects of tumorigenesis. From the TCGA-BRCA data set, it was observed that with high expression of YAP1, hippo pathway transducer, the overall survival rates of the breast cancer patients declined. For the functional validation of YAP in TNBC cells, the expression of the gene was inhibited using chemicals and silencing approaches. Both pharmacological and transient inhibition of YAP in MDA-MB-231 cell line inhibited proliferation and invasion potential of TNBC cell lines. A decrease in the wound closure percentage was observed in MDA-MB-231 breast cancer cells when YAP is pharmacologically inhibited compared to control groups.</i></p>
25	<p>Hariharan S. Clinical relevance of molecular and gene expression signatures in AML patients with normal cytogenetics for a prognostically prioritised molecular classification. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Completed).</p> <p><i>Two to three ml peripheral blood / bone marrow samples were collected from 100 AML patients after obtaining a written informed consent. Personal details and other epidemiological details related to the patient and disease were also collected and recorded. Cytogenetic studies were carried out in all these samples, FISH analysis was carried out to check the recurrent abnormalities. Identified 53 patients with Normal cytogenetics (AML NC). Samples with Normal Cytogenetics were studied for molecular parameters. DNA isolated from the AML NC patients and carried out molecular studies. The important molecular markers associated with the treatment response in AML are, FLT3, NPM1, IDH1, IDH2, DNMT3, ASXL1, CEBPA, TET2, RUNX1, E2H2, WT1, BAALC, ERG, MNI, AFI, EVI.</i></p>
26	<p>Hariharan S. Development of indigenous software for karyotyping and chromosome abnormality detection. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Completed).</p>
27	<p>Hariharan S. Digitally connected tribal colonies: Validation of automated screening system for cervical and oral cancer using computerised image analysis. <i>MEITY, Govt. of India.</i> (Ongoing).</p> <p><i>RCC and C-DAC have jointly developed an automated cervical cancer screening system (Cervi SCAN), which is to be validated. The Aim of the project is to see whether the software developed can be utilised for both cervical and oral cancer screening. For the Validation of the screening system we need more number of samples from cervix and oral cavity. So we are planning to collect more number of samples from RCC community oncology clinic, peripheral centres of RCC, early detection camps and samples from the tribal people visiting in the e-Health platform at the three Disease Screening Hubs in Wayanad district of Kerala State. Along with Cervical cancer screening, oral cancer screening and HPV analysis also included with this programme.</i></p>

28	<p>Rekha A. Nair (Dr:Hariharaan S/Co-Investigator). AI-driven large-scale screening for oral and oropharyngeal cancer: <i>DBT, Govt. of India</i>. (Ongoing).</p> <p><i>The objectives of the project are to develop an efficient and cost effective AI based Oral Cancer Screening system, to evaluate the significance of oral brush biopsy in the early detection oral cancer and to evaluate the possibility of image analysis for the identification of HPV. Subjects for oral examination will be identified from the early cancer detection clinics and camps conducted by the community oncology division of RCC and clinics. Monolayered smear from the brush biopsy sample will be prepared by mega funnel technique and smears will be stained by the classical Pap stain method. Indigenised equipment, developed as part of previous collaborative projects with C-DAC(T), available with RCC-T such as cyto-centrifuge, and automated specimen stainer will be used for automating smear preparation. All smears will be subjected to microscopic analysis to find out cytological abnormalities. Smears shall be digitised using DigiSmear, indigenised slide digitiser developed as part of previous collaborative project with C-DAC(T). Digitised smear will be annotated by expert cytotechnologists. Genomic DNA will be extracted from the remaining cells after preparing monolayered smear and subjected for HPV analysis using a PCR based technique. All the samples positive in DNA test will be compared with presence of morphological features like koilocytosis, nuclear smudging, dyskeratosis, parakeratosis, multinucleation, attempted pearl formation etc.</i></p>
29	<p>Sreelekha TT. Preparation and biological evaluation of galactoxyloglucan based scaffolds for stem cell differentiation and tumour reduction. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala</i>. (Completed).</p> <p><i>The present study, three different scaffolds with various architectures were prepared using polysaccharide PST001 and biodegradation and biocompatibility were demonstrated by in vitro and in vivo systems. Three dimensional (3D) cell cultures create an artificial 3D environment where cells grow and interact with all dimensions. Scaffolds were surface functionalised with the drug doxorubicin and implanted locally in to the tumor. Excellent local tumor reduction was obtained for Dox loaded groups. PST001 based scaffolds have the potential to differentiate Mesenchymal Stem Cell (MSC) different lineages and could be used in reconstructive surgery and wound healing without any off-target effects.</i></p>
30	<p>Sreelekha TT. Development of antimicrobial porous polymeric bandage for skin tissue regeneration. <i>Board of Research in Nuclear Sciences, Govt. of India</i>. (Completed).</p> <p><i>In-house synthesised biogenic metal nanoparticles were decorated onto various polysaccharide scaffolds to render them with antibacterial potential which was well observed in the murine models. The surface functionalised scaffolds presented appealing wound healing capacity as compared with the commercially available wound healing materials, which were employed as the positive control for the study. The healing response was in the order of Gamma radiated and Cryo-gelation Copper and Silver followed by porous and electrospun scaffolds in higher to lower order. Thus it was well described that the benefits of these custom-designed scaffolds were tangible and enormously consequential in terms of wound healing capacity, antimicrobial features, cost-effectiveness and biocompatibility.</i></p>
31	<p>Sreelekha TT. Engineering intelligent theranostic nanocarrier for targeted therapy and diagnosis of cancer: <i>Science and Engineering Research Board, Dept. of Science and Technology, Govt. of India</i>. (Completed).</p> <p><i>Six different nano-constructs namely, DOX-PST-AuNSs, DOX@PST-BSA AuNPs, We have synthesised various nano-constructs for targeted drug delivery and imaging using three polysaccharides from natural products. Excellent tumor reduction was observed in DLA tumor-bearing mice with and without laser irradiation and tumor volume reduction was evident in the antibody-conjugated nanoparticles. PSP-Y-AuNCs presented versatile imaging applications in cancer. We have designed a targeted theranostic nanovehicle using manganese-doped mesoporous silica nanoparticle and was chemically conjugated with folic acid and hyaluronic acid as a dual-targeting entity to promote folate receptor mediated cancer cell and CD44 mediated CSC uptake, respectively. This study highlights a modest and low-cost nano-drug delivery system and optical imaging applications in humans.</i></p>
32	<p>Guruvayoorappan C. Deciphering the mechanism behind the action of black tea and its theaflavins (Theaflavin, Theaflavin-3-gallate, Theaflavin-3'-gallate and Theaflavin-3'3' digallate) on thyroid carcinoma cell lines and mice models. <i>Indian Council for Medical Research, Govt. of India</i>. (Completed).</p> <p><i>The effect of theaflavins (Theaflavin, Theaflavin-3-gallate, Theaflavin-3'-gallate and Theaflavin-3'3' digallate) on mitigating thyroid carcinoma (ATC, PTC and FTC) will be studied in vivo.</i></p>
33	<p>Guruvayoorappan C. Targeting inflammatory mediators at the transcriptional level and protection of colon integrity during ulcerative colitis by umbelliferone. <i>Kerala Biotechnology Commission, Govt. of Kerala</i>. (Ongoing).</p> <p><i>The study showed that umbelliferone treatment could significantly inhibit the progression of ulcerative colitis in experimental animals and could regulate the expression of proinflammatory cytokines. This was confirmed by histopathology and immunohistochemistry studies.</i></p>

Research Projects

CANCER RESEARCH (Post-doctoral projects)	
34	<p>Sheeja K. (Mentor: Dr. Lakshmi S). Role of NOD-Like Receptor Protein 3 (NLRP3) on metastasis and angiogenesis of human melanoma. <i>Dept. of Science & Technology, Govt. of India.</i> (Ongoing).</p> <p><i>The main objective of the study is to analyse the role of NLRP3 protein on metastasis and angiogenesis of human melanoma. In the initial phase of the project, protein-protein interaction (PPI) network analysis was carried out using various bioinformatics software. Two distinct tools such as The Biological General Repository for Interaction Datasets (BioGRID) and Search Tool for the Retrieval of Interacting Genes/Proteins (STRING) DB were considered for the analysis. The results obtained from the BioGRID human interactome database of NLRP3 shows a total of 77 physical interactions for NLRP3 among other proteins. Similarly, analysis by STRING showed 61 seed genes along with their interaction partners. The validation of these observations in in vitro system using human melanoma cell lines is in progress.</i></p>
35	<p>Ashalekshmi (Mentor: Dr. Hariharan S). Nrf2 and p53: Potential biomarkers to foretell progression, prognosis and therapy response of abnormal cervical lesions: A promising approach to fortify early-stage detection of cervical cancer detection. <i>ICMR DHR, Govt. of India.</i> (Ongoing).</p> <p><i>Most of the Cervical Cancers (CC) can be prevented by early detection of abnormal cervical cell changes years before cancer develops. The launch of Pap smear for routine screening has moderated the prevalence of CC in developed countries. But, in developing countries owing to the meagerness in this aspect, approx. 80% of new cases and deaths are reported. ROS stress and DNA damage are considered to be important in cervical tumorigenesis. ROS and high-risk HPV act synergistically in tumor onset. HPV is said to be boosting DNA damage in cell by fostering ROS via down regulating antioxidant molecules like Nrf2. Nrf2, a transcription factor in cellular defense against oxidative stress, associated with therapy resistance and tumor growth and are distressed by HPV in head and neck cancers offer benefit as prognostic and predictive factor. The complete molecular mechanism behind this is unclear and studies are inevitable due to its growing social impact. The Nrf2 and p53 expression level analysis along with regular cytological screening and HPV testing will help us in further sub-grouping patients to high- and low- tumorigenic risk categories; therapy good-responder and bad-responder groups additionally providing clues for specified molecular typing, therapy implementation and survival. The development of a predictive scoring system using a combination of HPV status, Nrf2 pathway and p53 to stratify CIN to different grades based on menace of progression, prognosis and therapy riposte will assist in guiding future diagnosis and treatment approaches in patients.</i></p>
36	<p>Vineetha M. (Mentor: Dr. Hariharan S). Cytogenetic and molecular studies in adult acute lymphoblastic leukaemia. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Completed).</p> <p><i>Most cases of ALL demonstrate an abnormal karyotype, either in chromosome number (ploidy) or as structural changes such as translocations, inversions, or deletions but were detected in only half of ALL patients in the first banding studies. The identification of cytogenetic and molecular abnormalities offers prognostic information regarding the markers for therapy and targets for drug development, and pathobiologic insights In ALL patients. The main objectives of the study are To identify the cytogenetic and molecular abnormalities associated with ALL targeting mutations in IKZF1, NOTCH-1, CRLF2, Ras signaling and Janus kinases, to evaluate the effect of combination of imatinib and dasatinib through in vitro cell culture study (MOLT-4) and also in the primary cells isolated from patient samples.</i></p>
37	<p>Syama HP (Mentor: Dr. T.T. Sreelekha). Polysaccharide silver nanoparticle doped materials: In vitro and in vivo investigations for wound healing applications. <i>Department of Health Research, Govt. of India.</i> (Ongoing).</p> <p><i>Doped silver nanoparticle (SNP@PSP) and the stability of the formulated cream were also checked by placing it at different environmental conditions. No change was observed in the organoleptic and physicochemical properties. The results showed that these formulations were effective against S. aureus and C. albicans which were the key organisms for a prolonged wound healing period. In-vivo experiments also confirmed the wound healing potential of SNP@PSP cream and can be used as an antimicrobial wound dressing. SNP@PSP scaffolds were also formulated and found to have antimicrobial activity.</i></p>
38	<p>Reshma PL (Mentor: Dr. T.T. Sreelekha). Polysaccharide selenium nanoparticle loaded with paclitaxel for oral administration in gastrointestinal cancer. <i>Department of Health Research, Govt. of India.</i> (Ongoing).</p> <p><i>We have developed a polysaccharide (PST001) coated Selenium nanoparticle conjugated with Paclitaxel (PTX) for oral and intravenous delivery to treat gastric cancer. The PST-SNP and PST-SNP@PTX nanoparticles were prepared and characterised by UV-VIS, FTIR spectroscopy, SEM, TEM and HPLC. The cytotoxicity of the particle in colon cancer cell lines was determined by MTT assay. Live dead assay, annexin V FITC assay, and western blotting of apoptotic proteins was performed and PST-SNP@PTX was more efficient than PTX in inducing apoptotic cell death. The toxicity profiling on Balb/c mice was performed and the nanoparticles exhibit very little systemic toxicity and very few side effects in-vivo.</i></p>

COMMUNITY ONCOLOGY	
39	Jayakrishnan R. Cancer prevention and control among the tribal population of Kerala State. <i>Kerala State Tribal Development Department, Government of Kerala.</i> (Completed).
NATURAL BACKGROUND RADIATION CANCER REGISTRY	
40	Rekha A. Nair: India-Japan co-operative research programmes on health effects of natural radiation in Karunagappally, Kerala. <i>Health Research Foundation, Japan.</i> (Completed).
41	Rekha A. Nair: District Cancer Registry. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).
42	Rekha A. Nair: Population based survival studies of head and neck, breast & cervix cancers in Kollam District, Kerala. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing).
43	Jayalekshmi P. Cancer incidence and mortality studies in HBRA, Karunagappally. <i>Health Research Foundation, Japan.</i> (Completed).
44	Sreekumar A. Prevalence of cataract in HBRA, Karunagappally. <i>Health Research Foundation, Japan.</i> (Completed).
45	Sreekumar A. Prevalence of atherosclerosis in HBRA, Karunagappally. <i>Health Research Foundation, Japan.</i> (Completed).
46	Hariharan S. Cytogenetic studies on the effects of chronic low level radiation in the residents of high background radiation areas (HBRA) in Kerala, India. <i>Health Research Foundation, Japan.</i> (Completed).
RADIATION PHYSICS	
47	Thayal Singh Elias. Design and development of indigenous integrated brachytherapy simulator for cancer treatment. <i>Dept. of Science and Technology, Govt. of India.</i> (Completed).
48	Shaiju VS. Design and fabrication of a head phantom for dosimetric verification of radiotherapy treatment plans. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Completed). <i>Validation of indigenously designed and developed head phantom with the existing commercial phantom for performing patient specific quality assurance (PSQA) in radiotherapy. Molding of the indigenous polymerbased phantom material and analyzing its compatibility with human tissue under computer tomography.</i>

PHARMA/INDUSTRY SPONSORED

Sl. No.	Principal Investigator. Project Title. Funded by. (Status)
BREAST	
1	Beela Sarah Mathew. ALTTO (Adjuvant Lapatinib and/or Trastuzumab Treatment Optimisation) study. A randomised, multi-centre, open-label, phase III study of adjuvant lapatinib, trastuzumab, their sequence and their combination in patients with HER2/ErbB2 positive primary breast cancer. <i>Glaxo Smith Kline.</i> (Completed).
2	Anoop TM. A randomised, open-label, phase III study of abemaciclib combined with standard adjuvant endocrine therapy versus standard adjuvant endocrine therapy alone in patients with high risk, node positive, early stage, hormone receptor positive, human epidermal receptor 2 negative, breast cancer: I3Y-MC-JPCF. <i>Eli Lilly.</i> (Ongoing).
3	Anoop TM. A Single-arm Phase IV study of abemaciclib a CDK 4 and CDK6 inhibitor; in combination with endocrine therapy (Anastrozole / Letrozole, Fulvestrant) in participants with hormone receptor positive, human epidermal growth factor receptor 2 negative locally advanced and/or metastatic breast cancer in India. <i>Eli Lilly.</i> (Ongoing).
4	Anoop TM. A multicentre, randomised, double blind, parallel, global phase III study to assess the efficacy and safety of BP01 (Bevacizumab) when compared to Avastin®-EU in combination with carboplatin and paclitaxel during induction phase and bevacizumab alone during the maintenance phase in patients with newly diagnosed or recurrent stage IIIb/ IV non-squamous (ns) non-small cell lung cancer (NSCLC). <i>AXIS.</i> (Ongoing).
5	Rona Joseph P. A global, multicenter, three arms, open-label randomised study to evaluate the efficacy and safety of Nanosomal Docetaxel Lipid Suspension compared to Tax-otere® (Docetaxel Injection Concentrate) in triple-negative breast cancer patients with locally advanced or metastatic breast cancer after failure to prior chemotherapy. <i>INTAS.</i> (Ongoing).

