

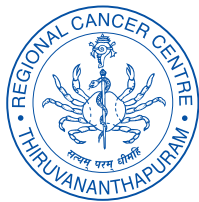
REGIONAL CANCER CENTRE

THIRUVANANTHAPURAM INDIA

ANNUAL REPORT 2020-21

FOUR DECADES OF CRUSADE AGAINST CANCER





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 2020-2021



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

REGIONAL CANCER CENTRE

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Front cover RCC building photo courtesy: Dr. Lijeesh AL

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GOVERNING BODY

1	Shri. Pinarayi Vijayan Hon'ble Chief Minister of Kerala	Chairman
2	Smt. K.K.Shailaja Teacher Hon'ble Minister for Health and Social Justice, Government of Kerala	Vice-Chairperson
3	Shri. Rajan N. Khobragade, IAS Principal Secretary to Government Health & Family Welfare Department, Government of Kerala	Alt.Vice-Chairman
4.	Shri. Rajesh Kumar Singh, IAS Additional Chief Secretary, Finance Department, Government of Kerala	Member
5	Dr. A. Jayathilak, IAS Principal Secretary to Government Planning & Economic Affairs Department, Government of Kerala	Member
	Dr.Venu V, IAS Additional Chief Secretary Planning & Economic Affairs Department, Government of Kerala	Member
6	Smt. Preeti Sudan, IAS (till 31.07.2020) Secretary to Government Ministry of Health and Family Welfare, Government of India	Member
	Shri. Rajesh Bhushan, IAS (from 31.07.2020) Secretary to Government Ministry of Health and Family Welfare, Government of India	Member
7	Dr. Rajiv Garg (till 11.08.2020) Director General of Health Services Ministry of Health and Family Welfare, Government of India	Member
	Dr. Sunil Kumar (from 11.08.2020) Director General of Health Services Ministry of Health and Family Welfare, Government of India	Member
8	Dr. Asha Kishore (till 09.12.2020) Director, Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram	Member
	Dr. K. Jayakumar (from 09.12.2020) Director, Sree Chitra Tirunal Institute for Medical Sciences & Technology, Thiruvananthapuram	Member
9	Dr. M.V. Pillai Haematologist, Medical Oncologist and President & CEO of the International Network for Cancer Treatment and Research (USA) (Eminent Medical Scientist)	Member
10	Dr. Remla Beevi Director of Medical Education, Government of Kerala	Member
11	Dr. M.K. Ajayakumar (till 31.05.2020) Principal, Government Medical College, Thiruvananthapuram	Member
	Dr. Sara Varghese (from 01.06.2020) Principal, Government Medical College, Thiruvananthapuram	Member
12	Dr. Rekha A. Nair Director, Regional Cancer Centre, Thiruvananthapuram	Convener

EXECUTIVE COMMITTEE

1	Shri. Rajan N. Khobragade, IAS Principal Secretary to Government Health & Family Welfare Department Government of Kerala	Chairman
2	Shri. Rajesh Kumar Singh, IAS Additional Chief Secretary Finance Department Government of Kerala	Member
3	Dr. A. Jayathilak, IAS Principal Secretary to Government Planning & Economic Affairs Department Government of Kerala	Member
	Dr. Venu V, IAS Additional Chief Secretary Planning & Economic Affairs Department Government of Kerala	Member
4	Dr. Remla Beevi Director of Medical Education Government of Kerala	Member
5	Dr. M.K. Ajayakumar (till 31.05.2020) Principal, Government Medical College Thiruvananthapuram	Member
	Dr. Sara Varghese (from 01.06.2020) Principal, Government Medical College Thiruvananthapuram	Member
6	Dr. Rekha A. Nair Director, Regional Cancer Centre Thiruvananthapuram	Convener



Dr. Rekha A. Nair
Director

DIRECTOR'S REVIEW

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. RCC, Thiruvananthapuram completed forty years of service to the nation and over the four decades of relentless crusade against cancer, our commitment to anyone afflicted with cancer remained constant. RCC reached yet another mile stone during this period, when the Centre took over 11.68 acres of land allotted by the Government on 27 January 2021, for the proposed Second Campus at Pulayanarkotta.

The Centre re-affirmed its devotion in cancer care, with more stories of strength and perseverance during the COVID-19 pandemic. The pandemic has dramatically impacted our services in terms of delays and disruptions. It reflected in the decline of new case registrations and follow-ups, number of investigations and more. Nevertheless, we registered 11191 new cases and reviewed 150330 cases even during this pandemic period. Meantime, the decline in patient registrations was not manifested in the magnitude of patients who availed free treatment under various Government supported schemes. In comparison with previous report period, we found a 22.6 % increase in number of patients covered under various welfare schemes such as 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. An amount of Rs.33.33 crores was expended under these schemes (a rise worth of Rs. 8.87 crores from the previous period) during the report period.

As already presented, the spread of COVID-19 in the community affected all facets of cancer management at our Centre that involved patients, their care givers and our professionals too. The Centre adopted multiple organisational strategies to reduce the impact of this pandemic and to improve patient's outcomes. It required preparedness and difficult choices, but we did with firm steps. The essential adaptations for the pandemic response included hospital visitation restrictions, triaging to ensure timely treatment for high risk patients, rescheduling appointments, thrust on emergency treatment and consultation services, tying up with Government hospitals in all districts through teleconferencing services, guiding doctors at peripheral hospitals in providing therapeutic services, distribution of medicines with the support of the State Fire and Rescue Services Department, virtual OP services, continuous patient monitoring and evaluation, psychosocial support, ease of restrictions when time warranted and so on. Each department and division of RCC planned, tested, successfully adopted and reviewed Standard Operating Procedures (SOP) to run systems. To overcome lockdown restrictions that forbade movement of people across inter-state borders, the Centre started a cancer care centre at Kanyakumari Medical College in Tamil Nadu. We responded to all the COVID-19 directives of State and Central Government authorities

from time to time and initiated several awareness campaigns to improve the knowledge, perceptions and attitude of the patients and their carers. The Centre also became part of 'E-Sanjeevani', the telemedicine platform of Government of Kerala to provide specialist oncology consultation services on designated days.

The period was eventful as our therapeutic and diagnostic facilities received a major boost with the addition of state-of-the-art facilities. Radiation Oncology department added two high energy linear accelerators (Vital Beam and True Beam) and our Surgical Services were upgraded with nasal endoscope with camera, portable video colposcope, sternum saw, high flow CO₂ insufflation unit, surgical smoke evacuator and thermal coagulators. Multiparameter monitors, high flow oxygen nasal cannula and portable ultrasound scanner were the latest inclusions in the Paediatric Oncology department. As departments with frontline diagnostics, the Radiodiagnosis department was upgraded with Dual source dual energy CT scanner and the department of Pathology continued revamping through BD FACSLyric flow cytometry system, binocular microscopes, cryostat and water purification systems. Platelet agitator incubator and multiparameter monitors at Transfusion Medicine division, MRI compatible pulse oximeter at the department of Anaesthesiology and biosafety cabinet, deep freezer and binocular microscopes at Microbiology division further strengthened our support facilities. Fumigation dispenser and multiparameter monitors were the latest additions at the Nursing Services. To strengthen the Information Technology infrastructure, an upgraded disaster recovery site was put in place.

Setting up of a 10 bedded new casualty with state-of-the-art facilities was another augmentation to infrastructure of the Centre. Adhering to the NABH standards, the high-tech casualty provided advanced life saving machines, infection control and triage facilities. The CBNAAT facility initiated during the previous report period was utilised for COVID rapid antigen testing with ICMR nod. Pathology department introduced FISH testing for lymphomas on formalin fixed paraffin embedded tissue sections.

Since virtual educational meetings and activities have become a practice in the pandemic era, the Centre also adapted to such changes and conducted workshops, training sessions, seminars and inaugural functions in online mode. Some notable events in virtual platform included International CME on Voice Preservation and Restoration in Laryngectomy, Updates in ESMO Breast Cancer and Medical Oncology, ASH highlights on Lymphoma and Leukaemia, Shared care in Paediatric Oncology and Head and Neck Oncology Masterclass. Along with our academia, distinguished national and international faculty were engaged in interactive sessions for such events at the digital space. Shri. Pinarayi Vijayan, Hon. Chief Minister of Kerala, Smt. K.K. Shailaja, Hon. Minister of Health and Family Welfare and several top order officials addressed the community in online platforms on the eve of inauguration of High Energy Linear Accelerators, Dual Energy CT scan and Casualty services.

The conduct of a number of 16 cancer detection programmes, 12 cancer education programmes and several awareness sessions for specific target groups in online and offline mode was a vindication of our committed outreach activities. The expertise of RCC was also explored by the State Government for initiating a distributed network of cancer treatment services at district and taluk hospitals.

The achievements of our dedicated and talented faculty and staff were acknowledged through awards and honors. Myself and Dr. Jayasree K (Professor, Pathology) were part of the team who were awarded the Australian Patent (Patent No. 2018202963; Year 2020) for 'Biomarkers useful for detection of types, grades and stages of human breast cancer'. Dr. Sudha P., Additional Professor, Palliative Medicine division was awarded UICC fellowship for safe non-opioid cancer pain management. Zhenia Gopalakrishnan, Assistant Professor and Sunil Kumar S, Technical Officer (both from Radiation Physics Division), were awarded PhD by the concerned universities. Dr. Rahul Rajagopal secured third rank in MD Pathology examinations conducted by Kerala University of Health Sciences for the year 2020.

A good number of 128 publications, as an academic outcome of faculty, residents and researchers were a testimony of our advocacy for scientific communication. It includes 96 journal articles, 21 abstracts in journals (conference papers), in addition to a share of chapters in books, academic dissertations and theses. Out of the 223 extramural, pharma sponsored and in-house research projects, 53 are extramurally funded projects.

We received help in extraordinary ways even in the form of PPE kits and other much-needed goods for frontline workers. The support of RCC-based philanthropic organisations such as Asraya, Care Plus, and Kanivu deserves special mention in the context of extended philanthropic services.

The construction work of our 14-storey building is continuing in fast pace. Ambitious plans are on the anvil for yet another phase of development at the second campus site of RCC at Pulayanarkotta (3.6 km from main campus).

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 2020-21 with the confirmation to the community that we uphold and deliver the best of cancer care.



Dr. Rekha A. Nair
Director

RCC Profile at a Glance

- 11191 new cases
- 150330 review cases
- 525 daily average patient visits
- 6807 in-patient admissions
- 30959 pathology reports
- 45443 imaging studies
- 41484 nuclear medicine studies
- 321995 clinical laboratory investigations
- 28187 microbiology investigations
- 24959 units blood products issued
- 2859 cytogenetics, FISH & RT-PCR based diagnostic studies
- 4355 patients were treated with external radiotherapy
- 963 brachytherapy procedures
- 3097 surgical and 624 endoscopic procedures
- 10067 patients were administered chemotherapy
- 21 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
- 14 residents in Head & Neck Surgical Oncology, Gynaecologic Surgical Oncology, Breast Surgical Oncology and Oncopathology Fellowship programmes
- 30 PhD scholars
- 16 cancer detection programmes and 12 cancer education programmes
- 223 research projects
- Hospital Based Cancer Registry
- Population Based Cancer Registry (Thiruvananthapuram, Kollam, Pathanamthitta and Alappuzha districts)

Major Diagnostic & Treatment Facilities

DIAGNOSTIC FACILITIES

Pathology

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

Radiodiagnosis

- MRI
- Dual source dual energy CT scan
- Full field digital mammography
- Prone breast biopsy table with stereotactic facility
- Ultrasound machines
- Xray units
- 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
- Chemiluminescence assay system

Clinical Laboratory

- Vitros XT 7600 with IM middleware integrated system
- Beckman coulter Unicell DxH 800 5-part haematology analyser
- Beckman coulter Unicell DxH slide maker stainer haematology analyser
- VITROS 5600 integrated system
- VITROS 5.1 FS chemistry system
- 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 I 6R refrigerated centrifuge
- Thermo Fisher Scientific Sorvall ST-I 6R refrigerated centrifuge
- Helmer Deep freezers
- Panasonic VIP Series Deep freezer
- Helmer refrigerator

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

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

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

- 50 bedded exclusive Paediatric Oncology ward
- A four bedded state-of-the-art ICU

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 FACILITIES ADDED DURING THE PERIOD

Anaesthesiology

MRI compatible pulse oximeter

Casualty Services

10 bedded State-of-the-art Casualty Services

Information Systems

Upgradation of Disaster recovery site

Microbiology

Biosafety cabinet, Deep freezer, Binocular microscopes

Nursing Services

Fumigation dispenser, Multiparameter monitors

Paediatric Oncology

Multiparameter monitors, High flow oxygen nasal cannula, Portable ultrasound scanner

Pathology

BD FACSLyric Flow cytometry system, Binocular microscopes

Cryostat, Water purification system

Radiation Oncology

State-of-the-art Linear Accelerators (Vital Beam and True Beam)

Radiodiagnosis

Dual source dual energy CT scanner

Surgical Services

Nasal endoscope with camera, Portable video colposcope, Sternum saw

High flow CO2 insufflation unit, Surgical smoke evacuator, Thermal coagulator

Transfusion Medicine

Platelet agitator incubator, Multiparameter monitors, Hot air oven

PATIENT WELFARE SCHEMES

RCC has implemented several schemes for providing economic assistance, free food, free drugs and various rehabilitation facilities for patients and their families through programmes supported by Central and State governments and non-governmental agencies. Patients received assistance from schemes such as Prime Minister's Relief Fund, Cancer Suraksha Scheme, Karunya Benevolent Fund, Karunya Arogya Suraksha Padhathi-State Health Agency (KASP-SHA), Karunya Arogya Suraksha Padhathi-Pradhan Mantri Jan Arogya Yojana (KASP-PMJAY), Thalolam, Scheduled Tribe Patient Fund and Snehasanthwanam for Endosulfan Victims. These schemes provided benefit to 8125 new patients to avail treatment worth Rs. 3333.32 Lakhs during the period under report. In addition, patients got benefitted from schemes initiated by RCC such as Cancer Care for Life (CCL) scheme, Free Drug Bank, and Free Food scheme ('Akshayapatram') and also the financial support from Indian Cancer Society.

State and Central Government Schemes (1 April 2020 to 31 March 2021)

Scheme	Patients enrolled during the period (New cases)	Amount spent during the period (Lakhs)	Total number benefited up to 31 March 2021	Total Amount Spent (Lakhs)
State Government Schemes				
Cancer Suraksha Scheme	293	249.50	6184	5774.50
Karunya Benevolent Fund New Scheme (KBFN)	0	00.00	12816	5947.87
Karunya Benevolent Fund Online (KBFO)	383	181.06	482	206.52
Difference of Karunya Benevolent Fund Online (DKBF)	22	00.77	25	00.96
Karunya Benevolent Fund – KASP Rate (KBKF)	457	352.40	1484	1106.30
KASP – PMJAY Scheme (Reliance)	490	104.06	5702	1812.40
Difference of KASP – PMJAY Scheme (KASD)	574	88.14	2535	570.50
KASP State Health Agency (KSHA)	3466	1906.67	6943	2869.80
Difference of KASP State Health Agency (KSHA)	2364	407.72	4472	636.60
Thalolam	08	01.20	125	39.86
Scheduled Tribe Patient Fund	30	20.12	454	317.30
Snehasanthwanam for Endosulfan Victims	01	00.08	62	46.88
Central Government Schemes				
Prime Minister's Relief Fund	37	21.60	2362	1989.36
Health Minister's Discretionary Fund	0	00.00	26	11.65
Total	8125	3333.32	43672	21330.50

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. 1.33 crore was spent for 117 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 monitored by a committee constituted by the Director, RCC. The drug bank provided full or partial help to 785 patients during the reporting period.

3. Free Food ('Akshayapatram')

Free food was provided to 1501 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 treatment of cancer. During the report period, 42 new patients received support worth Rs.45.86 lakhs.

HUMAN RESOURCE DEVELOPMENT

RCC has been playing a key role in generating trained manpower in cancer control through conducting superspeciality, postgraduate, post-doctoral, fellowship, graduate and diploma level academic programmes. In addition, over 600 post graduate medical and life science students from different institutions all over the country came for rotation postings and project training as part of their curriculum.

Academic programmes

Course name	Intake capacity	Duration
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 Oncopathology		4
Fellowship in Oncologic Imaging		4
Fellowship in Oncosurgical Anaesthesia		2
Post MSc Diploma in Radiological Physics	2- year Diploma course	4
Doctoral Research Programme	PhD course	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
Cytotechnologist		4
Medical Documentation Training Programme		10
Cytotechnician	6 Months course	6

DEPARTMENTS & DIVISIONS

DEPARTMENT OF RADIATION ONCOLOGY

Ramadas K
Professor & Head

Professors: Francis V. James, 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, Rajeev KR

Assistant Professors: Geethi MH, John Joseph, Priya Balakrishnan, Lijeesh AL, Aparna MP (temporary), Lekha M. Nair (temporary), Geethu Babu (temporary)



The faculty of the Department of Radiation Oncology, continue to practise as Clinical Oncologists in the various site-specific multi-disciplinary teams of RCC. They are responsible for all non-surgical therapies of solid tumours and serve as radiotherapy consultants for the haemato-oncology and paediatric oncology services. They are among the most experienced in their field in the country, who carries out evidence based patient tailored clinical decisions.



Equipped with five Linear Accelerators and one Telecobalt Unit, most patients receive CT-based precision radiotherapy including IMRT/IGRT, SRS, SBRT, and Image guided Brachytherapy. Respiratory gating facility was enhanced with installation of a visual coaching device. Prone breast radiotherapy was commenced. All these will enable significant reduction in long term morbidity while delivering optimum radiotherapy.

In view of the COVID-19 pandemic the department initiated the following steps to ensure safe treatment

- guiding doctors at peripheral hospitals in providing chemotherapy and supportive care to patients closer to their home
- tele-medicine consultations and providing oral medicines through courier services
- appropriate sanitization of radiation treatment rooms, proper counselling and screening and testing of patients on radiation
- hypofractionation, if required, to reduce hospital visits
- triaging to ensure timely treatment for high risk patients
- aligning with hospital policies on sanitization, care of staff and patients and admission to wards, etc.

New equipment acquired

State-of-the-art Linear Accelerators with dual photon energy, multiple electron energies and high dose-rate FFF beam (Vital Beam and True Beam)

Clinical services

Included external radiotherapy for 4355 patients and 963 brachytherapy procedures.

Radiotherapy services

Services	Number
CT based MLC planning & 3DCRT	2430
IGRT/IMRT	685
SRS+SRT	10
SBRT	07
TSET	06
Extra-corporeal radiation	07
Total brachytherapy procedures	963

Academic activities

- MD programme in Radiotherapy with an annual intake of eight seats
- Fellowship in Head and Neck Clinical Oncology with an annual intake of two seats
- Training was imparted to Post graduate students from various Medical Colleges in the State

Ongoing Doctoral Programme		
Research Scholar	Title of Study/University	Guide
Dr. Aswin Kumar	Quality of life of cervical cancer patients undergoing radical radiotherapy/ University of Tampere, Finland	Prof. Dr. Ansi Auvinen

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 Professor: Nebu Abraham George

Assistant Professors: Wagh Mira Sudam, Rexeena V. Bhargavan, Siva Ranjith J, Dhanya Dinesh

Senior Residents: Aswathy G. Nath, Ciju K. George



The Department of Surgical Services provided specialised site-wise surgical expertise for primary treatment of majority of solid organ cancers through its Divisions of Surgical Oncology, Head & Neck Surgery and Gynaecological Oncology. The Department could improve patient outcomes by effective utilization of manpower and resources during the COVID-19 pandemic. The

Department was able to perform all complex surgical procedures by implementing the COVID-19 protocols, enabling routine clinical work with minimal risk of infection among staff and patients. The number of cases operated were lesser compared to previous years due to multiple Nation-wide and State-wide lockdowns.

Surgical & Endoscopic procedures

Major Surgical Procedures	
Sites	Number
Head and Neck	720
Breast	758
Gastrointestinal	446
Gynaecological	357
Genito-Urinary + Skin	131
Bone and Sarcoma	157
Miscellaneous	60
Total	2629
Minor Surgical Procedures	
Procedure	Number
Minor cases	447
LEEP	21
Total	468
Endoscopy Procedures	
Procedure	Number
Nasopharyngolaryngoscopy, Nasal & Direct Laryngoscopy	174
Bronchoscopy	36
Oesophagoduodenoscopy	196
Oesophageal dilatation + stenting	03
Colonoscopy	165
Colposcopy	49
Hysteroscopy	01
Total	624

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
- Fellowship in Breast Surgical Oncology with an annual intake of two seats
- Fellowship in Gynae-Surgical Oncology with an annual intake of one seat
- Larynxcon 2020: 5th International CME on Voice Preservation and Restoration in Laryngectomy (Virtual CME) at RCC, Thiruvananthapuram on 21 June 2020
- Online training session for MCh post graduates across the country

DEPARTMENT OF MEDICAL ONCOLOGY

Geetha N

Professor & Head

Additional Professors: Sreejith Nair, Prakash NP

Associate Professors: Anoop TM, Lakshmi Haridas

Assistant Professors: Deepa Susan Joy Philip, Pranab K.

Prabhakaran (till 30.12.2020), Rona Joseph, Sugeeth MT

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 where intensive chemotherapy is indicated. Dose intense protocols were used for the treatment of all leukaemias and lymphomas. Medical Oncologists are also responsible for the diagnosis and management of other solid tumours under the C, D and E clinics, where chemotherapy is indicated.

Out of the 1687 new cases and 27308 review cases seen in the A Clinic during the report period, 80% underwent chemotherapy. 1979 patients were admitted for the administration of intensive chemotherapy and management

of emergencies and complications. The Medical Oncology team has seen 1500 new cases and 17000 review cases in the C clinic, 500 new cases and 3550 review cases in the D clinic and 1544 new cases and 4186 review cases in the E clinic. In the BMT unit, 42 apheresis procedures were performed. Stem cell transplantation following high dose chemotherapy was performed for 21 patients. About 900 cases of solid tumours were admitted for administration of high profile chemotherapy and management of emergencies and complications under C, D and E clinics. Many CML patients enrolled under the Novartis Patient Assistance (NOVA) programme were given imatinib drug free of cost.



Academic Activities

- DM Medical Oncology programme with an annual intake of eight seats
- Fellowship in Haematology with an annual intake of four seats
- Post graduate students in Radiation Oncology, General Medicine and Transfusion Medicine were given training in Medical Oncology
- Organised 'ESMO Breast Cancer Updates 2020' at RCC (Webinar/29 October 2020)
- Organised Medical Oncology Updates (Webinars) on 'Landmark discoveries: Innovations and New genes' (16 January 2021), 'ASH 2020 Highlights on Lymphoma' (19 February 2021) and 'ASH 2020 Highlights on Leukaemia' (26 February 2021)

DEPARTMENT OF PAEDIATRIC ONCOLOGY

Priyakumari T
Professor & Head

Associate Professors: Manjusha Nair, Binitha R, Guruprasad CS

Assistant Professors: Prasanth VR, Kalasekhar VS (from
11.01.2021)



The Department provided comprehensive cancer care for childhood malignancies up to the age of 14 years. A well-equipped paediatric oncology ICU having two modern ventilators with facilities including NAVA (Neurally Adjusted Ventilatory Assist) provides intensive care to critically ill children. Procedures such as bone marrow studies, lumbar puncture, FNAC, trucut biopsy, intrathecal drug administration and PICC line insertion were done routinely in the department.

Rescheduling of follow-up visits and restriction of admissions during the COVID-19 pandemic has resulted in the decrease of number of OP cases and admissions. 400 new cases and 13792 review cases were seen during the report period.

Academic activities

- DM programme in Paediatric Oncology with an annual intake of two seats
- Regular training to the postgraduates of RCC
- Regular training to postgraduate students of other Medical Colleges in Kerala as well as to postgraduate students from SAT Hospital, Thiruvananthapuram and various private Medical Colleges

- Organised Webinar on 'Shared Care in Paediatric Oncology: A Journey Together' on 16 February 2021 as part of International Childhood Cancer Day - 2021.

Patient Statistics

Cases	Number
Acute lymphoblastic leukaemia	133
Acute myeloid leukaemia	22
Chronic myeloid leukaemia	02
Brain tumour	65
Optic pathway glioma	02
Osteosarcoma	12
Ewing's sarcoma/Primitive Neuroectodermal Tumour (PNET)	16
Rhabdomyosarcoma	14
Soft tissue sarcoma	13
Hodgkin's lymphoma	07
Non-Hodgkin's lymphoma	08
Wilms' tumour	12
Neuroblastoma	18
Hepatoblastoma	06
Retinoblastoma	06
Germ cell tumour	13
Langerhans cell histiocytosis	07
Thyroid	04
Juvenile Myelomonocytic Leukaemia	01
Miscellaneous	08
Hemophagocytic lymphohistiocytosis (HLH)	02
Nasopharyngeal carcinoma	01
Non malignant	28
Total	400

DEPARTMENT OF PATHOLOGY

Jayasree K

Professor & Head

Professor: Rekha A. Nair (from 20.07. 2020)

Additional Professors: Anitha Mathews, Thara Somanathan, Nileena Nayak, Preethi TR

Associate Professors: Anila KR, Renu S, Priya Mary Jacob, Jayasudha AV

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

Assistant Professors: Neelima Radhakrishnan, Sindhu Nair P, Rari P.Mony, Simi CM

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

New service started

FISH testing for lymphomas on formalin fixed paraffin embedded tissue sections

New equipment acquired

BD FACSLytic Flow Cytometry System



FACSLytic Flow Cytometry system

Diagnostic Services

Surgical pathology	Cytopathology	Haematopathology	Total
14822	10149	5988	30959

Immunohistochemistry (Surgical pathology + Cytopathology + Haematopathology)	Frozen section	FISH/ HER-2	Flow cytometry	Molecular	LBC	Total
34514	1032	232	676	116	31	36601

Surgical Pathology

Specimens from RCC	Specimens for review	Specimens for second opinion
9091	5731	569

Cytopathology

FNAC + Fluids	Cervical smear (routine+projects)	Sputum	Second opinion to ECDC cases
5534	2246	759	1610

Haematopathology

Bone marrow	Peripheral smear	Slide review
2984	2923	81

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 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.



Automatic Immunohistochemistry Stainer

DEPARTMENT OF RADIODIAGNOSIS

Venugopal M

Professor & Head

Additional Professors: Sumod Mathew Koshy (rejoined on 17.08.2020), Jiji V

Associate Professor: Anitha Sen

Assistant Professors: Priya A, Jubiee Raj, Renuka G, Rakesh CA (temporary)

Senior Residents: Nitya, Jiju Zachariah



The Department has a DR X-ray unit, four portable X-ray units, three colour doppler ultrasound scanners with elastography facility, Full Field Digital Mammography X-ray machine, Dual source Dual energy CT scanner; 1.5T MRI scanner with MR spectroscopy, Prone breast biopsy table with stereotactic facility, DEXA scan, Fluoro-DR machine, and Picture Archiving and Communication System.

New equipment acquired

Dual Source Dual Energy CT Scanner

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	16835
Barium studies	176
Ultrasound scans	9124
Ultrasound guided intervention (FNA +Biopsy)	1003
Ultrasound guided prostatic biopsy	801
Doppler studies	722
Digital mammography	3426
Stereotactic biopsy	02
CT scans	10143
CT guided aspiration (FNA)	356
MRI scans	2704
Fluoroscopy	151
Total	45443

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



Besides providing anaesthesia for all major oncosurgical and emergency cases, the Department provided anaesthesia for minor therapeutic and diagnostic procedures such as MRI, Radiotherapy, Brachytherapy, and CT guided biopsies. The department acquired aerosol boxes for protection of personnel during airway manipulations. The Department also got recognition for all six MD seats.

Academic activities

- MD programme in Anaesthesia with an annual intake of six seats
- Fellowship in Oncosurgical Anaesthesia with an annual intake of two seats
- IMPACT 2020: Organised four post graduate training sessions (webinars) on 22 August 2020
- Organised BLS/ACLS training sessions for new post graduate students
- Organised Compression only Life Support training sessions for staff of Engineering and Administrative sections of the Centre on World Anaesthesia Day (16 October 2020)
- Department was recognized by KUHS for PhD programmes.