Research Projects

CHEST & GASTRO-INTESTINAL	
6	Roshni S. A randomized, double-blind, parallel group, equivalence, multicenter phase III trial to compare the efficacy, safety, pharmacokinetics and immunogenicity of HD204 to Avastin® in patients with metastatic or recurrent non-squamous non-small cell lung cancer. Astra Zeneca . (Completed).
7	Arun Sankar. A prospective, multicenter, randomized, double blind, phase III study to compare the efficacy and safety of biosimilar bevacizumab of Enzene Biosciences Ltd. versus innovator bevacizumab both in combination with CAPEOX in patients with metastatic colorectal cancer. Enzene Biosciences Ltd. (Ongoing). 8 patients screened, 5 patients randomized.
GYNAEC & GENITO-URINARY	
8	Francis V. James. A single arm, multicentric, open label, efficacy and safety study of Docetaxel Lipid Suspension for Injection of Intas Pharmaceuticals Limited, India in patients with metastatic castration resistant prostate cancer. Lambda Therapeutic Research Limited . (Ongoing. Stopped recruiting).
9	Francis V. James. A Phase III Double-Blind, Randomised, Placebo-Controlled Study Assessing the Efficacy and Safety of Capivasertib + Abiraterone Versus Placebo + Abiraterone as Treatment for Patients with De Novo Metastatic Hormone-Sensitive Prostate Cancer (mHSPC) Characterised by PTEN deficiency (CAPtello-281). Astra Zeneca . (Ongoing).
10	Francis V. James. A randomized, double-blind, placebo-controlled Phase 3 study of darolutamide in addition to androgen deprivation therapy (ADT) versus placebo plus ADT in men with metastatic hormone-sensitive prostate cancer (mHSPC). Bayer Pharmaceuticals . (Ongoing).
11	Aswin Kumar. Multicentre, randomised, open label, active-controlled, 2 parallel groups, phase III study to compare efficacy and safety masitinib at 7.5 mg/kg/day to dacarbazine in the treatment of patients with non resectable or metastatic stage 3 or 4 melanoma carrying a mutation in the juxta membrane domain of c-kit. AB Sciences . (Ongoing).
12	Aswin Kumar. A phase II double blind, placebo-controlled, multicentre clinical trial comparing chemoimmunotherapy (Paclitaxel-Carboplatin-Oregovomab) versus chemotherapy (Paclitaxel-Carboplatin-Placebo) as neoadjuvant therapy in patients with advanced epithelial ovarian, fallopian tube or peritoneal carcinoma. OncoQuest Pharmaceuticals Inc. (Ongoing).
13	Lakshmi Haridas K. A Phase IV Study of nivolumab in combination with ipilimumab in patients with previously untreated advanced renal cell carcinoma and intermediate-or poor-risk factors conducted in India. Bristol Myers Squibb . (Ongoing).
HAEMATOLOGICAL, LYMPHORETICULAR, BONE & SOFT TISSUE	
14	Geetha N. A phase II study of dasatinib therapy in children and adolescents with newly diagnosed chronic phase chronic myelogenous leukaemia or with Ph+ leukaemias resistant or intolerant to imatinib. Bristol Myers Squibb . (Ongoing).
15	Sreejith Nair. A randomised, controlled, double-blind phase III trial to compare the efficacy, safety and pharmacokinetics of GP2013 plus cyclophosphamide, vincristine and prednisone vs. MabThera® plus cyclophosphamide, vincristine, prednisone, followed by GP2013 or MabThera® maintenance therapy in patients with previously untreated, advanced stage follicular lymphoma. Novartis . (Completed).
HEAD & NECK	
16	Rejnish Kumar R. A phase III, open label, randomised, multi-centre study of the effects of leukocyte interleukin injection [Multikine] plus standard of care (surgery + radiotherapy or surgery + concurrent chemoradiotherapy) in subjects with advanced primary squamous cell carcinoma of oral cavity/soft palate versus standard of care only. Cell Science . (Completed).
17	Rejnish Kumar R. A prospective, multicentre, randomised, double blind, parallel group study to compare the efficacy and safety of biosimilar cetuximab Vs. innovator cetuximab in combination with platinum-based chemotherapy in patients with recurrent locoregional or metastatic squamous cell carcinoma of head and neck. Alkem Laboratories Ltd. (Completed).
18	Rejnish Kumar R. Prospective single arm post marketing phase IV study to assess the safety and efficacy of lenvatinib in subjects with locally recurrent or metastatic, progressive, radioiodine refractory differentiated thyroid cancer. EISAI Pharmaceuticals India Pvt. Ltd. (Ongoing).
19	Rejnish Kumar R. A multicenter, randomised, open-label, phase III trial comparing selpercatinib to physician's choice of cabozantinib or vandetanib in patients with progressive, advanced, kinase inhibitor naive, RET-Mutant medullary thyroid cancer (LIBRETTO-531) Project: J2G-MC-JZJB. Eli Lilly . (Ongoing).

PATHOLOGY	
20	Priya Mary Jacob. Application of deep learning in computer aided grading of follicular lymphomas: A proof of concept project. <i>Advanced Radiology And Medical Innovations (ARAMIS)</i> . (Ongoing).
RADIODIAGNOSIS	
21	Venugopal M. Thermolytix in breast screening. <i>Niramai, Bangalore</i> . (Ongoing). <i>Artificial intelligence incorporated in thermographic imaging is Thermolytix. It's efficacy in breast screening is evaluated, making use of mammogram, USG and histopathology.</i>

IN-HOUSE PROJECTS

Sl. No.	Principal Investigator: Project Title. (Status)
ANAESTHESIOLOGY	
1	Rachel Cherian Koshy. Predictive model for difficult intubation using computed tomographic and clinical parameters in head and neck oncosurgeries: a prospective observational study. (Ongoing).
2	Mary Thomas. Accuracy of stroke volume variation compared with pleth variability index to predict fluid responsiveness in mechanically ventilated patients undergoing major surgery. (Ongoing).
3	Mary Thomas. A prospective observational study to assess the effectiveness of postoperative pain management of patients undergoing elective laparoscopic colorectal surgery. (Ongoing).
4	Mary Thomas. ENCORE: Effect of anaesthesia in colorectal cancer outcome trial: A prospective observational multicentric study. (Ongoing).
5	Mary Thomas. Assessment of ariscat score as a prediction model for postoperative pulmonary complications in a prospective cohort of post covid patients undergoing onco surgery. (Ongoing).
6	Venugopal A. Ultrasonographic measurement of IVC diameter and collapsibility index to predict hypotension following induction of general anaesthesia: A prospective observational study. (Ongoing).
7	Mallika Balakrishnan. Correlation between specific craniofacial features and difficulty of intubation in non-obese patients with anticipated difficult intubation. (Ongoing).
8	Mallika Balakrishnan. Ultrasonography: An effective tool in airway assessment. (Completed).
9	Viji S. Pillai. Comparison of nebulised lignocaine and nebulised ketamine as an adjunct to general anaesthesia in attenuating stress response to intubation and in reducing the incidence of post-operative sore throat. (Completed).
10	Viji S. Pillai. Preprocedural ultrasound assisted landmark identification for epidural catheterisation: prospective observational study. (Ongoing).
11	Bhagyalekshmi R. Comparison of continuous epidural infusion of 0.1% ropivacaine with 0.2 % ropivacaine for postoperative analgesia in patients undergoing lower abdominal surgeries. (Ongoing).
12	Bhagyalekshmi R. An observational study to compare the effect of ESP block with PVB for patients undergoing mastectomy surgery. (Ongoing).
13	Deepthi J. Prabhu. Comparison of the effect of two different doses of neostigmine for reversal of neuromuscular blockade: A randomised controlled study. (Ongoing).
14	Deepthi J. Prabhu. Survey on preanaesthetic evaluation in post COVID patients among Anaesthesiologists of India. (Ongoing).
15	Subha R. Retrospective audit of transfusion practices for packed red cells, platelets fresh frozen plasma and other components in oncosurgical patients. (Ongoing).
16	Subha R. Preanaesthetic ultrasonographic measurement of right infraclavicular axillary vein for predicting hypotension after inducing general anaesthesia: A prospective observational study. (Ongoing).
17	Rajasree O. Survey on intubation and extubation practices during COVID-19 pandemic among Anaesthesiologists of India. (Completed).

Research Projects

18	Rajasree O. Intravenous and intratracheal lignocaine on airway and hemodynamic response during emergence and extubation following general anaesthesia. (Completed).
19	Rajasree O. Predictive model for difficult intubation using computed tomographic and clinical parameters in head and neck oncosurgeries: a prospective observational study. (Ongoing).
20	Rajasree O. Prevalence of chronic post-surgical pain in cancer surgery patients. (Completed).
21	Rajasree O. Efficacy of ultrasound in confirming correct placement of l-gel compared to video-bronchoscopy: A prospective observational study. (Ongoing).
22	Rajasree O. Comparative effectiveness of peripheral perfusion index and pleth variability index as early alert indicators over mean arterial pressure for intraoperative fluid management in reducing postoperative complications in patients undergoing major head and neck oncosurgeries under general anaesthesia: A prospective observational study. (Ongoing).
23	Rajasree O. The incidence and risk factors for cardiovascular complications after oncosurgeries: A retrospective analysis. (Ongoing).
24	Frenny Ann Philip. Comparison of post-operative cognitive dysfunction following inhalational anaesthesia and total intravenous anaesthesia in patients undergoing laparotomy for gynaecological and gastrointestinal malignancies: A prospective observational study. (Completed).
25	Frenny Ann Philip. Acromio-Axillo Suprasternal notch Index (AASI): A reliable test to predict difficult visualisation of larynx. (Ongoing).
BONE & SOFT TISSUE	
26	Rexeena V. Bhargavan. Role of surgical margins on the outcome of chest wall soft tissue sarcoma: A prospective study. (Ongoing).
27	Rexeena V. Bhargavan. Role of surgical margins on the outcome of extremity soft tissue sarcoma: A prospective study. (Ongoing).
BREAST & CENTRAL NERVOUS SYSTEM	
28	Beela Sarah Mathew. Clinical validation of IHC 4 as a predictor of outcome for early stage hormone positive HER 2 negative low grade breast cancer. (Completed).
29	Beela Sarah Mathew. Comparison of prone Vs supine position for whole breast radiotherapy following breast conservation: A dosimetric study. (Ongoing).
30	Asha Arjunan. Comparison of the dosimetric parameters of free breathing Vs deep inspiratory breath hold for left sided carcinoma breast. (Completed).
31	Rajeev KR. Comparison of sequential conventional Vs hypofractionated boost following whole breast radiotherapy: A propensity score matched analysis. (Ongoing).
32	Paul Augustine. Prevalence, characteristics and effect on QoL of post mastectomy pain syndrome. (Completed).
33	Paul Augustine. Validation of the Malayalam version of body image scale and assessment of the impact of breast cancer surgery on body image. (Completed).
34	Paul Augustine. Skin sparing mastectomy and immediate reconstruction: a retrospective analysis. (Ongoing).
35	Paul Augustine. A study on factors influencing women's choice of surgery for early breast cancer. (Ongoing).
36	Paul Augustine. Evaluation of adequacy of preoperative assessment in breast cancer patients reporting after lumpectomy +/- axillary surgery. (Ongoing).
37	Paul Augustine. Validation of MSKCC nomogram for prediction of metastasis in non-sentinel lymph node cancer patients. (Ongoing).
38	Paul Augustine. Delineating the role of DNA methylation in insulin resistance driven breast cancer development and progression. (Ongoing).
39	Paul Augustine. Evaluation of the metastatic status of lymph nodes identified using axillary reverse mapping in breast cancer. (Ongoing).
40	Paul Augustine. Role of sentinel lymph node biopsy using single tracer technique in predicting the nodal status of axilla in neo-adjuvant setting in carcinoma breast. (Ongoing).
41	Paul Augustine. Tumour resection volumes in breast conservation surgery: A prospective analysis. (Ongoing).

42	Paul Augustine. Role of intraoperative ultrasound in breast conservation surgery for non-palpable residual disease after neo-adjuvant chemotherapy: A pilot study. (Ongoing).
43	Paul Augustine. Malignant phyllodes tumour of breast: a 15-year retrospective analysis. (Ongoing).
44	Kurian Cherian. Low axillary sampling in predicting nodal status of post chemotherapy axilla in carcinoma breast. (Completed).
45	Rexeena V. Bhargavan. The current surgical management patterns of breast cancer patients in a tertiary care centre. (Completed).
46	Rexeena V. Bhargavan. Sentinel node biopsy in post neo-adjuvant chemotherapy breast cancer patients using preoperative breast tattooing: A prospective study. (Completed).
47	Rexeena V. Bhargavan. Role of locoregional treatment of the primary site in de novo oligometastatic breast cancer: A prospective observational study. (Ongoing).
48	Rexeena V. Bhargavan. Prevalence of androgen receptor positivity in breast cancer patients and its prognostic implications. (Ongoing).
49	Rexeena V. Bhargavan. The role of level III dissection in locally advanced breast cancer following neo-adjuvant chemotherapy: A prospective study. (Ongoing).
50	Rexeena V. Bhargavan. Role of locoregional treatment of the primary site in de novo hormone receptor positive, Her2neu receptor negative oligometastatic breast cancer: A prospective observational study. (Ongoing).
51	Anoop TM. A prospective study to evaluate the role of cell free DNA integrity index in assessing the response to neo adjuvant chemotherapy in patients with carcinoma breast. (Ongoing).
52	Anoop TM. Prognostic significance of low HER2 expression in hormone positive breast cancer. (Ongoing).
53	Rona Joseph P. PDL-1 Expression and tumour infiltrating lymphocytes in triple negative breast cancer patients and its prognostic significance. (Ongoing).
54	Rona Joseph P. Evaluation of the G8 screening tool for prognostication of survival in elderly patients with breast cancer: A prospective study. (Ongoing).
55	Rona Joseph P. Clinical characteristics and treatment outcome of invasive lobular carcinoma breast: A retrospective analysis. (Ongoing).
56	Rona Joseph P. Clinical characteristics and treatment outcome of pregnancy associated breast cancer: A retrospective analysis. (Ongoing).
57	Rona Joseph P. Vitamin D deficiency and bone mineral density in postmenopausal women receiving adjuvant hormone therapy for breast cancer. (Ongoing).
CANCER EPIDEMIOLOGY	
58	Aleyamma Mathew. The impact of Socio-economic Status (SES) on stage and survival of gastrointestinal cancer: A comparative study of Canada and South India. (Completed).
59	Aleyamma Mathew. Comparison of Gail and Cuzick model for breast cancer risk prediction. (Completed).
60	Aleyamma Mathew. Diabetes mellitus and risk of breast cancer: A meta-analysis. (Completed).
61	Aleyamma Mathew. Comparison of time trend analysis of cancer using log linear regression model with different join points. (Completed).
62	Aleyamma Mathew. Population attributable fraction due to tobacco and alcohol for cancers in Kerala. (Ongoing).
63	Aleyamma Mathew. Time trend analysis of lung cancer in South Kerala. (Ongoing).
64	Preethi Sara George. Propensity score methods on the risk estimation of breast cancer. (Completed).
65	Preethi Sara George. Breast cancer risk estimation: a comparison between decision tree and logistic regression model. (Completed).
66	Preethi Sara George. Breast cancer survival using artificial neural network (ANN) model. (Completed).
67	Preethi Sara George. Cervical cancer survival estimation using random forest techniques. (Completed).
68	Jagathnath Krishna KM. Dynamic prediction of colorectal cancer survival risk using landmark modelling. (Completed).

Research Projects

69	Jagathnath Krishna KM. Modelling and estimation of cancer survival in application to colorectal cancer. (Completed).
70	Jagathnath Krishna KM. Colorectal cancer survival risk estimation using competing risk model. (Completed).
71	Jagathnath Krishna KM. Joint multi-state modelling for longitudinal time-to-event cancer data. (Ongoing).
CHEST & GASTRO-INTESTINAL	
72	Sajeed A. Outcomes and prognostic factors of extensive stage small cell lung cancer: a retrospective study. (Completed). <i>Two hundred eightythree patients were evaluated. Median overall survival was seven months. ECOG performance status, hyponatremia, chemotherapy cycles, consolidation radiotherapy, and cranial radiotherapy were prognostic factors.</i>
73	Sivanandan CD. Clinical presentation, outcome and prognostic factors of Thymoma: A retrospective study. (Ongoing).
74	Roshni S. Clinical outcome of locally advanced adenocarcinoma rectum treated with short course radiation followed by delayed surgery. (Ongoing).
75	Arun Sankar S. Retrospective audit of clinical outcome in patients with radically treated Periampullary carcinoma at Regional Cancer Centre. (Completed). <i>Ninety two patients were evaluated. The 2 year overall survival was 62.2% and the disease free survival was 52%. With a median followup of 48 months, 45 patients developed recurrence.</i>
76	Chandramohan K. Pattern of care of gastric cancer. (Completed).
77	Chandramohan K. Low rectal cancer syndrome and QoL. (Completed).
78	Madhu Muralee. Predictive value of serum and molecular markers in assessing response to neo-adjuvant treatment and short term outcome in adenocarcinoma of esophagogastric junction and stomach: Prospective observational Study. (Completed).
79	Madhu Muralee. Prospective observational study on the impact of prognostic nutritional index as an indicator of short-term morbidity and mortality in patients undergoing surgery for gastric and esophagogastric junction carcinoma. (Completed).
80	Wag Mira S. Retrospective audit of patients undergoing surgery for esophageal and OG junction cancers: an analysis of cases done over 5 years. (Ongoing).
81	Anoop TM. The predictive and prognostic value of C - reactive proteins albumin ratio in response to palliative chemotherapy in stage IV colorectal cancer. (Ongoing).
82	Anoop TM. HALP score (Hemoglobin albumin lymphocytes platelet score) as predictive and prognostic indicator for response and survival in patients with stage IV non-small cell lung cancer on first line palliative chemotherapy. (Ongoing).
GYNAEC & GENITOURINARY	
83	Francis V. James. Toxicity assessment of moderate hypofractionated radiotherapy in localised prostate cancer: A prospective observational study. (Completed).
84	Francis V. James. Comparison of new and old ESGO-ESTRO-ESP endometrial cancer risk classification on outcome. (Completed).
85	Francis V. James. Audit of female germ cell tumors of ovary treated at a tertiary care centre. (Ongoing).
86	Francis V. James. Prognostic significance of PD L1 expression on survival of carcinoma cervix: A retrospective study. (Ongoing).
87	Francis V. James. Assessment of acute hematological toxicities in patients with cervical cancer treated with radical chemoradiotherapy: A prospective observational study. (Ongoing).
88	Aswin Kumar. Quality of life and adverse events in patients undergoing radical chemoradiation for cervical cancer. (Ongoing).
89	Susan Mathews. Comparison of volume doses from intrauterine and tandem plan versus Rotterdam applicator plan in cervical carcinoma with vaginal extension. (Ongoing).
90	Rema P. Life after exenteration: Quality of life assessment in patients after exenteration for gynaecological cancers. (Completed).
91	Rema P. Implementation of Enhanced Recovery After Surgery (ERAS) in patients undergoing laparotomy for gynaecologic malignancies. (Completed).
92	Rema P. Prospective study to evaluate the correlation between colposcopic scoring with histopathology in VIA positive patients. (Completed).