Anaesthetic Services	
Pre-anaesthesia Clinic	
New cases	3356
Review cases	11975
Total	15331
Anaesthesia Techniques	
Total Intravenous Anaesthesia	688
GA+Epidural	744
GA+Controlled Ventilation	1990
GA+Spontaneous Ventilation	19
Epidural block	11
Combined spinal + epidural	136
Subarachnoid Block	68
Monitored Anaesthesia Care	20
Genral Endotracheal Anaesthesia	2052
Supraglottic airway devices	390
Plexus & other blocks	33
GA + Block	97
Anaesthesia for children (MRI, Radiation therapy, CT simulation)	678
Anaesthesia for brachytherapy	21
Central venous access (Non-surgical patients)	09
Surgical ICU	
Patients ventilated	167
Total ventilator days	420
Acute pain service	
Patients with epidural catheters	891
Number of epidural days	2467

DIVISION OF NUCLEAR MEDICINE

Pradeep VM (till 31.03.2021)
Professor & Head

Additional Professor: Sreekumar A



The Division provided therapeutic and diagnostic 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 and high dose therapy for thyroid cancer).

Diagnostic & Clinical Services	
Investigations/Therapy	Number
PET Scan	1127
SPECT Gamma camera	804
SPECT CT	1966
Radio immunoassay	37587
Thyroid cancer therapy	380
Thyrotoxicosis therapy	78

DIVISION OF RADIATION PHYSICS

Thayal Singh Elias
Professor & Head

Additional Professors: Raghu Kumar P, 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, SRS, SRT, SBRT, 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, CT/MRI guided conformal brachytherapy treatments such as intracavitary, intraluminal and mould brachytherapy using Microselectron (V3) HDR.



Patient Services

Treatment given	Number
External Beam Radiotherapy	
CT Based Planning	687
Conventional Planning	1210
3DCRT	1743
IMRT+IGRT	685
SRS+SRT	10
SBRT	07
TSET	06
ECRT	07
Total	4355
Brachytherapy Procedures (Microselectron HDR)	
Gynaecologic (Total treatments)	963
Simulation	
CT simulation	4178
Conventional simulation	1275
Total	5453

Academic activities

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
Shaiju VS	Design and fabrication of a head phantom for dosimetric evaluation of radiotherapy treatment plans/Meenakshi Academy of Higher Education and Research	Dr. Raghu Ram K.Nair
Debjani Phani	Design and development of quality assurance protocol for ultrasound imaging/Meenakshi Academy of Higher Education and Research	Dr. Raghu Ram K.Nair
Sharika V. Menon	Dosimetric evaluation of small fields used in intracranial stereotactic treatments using an indigenously developed phantom/Bharathiar University, Coimbatore	Dr. Raghukumar P
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



The Division offered comprehensive clinical laboratory services in high volume chemistry, haematology and coagulation, serology for HIV and hepatitis, blood gas analysis, automated serum and urine electrophoresis (EP) and immunofixation electrophoresis (IFE). Immunosuppressant drug monitoring for bone marrow transplant patients, methotrexate drug level and 24-hour urine protein estimations were also done.

The laboratory processed 130797 haematology samples, 186128 biochemistry samples, 5070 urine samples and reported 1.91 million tests in the period under report. Fiftyone EP and 53 IFE were referred to the division from government and private hospitals. During the COVID-19 pandemic,

Phlebotomy section handled an average 410 outpatients per day and tests were reported with a turnaround time of 60 minutes or less.

Quality assurance

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. The biochemistry analysers are integrated with an Instrument Manager (IM) middleware system for streamlined operation to increase quality of test results, optimize labour, and cost.

Investigations done	
Investigations	Number
Biochemistry	930643
Haematology	913801
Coagulation parameters	17460
Urinalysis	24856
Cerebrospinal Fluid (Sugar & Protein)	460
HbA1c	328
Lipid profile	608
Creatinine clearance test	1101
24 hour urine protein	935
Methotrexate assay	1470
Cyclosporin assay	103
Serum Immunoglobulin Assay (IgG, IgA & IgM)	6604
Free Kappa	2202
Free Lambda	2202
Serum electrophoresis	2262
Immunofixation electrophoresis	2267
Blood gas (ABG)	1602
Serology	
HIV	9251
HBsAg	9299
HCV	9299

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 Biochemistry and Medical Laboratory Technology

Training provided	
Trainees	Number trained
MD Biochemistry	02
BSc MLT	10

DIVISION OF MICROBIOLOGY

Swapna R. Nath

Additional Professor & Head

Assistant Professor: Sagila SG



The Division continued to provide services in Bacteriology, Mycology, Parasitology, Mycobacteriology and Serology, in addition to supporting the laboratory needs of infection control programmes in RCC. The division is also a Designated Microscopy Centre for detection of acid fast bacilli under the Revised National Tuberculosis Control Programme (RNTCP).

New service started

CBNAAT and Rapid Antigen Testing (RAT) for COVID-19

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
- Training of health care staff on infection control procedures

Investigations done	
Culture, Sensitivity & Other tests	Number
Blood	5932
Bone marrow	23
Exudate	1237
Urine	1819
Throat swab	700
Sputum	476
Aspirate	308
Stool	363
Surveillance culture	705
Cerebrospinal fluid	64
Acid-fast bacteria staining	532
Acid-fast Bacilli culture	20
Fungus	25
Serology (Procalcitonin, Troponin-I, Anti HBcIgM, Anti HBc Total, D- Dimer, Anti HBs antibody)	3980
TB CBNAAT	136
COVID Rapid antigen	7034
COVID CBNAAT	4833
Total	28187

DIVISION OF TRANSFUSION MEDICINE

Vijayalakshmi K
Additional Professor & Head

Resident Medical Officer: Rajesh R. Chandran

The Division is a National AIDS Control Organisation recognised Regional Blood Transfusion Centre. The division has a full-fledged component separation unit having state-of-the-art equipment and disposables for collection, processing and issue of blood products. Additional facilities include plateletpheresis, provision of leucoreduced blood components and blood irradiation. The Division is a nodal training centre for staff members from Health Services Department.

New equipment acquired

Platelet agitator incubator : 2
Hot air oven : 1
Multiparameter monitor : 3

Blood components issued	
Components	Number
Irradiation done	1422
Apheresis done	2056
Packed Red Cells	8295
Platelet concentrate	9873
Fresh Frozen Plasma	3239
Cryoprecipitate	74

Academic activities

One year programme, 'Advanced Training in Blood Banking and Transfusion Technology' with an annual intake of four seats



DIVISION OF PALLIATIVE MEDICINE

Sudha P

Additional Professor & Head

Resident Medical Officer Gr. I: Prasanth CV

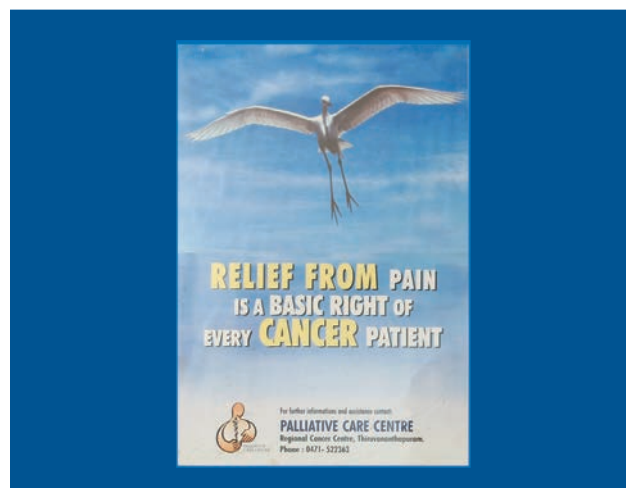
Resident Medical Officer: Manju Achamma Varghese

The Division works in close collaboration with other clinical services, physiotherapist and nutritionist and provided regular outpatient services, day care and ward consultations. The Division also performed interventional procedures for relief of difficult to manage/refractory pain in collaboration with Department of Anaesthesiology.

The following steps were taken to streamline the functioning of the division during the reporting period.

- Standardised assessment and documentation of pain and other symptoms
- Staff were enrolled for certified training in basic palliative care
- Ensured uninterrupted production and supply of oral morphine formulations by improving the infrastructural facility of the morphine manufacturing unit
- Additional consultation room and a Medical Social Worker were added

Patient services	
Cases	Number
New	2990
Review and ward consultations	9654
Total	12644
Interventional pain procedures	02
Total Oral Morphine consumption (in grams)	10517.80
Total Fentanyl consumption as 25µgm/hour Transdermal patch (in milligrams)	1734.60



Other Services

Psychosocial counseling, financial assistance, reimbursement of cost of medicines, food kits, free drugs and nutritional supplements were provided with the help of NGOs. A pleasure trip to Magic Planet was arranged on State Palliative Care Day (15 January 2021).

Academic activities

- Regular academic sessions were conducted for MD, DM, MCh, Nursing students and nursing staff of RCC and students posted from other institutions
- Observed World Palliative Care Day (10 October 2020) to create awareness about palliative care among the public.

DIVISION OF DENTAL CARE

Divya Raj
Assistant Professor

Scope of the Division is to maintain good oral health in cancer patients before, during and after treatment. Various activities in this division include pre and post treatment dental checkup, 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. All dental procedures creating aerosol were limited and all dental treatments were done strictly adhering to COVID-19 protocol.

Clinical Services	
Cases	Number
Total patient visits	4552
In patient consultation	05
Pre-treatment dental check up	2303
BMT/Stem cell therapy consultation	23
Dental prophylaxis	18
Management of trismus	27
Management of Osteoradionecrosis	10
Sodium fluoride gel application	2255

DIVISION OF NURSING SERVICES

Sreelekha R
Chief Nursing Officer

The Division rendered patient care in wards, day care services, out-patient 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 were continued functioning.

Clinical services

Service	Patient visits
Chemotherapy administration (OP)	51554
Central Venous Access Device Clinic	13422
Lymphoedema Clinic	1569
Stoma Clinic	4884
Head & Neck Rehabilitation Clinic	5030
Brachytherapy Counseling	963



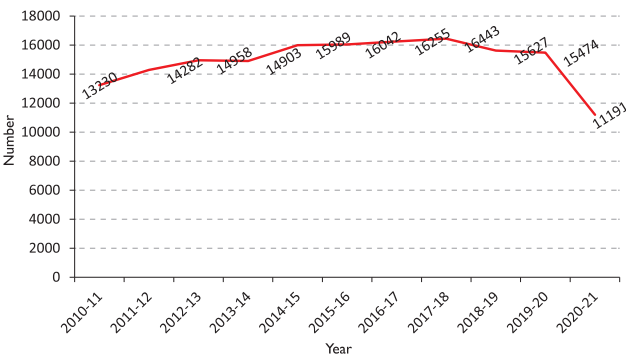
DIVISION OF CLINICAL SERVICES & MEDICAL RECORDS

Chandrika D
Medical Records Officer-I

Assistant Administrative Officer
(Clinical Services): Sreekumar B
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, issuance of certificates, railway concessions and management of vehicles.

Figure 1: New cases registered (2010-11 to 2020-21)



Patient Statistics	
Item	Number
New cases	11191
Review cases*	150330
Total patient visits	161521
Daily average	525
In-Patient admissions	6807
In-Patient bed**	301
Total bed occupancy	55728
Average bed occupancy	152
Bed occupancy rate (%)	71.68
Average patient stay (in days)	08
Hospital death	434
Consultation at Peripheral Centres	1445

* 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	1355	12.11
M	4352	38.89
O	3137	28.03
P	06	00.05
R	589	05.26
S	229	02.04
H	1523	13.60
Total	11191	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	1687	15.07	27308	18.20
B	1785	15.95	19522	12.98
C	2029	18.13	33157	22.05
D	1965	17.55	21017	13.98
E	2694	24.07	23352	15.53
F	400	03.60	13792	09.17
G	631	05.63	08322	05.53
P	--	--	03860	02.56
Total	11191	100	150330	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

P - Palliative Care

Referral System

RCC is a tertiary level referral hospital and patients were referred from other government and private hospitals.

Referred cases			
Referred from		Number	%
Teaching hospitals	Government	2573	24.90
	Private	213	
PHCs/District/General Hospitals		1029	09.20
Taluk Hospitals		562	05.02
Other Government Hospitals		604	05.40
VSSC/ESI/CGHS/ECHS/Railway Hospitals		259	02.31
Other Cancer Centres		69	00.62
Private Doctors		431	03.85
Private Hospitals		4380	39.13
ECDC and Peripheral Centres		38	00.33
Self/RCC		1033	09.23
Total		11191	100

Training provided

Training in medical records and patients services was given to Master of Applied Science & Medical Documentation and MA/MSW students from various universities.

DIVISION OF COMMUNITY ONCOLOGY

Gigi Thomas

Additional Professor & Head

Additional Professor: Jayakrishnan R

The Community Oncology Division gives emphasis on primary and secondary prevention of cancers and also takes key initiatives for cancer control activities through human resource development programmes. The facilities of the Division were utilised for triaging of cancer patients reported to the Centre during the COVID-19 pandemic.

In the period under report, 1546 people were examined as part of the cancer screening/early detection programmes. This included 1355 persons who were reported at the Early Cancer Detection Clinic run by the Division and 191 persons screened through three community based cancer screening programmes. A total number of 188 cancers and 122 precancers were detected through these screening programmes. E-Sanjeevani tele consultation was utilised to provide services for 52 patients.

Human Resource Development

Trainer-Trainee Programmes: Seven trainer-trainee programmes were conducted for health care providers which included doctors, dentists/dental students, nurses/paramedicals, health supervisors and community volunteers.

Trainer-Trainee programmes		
Categories of Trainees	Number of programmes	Number trained
Doctors	2 (webinars)	57
Dentists/Dental students		30
Nurses and paramedicals	1 (webinar)	09
Health supervisors and workers	2	195
Community volunteers/NGO's	2	52
Total	7	343

Early cancer detection clinics (Breast cancer screening, Oral dysplasia & Colposcopy)

During the period under report, 1355 persons attended the Early Cancer Detection Clinic of the Division. 188 cancers and 122 precancers were detected through screening. In the oral dysplasia clinic, 19 cases of leukoplakia, eight cases of oral submucous fibrosis, 29 cases of lichen planus and 12 other lesions/conditions were detected. The details of cancers and precancers detected in the ECDC and the activities of the colposcopy clinic are given in the following tables.

Cancers and Precancers detected		
Site	Cancers	Precancers/benign lesions
Oral	88	68
Breast	48	23
Cervix	14	31
Others	38	--
Total	188	122

Colposcopy clinic	
Procedures done	Number
Colposcopy	289
Colpodirected biopsy	139
Pap smear	364

Cancer detection programmes

There were only three cancer detection programmes conducted during the COVID-19 pandemic period. From among 191 persons screened, one oral cancer, 12 oral precancers and five cervical pre-cancers were detected.

Other activities

Breast Cancer Awareness Month, October 2020

Webinars were organised on 'Early Detection and Management of Breast Cancer' for staff and students of Govt. Women's College, Thiruvananthapuram (10 October 2020), National Service Scheme volunteers (14 October 2020) and also for members of Indian Dental Association, Attingal branch, Thiruvananthapuram (20 October 2020).

World Cancer Day (4 February 2021)

Organised a Webinar for Doctors of State Health Services Department on the topic, 'Redefining the Limits of Cancer Care'.

DIVISION OF CANCER EPIDEMIOLOGY & BIOSTATISTICS

Aleyamma Mathew
Professor & Head

Additional Professors: Jayalekshmi P, Preethi Sara George
Associate Professors: Kalavathy MC, Jagathnath Krishna KM

The Division runs 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), provide cancer awareness classes to

the lay public and screening programmes. The division teaches biostatistics to RCC students, provides training in cancer registry operations and conducts doctoral programmes in Epidemiology & Biostatistics. The division also provided 150 statistical consultancy services. The Division prepared Hospital Based Cancer Registry annual reports for the year 2018.

Figure 2: Hospital Based Cancer Registry (HBCR), Regional Cancer Centre, Thiruvananthapuram (2020-2021): System-wise distribution (%) of invasive cancers by gender

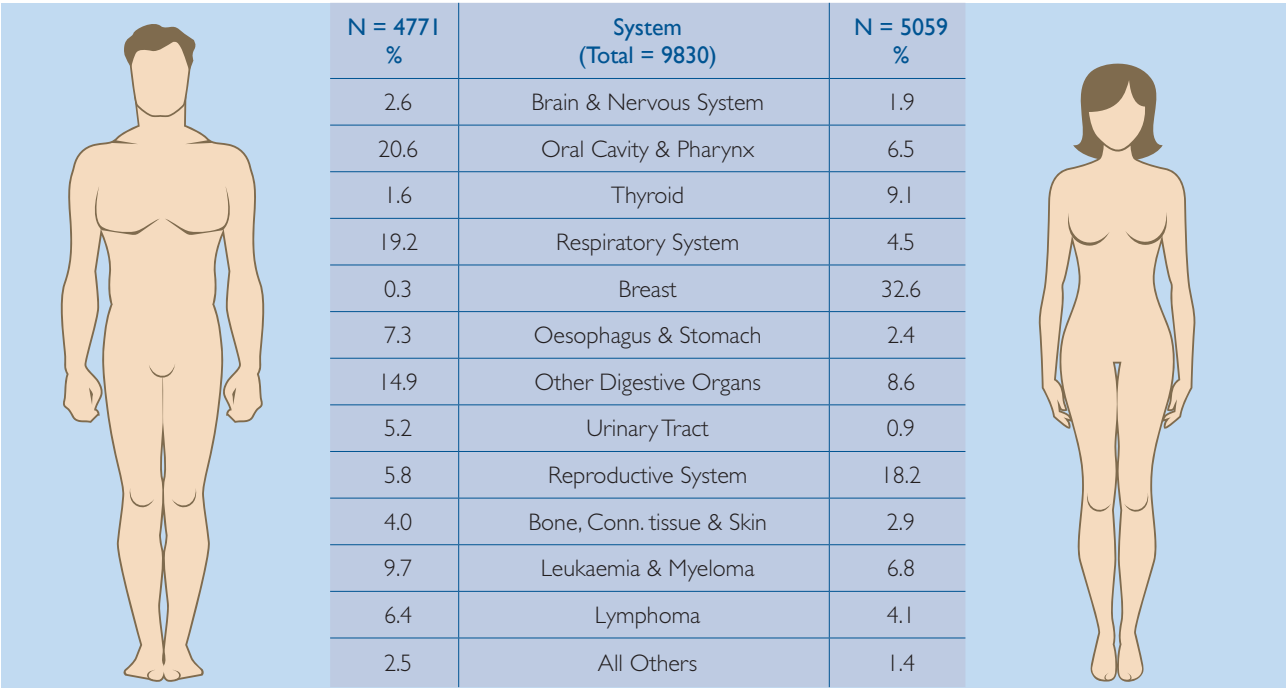


Figure 3: Geographical Distribution of New Patient Registration (2020-2021)

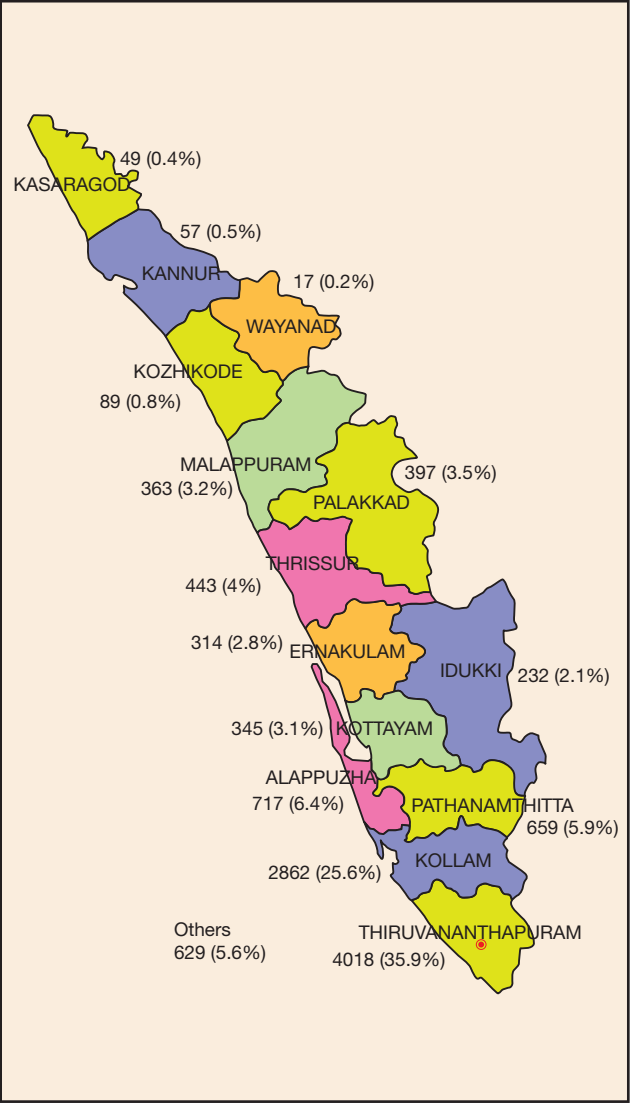
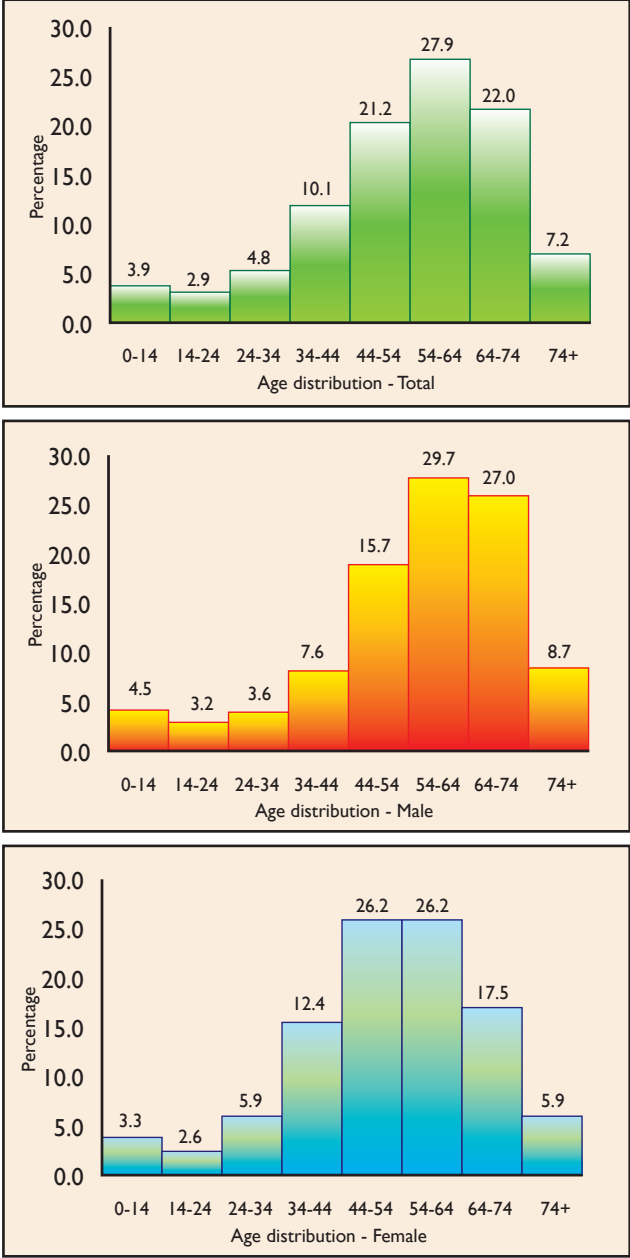


Figure 4: Age Distribution of New Patient registration (2020-2021)



Hospital Based Cancer Registry (HBCR), Regional Cancer Centre, Thiruvananthapuram (2020-2021): Site-wise distribution of patient registration by gender

ICD-10	Site	Male		Female		Total	
		No.	%	No.	%	No.	%
C00	Lip	14	0.3	7	0.1	21	0.2
C01	Base of tongue	24	0.5	2	0.0	26	0.3
C02	Tongue	342	7.2	127	2.5	469	4.8
C03	Gum	87	1.8	45	0.9	132	1.3
C04	Floor of mouth	53	1.1	5	0.1	58	0.6
C05	Palate	23	0.5	10	0.2	33	0.3
C06	Other mouth	178	3.7	81	1.6	259	2.6
C07	Parotid gland	22	0.5	14	0.3	36	0.4
C08	Salivary gland	5	0.1	4	0.1	9	0.1
C09	Tonsil	17	0.4	1	0.0	18	0.2
C10	Oropharynx	111	2.3	6	0.1	117	1.2
C11	Nasopharynx	29	0.6	11	0.2	40	0.4
C12	Pyriform sinus	34	0.7	1	0.0	35	0.4
C13	Hypopharynx	38	0.8	11	0.2	49	0.5
C14	Pharynx unspecified	4	0.1	2	0.0	6	0.1
C15	Oesophagus	180	3.8	52	1.0	232	2.4
C16	Stomach	168	3.5	70	1.4	238	2.4
C17	Small intestine	9	0.2	8	0.2	17	0.2
C18	Colon	141	3.0	109	2.2	250	2.5
C19	Rectosigmoid colon	34	0.7	25	0.5	59	0.6
C20	Rectum	194	4.1	159	3.1	353	3.6
C21	Anus & anal canal	11	0.2	4	0.1	15	0.2
C22	Liver	210	4.4	51	1.0	261	2.7
C23	Gall bladder	5	0.1	13	0.3	18	0.2
C24	Other biliary tract	27	0.6	18	0.4	45	0.5
C25	Pancreas	80	1.7	50	1.0	130	1.3
C26	Other digestive organs	1	0.0	0	0.0	1	0.0
C30	Nasal cavity	17	0.4	5	0.1	22	0.2
C31	Accessory sinus	13	0.3	6	0.1	19	0.2
C32	Larynx	239	5.0	14	0.3	253	2.6
C33	Trachea	0	0.0	0	0.0	0	0.0
C34	Lung	632	13.2	200	4.0	832	8.5
C37	Thymus	5	0.1	0	0.0	5	0.1
C38	Heart & mediastinum	8	0.2	4	0.1	12	0.1

C40	Bone of limbs	40	0.8	28	0.6	68	0.7
C41	Other bone	20	0.4	18	0.4	38	0.4
C43	Skin Melanoma	6	0.1	5	0.1	11	0.1
C44	Skin other	56	1.2	42	0.8	98	1.0
C45	Mesothelioma	0	0.0	1	0.0	1	0.0
C47	Peripheral nerves	1	0.0	1	0.0	2	0.0
C48	Retroperitoneum	3	0.1	8	0.2	11	0.1
C49	Connective tissue	66	1.4	50	1.0	116	1.2
C50	Breast	13	0.3	1651	32.6	1664	16.9
C51	Vulva	0	0.0	7	0.1	7	0.1
C52	Vagina	0	0.0	8	0.2	8	0.1
C53	Cervix uteri	0	0.0	297	5.9	297	3.0
C54	Corpus uteri	0	0.0	299	5.9	299	3.0
C55	Uterus, nos	0	0.0	30	0.6	30	0.3
C56	Ovary	0	0.0	277	5.5	277	2.8
C57	Oth. Female genital org.	1	0.0	4	0.1	6	0.1
C60	Penis	20	0.4	0	0.0	20	0.2
C61	Prostate	224	4.7	0	0.0	223	2.3
C62	Testis	29	0.6	0	0.0	29	0.3
C63	Other & unspecified male genital organs	2	0.0	0	0.0	2	0.0
C64	Kidney	111	2.3	22	0.4	133	1.4
C65	Renal pelvis	2	0.0	1	0.0	3	0.0
C66	Ureter	2	0.0	0	0.0	2	0.0
C67	Urinary bladder	132	2.8	21	0.4	153	1.6
C68	Other urinary organs	1	0.0	0	0.0	1	0.0
C69	Eye	10	0.2	6	0.1	16	0.2
C70	Meninges	0	0.0	0	0.0	0	0.0
C71	Brain	123	2.6	90	1.8	213	2.2
C72	Spinal cord	1	0.0	4	0.1	5	0.1
C73	Thyroid gland	77	1.6	462	9.1	539	5.5
C74	Adrenal gland	13	0.3	7	0.1	20	0.2
C75	Other endocrine gland	1	0.0	2	0.0	3	0.0
C76	Ill-defined sites	1	0.0	4	0.1	5	0.1
C77	Secondary lymph node	38	0.8	12	0.2	50	0.5
C78	Sec. resp & digestive	6	0.1	7	0.1	13	0.1
C79	Secondary Other sites	13	0.3	6	0.1	19	0.2
C80	Primary unknown	36	0.8	20	0.4	56	0.6
C81	Hodgkin's disease	50	1.0	35	0.7	85	0.9

C82	Follicular NHL	54	1.1	36	0.7	90	0.9
C83	Diffuse NHL	135	2.8	95	1.9	230	2.3
C84	T-cell lymphoma	20	0.4	9	0.2	29	0.3
C85	Other NHL	38	0.8	26	0.5	64	0.7
C88	Malig. Immunoprolif.	0	0.0	0	0.0	0	0.0
C90	Multiple myeloma	111	2.3	89	1.8	200	2.0
C91	Leukaemia, lymphoid	147	3.1	83	1.6	230	2.3
C92	Leukaemia, myeloid	145	3.0	111	2.2	256	2.6
C93	Leukaemia, monocytic	20	0.4	36	0.7	56	0.6
C94	Other specif. leukaemia	2	0.0	4	0.1	6	0.1
C95	Leukaemia, unspecified	36	0.8	21	0.4	57	0.6
C96	Oth. lymphoid neopl.	10	0.2	8	0.2	18	0.2
	Total (Invasive)	4771	100	5059	100	9830	100
	Benign tumours	62	11.3	139	17.1	201	14.8
	Borderline malignancy	69	12.6	110	13.5	179	13.2
	In-situ	9	1.6	49	6.0	58	4.3
	Non-neoplastic (pre-malig. Cond. & others)	164	29.9	227	28.0	391	28.7
	Diagnosis not confirmed	245	44.6	287	35.3	532	39.1
	Total (non-invasive)	549	100	812	100	1361	100
	Total number of patients	5320	100	5871	100	11191	100

Academic activities

Ongoing doctoral research programmes

No.	Research scholar	Title of study/University	Guide
1	Kavitha Chandran C (Thesis submitted)	Effect of multilateral health care strategies on metabolic profile among prediabetics/University of Kerala	Dr. Aleyamma Mathew
2	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: Sujathan K, Lakshmi S, Hariharan S

Associate Professors: Sreelekha TT, Guruvayoorappan C

Six 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 in identifying molecular signatures capable of predicting disease prognosis to aid personalized and risk adjusted therapy. One of the projects aims at interpreting the biology of metabolic reprogramming in oral cancer metastasis using cell lines developed from the primary and metastatic oral tumours of same patients. The main objective is identification of the signature biomarker(s) for the diagnosis and prognosis of oral cancer. Another study on the functional validation of miRNA signature for uterine cervical cancer tries to identify the biological significance of these altered miRNAs in cervical cancer cell lines. The third programme is on the evaluation of the potential of liquid biopsy in diagnosis and prognosis of oral cancer. The objective of this study is to find out the signature of circulating cell free

nucleic acid (CFNAS) from oral cancer patients and correlate with cancer progression stages. The study materials include ctDNA, ctRNA, and exosome. Another study, on the biology of BRAF and TERT gene mutations in thyroid cancer, evaluates the prevalence of BRAF and TERT mutations in WDTC patients from our population and its prognostic significance.

The Laboratory of Molecular Cytopathology and Proteomics is primarily focusing on the early detection of cervical and lung cancers by setting up cost effective screening platforms and novel biomarker panels. Our efforts have been successful to a degree in this area by the commencement of a semi-automated Pap smear analysis system for population based cervical cancer screening and by the validation of novel biomarkers for lung and breast cancer diagnosis and prognosis. Currently we are in the mission of upgrading the system into a fully automated level and validation of the same in a multicentric manner with three other National cancer centers.



In addition, a distinguished panel of cell cycle regulatory proteins is being experimentally validated as biomarkers for refining the conventional sputum cytology to reinforce early detection of lung cancer. More to the point the lab is riveted in developing a multiplexing platform using different pitches such as quantum dots, SERS nanoprobe, etc. for simultaneous detection of multiple biomarkers.

The Laboratory of Molecular Medicine has been undertaking studies on the cellular and molecular mechanisms in the development of breast cancer. Studies are focused on developing primary cell lines of breast cancers and the effect of plant products in development and progression of tumours. The ICMR Task Force project in collaboration with AIIMS, National Institute of Pathology and National Institute of Cancer Prevention and Research, New Delhi studies the genetic and epidemiological factors involved in breast cancer. Another multi-institutional research involving Rajiv Gandhi Centre for Biotechnology, under the DBT funded COE scheme, tries to understand the biology of Triple Negative Breast Cancer. Post-doctoral studies funded by DBT under the Women Scientist scheme and KSCSTE under back to lab scheme analyse the therapeutic potential of natural plant products. Studies on circulating DNA in ovarian cancer patients and the significance of PDL1 expression in breast cancer are also being carried out as part of Dissertation work of PG students.

The Laboratory of Cytogenetics and Molecular Diagnostics is mainly working on leukaemia cytogenetics and molecular markers. Research on chromosomal abnormalities in various types of leukaemia identified many chromosomal abnormalities very specific to some specific types of leukaemia. Mutation studies of FLT3, NPM1, CEBPA, DNMT3A, WTI, 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 were carried out in AML patients with t(8;21). Cytogenetic and molecular studies on paediatric leukaemia, Imatinib resistance in CML patients, molecular mechanism in advanced stages of CML patients, drug resistance in AML patients, cytogenetic and molecular studies in inhabitants of high natural background radiation area, Karunagappally, Kerala are also being carried

out. Apart from these, this Lab is rendering diagnostic Cytogenetic and FISH services to patients attending RCC, Govt. Medical College, Thiruvananthapuram and SCTIMST, Thiruvananthapuram.

The Laboratory of Biopharmaceuticals & Nanomedicine is actively working on the therapeutic efficacy of plant polysaccharides and its nanoconstructs through comprehensive studies on cancer cells and in vivo models. The gold, silver, iron and copper nanoparticles capped with polysaccharides and conjugated to chemotherapeutic agents are deliberated for theranostic applications such as targeted drug delivery, tumour reduction, RNAi, photothermal therapy, antimicrobial properties, in vivo imaging, SERS and as contrasting agent for MRI. Apart from nanoparticles, scaffolds with various architectures (fibrous, porous and hydrogel) are explored for MSC differentiation, 3D cell culture, wound healing and local chemotherapeutic delivery.

The Laboratory of Immunopharmacology and Experimental Therapeutics is devoted to the development of novel, targeted therapeutic agents for cancer drug delivery. One of the projects supported by Kerala Biotechnology Commission, studies the inflammatory bowel disease and its relation with cancer progression. Another project funded by Department of Science and Technology (DST), aims at mitigation of radiation esophagitis using natural products with an objective to improve the quality of life of cancer patients receiving thoracic radiation. The project work financially supported by ICMR is elucidating the mechanism behind the action of black tea theaflavins in mitigating thyroid carcinoma.

Diagnostic services provided	
Services	Number
Karyotype analysis	
Bone marrow samples	626
Peripheral blood samples	05
Fluorescent In Situ Hybridization	906
Quantitative RT-PCR for bcr-abl	763
Qualitative RT-PCR for bcr-abl & pml-rara	559
Total	2859

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 NFkB 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	Preethi G. Nath (Thesis Submitted)	Identification of novel prognostic markers in paediatric leukaemia/University of Kerala	Dr. Hariharan S
15	Akhila Raj TV	Molecular studies on genes responsible for drug resistance: A study on de novo and relapsed acute myeloid leukaemia patients/University of Kerala	Dr. Hariharan S
16	Geetha Raj	Cytogenetic abnormalities and risk stratification of multiple myeloma patients by FISH technique/University of Kerala	Dr. Hariharan S
17	Mahitha MS	Clinical significance of advanced stages of CML patients/University of Kerala	Dr. Hariharan S
18	Amritha P. Kumar	A study of cytogenetic and molecular abnormalities in children with ALL and its clinical significance/University of Kerala	Dr. Hariharan S
19	Devipriya P	A study of miRNA profiling in different cytogenetic subtypes of acute myeloid leukaemia patients/University of Kerala	Dr. Hariharan S
20	Unnikrishnan BS	Application of polysaccharide metal nanoconjugates in cancer detection and therapy/University of Kerala	Dr. Sreelekha TT

21	Preethi GU	Chemotherapeutics loaded polysaccharide scaffold as novel tool to fight against cancer/University of Kerala	Dr. Sreelekha TT
22	Shiji R	Galactomannan polysaccharide nanoconjugates for imaging and targeted cancer therapy/University of Kerala	Dr. Sreelekha TT
23	Archana MG	Polysaccharide based nanoconstructs facilitated co-delivery of drug and gene for effective cancer therapy/University of Kerala	Dr. Sreelekha TT
24	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-κB signaling pathways/University of Kerala	Dr. Guruvayoorappan C
25	Vishnu Walsan	Investigation of radioprotective effect of mangroves and its potential application in mitigating radiation-induced esophagitis/University of Kerala	Dr. Guruvayoorappan C
26	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
27	Dhanisha SS	Investigation of the immunomodulatory efficacy of medicinal plants and its potential application in preventing cancer metastasis/University of Kerala	Dr. Guruvayoorappan C

Training provided	
Trainees	Number trained
MD/MS/DM students (Observation training)	20
MSc (Biotech)/Life Science students (3/6 months project work)	15

DIVISION OF LIBRARY AND INFORMATION SERVICES

Vishnu V

Librarian cum Information Officer Gr. I & Head

The Division carried out a wide range of services to support the clinical, academic and administrative requirements of the Centre. Institution wide and remote based full text access to the subscribed content from ScienceDirect, Wiley Online Library, Oxford University Press, Ovid, Springer Nature, Informa Health, American Society of Clinical Oncology, American Association for Cancer Research, etc. were made available. This is in addition to the journals, E-books and other multimedia resources available through ClinicalKey and OVID platforms of the National Cancer Grid (NCG) library services. Subscription to the UpToDate Anywhere database was continued to provide campus wide and off campus access. NCG services were utilized to provide 'Ithenticate' software based plagiarism checking for 36 manuscripts including articles and theses received from faculty, research scholars and postgraduate/superspeciality students.

Information sources	
Document type	Collection as on 31 March 2021
Books, Monographs and Back Volumes	13495
Current Journals	132
E-Journals	125
E-Books	144
Reprints	8188



Web-based information services

Arrangements are in place for the provision of information services through regular updates in library home page. Links were provided to each journal, which enabled direct access to full text of articles. Details of books, RCC publications, reprints, journal holdings, e-books, and previous year university examination question papers of Post graduate/Superspeciality programmes in the Centre were made accessible through various links provided in the library page.

DIVISION OF INFORMATION SYSTEMS

Neelima N

Systems Manager & Head

The Division is entrusted with the maintenance of Hospital Information System, web, mail and proxy servers, administration of Oracle database, management of LAN and WAN, management of data relating to Cancer Care for Life scheme, maintenance of PCs and trouble shooting, administration and maintenance of telemedicine software and equipment, scanning of case sheets, etc. The division is equipped with Hyper-Converged Infrastructure (HCI), Oracle Database Appliance (ODA), and Organization structured network with 40G network fibre optic backbone, which ensures a faster and reliable data transfer speed within the campus network.

Hospital Information System (HIS) in RCC, known as TEJHAS (Telemedicine Enabled Java based Hospital Automation System) is a network of computers, used to collect process and retrieve patient care and administrative information on all hospital activities from various departments to satisfy the functional requirement of the users. In addition to HIS, the division maintains the IT Hardware infrastructure, IP Surveillance Infrastructure, Network Infrastructure, Software Infrastructure, Mini Datacentre and Disaster Recovery Site Infrastructure of the Centre.



EARLY CANCER DETECTION CENTRE (ECDC)

ECDC, Ernakulam

Latha A (till 30.11.2020)

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 653 patients during the period.

Screening services

Services	Number
Persons screened	4180
Cancers detected*	366
Pre-cancers detected	54

*Oral-34, Breast-190, Cervix-6, Lymphoma-9, Thyroid-42, Metastatic lymphnode-83, Others-2

Clinical activities

Tasks	ECDC
Cervical smear	914
Oral smear	60
Fine Needle Aspiration Cytology	1503

ECDC, Palakkad

Rekha SR

Resident Medical Officer

The major activities of this Centre are primary and secondary prevention of cancers through cancer awareness/education programmes organised at the Centre and at the 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 from RCC were also done. Follow up clinics were conducted for patients from Palakkad, Thrissur and Malappuram districts through telemedicine mode and were attended by 499 patients. Morphine tablets were given to palliative care patients.

Screening services

Services	Number
Awareness classes	10
Cancer detection camps	04
Persons screened	3953
Cancers detected*	49
Pre-cancers detected	89

*Oral-11, Breast-23, Cervix-3, Others-12

Clinical activities

Tasks	ECDC	Camp	Total
Cervical smear	320	62	382
Oral smear	25	0	25
Fine Needle Aspiration Cytology	114	06	120
Sputum cytology	09	0	09
Nipple discharge	06	02	08
Fluid cytology	16	0	16

NATURAL BACKGROUND RADIATION CANCER REGISTRY (NBRR), KARUNAGAPPALLY

Jayalekshmi P

Additional Professor & Officer-in-charge

NBRR was started in 1990 to evaluate the health effects of natural radiation present in the sea coast of Karunagappally Taluk, Kollam district of Kerala. The study concentrated on the clinical and biological effects of natural radiation on cancer and the study results so far indicate no excess cancer in relation to natural radiation in this area. NBRR carries out radiation epidemiologic studies on cancer and non-cancerous diseases, dosimetric studies, cytogenetic studies and prevalence of other health effects such as cataract and atherosclerosis. Kollam District Cancer Registry and Population Based Survival Studies supported by ICMR, Govt. of India, and Cancer Care Centre, Neendakara supported by Govt. of Kerala are attached with this registry. The new building at the Cancer Care Centre premises built under the Asset Development scheme of MLA, Chavara legislative constituency was occupied on 27 November 2020.

Patient services

The registry conducted review clinics, cancer awareness classes, cancer detection camps, cancer control training programmes, and cancer supportive clinics with day care and home care.

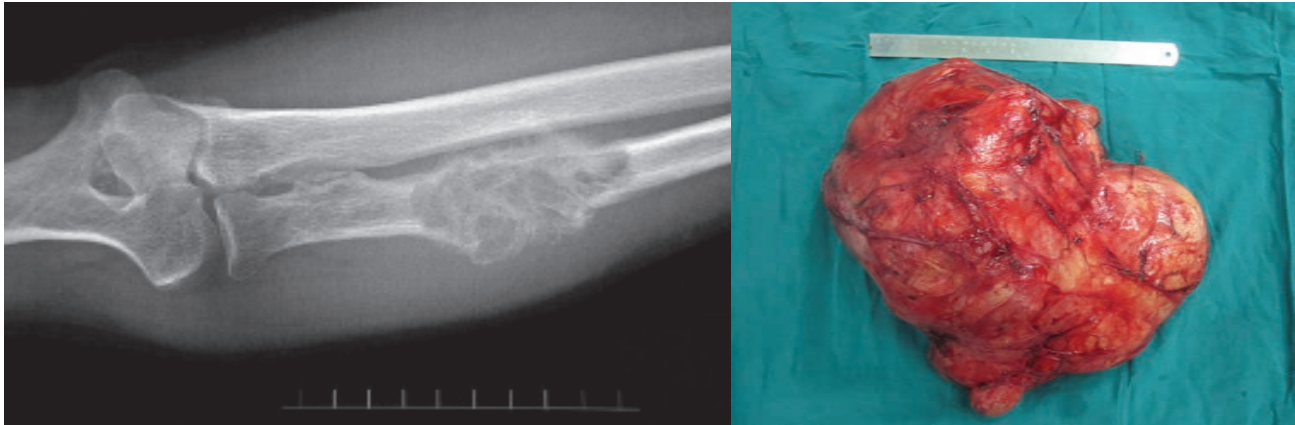
Patient services		
Services	Number	Persons attended
Review clinics	07	285
Cancer supportive clinics with day care (all working days) & home care (weekly 2 days)	Daily	5110
Cancer awareness classes & cancer control training programmes	02	140
Cancer detection camps	09	270
Pap smear screening	09	177
Other cytology investigations	--	07
Cancers detected*	12	--

*Oral-03, Breast-06, Others-03

MULTIDISCIPLINARY CLINICS

'A' CLINIC

(HAEMATOLOGICAL, LYMPHORETICULAR, BONE & SOFT TISSUE SARCOMA)



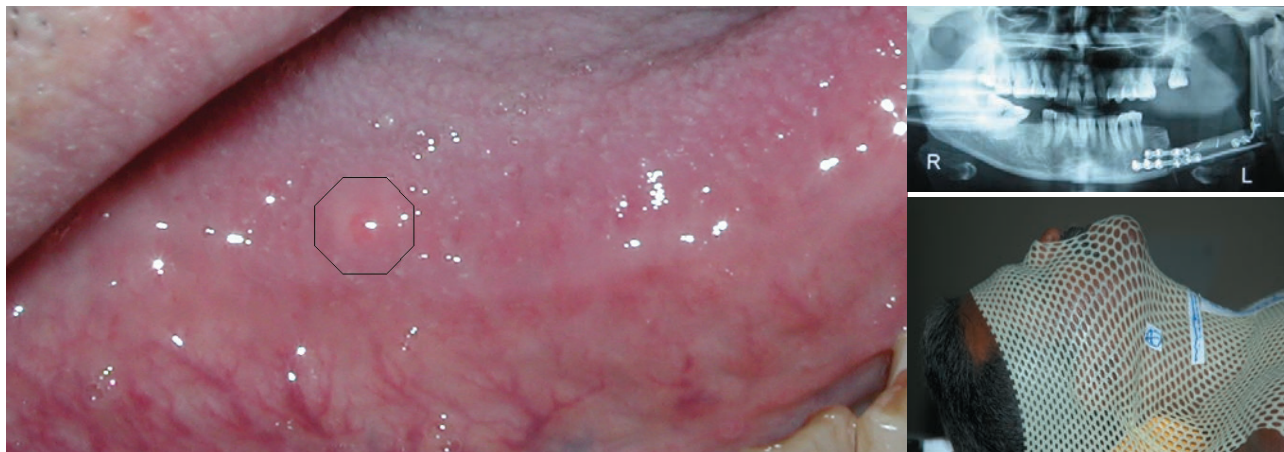
'A' Clinic is responsible for the diagnosis and management of haematological and lymphoreticular malignancies, sarcomas and other solid tumours where intensive chemotherapy is indicated. 1979 patients were admitted for the administration of high profile chemotherapy and management of emergencies and complications. In the BMT unit, autologous bone marrow transplantation following high dose chemotherapy was performed in 19 patients. Allogenic bone marrow transplantation for leukaemias was performed in two patients. In the BMT unit, 42 stem cell apheresis procedures were done during the reporting period. Clinical training was given to postgraduate students of Radiation Oncology, Surgical Oncology and Medical Oncology of RCC and other Medical Colleges.

Clinical Services/Procedures

Patients consulted			
Patients		Number	
New cases		1687	
Review cases		27308	
Total		28995	
Specialised services			
High dose chemotherapy	Apheresis procedure	Autologous BMT	Allogenic BMT
1979	42	19	02

Major surgical procedures: 157 (Soft tissue sarcoma - 61, Bone tumours - 88, Lymphoma – 08)

'B' CLINIC (HEAD & NECK)



'B' Clinic comprises of a multidisciplinary team of surgical oncologists and clinical oncologists working together for 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 of 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 provided state-of-the-art radiotherapy services including IMRT, 3D conformal radiotherapy and remote after loading HDR brachytherapy. The clinic also provided training to post graduates of Surgery, ENT, Radiation Oncology and various Dental specialties from various colleges across South India.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	1785
Review cases	19522
Total	21307

Radiotherapy Procedures

Radical			Palliative
3D CRT	IMRT + IGRT	2D Planning	
101	125	525	216

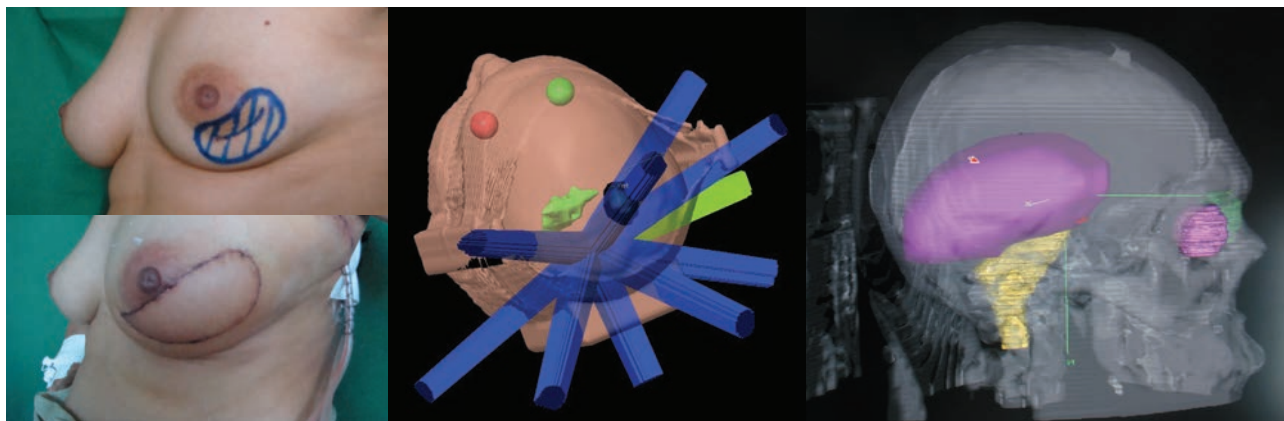
Surgical Procedures

Oral cancer	Laryngo-pharyngeal	Salivary glands	Sino-nasal	Miscellaneous
496	24	15	09	67

Academic activities

- One year Fellowship programme in Head and Neck Clinical Oncology, with an annual intake of two seats
- Organised 'Head and Neck Oncology Masterclass', webinar consisting of a series of 20 lectures with International faculty, from September 2020 to January 2021.

'C' CLINIC (BREAST & CENTRAL NERVOUS SYSTEM)



'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 comprised of a well-trained surgeons, radiation and medical oncologists works in collaboration with radiologists and pathologists. Regular multi-disciplinary tumour board discusses various treatment programmes for each patient. 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 and all forms of systemic treatments such as chemotherapy, endocrine therapy and targeted therapy. Clinic includes well-trained nurses for counseling on treatment side-effects, post treatment physiotherapy, rehabilitation and management of lymphoedema. The team of medical social workers is involved in arranging social and financial support schemes. Training in breast and neuro-oncology is provided for postgraduate and super-specialty students of RCC and other medical colleges.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	2029
Review cases	33157
Total	35186

Radiotherapy procedures				
Radical				Palliative
Conformal	Conventional	IMRT	SRS/SRT	
1057	11	108	06	154

Surgical Procedures	
Mastectomy +/- Reconstruction	Breast conservation & Oncoplasty
364	394

Chemotherapy

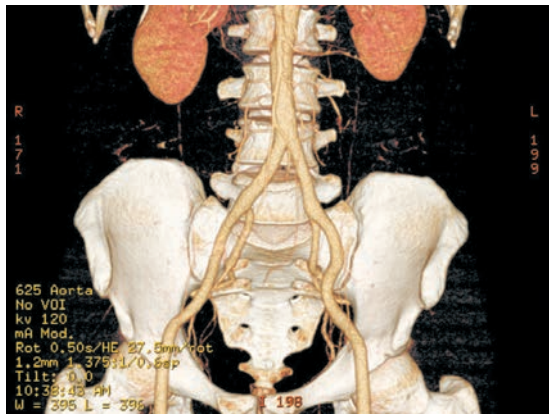
Most of the chemotherapy is delivered on an out-patient basis. In the reported year over 15,000 patients received chemotherapy.

Academic activities

Online webinar on Breast cancer awareness (October 2020) for specialists and residents: conducted eight lectures on various aspects of breast cancer prevention and treatment.

'D' CLINIC

(GYNAEC, GENITOURINARY & OTHERS)



'D' Clinic manages patients with gynecological 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 precision radiotherapy (IGRT, IMRT and 3D conformal RT), surgery, chemotherapy, targeted and hormonal therapies. Surgical oncology services range from extensive pelvic surgery to minimally invasive laparoscopic procedures. 337 patients had brachytherapy also. Clinical training was given to postgraduate students from Radiation Oncology, Surgical Oncology, Medical Oncology, Gynecologic Oncology and Gynecology.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	1965
Review cases	21017
Total	22982

Radiotherapy procedures

Radical			Palliative	Brachytherapy
3DCRT	IMRT/IGRT	2D Planning		
116	202	136	302	1006

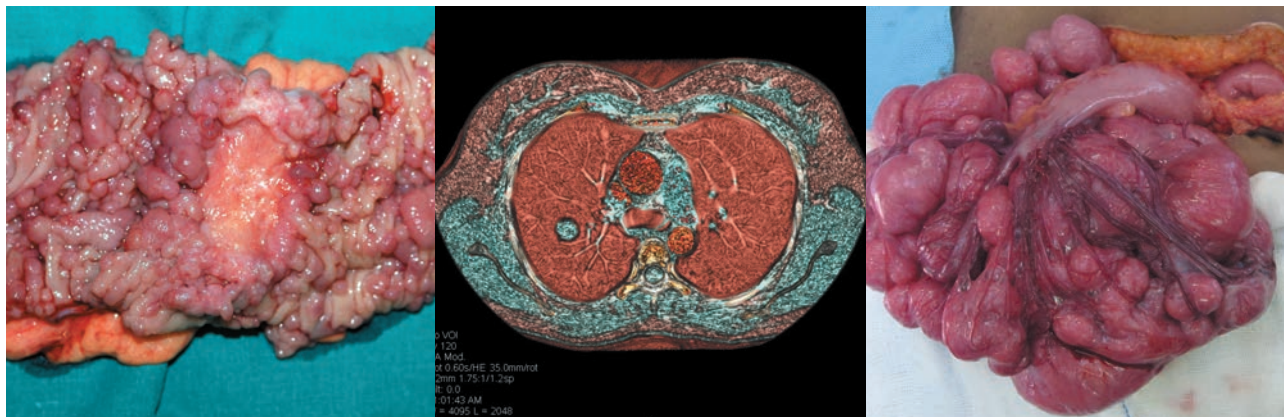
Surgical Procedures

Gynaecological cancers	Ovarian	161
	Endometrial	140
	Cervical	06
Urological cancers	Nephrectomy	39
	Penectomy	18
	Bladder	15
Skin		43
Others		66

Minor cases

Uro and Skin	20
LEEP	21
Colposcopy	49

'E' CLINIC (CHEST & GASTROINTESTINAL)



'E' Clinic caters for patients with cancers of lung, mediastinum, gastro-intestinal tract and hepato-biliary tract. The multidisciplinary team consisting of well-trained surgical oncologists, radiation oncologists and medical oncologists offers comprehensive state-of-the-art surgery, radiotherapy, and chemotherapy services. Image guided and respiration gated radiotherapy and stereotactic body radiotherapy (SBRT) are being practiced where clinically indicated. The surgical services were suspended during the COVID-19 national lockdown period and only emergency surgeries were conducted. Clinical services were resumed with new COVID-19 protocols enabling routine clinical work with minimal risk of infection among staff and patients. Clinical training was given to postgraduate students of Radiation Oncology, Surgical Oncology and Medical Oncology of RCC and other Medical Colleges.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	2694
Review cases	23352
Total	26046

Radiotherapy procedures

Radical				Palliative
Conformal	IMRT/IGRT	CT/2D Plan	SRS/ SBRT	
255	181	04	07	718

Surgical procedures

Esophagus	Stomach	Hepatobiliary and Pancreas	Colorectal	Thoracic	Others
16	29	28	215	11	95

Chemotherapy

The clinic provided both day care as well as inpatient chemotherapy services. Chemotherapy infusion regimens were given through infusion pumps using PICC line as part of daycare chemotherapy, thereby avoiding inpatient admissions.