93	Rema P. Significance of TGF beta signaling alterations in endometrial cancer. (Ongoing).
94	Rema P. Impact of COVID-19 pandemic on surgical care of patients with gynaecological cancer. (Ongoing).
95	Rema P. Evaluation of effectiveness of thermal ablation in treating cervical intra epithelial neoplasia. (Ongoing).
96	Rema P. Clinicopathologic profile and survival of patients with ovarian mucinous carcinoma. (Ongoing).
97	Suchetha S. Clinico-pathological profile and survival outcome of Type-1 and Type-2 ovarian cancers. (Completed).
98	Suchetha S. Validation of QLQ-EN24 in Malayalam. (Completed).
99	Suchetha S. Feasibility of fertility preserving surgery and reproductive outcome after neo-adjuvant chemotherapy for advanced malignant germ cell tumour ovary: A retrospective study. (Completed).
100	Suchetha S. Risk factors for short-term surgical complications in women undergoing surgery for gynaecological malignancies. (Ongoing).
101	Suchetha S. Cervico-vaginal microbiota in patients with precancerous and cancerous lesions of cervix: A case control study. (Ongoing).
102	Suchetha S. Pattern and risk factors for perioperative morbidity among women undergoing surgery for gynecological malignancy. (Ongoing).
103	Suchetha S. Prognostic significance of chemotherapy response score in patients undergoing interval debulking surgery for high grade serous tubal and ovarian carcinoma. (Ongoing).
104	Siva Ranjith J. Laparoscopic sentinel lymph node mapping using indocyanine green dye. (Completed).
105	Dhanya Dinesh. Evaluation of prediction models of completeness of cytoreduction in epithelial ovarian cancer recurrence. (Completed).
106	Lakshmi Haridas K. Tumour marker decline in predicting treatment outcome among poor risk testicular germ cell tumours: A tertiary cancer centre data. (Completed).
107	Lakshmi Haridas K. A study to assess androgen receptor expression in newly diagnosed advanced high grade serous ovarian carcinoma and its response to neoadjuvant chemotherapy. (Ongoing).
HAEMATOLOGICAL, LYMPHORETICULAR, BONE & SOFT TISSUE	
108	Geetha N. Prognostic significance of absolute lymphocyte count/Absolute monocyte count ratio in classical Hodgkin's lymphoma and its correlation with PET response: a prospective study. (Completed).
109	Geetha N. Evaluation of the profile and risk factors for toxicity of high dose methotrexate. (Completed).
110	Geetha N. The pattern and outcome of healthcare associated infections in patients with acute myeloid leukaemia. (Completed).
111	Geetha N. Clinical profile and complications of newly diagnosed acute leukaemia patients with hyperleucocytosis. (Completed).
112	Geetha N. Efficacy and toxicity of dose adjusted EPOCH Rituximab chemotherapy in high grade lymphoma. (Ongoing).
113	Geetha N. Prognostic significance of serum ferritin in acute myeloid leukaemia. (Ongoing).
114	Geetha N. Glasgow prognostic score in Diffuse Large B Cell Lymphoma patients treated with R-CHOP Chemotherapy: An Observational Study. (Ongoing).
115	Geetha N. The prognostic significance of CD25 and CD123 expression in Acute Myeloid Leukemia. (Ongoing).
116	Geetha N. Outcome of newly diagnosed multiple myeloma patients presenting with renal impairment. (Ongoing).
117	Sreejith Nair: Prognostic significance of serum ferritin levels in Hodgkin's lymphoma and its correlation with end of treatment PET response. (Completed).
118	Sreejith Nair: Prognostic significance of baseline Vitamin D level on the outcome of DLBCL. (Ongoing).
119	Prakash NP. Prognostic significance of CD 200 expression in acute myeloid leukaemia. (Ongoing).
120	Prakash NP. Impact of BCR-ABL transcript type on response to treatment with Imatinib in chronic myeloid leukaemia chronic phase patients. (Ongoing).

Research Projects

I21	Prakash NP.Prognostic significance of serum Vitamin D level in newly diagnosed multiple myeloma patients. (Ongoing).
I22	Prakash NP.Prognostic significance of pretreatment Neutrophil- Lymphocyte ratio and Platelet-Lymphocyte ratio in Diffuse Large B Cell lymphoma and its correlation with End of Treatment PET-CT response. (Ongoing).
HEAD & NECK	
I23	Rejnish Kumar R. Clinical outcomes of patients receiving induction chemotherapy with TPF regimen for stage IVB gingivobuccal complex tumours. (Ongoing).
I24	Kainickal CT.Treatment outcomes of carcinoma buccal mucosa treated with definitive accelerated radiotherapy: a retrospective analysis. (Completed).
I25	Kainickal CT.Treatment outcomes of squamous cell carcinoma lip: a retrospective analysis. (Ongoing).
I26	Malu Rafi.Treatment outcomes and prognostic factors in squamous cell carcinoma of oral tongue: a single institution study. (Ongoing).
I27	Malu Rafi.Predictive Clinical and HPV associated biomarkers in laryngeal and hypopharyngeal Squamous cell carcinomas. (Ongoing).
I28	Malu Rafi.Predictive clinical and HPV associated biomarkers in laryngeal and hypopharyngeal squamous cell carcinomas. (Ongoing).
I29	Shaji Thomas. Predictability of prognosis using Brandwein-Gensler's Risk Scoring System in early squamous cell carcinoma of tongue. (Ongoing).
I30	Shaji Thomas.Association between pattern of invasion and epithelial mesenchymal transition and its prognostic impact on early squamous cell carcinoma of tongue. (Ongoing).
I31	Shaji Thomas.Oncological safety of marginal mandibulectomy in resection of oral cavity cancers:A retrospective study. (Completed).
I32	Shaji Thomas.Thyroid carcinoma arising from thyroglossal duct cyst:A tertiary care centre experience. (Completed).
I33	Shaji Thomas. Surgically treated parapharyngeal tumours: An institutional experience. (Completed).
I34	Shaji Thomas. Island nasolabial flap: a versatile option in reconstruction of oral defects: a retrospective analysis. (Completed).
I35	Bipin T.Varghese. Prospective comparative study of watch and wait policy versus elective neck dissection in early superficial squamous cell carcinoma of tongue. (Completed).
I36	Bipin T.Varghese. Dual Baseline Imaging with ultrasonogram (USG) and Contrast Enhanced CT (CECT) scan for precision mapping in thyroid cancer surgery. (Completed).
I37	Bipin T.Varghese. Salivary neoplasms: therapeutic and functional outcome: a retrospective study. (Completed).
I38	Bipin T.Varghese. Study of pharyngocutaneous fistulae among laryngectomies. (Completed).
I39	Bipin T.Varghese.Treatment outcomes of medullary carcinoma of thyroid. (Ongoing).
I40	Bipin T.Varghese.Treatment outcomes of poorly differentiated carcinoma of thyroid. (Ongoing).
I41	Bipin T.Varghese. Study of tonicity of pharyngo-esophageal segment of laryngectomies using surface EMG. (Ongoing).
I42	Elizabeth Mathew lype. Survival analysis of differentiated thyroid cancers. (Ongoing).
I43	Elizabeth Mathew lype.Treatment outcome for Tis,TI glottic carcinoma after transoral CO ₂ laser microsurgery: A retrospective analysis. (Ongoing).
I44	Elizabeth Mathew lype.Ten year survival of patients with well differentiated thyroid cancers: A retrospective analysis. (Ongoing).
I45	Elizabeth Mathew lype. Mandibular invasion in squamous cell carcinoma of the oral cavity. A study of clinic-radio-pathological correlation. (Ongoing).
PAEDIATRIC ONCOLOGY	
I46	Priyakumari T. Neutropenic enterocolitis during acute myeloid leukaemia therapy in children (Ongoing).
I47	Priyakumari T. Evaluation of hearing and renal function in children treated with platinum compounds. (Ongoing).
I48	Priyakumari T.Dynamics of nutritional status during induction chemotherapy in childhood acute lymphoblastic leukaemia and their effects on the course of induction therapy. (Ongoing).
I49	Priyakumari T. Toxicity profile of L-Asparaginase and its outcome in children with acute lymphoblastic leukaemia. (Ongoing).
I50	Binitha R. Clinical and microbiological profile of bloodstream infections in Pediatric Oncology. (Ongoing).

PALLIATIVE MEDICINE	
151	Sudha P. Comparison of post-operative cognitive dysfunction following inhalational anaesthesia and total intravenous anaesthesia in patients undergoing laparotomy for gynaecological and gastrointestinal malignancies: a prospective observational study. (Ongoing).
PATHOLOGY	
152	Jayasree K. Pathology of chondroid neoplasm of bone: A 10 year retrospective study. (Ongoing).
153	Anitha Mathews. Comparison of expression pattern of HR and HER2/neu protein in primary breast carcinoma and synchronous LN metastasis. (Ongoing).
154	Anila KR. Histopathological diagnosis of secretory carcinoma of salivary gland: an algorithmic approach. (Ongoing).
155	Priya Mary Jacob. Expression of Programmed Death Ligand 1 (PD-L1) in classical Hodgkin's lymphoma: study from a tertiary cancer centre in South India. (Ongoing).
156	Priya Mary Jacob. Challenges in the diagnosis of primary bone lymphomas: experience of a decade from a tertiary cancer centre. (Ongoing).
157	Renu S. Morphological spectrum and distribution pattern of neuroendocrine neoplasms of the gastroenteropancreatic system: A retrospective observational study. (Ongoing).
158	Sindhu Nair P. Clinicopathological profile and pattern of P53 expression in lung adenocarcinoma in smokers and non-smokers. (Ongoing).
159	Sindhu Nair P. Surgical outcome in patients with head and neck bone sarcoma: A retrospective analysis. (Ongoing).
160	Rari P. Mony. A comparative study of liquid-based cytology to conventional cytology for diagnosis of cervical lesions in tertiary care centre. (Ongoing)
161	Rari P. Mony. Histopathological Assessment of the effect of chemotherapy in osteosarcoma. (Ongoing)
162	Jayasudha AV. Flow cytometry in mature T- and NK- cell neoplasms. (Ongoing).
163	Jayasudha AV. ALK positive large B cell lymphoma: A clinicopathologic study from a tertiary care cancer centre. (Ongoing).
164	Neelima Radhakrishnan. COVID-19 impact on newly diagnosed breast cancers at Regional Cancer Centre, Thiruvananthapuram: An audit. (Ongoing).
165	Simi CM. Diagnostic utility of lymphoid enhancer binding factor -1 immunohistochemistry in chronic lymphocytic leukaemia/small lymphocytic lymphoma. (Ongoing).
RADIATION PHYSICS	
166	Raghukumar P. Comparison of electron output measurement using parallel plate chamber calibrated at both electron and photon beams. (Completed).
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168	Shaiju VS. To study the effect of generalised Equivalent Uniform Dose (gEUD) biological optimisation objective for organs at risk in Volumetric Modulated Arc Therapy (VMAT) using Eclipse Treatment Planning System. (Completed).
169	Sarin B. Configuration and validation of stereotactic treatment fields in Eclipse® treatment planning system for a TrueBeam® linear accelerator. (Completed).
170	Debjani Phani. Design and development of a Phantom to evaluate gray scale contrast in ultrasound imaging. (Ongoing).
RADIODIAGNOSIS	
171	Jiji V. Unearthing contralateral breast malignancy: Screening mammography as a tool. (Completed).
172	Priya A. Role of intraoperative ultrasound in breast conservation surgery for non-palpable residual disease after neoadjuvant chemotherapy: A prospective pilot study. (Completed).

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168	Nath PG. Prognostic significance of cytogenetic and molecular studies in pediatric acute leukemia patients. Thiruvananthapuram: University of Kerala, 2021. 405p. (PhD Biotechnology)
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Administration, Standing Committees & Right to Information

a. ADMINISTRATION

Director	:	Dr. Rekha A. Nair
Additional Director (Academic)	:	Dr. N. Geetha
Additional Director (Administration)	:	Dr. Sajeed A
Medical Superintendent	:	Dr. Madhu Muralee
Deputy Medical Superintendent	:	Dr. Rajesh R. Chandran (till 30.11.2021)
Deputy Medical Superintendent	:	Dr. Lijeesh AL (from 11.12.2021)

b. STAFF STRENGTH

Type of Staff	Permanent		Temporary/ Contract	Daily wages	Deputation		Consultants engaged	Total
	Existing	New Recruits			In	Out		
Academic	107	07	03	--	--	--	06	123
Non-Academic	696	09	97	16	06	03	--	827
Total	803	16	100	16	06	03	06	950

c. ACADEMIC STAFF STRENGTH

Professors-13, Additional Professors-41, Associate Professors-34, Assistant Professors-24

d. NON-ACADEMIC STAFF

Administrative Office

Santhosh D (Sri)	Administrative Officer (till 06.08.2021)
Leena Litty (Smt)	Sr. Administrative Officer (from 31.08.2021)
Snehalatha HB (Smt)	Office Assistant Sel.Gr.
Vijayaprasad B (Sri)	Office Assistant
Padmarajan R (Sri)	Typist Gr I
Thankamony Amma P (Smt)	Clerk Gr. I
Nikhil S. Baiju (Sri)	Clerk
Ajitha S (Smt)	Clinical Records Assistant
Praveen J. Nair (Sri)	Clinical Records Assistant
Aswin VA (Sri)	Clinical Records Assistant

Anaesthesiology

Abin Issac (Sri)	Operation Theatre Technician Sr. Gr.
Manju RS (Smt)	Operation Theatre Technician
Kirankumar (Sri)	Operation Theatre Technician
Santhosh S (Sri)	Operation Theatre Technician
Sindhumol VA (Smt)	Operation Theatre Technician
Beenamma Chacko (Smt)	Operation Theatre Technician
Krishnakumar GK (Sri)	Operation Theatre Technician
Shemnad A (Sri)	Operation Theatre Technician
Prasakh P (Sri)	Operation Theatre Technician (resigned 20.01.2022)

Cancer Epidemiology & Bio-statistics

Asha NM (Smt)	Clerk Gr.I
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Cancer Research

Sanil PN (Sri)	Cytotechnologist Sr. Gr.
Vinoj Kumar B (Sri)	Animal House Keeper

Clinical Laboratory

Helen B (Smt)	Technical Officer (Lab)
Rajesh KR (Sri)	Technical Officer (Lab)
Renuka P (Smt)	Technical Officer (Lab)
Ajaya Kumar R (Sri)	Lab. Technician Sel.Gr.
Jaya Kumar B (Sri)	Lab. Technician Sel.Gr.
Riyad RA (Sri)	Lab. Technician Sel.Gr.
Saneela S (Smt)	Lab. Technician Sel.Gr.
Sindhumony S (Smt)	Lab. Technician Sel.Gr.
Sini LS (Smt)	Lab. Technician Sel.Gr.
Sreelekha VK (Smt)	Lab. Technician Sel.Gr.
Trophy S (Sri)	Lab. Technician Sel.Gr.
Veena Devi Thankachy VS (Smt)	Lab. Technician Sel.Gr.
Beena Rani AS (Sri)	Lab. Technician

Clinical Services & Medical Records

Anil Kumar K (Sri)	Medical Records Officer -I
Sreelatha S (Smt)	Clerk Sel. Gr.
Jaya Kumar P (Sri)	Clerk Gr. I
Bindu Sadasivan (Smt)	Clerk Gr. I

Kumari Bindu PK (Smt)	Clerk Gr. I
Ambily O (Smt)	Clerk Gr. I
Ganga AP (Smt)	Clerk Gr. I
John S (Sri)	Clerk (MRT) Gr. I
Girija R (Smt)	Clerk (MRT)
Geetha O (Smt)	Clerk (MRT)
Siju R. Nair (Smt)	Clerk (MRT)
Girija K (Smt)	Office Assistant
Jayalekshmi P (Smt)	Coding Clerk Gr. I
Jinson K. Paul (Sri)	Physiotherapist (resigned 22.11.2021)
Senan S (Sri)	Senior Helper
Anil Kumar TT (Sri)	Driver
Balachandran BK (Sri)	Driver
Rajeendran GC (Sri)	Driver
Hari C (Sri)	Dark Room Asst. Gr. I
Community Oncology	
Jeena Joseph N (Smt)	Protocol Nurse
Director's Office	
Sajeesh CK (Sri)	Clinical Records Assistant
ECDC, Ernakulam	
Rekha SR (Dr)	Resident Medical Officer
James Thomas M (Sri)	Technical Officer (Cyto)
Jolly GS (Smt)	Cytotechnologist
Shanavas A (Sri)	Cytotechnologist
Lijo TV (Sri)	Lab. Technician Sel.Gr.
Renjini Thomas (Smt)	Lab. Technician Sel.Gr.
Resmi V (Smt)	Staff Nurse Sr. Gr.
Nirmala KC (Smt)	Staff Nurse Sel. Gr.
Laiby V. Elizabeth (Smt)	Staff Nurse
Priya KL (Smt)	Staff Nurse
Rajmohan MB (Sri)	Electrician Sel. Gr.
Engineering Wing	
Giri Purushothaman (Sri)	Assistant Professor & Head
Nishanth S (Sri)	Maintenance Engineer (Mechanical)
Venugopalan Nair VR (Sri)	Supervisor (Electrical) Gr. I
Giji PS (Sri)	Supervisor (Electrical) (under suspension from 26.05.21)
Jayakumar P (Sri)	Supervisor (Electrical)
Suresh Kumar G (Sri)	Electrician Gr. I
Sunil Kumar R (Sri)	Electrician (under suspension from 15.05.21)
Deepu SS (Sri)	Electrician
Sivarajan L (Sri)	Electronic Technician Sr.Gr.
Santhosh Kumar MS (Sri)	Electronic Technician Sr.Gr.

Ambili S (Smt)	Clerk Gr. I
Jayabalan Nair B (Sri)	Plumber Gr. I
Shalin Raj R (Sri)	Plumber
Sanjayam S (Sri)	Plumber (under suspension from 05.10.21)
Finance & Accounts	
Ahammed Kabeer Y (Sri)	Controller of Finance (till 28.02.2022)
Gopakumar KR (Sri)	Controller of Finance (from 01.03.2022)
Reshmy BN (Smt)	Accounts Officer
Sheela Kumari R (Smt)	Asst. Accounts Officer
Jumailathu Beevi KM (Smt)	Office Assistant Sel.Gr.
Vijayan S (Sri)	Office Assistant Sr. Gr.
Shajkumar KR (Sri)	Office Assistant Sr. Gr.
Girija Kumari LS (Smt)	Office Assistant Sr. Gr.
Nandakumaran T (Sri)	Office Assistant
Vindhya Sugathan (Smt)	Office Assistant
Kalpana Soni S (Smt)	Office Assistant
Pradeep Chandran (Sri)	Junior System Analyst
Prabhavathi Devi AK (Smt)	Clerk Gr. I
Sheena Saju (Smt)	Cashier
Sreejit S (Sri)	Clerk
Aswathi Bai AL (Smt)	Clerk
Jayanthy JK (Smt)	Data Entry Operator Sel.Gr.
Girija R (Smt)	Clerk (MRT)
Gireesh S (Sri)	Clinical Records Assistant
Liji S (Smt)	Clinical Records Assistant
Savitha VM (Smt)	Clinical Records Assistant
Housekeeping	
Anil Kumar R (Sri)	Senior Helper
Gopa Kumar (Sri)	Senior Helper
Vimal Kumar YS (Sri)	Helper
Santhosh Kumar CS (Sri)	Hospital Assistant
Ajitha Kumari RB (Smt)	Hospital Attender
Mariyamma Varghese (Smt)	Hospital Attender
Anitha V (Smt)	Cleaner
Chandrasekharan Nair M (Sri)	Cleaner
Ebsiba D (Smt)	Cleaner
Geethakumari K (Smt)	Cleaner
Girija S (Smt)	Cleaner
Gopakumar P (Sri)	Cleaner
Jayanthi D (Smt)	Cleaner
Kala Krishnan (Smt)	Cleaner
Kaladevi B (Smt)	Cleaner

Radha S (Lathika S) (Smt)	Cleaner
Lethakumari K (Smt)	Cleaner
Moly B (Smt)	Cleaner
Pradeep A (Sri)	Cleaner
Prasanna S (Smt)	Cleaner
Premaletha OT (Smt)	Cleaner
Pushpa T (Smt)	Cleaner
Pushpakumari P (Smt)	Cleaner
Rajalakshmy R (Smt)	Cleaner
Raheela N (Smt)	Cleaner
Rajeswari L (Smt)	Cleaner
Remadevi R (Smt)	Cleaner
Sarojam T (Smt)	Cleaner
Sasikala P (Smt)	Cleaner
Sailaja A (Smt)	Cleaner
Sreelatha P (Smt)	Cleaner
Stalin Bright N (Sri)	Cleaner
Sukumary L (Smt)	Cleaner
Suma L (Smt)	Cleaner
Sunilkumar G (Sri)	Cleaner
Sureshkumar K (Sri)	Cleaner
Syamalakumari S (Smt)	Cleaner
Thanky S (Smt)	Cleaner
Thulasi P (Smt)	Cleaner
Valsala P (Smt)	Cleaner
Vijayakumar S (Sri)	Cleaner
Information Systems	
Neelima N (Smt)	Systems Manager
Rajesh P (Sri)	System Analyst
Shaji J (Sri)	System Analyst
Basil Varghese (Sri)	Junior System Analyst
Suseela Devi B (Smt)	Data Entry Operator Sel.Gr.
Library & Information Services	
Vishnu V (Dr)	Librarian cum Information Officer Gr. I
Saji S. Nair (Dr)	Librarian
Haseena K (Smt)	Library Assistant
Medical Oncology	
Lali VS (Dr)	Resident Medical Officer Sr Gr
Microbiology	
Kumar TN (Sri)	Lab Technician
Nuclear Medicine	
Bindu B (Smt)	Technical Officer (RIA)
Minyamma K (Smt)	Technical Officer (RIA)
Sheeja SR (Smt)	Technical Officer
Shailesh Kumar KN (Sri)	Technical Officer (Radiation)

Sibi KS (Smt)	Radiation Technologist Sr. Gr.
Veena RR (Smt)	Radiation Technologist Sr.Gr.
Salini PS (Smt)	Radiation Technologist
Preeetha Kumary SS (Smt)	Radiation Technologist
Jayakumar J (Sri)	Radiation Technologist
Deepthi Chandran (Smt)	Radiation Technologist
Ananda Kumar K (Sri)	R I A Technician Sel. Gr.
Usha R (Smt)	Data Entry Operator Gr.I
Nursing Services	
Sreelekha R (Smt)	Chief Nursing Officer
Sheela Rodriguez (Smt)	Nursing Supervisor
Geetha Kumari BS (Smt)	Nursing Supervisor
Rajila Beegum (Smt)	Head Nurse Sr. Gr.
Sunitha Kumari R (Smt)	Head Nurse Sr. Gr.
Jaya TS (Smt)	Head Nurse Gr. I
Jikki M (Smt)	Head Nurse Gr. I
Sheeba SV (Smt)	Head Nurse Gr. I
Shobha S (Smt)	Head Nurse Gr. I
Vijaya AK (Smt)	Head Nurse Gr. I
Aniamma Joseph (Smt)	Head Nurse Gr. I
Shema C (Smt)	Head Nurse
Sindhu S (Smt)	Head Nurse
Saraswathy Amma P (Smt)	Head Nurse
Sindhu GS (Smt)	Head Nurse
Siva Kumari PR (Smt)	Head Nurse
Elsamma Joseph (Smt)	Head Nurse
Indu VS (Smt)	Head Nurse
Ajitha TL (Smt)	Staff Nurse Sel.Gr.
Anila Kumari S (Smt)	Staff Nurse Sel.Gr.
Indira Devi G (Smt)	Staff Nurse Sel.Gr.
Jessy Thomas (Smt)	Staff Nurse Sel.Gr.
Kumari Sindhu S (Smt)	Staff Nurse Sel.Gr.
Ranichandra V (Smt)	Staff Nurse Sel.Gr.
Sajitha S (Smt)	Staff Nurse Sel.Gr.
Sherly M (Smt)	Staff Nurse Sel.Gr.
Shijikumary NG (Smt)	Staff Nurse Sel.Gr.
Suma PV (Smt)	Staff Nurse Sel.Gr.
Swapna CR (Smt)	Staff Nurse Sel.Gr.
Mareena Silas (Smt)	Staff Nurse Sel.Gr.
Sindhumol MG (Smt)	Staff Nurse Sel.Gr.
Sophiya Lilly (Smt)	Staff Nurse Sel.Gr.
Sindhu G (Smt)	Staff Nurse Sel.Gr.
Laly Joseph (Smt)	Staff Nurse Sel.Gr.
Mangalam S (Smt)	Staff Nurse Sel.Gr.
Chandrika P (Smt)	Staff Nurse Sr.Gr.
Ilin William (Smt)	Staff Nurse Sr.Gr.

Indulekha (Smt)	Staff Nurse Sr.Gr.
Marykutty Mathew (Smt)	Staff Nurse Sr.Gr.
Rethidevi GS (Smt)	Staff Nurse Sr.Gr.
Abraham Shini (Smt)	Staff Nurse Sr.Gr.
Ajitha S (Smt)	Staff Nurse Sr.Gr.
Anitha Kumary PV (Smt)	Staff Nurse Sr.Gr.
Bindhu M (Smt)	Staff Nurse Sr.Gr.
Bini A (Smt)	Staff Nurse Sr.Gr.
Binu O (Smt)	Staff Nurse Sr.Gr.
Joby Paul (Smt)	Staff Nurse Sr.Gr.
Leemol Mathew (Smt)	Staff Nurse Sr.Gr.
Moly MT (Smt)	Staff Nurse Sr.Gr.
Rosamma Joseph (Smt)	Staff Nurse Sr.Gr.
Nisha Vidyadhar R (Smt)	Staff Nurse Sr.Gr.
Sheeba P (Smt)	Staff Nurse Sr.Gr.
Jainamma Standal (Smt.)	Staff Nurse Sr.Gr.
Sheeja DB (Smt)	Staff Nurse Sr.Gr.
Sheeja Samuel (Smt)	Staff Nurse Sr.Gr.
Rajani RV (Smt)	Staff Nurse Sr.Gr.
Simmy Panicker S (Smt)	Staff Nurse Sr.Gr.
Sindhu K (Smt)	Staff Nurse Sr.Gr.
Aleyamma Chacko (Smt)	Staff Nurse Gr. I
Bindhu PD (Smt)	Staff Nurse Gr. I
Geetha Kumari D (Smt)	Staff Nurse Gr. I
Jyothilekshmi D (Smt)	Staff Nurse Gr. I
Sherry M (Smt)	Staff Nurse Gr. I
Ajila MS (Smt)	Staff Nurse Gr. I
Shiny PThankappan (Smt)	Staff Nurse Gr. I
Sindhu L (Smt)	Staff Nurse Gr. I
Sindhu V (Smt)	Staff Nurse Gr. I
Sreeja AP (Smt)	Staff Nurse Gr. I
Sreeja S (Smt)	Staff Nurse Gr. I
Sreekala T (Smt)	Staff Nurse Gr. I
Sreekumaran Pillai V (Sri)	Staff Nurse Gr. I
Sreelatha CS (Smt)	Staff Nurse Gr. I
Sukanya Kumari SR (Smt)	Staff Nurse Gr. I
Lizy Varkey (Smt)	Staff Nurse Gr. I
Sindhu G (Smt)	Staff Nurse Gr. I
Ajitha S (Smt)	Staff Nurse Gr. I
Amrutha L Raj (Smt)	Staff Nurse Gr. I
Annamma EJ (Smt)	Staff Nurse Gr. I
Anupama B (Smt)	Staff Nurse Gr. I
Archana M. Nair (Smt)	Staff Nurse Gr. I
Ariya Sreedharan B (Smt)	Staff Nurse Gr. I
Aswathy MR (Smt)	Staff Nurse Gr. I
Beena KG (Smt)	Staff Nurse Gr. I

Bency Varghese (Smt)	Staff Nurse Gr. I
Biji PR (Smt)	Staff Nurse Gr. I
Bincy Lukose (Smt)	Staff Nurse Gr. I
Bindhu Rani PV (Smt)	Staff Nurse Gr. I
Bindu Kumari TC (Smt)	Staff Nurse Gr. I
Bini R (Smt)	Staff Nurse Gr. I
Cherupushpam M (Smt)	Staff Nurse Gr. I
Chithra VG (Smt)	Staff Nurse Gr. I
Deepa R (Smt)	Staff Nurse Gr. I
Divya Das S (Smt)	Staff Nurse Gr. I
Girija L (Smt)	Staff Nurse Gr. I
Gracy Sebastian (Smt)	Staff Nurse Gr. I
Jayasree CG (Smt)	Staff Nurse Gr. I
Jeeja Rajan (Smt)	Staff Nurse Gr. I
Kavitha SG (Smt)	Staff Nurse Gr. I
Kochuthresia PV (Smt)	Staff Nurse Gr. I
Kumari Sobha D (Smt)	Staff Nurse Gr. I
Linsa George (Smt)	Staff Nurse Gr. I
Manju VP (Smt)	Staff Nurse Gr. I
Preetha S (Smt)	Staff Nurse Gr. I
Preethi PR (Smt)	Staff Nurse Gr. I
Rajesh Kumar S (Sri)	Staff Nurse Gr. I
Rani Thomas (Smt)	Staff Nurse Gr. I
Preetha A (Smt)	Staff Nurse Gr. I
Maya SS (Smt)	Staff Nurse Gr. I
Reena P Stanley (Smt)	Staff Nurse Gr. I
Remya R Chandran (Smt)	Staff Nurse Gr. I
Roja S. Anand (Smt)	Staff Nurse Gr. I
Saji GS (Smt)	Staff Nurse Gr. I
Sandhya V. Nair (Smt)	Staff Nurse Gr. I
Sandhyamol KS (Smt)	Staff Nurse Gr. I
Sangeetha KS (Smt)	Staff Nurse Gr. I
Saritha SS (Smt)	Staff Nurse Gr. I
Sheeba P.Varghese (Smt)	Staff Nurse Gr. I
Sheeba VL (Smt)	Staff Nurse Gr. I
Suma V (Smt)	Staff Nurse Gr. I
Suma John (Smt)	Staff Nurse Gr. I
Suma K (Smt)	Staff Nurse Gr. I
Suma PS (Smt)	Staff Nurse Gr. I
Suni Mathew (Smt)	Staff Nurse Gr. I
Sunitha L (Smt)	Staff Nurse Gr. I
Swopna K (Smt)	Staff Nurse Gr. I
Thara SS (Smt)	Staff Nurse Gr. I
Vasanthakumari R (Smt)	Staff Nurse Gr. I
Ambika T B (Smt)	Staff Nurse Gr. I
Nisha KN (Smt)	Staff Nurse Gr. I

Abdul Jaseer E (Sri)	Staff Nurse
Aradhana S (Smt)	Staff Nurse
Baijudeen B (Sri)	Staff Nurse (under suspension from 07.02.22)
Bindu B (Smt)	Staff Nurse
Daisy A (Smt)	Staff Nurse
Deepa AS (Smt)	Staff Nurse
Deepa TP (Smt)	Staff Nurse
Ducakis S (Smt)	Staff Nurse
Fathima S (Smt)	Staff Nurse
Fathima Suhra M (Smt)	Staff Nurse
Georgia George (Smt)	Staff Nurse
Gigi Mol Chacko (Smt)	Staff Nurse
Jaichitra MV (Smt)	Staff Nurse
Jasna PK (Smt)	Staff Nurse
Jesna R (Smt)	Staff Nurse
Jijimol S J (Smt)	Staff Nurse
Julie Mariam Jacob (Smt)	Staff Nurse
Karthika Raj KS (Smt)	Staff Nurse
Ligi Das RS (Smt)	Staff Nurse
Lija K (Smt)	Staff Nurse
Preetha Thomas (Smt)	Staff Nurse
Rajaram SK (Sri)	Staff Nurse
Raji KR (Smt)	Staff Nurse
Manjusha GS (Smt)	Staff Nurse
Manoj GS (Sri)	Staff Nurse
Maya N. Nair (Smt)	Staff Nurse
Mayadevi L (Smt)	Staff Nurse
Niza A. Khalam (Smt)	Staff Nurse
Preeja S (Smt)	Staff Nurse
Preetha P.Nair (Smt)	Staff Nurse
Rejani Mole A (Smt)	Staff Nurse
Renjini RS (Smt)	Staff Nurse
Renjini SR (Smt)	Staff Nurse
Resmi V (Smt)	Staff Nurse
Rugmini MD (Smt)	Staff Nurse
Saloma PS (Smt)	Staff Nurse
Sandhya G (Smt)	Staff Nurse
Sheeja BT (Smt)	Staff Nurse
Sheeja H (Smt)	Staff Nurse
Sheeja Kumari G (Smt)	Staff Nurse
Shijitha KS (Smt)	Staff Nurse
Shiny George (Smt)	Staff Nurse
Sindhu P (Smt)	Staff Nurse
Sindhu P.Nair (Smt)	Staff Nurse
Sindhu R (Smt)	Staff Nurse

Smitha S. Nair (Smt)	Staff Nurse
Soni John (Smt)	Staff Nurse
Sreeja MS (Smt)	Staff Nurse
Sreekala NS (Smt)	Staff Nurse
Sreekala P (Smt)	Staff Nurse
Sreelekha S (Smt)	Staff Nurse
Sumam L (Smt)	Staff Nurse
Sumathy P (Smt)	Staff Nurse
Sithara Balakrishnan (Smt)	Staff Nurse
Archana CS (Smt)	Staff Nurse
Sahiya VV (Smt)	Staff Nurse
Jafna N (Smt)	Staff Nurse
Arathy SR (Smt)	Staff Nurse
Aparna A (Smt)	Staff Nurse
Manju Punnen (Smt)	Staff Nurse
Resmi VR (Smt)	Staff Nurse
Gayathri Devi KS (Smt)	Staff Nurse
Keerthy MS (Smt)	Staff Nurse
Lekshmi P.Nair (Smt)	Staff Nurse
Asha A (Smt)	Staff Nurse
Harish Nair M (Sri)	Staff Nurse
Divya Pauly (Smt)	Staff Nurse
Bismi NS (Smt)	Staff Nurse
Jamsheena EM (Smt)	Staff Nurse
Aswathy S (Smt)	Staff Nurse
Rosamma PT (Smt)	Staff Nurse
Ajeesh K (Sri)	Staff Nurse
Dhanya Krishnan MG (Smt)	Staff Nurse
Soumya TL (Smt)	Staff Nurse
Abhilash Michael (Sri)	Staff Nurse
Aishwarya PG (Smt)	Staff Nurse
Vishnu Prasad VS (Sri)	Staff Nurse
Arya P (Smt)	Staff Nurse
Binson Baby (Sri)	Staff Nurse
Sajisha ES (Smt)	Staff Nurse
Dhanya AS (Smt)	Staff Nurse
Kavitha GS (Smt)	Staff Nurse
Mohammad Sajin N (Sri)	Staff Nurse
Ashwathi JC (Smt)	Staff Nurse
Kavitha Mohan L (Smt)	Staff Nurse
Geethu Karun (Smt)	Staff Nurse
Keerthi R. Pillai (Smt)	Staff Nurse
Tania Raj K (Smt)	Staff Nurse
Bibin K. Mathew (Sri)	Staff Nurse
Neelima G (Smt)	Staff Nurse
Anu Priya VM (Smt)	Staff Nurse

Asha S (Smt)	Staff Nurse
Divya VJ (Smt)	Staff Nurse
Neethu Sasi (Smt)	Staff Nurse
Susan John (Smt)	Staff Nurse
Sajitha S (Smt)	Staff Nurse
Pratheeksha R (Smt)	Staff Nurse
Sajana K. Badusha (Smt)	Staff Nurse
Riti Merin Abraham (Smt)	Staff Nurse
Ansha P. Jyothy (Smt)	Staff Nurse
Lekshmi Mohan (Smt)	Staff Nurse
Preetha B (Smt)	Staff Nurse
Sankar MG (Smt)	Staff Nurse
Gireeshkumar S (Sri)	Staff Nurse
Anu K. Avirah (Smt)	Staff Nurse
Remya KB (Smt)	Staff Nurse
Mini MS (Smt)	Staff Nurse
Shinoj P (Sri)	Staff Nurse
Soumya CS (Smt)	Staff Nurse
Aparna J (Smt)	Staff Nurse
Midhun Raj PT (Sri)	Staff Nurse
Shafna Ashraff (Smt)	Staff Nurse
Abhilash P (Sri)	Staff Nurse
Shameer AM (Sri)	Staff Nurse
Praveena U (Smt)	Staff Nurse
Deepa M (Smt)	Staff Nurse
Atheena Jinu AJ (Smt)	Staff Nurse
Lekshmy MS (Smt)	Staff Nurse
Rosily Thomas (Smt)	Staff Nurse
Juby Baby (Smt)	Staff Nurse
Mukesh M (Sri)	Staff Nurse
Ansa AR (Smt)	Staff Nurse
Suby A (Smt)	Staff Nurse
Anju Krishnan (Smt)	Staff Nurse
Sajeena B (Smt)	Staff Nurse
Anila Mohan (Smt)	Staff Nurse
Binila TA (Smt)	Staff Nurse
Asha Prakash (Smt)	Staff Nurse
Anjaly VN (Smt)	Staff Nurse
Aneesh Kumar RP (Sri)	Staff Nurse
Seema MB (Smt)	Staff Nurse
Syama MG (Smt)	Staff Nurse
Salini Krishnan SK (Smt)	Staff Nurse
Remya RB (Smt)	Staff Nurse
Amitha S (Smt)	Staff Nurse
Jesly Kurian P (Smt)	Staff Nurse
Anisha S (Smt)	Staff Nurse