'F' CLINIC (PAEDIATRIC ONCOLOGY)



'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. Supportive care, psychosocial counseling, nutritional support, informal education and cultural programs for patients and parents were also provided. Among the new cases reported, acute lymphoblastic leukaemia and brain tumour were the most common malignancies. A total of 867 children were admitted in the paediatric oncology ward during the period.

Clinical Services/Procedures

Procedures	
Intrathecal medications	1813
Lumbar puncture	377
Bone marrow aspiration/biopsy	716
PICC line insertion	21
PICC line resuturing	42
Trucut biopsy	18
FNAC	26
Pleural/ascitic tapping	10
Chest tube insertion	01
Ventilator support	13
Wound C&D, aspiration for C&S	13

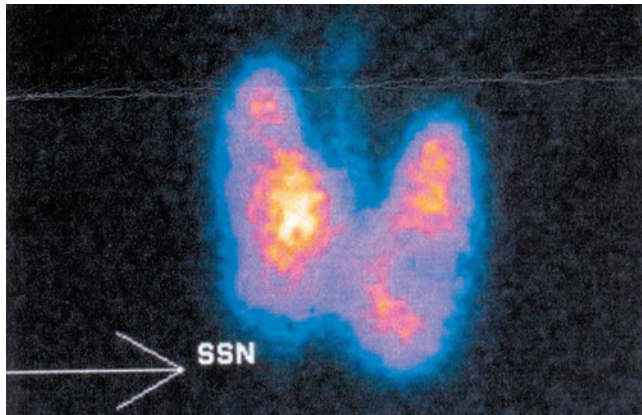
Patients consulted

Patients	Number
New cases	400
Review cases	13792
Total	14192

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 from within RCC and also from various Medical Colleges and private institutions like Kerala Institute of Medical Sciences and CSI Medical College, Karakkonam.
- Provided training to paediatricians from Government Hospitals in Kerala. Observers from foreign academic institutions were given an overview and exposure to Paediatric Oncology.

'G' CLINIC (THYROID)



'G' Clinic is a multidisciplinary clinic comprising experts from Nuclear Medicine, Surgical Oncology and Radiation Oncology divisions. The clinic managed both thyroid cancer as well as non-malignant cases.

Clinical Services/Procedures

Patients consulted	
Patients	Number
New cases	631
Review cases	8322
Total	8953

Nuclear Medicine services

Immunoassays	PET-CT Scan	SPECT Gamma camera	SPECT CT
37587	1127	804	1966

Radio-iodine therapy

Thyroid Cancer	Thyrotoxicosis
380	78

Surgical Procedures

Total Thyroidectomy	Hemi Thyroidectomy	Revision/ Completion Thyroidectomy
65	01	11

Public Relations Activities

Public Relations Officer Sr. Gr.

Surendran Nair V

The Public Relations wing dealt with information counter, media relations, public functions, co-ordination of volunteers, poor patients' welfare fund campaign, conduct of cancer awareness programmes, Cancer Care for Life scheme (CCL), Interest Free Medical Advance (IFMA), complaint redressal, receptionist training programme, preparation of brochures, articles, documentaries and other media publicity materials. Weekly meetings of the CCL committee to review and sanction treatment were organized and 117 CCL members reported for treatment during the period. 125 IFMA files from H & FW Department, Govt. of Kerala were processed and submitted. Fund raising campaign to promote contribution to the poor patients welfare fund (Akshayapatram) were organised with the help of several individuals and philanthropic organisations. Contribution received from 437 donors during

this period, was utilised for food, medicine, and rehabilitation of patients who were not covered under any patient welfare schemes. 263 patients availed financial assistance from this fund, including those patients not included under any welfare schemes and patients from Tamil Nadu. This fund was also utilized for 'free food' to the patients in general wards. Cancer awareness programmes were conducted through various audio-visual media. Opinion surveys were conducted among patients and bystanders to determine quality of service. The complaints lodged by the patients and bystanders were documented and forwarded to Medical Superintendent.

Certificates were issued to the 8th batch of Receptionist Trainees (8 seats per batch), who successfully completed one year of training.

Honours, Awards and Recognitions Received

Faculty and other Staff

Patent Awarded

Lekha Dinesh Kumar, Vinod Kumar Verma, **Rekha A. Nair**, Jem Prabhakar, **Jayasree K.**, awarded the Australian Patent for 'Biomarkers useful for detection of types, grades and stages of human breast cancer'. (Patent No. 2018202963; Year 2020)

Awards/Honours

Dhanya Dinesh (Assistant Professor; Surgical Services), received Dr. Chitrathara Medal for the best paper in Gynaecologic Oncology at All Kerala Conference of Obstetrics and Gynaecology, Kochi. (February 2021).

Sindhu Nair P (Assistant Professor; Pathology), won best poster award for 'Endometrioid carcinoma: Report of three unusual variants', at the BAGP 2020: British Association of Gynaecological Pathologists', 11-12 June 2020. (E-poster competition).

Sudha P (Additional Professor; Palliative Medicine), awarded UICC fellowship for safe non-opioid cancer pain management.

Sunil Kumar S (Technical Officer; Radiation Physics), awarded PhD by Meenakshi Academy of Higher Education and Research, Chennai on the topic 'Sustainability/prevalence of dengue fever in Thiruvananthapuram district, Kerala: Case study'. (March 2021).

Zhenia Gopalakrishnan (Assistant Professor; Radiation Physics), awarded PhD by University of Kerala on the topic 'Evaluation of radiotherapy treatment planning techniques and different dose calculation algorithms for the management of breast cancer'. (May 2020).

Trainees

Abeesh P (Research Scholar), won best poster award for 'Nanoliposomal withaferin A induce apoptosis in lymphoma cells and mitigate murine solid tumour development by regulating BCL-XL', at the National Conference on Recent Advances in Applied Sciences, Technology and Health (RASTH – 2021), 04-05 March 2021.

Archana MG (Research Scholar), won first prize for the poster 'Bio fabricated metallic nanosystem conjugated with doxorubicin: A promising drug delivery system for tumour management', at the International Seminar on Recent Biochemical Approaches in Therapeutics (RBAT-VII), Department of Biochemistry, University of Kerala, Thiruvananthapuram, 09-11 February 2021.

Divya V. Gladston (MD Anaesthesiology student), awarded Gold Medal for best outgoing post graduate student (2020).

Joseph Vimal (Research Scholar), won best oral presentation (Scientist) award for the paper, 'Utilization of oral fluid metabolites as diagnostic and prognostic markers in oral tongue cancer', at the 33rd Kerala Science Congress, 25-30 January 2021.

Preethi GU (Research Scholar), received Dr. Divya Ravindran Memorial Award 2020 for best research paper of the year 2019-2020, 'Doxorubicin eluting microporous polysaccharide scaffolds: An implantable device to expunge tumour'. Materials Science and Engineering: C. 107, 110332, 2020. (16 October 2020).

Rahul Rajagopal (MD Pathology student), received third rank in MD Pathology examinations. (2020).

Shanaz S. Sharaf (Research Scholar), won best oral presentation award for the paper, 'Multiplexed IHC provides comprehensive prognostic information of breast carcinoma', at the 33rd Kerala Science Congress, 25-30 January 2021.

Steffi Chacko (DM Medical Oncology student)

- received 3rd prize for the paper, 'Serum cystatin as a prognostic marker in multiple myeloma', at the 43rd ICON, Virtual Conference, 09-11 October 2020.
- received 1st prize for the paper, 'Serum free light chain assay as a prognostic marker in aggressive B cell NHL: Impact on survival outcome', at ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology (Webinar), Bengaluru, 06-08 November 2020.

Unnikrishnan BS (Research Scholar)

- won first prize for the poster, 'Folic acid conjugated polysaccharide iron oxide nanoparticles: a new platform for magnetic field mediated liquid biopsy', at the Indo-UK Virtual conference, CBCMT, VIT, Vellore, India, Swansea University, United Kingdom and NIPER, Kolkata, India, 01-03 June 2020.
- received Shri K.N. Narasimhaiah award for best original paper in Cancer Biology, 'Theranostic nano probe for the laser mediated tumour ablation coupled with Raman spectroscopic analysis', at the National Virtual Conference on Recent Breakthroughs in Biotechnology and Annual Meet of Society for Biotechnologists (India) 2021, Bharathiar University, Coimbatore, 22-23 January 2021.

Functions & Workshops organised

Sl. No.	Name of Programme	Date
1	Larynxcon 2020: 5th International CME on Voice Preservation and Restoration in Laryngectomy (Virtual CME).	21 June 2020
2	Inauguration of State-of-the-art High Energy Linear Accelerator by Smt. K.K. Shailaja Teacher, Hon'ble Minister for Health, Social Justice, Women and Child Health, Govt. of Kerala. (Through video conferencing)	18 August 2020
3	IMPACT2020: Anaesthesia Workshops	22 August 2020
4	Inauguration of State-of-the-art Casualty Services by Sri. Pinarayi Vijayan, Hon'ble Chief Minister of Kerala. (Through video conferencing)	19 September 2020
5	PG QUEST 2020: Surgical Oncology (MCh) PG Training programme (Webinar)	25 September 2020
6	ESMO Breast Cancer Updates 2020 (Webinar)	29 October 2020
7	Head and Neck Oncology Master class 2020 (Webinar)	22 November 2020
8	International Childhood Cancer Day (ICCD) Webinar on 'Shared Care in Paediatric Oncology: A Journey Together'.	16 February 2021
9	ASH Updates 2021 (Webinar)	19, 26 February 2021
10	Inauguration of 2nd Campus of RCC at Pulayanarkotta, State-of-the-art Dual Source Dual Energy CT scanner & State-of-the-art High Energy Linear Accelerator by Sri. Pinarayi Vijayan, Hon'ble Chief Minister of Kerala. (Through video conferencing)	24 February 2021

GALLERY



State-of-the-art High Energy Linear Accelerator; inaugurated by Smt. K.K. Shailaja Teacher, Hon'ble Minister for Health, Social Justice, Women and Child Development (18 August 2020)

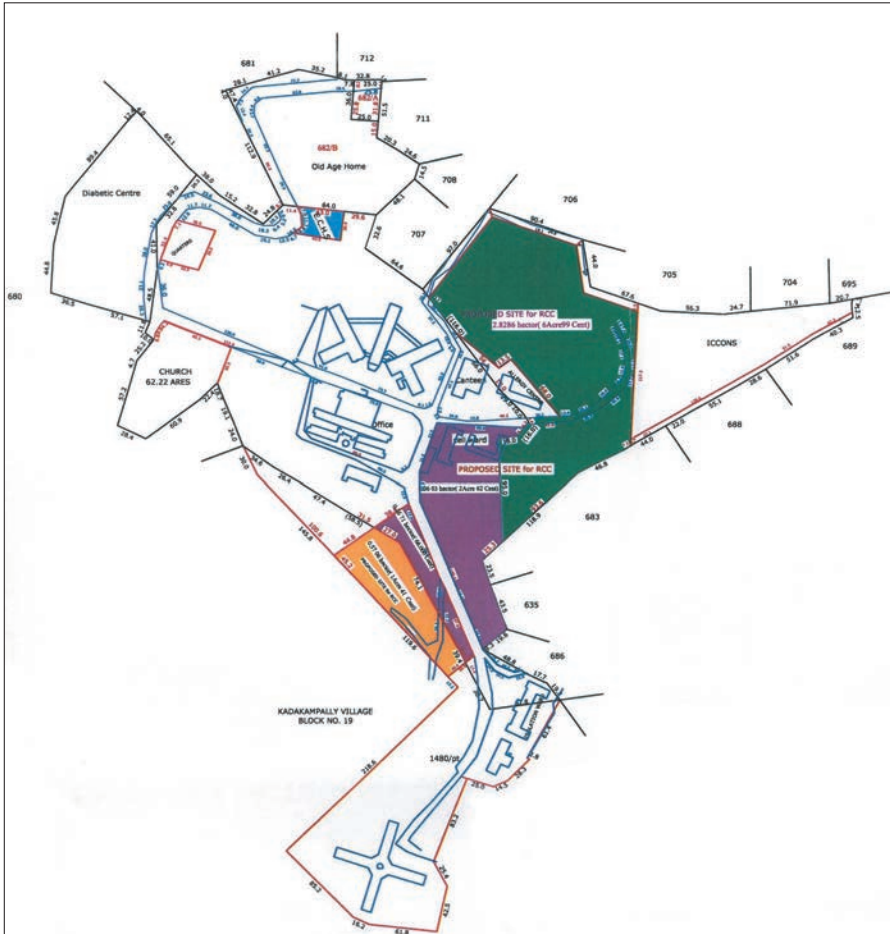
State-of-the-art Dual Source CT Scanner; inaugurated by Sri. Pinarayi Vijayan, Hon'ble Chief Minister (24 February 2021)



State-of-the-art High Energy Linear Accelerator; inaugurated by Sri. Pinarayi Vijayan, Hon'ble Chief Minister (24 February 2021)



State-of-the-art Casualty, inaugurated by Sri. Pinarayi Vijayan, Hon'ble Chief Minister (19 September 2020)



2nd Campus at
Pulayanarkotta,
Thiruvananthapuram
(sketch)

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	Abhilash Menon	EIOC (Excellence In Oncology Care) 2020. 15-17 Oct 2020, Dubai/Webinar: (Delegate) . 61 st HAEMATOCON. 20-22 Nov 2020/Webinar: (Delegate) .
2	Akhilesh C. Sudhakaran	ESGO Virtual Conference 2020. 14-16 Dec 2020. (Paper: Survival outcomes of patients with clear cell carcinoma cervix: a single institutional retrospective analysis) .
3	Arun V	EIOC (Excellence In Oncology Care) 2020. 15-17 Oct 2020, Dubai/Webinar: (Poster: Clinical profile and treatment outcome of synovial sarcoma: A retrospective study) . European School of Hematology Meeting. 08 Nov 2020/Webinar: (Poster: Non Hodgkins lymphoma involving the duodenum: A case series) . Practice Changing Clinical Updates in Lymphoma and Myeloma 2020 and Beyond. 10-11 Nov 2020/ Webinar: (Delegate) .
4	Beela Sarah Mathew	Global Breast Cancer Initiative (GBCI) Technical Consultation' hosted by WHO Cancer Team. 04 Feb 2021/Webinar: (Delegate) .
5	Chandramohan K	Society of Surgical Oncology Annual Meeting. 17-18 Aug 2020, USA/ Webinar: (Delegate) .
6	Divya V. Gladston	The Royal College of Anaesthesiologists: Guy's Airway Management Course 2021. 29 Jan 2021, UK/ Webinar: (Poster: A randomised controlled trial to study the effect of intratracheal and intravenous lignocaine on airway and hemodynamic response during emergence and extubation following general anaesthesia) .
7	Elizabeth Mathew lype	AHNS (American Head and Neck Society) Journal Club. March 2021, AHNS, California/Webinar: (Delegate) .
8	Flowerlit Thomas	EIOC (Excellence In Oncology Care) 2020. 15-17 Oct 2020, Dubai/Webinar: (Delegate) .
9	Francis V. James	Virtual ESMO. 18-20 Sept 2020. (Delegate) .
10	Gayatri Gopan	Expert Perspectives on Integrating Immuno-Oncology Therapeutics into the Management of Metastatic Triple-Negative Breast Cancer. 25 May 2020/Webinar: (Delegate) . New Systemic Therapies for Mycosis Fungoides and Sézary Syndrome. 03 June 2020/Webinar: (Delegate) . EIOC (Excellence In Oncology Care) 2020. 15-17 Oct 2020, Dubai/Webinar: (Paper: Clinical characteristics and response to treatment of elderly patients with multiple myeloma: a retrospective study) . 2 nd ESH Conference: How to Diagnose and Treat Lymphoma. 06-08 Nov 2020/Webinar: (Poster: Waldenstroms macroglobulinemia: a review of 11 patients from a single centre in South India) .
11	Jayakrishnan R	Cancer amid COVID-19: Organised by Asia Pacific Organisation for Cancer Prevention and Asian National Cancer Centre Alliance. 04 Dec 2020/Webinar: (Panelist) .
12	Lekha M. Nair	ESMO ASIA Virtual Congress 2020. 20-22 Nov 2020. (Paper: Prognostic factors and outcomes of non-seminomatous germ cell tumours of testis: experience from a tertiary cancer centre in India) .
13	Mintu Mathew Abraham, Arun V	Immunotherapy Updates 2020. 17 July 2020/Webinar: (Delegates) . 4 th International BRCA virtual Forum. 22 Aug 2020, Singapore. (Delegates) . Asia Pacific Gastroenterology Cancer Summit. 23 Aug 2020/Webinar: (Delegates) .
14	Mintu Mathew Abraham	EIOC (Excellence In Oncology Care) 2020. 15-17 Oct 2020, Dubai/Webinar: (Paper: Clinical characteristics and treatment outcome of mixed phenotype acute leukaemia: A single centre experience) . 2 nd ESH Conference: How to Diagnose and Treat Lymphoma. 06-08 Nov 2020/Webinar: (Paper: Extranodal NK/T cell lymphoma: review of 8 cases from a single centre in India) .

15	Paul Augustine	12 th European Breast Cancer Conference. 02-03 Oct 2020. (<i>Poster: Endofascial axillary dissection: A novel method to reduce axillary seroma</i>).
16	Priyakumari T	London Global Cancer Week 2020. 17 Nov 2020/Webinar. (<i>Talk: Research and treatment of paediatric cancers during COVID-19: Global perspectives</i>).
17	Priyakumari T, Harish TV, Raghwesh R	15th St. Jude Viva Forum. 05-13 Mar 2021/Webinar. (<i>Delegates</i>).
18	Rona Joseph P, Mintu Mathew Abraham, Arun V, Gayatri Gopan	ESMO Breast Cancer Virtual Meeting 2020. 23-24 May 2020. (<i>Delegates</i>).
19	Rona Joseph P, Sherry S. Abraham	ESMO Virtual Preceptorship on Breast Cancer. 22-23 Jan 2021. (<i>Delegates</i>).
20	Rona Joseph P	17th St. Gallen International Breast Cancer Conference 2021. 17-21 Mar 2021/Webinar. (<i>Delegate</i>).
21	Saikumar S	ESMO Immuno-Oncology Virtual Conference. 09-12 Dec 2020. (<i>Delegate</i>).
		ESMO TAT Virtual Conference. 01-02 Mar 2021. (<i>Delegate</i>).
		European Lung Cancer Virtual Conference. 25-27 Mar 2021. (<i>Delegate</i>).
22	Steffi Chacko	EIOC (Excellence In Oncology Care) 2020. 15-17 Oct 2020, Dubai/Webinar: (<i>Poster: Treatment outcome of patient with salivary gland lymphoma: Experience from a tertiary care centre in India</i>).
		2 nd ESH Conference: How to Diagnose and Treat Lymphoma. 06-08 Nov 2020/Webinar. (<i>Poster: Subcutaneous panniculitis like T cell lymphoma: A case series</i>).
23	Sugeeth MT	ESH 5 th Translational Research e-Conference: Multiple Myeloma. 08-11 Oct 2020. (<i>Delegate</i>).
24	Sugeeth MT, Abhilash Menon	2 nd ESH Conference: How to Diagnose and Treat CML/MPN. 25-28 Feb 2021/Webinar. (<i>Delegates</i>).
25	Trivedi Maharshi Dinesh Bhai, Harish TV, Raghwesh R	SIOP 2020: 52 nd Congress. 14-17 Oct 2020/Webinar. (<i>Delegates</i>).

NATIONAL LEVEL

Sl. No.	Delegate/s	Name of Conference/Meeting. Date & Venue (<i>Paper/Talk/Poster/Video presented/Delegate's status</i>)
1.	Abhilash Menon	ASH Updates 2021. 19 Feb 2021, RCC/Webinar. (<i>Talk: MURANO 5yr update</i>).
2.	Aleyamma Mathew, Preethi Sara George, Jagathnath Krishna KM	National webinar on Recent Trends in Statistical Theory & Applications. 29 June-01 July 2020, Thiruvananthapuram. (<i>Delegates</i>).
3.	Amritha P. Kumar	International webinar on Advances in Genomics and Gene Technology. 24-26 Mar 2021, Inter University Centre for Genomics and Gene Technology, Kerala. (<i>Paper: Efficacy of cytogenetic analysis in the risk stratification of pediatric B- acute lymphoblastic leukaemia patients</i>).
4.	Amitha Sherief P	ASH Updates 2021. 19 Feb 2021, RCC/Webinar. (<i>Talk: Five year update of ECHELON 1 trial</i>).
5.	Ancy George	Certificate Course in Essentials of Palliative Medicine. December 2020. (<i>Delegate</i>).
		Refresher Course in Palliative Medicine. December 2020. (<i>Enrolled for the year 2021</i>).
6.	Anoop TM	ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020/Webinar. (<i>Delegate</i>).
7.	Archana MG	International Online Conference on Macromolecules (ICM 2020). 13-15 Nov 2020, Kottayam. (<i>Paper: Bio-fabricated gold nanoparticles for combinatorial delivery of siRNA and doxorubicin in cancer cells</i>).
		RBAT-VII: International online Seminar on 'Recent Biochemical Approaches in Therapeutics'. 09-11 Feb 2021, Department of Biochemistry, Kerala University. (<i>Paper: Bio-fabricated metallic nanosystem conjugated with doxorubicin: A promising drug delivery system for tumour management</i>).

Conferences

8.	Arun Peter Mathew, Chandramohan K, Nebu Abraham George, Mira Wagh, Siva Ranjith J	Basic Course in Biomedical Research by ICMR and NIE for MCI Teachers. December 2020/Webinar: (Delegates. Completed successfully).
9.	Arun Sankar S	ECHO 2020. 25-26 Sep 2020/Webinar: (Speaker: EGFR exon 19del and 21 L858R mutation subsets require different treatment approaches). ASICON: 80th Annual Conference. 17-19 Dec 2020/Webinar: (Speaker: Role of radiation in carcinoma stomach).
10.	Arun Sankar S, Geethi M H	India GI Cancer Congress. 12 - 13 Mar 2021/Webinar: (Organiser & Faculty).
11.	Arun V	43 rd ICON. 08-10 Oct 2020/Webinar: (Talk: Prognostic Significance of R-ISS staging system in multiple myeloma). ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar: (Poster: Clinical characteristics and treatment outcome of non-metastatic synovial sarcoma: A retrospective study).
12.	Bhagyalakshmi R	The XIth Annual Conference of All India Difficult Airway Association (AIDAA NAC 2020). 10-11 Oct 2020/Webinar: (Delegate).
13.	Bhagyalakshmi R, Frenny Ann Philip	Anaesthesia Post Graduate Academic Programme (APGAP). November 2020/Webinar: (Delegate).
14.	Bhavya S. Kumar	ASH Updates 2021. 19 Feb 2021, RCC/Webinar: (Talk: Update on Transcend 001 trial).
15.	Binitha R	Indian Academy of Paediatrics, Thiruvananthapuram. October 2020/Webinar: (Chairperson).
16.	Bipin T. Varghese	Larynxcon 2020: The 5th International CME on Voice preservation and Restoration in Laryngectomy. 21 June 2020, RCC, Thiruvananthapuram/Webinar: (Faculty, Organiser. Talk: Indian (ICMR) guidelines in the management of larynx and hypopharynx cancer). PG QUEST 2020: Surgical Oncology (MCh) PG Training programme. 25 Sept 2020, RCC/Webinar: (Examiner: Mock examination sessions: Parotid and Unknown Primary. Instructor : Cadaveric dissection course sessions). Webinar Series on Facial Plastic and Reconstructive Surgery 2020-21 organised by the Indian Society for Facial Trauma, Aesthetic and Reconstructive Surgery of Otolaryngologists. 15 Nov 2020. (Didactic lecture on regional flaps for head and neck reconstruction: The submental and nasolabial flaps). Head and Neck Oncology Master class 2020. 22 Nov 2020, RCC, Thiruvananthapuram/Webinar: (Talk: Surgical Management of T4a Ca Larynx). Foundation of Head & Neck Oncology Annual Conference 2020. 12-13 Dec 2020/Webinar: (Moderator: Session on Trouble shooting the TEP).
17.	Chandramohan K	Webinar by Cancer Academy New Delhi. 29 July 2020. (Talk: Lymphatic drainage of and D2 dissection for cancer stomach). Webinar by IASO & KASO. 07 Aug 2020. (Talk: Management of significant polyps and early colorectal cancer). Training the trainer programme on online education system management by KUHS. 2020 September/Webinar: (Delegate). Virtual National meeting of Association of Surgeons of India. 17-19 Dec 2020. (Moderated Panel discussion in international symposium on locally advanced gastric cancer).
18.	Dhanya Krishnan	33rd Kerala Science Congress: Pandemics: Risks, Impacts & Mitigation. 25-30 Jan 2021, Palakkad / Webinar: (Presented poster).
19.	Divya Raj, Maymon	Retreatment strategies in Prosthodontics in general practise conducted by Dental Council of India. 11 Oct 2020/Webinar: (Delegates).
20.	Divya Raj	Nonsurgical periodontal therapy conducted by Dental Council of India. 18 Oct 2020/Webinar: (Delegate). Triple O Conclave 2020. 10 Dec 2020/Webinar: (Delegate).

21.	Divya V.Gladston	Yuva 2020: National Conference. 05-06 Sept 2020, Haryana/Webinar: (<i>Paper: Current concepts in management of pheochromocytoma</i>). All India Institute of Medical Sciences 2020. 16 Oct 2020, Bathinda/Webinar: (<i>Poster: Innovations and future in anaesthesia: Reinforcement of cuffed endotracheal tube to prevent kinking</i>).
22.	Drishya Sudarsanan, Dhanisha SS	Recent Advances in Applied Sciences, Technology and Health (RASTH 2021). 04 Mar 2021/ Webinar: (<i>Delegates</i>).
23.	Elizabeth Mathew lype	FHNO National Conference. December 2020, Bengaluru/Webinar: (<i>Panelist on Oral cancer management</i>).
24.	Flowerlit Thomas	ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar: (<i>Poster: Plasmacytoma of the mesentery: A review of 5 cases</i>).
25.	Francis V. James	Best of ASTRO. 15-16 Aug 2020/Webinar: (<i>Faculty</i>).
		KUHS: Functioning of Ethics committee during Covid 19. 19-21 Sept 2020/Webinar: (<i>Delegate</i>).
		CRAB-E-CON & DWITIYA TELEONCOTHON. 02-04 Oct 2020/Webinar: (<i>Faculty</i>).
		43 rd ICON. 08-10 Oct 2020/Webinar: (<i>Delegate</i>).
		7th National Conference of Forum for Ethics Review Committees in India. 27-29 Nov 2020/ Webinar: (<i>Delegate</i>).
26.	Frenny Ann Philip, Venugopal A	ICMR Training of Ethics committee members. 16 Mar 2021/Webinar: (<i>Delegate</i>).
		GARC 2020: Ganga Anaesthesia Refresher Course. 12-13 Dec 2020, Coimbatore/Webinar: (<i>Delegates</i>).
		43 rd ICON. 08-10 Oct 2020/Webinar: (<i>Talk: The prognostic significance of beta 2 microglobulin and absolute lymphocyte monocyte ratio in DLBCL patients treated with RCHOP</i>).
		ESMO Breast Cancer Updates 2020. 29 Oct 2020, RCC/Webinar: (<i>Poster: IMpassion031: Results from a phase III study of neoadjuvant Atezolizumab + Chemotherapy in early triple-negative breast cancer</i>).
		ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar: (<i>Poster: Outcome of treatment in elderly myeloma: a single centre experience</i>).
28.	Geetha kumari BS	Training Programme for Secondary Staff Nurses, Govt Palliative care team, Thrissur . 27 Mar 2021/Webinar: (<i>Talk: Stoma care</i>).
29.	Geetha Raj	International webinar on Advances in Genomics and Gene Technology. 24-26 Mar 2021, Inter University Centre for Genomics and Gene Technology, Kerala. (<i>Paper: Exploring the impact of IDH mutations in the risk refinement of cytogenetically normal acute myeloid leukaemia patients</i>).
30.	Geethi MH	Virtual update: 4th International Annual Precision Oncology & IBC Conference. 09-11 Oct 2020. (<i>Delegate</i>).
		4th Multidisciplinary Lung Cancer Management Course. 05-06 & 12-13 Dec 2020/Webinar: (<i>Delegate</i>).
31.	Gireesh Kumar S	International webinar on the basics of oncology nursing care in the milieu of COVID-19. 24 Nov 2020. (<i>Talk: Nutrition for patients affected with cancer</i>).
32.	Guruprasad CS	Indian Academy of Paediatrics, Kochi: Paediatric Potpurri. July 2020/Webinar: (<i>Talk: Diagnosis of acute leukaemia</i>).
		Indian Academy of Paediatrics, Kochi: Endocrinology. November 2020/Webinar: (<i>Talk: Intracranial germ cell tumour: management</i>).
		Indian Academy of Paediatrics, Alappuzha: World Cancer Day event- Child hood Cancer: February 2021/Webinar: (<i>Talk: When to suspect and how to approach?</i>)
		Kerala PHOCON. March 2021/Webinar: (<i>Talk: Dealing with oncological emergencies</i>).
		Indian Academy of Pediatrics, Thiruvananthapuram: World Down Syndrome Day. March 2021/ Webinar: (<i>Talk: Management of Down syndrome in children: multidisciplinary approach</i>).

Conferences

33.	Guruvayoorappan C	Green Revolution Global Certification Programme organized by United Nations Framework Convention on Climate Change. 07 Aug 2020/Webinar: (Delegate).
34.	Harish TV, Ajay Sankar, Thirumala CR, Nandakumar S, Saishiva G	International Childhood Cancer Day-2021. Shared Care in Pediatric Oncology: A Journey Together. 16 Feb 2021/Webinar: (Delegates).
35.	Jagathnath Krishna KM	Webinar on 'Sample Size Determination'. 20 Oct 2020, Thrissur: (Faculty) 38th Annual Conference of Indian Society for Medical Statistics (ISMS). 10-12 Dec 2020/Webinar: (Paper presented) International Virtual Conference on Advanced Statistical Techniques in Business and Industry: A Regional Virtual Conference of International Society for Business and Industrial Statistics (ISBIS). 28-30 Dec 2020, Kochi. (Invited talk).
36.	Jayasree K	Calicut Pathalummi Meet. 22 Jan 2021/Webinar: (Talk: Approach to bone tumours: Basics to molecular). IAPM Kerala Chapter Meeting. 07 Mar 2021/Webinar: (Moderator: Guest lecture on Approach to bone tumours by Dr. Bharat Rekhi)
37.	Joseph Vimal	Training Programme in Biostatistics: From Basics Towards Data Analysis. 14-21 Sept 2020/Webinar: (Delegate). 33rd Kerala Science Congress: Pandemics: Risks, Impacts & Mitigation. 25-30 Jan 2021, Palakkad/Webinar: (Paper: Utilization of oral fluid metabolites as diagnostic and prognostic markers in oral tongue cancer).
38.	Kainickal CT	Larynxcon 2020: The 5th International CME on Voice preservation and Restoration in Laryngectomy. 21 June 2020, RCC, Thiruvananthapuram/Webinar: (Panel discussion: Management of locally advanced Ca Larynx). Chart rounds - Online lecture. 25 Jun 2020. (Talk: Incurable HNSCC, Adjuvant treatment in Ca oral cavity). Oncology Academic forum lecture. 08, 21 July, 02 Aug 2020/Webinar: (Talks: Head & Neck nodal stations: Clinical & radiological Implications, Management of HPV positive Ca Oropharynx, Role of imaging in the staging and treatment of Ca larynx). Online Webinar- JIPMER. 04-05 August 2020. (Talk: Radiological anatomy, staging, investigations in Ca Nasopharynx, treatment and target volume delineation in Ca Nasopharynx). Clinical Society BBCL. 30 Sept 2020, Guwahati. (Talk: Radiology anatomy and organ preservation strategies in Ca Larynx and Hypopharynx). Rapid revision of Oncology evidences 2019: Wolters & Kluwer. 30 Sept 2020. (Talk: Rapid revision of Oncology evidences 2019). Head & Neck Oncology Master Class organised by Department of Radiation Oncology, RCC. 04 Oct 2020 & 17 Jan 2021/Webinars. (Talk: Head & Neck Cancer- 8th TNM classification, Meta-Analysis of Chemotherapy in Head & Neck Cancer (MACH –NC)) Oncology Academic forum Online Lecture. 02, 09, 26 Mar 2021. (Talk: Clinical Problems in Head & Neck Cancer – Ca Oral Cavity, Oropharynx, Larynx, Hypopharynx & Nasopharynx, Management of Ca Oral Cavity).
39.	Kurian Cherian	Webinar on Breast Cancer. 31 Oct 2020. (Talk: Breast Cancer: Less is enough).
40.	Lakshmi Haridas K	Virtual Melanoma Centre of Excellence CONNECT Meeting. 13 June 2020. (Talk: Current scenarios and diagnosis of melanoma in India). Current Scenarios and Diagnosis of Melanoma in India. 16 June 2020/Webinar: (Panelist: Melanoma) Sarcoma and GIST Symposium. 30-31 July 2020/Webinar: (Panelist: Sarcoma) 2nd Immunooncology Review National Forum. 05-06 Sep 2020/Webinar: (Panelist: Role of immunotherapy in ovarian cancer). 2nd Annual Meeting of IASCC 2020. 03-04 Oct 2020/Webinar: (Talk: Holistic care in oncology).

41.	Lakshmi S, Sulfath TP	International webinar series on Tumour Immunology and Microenvironment. 04 Nov-03 Dec 2020. (Delegates).
42.	Lakshmi S	National Conference on the Life Science Ecosystem: Challenges and Opportunities in the Pandemic. 09-10 Mar 2021, Department of Biochemistry, University of Kerala/Webinar. (Evaluator of presentations). International Webinar on Advances in Genomics and Gene Technology. 24-26 Mar 2021, IUCGGT, Department of Biotechnology, University of Kerala/Webinar. (Evaluator of presentations).
43.	Lijeesh AL	National webinar on 'Get the facts to fight back Breast Cancer'. 03 Nov 2020. (Speaker). 4 th Multidisciplinary Lung cancer Management Course. 05-06 Dec 2020/Webinar. (Delegate). Updates in the Management of Carcinoma of Stomach. 19 Dec 2020/Webinar. (Delegate).
44.	Mahitha MS	International webinar on Advances in Genomics and Gene Technology. 24-26 Mar 2021, Inter University Centre for Genomics and Gene Technology, Kerala. (Paper: Clinical utility of cytogenetics in chronic phase of CML patients).
45.	Mary Thomas, Subha R	ISAWEBCON Kerala 2020. 01 Nov 2020/Webinar. (Delegates).
46.	Mary Thomas	IMPACT2020. 22 Aug 2020/Webinar. (Talk: Uptake and distribution of inhalational agents). KAAMCON: Kochi Advanced Airway Management Conference, Supported by Difficult Airway Society (DAS) UK, All India Difficult Airway Association (AIDAA) and Airway Management Foundation (AMF). 17 Jan 2021, Kochi/Webinar. (Talk: Blind nasal intubation: A forgotten art). ISAMIDKON. 20-21 Mar 2021/Webinar. (Internal Examiner : Case of Le Fort type 2 fracture maxilla for orif case discussion).
47.	Mintu Mathew Abraham, Arun V	3 rd Mid Year Gastro Intestinal Oncology Conference. 31 July-02 Aug 2020/Webinar. (Delegates).
48.	Mintu Mathew Abraham	43 rd ICON. 08-10 Oct 2020/Webinar. (Talk: Prognostic value of inflammatory markers in predicting response to neoadjuvant chemotherapy in patients with non-metastatic osteosarcoma). ESMO Breast Cancer Updates 2020. 29 Oct 2020, RCC/Webinar. (ASCENT trial abstract presentation). ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar. (Poster: POEMS syndrome: A review of 6 cases from a single institution in India).
49.	Prasanth VR	International Childhood Cancer Day-2021. Shared Care in Pediatric Oncology: A Journey Together. 16 Feb 2021/Webinar. (Moderator).
50.	Priya A	SCIICON 2020: The Second Annual Virtual Conference of the Society of Chest Imaging and Interventions. 26-27 Sept 2020. (Talk: Challenging cases in lung).
51.	Priyakumari T, Manjusha Nair, Binitha R, Guruprasad CS, Prasanth VR, Kalasekhar VS, Trivedi Maharshi Dinesh Bhai, Raghwesh R, Ajay S, Thirumala CR, Nandakumar S, Saishiva G, Harish TV, Raghwesh R	XIII th SIOP Asia Conference. 19-21 Mar 2021, Mumbai/Webinar. (Delegates).
52.	Priyakumari T	National Cancer Grid Guidelines Manual. 09 Jan 2021 / Webinar. (Member). Indian Academy of Paediatrics, Alappuzha: World Cancer Day event- Child hood Cancer: 02 February 2021/Webinar. (Chairperson: When to suspect and how to approach?) National Cancer Grid : Meeting with National Digital Health Mission (NDHM)/National Health Authority(NHA)/AB-PMJAY. 20 Feb 2021 / Webinar. (Member).
53.	Priyakumari T, Manjusha Nair, Binitha R, Guruprasad CS, Prasanth VR	COVID-19: Current Perspectives. October 2020, Department of Infectious Disease, Medical College, Thiruvananthapuram/Webinar. (Delegates).

Conferences

54.	Priyakumari T, Manjusha Nair, Binitha R, Guruprasad CS, Kalasekhar VS	International Childhood Cancer Day-2021. Shared Care in Pediatric Oncology: A Journey Together. 16 Feb 2021/Webinar: (Panelists).
55.	Rajani RV	MGM Healthcare Online workshop on Rebooting Hospitals. 17, 19, 22, 24, 26 June 2020. (Delegate).
56.	Rajeev KR	Online Certification Course by ICMR-NPTEL in Biomedical research (Aug-Dec 2020 Session). (Trainee). Online Certification Course on Training of Trainers programme in Online Education Systems by Kerala University of Health Sciences - 2020. (Trainee). E-Confluence on breast cancer jointly organized by Indian Radiological Imaging Association (IRIA) and Society of Nuclear Medicine India-Southern Chapter (SNMMI SC). 24 Jan 2021. (Talk: Radiation techniques in Breast cancer: Role of Imaging).
57.	Ramadas K	Head & Neck Master Class. Webinar organised by Regional Cancer Centre. 20 Sep 2020 & 01 Nov 2020. (Speaker: Oral cancer screening & Organ preservation in ca larynx & hypopharynx). Mathru Suraksha Kavacham 2020. Webinar organised by Malabar Cancer Care Society. 27 Oct 2020. (Speaker: Life style modification in prevention of cancer). 'SUKHAMASTHU': Webinar series organised by Amrita Vishwa Vidyapeetham. 06 Mar 2021. (Speaker: Cancer & risk factors).
58.	Raveendran Pillai K	7th Group Monitoring Workshop of Back to Lab projects. 21-22 Jan 2021, KSCSTE, Thiruvananthapuram/Webinar: (Member of Research Advisory Committee). 21st Meeting of Research Advisory Committee of Women Scientists Division for selection of research projects. 22-23 Feb 2021/Webinar: (Member of Research Advisory Committee).
59.	Rema P	Webinar on Recent Advances in Gynaecological Cancer Treatment. 24 May 2020, Kollam. (Talk: Gynaecological cancer treatment protocols). Webinar on Vulval Cancer by AOGIN (Asia-Oceania Research Organization in Genital Infection and Neoplasia), India. 19 June 2020. (Talk: Management of VIN). Webinar on Continuing Cancer Surgery During Pandemic. 20 Sept 2020, AIIMS Gynecological Oncology Department. (Talk: Gynecological cancer surgery during Pandemic). Webinar on 'Continuing cervical cancer screening in COVID Pandemic' by ISSCP (Indian Society of Colposcopy and Cervical Pathology). 08 Nov 2020. (Talk: ISSCP Guidelines on cervical cancer screening).
60.	Roshni S	4 th LION (Leadership Immuno Oncology Network) virtual conference on How to manage a Stage III NSCLC patient. 16 May 2020. (Panelist). Recent Advances in Advanced NSCLC and Melanoma. 15 Jun 2020/Webinar: (Panelist).
61.	Sabaha Shabnam	ISAMIDKON. 20-21 Mar 2021/Webinar: (Case presentation on Le Fort II for ORIF).
62.	Sagila SG	2nd Virtual Chapter Meet of Indian Association of Medical Microbiologists, Delhi Chapter: 11-12 Sept 2020. (Delegate). MELAP Webinar: 2 day virtual workshop on COVID 19: Molecular Biology including Lab and Patient Safety. 14-15 Dec 2020. (Delegate). CIDS Webinar on All about COVID vaccines. 22 Jan 2021. (Delegate). Webinar on Anaerobes: Microbes of the Millenium conducted by AIIMS-ASM 2021. 04-05 Mar 2021. (Delegate).
63.	Saikumar S	ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar: (Poster: Multiple myeloma in young adults: A report of nine cases).
64.	Sandeep TV	ASH Updates 2021. 26 Feb 2021, RCC/Webinar: (Talk: Hyper-CVAD and sequential Blinatumomab in adults with newly diagnosed Ph-ve ALL: Results from a phase 2 study).
65.	Shaiju VS	33rd Kerala Science Congress: Pandemics: Risks, Impacts & Mitigation. 25-30 Jan 2021, Palakkad/ Webinar: (Delegate).

66.	Shaji Thomas	Larynxcon 2020: The 5th International CME on Voice preservation and Restoration in Laryngectomy. 21 June 2020, RCC, Thiruvananthapuram/Webinar: (Talk: How we adopted to COVID situation in Head and Neck unit in a Tertiary Cancer Centre).
		PG QUEST 2020: Surgical Oncology (MCh) PG Training programme. 11 Sept 2020, RCC/Webinar: (Master class: Case discussion on Thyroid Tumours; Examiner: Mock examination on Thyroid case).
		Trivandrum Surgical club. 20 Mar 2021/Webinar: (Talk: Surgical management of oral cancers: An update).
67.	Shanaz S. Sharaf	33rd Kerala Science Congress: Pandemics: Risks, Impacts & Mitigation. 25-30 Jan 2021, Palakkad / Webinar: (Paper: Multiplexed IHC provides comprehensive prognostic information of breast carcinoma).
68.	Sheeja K	Coronavirus 2019 (COVID-19) accredited by the Massachusetts Medical Society. 04 Apr 2020/ Webinar: (Delegate).
		Understanding Infection and Immunity of SARS-CoV-2: From Diagnostics to Therapies for COVID-19. 15 June 2020, International Union of Immunological Societies (IUIS)/Webinar: (Delegate).
		SPARC-Indo-US Immunology Workshop. 12-13 July 2020, IIT Ropar (India) and Gorge Washington University USA/Webinar: (Delegate).
		Webinar on Immunology. 30 Aug 2020. (Paper: NLRP3 inflammasome in cancer immunotherapy).
69.	Sherry S. Abraham	ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar: (Poster: Castleman disease: A review of eight cases from a single Centre).
		ASH Updates 2021. 26 Feb 2021, RCC/Webinar: (Talk: ASCEMBL: A phase 3, randomized study of Asciminib, a novel STAMP inhibitor, vs bosutinib in CML after ≥ 2 prior tyrosine kinase inhibitors).
70.	Soumya CN	IMPACT 2020. 22 Aug 2020, RCC/Webinar: (1. E-Poster: Informed consent: a survey among anaesthesiologists in South India . 2. Paper: Challenges in the postoperative period following resection of a massive retroperitoneal sarcoma).
		Yuva 2020: National Conference. 05-06 Sept 2020, Haryana/Webinar: (Paper: Challenges in the postoperative period following resection of a massive retroperitoneal sarcoma).
71.	Sreelekha TT	33rd Kerala Science Congress: Pandemics: Risks, Impacts & Mitigation. 25-30 Jan 2021, Palakkad / Webinar: (Delegate).
72.	Sreelekha TT, Guruvayoorappan. C	40th Annual Conference of Indian Association for Cancer Research (IACR 2021). 01 Mar 2021, Institute of Life Sciences, Bhubaneswar/Webinar: (Delegates).
73.	Sreelekshmi PR	ISAWEBCON Kerala 2020. 01 Nov 2020/Webinar: (Poster: Successful anaesthetic management of systemic sclerosis patient undergoing MRM).
74.	Steffy Chacko	Best Clinical Oncology Symposium 2020. 10-14 June 2020/Webinar: (Delegate).
		43 rd ICON. 08-10 Oct 2020/Webinar: (Talk: Serum cystatin as a prognostic marker in multiple myeloma).
		ESMO Breast Cancer Updates 2020. 29 Oct 2020, RCC/Webinar: (SOLAR trial abstract presentation).
		ISMPOCON 2020: Annual Conference of Indian Society of Medical and Pediatric Oncology. 06-08 Nov 2020, Bengaluru/Webinar: (Paper: Serum free light chain assay as a prognostic marker in aggressive B cell NHL: Impact on survival outcome).
75.	Subha R	Lymphoma Myeloma 2020 and Beyond. 10-11 Nov 2020/Webinar: (Delegate).
		First Annual National Conference of YUVA ISA (1 st YUVA ISACON 2020). 05-06 Sept 2020/ Webinar: (Delegate).
		10 th National Conference of Academy of Regional Anaesthesia of India. 31 Oct-01 Nov 2020, Chandigarh. (Delegate).
		Phaneendra Nath Thota Anaesthesia Update and 17 th Anaesthesia Postgraduate Academic Programme. 02-08 Nov 2020/Webinar: (Delegate).
		E-Criticare ISSCM Virtual Conference organised by Indian Society of Critical Care Medicine. 08 Nov 2020. (Delegate).

Conferences

76.	Suchetha S	Indian Ovarian Cancer Coalition Conference 2020 by AGOI. 26 June 2020/Webinar: (Delegate) . FOGSI POGS International Virtual Conference: 'Just Tumours-Benign to Malignant'. 11-13 Dec 2020. (Delegate) .
77.	Sudha P	National Fellowship in Palliative Medicine. September 2020 (1 year programme, enrolled for the period 2020-21) . Fellowship in Regional Anaesthesia & Pain Management. December 2020. (6 months programme, enrolled for the period 2020-21) .
78.	Sudha P, Ancy George	IAPCON 2021: 8th International Conference of Indian Association of Palliative Care. 19-21 Mar 2021/Webinar: (Delegates) . Indian Association of Palliative Care: online training program in Palliative Medicine. (Enrolled for the period 2020-21) .
79.	Sulfath TP, Devipriya	International webinar on Advances in Genomics and Gene Technology. 24-26 Mar 2021, Inter University Centre for Genomics and Gene Technology, Kerala. (Delegates) .
80.	Swapna R. Nath, Sagila SG	An update on fungal infections. 21 Nov 2020, Pondicherry Institute of Medical Sciences/ Webinar: (Delegate) . Virtual annual workshop on Basic and Molecular Diagnostics in Mycology. 24-27 Nov 2020, Sri Ramachandra Institute of Higher Education and Research, Chennai. (Delegate) . CIDSCON 2020 of Clinical Infectious Disease Society. 21- 29 Nov 2020/ Webinar: (Delegate) .
81.	Unnikrishnan BS	Indo-UK Virtual conference on 'Current Innovations and the Future of Therapeutic Developments'. 01-03 June 2020, Vellore Institute of Technology, Vellore. (Paper: Folic acid conjugated polysaccharide iron oxide nanoparticles: a new platform for magnetic field mediated liquid biopsy) . National Virtual Conference on 'Recent Breakthroughs in Biotechnology and Annual Meet of Society for Biotechnologists (India) 2021'. 22-23 Jan 2021, Bharathiar University, Coimbatore. (Paper: Theranostic nano probe for the laser mediated tumour ablation coupled with Raman spectroscopic analysis) .
82.	Venugopal A	ISAWEBCON Kerala 2020. 01 Nov 2020/Webinar: (Judge: Poster session) . ISA KARNATAKA-VIRTUCON 2020. 14 Dec 2020. (Judge: Paper session) .
83.	Venugopal M	Head and Neck Oncology Master Class. 25 Oct 2020, Dept of Radiation Oncology, RCC. (Talk: Radiological anatomy of oropharynx) .
84.	Viji S. Pillai	Anaesthesia Post Graduate Academic Programme (APGAP). July 2020/Webinar: (Delegate) . Regional Anaesthesia. 10 Jan 2021/Webinar: (Talk: Ultrasound guided superficial, intermediate cervical plexus block) . Academy of Regional Anaesthesia of India (AORA 2020). 31 Oct 2020/Webinar: (Delegate) .
85.	Vineetha C	33rd Kerala Science Congress: Pandemics: Risks, Impacts & Mitigation. 25-30 Jan 2021, Palakkad / Webinar: (Paper: Cytogenetic profile of de novo acute lymphoblastic leukaemia in adults: Identification of novel chromosome aberrations) .

ONGOING 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, randomized 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>35 Patients registered, 31 patients randomised.</i>
2	Ramadas K. 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).
CHEST & GASTRO-INTESTINAL	
3	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 randomised.</i>
GYNAEC & GENITO-URINARY	
4	Rema P. Prediction of treatment response in patient derived organoid model for ovarian cancer. <i>Science and Engineering Research Board.</i> (Ongoing).
5	Lakshmi Haridas K. Prognostic significance of p53 mutation in metastatic prostate cancer. <i>ICON.</i> (Ongoing).
HEAD & NECK	
6	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>
7	Ramadas K. Biomarkers of oral cancer risk prediction. <i>Department of Biotechnology, Govt. of India.</i> (Ongoing).
CANCER EPIDEMIOLOGY	
8	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>
9	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>
10	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 38th year under the network of National Cancer Registry Programme (NCRP), Indian Council of Medical Research (ICMR), Govt. of India.</i>

Ongoing Research Projects

11	Aleyamma Mathew. Population Based Cancer Survival studies (PBCSS). Indian Council of Medical Research, Govt. of India. (Ongoing). <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>
12	Aleyamma Mathew. Population based cancer registry, Thiruvananthapuram. Indian Council of Medical Research, Govt. of India. (Ongoing). <i>PBCR, Thiruvananthapuram covering the entire district (3.3 million populations) is in its 8th year under the network of NCRP (ICMR) in 2019.</i>
13	Aleyamma Mathew. Reasons for diagnostic delay, treatment refusal/incompleteness, and loss to follow-up: A Hospital-Based Cancer Registry study in Trivandrum, India. Kerala State Council for Science, Technology & Environment, Govt. of Kerala. (Ongoing). <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>
14	Preethi Sara George & Aleyamma Mathew. Assessment of cancer density maps for cancer control in Trivandrum, South India. New India Assurance Company LTD. (Ongoing). <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 utilizing sophisticated mapping techniques and cancer registry data was first of its kind in India.</i>
15	Preethi Sara George. Artificial neural network model based on geographical information system for predicting spatial distribution of cancer incidence in South Kerala. Indian Council of Medical Research, Govt. of India. (Ongoing). <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 utilizing sophisticated mapping techniques and cancer registry data was first of its kind in India.</i>
16	Preethi Sara George. Artificial neural network model based on geographical information system for predicting spatial distribution of cancer mortality in South Kerala. Department of Health Research, Govt. of India. (Ongoing).
17	Kalavathy MC. Pap-smear screening programme among women with gynecological problems reported in a hospital. Thiruvananthapuram Corporation & Panchayats. (Ongoing).
18	Jagathnath Krishna KM. Joint frailty modelling of longitudinal time-to-event data in cancer survival. Department of Health Research, Govt. of India. (Ongoing).