Gopika Lekshmi SR (Smt)	Staff Nurse
Mahesh M. Mukund (Sri)	Staff Nurse
Thushara Thulasidharan (Smt)	Staff Nurse
Ajitha P. Sebastian (Smt)	Staff Nurse
Athira Prasad (Smt)	Staff Nurse
Lekshmi SR (Smt)	Staff Nurse
Febinlal KP (Smt)	Staff Nurse
Anuja SR (Smt)	Staff Nurse
Althaf AS (Sri)	Staff Nurse
Shemeena KS (Smt)	Staff Nurse
Lekshmi C (Smt)	Staff Nurse
Remya C (Smt)	Staff Nurse
Varsha VV (Smt)	Staff Nurse
Sindhumole PM (Smt)	Staff Nurse
Divya SS (Smt)	Staff Nurse
Nishad N (Sri)	Staff Nurse
Jyothi G. John (Smt)	Staff Nurse
Athira Raj (Smt)	Staff Nurse
Sini NS (Smt)	Staff Nurse
Soumya S. Nair (Smt)	Staff Nurse
Jubilet Malar C (Smt)	Nursing Assistant
Sreekumari N (Smt)	Nursing Assistant
Kumari Sindhu TS (Smt)	Nursing Assistant
Sheela M (Smt)	Nursing Assistant
Mini AK (Smt)	Nursing Assistant
Jessy Thomas (Smt)	Nursing Assistant
Varghese Thomas (Sri)	Nursing Assistant
Deenamma MJ (Smt)	Nursing Assistant
Sunila RS (Smt)	Nursing Assistant
Smitha D (Smt)	Nursing Assistant
Ambily TK (Smt)	Nursing Assistant
Kumari Prameela RG (Smt)	Nursing Assistant
Sheeja Rani G (Smt)	Nursing Assistant
Usha L (Smt)	Nursing Assistant
Jaya Kumari R (Smt)	Nursing Assistant
Reeja AS (Smt)	Nursing Assistant
Sreekumari M (Smt)	Nursing Assistant
Jessy Xavier (Smt)	Nursing Assistant
Subhadra TK (Smt)	Nursing Assistant
Hendit Florin SD (Smt)	Nursing Assistant
Mary Helen S (Smt)	Nursing Assistant
Deepthi SS (Smt)	Nursing Assistant
Sherly PK (Smt)	Nursing Assistant
Rema K (Smt)	Nursing Assistant
Felcy Jesslet A (Smt)	Nursing Assistant
Ambika V (Smt)	Nursing Assistant

Bigimol Dominic (Smt)	Nursing Assistant
Shaija K (Smt)	Nursing Assistant
Geetha S (Smt)	Nursing Assistant
Sneha Latha S (Smt)	Nursing Assistant
Suja Kuruvilla (Smt)	Nursing Assistant
Laly VJ (Smt)	Nursing Assistant
Suja V (Smt)	Nursing Assistant
Sajini John (Smt)	Nursing Assistant
Jessy Philipose (Smt)	Nursing Assistant
Shyni John (Smt)	Nursing Assistant
Sheeba PK (Smt)	Nursing Assistant
Priya S (Smt)	Nursing Assistant
Sudha S (Smt)	Nursing Assistant
Bindu AB (Smt)	Nursing Assistant
Sithalekshmi VS (Smt)	Nursing Assistant
Mariamamma Joseph (Smt)	Nursing Assistant
Geetha PK (Smt)	Nursing Assistant
Bindhu S (Smt)	Nursing Assistant
Sali Varughese (Smt)	Nursing Assistant
Manju I (Smt)	Nursing Assistant
Babitha Beegam R (Smt)	Nursing Assistant
Sunitha Devi RR (Smt)	Nursing Assistant
Ranjini R (Smt)	Nursing Assistant
Manju C (Smt)	Nursing Assistant
Jayasree S (Smt)	Nursing Assistant
Sheeba L (Smt)	Nursing Assistant
Subha Moly O (Smt)	Nursing Assistant
Sujakumari L (Smt)	Nursing Assistant
Sreelatha S (Smt)	Nursing Assistant
Manjusha V (Smt)	Nursing Assistant
Sheeja R (Smt)	Nursing Assistant
Kala L. K. Nair (Smt)	Nursing Assistant
Sandhyakrishnan L (Smt)	Nursing Assistant
Sheeja Raj (Smt)	Nursing Assistant
Sari AS (Smt)	Nursing Assistant
Darley Grace AE (Smt)	Nursing Assistant
Minimol SS (Smt)	Nursing Assistant
Sajitha A (Smt)	Nursing Assistant
Mini J (Smt)	Nursing Assistant
Arun AK (Sri)	Nursing Assistant
Nagammal R (Smt)	Nursing Assistant
Roslet Titus S (Smt)	Nursing Assistant
Faseela Beevi H (Smt)	Nursing Assistant
Chithra C (Smt)	Nursing Assistant
Saritha SS (Smt)	Nursing Assistant
Renuka VC (Smt)	Nursing Assistant

Manju K (Smt)	Nursing Assistant
Sheena C (Smt)	Nursing Assistant
Sunitha M (Smt)	Nursing Assistant
Archana VS (Smt)	Nursing Assistant
Palliative Medicine	
Prasanth CV (Dr)	Resident Medical Officer Gr I
Manju Achamma Varghese (Dr)	Resident Medical Officer Gr I
Dennison G (Sri)	Manufacturing Chemist
Sanal AD (Sri)	Skilled Worker
Pathology	
Nataraj A (Sri)	Technical Officer (Lab)
Brinda TP (Smt)	Technical Officer (Lab)
Saina A (Smt)	Technical Officer (Lab)
Sulochana S (Smt)	Technical Officer (Lab)
Veena VS (Smt)	Cytotechnologist Sel.Gr.
Jayalal KS (Sri)	Cytotechnologist Sel.Gr.
Anitha S (Smt)	Cytotechnologist Sr. Gr.
Lathamalathy L (Smt)	Lab.Technician Sel.Gr.
Jayasree PS (Smt)	Lab.Technician Sel.Gr.
Jiju JS (Sri)	Lab.Technician Sel.Gr.
Arya CS (Smt)	Lab.Technician
Rejitha VS (Smt)	Data Entry Operator
Letha B (Smt)	Typist Gr. I
Sheena Rani GS (Smt)	Typist
Pharmacy & Store	
Suresh G (Sri)	Stores Officer
Dinesh PS (Sri)	Pharmacist Gr. I
Shaji SS (Sri)	Pharmacist
Mini KL (Smt)	Pharmacist
Krishnapriya V (Smt)	Pharmacist
Saritha SS (Smt)	Pharmacist
Jalaja Kumari VS (Smt)	Pharmacist
Sreeja T. Nair (Smt)	Pharmacist
Veena CL (Smt)	Office Assistant Sr. Gr.
Project Cell	
Vijayakumar G (Sri)	Project Assistant Sr. Gr.
Purchase	
Ramaprasad P (Sri)	Assistant Purchase Officer
Ajitha OS (Smt)	Office Assistant Sr. Gr.
John Joseph (Sri)	Office Assistant Gr. I
Sheeja SS (Smt)	Office Assistant
Jayaprakash V (Sri)	Clerk
Rahul V	Clinical Records Assistant
Radiation Physics	
Anitha C (Smt)	Technical Officer (Radiation)

Radhakrishnan Nair T (Sri)	Technical Officer (Radiation) (under suspension w.e.f. 26.03.2020)
Sreekala R (Smt)	Technical Officer (Radiation)
Sreekala D (Smt)	Technical Officer (Mould)
Geethamma K (Smt)	Technical Officer (Radiation)
Sunil Kumar S (Sri)	Technical Officer (Radiation)
Sheeba DR (Smt)	Technical Officer (Radiation)
Premeela Devi T (Smt)	Technical Officer (Radiation)
Jayasree CG (Smt)	Technical Officer (Radiation)
Ambily Govind K (Smt)	Technical Officer
Geetha P (Smt)	Technical Officer
Santhan H (Sri)	Technical Officer
Vidhiul Latha PA (Smt)	Technical Officer
Maheswari J (Smt)	Technical Officer
Rojas K. Jose	Medical Physicist
Midhun Sajeev (Sri)	Medical Physicist
Deepa MV (Smt)	Medical Physicist
Mini VL (Smt)	Radiotherapy Technologist Sel.Gr.
Rajesh PR (Sri)	Radiotherapy Technologist Sel.Gr.
Sindhu SS (Smt)	Radiotherapy Technologist Sel.Gr.
Saritha VS (Smt)	Radiotherapy Technologist Sel.Gr.
Sunitha Kumari UP (Smt)	Radiotherapy Technologist Sr.Gr.
Abhilash Sudh SS (Sri)	Radiotherapy Technologist Sr.Gr.
Asa Rani KS (Smt)	Radiotherapy Technologist Sr.Gr.
Lal K Nair (Sri)	Radiotherapy Technologist Sr.Gr.
Manju PM (Smt)	Radiotherapy Technologist Sr.Gr.
Maya M (Smt)	Radiotherapy Technologist Sr.Gr.
Seena CS (Smt)	Radiotherapy Technologist Sr.Gr.
Sheena J (Smt)	Radiotherapy Technologist Sr.Gr.
Shinu RS (Sri)	Radiotherapy Technologist Sr.Gr.
Vinod SL (Sri)	Radiotherapy Technologist Sr.Gr.
Chinju G (Smt)	Radiation Technologist
Radiodiagnosis	
Udayakumar KR (Sri)	Technical Officer (Radiation)
Pradeep S (Sri)	Technical Officer (Radiation)
Suja BR (Smt)	Technical Officer (Radiation)
Sherif JS (Sri)	Technical Officer (Radiation)
Prasad PP (Sri)	Technical Officer
Asha S (Smt)	Radiation Technologist Sr.Gr.
Binoy BG (Sri)	Radiation Technologist Sr.Gr.
Jayakumar P (Sri)	Radiation Technologist Sr.Gr.
Sreelekha LD (Smt)	Radiation Technologist Sr.Gr.
Sunitha S (Smt)	Radiation Technologist Sr. Gr.
Anees KN (Sri)	Radiation Technologist
Chitralekha AR (smt)	Radiation Technologist

Saritha BS (Smt)	Radiation Technologist
Security	
Satheeshkumar KS (Sri)	Tel.Operator cum Receptionist Gr. I
Sreekumar C (Sri)	Tel.Operator cum Receptionist
Ajikumar SL (Sri)	Security Guard
Supporting Services	
Surendran Nair V (Sri)	Public Relations Officer Sr. Gr.
Mini N (Smt)	Dietician Sr. Gr.
Krishna Mohandas (Smt)	Assistant Dietician
Surgical Services	
Jayasree S (Smt)	Typist Gr. I
Shirly K. Ninan (Smt)	Data Entry Operator Sr. Gr.
Suresh PS (Sri)	Technician CSSD
Transfusion Medicine	
Rajesh R. Chandran (Dr)	Resident Medical Officer (resigned 30.11.21)
Renukadevi V (Smt)	Technical Officer
Bindu AP (Smt)	Scientific Assistant
Asha SR (Smt)	Lab. Technician Sel.Gr.
Mini SP (Smt)	Lab. Technician Sel.Gr.
e. Dismissals/Retrenchments: Nil	
f. Retirements	
Sujathan K (Dr)	Additional Professor (30.04.2021)
Jayalekshmi P (Dr)	Additional Professor (31.05.2021)
Sreekumar B (Sri)	Assistant Administrative Officer (CS) (31.05.2021)
Ramabhadran P (Sri)	Technical Officer (31.05.2021)
Chandramathi Amma (Smt)	Cleaner (31.05.2021)
Valsala TK (Smt)	Cleaner Higher Gr (30.06.2021)
Ramadas K (Dr)	Professor (VRS 06.08.2021)
Mani KS (Sri)	Cytotechnologist Sel Gr (31.07.2021)
Hareendran NK (Sri)	Research Assistant (31.07.2021)
Viswakumar N (Sri)	Typist (31.07.2021)
Joe D'cruz A (Sri)	Technical Officer (31.07.2021)
Sindhu P (Smt)	Technical Officer (30.09.2021)
Chandrika D (Smt)	Medical Records Officer (30.11.2021)
Remani R (Smt)	Cleaner (30.11.2021)
Sobhana S (Smt)	Cleaner Higher Gr (31.01.2022)
g. Obituary	
Bindhu KG (Smt)	Staff Nurse (02.05.2021)

Standing Committees

a. Scientific Committee

1	Director, SCTIMST, Thiruvananthapuram	Chairman
2	Dr. G.K. Rath, Chief, BRA-IRCH, AIIMS, New Delhi	Member
3	Dr. M.Vijayakumar, Vice-Chancellor, Yenepoya University, Mangalore, Karnataka	Member
4	Dr. Chandrabas Narayana, Director, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram	Member
5	Dr. Selvaluxmi, Director, Cancer Institute (WIA), Chennai	Member
6	Dr. Krishna G, Prof. & Head, Dept. of Pathology, Govt. Medical College, Thiruvananthapuram	Member
7	Dr. T. Rajkumar, Prof. & Head, Dept. of Molecular Oncology, Cancer Institute (WIA), Chennai	Member
8	Prof. Vani Santhosh, Prof. of Neuropathology and Head, Dept. of Clinical Neuroscience, NIMHANS, Bengaluru	Member
9	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology, RCC, Thiruvananthapuram (till 06.08.2021)	Member
10	Dr. N. Geetha, Prof. & Head, Dept. of Medical Oncology, RCC, Thiruvananthapuram	Member
11	Dr. Rekha A. Nair, Director, RCC, Thiruvananthapuram	Convener

b. Institutional Review Board

1	Dr. Rekha A. Nair, Director, RCC, Thiruvananthapuram	Chairperson
2	Dr. N. Geetha, Prof. & Head, Dept. of Medical Oncology, RCC, Thiruvananthapuram	Vice Chairperson
3	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology, RCC, Thiruvananthapuram (till 06.08.2021)	Member
4	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology, RCC, Thiruvananthapuram	Member
5	Dr. Rachel Cherian Koshy, Prof. & Head, Dept. of Anaesthesiology, RCC, Thiruvananthapuram	Member

6	Dr. Priyakumari T, Prof. & Head, Dept. of Paediatric Oncology, RCC, Thiruvananthapuram	Member
7	Dr. Shaji Thomas, Additional Professor & Head, Dept. of Surgical Services, RCC, Thiruvananthapuram	Member
8	Dr. K. Jayasree, Prof. & Head, Dept. of Pathology, RCC, Thiruvananthapuram	Member
9	Dr. Venugopal M, Prof. & Head, Dept. of Radiodiagnosis, RCC, Thiruvananthapuram	Member
10	Dr. S. Kannan, Prof. & Head, Division of Cancer Research, RCC, Thiruvananthapuram	Member
11	Dr. Beela Sarah Mathew, Professor, Dept. of Radiation Oncology, RCC, Thiruvananthapuram	Member
12	Dr. Bipin T. Varghese, Additional Professor, Department of Surgical Services, RCC, Thiruvananthapuram	Member
13	Dr. Aleyamma Mathew, Prof. & Head, Division of Cancer Epidemiology & Biostatistics, RCC, Thiruvananthapuram	Convener

c. Human Ethics Committee

1	Dr. M. Narendranathan, 'Sreenilayam', Veerabhadra Gardens, Pottakuzhi, Pattom P.O., Thiruvananthapuram 695004.	Chairman
2	Dr. V. Ramankutty, Professor (Retired), Achuthamenon Centre for Health Science Studies, SCTIMST, Thiruvananthapuram. L-51, LIC Road, Pattom, Thiruvananthapuram 695004	Member
3	Dr. R.S. Jayasree, PhD, Head, Division of Biophotonics & Imaging, BMT Wing, SCTIMST, Poojappura, Thiruvananthapuram 695012	Member
4	Dr. K.G. Retnavally, Professor of Pharmacology (Retired), Govt. Medical College, Thiruvananthapuram. 'Lekshmi', House No. 59, Vrindavan Housing Colony, Pattom, Thiruvananthapuram-695004.	Member
5	Adv. Krishnankutty Nair, 'Arathy', T.C. 17/28, JERA- 21, Jagathy, Thiruvananthapuram-695014	Member
6	Smt. Lali V.S. (Retired Joint Director, Dept. of Agriculture, Govt. of Kerala), Rose Gardens, Christ Nagar, Vazhayila, Karakulam P.O., Thiruvananthapuram 695564	Member

7	Dr. Sanjeev V. Thomas, Professor of Neurology, Sree Chitra Tirunal Institute for Sciences & Technology, Thiruvananthapuram 695 011	Member
8	Dr. N. Geetha, Prof. & Head, Dept. of Medical Oncology, RCC, Thiruvananthapuram	Member
9	Dr. Sajeed A, Additional Director (Administration), RCC, Thiruvananthapuram.	Member
10	Fr. Abraham Thomas (Director, Snehaniyam), Matha Mariam Ashramam, Nirmalagiri, Powdikonam, Thiruvananthapuram 695588	Member
11	Smt. Karthiyani V (Trustee, Swasthi Foundation, Thiruvananthapuram), Madhuvan, T.C. 6/298-I, Vattiyoorkavu, Thiruvananthapuram 6950013.	Member
12	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology, RCC, Thiruvananthapuram	Convener

d. Building Committee

1	Chief Engineer, PWD (Buildings & Local Works), Govt. of Kerala	Chairman
2	Chief Architect, PWD, Govt. of Kerala	Member
3	Director of Medical Education, Govt. of Kerala	Member
4	Principal, Govt. Medical College, Thiruvananthapuram	Member
5	Director, RCC, Thiruvananthapuram	Member
6	Controller of Finance, RCC, Thiruvananthapuram	Member
7	Head, Engineering Division, RCC, Thiruvananthapuram	Convener

e. Medical Records Review Committee

1	Dr. Sajeed A, Additional Director (Administration)	Chairman
2	Dr. Madhu Muralee, Medical Superintendent	Member
3	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
4	Dr. Rajeevan V, Administrative Medical Officer	Member
5	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member

6	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
7	Dr. Beela Sarah Mathew, Prof. of Radiation Oncology	Member
8	Dr. M. Venugopal, Prof. & Head, Dept. of Radiodiagnosis	Member
9	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
10	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
11	Dr. Geetha N, Prof. & Head, Dept. of Medical Oncology	Member
12	Dr. Aleyamma Mathew, Prof. & Head, Division of Cancer Epidemiology & Biostatistics	Member
13	Dr. Aswinkumar, Addl. Professor, Radiation Oncology/Patient Safety Officer	Member
14	Dr. Swapna R. Nath, Head, Division of Microbiology/NABH Nodal Officer	Member
15	Smt. Neelima N, Head, Information System Division	Member
16	Smt. Sreelekha R, Chief Nursing Officer	Member
17	Sri. Anilkumar K, Medical Records Officer-II	Member
18	Sri. Sreekumar B, Assistant Administrative Officer (CS) (till 31 st May 2021)	Convener
19	Smt. Siju Nair, Clerk, Medical Records Division (from 10.06.2021)	Convener

f. Hospital Infection Control Committee

1	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Chairman
2	Dr. Sajeed A, Additional Director (Administration) (from August 2021)	Chairman
3	Dr. Madhu Muralee, Medical Superintendent	Member
4	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
5	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
6	Dr. K. Jayasree, Prof. & Head, Dept. of Pathology	Member
7	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
8	Dr. Rachel Cherian Koshy, Prof. & Head, Dept. of Anaesthesiology	Member
9	Dr. Geetha N, Prof. & Head, Dept. of Medical Oncology	Member

10	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
11	Dr. Aswin Kumar, Addl. Professor; Dept. of Radiation Oncology/ Patient Safety Officer	Member
12	Dr. Binitha R, Associate Professor; Dept. of Paediatric Oncology/Infection Control Doctor	Member
13	Dr. K. Vijayalekshmi, Head, Division of Transfusion Medicine	Member
14	Dr. Swapna R. Nath, Head, Division of Microbiology/Infection Control Officer	Member
15	Dr. Sudha P, Head, Division of Palliative Medicine	Member
16	Smt. Sreelekha R, Chief Nursing Officer	Member
17	Sri. Giri Purushothaman, Head, Engineering Wing	Member
18	Smt. Mini N, Dietician	Member
19	Smt. Indu, Head Nurse, Operation Theatre	Member
20	Smt. Jaya TS, Head, Housekeeping Division	Member
21	Smt. Sunithakumari, Head Nurse, CVAD Clinic	Member
22	Smt. Ajitha S, Infection Control Nurse	Member
23	Smt. Arya Sreedharan, Infection Control Nurse	Member
24	Smt. Rajani RV, NABH Co-ordinator	Member
25	Smt. Sheela Rodriguez, Nursing Supervisor	Convener

g. Internal Audit Committee

1	Dr. Paul Augustine, Additional Professor; Dept. of Surgical Services	Chairman
2	Dr. Sajeed A, Addl. Director (Administration)	Member
3	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
4	Dr. Madhu Muralee, Medical Superintendent	Member
5	Dr. Beela Sarah Mathew, Professor; Dept. of Radiation Oncology	Member
6	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
7	Dr. Anila KR, Associate Professor; Dept. of Pathology	Member
8	Dr. Roshni S, Associate Professor; Dept. of Radiation Oncology	Member
9	Dr. Sudha P, Head, Division of Palliative Medicine	Member

10	Dr. Swapna R. Nath, Head, Division of Microbiology	Member
11	Dr. Kurian Cherian, Additional Professor; Dept. of Surgical Services	Member
12	Dr. Rajeev KR, Associate Professor; Dept. of Radiation Oncology	Member
13	Dr. Arun Sankar, Associate Professor; Dept. of Radiation Oncology	Member
14	Dr. Malu Rafi, Associate Professor; Dept. of Radiation Oncology	Member
15	Dr. Priya Mary Jacob, Associate Professor; Dept. of Pathology	Member
16	Dr. Anoop, Associate Professor; Dept. of Medical Oncology	Member
17	Dr. Siva Ranjith, Assistant Professor; Dept. of Surgical Services	Member
18	Dr. Deepthi Prabhu, Associate Professor; Dept. of Anaesthesiology	Member
19	Dr. Lijeesh, Assistant Professor/Deputy Medical Superintendent, Dept. of Radiation Oncology	Member
20	Dr. Frenny Philip, Associate Professor; Dept. of Anaesthesiology	Member
21	Dr. Sagila SG, Associate Professor; Division of Microbiology	Member
22	Dr. Rona Joseph, Assistant Professor; Dept. of Medical Oncology	Member
23	Dr. Geethi MH, Assistant Professor; Dept. of Radiation Oncology	Member
24	Dr. Guru Prasad, Associate Professor; Dept. of Paediatric Oncology	Member
25	Dr. John Joseph, Assistant Professor; Dept. of Radiation Oncology	Member
26	Dr. Manjusha Nair, Associate Professor; Dept. of Paediatric Oncology	Member
27	Dr. Deepa Susan, Assistant Professor; Dept. of Medical Oncology	Member
28	Dr. Lakshmi Haridas, Associate Professor; Dept. of Medical Oncology	Member
29	Dr. Aparna S, Assistant Professor; Dept. of Radiation Oncology	Member
30	Dr. Rexeena Bhargavan, Associate Professor; Dept. of Surgical Services	Member

31	Dr. Neelima Radhakrishnan, Assistant Professor, Dept. of Pathology	Member
32	Dr. Lekha M. Nair, Assistant Professor, Dept. of Radiation Oncology	Member
33	Smt. Sreelekha R, Chief Nursing Officer	Member
34	Sri. Prasad P, Technical Officer, Dept. of Radiodiagnosis	Member
35	Smt. Sini LS, Lab Technician	Member
36	Smt. Mini N, Dietician	Member
37	Smt. Sivakumari, Head Nurse	Member
38	Smt. Ariya Sreedharan, Infection Control Nurse	Member
39	Dr. Sharika V. Menon, Assistant Professor, Division of Radiation Physics	Member
40	Mr. Rojus K. Jose, Medical Physicist, Division of Radiation Physics	Member
41	Mr. Pradeep S, Technical Officer, Dept. of Radiodiagnosis	Member
42	Mr. Anand, Assistant Engineer, Engineering Wing	Member
43	Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/ Patient Safety Officer	Convener

12	Dr. Sreekumar A, Head, Division of Nuclear Medicine	Member
13	Dr. Gigi Thomas, Head, Division of Community Oncology	Member
14	Dr. K. Jayasree, Prof. & Head, Dept. of Pathology	Member
15	Dr. K. Vijayalekshmi, Head, Division of Transfusion Medicine	Member
16	Dr. Swapna R. Nath, Head, Division of Microbiology	Member
17	Dr. Sudha P, Head, Division of Palliative Medicine	Member
18	Dr. Thayal Singh Eliyas, Head, Division of Radiation Physics (till 15.02.2022)	Member
19	Dr. Raghukumar P, Head, Division of Radiation Physics (from 16.02.2022)	Member
20	Dr. Aleyamma Mathew, Prof. & Head, Division of Cancer Epidemiology & Biostatistics	Member
21	Dr. Raveendran Pillai K, Additional Professor & Head, Division of Clinical Laboratory Services	Member
22	Ms. Neelima, Head, Division of Information Systems	Member
23	Smt. Sreelekha R, Chief Nursing Officer	Member
24	Sri. Giri Purushothaman, Head, Engineering Wing	Member
25	Sri. Surendran Nair V, Public Relations Officer	Member
26	Mr. Anilkumar K, Medical Records Officer-II	Member
27	Sri. Sreekumar B, Assistant Administrative Officer (CS) (till 31.05.2021)	Member
28	Smt. Sheela Rodriguez, Infection Control Convener	Member
29	Smt. Mini N, Dietician	Member
30	Dr. Sajeed A, Additional Director (Administration)	Convener

h. Quality Improvement Committee

1	Dr. Rekha A. Nair, Director	Chairperson
2	Dr. Madhu Muralee, Medical Superintendent	Member
3	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
4	Dr. Rajeevan V, Administrative Medical Officer	Member
5	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
6	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
7	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
8	Dr. Rachel Cherian Koshy, Prof. & Head, Dept. of Anaesthesiology	Member
9	Dr. Geetha N, Prof. & Head, Dept. of Medical Oncology	Member
10	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
11	Dr. M. Venugopal, Prof. & Head, Dept. of Radiodiagnosis	Member

i. Drug Committee

1	Dr. Rekha A. Nair, Director	Chairperson
2	Dr. Sajeed A, Additional Director (Administration)	Member
3	Dr. Madhu Muralee, Medical Superintendent	Member
4	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member

5	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
6	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
7	Dr. Rachel Cherian Koshy, Prof. & Head, Dept. of Anaesthesiology	Member
8	Dr. Geetha N, Prof. & Head, Dept. of Medical Oncology	Member
9	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
10	Dr. Aswin Kumar, Additional Professor, Dept. of Radiation Oncology	Member
11	Dr. Asha Arjunan, Additional Professor, Dept. of Radiation Oncology	Member
12	Dr. Anoop TM, Associate Professor, Dept. of Medical Oncology	Member
13	Sri. Suresh G, Stores Officer	Member
14	Sri. Y. Ahammed Kabeer, Controller of Finance (till 28.02.2022)	Member
15	Sri. K.R. Gopakumar, Controller of Finance (from 01.03.2022)	Member
16	Sri. P. Ramaprasad, Assistant Purchase Officer	Convener

j. Hospital Transfusion Committee

1	Dr. Madhu Muralee, Medical Superintendent	Chairman
2	Dr. Sajeed A, Additional Director (Administration)	Member
3	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
4	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
5	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
6	Dr. Rachel Cherian Koshy, Prof. & Head, Dept. of Anaesthesiology	Member
7	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
8	Dr. Sreejith G. Nair, Professor, Dept. of Medical Oncology	Member
9	Smt. Sreelekha R, Chief Nursing Officer	Member
10	Smt. Bindu, Scientific Officer, Division of Transfusion Medicine	Member
11	Dr. K. Vijayalekshmi, Head, Division of Transfusion Medicine	Convener

k. Hospital Safety Committee

1	Dr. Sajeed A, Additional Director (Administration)	Chairman
2	Dr. Madhu Muralee, Medical Superintendent	Member
3	Dr. Rajeevan V, Administrative Medical Officer	Member
4	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
5	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
6	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
7	Dr. Swapna R. Nath, NABH Nodal Officer	Member
8	Dr. Prasanth CV, Resident Medical Officer Gr I, Division of Palliative Medicine	Member
9	Dr. Saju B, Additional Professor, Division of Radiation Physics	Member
10	Sri. Giri Purushothaman, Head, Engineering Wing	Member
11	Smt. Sheela Rodriguez, Infection Control Convener	Member
12	Smt. Sreelekha R, Chief Nursing Officer	Member
13	Smt. Mini N, Dietician	Member
14	Smt. Jaya TS, Head, Housekeeping division	Member
15	Smt. Rajani RV, Clinical Safety Officer	Member
16	Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/Patient Safety Officer	Convener

l. Mortality/Morbidity Review Committee

1	Dr. Sajeed A, Additional Director (Administration)	Chairman
2	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
3	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
4	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
5	Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/Patient Safety Officer	Member
6	Dr. Geetha N, Prof. & Head, Dept. of Medical Oncology	Member
7	Dr. T. Priyakumari, Prof. & Head, Dept. of Paediatric Oncology	Member
8	Dr. Swapna R. Nath, NABH Nodal Officer	Member

9	Dr. Rema P, Additional Professor; Dept. of Surgical Services	Member
10	Dr. Bipin T. Varghese, Additional Professor; Dept. of Surgical Services	Member
11	Dr. Asha Arjunan, Additional Professor; Dept. of Radiation Oncology	Member
12	Dr. Roshni S, Associate Professor; Dept. of Radiation Oncology	Member
13	Dr. Lali VS, Resident Medical Officer Sr Gr; Dept. of Medical Oncology	Member
14	Dr. Wagh Mira Sudham, Assistant Professor; Dept. of Surgical Services	Member
15	Dr. Manjusha Nair, Associate Professor; Dept. of Paediatric Oncology	Member
16	Dr. Sugeeth MT, Assistant Professor; Dept. of Medical Oncology	Member
17	Dr. Madhu Muralee, Medical Superintendent	Convener

m. Code Blue Committee

1	Dr. Viji S. Pillai, Additional Professor; Dept. of Anaesthesiology	Chairperson
2	Dr. Sajeed A, Additional Director (Administration)	Member
3	Dr. Madhu Muralee, Medical Superintendent	Member
4	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
5	Dr. Rajeevan V, Administrative Medical Officer	Member
6	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
7	Dr. Rachel Cherian Koshy, Prof. & Head, Dept. of Anaesthesiology	Member
8	Dr. Bhagyalakshmi R, Associate Professor; Dept. of Anaesthesiology	Member
9	Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/Patient Safety Officer	Member
10	Dr. Roshni S, Associate Professor; Dept. of Radiation Oncology	Member
11	Dr. Prasanth VR, Assistant Professor; Dept. of Paediatric Oncology	Member
12	Smt. Sreelekha R, Chief Nursing Officer	Member
13	Smt. Vijaya AK, Head Nurse	Member
14	Sri. Manoj, Staff Nurse	Convener

n. Pharmacy and Therapeutic Committee

1	Dr. Sajeed A, Additional Director (Administration)	Chairman
2	Dr. Madhu Muralee, Medical Superintendent	Member
3	Dr. Lijeesh AL, Deputy Medical Superintendent	Member
4	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 06.08.2021)	Member
5	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology (from August 2021)	Member
6	Dr. Beela Sarah Mathew, Professor; Dept. of Radiation Oncology	Member
7	Dr. Aswin Kumar, Additional Professor; Dept. of Radiation Oncology	Member
8	Dr. Mallika Balakrishnan, Additional Professor; Dept. of Anaesthesiology	Member
9	Dr. Swapna R. Nath, Head, Division of Microbiology & NABH Nodal Officer	Member
10	Dr. Anoop TM, Associate Professor; Dept. of Medical Oncology	Member
11	Dr. Bintha R, Associate Professor; Dept. of Paediatric Oncology	Member
12	Smt. Sreelekha R, Chief Nursing Officer	Member
13	Smt. Jaya TS, Head, Housekeeping Division	Member
14	Sri. Dinesh PS, Pharmacist Gr I	Member
15	Sri. Suresh G, Stores Officer	Convener

o. Committee on Safe Radiotherapy Practice

1	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology (till 6.08.2021)	Chairman
2	Dr. Sajeed A, Additional Director (Administration)	Member
3	Dr. Francis V. James, Prof. & Head, Dept. of Radiation Oncology	Member
4	Dr. Beela Sarah Mathew, Professor; Dept. of Radiation Oncology	Member
5	Dr. Raghu Kumar P, Head, Division of Radiation Physics	Member
6	Dr. Zenia Gopalakrishnan, Assistant Professor; Division of Radiation Physics	Member
7	Sri. Ramabhadran P, Technical Officer; Division of Radiation Physics (till 31.05.2021)	Member

8	Concerned staff/Concerned Division/ Department	Member
9	Dr.Thayal Singh Elias, Division of Radiation Physics	Convener

p. Radiation Safety Committee for Division of Nuclear Medicine

1	Dr. Sreekumar A, Head, Division of Nuclear Medicine	Chairman
2	Dr. Sajeed A, Additional Director (Administration)	Member
3	Dr.Thayal Singh Elias, Professor, Division of Radiation Physics	Member
4	Dr. Shaiju VS, Assistant Professor, Division of Radiation Physics	Member
5	Dr. Shailesh Kumar KN, Technical Officer, Division of Nuclear Medicine	Member
6	Smt. Sheeja SR, Technical Officer, Division of Nuclear Medicine	Member
7	Dr. Raghukumar P, Addl. Professor & Head, Division of Radiation Physics and Radiation Safety Officer	Convener

q. Library Committee

1	Dr. Rekha A. Nair, Director	Chairperson
2	Dr. N. Geetha, Additional Director (Academic)	Member
3	Dr. Madhu Muralee, Medical Superintendent	Member
4	Dr. M.Venugopal, Head, Dept. of Radiodiagnosis	Member
5	Dr. K. Jayasree, Head, Dept. of Pathology	Member
6	Sri. Y. Ahammed Kabeer, Controller of Finance (till 28.02.2022)	Member
7	Sri. K.R.Gopakumar, Controller of Finance (from 01.03.2022)	Member
8	Dr. V. Vishnu, Librarian cum Information Officer Gr I	Convener

Right to Information Act

- a. Appellate Authority
Dr. Sajeed A, Additional Director (Administration)
- b. Public Information Officer
Dr. Rajesh R. Chandran, Deputy Medical Superintendent
(till 30.11.2021)
Dr. Lijeesh AL, Deputy Medical Superintendent
(from 11.12.2021)
- c. Assistant Public Information Officer
Sri. Sajeesh CK, Clinical Records Assistant
- d. Number of Applications

Received	:	72
Disposed	:	72
Pending	:	Nil
- e. Penalties levied for non-supply of information: Nil
- f. Cases pending with State Information Commission: Nil

Internal Control Mechanism

- a. Staff used exclusively for internal audit: 1
- b. Audit committee meetings: Nil
- c. Monitoring committees set up: Administrative committee consisting of all HODs, Medical Superintendent and Additional Directors with the Director as the Head, meets periodically to evaluate the functioning of the Centre.
- d. Other matters
 - i. Grievance redressal mechanism: Committee for redressal of complaints of sexual harassment against female employees.
 - ii. Official Language Act: Implemented
 - iii. Computerisation: Completed

ACCOUNTS
2021-2022

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM (Reg. No. 567/81)
BALANCE SHEET AS ON 31st MARCH 2022