CANCER RESEARCH

19	Kannan S. Delineate the biological significance of miRNAs altered in oral carcinoma. Dept. of Biotechnology, Govt. of India. (Completed). <i>Previous study on miRNA expression pattern conducted in our lab also revealed that oral cancer tissue and the adjacent normal tissue have different miRNA profiles. This study aims to validate the miRNA signature in established oral cancer cell lines, to unravel the biological significance of altered miRNAs in oral carcinogenesis and hence delineate the associated pathways using various in vitro techniques.</i>
20	Kannan S. Utilization of salivary metabolites in prognosis and diagnosis of oral and tongue cancer. Indian Council of Medical Research, Govt. of India. (Ongoing). <i>The Oral Tongue Cancer (OTC) represents an aggressive type of tumour in oral cavity, usually formed in the squamous epithelium of the tongue. OTC received reasonable importance especially in developing countries due to its significant morbidity and mortality rates. The introduction of modern high throughput method "Metabolomics" in the field of salivary biomarker discovery, bring more potential and reliable biomarkers for the early detection of oral cancer. The comparison between metabolite profiles of normal control samples with both early stage oral tongue cancer and late tongue cancer significantly altered each other. Our finding demonstrated that the salivary untargeted metabolomics approach could be a reliable and efficient non-invasive method for early detection of oral tongue cancer.</i>
21	Sujathan K. CerviSCAN: Image analysis for reliable and cost effective cancer detection. Swedish Research Link, Govt. of Sweden. (Completed). <i>Subtle morphological changes occur in cytologically normal cells due to their proximity to a tumour. Recognition of these changes applying machine learning methods is being tried in computerized Pap smear analysis system.</i>

22	<p>Sujathan K. Nano biosensors and microfluidics for health care. Council for Scientific and Industrial Research, Govt. of India. (Ongoing).</p> <p><i>A portable hand-held Raman spectroscopy 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>
23	<p>Sujathan K. Development of multiplexing detection platform for breast cancer biomarkers by non-invasive Surface Enhanced Raman Scattering Nanoprobe. Dept. of Science and Technology, Govt. of India. (Completed).</p> <p><i>The ability to gauge the abundance of multiple proteins precisely and simultaneously is an important recent advance for static and dynamic, as well as descriptive and predictive, biological research. A multiplexing system using Surface enhanced Raman spectroscopy is being validated in tissue samples are in progress.</i></p>
24	<p>Sujathan K. Quantum dots based fluorescent multiplexing platform for histoclinical classification of breast cancers. Dept. of Biotechnology, Govt. of India. (Completed).</p> <p><i>Quantum Dots have emerged as a promising multifunctional tool in biomedical applications. The potential of QD for multiplex immunohistochemistry is being tried for the histoclinical classification of breast cancer.</i></p>
25	<p>Sujathan K. Development of a low cost automated screening system for cervical cancer (Cervi-SCAN-II). Ministry of Electronics and Information Technology & Dept. of Health Research. (Ongoing).</p> <p><i>Computerized Pap smear screening system developed in collaboration with CDAC, Trivandrum is being validated in a multi-centric way.</i></p>
26	<p>Lakshmi S. Comparative study of genetic, clinical and epidemiological risk factors of breast cancer in Indian population. Indian Council of Medical Research, Govt. of India. (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 analyzed 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, TP53, PZP, MUC4, MUC16, OBSCN, PKD1, PIK3CA, DNMT1 are found to be the top 10 genes. Validation of a set of genes (TP53, PIK3CA, ACTN1, and KTN1) has been initiated.</i></p>
27	<p>Lakshmi S. Global high through put methylome and transcriptome profiling for the identification of novel therapeutic targets in TNBC and experimental validation. Dept. of Biotechnology, Govt. of India. (Ongoing).</p> <p><i>Based on the data-mining, YAP/TAZ belongs to Hippo-pathway of cell singling that is known to play a key role in diverse aspects of tumourigenesis. 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>
28	<p>Hariharan S. Clinical relevance of molecular and gene expression signatures in AML patients with normal cytogenetics for a prognostically prioritized molecular classification. Kerala State Council for Science, Technology & Environment, Govt. of Kerala. (Ongoing).</p> <p><i>A Two to three ml peripheral blood/bone marrow sample was collected from 82 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 investigations were carried out in all the samples, FISH analysis was carried out to check the recurrent abnormalities. Identified 50 patients with Normal cytogenetics (AML NC). Samples with Normal Cytogenetics will be studied for molecular parameters. DNA isolated from the AML NC patients and kept in the freezer for 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>
29	<p>Hariharan S. Development of indigenous software for karyotyping and chromosome abnormality detection. Kerala State Council for Science, Technology & Environment, Govt. of Kerala. (Ongoing).</p> <p><i>This project is aimed to develop indigenous low cost cytogenetic software for karyotyping. The metaphase images were used for developing the software, in collaboration with College of Engineering Karunagappally. Currently the software available is imported from foreign countries and is very costly. The work is at the final stage.</i></p>
30	<p>Sreelekha TT. Preparation and biological evaluation of galactoxyloglucan based scaffolds for stem cell differentiation and tumour reduction. Kerala State Council for Science, Technology & Environment, Govt. of Kerala. (Ongoing).</p> <p><i>Polymeric scaffolds fabricated to support the growth of biological tissue for implantation that greatly accelerate the development of cancer therapeutics. Biomaterials were fabricated using PST001 (tamarind seed kernel polysaccharide) using electrospinning, freeze drying and gelation respectively and yielded three surface topographies. Porous scaffold had a highly porous nature showed better responses during wound healing and tumour reduction. Stem cells readily differentiated on these scaffolds but behaved differently. Doxorubicin was loaded and local tumour reduction studies were carried out in tumour bearing mouse models. All the three scaffolds with drug were showed better response in terms of tumour size, survival etc.,</i></p>

Ongoing Research Projects

31	<p>Sreelekha TT. Development of antimicrobial porous polymeric bandage for skin tissue regeneration. <i>Board of Research in Nuclear Sciences, Govt. of India.</i> (Ongoing).</p> <p><i>The present study, compared scaffolds made by four different techniques, electrospinning, gamma radiation technique, porous scaffold via cryotropic, and chemical cross-linking methods with glutaraldehyde followed by lyophilization. All the scaffolds showed good properties like porosity, good strength, and swelling property. The scaffolds were incorporated with antimicrobial agents as silver NPs and copper which showed good results against E.coli, S. aureus, and S. epidermidis. The porous scaffold loaded with stem cells showed good viability, metabolic rate and wound healing.</i></p>
32	<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> (Ongoing).</p> <p><i>Six different nano constructs namely, DOX-PST-AuNSs, DOX@PST-BSA AuNPs, DOX-PST-AuNP, DOX-PST-AuNPAb, PSP-Y-AuNCs and MSN-Mn-CS-FA-HA were synthesized and characterised. Some of these nanoparticles used for Raman scattering platform as an emerging methodology to monitor apoptotic events in sub-cellular levels of cancer tissues. These nanoparticles significantly decrease the free release of drug in blood plasma in healthy Balb/c mice and significantly lesser accumulation of particles in healthy tissues compared to free drug and improved tumour reduction. The PSP-Y-AuNCs demonstrated a pH dependent imaging capacity with high fluorescent signals at the acidic pH in cells which can be well translated in solid tumour imaging.</i></p>
33	<p>Guruvayoorappan C. Mitigation of radiation induced esophagitis by Pyrazole (1,2, Diazole) from <i>Rhizophora apiculata</i> and its potential application as an effective radioprotector: <i>Science and Engineering Research Board, Dept. of Science and Technology, Govt. of India.</i> (Completed).</p> <p><i>Pyrazole (1,2, Diazole) from Rhizophora apiculata could significantly inhibit experimental esophagitis as evidenced by tissue morphology and histopathology results. Treatment with Pyrazole (1,2, Diazole) regulated the expression of inflammatory mediators in the esophagus during radiation. Pyrazole (1,2, Diazole) have potential to reduce the complications associated with radiation esophagitis such as odynophagia and dysphagia.</i></p>
34	<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> (Ongoing).</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 experimental thyroid carcinoma.</i></p>
35	<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>
CANCER RESEARCH (Post-doctoral projects)	
36	<p>Sheeja K. 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>
37	<p>Sreeja Purushothaman. <i>In vitro</i> assessment of the anti-cancer property of Amalaki Rasayanam in triple negative breast cancer and delineation of its molecular mechanism of action. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Completed).</p> <p><i>Triple-negative breast cancer is featured with a high risk of recurrence, metastasis and is insensitive to hormone therapy. The study sought to evaluate the anticancer properties of Amalaki Rasayana (AR) along with the delineation of the underlying molecular mechanism of action in TNBC cell line. MDA MB 231 and MCF 10A cell lines served as the experimental models. The extracts showed selective cytotoxicity towards the cancer cells, induced cell cycle arrest at S phase and apoptosis, inhibited cell migration and invasions by inhibition of MMP2 and 9, VEGF and its receptors. Extracts down regulated NF-κB expression and its DNA binding activity and inhibited the interaction of NF-κB p65 sub-units with the EMT-Transcription Factor promoter region, thus reversed EMT. AR extract was found to be more potent compared to PE possibly due to the enrichment of Phytochemical entities with NF-κB inhibition potential.</i></p>

38	Vineetha M. Cytogenetic and molecular studies in adult acute lymphoblastic leukaemia. <i>Kerala State Council for Science, Technology & Environment, Govt. of Kerala.</i> (Ongoing). <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 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>
39	Syama HP. 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). <i>The main objective of the present study was to formulate a cream incorporating PSP@SNP and to explore its antimicrobial potential. Different methods and compositions were tried out to reach a final cream formulation. The antimicrobial activity was determined by both well and disc diffusion methods. The results showed that as the concentration of PSP@SNP increasing a significant increase in antimicrobial activity against S. aureus and C. albicans, which are the organisms responsible for wound infection. Further in-vivo studies are going on to explore the wound healing property of PSP@SNP doped cream</i>
40	Reshma PL. Polysaccharide selenium nanoparticle loaded with paclitaxel for oral administration in gastrointestinal cancer. <i>Department of Health Research, Govt. of India.</i> (Ongoing). <i>The aim of the project is to develop polysaccharide Selenium PTX (PST-SNP-PTX) oral and intravenous nano formulations to treat gastric cancer. The preparation of PST-SNP-PTX was standardized and one particle was selected by determining the size and stability. The nanoparticle was further characterized by UV-VIS and FTIR spectrometry. The antimicrobial activity of the nanoparticles was determined by well and disc-diffusion method and it was found that the nanoparticle showed increased antimicrobial activity against S. aureus and K. pneumonia. Further studies on gastric and stomach cancer cell lines and in vivo studies are needed to determine the potential of PST-SNP-PTX against gastro-intestinal cancer.</i>

COMMUNITY ONCOLOGY

41	Jayakrishnan R. Cancer prevention and control among the tribal population of Kerala State. <i>Kerala State Tribal Development Department, Government of Kerala.</i> (Ongoing).
42	Jayakrishnan R. LEADership training programme for doctors (LEAD 2019-2020) in cancer prevention and control. <i>National Health Mission, Kerala State.</i> (Completed).

NATURAL BACKGROUND RADIATION CANCER REGISTRY

43	Rekha A. Nair. India- Japan co-operative research programmes on health effects of natural radiation in Karunagappally, Kerala. <i>Health Research Foundation, Japan.</i> (Ongoing). <i>Radiation Epidemiologic studies, cytogenetic and clinical studies ongoing; concentrating on the radiation cohort comprising 4 lakhs population.</i>
44	Jayalekshmi P. Cancer incidence and mortality studies in HBRA, Karunagappally. <i>Health Research Foundation, Japan.</i> (Ongoing). <i>Follow up of the residents of HBRA. Mortality and Cancer Incidence survey undertaken covering 4 lakh population for the years 2019 & 2020. Limited field visits attempted.</i>
45	Sreekumar A. Prevalence of cataract in HBRA, Karunagappally. <i>Health Research Foundation, Japan.</i> (Ongoing). <i>The project aims to evaluate the prevalence of cataract and lens opacity among the residents of high and low background area. 900 females have undergone eye examination using slit lamp by ophthalmologist and analysis is now ongoing.</i>
46	Sreekumar A. Prevalence of atherosclerosis in HBRA, Karunagappally. <i>Health Research Foundation, Japan.</i> (Ongoing). <i>The project evaluates the prevalence of atherosclerosis among the residents. Data collection CAVI, IMT measurements and biochemical investigations completed. Data processing and analysis ongoing.</i>
47	Rekha A. Nair. District Cancer Registry. <i>Indian Council of Medical Research, Govt. of India.</i> (Ongoing). <i>District Cancer Registry supported by NCDIR, ICMR provides incidence and pattern of cancer in Kollam District. During the report period so far 1600 cancer cases were registered.</i>
48	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). <i>The study aims to estimate the survival rates of the cases registered with the above sites during 2012 to 2015 in District Cancer Registry. The survival information collection for the estimation of survival rates was under taken.</i>

Ongoing Research Projects

49	Hariharan S. Cytogenetic studies on the effects of chronic low level radiation in the residents of high background radiation areas (HBRA) in Kerala, India. Health Research Foundation, Japan. (Ongoing). <i>Cytogenetic studies were undertaken to estimate the translocations of chromosomes among high background radiation area (HBRA) residents. Molecular signature of thyroid cancers was also undertaken.</i>
50	Jayalekshmi P. Palliative Care: A new programme. Oachira Block Panchayat. (Ongoing).
PATHOLOGY	
51	Rari P Mony. Histological grading of prostatic cancer using convolution neural network in tissue images. Dept. of Biotechnology, Govt. of India. (Ongoing).
RADIATION PHYSICS	
52	Thayal Singh Elias. Design and development of indigenous integrated brachytherapy simulator for cancer treatment. Dept. of Science and Technology, Govt. of India. (Ongoing).
53	Shaiju VS. Design and fabrication of a head phantom for dosimetric verification of radiotherapy treatment plans. Kerala State Council for Science, Technology & Environment, Govt. of Kerala. (Ongoing). <i>Validation of indigenously designed and developed head phantom with the existing commercial phantom for performing Patient Specific Quality Assurance (PSQA) in radiotherapy. Design & fabrication of a head phantom with capability to incorporate different type of radiation detectors such as ionisation chambers, diode detectors, optically stimulated Luminescence Detectors (OSLDs), Gafchromic films etc. Molding of the indigenous polymer based phantom material and analyzing its compatibility with human tissue under Computer Tomography (CT) scans.</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. Glaxo Smith Kline. (Ongoing). <i>9 patients randomized, 7 patients are on follow up and 2 patients died.</i>
2	Anoop TM. A randomized, 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. Eli Lilly. (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. Eli Lilly. (Ongoing).
4	Rona Joseph P.A global, multicentre, three arms, open-label randomized 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. INTAS. (Ongoing).
GYNAEC & GENITO-URINARY	
5	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).
6	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).
7	Aswin Kumar. Multicentre, randomized, 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).
8	Aswin Kumar. A prospective, multicentre, randomized, double blind, placebo-controlled, 2-parallel groups, phase III study to compare the efficacy and safety of masitinib in combination with docetaxel to placebo in combination with docetaxel in first line metastatic castrate resistant prostate cancer (mCRPC). AB Sciences. (Completed).

9	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	
10	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).
11	Sreejith Nair. A randomized, 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 . (Ongoing).
HEAD & NECK	
12	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 . (Partial closure done, Awaiting close down).
13	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).
14	Rejnish Kumar R. A prospective, multicentre, randomized, 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. (Ongoing).
PATHOLOGY	
15	Priya Mary Jacob. Application of deep learning in computer aided grading of follicular lymphomas: A proof of concept project. Advanced Radiology And Medical Innovations (ARAMIS) . (Ongoing).
RADIODIAGNOSIS	
16	Venugopal M. Thermolytix in breast screening. Niramai, Bangalore . (Ongoing). Artificial intelligence incorporated in thermographic imaging is Thermolytix. It's efficacy in breast screening is evaluated, making use of mammogram, USG and histopathology.

IN-HOUSE PROJECTS

Sl. No.	Principal Investigator. Project Title. (Status)
ANAESTHESIOLOGY	
1	Rachel Cherian Koshy. Comparison of ease of endotracheal intubation and laryngeal view between sniffing and ramped positions: a prospective observational study. (Completed).
2	Rachel Cherian Koshy. Determining the cause of acute respiratory failure with lung ultrasound: a prospective observational study. (Ongoing).
3	Rachel Cherian Koshy. Incidence and risk factors of postoperative pulmonary complications after cancer surgery: a prospective observational cohort study. (Ongoing).
4	Mary Thomas. Accuracy of stroke volume variation compared with pleth variability index to predict fluid responsiveness in mechanically ventilated patients undergoing major surgery. (Ongoing).
5	Mary Thomas. A prospective observational study to assess the effectiveness of postoperative pain management of patients undergoing elective laparoscopic colorectal surgery. (Ongoing).
6	Mary Thomas. ENCORE: Effect of Anaesthesia in colorectal cancer outcome trial: A Prospective observational multicentric study. (Ongoing).
7	Mary Thomas. Pre-operative shuttle walk test for morbidity and mortality prediction in elective major colorectal surgery: A single arm interventional study. (Completed).
8	Venugopal A. Ultrasonographic measurement of IVC diameter and collapsibility index to predict hypotension following induction of general anaesthesia: A prospective observational study. (Ongoing).
9	Mallika Balakrishnan. Correlation between specific craniofacial features and difficulty of intubation in non-obese patients with anticipated difficult intubation. (Ongoing).

Ongoing Research Projects

10	Mallika Balakrishnan. Ultrasonography: An effective tool in airway assessment. (Ongoing).
11	Viji S. Pillai. Preprocedural ultrasound assisted landmark identification for epidural catheterisation: prospective observational study. (Ongoing).
12	Viji S. Pillai. Comparison of nebulized lignocaine and nebulized ketamine as an adjunct to general anaesthesia in attenuating stress response to intubation and in reducing the incidence of post-operative sore throat. (Ongoing).
13	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).
14	Bhagyalekshmi R. An observational study to compare the effect of ESP block with PVB for patients undergoing mastectomy surgery. (Ongoing).
15	Deepthi J. Prabhu. Comparison of the effect of two different doses of neostigmine for reversal of neuromuscular blockade: A randomized controlled study. (Ongoing).
16	Deepthi J. Prabhu. Survey on preanaesthetic evaluation in post COVID patients among Anaesthesiologists of India. (Ongoing).
17	Subha R. Retrospective audit of transfusion practices for packed red cells, platelets fresh frozen plasma and other components in oncosurgical patients. (Ongoing).
18	Subha R. Preanaesthetic ultrasonographic measurement of right infraclavicular axillary vein for predicting hypotension after inducing general anaesthesia: A prospective observational study. (Ongoing).
19	Rajasree O. Survey on intubation and extubation practices during COVID-19 pandemic among Anaesthesiologists of India. (Ongoing).
20	Rajasree O. Intravenous and intratracheal lignocaine on airway and hemodynamic response during emergence and extubation following general anaesthesia. (Ongoing).
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. Predictive model for difficult intubation using computed tomographic and clinical parameters in head and neck oncosurgeries: a prospective observational study. (Ongoing).
23	Rajasree O. Prevalence of chronic post-surgical pain in cancer surgery patients. (Ongoing).
24	Rajasree O. The incidence and risk factors for cardiovascular complications after oncosurgeries: A retrospective analysis. (Ongoing).
25	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. (Ongoing).
26	Frenny Ann Philip. Acromio-Axillo Suprasternal notch Index (AASI): A reliable test to predict difficult visualization of larynx. (Ongoing).
BONE & SOFT TISSUE	
27	Prakash NP. Role of inflammatory markers in predicting response to treatment in patients with non-metastatic osteosarcoma: a prospective observational study. (Completed).
28	Rexeena V. Bhargavan. Role of surgical margins on the outcome of chest wall soft tissue sarcoma: A prospective study. (Ongoing).
29	Rexeena V. Bhargavan. Role of surgical margins on the outcome of extremity soft tissue sarcoma: A prospective study. (Ongoing).
BREAST & CENTRAL NERVOUS SYSTEM	
30	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. (Ongoing).
31	Beela Sarah Mathew. Comparison of Prone Vs Supine position for whole breast radiotherapy following breast conservation: A dosimetric study. (Ongoing).
32	Asha Arjunan. Comparison of the dosimetric parameters of free breathing vs deep inspiratory breath hold for left sided carcinoma breast. (Ongoing).
33	Rajeev KR. Comparison of Sequential conventional vs hypofractionated boost following whole breast radiotherapy: A propensity score matched analysis. (Ongoing).
34	Paul Augustine. Prevalence, characteristics and effect on QoL of post mastectomy pain syndrome. (Ongoing).
35	Paul Augustine. Validation of the Malayalam version of body image scale and assessment of the impact of breast cancer surgery on body image. (Ongoing).
36	Paul Augustine. Skin sparing mastectomy and immediate reconstruction: a retrospective analysis. (Ongoing).
37	Paul Augustine. Evaluation of the metastatic status of lymph nodes identified using axillary reverse mapping in breast cancer. (Ongoing).

38	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).
39	Paul Augustine. Tumour resection volumes in breast conservation surgery: A prospective analysis. (Ongoing).
40	Paul Augustine. Role of intraoperative ultrasound in breast conservation surgery for non-palpable residual disease after neo-adjuvant chemotherapy: A pilot study. (Ongoing).
41	Paul Augustine. Malignant phyllodes tumour of breast: a 15-year retrospective analysis. (Ongoing).
42	Kurian Cherian. Low axillary sampling in predicting nodal status of post chemotherapy axilla in carcinoma breast. (Ongoing).
43	Rexeena V. Bhargavan. Role of locoregional treatment of the primary site in de novo oligometastatic breast cancer: A prospective observational study. (Ongoing).
44	Rexeena V. Bhargavan. Prevalence of androgen receptor positivity in breast cancer patients and its prognostic implications. (Ongoing).
45	Rexeena V. Bhargavan. The role of level III dissection in locally advanced breast cancer following neo-adjuvant chemotherapy: A prospective study. (Ongoing).
46	Rexeena V. Bhargavan. The current surgical management patterns of breast cancer patients in a tertiary care centre. (Ongoing).
47	Rexeena V. Bhargavan. Sentinel node biopsy in post neo-adjuvant chemotherapy breast cancer patients using preoperative breast tattooing: A prospective study. (Ongoing).
48	Anoop TM. Serum carcinoembryonic antigen as a prognostic biomarker in metastatic breast cancer. (Completed).
49	Anoop TM. Role of Lactate Dehydrogenase (LDH) response in predicting survival in metastatic breast cancer patients receiving first-line chemotherapy. (Completed).
50	Anoop TM. Treatment outcome of elderly breast cancer patients: A retrospective analysis. (Completed).
51	Anoop TM. Fin Her protocol as neo-adjuvant treatment for Her 2 positive locally advanced breast cancer patients: A retrospective analysis. (Completed).
52	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).
53	Anoop TM. Prognostic significance of low HER2 expression in hormone positive breast cancer. (Ongoing).
54	Rona Joseph P. PDL-1 Expression and tumour infiltrating lymphocytes in triple negative breast cancer patients and its prognostic significance. (Ongoing).
55	Rona Joseph P. Evaluation of the G8 screening tool for prognostication of survival in elderly patients with breast cancer: A prospective study. (Ongoing).
56	Rona Joseph P. Clinical characteristics and treatment outcome of invasive lobular carcinoma breast: A retrospective analysis. (Ongoing).
57	Rona Joseph P. Clinical characteristics and treatment outcome of pregnancy associated breast cancer: A retrospective analysis. (Ongoing).
58	Rona Joseph P. Vitamin D deficiency and bone mineral density in postmenopausal women receiving adjuvant hormone therapy for breast cancer. (Ongoing).
CANCER EPIDEMIOLOGY	
59	Aleyamma Mathew. The impact of Socio-economic Status (SES) on stage and survival of gastrointestinal cancer: A comparative study of Canada and South India. (Ongoing).
60	Jagathnath Krishna KM. Joint multi-state modelling for longitudinal time-to-event cancer data. (Ongoing).
61	Jagathnath Krishna KM. Modeling of recurrent and terminal events in cancer survival due to non-proportionality in follow-up and hazards. (Ongoing).
CHEST & GASTRO-INTESTINAL	
62	Chandramohan K. Pattern of care of gastric cancer. (Ongoing).
63	Chandramohan K. Low rectal cancer syndrome and QoL. (Ongoing).
64	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. (Ongoing).
65	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. (Ongoing).
66	Arun Peter Mathew. Pattern of sarcopenia in patients with gastric cancer and its effect on postoperative outcome. (Ongoing).

Ongoing Research Projects

67	Sivanandan CD. A retrospective analysis of clinical outcome in patients treated with short course radiotherapy followed by surgery for operable adenocarcinoma of rectum. (Completed).
68	Sivanandan CD. Clinical presentation, outcome and prognostic factors of Thymoma: A retrospective study. (Ongoing).
69	Roshni S. Clinical outcome of locally advanced adenocarcinoma rectum treated with short course radiation followed by delayed surgery. (Ongoing).
70	Roshni S. Prospective observational study of preoperative short course radiation followed by delayed surgery in operable and locally advanced adenocarcinoma rectum. (Completed).
71	Arun Sankar S. Retrospective audit of clinical outcome in patients with radically treated Periapillary carcinoma at Regional Cancer Centre. (Ongoing).

GYNAEC & GENITOURINARY

72	Francis V. James. Toxicity assessment of moderate hypofractionated radiotherapy in localized prostate cancer: A prospective observational study. (Ongoing).
73	Francis V. James. Utrecht applicator for combined intracavitary/interstitial brachytherapy in locally advanced cancer cervix: Feasibility and plan comparison. (Completed).
74	Rema P. Life after exenteration: Quality of life assessment in patients after exenteration for gynaecological cancers. (Ongoing).
75	Rema P. Prospective study to evaluate the correlation between colposcopic scoring with histopathology in VIA positive patients. (Ongoing).
76	Rema P. Significance of TGF beta signaling alterations in endometrial cancer. (Ongoing).
77	Rema P. Evaluation of effectiveness of thermal ablation in treating cervical intra epithelial neoplasia. (Ongoing).
78	Rema P. Implementation of Enhanced Recovery After Surgery (ERAS) in patients undergoing laparotomy for gynaecologic malignancies. (Ongoing).
79	Suchetha S. Clinico-pathological profile and survival outcome of Type-I and Type-2 ovarian cancers. (Ongoing).
80	Suchetha S. Validation of QLQ-EN24 in Malayalam. (Ongoing).
81	Suchetha S. Feasibility of fertility preserving surgery and reproductive outcome after neo-adjuvant chemotherapy for advanced malignant germ cell tumour ovary: A retrospective study. (Ongoing).
82	Suchetha S. Risk factors for short-term surgical complications in women undergoing surgery for gynaecological malignancies. (Ongoing).
83	Suchetha S. Prognostic significance of chemotherapy response score in patients undergoing interval debulking surgery for high grade serous tubal and ovarian carcinoma. (Ongoing).
84	Siva Ranjith J. Laparoscopic sentinel lymph node mapping using indocyanine green dye. (Ongoing).
85	Dhanya Dinesh. Evaluation of prediction models of completeness of cytoreduction in epithelial ovarian cancer recurrence. (Ongoing).
86	Lakshmi Haridas K. Tumour marker decline in predicting treatment outcome among poor risk testicular germ cell tumours: A tertiary cancer centre data. (Ongoing).

HAEMATOLOGICAL & LYMPHORETICULAR

87	Geetha N. A prospective study of Revised International Staging system (R-ISS) in multiple myeloma and its prognostic significance. (Completed).
88	Geetha N. Serum Cystatin C as prognostic marker in multiple myeloma. (Completed).
89	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. (Ongoing).
90	Geetha N. Evaluation of the profile and risk factors for toxicity of high dose methotrexate. (Ongoing).
91	Geetha N. Prognostic significance of serum ferritin in acute myeloid leukaemia. (Ongoing).
92	Geetha N. Efficacy and toxicity of dose adjusted EPOCH Rituximab chemotherapy in high grade lymphoma. (Ongoing).
93	Geetha N. The pattern and outcome of healthcare associated infections in patients with acute myeloid leukaemia. (Ongoing).
94	Geetha N. Clinical profile and complications of newly diagnosed acute leukaemia patients with hyperleucocytosis. (Ongoing).
95	Sreejith Nair. Prognostic significance of beta 2 microglobulin and absolute lymphocyte monocyte ratio in patients with DLBCL treated with RCHOP. (Completed).
96	Sreejith Nair. A prospective observational study to correlate the association of Neutrophil Lymphocyte ratio and treatment response in patients with multiple myeloma. (Completed).

97	Sreejith Nair: Prognostic significance of serum ferritin levels in Hodgkin's lymphoma and it's correlation with end of treatment PET response. (Ongoing).
98	Sreejith Nair: Prognostic significance of baseline Vitamin D level on the outcome of DLBCL. (Ongoing).
99	Prakash NP: An observational study to evaluate the efficacy of escalated dose of imatinib or a second line tyrosine kinase inhibitor in chronic myeloid leukaemia patients showing treatment failure to standard dose imatinib. (Completed).
100	Prakash NP: Prognostic significance of CD 200 expression in acute myeloid leukaemia. (Ongoing).
101	Prakash NP: Impact of BCR-ABL transcript type on response to treatment with Imatinib in chronic myeloid leukaemia chronic phase patients. (Ongoing).

HEAD & NECK

102	Ramadas K. A randomized controlled trial to evaluate the efficacy of Yashtimadhu Ghrita application for minimizing the radiation induced toxicities in patients with oropharyngeal squamous cell carcinoma. (Ongoing).
103	Ramadas K. Randomised controlled trial to test the efficacy of herbal mouth wash in managing acute toxicity of radiation in head & neck cancer patients. (Ongoing).
104	Rejnish Kumar R. Outcome of early glottis cancer treated with radical radiotherapy: single institution experience. (Ongoing).
105	Rejnish Kumar R. Clinical outcomes of patients receiving induction chemotherapy with TPF regimen for stage IVB gingivobuccal complex tumours. (Ongoing).
106	Kainickal CT. Clinical profiles and treatment outcomes of patients treated with induction chemotherapy for locally advanced carcinoma of oral tongue: a retrospective analysis. (Completed).
107	Kainickal CT. Clinical outcomes of locally advanced Ca Larynx treated with definitive chemo-RT/RT: a retrospective analysis. (Completed).
108	Malu Rafi. Dosimetric impact of neoadjuvant chemotherapy in locally advanced carcinoma nasopharynx treated with IMRT technique. (Completed).
109	Malu Rafi. Treatment outcomes of carcinoma of the parotid gland: a single institution experience. (Ongoing).
110	Malu Rafi. Predictive clinical and HPV associated biomarkers in laryngeal and hypopharyngeal squamous cell carcinomas. (Ongoing).
111	Shaji Thomas. Predictability of prognosis using Brandwein-Gensler's Risk Scoring System in early squamous cell carcinoma of tongue. (Ongoing).
112	Shaji Thomas. Association between pattern of invasion and epithelial mesenchymal transition and its prognostic impact on early squamous cell carcinoma of tongue. (Ongoing).
113	Shaji Thomas. Oncological safety of marginal mandibulectomy in resection of oral cavity cancers: A retrospective study. (Ongoing).
114	Shaji Thomas. Thyroid carcinoma arising from thyroglossal duct cyst: A tertiary care centre experience. (Ongoing).
115	Shaji Thomas. Surgically treated parapharyngeal tumours: An institutional experience. (Ongoing).
116	Shaji Thomas. Island nasolabial flap: a versatile option in reconstruction of oral defects: a retrospective analysis. (Ongoing).
117	Bipin T. Varghese. Prospective comparative study of watch and wait policy versus elective neck dissection in early superficial squamous cell carcinoma of tongue. (Ongoing).
118	Bipin T. Varghese. Dual Baseline Imaging with ultrasonogram (USG) and Contrast Enhanced CT (CECT) scan for precision mapping in thyroid cancer surgery. (Ongoing).
119	Bipin T. Varghese. Salivary neoplasms: therapeutic and functional outcome: a retrospective study. (Ongoing).
120	Bipin T. Varghese. Treatment outcomes of medullary carcinoma of thyroid. (Ongoing).
121	Bipin T. Varghese. Treatment outcomes of poorly differentiated carcinoma of thyroid. (Ongoing).
122	Bipin T. Varghese. Study of tonicity of pharyngo-esophageal segment of laryngectomies using surface EMG. (Ongoing).
123	Bipin T. Varghese. Study of pharyngocutaneous fistulae among laryngectomies. (Ongoing).
124	Elizabeth Mathew lype. Survival analysis of differentiated thyroid cancers. (Ongoing).
125	Elizabeth Mathew lype. Quality of life after thyroid surgery. (Ongoing).