Sch.	Liabilities	Current Year (Rs.)	Previous Year (Rs.)	Sch.	Assets	Current Year (Rs.)	Previous Year (Rs.)
I	CAPITAL FUND	4,174,786,847	3,842,329,188	VI	FIXED ASSETS	4,347,436,492	4,019,303,802
II	SPECIFIC FUNDS	452,394,209	438,340,353	VII	INVESTMENTS	2,010,379,763	1,676,804,926
	Grant in aid - GOF for State Cancer Institute	23,929,109	10,182		<u>CURRENT ASSETS AND LOANS & ADVANCES</u>		
	GRANT FROM GOVT OF KERALA	5,737,569	5,737,569	VIII	CLOSING STOCK	126,994,001	111,739,798
	GRANT IN AID - GOK FOR KARUNAGAPPALLY PROJECT	1,741,000		IX	ADVANCES-OTHERS & OTHER CURRENT ASSETS	537,883,061	242,132,603
	CCL FUND	209,460,053	209,460,053	X	INVESTIGATION FEES RECEIVABLE	422,371,223	649,237,873
	CSR FUND	7,500,000		XI	BALANCE WITH BANK	583,821,577	441,908,847
III	RADIO THERAPY RESEARCH FUND	725,621	725,621	XII	CASH IN HAND	1,520,920	1,420,046
	<u>CURRENT LIABILITIES AND PROVISIONS</u>			XIII	INCOME & EXPENDITURE ACCOUNT	403,983,017	432,966,555
IV	CURRENT LIABILITIES - OTHERS	615,790,343	527,829,726				
	PROVISION FOR DA ARREARS						
	PROVISION FOR GRATUITY	(16,521,207)	(16,521,207)				
	PROVISION FOR MEDICINE PURCHASE KMSCL	97,849,223	97,849,223				
	PROVISION FOR DOUBTFULL DEBTS	347,565,843	211,196,608				
V	CREDITORS FOR GOODS SUPPLIED	147,116,860	111,146,658				
VI	PROVISION FOR DEPRECIATION	2,366,314,582	2,147,410,476				
	TOTAL	8,434,390,053	7,575,514,451		TOTAL	8,434,390,053	7,575,514,451

Thiruvananthapuram
29.09.2022

Dr. Rekha A Nair
Director, RCC

Gopakumar K R
Controller of Finance

For J Singh & Associates
Chartered Accountants

As per our report of even date attached

REGIONAL CANCER CENTRE SOCIETY,TRIVANDRUM (Reg.No. 567/81) INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2022

Sch.	Particulars	Current Year (Rs.)	Previous Year (Rs.)	Sch.	Particulars	Current Year (Rs.)	Previous Year (Rs.)
	Opening Stock	111,739,798	172,557,707		Grant-in-aid; Govt of Kerala	596,055,000	743,864,000
A	Purchases,medicines,chemicals etc	661,131,513	484,902,121		Investigation fees	982,359,542	682,487,965
B	Salaries and Allowances	1,075,087,776	931,781,557		Medicine Receipts	604,840,130	509,870,262
	Uniform and Liveries	1,032,309	449,944	L	Interest Income	86,533,205	60,385,453
C	Rent, Rates & Taxes	5,810,858	2,021,912	M	Training Fees	28,154,502	30,168,092
D	Postage, Telephone & Telegram	610,473	670,963	N	Miscellaneous Income	7,593,947	6,893,723
E	Travelling Expenses	69,932	24,296	O	Training Fund	3,004,348	10,955,537
F	Printing and Stationery	2,472,002	2,493,471		Closing Stock	126,994,001	111,739,798
	Advertisement Charges	777,159	653,889				
G	Electricity and Water Charges	54,074,035	51,900,726				
H	Repairs and Maintenance	18,940,088	11,070,258				
I	Service Contract Charges	54,025,487	15,028,377				
	Audit Fees	57,500	175,820				
J	Computer Expenses	797,183	784,121				
	Books & Periodicals	17,520	21,081				
	Expenses to NTR	-	354,206				
K	Miscellaneous Expenses	56,698,712	49,038,217				
	Doubtful debts	136,369,235	175,188,799				
	Medical treatment staff & dependents	4,976,359	4,514,506				
	Depreciation	218,904,106	224,219,871				
	Excess of Income over Expenditure	31,942,629	28,512,989				
	TOTAL	2,435,534,674	2,156,364,831		TOTAL	2,435,534,674	2,156,364,831

Thiruvananthapuram
29.09.2022

Dr. Rekha A Nair
Director, RCC

Gopakumar K R
Controller of Finance

For J Singh & Associates
Chartered Accountants

As per our report of even date attached

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM (Reg. No. 567/81)

SCHEDULE -VI

ITEM	Sch.	Gross Block				Depreciation			Net Block		Amount INR	
		Original cost 01.04.2021	Additions	Deductions	Cost on 31.3.2022	Up to 31.3.2021	Rate	For the year 2021-22	Total up to 31.3.2022	Balance as on 31.03.2022		As on 31.3.2021
Air Conditioner	1	79,490,621	16,900		79,507,521	57,769,137	0	3,260,758	61,029,895	18,477,627	21,721,484	
Building	2	607,868,227	13,953,581		621,821,808	325,465,542	0	29,635,627	355,101,168	266,720,639	282,402,685	
Civil Works	3	309,141	-		309,141	226,783	0	8,236	235,018	74,122	82,358	
Cobalt Unit	4	18,123,455	-		18,123,455	17,425,614	0	104,676	17,530,291	593,165	697,841	
Hospital Equipments & Other Assets (Projects)	5	71,953,412	-		71,953,412	58,311,145	0	2,046,340	60,357,485	11,595,927	13,642,267	
Electrical Installation	6	115,909,151	2,051,398		117,960,549	88,477,260	0	4,422,493	92,899,753	25,060,796	27,431,891	
Hospital & Lab Equipments	7	2,213,062,451	163,122,276		2,376,184,727	1,289,612,114	0	162,985,892	1,452,598,006	923,586,721	923,450,337	
Assets (Donations)	8	370,112	-		370,112	360,328	0	1,468	361,795	8,317	9,784	
Fire Detection	9	16,560,074	-		16,560,074	10,707,020	0	877,958	11,584,978	4,975,096	5,853,054	
Gas & Cylinder	10	10,384,532	-		10,384,532	9,329,414	0	158,268	9,487,682	896,850	1,055,118	
Computer Hardware & Software	11	82,227,018	2,123,830		84,350,848	77,236,608	0	2,845,696	80,082,304	4,268,544	4,990,409	
High Energy Linear Accelerator	12	52,987,763	-		52,987,763	49,643,524	0	501,636	50,145,160	2,842,603	3,344,239	
Furniture & Fittings	13	48,847,612	4,144,840		52,992,452	27,253,848	0	2,573,860	29,827,708	23,164,744	21,593,765	
Land	14	1,000	-		1,000	-	-	-	-	1,000	1,000	
Library Books & Journals	15	121,635,846	4,115,035		125,750,881	80,546,051	0	6,780,724	87,326,776	38,424,105	41,089,795	
Lift & Elevator	16	27,265,560	-		27,265,560	20,027,312	0	1,085,737	21,113,049	6,152,511	7,238,248	
Low Energy Linear Accelerator	17	3,611,489	-		3,611,489	3,240,338	0	55,673	3,296,011	315,479	371,152	
Capital Wok in Progress	18	506,625,910	138,503,056		645,128,966	-	-	-	-	645,128,966	506,625,910	
Office Equipments	19	7,985,110	14,836		7,999,946	4,851,413	0	472,280	5,323,693	2,676,253	3,133,697	
Solar Power Generation System-M/s ANERT	20	6,208,809	-		6,208,809	3,501,848	0	406,044	3,907,892	2,300,917	2,706,961	
Telemedicine Projects	21	7,718,623	-		7,718,623	7,291,520	0	64,065	7,355,585	363,038	427,103	
Telephone Equipments	22	6,699,118	86,938		6,786,056	5,620,048	0	174,901	5,794,950	991,106	1,079,070	
Vehicles	23	6,753,932	-		6,753,932	4,763,890	0	298,506	5,062,397	1,691,535	1,990,041	
Water Supply & Drainage	24	6,704,835	-		6,704,835	5,749,719	0	143,268	5,892,986	811,849	955,117	
TOTAL		4,019,303,802	328,132,690		4,347,436,492	2,147,410,476		2,18,904,106	2,366,314,582	1,98,112,1909	1,871,893,325	

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(Reg. no. 567/81)
CANCER CARE FOR LIFE SCHEME
INCOME AND EXPENDITURE ACCOUNT FOR
THE YEAR ENDED 31st MARCH 2022

Particulars	Current Year (Rs.)	Previous Year (Rs.)	Particulars	Current Year (Rs.)	Previous Year (Rs.)
Reimbursement to Patients	17,589,677	13,333,730	Interest on FD & Investments	14,602,253	15,933,200
Excess of Income over Expenditure		2,599,470	CCI Incentive	28,333	
			Excess of Expenditure over Income	2,959,091	
TOTAL	17,589,677	15,933,200	TOTAL	17,589,677	15,933,200

Thiruvananthapuram
29.09.2022

Dr. Rekha A Nair
Director, RCC

Gopakumar K R
Controller of Finance

For J Singh & Associates
Chartered Accountants
As per our report of even date attached

INDEPENDENT AUDITOR'S REPORT

TO THE MEMBERS OF "REGIONAL CANCER CENTRE SOCIETY"

Report on the Financial Statements

We have audited the financial statements of REGIONAL CANCER CENTRE SOCIETY, Thiruvananthapuram which comprises the Balance Sheet as at March 31st 2022, the Income and Expenditure Account for the year then ended, and a summary of significant accounting policies. In our opinion, the accompanying financial statement give a true and fair view of the financial position of the entity as at 31st March 2022, and of its financial performance for the year then ended in accordance with the accounting standards issued by the Institute of Chartered Accountants of India (ICAI).

Basis for Opinion

We conducted our Audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those Standards are further described in the Auditors Responsibilities for the Audit of Financial Statements section of our report. We are independent of the entity in accordance with the Code of Ethics issued by ICAI and we have fulfilled our other ethical responsibilities in accordance with 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

Without qualifying our opinion, and to the best of our information and explanation given to the matters came to our notice during the course of audit are provided in Annexure I to this report.

Responsibilities of Management and those charged with Governance for the Financial Statements

The Society's management is responsible for the preparation of these financial statements that give a true and fair view of the state of affairs and the results of operations of the society in accordance with accounting principles generally accepted in India. This responsibility includes the design, implementation and maintenance of internal control relevant to the preparation and presentation of the financial statements that give a true and fair view and are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of Accounting unless management either intends to liquidate the society or to cease operations or has no realistic alternative but to do so.

Those charged with Governance are responsible for overseeing the society's financial reporting process.

Auditor's Responsibilities for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, 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 Standards on Auditing (SA's) 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 users taken on the basis of these financial statements.

Report on other Legal and other regulatory requirements

1) We further report that;

We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for purposes of audit.

In our opinion, proper books of account have been kept by Society so far as appears from our examination of those books.

The Balance Sheet and the Income and Expenditure account dealt by this report are in the agreement with the Books of Accounts.

In our opinion, the Balance Sheet and the Income and Expenditure Account comply with the Accounting Standards issued by the Institute of Chartered Accountants of India.

Thiruvananthapuram
29.09.2022

For J Singh & Associates
Chartered Accountants
FRN | I0266W

Densil Fernando
Partner
M. No. 208859
UDIN: 22208859ADFUNT1339

SCHEDULE XV

SIGNIFICANT ACCOUNTING POLICIES

1. ACCOUNTING ASSUMPTIONS

The accounts have been prepared under the historic cost convention on the basis of a going concern, with revenues recognised and expenses accounted on their accrual (except income from investments, treatment expenditure in respect of patients, which is accounted only at the settlement of bills and leave surrender salary which are accounted as and when income/expense is actually received or paid, hostel rent in respect of PG doctors) including provisions / adjustments for committed obligations and amounts determined as payable or receivable during the year.

The Financial Statements are prepared in accordance with Generally Accepted Accounting Principles (GAAP) in India and the Accounting Standards issued by the Institute of Chartered Accountants of India and deviations if any from such standards have been explained in the notes on accounts.

2. METHOD OF ACCOUNTING

The method of accounting followed by the society is "mercantile system" subject to the clause no.1 above.

3. INVENTORIES

Inventories are valued at cost or net realizable value whichever is less. Cost includes freight and other related incidental expenses and is computed in weighted average method.

4. FIXED ASSETS

The "Gross Block" of fixed assets represents cost of acquisition and all other attributable cost of bringing the asset to the working condition for its intended use. Accumulated depreciation is shown separately as Provision for Depreciation.

5. DEPRECIATION

Depreciation is provided on Fixed Assets under written down value method at the rates as per the Fixed Assets Schedule attached. In the case of new assets purchased during the year full depreciation is provided at the rates mentioned above while no depreciation is charged during the year in the case of assets disposed / demolished / discarded or otherwise retired during the year.

6. GRANT-IN-AID

Grant-in-Aid received during the year from the Government, both Central and State, under the plan funds to the extent of the value of additions to fixed assets in the current year is transferred and included under Capital Fund Account and the balance amount is retained under Grant in Aid from the respective Government Account. Grant in Aid received as non-plan funds from the State Government is transferred to Income and Expenditure Account to the extent utilized in the current year for the purpose for which it is received and the amount to the extent not utilized in the current year for the stated purpose, but set apart to be used for the purpose in the subsequent year(s), is retained under Grant-in-Aid from the State Government Account. Capital Grant received from NRHM during the previous years has been included under capital fund account as it represents the fixed assets acquired.

7. CAPITAL FUND

Capital Fund Account balance includes the fund balance at the beginning of the year; Capital Grants to the extent used for acquisition / construction of fixed assets, the value of assets received from the projects at free of cost and the value of assets received as donations.

8. INCOME-TAX

No provision for current or deferred tax is provided as the society is a registered charitable society under Section 12A (a) of the Income-Tax Act, 1961.

9. ASSETS RECEIVED FROM PROJECT CELL

(a) The assets transferred to the society from the projects cell after having fulfilled its intended use in the projects are credited to capital fund account as the Society received these assets as free of cost.

(b) The Receipt and expenditure of projects funded by foreign entities received at project cell during the year was Rs.24,15,260.07 and Rs.23,76,753 respectively and the same is accounted in RCC as net of FCR Fund receivable and FCR specified fund.

10. RETIREMENT BENEFITS

The liability on account of post-employment benefits in the form of gratuity, as and when it arises, is met from Regional Cancer Centre Employees Group Gratuity Fund set up under a Group Gratuity Scheme administered by the Life Insurance Corporation of India. The premiums paid to the scheme is treated as revenue expenditure and disclosed in the Income and Expenditure Account.

Thiruvananthapuram
29-09-2022

Dr: Rekha A Nair
Director, RCC

Gopakumar K R
Controller of Finance

For J Singh & Associates
Chartered Accountants

As per our report of even date attached

SCHEDULE – XVI

NOTES ON ACCOUNTS

1. Had the organization followed the Accounting Standards (AS 12) regarding Government Grant issued by the ICAI and reduced the grant utilized for acquisition of fixed assets from the gross value of such assets, the depreciation debited to Income & Expenditure Account for the year would have been reduced by the quantum of depreciation relating to the value of specific assets acquired out of Grant-in-Aid and there would have been consequent reduction in the deficit for the year. As the organization, has been following the accounting practice, as mentioned under Clause No.6 of the Significant Accounting Policies, for previous years also, the impact of the above deviation from the standard in the current year's deficit could not be quantified precisely.
2. RCC is implementing the flagship Insurance scheme of State /Central Government viz, Karunya Aarogya Suraksha Pathadhi(KASP-SHA). The package rates provided in the scheme was much less than the normal billing rate of RCC and the Government promised to provide the difference as a special scheme. However, no assistance was sanctioned so far. Hence RCC created a provision amounting to Rs.102,11,07,156.33 for the amount shown as difference of KASP – SHA rate for the year 2021-22.
3. RCC was also implementing Central Health Ministers Cancer Patient Scheme (RAN Scheme). An amount of Rs. 3,42,62,078.64 was due from Government of India towards this scheme. Even prolonged correspondence, there appears to be doubtful about its realization and hence a provision amounting to Rs. 3,42,62,078.64 was created during the year.
4. Investigation fees include income from registration fees, ward charges, nuclear medicine, radiotherapy, surgery and lab charges.
5. If there is surplus or profit during the year, according to the society, which is not chargeable to income-tax, as the society has obtained registration under Section 12AA of the Income Tax Act 1961.
6. Contingent liability towards property tax and interest thereon is amounting to Rs.101,67,369/- Non-refund of Grant-in-aid is contingent upon the fulfillment of all the conditions attached to such assistance.
7. The balance in Grant in Aid from Government of Kerala account, includes grant received under Plan Fund of Rs. 57,37,569/- and similarly Grant-in-Aid from Government of India of Rs. 2,39,29,109/- represent the unutilized amount of Grant received under Plan from the Central Government.
8. Figures for the previous year have been regrouped and recast wherever necessary to suit the current year lay-out.

Thiruvananthapuram
29-09-2022

Dr. Rekha A Nair
Director, RCC

Gopakumar K R
Controller of Finance

For J Singh & Associates
Chartered Accountants
As per our report of even date attached

TO WHOMSOEVER IT MAY CONCERN

1. During the year 2021-22 The Regional Cancer Centre Society, Thiruvananthapuram has received Rs. 2135.77 lakh under the head of account 2210-05-105-52-36 (NP) Grant in Aid-Non Salary and Rs. 3824.78 lakh under the head of account 2210-05-105-52-31 (NP) Grant in Aid-Salary from the Govt. of Kerala. The details of such receipts are as follows:

Installment	G.O.Numbers	Amount (Rs. in Lakhs)
A	Head of Account-2210-05-105-52-36 (NP)- Grant in Aid-Non Salary	
1	GO.(Rt).No.1092/2021/H&FWD dt. 19/05/2021	266.97
2	GO.(Rt).No.1494/2021/H&FWD dt. 18/07/2021	266.97
3	GO.(Rt).No.2075/2021/H&FWD dt. 24/09/2021	266.97
4	GO.(Rt).No.2509/2021/H&FWD dt. 16/11/2021	266.97
5	GO.(Rt).No.2837/2021/H&FWD dt. 17/12/2021	266.97
6	GO.(Rt).No.341/2022/H&FWD dt. 11/02/2022	82.92
7	GO.(Rt).No.521/2022/H&FWD dt.08/03/2022	718.00
	Total (A)	2135.77
B	Head of Accounts-2210-05-105-31 (NP)-Grant in Aid -Salary	
1	GO.(Rt).No.1092/2021/H&FWD dt. 19/05/2021	478.10
2	GO.(Rt).No.1494/2021/H&FWD dt. 18/07/2021	478.10
3	GO.(Rt).No.2075/2021/H&FWD dt. 24/09/2021	478.10
4	GO.(Rt).No.2509/2021/H&FWD dt. 16/11/2021	478.10
5	GO.(Rt).No.2837/2021/H&FWD dt. 17/12/2021	478.10
6	GO.(Rt).No.341/2022/H&FWD dt. 11/02/2022	478.10
7	GO.(Rt).No.497/2022/H&FWD dt.04/03/2022	956.18
	Total (B)	3824.78
	Grand Total (A+B)	5960.55

2. The amount was used during the year 2021-22 for the following purposes:

Sl.No	Purpose	Amount (Rs.in Lakhs)
1	Operational expenditure including salary	5,960.55
	Total	5,960.55

3. That the utilization mentioned above is true and correct as disclosed by the Books of accounts of the Society.

Thiruvananthapuram
29-09-2022

Dr. Rekha A Nair
Director, RCC

Gopakumar KR
Controller of Finance

For J Singh & Associates
Chartered Accountants

As per our report of even date attached

AUDITOR'S REPORT

We have audited the accounts of the Foreign Contribution for Research Projects of the Regional Cancer Centre Society, registered as per T.C Literary, Scientific and Charitable Societies Regulation Act XII of 1955 (Reg. No. 567/81) with registered office at Medical College PO, Thiruvananthapuram-695011, Kerala State for the year ended 31st March 2022 and examined all relevant books and vouchers and certify that according to the audited accounts.