PAEDIATRIC ONCOLOGY

126	Priyakumari T. Neutropenic enterocolitis during acute myeloid leukaemia therapy in children (Ongoing).
127	Priyakumari T. Evaluation of hearing and renal function in children treated with platinum compounds. (Ongoing).

Ongoing Research Projects

I28	Priyakumari T. Dynamics of nutritional status during induction chemotherapy in childhood acute lymphoblastic leukaemia and their effects on the course of induction therapy. (Ongoing).
I29	Priyakumari T. Toxicity profile of L-Asparaginase and its outcome in children with acute lymphoblastic leukaemia. (Ongoing).
I30	Priyakumari T. Evaluation of toxicity profile of high dose methotrexate therapy in childhood acute lymphoblastic leukaemia. (Ongoing).
I31	Priyakumari T. The dynamics of Anti-HBs titre in children during maintenance phase chemotherapy for acute lymphoblastic leukaemia. (Ongoing).
PALLIATIVE MEDICINE	
I32	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	
I33	Jayasree K. Pathology of chondroid neoplasm of bone: A 10 year retrospective study. (Ongoing).
I34	Jayasree K. Clinical characteristics and treatment outcome of Ewing's sarcoma in adolescents and adults: Retrospective study. (Ongoing).
I35	Anitha Mathews. Comparison of expression pattern of HR and HER2/neu protein in primary breast carcinoma and synchronous LN metastasis. (Ongoing).
I36	Anila KR. Prevalence of BRAF, RAS, RET/PTC and PTEN proto-oncogene mutations in recurrent and aggressive thyroid cancers. (Completed).
I37	Anila KR. Utility of fascin over-expression as a marker of aggressiveness in squamous cell carcinoma of tongue. (Completed).
I38	Anila KR. An audit of ameloblastic epithelial odontogenic tumours with clinicopathological correlation. (Ongoing).
I39	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).
I40	Sindhu Nair P. Clinicopathological profile and pattern of P53 expression in lung adenocarcinoma in smokers and non-smokers. (Ongoing).
I41	Rari P Mony. A comparative study of liquid-based cytology to conventional cytology for diagnosis of cervical lesions in tertiary care centre. (Ongoing).
I42	Jayasudha AV. Prognostic significance of double-expresser status in diffuse large B-cell lymphoma. (Completed).
I43	Jayasudha AV. Flow cytometry in Mature T- and NK- cell neoplasms. (Ongoing).
I44	Neelima Radhakrishnan. Utility of frozen section in the assessment of margins and its impact on local recurrence in squamous cell carcinoma of tongue. (Completed).
I45	Neelima Radhakrishnan. COVID-19 impact on newly diagnosed breast cancers at Regional Cancer Centre, Thiruvananthapuram: An audit. (Ongoing).
I46	Simi CM. Diagnostic utility of lymphoid enhancer binding factor - I immunohistochemistry in chronic lymphocytic leukaemia/small lymphocytic lymphoma. (Ongoing).
RADIATION PHYSICS	
I47	Raghukumar P. A study on the variation of overlapping factor with patient geometry and spoiler thickness in Total Skin Electron Beam Therapy. (Completed).
I48	Raghukumar P. Comparison of electron output measurement using parallel plate chamber calibrated at both electron and photon beams. (Ongoing).
I49	Zhenia Gopalakrishnan. Dosimetric evaluation of the two dose reporting modes of Acuros XB dose calculation algorithm using Electronic Portal Imaging Device (EPID) in Volumetric Modulated Arc Therapy. (Completed).
I50	Zhenia Gopalakrishnan. Influence of beam data acquisition and modeling on the estimation of dose in the buildup region for Eclipse Treatment Planning System. (Ongoing).
I51	Shaiju VS. To study the effect of generalized Equivalent Uniform Dose (gEUD) biological optimization objective for organs at risk in Volumetric Modulated Arc Therapy (VMAT) using Eclipse Treatment Planning System. (Ongoing).
I52	Sarin B. Configuration and validation of stereotactic treatment fields in Eclipse® treatment planning system for a TrueBeam® linear accelerator. (Ongoing).
RADIODIAGNOSIS	
I53	Jiji V. Unearthing contralateral breast malignancy: Screening mammography as a tool. (Ongoing).
I54	Priya A. Role of intraoperative ultrasound in breast conservation surgery for non-palpable residual disease after neoadjuvant chemotherapy: A prospective pilot study. (Ongoing).

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Journal Articles

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98.	Aparna P, Dhas M, Kumar A, Mathews S, Joseph J, Krishna JKM, Ammu JV, Suchetha S, James FV. 'Prognostic factors for recurrence in carcinoma endometrium (IGCS 20 Abstract).' International Journal of Gynecological Cancer. 2020/30(Suppl.3):A173.
99.	Aryakrishna SL, Lakshmi S, Preethi TR, Mathew A, Kumar A, Joseph J, Mathews S, James FV. 'Programmed death ligand - 1 (PD L-1) expression in cervical cancer patients.' Annals of Oncology. 2020/31(Suppl.4):S643.
100.	Binitha R, Prasanth VR, Priyakumari T, Nair M, Guruprasad CS, Arun Sankar, Sugath S, Krishna JKM, Kusumakumary P. 'Ewing sarcoma in children: a five year retrospective analysis (SIOP Asia 2020 abstract).' Pediatric Hematology Oncology Journal. 2020/5(4):S36-7.
101.	Nair LM, Krishna JKM, Kumar A, Mathew S, Joseph J, James FV. 'Prognostic factors and outcomes of non-seminomatous germ cell tumours of testis: experience from a tertiary cancer centre in India.' Annals of Oncology. 2020/31(Suppl.6):S1322.
102.	Nair M, Priyakumari T, Binitha R, Guruprasad CS, Prasanth VR, George PS, Kusumakumary P. 'Ten year experience of treating pediatric metastatic neuroblastoma with chemotherapy based multimodality approach (SIOP Asia 2020 abstract).' Pediatric Hematology Oncology Journal. 2020/5(4):S39-40.
103.	Nirmal G, Priyakumari T, Guruprasad CS, Nair M, Binitha R, Prasanth VR, Krishna JKM. 'Prevalence and risk factors for metabolic syndrome, insulin resistance and obesity among childhood Acute Lymphoblastic Leukemia survivors: experience from South India (52nd SIOP meeting abstract).' Pediatric Blood and Cancer. 2020/67(Suppl. 4):S153.
104.	Nirmal G, Priyakumari T, Guruprasad CS, Nair M, Binitha R, Prasanth VR, Krishna JKM. 'Are survivors of childhood Acute Lymphoblastic Leukemia at increased risk of subclinical cardiotoxicity?: experience from India (52nd SIOP meeting abstract).' Pediatric Blood and Cancer. 2020/67(Suppl. 4):S169.
105.	Paul M, Augustine P, Cherian K, Bhargavan VR. 'Clinico-pathological profile and survival outcome among patients with bilateral breast cancer: an Indian perspective (ESSO 40 Abstract).' European Journal of Surgical Oncology. 2021/47(2):e41.
106.	Prakasana A, Dhas M, Kumar A, Mathews S, Joseph J, Krishna JKM, Ammu JV, Suchetha S, James FV. 'Prognostic factors for recurrence in carcinoma endometrium.' International Journal of Gynecologic Cancer. 2020/30(Suppl.3):A173.
107.	Rafi M, Ganapathy R, Kumar RR, Kainickal CT, Kannan S, George PS, Ramadas K. 'Molecular dynamics of Epstein Barr Virus in nasopharyngeal carcinoma from a non-endemic area (ESTRO-2020 meeting abstract).' Radiotherapy and Oncology. 2020/52(Suppl. 1):S448.
108.	Ranjan R, Prasanth VR, Binitha R, Nair M, Priyakumari T, Guruprasad CS. 'Status of anti hepatitis-B titre in children with acute lymphoblastic leukemia during treatment: experience from a tertiary cancer centre in south India (SIOP Asia 2020 abstract).' Pediatric Hematology Oncology Journal. 2020/5(4):S57.
109.	Ranjan R, Priyakumari T, Nair M, Binitha R, Guruprasad CS, Prasanth VR, Krishna JKM. 'Dynamics of anti hepatitis-B titre in children with acute lymphoblastic leukemia during treatment: Experience from a tertiary cancer centre of south India (52nd SIOP meeting abstract).' Pediatric Blood and Cancer. 2020/67(Suppl.4):S296-7.
110.	Ranjan R, Priyakumari T, Nair M, Binitha R, Guruprasad CS, Prasanth VR. 'Clinical profile and treatment outcome of children with Langerhans cell histiocytosis: Experience from a tertiary cancer centre from south India (52nd SIOP meeting abstract).' Pediatric Blood and Cancer. 2020/67(Suppl.4):S297-8.

Publications

111.	Srinidhi M, Augustine P, Bhargavan VR, Cherian K. 'Endofascial axillary dissection: a novel method to reduce seroma formation (EBCC 12 Abstract).' European Journal of Cancer: 2020/138(Suppl.1):S47.
112.	Trivedi M, Priyakumari T. 'Serum immunoglobulin levels in children with Acute Lymphoblastic Leukemia during maintenance chemotherapy and its correlation with intensity of treatment and infection (52 nd SIOP meeting abstract).' Pediatric Blood and Cancer: 2020/67 (Suppl. 4): S135.
113.	Trivedi M, Priyakumari T, Nair RA, George PS. 'Clinical characteristics and treatment outcome of children with Philadelphia Chromosome positive Acute Lymphoblastic Leukemia: experience from tertiary cancer care centre in South India (52 nd SIOP meeting abstract).' Pediatric Blood and Cancer: 2020/67 (Suppl. 4): S200.
114.	Trivedi M, Priyakumari T, Nirmal G, Nair RA, Jacob PM, Krishna JKM. Clinical characteristics and survival of children with large B Cell Lymphoma: experience from tertiary care cancer centre from South India (52 nd SIOP meeting abstract).' Pediatric Blood and Cancer: 2020/67 (Suppl. 4): S443.
115.	Varma TH, Priyakumari T, Nair M, Binitha R, Guruprasad CS, Prasanth VR, Krishna JKM. 'Clinical characteristics and treatment outcome of children with testicular germ cell tumor: Two decade experience from a tertiary cancer centre in India (52 nd SIOP meeting abstract).' Pediatric Blood and Cancer: 2020/67(Suppl.4):S255-6.
116.	Varma TH, Priyakumari T, Nair M, Binitha R, Guruprasad CS, Prasanth VR. 'Toxicity profile and clearance of high dose methotrexate in children with acute lymphoblastic leukemia: Evidence from a tertiary cancer centre of India (52 nd SIOP meeting abstract).' Pediatric Blood and Cancer: 2020/67(Suppl.4):S256.
117.	Varma TH, Priyakumari T, Nair M, Binitha R, Guruprasad CS, Prasanth VR. 'Evaluation of the toxicity profile and clearance of high dose methotrexate in children with acute lymphoblastic leukemia from a tertiary cancer centre of south India (SIOP Asia 2020 abstract).' Pediatric Hematology Oncology Journal. 2020/5(4):S28.

Chapters in Books

118.	Mathew AP. 'Oncoplastic surgery in early breast cancer.' In: Management of early stage breast cancer/ edited by Beena K and Vijayakumar DK. Singapore: Springer, 2021. p.119-30.
119.	Muralee M. 'Intestinal anastomosis.' In: Surgical handicrafts: manual for surgical residents and surgeons/edited by R. Dayananda Babu. 2nd ed. New Delhi: Jaypee Medical Publishers, 2021. p.160-72.
120.	Sebastian P. 'India, Kollam.' In: Cancer incidence in five continents. Vol.XI/edited by Bray, F ...et al. Lyon: IARC, 2021. p.596-7.

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121.	Abraham AA. A prospective study to correlate the neutrophil lymphocyte ratio and treatment response in patients with multiple myeloma. Thrissur: Kerala University of Health Sciences, 2020. 104p. (DM Medical Oncology)
122.	Arun AJ. Evaluation of cardiac morbidity with adjuvant hypo fractionated radiotherapy and concurrent trastuzumab in patients with Her 2 positive stage I-III breast cancer. Thrissur: Kerala University of Health Sciences, 2021. 51p. (MD Radiotherapy)
123.	Noufira VS. Prospective observational study of preoperative short course radiation followed by delayed surgery in operable and locally advanced adeocarcinoma rectum. Thrissur: Kerala University of Health Sciences, 2021. 127p. (MD Radiotherapy)
124.	Praseeda G. Clinical profile and treatment outcomes of patients treated with induction chemotherapy for locally advanced carcinoma oral tongue: a retrospective analysis. Thrissur: Kerala University of Health Sciences, 2021. 78p. (MD Radiotherapy)
125.	Sasikumar I. A retrospective analysis of clinical outcome in patients with short course radiotherapy followed by surgery for operable adenocarcinoma rectum. Thrissur: Kerala University of Health Sciences, 2021. 64p. (MD Radiotherapy)
126.	Thomson JK. The role of PET-CT in staging and treatment planning of carcinoma cervix stage IIB-IIIB. Thrissur: Kerala University of Health Sciences, 2020. 66p. (MD Radiotherapy)
127.	Unnikrishnan P. An observational study to evaluate the efficacy of escalated dose of Imatinib or a second generation Tyrosine kinase inhibitor in chronic myeloid leukemia patients showing treatment failure to standard dose Imatinib. Thrissur: Kerala University of Health Sciences, 2020. 70p. (DM Medical Oncology)
128.	Vijay S. Prognostic significance of double expresser status in diffuse large B-cell lymphoma. Thrissur: Kerala University of Health Sciences, 2021. 62p. (MD Pathology)

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. (from 11.01.2021)
Medical Superintendent	:	Dr. Sajeed A. (till 11.01.2021)
Medical Superintendent	:	Dr. Madhu Muralee (from 11.01.2021)
Deputy Medical Superintendent	:	Dr. Madhu Muralee (till 11.01.2021)
Deputy Medical Superintendent	:	Dr. Rajesh R. Chandran (from 11.01.2021)

b. STAFF STRENGTH

Type of Staff	Permanent		Temporary/ Contract	Daily wages	Deputation		Consultants engaged	Total
	Existing	New Recruits			In	Out		
Academic	124	01	04	--	--	--	06	135
Non-Academic	768	12	85	25	05	02	--	897
Total	892	13	89	25	05	02	06	1032

c. ACADEMIC STAFF STRENGTH

Professors-13, Additional Professors-42, Associate Professors-27, Assistant Professors-27

d. NON-ACADEMIC STAFF

Administrative Office

Shibu Issac (Sri)	Administrative Officer (till 30.06.2020)
Santhosh D (Sri)	Administrative Officer (from 07.08.2020)
Snehalatha HB (Smt)	Office Assistant Sel.Gr.
Kalpana Soni S (Smt)	Office Assistant
Vijayaprasad B (Sri)	Office Assistant
Padmarajan R (Sri)	Typist Gr I
Thankamony Amma P (Smt)	Clerk Gr. I
Ajitha S (Smt)	Clinical Records Assistant
Praveen J. Nair (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
Surabhi Chandran (Smt)	Operation Theatre Technician (resigned on 30.01.2021)
Krishnakumar GK (Sri)	Operation Theatre Technician
Shemnad A (Sri)	Operation Theatre Technician
Prasakh P (Sri)	Operation Theatre Technician

Cancer Epidemiology & Bio-statistics

Chandrika D (Smt)	Medical Records Officer-I Gr. I
Asha NM (Smt)	Clerk Gr.I

Cancer Research

Hareendran NK (Sri)	Research Assistant 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
Anil Kumar R (Sri)	Senior Helper
Gopa Kumar (Sri)	Senior Helper

Clinical Services & Medical Records

Sreekumar B (Sri)	Assistant Administrative Officer (CS)
Anil Kumar K (Sri)	Medical Records Officer -II
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
Nikhil S. Baiju (Sri)	Clerk
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
Gireesh S (Sri)	Clinical Records Assistant
Liji S (Smt)	Clinical Records Assistant
Savitha VM (Smt)	Clinical Records Assistant
Jinson K. Paul (Sri)	Physiotherapist
Senan S (Sri)	Senior Helper
Anil Kumar TT (Sri)	Driver
Balachandran BK (Sri)	Driver
Rajeendran GC (Sri)	Driver
Ajitha Kumari RB (Smt)	Hospital Attender
Mariyamma Varghese (Smt)	Hospital Attender
Hari C (Sri)	Dark Room Asst. Gr. I

Community Oncology

Jeena Joseph N (Smt)	Protocol Nurse
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Director's Office

Sajeesh CK (Sri)	Clinical Records Assistant
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ECDC, Ernakulam

James Thomas M (Sri)	Technical Officer (Cyto)
Sanil PN (Sri)	Cytotechnologist Sr. Gr.
Jolly GS (Smt)	Cytotechnologist
Lijo TV (Sri)	Lab. Technician Sel. Gr.
Renjini Thomas (Smt)	Lab. Technician Sel. Gr.
Resmi V (Smt)	Staff Nurse Sr. Gr.
Laiby V. Elizabeth (Smt)	Staff Nurse
Letha B (Smt)	Typist Gr. I

ECDC, Palakkad

Rekha SR (Dr)	Resident Medical Officer
Shanavas A (Sri)	Cytotechnologist
Nirmala KC (Smt)	Staff Nurse Sel. Gr.
Ajila MS (Smt)	Staff Nurse Gr. I
Rajmohan MB (Sri)	Electrician Sel. Gr.

Engineering Wing

Giri Purushothaman (Sri)	Assistant Professor & Head
Renjith R (Sri)	Maintenance Engineer (Mechanical) (resigned on 02.12.2020)
Nishanth S (Sri)	Maintenance Engineer (Mechanical) (joined on 20.01.2021)
Venugopalan Nair VR (Sri)	Supervisor (Electrical) Gr. I
Giji PS (Sri)	Supervisor (Electrical)
Jayakumar P (Sri)	Supervisor (Electrical)
Suresh Kumar G (Sri)	Electrician Gr. I
Sunil Kumar R (Sri)	Electrician
Deepu SS (Sri)	Electrician
Sivarajan L (Sri)	Electronic Technician Sr. Gr.
Santhosh Kumar MS (Sri)	Electronic Technician Sr. Gr.
Jayanthi JK (Smt)	Data Entry Operator Sel. Gr.
Jayabalan Nair B (Sri)	Plumber Gr. I
Shalin Raj R (Sri)	Plumber
Sanjayan S (Sri)	Plumber

Finance & Accounts

Gopakumar KR (Sri)	Controller of Finance (till 31.01.2021)
Ahammed Kabeer Y (Sri)	Controller of Finance (from 01.02.2021)
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.
Veena CL (Smt)	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
Pradeep Chandran (Sri)	Junior System Analyst
Prabhavathi Devi AK (Smt)	Clerk Gr. I
Ambili S (Smt)	Clerk Gr. I
Sheena Sajju (Smt)	Cashier
Sreejit S (Sri)	Clerk
Aswathi Bai AL (Smt)	Clerk

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

Rahul LR (Sri)	Library Assistant (resigned on 23.03.2020)
Jayasree R (Smt)	Helper

Medical Oncology

Lali VS (Dr)	Resident Medical Officer Sr Gr
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Microbiology

Kumar TN (Sri)	Lab Technician
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Nuclear Medicine

Joe D'Cruz A (Sri)	Technical Officer (Radiation)
Bindu B (Smt)	Technical Officer (RIA)
Minyamma K (Smt)	Technical Officer (RIA)
Sindhu P (Smt)	Technical Officer (RIA)
Sheeja SR (Smt)	Technical Officer
Sibi KS (Smt)	Radiation Technologist Sr. Gr.
Sunitha S (Smt)	Radiation Technologist Sr. Gr.
Salini PS (Smt)	Radiation Technologist
Preetha Kumary SS (Smt)	Radiation Technologist
Jayakumar J (Sri)	Radiation Technologist
Chinju G (Smt)	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.
Sindhumul 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
Shiny P Thankappan (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	Suma John (Smt)	Staff Nurse Gr. I
Lizy Varkey (Smt)	Staff Nurse Gr. I	Suma K (Smt)	Staff Nurse Gr. I
Sindhu G (Smt)	Staff Nurse Gr. I	Suma PS (Smt)	Staff Nurse Gr. I
Ajitha S (Smt)	Staff Nurse Gr. I	Suni Mathew (Smt)	Staff Nurse Gr. I
Amrutha L Raj (Smt)	Staff Nurse Gr. I	Sunitha L (Smt)	Staff Nurse Gr. I
Annamma EJ (Smt)	Staff Nurse Gr. I	Swopna K (Smt)	Staff Nurse Gr. I
Anupama B (Smt)	Staff Nurse Gr. I	Thara SS (Smt)	Staff Nurse Gr. I
Archana M. Nair (Smt)	Staff Nurse Gr. I	Vasanthakumari R (Smt)	Staff Nurse Gr. I
Ariya Sreedharan B (Smt)	Staff Nurse Gr. I	Ambika T B (Smt)	Staff Nurse Gr. I
Aswathy MR (Smt)	Staff Nurse Gr. I	Nisha KN (Smt)	Staff Nurse Gr. I
Beena KG (Smt)	Staff Nurse Gr. I	Abdul Jaseer E (Sri)	Staff Nurse
Bency Varghese (Smt)	Staff Nurse Gr. I	Aradhana S (Smt)	Staff Nurse
Biji PR (Smt)	Staff Nurse Gr. I	Baijudeen B (Sri)	Staff Nurse
Bincy Lukose (Smt)	Staff Nurse Gr. I	Bindhu KG (Smt)	Staff Nurse
Bindhu Rani PV (Smt)	Staff Nurse Gr. I	Bindu B (Smt)	Staff Nurse
Bindu Kumari TC (Smt)	Staff Nurse Gr. I	Daisy A (Smt)	Staff Nurse
Bini R (Smt)	Staff Nurse Gr. I	Deepa AS (Smt)	Staff Nurse
Cherupushpam M (Smt)	Staff Nurse Gr. I	Deepa TP (Smt)	Staff Nurse
Chithra VG (Smt)	Staff Nurse Gr. I	Ducakis S (Smt)	Staff Nurse
Deepa R (Smt)	Staff Nurse Gr. I	Fathima S (Smt)	Staff Nurse
Divya Das S (Smt)	Staff Nurse Gr. I	Fathima Suhra M (Smt)	Staff Nurse
Girija L (Smt)	Staff Nurse Gr. I	Georgia George (Smt)	Staff Nurse
Gracy Sebastian (Smt)	Staff Nurse Gr. I	Gigi Mol Chacko (Smt)	Staff Nurse
Jayasree CG (Smt)	Staff Nurse Gr. I	Jaichitra MV (Smt)	Staff Nurse
Jeeja Rajan (Smt)	Staff Nurse Gr. I	Jasna PK (Smt)	Staff Nurse
Kavitha SG (Smt)	Staff Nurse Gr. I	Jesna R (Smt)	Staff Nurse
Kochuthresia PV (Smt)	Staff Nurse Gr. I	Jijimol S J (Smt)	Staff Nurse
Kumari Sobha D (Smt)	Staff Nurse Gr. I	Julie Mariam Jacob (Smt)	Staff Nurse
Linsa George (Smt)	Staff Nurse Gr. I	Karthika Raj KS (Smt)	Staff Nurse
Manju VP (Smt)	Staff Nurse Gr. I	Ligi Das RS (Smt)	Staff Nurse
Preetha S (Smt)	Staff Nurse Gr. I	Lija K (Smt)	Staff Nurse
Preethi PR (Smt)	Staff Nurse Gr. I	Preetha Thomas (Smt)	Staff Nurse
Priya KL (Smt)	Staff Nurse Gr. I	Rajaram SK (Sri)	Staff Nurse
Rajesh Kumar S (Sri)	Staff Nurse Gr. I	Raji KR (Smt)	Staff Nurse
Rani Thomas (Smt)	Staff Nurse Gr. I	Manjusha GS (Smt)	Staff Nurse
Preetha A (Smt)	Staff Nurse Gr. I	Manoj GS (Sri)	Staff Nurse
Maya SS (Smt)	Staff Nurse Gr. I	Maya N. Nair (Smt)	Staff Nurse
Reena P Stanley (Smt)	Staff Nurse Gr. I	Mayadevi L (Smt)	Staff Nurse
Remya R Chandran (Smt)	Staff Nurse Gr. I	Niza A. Khalam (Smt)	Staff Nurse
Roja S. Anand (Smt)	Staff Nurse Gr. I	Preeja S (Smt)	Staff Nurse
Saji GS (Smt)	Staff Nurse Gr. I	Preetha P. Nair (Smt)	Staff Nurse
Sandhya V. Nair (Smt)	Staff Nurse Gr. I	Reena A (Smt)	Staff Nurse (resigned on 02.01.2021)
Sandhyamol KS (Smt)	Staff Nurse Gr. I	Rejani Mole A (Smt)	Staff Nurse
Sangeetha KS (Smt)	Staff Nurse Gr. I	Renjini RS (Smt)	Staff Nurse
Saritha SS (Smt)	Staff Nurse Gr. I	Renjini SR (Smt)	Staff Nurse
Sheeba P.Varghese (Smt)	Staff Nurse Gr. I	Resmi V (Smt)	Staff Nurse
Sheeba VL (Smt)	Staff Nurse Gr. I	Rugmini MD (Smt)	Staff Nurse
Suma V (Smt)	Staff Nurse Gr. I	Saloma PS (Smt)	Staff Nurse