1. The brought forward foreign contribution at the beginning of the financial year 2021-2022 was Rs.6,75,65,964.35
2. Foreign Contribution worth Rs.24,15,260.07 was received by the Association during the year ended 31st March 2022.
3. Interest accrued on foreign contribution and other income derived from foreign contribution or interest thereon of worth Rs.36,50,573.31 was received by the Association during the financial year 2021-22.
4. The balance in foreign contribution account together with interest earned thereon at the end of the financial year 2021-2022 was Rs.7,12,55,044.73
5. Certified that the Association has maintained the accounts of foreign contribution and records relating thereto in the manner specified in section 19 of the Foreign Contribution (Regulation) Act, 2010(42 of 2010) read with Rule 17 of the Foreign Contribution (Regulation) Rules, 2011.

The information furnished above and, in the Balance Sheet, and statement of Receipts and Payments is correct, as checked by me.

The association has utilized the foreign contribution for the purpose(s) it is registered or granted prior permission under Foreign Contribution (Regulation) Act,2010

For J Singh & Associates

Chartered Accountants

FRN. 110266W

Densil Fernando

Partner

M.No. 208859

UDIN : 22208859BDTAKV5083

31st October 2022

Thiruvananthapuram

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(Reg. No. 567/81)
Foreign contribution for Research Projects
Balance Sheet as at 31st March 2022

Amount INR

Previous Year As on 31/03/2021	LIABILITIES	Current Year As on 31/03/2022	Previous Year As on 31/03/2021	PROPERTY & ASSETS		Current Year As on 31/03/2022
	CAPITAL FUND	-		FIXED ASSETS		-
46,315,440.95	RESEARCH FUND (Sch.1)	49,966,014.26				
			62,097,470.00	INVESTMENTS		63,824,071.31
21,250,523.40	FC PROJECT FUND (Sch.2)	21,289,030.47		(Schedule 3 attached)		
				<u>CURRENT ASSETS &</u>		
	<u>CURRENT LIABILITIES</u>			<u>LOANS AND ADVANCES</u>		
-	Salary Recovery	-	20,638.00	Cash in Hand	23,675.00	
			2,136,626.85	Cash at Bank	3,083,995.42	
375,407.50	Payable to Res: Project a/c	214,937.00		(SBI A/c No.57036240199)		
			2,730,443.00	Interest Accrued but not due	3,246,001.00	
			929,194.00	Tax Deducted at Source	1,272,239.00	
			7,000.00	Imprest	-	
			20,000.00	Rent Deposits	<u>20,000.00</u>	7,645,910.42
67,941,371.85	TOTAL	71,469,981.73	67,941,371.85			71,469,981.73

Vide my report of even date attached.

Thiruvananthapuram
31st October 2022

Finance Manager (Projects)

DIRECTOR

J SINGH & ASSOCIATES
Chartered Accountants

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(Reg. No. 567/81)
Foreign contribution for Research Projects
Receipts and Payments Account for the
year ended on 31st March 2022

RECEIPTS	Amount (Rs)	PAYMENTS	Amount (Rs)
To Opening Balance:-		By Project Expenses:-	
Cash in Hand	20,638.00	" Revenue Expenses paid	2,209,509.00
Cash at Bank	2,136,626.85	" Capital Expenses paid	-
		Other expenses paid	76,800.00
Receipts-Research Funds		Salary Recovery Account	43,360.00
Foreign Receipts (Sch.2)	2,415,260.07	Taxes paid	9,500.00
Recovery from Salary	43,360.00	Term Deposits	1,500,000.00
Tax Recoveries	9,500.00	Paid to Research	292,744.50
Refund of imprest	7,000.00		
Interest Received	70,212.00		
Term Deposit PNB	2,536,987.00		
		Closing Balance:-	
		Cash in Hand	23,675.00
		Cash at Bank	3,083,995.42
TOTAL	7,239,583.92	TOTAL	7,239,583.92

Vide my report of even date attached.

Thiruvananthapuram
31st October 2022

Finance Manager (Projects)

DIRECTOR

J SINGH & ASSOCIATES
Chartered Accountants

INDEPENDENT AUDITOR'S REPORT

To the Management

Report on the Financial Statements

Opinion

We have audited the accompanying Standalone financial statements of The Project Cell of RCC ("the Project Cell") which comprises the Balance Sheet as at March 31, 2022 the Statement of Income & Expenditure and other notes to the financial statements including policies and other explanatory information.

In our opinion and to the best of our information and according to the explanations given to us, the aforesaid standalone financial statements give a true and fair view, of the financial position of the Project Cell as at March 31, 2022, and of its financial performance for the year then ended in accordance with the Accounting Standards issued by the Institute of Chartered Accountants of India, (ICAI).

Basis for Opinion

We conducted our audit in accordance with the Standards on Auditing (SAs) issued by ICAI. Our responsibilities under those Standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the entity in accordance with the Code of Ethics issued by the Institute of Chartered Accountants of India together with the ethical requirements that are relevant to our audit of the 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.

Responsibility of Management for the Financial Statements

The management is responsible for the preparation and fair presentation of financial statements in accordance with the accounting standards and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, management is responsible for assessing the entity's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless management either intends to liquidate the entity or to cease operations, or has no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the entity's financial reporting process

Auditor's Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, 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 users taken on the basis of these financial statements.

Report on other Legal and regulatory requirements

We report that:

- a. We have sought and obtained all the information and explanations which to the best of our knowledge and belief were necessary for the purpose of our audit;
- b. In our opinion proper books of accounts have been kept by Project Cell of RCC so far as it appears from our examination of those books.
- c. The Balance Sheet, Statement of Income & Expenditure, and notes dealt with by this Report are in agreement with the books of account.
- d. In our opinion, the Balance sheet and the Income and Expenditure Account comply with the Accounting Standards issued by the institute of Chartered Accountants of India.

For J Singh & Associates

Chartered Accountants

FRN. 110266W

Densil Fernando

Partner

M.No. 208859

UDIN : 22208859BDSZYM4200

31st October 2022

Thiruvananthapuram

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(REG. No. 567/81)
PROJECT CELL
(Financial Assistance received from
National Agencies for Research Projects)
Balance Sheet as on 31st March 2022

Previous Year As on 31/03/2021	LIABILITIES		Current Year As on 31/03/2022	Previous Year As on 31/03/2021	PROPERTY & ASSETS		Current Year As on 31/03/2022
9,963,577.62	CAPITAL FUND		9,963,577.62	148,532.11	FIXED ASSETS (Schedule-5)		168,330.34
	<u>EARMARKED FUNDS</u>						
139,148,892.85	R&D Fund (Sch.1)	153,649,847.12		264,989,092.00	INVESTMENTS (Schedule-6)		266,965,912.75
13,953,319.45	Dept: General Fund (Sch.2)	13,742,841.45					
1,937,684.62	Internal Project Fund (Sch.3)	1,164,100.62					
61,661,591.71	Project Fund (Sch.4)	55,923,104.09					
2,500,000.00	Grant in aid-Infosys	2,500,000.00			<u>CURRENT ASSETS &</u>		
50,000,000.00	Endowment Fund-Infosys	<u>50,000,000.00</u>	276,979,893.28		<u>LOANS & ADVANCES</u>		
				107,433.00	Cash in Hand - Sch-7	73,776.00	
	<u>OTHER CURRENT LIABILITIES</u>			6,490,164.01	Cash at Bank - Sch-8	<u>7,009,572.18</u>	7,083,348.18
252,584.00	Security Deposits	439,288.00			Other Current Assets and		
-	EPF Recovery	-		15,821,120.13	Loans & Advances (Schedule-9)		23,916,523.63
227,134.00	Goods & Service Tax	18,524.00					
1,043,486.00	Sundry creditors -Others	149,665.00					
6,868,071.00	Int.on Endowment -Infosys	<u>10,583,167.00</u>	11,190,644.00				
287,556,341.25			298,134,114.90	287,556,341.25			298,134,114.90

Vide my report of even date attached.

Thiruvananthapuram
31st October 2022

Finance Manager (Projects)

DIRECTOR

J SINGH & ASSOCIATES
Chartered Accountants

PROJECT CELL
REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(REG. No. 567/81)
Income and Expenditure Account
for the year ended on 31st March 2022

Previous Year As on 31/03/2021	EXPENDITURE	Current Year As on 31/03/2022	Previous Year As on 31/03/2021	INCOME	Current Year As on 31/03/2022
600,000.00	Consultation fee	710,000.00	3,263,844.15	Income from Projects	5,014,032.00
151,250.00	Daily Wages	196,410.00	11,118,910.00	Interest received	11,429,572.75
496,944.00	Monthly Allowance	448,000.00			
1,000.00	Travelling Expenses	-			
70,000.00	Audit Fee	112,600.00			
17,138.00	Meeting Expenses	22,837.00			
-	Printing & Stationery	7,721.00			
-	Computer Stationery	-			
101.00	Postage Expenses	288.00			
2,405.41	Bank charges	985.78			
32,014.48	Other Miscellaneous Expenses	120,465.93			
54,029.92	Depreciation	72,367.77			
12,957,871.34	Excess of Income Over Expenditure	14,751,929.27			
14,382,754.15		16,443,604.75	14,382,754.15		16,443,604.75

Vide my report of even date attached.

Thiruvananthapuram
31st October 2022

Finance Manager (Projects)

DIRECTOR

J SINGH & ASSOCIATES
Chartered Accountants

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
PERIPHERAL CENTRE OF RCC AT NEENDAKARA
Receipts and Payments Account
for the year ended on 31st March 2022

Sl.No	Receipts	Amount (Rs. Ps.)	Payments	Amount (Rs. Ps.)
1	Grant-in-Aid received (G.O.Rt.No.1303/2021/H&FWD dt.18.06.2021)	1,800,000.00	Salary	2,754,436.00
			Non-Salary	1,080,625.00
2	Grant-in-Aid received(G.O.Rt.No.397/2022/H&FWD dt.19.02.2022)	1,741,000.00		
	Excess Expenditure	294,061.00		
	TOTAL	3,835,061.00	TOTAL	3,835,061.00

Thiruvananthapuram
31st October 2022

Finance Manager (Projects)

DIRECTOR

J SINGH & ASSOCIATES
Chartered Accountants

REGIONAL CANCER CENTRE SOCIETY,TRIVANDRUM
PERIPHERAL CENTRE OF RCC AT NEENDAKARA
Utilisation Certificate

Sl. No.	Letter No.& date	Major/Subheads	Amount (Rs. in lakhs)
1	Grant-in-Aid received (G.O Rt.No.1303/2021/H&FWD) dt.18.06.2021	a. 2210-05-200-97-31 Salary(NP)	12.00
		b. 2210-05-200-97-36 Non Salary(NP)	6.00
2	Grant-in-Aid received (G.O.Rt.No.397/2022/H&FWD) dt.19.02.2022	a. 2210-05-200-97-31 Salary(NP)	13.51
		b. 2210-05-200-97-36 Non Salary(NP)	3.90
	TOTAL		35.41

Note: Certified that out of **Rs.35,41,000/-** of Grant-in-Aid sanctioned and received for the Peripheral Centre of RCC at Neendakara,Kollam during the financial year 2021 -22, a sum of **Rs.38,35,061/-** has been utilised for the purpose for which it has been sanctioned. The Receipts&Payments account duly certified is attached with this Utilisation Certificate.

DIRECTOR
31st October 2022

J SINGH & ASSOCIATES
CHARTERED ACCOUNTANT

Abbreviations used

3DCRT	Three-Dimensional Conformal Radiotherapy
AAR	Age-Adjusted incidence Rate
ABG	Arterial Blood Gas
AIDS	Acquired Immune Deficiency Syndrome
AML	Acute Myeloid Leukaemia
BARC	Bhabha Atomic Research Centre
BCR-ABL	Breakpoint Cluster Region-Abelson murine leukaemic viral gene
BMT	Bone Marrow Transplantation
BSc	Bachelor of Science
CBNAAT	Cartridge Based Nucleic Acid Amplification Test
CGHS	Central Government Health Scheme
CHIS	Comprehensive Health Insurance Scheme
CML	Chronic Myeloid Leukaemia
COVID	Coronavirus Disease
CR	Computed Radiography
CR	Crude Incidence Rate
CSR	Corporate Social Responsibility
CT	Computed Tomography
CVAD	Central Venous Access Device
DIBH	Deep Inspiration Breath Hold
DM	Doctorate of Medicine
DNA	Deoxyribonucleic Acid
DR	Digital Radiography
ECDC	Early Cancer Detection Centre
ECRT	Extra Corporeal Radiotherapy
ELISA	Enzyme-Linked Immunosorbent Assay
ER	Estrogen Receptor
ESI	Employees' State Insurance
ESTRO	European Society for Radiotherapy and Oncology
FISH	Fluorescence In Situ Hybridization
FNAC	Fine Needle Aspiration Cytology
GA	General Anaesthesia
HbA1c	Haemoglobin A1c
HBCR	Hospital Based Cancer Registry
HBRA	High Background Radiation Area
HbsAg	Hepatitis B surface Antigen
HCV	Hepatitis C Virus
HDR	High Dose Rate
HER2	Human Epidermal Growth Factor Receptor 2
HIV	Human Immunodeficiency Virus
HMCPF	Health Minister's Cancer Patient Fund
HPLC	High Performance Liquid Chromatography
HPV	Human Papillomavirus
IAEA	International Atomic Energy Agency
IARC	The International Agency for Research on Cancer
ICMR	Indian Council of Medical Research
ICU	Intensive Care Unit
IgG	Immunoglobulin G

IGRT	Image-Guided Radiation Therapy
IMRT	Intensity-Modulated Radiation Therapy
IP	In-patient
KUHS	Kerala University of Health Sciences
LEEP	Loop Electrosurgical Excision Procedure
MCh	Magister of Chirurgiae
MD	Doctor of Medicine
MLT	Medical Laboratory Technology
MR	Magnetic Resonance
MRI	Magnetic Resonance Imaging
MS	Master of Surgery
MSc	Master of Science
MUPIT	Multiple-site Perineal Applicator
NACO	National AIDS Control Organisation
NBRR	Natural Background Radiation Registry
NF-κB	Nuclear Factor Kappa-B Cells
NGO	Non-Governmental Organisation
NHL	Non-Hodgkin's Lymphoma
OGD	Oesophago-Gastroduodenoscopy
OP	Out Patient
PBCR	Population Based Cancer Registry
PC	Packed Cells
PCR	Polymerase Chain Reaction
PET/CT	Positron Emission Tomography/Computed Tomography
PICC	Peripherally Inserted Central Catheter
PML-RARA	Promyelocytic Leukaemia/Retinoic Acid Receptor Alpha
PR	Progesterone Receptor
RBC	Red Blood Corpuscles
RCC	Regional Cancer Centre
RGCB	Rajiv Gandhi Centre for Biotechnology
RNA	Ribonucleic Acid
RT	Radiation Therapy
RT-PCR	Reverse Transcription Polymerase Chain Reaction
SBRT	Stereotactic Body Radiation Therapy
SCTIMST	Sree Chitra Tirunal Institute for Medical Sciences and Technology
SERS	Surface-Enhanced Raman Scattering
SPECT	Single-Photon Emission Computed Tomography
SRS/SRT	Stereotactic Radiosurgery & Radiotherapy
STAT3	Signal Transducer and Activator of Transcription-3
TB	Tuberculosis
TBI	Total Body Irradiation
TLD	Thermoluminescent Dosimeter
TNBC	Triple Negative Breast Cancer
TSET	Total Skin Electron Therapy
VIA	Visual Inspection with Acetic Acid
VIAM	Visual Inspection with Acetic Acid under Magnification
VSSC	Vikram Sarabhai Space Centre

Acknowledgements

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Department of Health & Family Welfare, Government of Kerala
State Planning Board, Government of Kerala
Director of Health Services, Government of Kerala, Thiruvananthapuram
World Health Organisation, Geneva, Switzerland
International Agency for Research on Cancer (IARC), Lyon, France
Union for International Cancer Control (UICC) Geneva, Switzerland
World Health Organisation, Regional Office, New Delhi
National Cancer Institute, Bethesda, Maryland, USA
Memorial Sloan-Kettering Cancer Centre, New York, USA
National Cancer Centre, Singapore
Health Research Foundation, Japan
Finnish Cancer Society, Finland
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Atomic Energy Commission, Government of India
Bhabha Atomic Research Centre, Bombay
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Sree Avittam Thirunal Hospital for Women and Children, Thiruvananthapuram
Dental College, Thiruvananthapuram
Department of Economics and Statistics, Kerala
Drugs Controller, Thiruvananthapuram
College of Pharmaceutical Sciences, Thiruvananthapuram
Corporation of Thiruvananthapuram
Regional Cancer Association, Thiruvananthapuram
Care Plus, Thiruvananthapuram
Asraya, Thiruvananthapuram
All our Well-wishers and Friends



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