Sandhya G (Smt)	Staff Nurse	Kavitha Mohan L (Smt)	Staff Nurse
Sheeja BT (Smt)	Staff Nurse	Geethu Karun (Smt)	Staff Nurse
Sheeja H (Smt)	Staff Nurse	Keerthi R. Pillai (Smt)	Staff Nurse
Sheeja Kumari G (Smt)	Staff Nurse	Tania Raj K (Smt)	Staff Nurse
Shijitha KS (Smt)	Staff Nurse	Bibin K. Mathew (Sri)	Staff Nurse
Shiny George (Smt)	Staff Nurse	Neelima G (Smt)	Staff Nurse
Sindhu P (Smt)	Staff Nurse	Anu Priya VM (Smt)	Staff Nurse
Sindhu P. Nair (Smt)	Staff Nurse	Asha S (Smt)	Staff Nurse
Sindhu R (Smt)	Staff Nurse	Divya VJ (Smt)	Staff Nurse
Smitha S. Nair (Smt)	Staff Nurse	Neethu Sasi (Smt)	Staff Nurse
Soni John (Smt)	Staff Nurse	Susan John (Smt)	Staff Nurse
Sreeja MS (Smt)	Staff Nurse	Sajitha S (Smt)	Staff Nurse
Sreekala NS (Smt)	Staff Nurse	Pratheeksha R (Smt)	Staff Nurse
Sreekala P (Smt)	Staff Nurse	Sajana K. Badusha (Smt)	Staff Nurse
Sreelekha S (Smt)	Staff Nurse	Riti Merin Abraham (Smt)	Staff Nurse
Sumam L (Smt)	Staff Nurse	Ansha P. Jyothy (Smt)	Staff Nurse
Sumathy P (Smt)	Staff Nurse	Lekshmi Mohan (Smt)	Staff Nurse
Sithara Balakrishnan (Smt)	Staff Nurse	Preetha B (Smt)	Staff Nurse
Archana CS (Smt)	Staff Nurse	Sankar MG (Smt)	Staff Nurse
Sahiya VV (Smt)	Staff Nurse	Gireeshkumar S (Sri)	Staff Nurse
Jafna N (Smt)	Staff Nurse	Anu K. Avirah (Smt)	Staff Nurse
Arathy SR (Smt)	Staff Nurse	Remya KB (Smt)	Staff Nurse
Aparna A (Smt)	Staff Nurse	Mini MS (Smt)	Staff Nurse
Manju Punnen (Smt)	Staff Nurse	Shinoj P (Sri)	Staff Nurse
Resmi VR (Smt)	Staff Nurse	Soumya CS (Smt)	Staff Nurse
Gayathri Devi KS (Smt)	Staff Nurse	Aparna J (Smt)	Staff Nurse
Keerthy MS (Smt)	Staff Nurse	Midhun Raj PT (Sri)	Staff Nurse
Lekshmi P. Nair (Smt)	Staff Nurse	Shafna Ashraff (Smt)	Staff Nurse
Asha A (Smt)	Staff Nurse	Abhilash P (Sri)	Staff Nurse
Harish Nair M (Sri)	Staff Nurse	Shameer AM (Sri)	Staff Nurse
Divya Pauly (Smt)	Staff Nurse	Praveena U (Smt)	Staff Nurse
Bismi NS (Smt)	Staff Nurse	Deepa M (Smt)	Staff Nurse
Jamsheena EM (Smt)	Staff Nurse	Atheena Jinu AJ (Smt)	Staff Nurse
Aswathy S (Smt)	Staff Nurse	Lekshmy MS (Smt)	Staff Nurse
Rosamma PT (Smt)	Staff Nurse	Rosily Thomas (Smt)	Staff Nurse
Ajeesh K (Sri)	Staff Nurse	Juby Baby (Smt)	Staff Nurse
Dhanya Krishnan MG (Smt)	Staff Nurse	Mukesh M (Sri)	Staff Nurse
Soumya TL (Smt)	Staff Nurse	Ansa AR (Smt)	Staff Nurse
Abhilash Michael (Sri)	Staff Nurse	Suby A (Smt)	Staff Nurse
Aishwarya PG (Smt)	Staff Nurse	Anju Krishnan (Smt)	Staff Nurse
Vishnu Prasad VS (Sri)	Staff Nurse	Sajeena B (Smt)	Staff Nurse
Arya P (Smt)	Staff Nurse	Anila Mohan (Smt)	Staff Nurse
Binson Baby (Sri)	Staff Nurse	Binila TA (Smt)	Staff Nurse
Sajisha ES (Smt)	Staff Nurse	Asha Prakash (Smt)	Staff Nurse
Dhanya AS (Smt)	Staff Nurse	Aswathy Raj R (Smt)	Staff Nurse (resigned on 23.02.2021)
Kavitha GS (Smt)	Staff Nurse	Anjaly VN (Smt)	Staff Nurse
Mohammad Sajin N (Sri)	Staff Nurse	Aneesh Kumar RP (Sri)	Staff Nurse
Ashwathi JC (Smt)	Staff Nurse	Seema MB (Smt)	Staff Nurse

Syama MG (Smt)	Staff Nurse	Hendit Florin SD (Smt)	Nursing Assistant
Salini Krishnan SK (Smt)	Staff Nurse	Mary Helen S (Smt)	Nursing Assistant
Remya RB (Smt)	Staff Nurse	Deepthi SS (Smt)	Nursing Assistant
Amitha S (Smt)	Staff Nurse	Sherly PK (Smt)	Nursing Assistant
Jesly Kurian P (Smt)	Staff Nurse	Rema K (Smt)	Nursing Assistant
Anisha S (Smt)	Staff Nurse	Felcy Jesslet A (Smt)	Nursing Assistant
Gopika Lekshmi SR (Smt)	Staff Nurse	Ambika V (Smt)	Nursing Assistant
Maresh M. Mukund (Sri)	Staff Nurse	Bigimol Dominic (Smt)	Nursing Assistant
Thushara Thulasidharan (Smt)	Staff Nurse	Shaija K (Smt)	Nursing Assistant
Ajitha P. Sebastian (Smt)	Staff Nurse	Geetha S (Smt)	Nursing Assistant
Athira Prasad (Smt)	Staff Nurse	Sneha Latha S (Smt)	Nursing Assistant
Lekshmi SR (Smt)	Staff Nurse	Suja Kuruvilla (Smt)	Nursing Assistant
Geethu K (Smt)	Staff Nurse (resigned on 26.03.2021)	Laly VJ (Smt)	Nursing Assistant
Febinal KP (Smt)	Staff Nurse	Suja V (Smt)	Nursing Assistant
Anuja SR (Smt)	Staff Nurse	Sajini John (Smt)	Nursing Assistant
Althaf AS (Sri)	Staff Nurse	Jessy Philipose (Smt)	Nursing Assistant
Shemeena KS (Smt)	Staff Nurse	Shyni John (Smt)	Nursing Assistant
Lekshmi C (Smt)	Staff Nurse	Sheeba PK (Smt)	Nursing Assistant
Anjali S. Kumar (Smt)	Staff Nurse (resigned on 16.03.2021)	Priya S (Smt)	Nursing Assistant
Remya C (Smt)	Staff Nurse	Sudha S (Smt)	Nursing Assistant
Varsha VV (Smt)	Staff Nurse	Bindu AB (Smt)	Nursing Assistant
Sindhumole PM (Smt)	Staff Nurse	Sithalekshmi VS (Smt)	Nursing Assistant
Divya SS (Smt)	Staff Nurse	Mariamamma Joseph (Smt)	Nursing Assistant
Sreelekshmi SS (Smt)	Staff Nurse (resigned on 03.03.2021)	Geetha PK (Smt)	Nursing Assistant
Nishad N (Sri)	Staff Nurse	Bindhu S (Smt)	Nursing Assistant
Jyothi G. John (Smt)	Staff Nurse	Sali Varughese (Smt)	Nursing Assistant
Athira Raj (Smt)	Staff Nurse	Manju I (Smt)	Nursing Assistant
Sini NS (Smt)	Staff Nurse	Babitha Beegam R (Smt)	Nursing Assistant
Soumya S. Nair (Smt)	Staff Nurse	Sunitha Devi RR (Smt)	Nursing Assistant
Jubilet Malar C (Smt)	Nursing Assistant	Ranjini R (Smt)	Nursing Assistant
Sreekumari N (Smt)	Nursing Assistant	Manju C (Smt)	Nursing Assistant
Kumari Sindhu TS (Smt)	Nursing Assistant	Jayasree S (Smt)	Nursing Assistant
Sheela M (Smt)	Nursing Assistant	Sheeba L (Smt)	Nursing Assistant
Mini AK (Smt)	Nursing Assistant	Subha Moly O (Smt)	Nursing Assistant
Jessy Thomas (Smt)	Nursing Assistant	Sujakumari L (Smt)	Nursing Assistant
Varghese Thomas (Sri)	Nursing Assistant	Sreelatha S (Smt)	Nursing Assistant
Deenamma MJ (Smt)	Nursing Assistant	Manjusha V (Smt)	Nursing Assistant
Sunila RS (Smt)	Nursing Assistant	Sheeja R (Smt)	Nursing Assistant
Smitha D (Smt)	Nursing Assistant	Kala L. K. Nair (Smt)	Nursing Assistant
Ambily TK (Smt)	Nursing Assistant	Sandhyakrishnan L (Smt)	Nursing Assistant
Kumari Prameela RG (Smt)	Nursing Assistant	Sheeja Raj (Smt)	Nursing Assistant
Sheeja Rani G (Smt)	Nursing Assistant	Sari AS (Smt)	Nursing Assistant
Usha L (Smt)	Nursing Assistant	Darley Grace AE (Smt)	Nursing Assistant
Jaya Kumari R (Smt)	Nursing Assistant	Minimol SS (Smt)	Nursing Assistant
Reeja AS (Smt)	Nursing Assistant	Sajitha A (Smt)	Nursing Assistant
Sreekumari M (Smt)	Nursing Assistant	Mini J (Smt)	Nursing Assistant
Jessy Xavier (Smt)	Nursing Assistant	Arun AK (Sri)	Nursing Assistant
Subhadra TK (Smt)	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
Anitha V (Smt)	Cleaner
Chandramathi Amma S (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
Remany R (Smt)	Cleaner
Sarojam T (Smt)	Cleaner
Sasikala P (Smt)	Cleaner
Sailaja A (Smt)	Cleaner
Sobhana S (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
Valsala TK (Smt)	Cleaner
Vijayakumar S (Sri)	Cleaner

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.
Mani 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
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
Vimal KumarYS (Sri)	Helper

Project Cell

Vijayakumar G (Sri)	Project Assistant Sr. Gr.
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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

Radiation Physics

Rojas K. Jose	Medical Physicist
Midhun Sajeev (Sri)	Medical Physicist
Deepa MV (Smt)	Medical Physicist
Ramabhadran P (Sri)	Technical Officer (Radiation)
Anitha C (Smt)	Technical Officer (Radiation)
Radhakrishnan Nair T (Sri)	Technical Officer (Radiation) (under suspension w.e.f. 26.03.2020)

Sherif JS (Sri)	Technical Officer (Radiation)
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
Viddiul Latha PA (Smt)	Technical Officer
Maheswari J (Smt)	Technical Officer
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.

Radiodiagnosis

Shailesh Kumar KN (Sri)	Technical Officer (Radiation)
Udayakumar KR (Sri)	Technical Officer (Radiation)
Pradeep S (Sri)	Technical Officer (Radiation)
Suja BR (Smt)	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.
Veena RR (Smt)	Radiation Technologist Sr.Gr.
Anees KN (Sri)	Radiation Technologist
Chitralkha AR (smt)	Radiation Technologist
Saritha BS (Smt)	Radiation Technologist
Santhosh Kumar CS (Sri)	Hospital Assistant

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
Viswakumar N (Sri)	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
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

Johnson X (Sri)	Cashier cum Receptionist Sr Gr (30.04.2020)
Rajendran KR (Sri)	Supervisor (Electrical) Sel Gr (31.05.2020)
Prasannakumary S (Smt)	Head Nurse Sr Gr (31.05.2020)
Vijayalekshmi Ammal M (Smt)	Head Nurse Sr Gr (31.05.2020)
Bensamma Varghese	Head Nurse Sr Gr (31.05.2020)
Thrivikraman Nair MG (Sri)	Clerk Gr I (31.05.2020)
Krishnankutty R (Sri)	Senior Helper (31.05.2020)
Sreekumaran Nair P (Sri)	Driver Sel Gr (31.05.2020)
Antony P (Sri)	Despatcher (31.05.2020)
Subhashini K (Smt)	Cleaner (31.05.2020)
John Evidus PP (Sri)	Hospital Assistant (31.08.2020)
Remila CK (Smt)	Office Assistant Sel Gr (30.09.2020)
Premachandran Nair S (Sri)	Driver (30.11.2020)
Latha A (Dr)	Cytopathologist, ECDC, Ernakulam (30.11.2020)
Sukumaran Nair R (Sri)	Security Guard (31.12.2020)
Rajan PC (Sri)	Senior Helper (31.01.2021)
Pradeep VM (Dr)	Professor (31.03.2021)

g. Obituary

Sathyalekha SI (Smt)	Technical Officer (Radiation) (16.03.2021)
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Standing Committees

a. Scientific Committee

1	Dr. Asha Kishore (till 09.12.2020) Director, SCTIMST, Thiruvananthapuram	Chairperson
	Dr. K. Jayakumar (from 09.12.2020) Director, SCTIMST, Thiruvananthapuram	Chairman
2	Dr. Rekha A. Nair, Director, RCC, Thiruvananthapuram	Alternate Chairperson
3	Dr. G.K. Rath, Chief, BRA-IRCH, AIIMS, New Delhi	Member
4	Dr. Rajendra A. Badwe, Director, Tata Memorial Centre, Mumbai	Member
5	Dr. M. Vijayakumar, Director, Kidwai Memorial Institute of Oncology, Bengaluru	Member
6	Dr. M. Radhakrishna Pillai (till 31 August 2020) Director, Rajiv Gandhi Centre for Biotechnology, Thiruvananthapuram	Member
7	Dr. T. Rajkumar, Prof. and Head, Dept. of Molecular Oncology Cancer Institute (WIA), Chennai	Member
8	Dr. Nirmala A. Jambhedkar, Prof. & Head, Dept. of Pathology, Tata Memorial Centre, Mumbai	Member
9	Dr. K. Ramadas, Prof. & Head, Dept. Radiation Oncology RCC, Thiruvananthapuram	Convener

b. Institutional Review Board

1	Dr. Rekha A. Nair, Director, RCC, Thiruvananthapuram	Chairperson
2	Dr. N. Geetha, Professor & Head, Dept. of Medical Oncology, RCC, Thiruvananthapuram	Vice Chairperson
3	Dr. K. Ramadas, Prof. & Head, Dept. of Radiation Oncology RCC, Thiruvananthapuram	Member
4	Dr. Francis V. James, Professor, Dept. of Radiation Oncology, RCC, Thiruvananthapuram	Member
5	Dr. Rachel Cherian Koshy, Professor & Head, Dept. of Anaesthesiology, RCC, Thiruvananthapuram	Member
6	Dr. Priyakumari T, Prof. and Head, Dept. of Paediatric Oncology, RCC, Thiruvananthapuram	Member

7	Dr. Shaji Thomas, Additional Prof. & Head, Dept. of Surgical Services, RCC, Thiruvananthapuram	Member
8	Dr. K. Jayasree, Professor & Head, Dept. of Pathology, RCC, Thiruvananthapuram	Member
9	Dr. Venugopal M, Professor & Head, Dept. of Radiodiagnosis, RCC, Thiruvananthapuram	Member
10	Dr. S. Kannan, Professor & Head, Division of Cancer Research, RCC, Thiruvananthapuram	Member
11	Dr. Beela Sarah Mathew, Professor, Dept. of Radiation Oncology, RCC, Thiruvananthapuram	Member
12	Dr. Aleyamma Mathew, Professor & 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	Sri. K.T. Cherian Panicker (till 10.08.2020) Panikkaru Veetil, Soubhagya Lane, Keeriserri, Nalanchira, Thiruvananthapuram -695015 Smt. Lali V.S. (from 11.08.2020) (Retired Joint Director, Dept. of Agriculture, Govt. of Kerala) Rose Gardens, Christ Nagar, Vazhayila, Karakulam P.O., Thiruvananthapuram-695564	Member

7	Dr. Sajeev V. Thomas, Prof. of Neurology, Sree Chitra Tirunal Institute for Sciences & Technology, Thiruvananthapuram-695011	Member	7.	Dr. T. Priyakumari, Head, Dept. of Paediatric Oncology	Member
8	Dr. N. Geetha, Professor & Head, Dept. of Medical Oncology, RCC, Thiruvananthapuram	Member	8.	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
9	Dr. Sajeev A, Additional Prof. & Additional Director (Administration), RCC, Thiruvananthapuram.	Member	9.	Dr. Geetha N, Head, Dept. of Medical Oncology	Member
10	Fr. Abraham Thomas (Director, Snehanilayam), Matha Mariam Ashramam, Nirmalagiri, Powdikonam, Thiruvananthapuram-695588	Member	10.	Dr. Aswinkumar, Addl. Professor, Radiation Oncology/Quality & Safety Officer	Member
11	Smt. Jessy Susan Philip (till 10.08.2020) DI, Cliff Valley, TC 4/1458, Kavu Road, Kowdiar P.O., Thiruvananthapuram-695003	Member	11.	Dr. Swapna R. Nath, Head, Division of Microbiology/ NABH Nodal Officer	Member
	Smt. Karthiyani V (from 11.08.2020) (Trustee, Swasthi Foundation, Thiruvananthapuram) Madhuvan, T.C. 6/298-1, Vattiyoorkavu, Thiruvananthapuram-6950013.	Member	12.	Smt. Sreelekha R, Chief Nursing Officer	Member
12	Dr. Francis V. James, Professor, Dept. of Radiation Oncology, RCC, Thiruvananthapuram	Convener	13.	Sri. Anilkumar K, Medical Records Officer-II	Member
d. Building Committee			14.	Sri. Sreekumar B, Assistant Administrative Officer (CS)	Convener
1	Chief Engineer, PWD (Buildings & Local Works), Govt. of Kerala	Chairman	f. Hospital Infection Control Committee		
2	Chief Architect, PWD, Govt. of Kerala	Member	1.	Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Chairman
3	Director of Medical Education, Govt. of Kerala	Member	2.	Dr. Sajeev A, Additional Director (Administration)	Member
4	Principal, Govt. Medical College, Thiruvananthapuram	Member	3.	Dr. Madhu Muralee, Medical Superintendent	Member
5	Director, RCC, Thiruvananthapuram	Member	4.	Dr. K. Jayasree, Head, Dept. of Pathology	Member
6	Controller of Finance, RCC, Thiruvananthapuram	Member	5.	Dr. T. Priyakumari, Head, Dept. of Paediatric Oncology	Member
7	Head, Engineering Division, RCC, Thiruvananthapuram	Convener	6.	Dr. Rachel Cherian Koshy, Head, Dept. of Anaesthesiology	Member
e. Medical Record Review Committee			7.	Dr. Geetha N, Head, Dept. of Medical Oncology	Member
1.	Dr. Sajeev A, Additional Director (Administration)	Chairman	8.	Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
2.	Dr. Madhu Muralee, Medical Superintendent	Member	9.	Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/ Quality & Safety Officer	Member
3.	Dr. Rajeevan V, Administrative Medical Officer	Member	10.	Dr. Binitha R, Associate Professor, Department of Paediatric Oncology/Infection Control Doctor	Member
4.	Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Member	11.	Dr. K. Vijayalekshmi, Head, Division of Transfusion Medicine	Member
5.	Dr. Beela Sarah Mathew, Prof. of Radiation Oncology	Member	12.	Dr. Swapna R. Nath, Head, Division of Microbiology/ Infection Control Officer	Member
6.	Dr. M. Venugopal, Head, Dept. of Radiodiagnosis	Member	13.	Dr. Sudha P, Head, Division of Palliative Medicine	Member
			14.	Smt. Sreelekha R, Chief Nursing Officer	Member
			15.	Sri. Giri Purushothaman, Head, Engineering Wing	Member

16. Smt. Mini N, Dietician	Member
17. Smt. Indu, Head Nurse, Operation Theatre	Member
18. Sri. P. Ramaprasad, Assistant Purchase Officer	Member
19. Smt. Jaya TS, Head, Housekeeping Division	Member
20. Smt. Sunithakumari, Head Nurse, CVAD Clinic	Member
21. Smt. Ajitha S, Infection Control Nurse	Member
22. Smt. Arya Sreedharan, Infection Control Nurse	Member
23. Smt. Rajani RV, NABH Co-ordinator	Member
24. Smt. Sheela Rodriguez, Nursing Supervisor	Convener

g. Internal Audit Committee

1. Dr. Paul Augustine, Additional Professor, Dept. of Surgical Services	Chairman	19. Dr. Deepthi Prabhu, Associate Professor, Dept. of Anaesthesiology	Member
2. Dr. Sajeed A, Additional Director (Administration)	Member	20. Dr. Lijeesh, Asst. Professor, Dept. of Radiation Oncology	Member
3. Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Member	21. Dr. Frenny Philip, Asst. Professor, Dept. of Anaesthesiology	Member
4. Dr. Madhu Muralee, Medical Superintendent	Member	22. Dr. Sagila SG, Asst. Professor, Division of Microbiology	Member
5. Dr. Beela Sarah Mathew, Professor, Dept. of Radiation Oncology	Member	23. Dr. Rona Joseph, Asst. Professor, Dept. of Medical Oncology	Member
6. Dr. T. Priyakumari, Head, Dept. of Paediatric Oncology	Member	24. Dr. Geethi MH, Asst. Professor, Dept. of Radiation Oncology	Member
7. Dr. Anila KR, Associate Professor, Dept. of Pathology	Member	25. Dr. Guru Prasad, Asst. Professor, Dept. of Paediatric Oncology	Member
8. Dr. Roshni S, Associate Professor, Dept. of Radiation Oncology	Member	26. Dr. John Joseph, Asst. Professor, Dept. of Radiation Oncology	Member
9. Dr. Sudha P, Additional Professor, Division of Palliative Medicine	Member	27. Dr. Manjusha Nair, Asst. Professor, Dept. of Paediatric Oncology	Member
10. Dr. Swapna R. Nath, Head, Division of Microbiology	Member	28. Dr. Deepa Susan, Asst. Professor, Dept. of Medical Oncology	Member
11. Dr. Arun Peter Mathew, Additional Professor, Dept. of Surgical Services	Member	29. Dr. Lakshmi Haridas, Asst. Professor, Dept. of Medical Oncology	Member
12. Dr. Kurian Cherian, Additional Professor, Dept. of Surgical Services	Member	30. Dr. Aparna S, Asst. Professor, Dept. of Radiation Oncology	Member
13. Dr. Rajeev KR, Associate Professor, Dept. of Radiation Oncology	Member	31. Dr. Rexeena Bhargavan, Asst. Professor, Dept. of Surgical Services	Member
14. Dr. Arun Sankar, Associate Professor, Dept. of Radiation Oncology	Member	32. Dr. Neelima Radhakrishnan, Asst. Professor, Dept. of Pathology	Member
15. Dr. Malu Rafi, Associate Professor, Dept. of Radiation Oncology	Member	33. Dr. Lekha M. Nair, Asst. Professor, Dept. of Radiation Oncology	Member
16. Dr. Priya Mary Jacob, Associate Professor, Dept. of Pathology	Member	34. Smt. Sreelekha R, Chief Nursing Officer	Member
17. Dr. Anoop, Associate Professor, Dept. of Medical Oncology	Member	35. Sri. Prasad PP, Technical Officer, Dept. of Radiodiagnosis	Member
18. Dr. Siva Ranjith, Assistant Professor, Dept. of Surgical Services	Member	36. Smt. Sini LS, Lab Technician	Member
		37. Smt. Mini N, Dietician	Member
		38. Smt. Sivakumari, Head Nurse	Member
		39. Smt. Ariya Sreedharan, Infection Control Nurse	Member
		40. Smt. Sharika V. Menon, Asst. Professor, Division of Radiation Physics	Member
		41. Smt. Rojus K. Jose, Medical Physicist, Division of Radiation Physics	Member
		42. Mr. Pradeep S, Technical Officer, Dept. of Radiodiagnosis	Member
		43. Mr. Anand, Asst. Engineer, Engineering Wing	Member
		44. Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/ Quality & Safety Officer	Convener

h. Quality Improvement Committee

1. Dr. Rekha A. Nair, Director	Chairperson
2. Dr. Madhu Muralee, Medical Superintendent	Member
3. Dr. Rajeevan V, Administrative Medical Officer	Member
4. Dr.T. Priyakumari, Head, Dept. of Paediatric Oncology	Member
5. Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Member
6. Dr. Rachel Cherian Koshy, Head, Dept. of Anaesthesiology	Member
7. Dr. Geetha N, Head, Dept. of Medical Oncology	Member
8. Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
9. Dr. M.Venugopal, Head, Dept. of Radiodiagnosis	Member
10. Dr.V.M. Pradeep, Head, Division of Nuclear Medicine	Member
11. Dr. Gigi Thomas, Head, Division of Community Oncology	Member
12. Dr. K. Jayasree, Head, Dept. of Pathology	Member
13. Dr. K.Vijayalekshmi, Head, Division of Transfusion Medicine	Member
14. Dr. Swapna R. Nath, Head, Division of Microbiology	Member
15. Dr. Sudha P, Head, Division of Palliative Medicine	Member
16. Dr.Thayal Singh Eliyas, Head, Division of Radiation Physics	Member
17. Dr.Aleyamma Mathew, Head, Division of Cancer Epidemiology & Biostatistics	Member
18. Dr. Raveendran Pillai K, Additional Professor, Division of Clinical Laboratory Services	Member
19. Ms. Neelima, Head, Division of Information Systems	Member
20. Smt. Sreelekha R, Chief Nursing Officer	Member
21. Sri. Giri Purushothaman, Head, Engineering Wing	Member
22. Sri. Surendran Nair V, Public Relations Officer	Member
23. Mr. Anilkumar K , Medical Records Officer-II	Member
24. Sri. Sreekumar B, Assistant Administrative Officer (CS)	Member
25. Smt. Sheela Rodriguez, Infection Control Convener	Member

26. Smt. Mini N, Dietician	Member
27. Dr. Sajeed A, Additional Director (Administration)	Convener

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, Head, Dept. of Radiation Oncology	Member
5. Dr.T. Priyakumari, Head, Dept. of Paediatric Oncology	Member
6. Dr. Rachel Cherian Koshy, Head, Dept. of Anaesthesiology	Member
7. Dr. Geetha N, Head, Dept. of Medical Oncology	Member
8. Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
9. Dr. Aswin Kumar, Additional Professor, Dept. of Radiation Oncology	Member
10. Dr. Asha Arjunan, Additional Professor, Dept. of Radiation Oncology	Member
11. Dr. Anoop TM, Associate Professor, Dept. of Medical Oncology	Member
12. Sri. Suresh G, Stores Officer	Member
13. Sri. K.R. Gopakumar, Controller of Finance	Member
14. Sri. P. Ramaprasad, Assistant Purchase Officer	Convener

j. Hospital Transfusion Committee

1. Dr. Sajeed A, Additional Director (Administration)	Chairman
2. Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Member
3. Dr.T. Priyakumari, Head, Dept. of Paediatric Oncology	Member
4. Dr. Rachel Cherian Koshy, Head, Dept. of Anaesthesiology	Member
5. Dr. Shaji Thomas, Head, Dept. of Surgical Services	Member
6. Dr. Sreejith G. Nair, Additional Professor, Dept. of Medical Oncology	Member
7. Dr. Rajesh, Resident Medical Officer, Division of Transfusion Medicine	Member
8. Smt. Sreelekha R, Chief Nursing Officer	Member
9. Smt. Bindu, Scientific Officer, Division of Transfusion Medicine	Member
10. 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. K. Ramadas, Head, Dept. of Radiation Oncology	Member
5. Dr. Swapna R. Nath, NABH Nodal Officer	Member
6. Dr. Geetha N, Head, Dept. of Medical Oncology	Member
7. Dr. Prasanth CV, Resident Medical Officer Gr I, Division of Palliative Medicine	Member
8. Dr. Saju B, Additional Professor, Division of Radiation Physics	Member
9. Sri. Giri Purushothaman, Head, Engineering Wing	Member
10. Smt. Sheela Rodriguez, Infection Control Convener	Member
11. Smt. Sreelekha R, Chief Nursing Officer	Member
12. Smt. Mini N, Dietician	Member
13. Sri.V.B. Ramesh Kumar, Security Officer	Member
14. Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/ Quality & Safety Officer	Convener

l. Mortality/Morbidity Review Committee

1. Dr. Sajeed A, Additional Director (Administration)	Chairman
2. Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Member
3. Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/ Quality & Safety Officer	Member
4. Dr. Geetha N, Head, Dept. of Medical Oncology	Member
5. Dr. T. Priyakumari, Head, Dept. of Paediatric Oncology	Member
6. Dr. Swapna R. Nath, NABH Nodal Officer	Member
7. Dr. Rema P, Additional Professor, Dept. of Surgical Services	Member
8. Dr. Bipin T. Varghese, Additional Professor, Dept. of Surgical Services	Member
9. Dr. Asha Arjunan, Additional Professor, Dept. of Radiation Oncology	Member
10. Dr. Roshni S, Associate Professor, Dept. of Radiation Oncology	Member

11. Dr. Lali VS, Resident Medical Officer Sr Gr, Dept. of Medical Oncology	Member
12. Dr. Wagh Mira Sudham, Assistant Professor, Dept. of Surgical Services	Member
13. 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. Rajeevan V, Administrative Medical Officer	Member
5. Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Member
6. Dr. Rachel Cherian Koshy, Head, Dept. of Anaesthesiology	Member
7. Dr. Bhagyalakshmi R, Associate Professor, Dept. of Anaesthesiology	Member
8. Dr. Aswin Kumar, Addl. Professor, Dept. of Radiation Oncology/ Quality & Safety Officer	Member
9. Dr. Roshni S, Associate Professor, Dept. of Radiation Oncology	Member
10. Dr. Prasanth VR, Assistant Professor, Dept. of Paediatric Oncology	Member
11. Smt. Sreelekha R, Chief Nursing Officer	Member
12. Smt. Vijaya AK, Head Nurse	Member
13. 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. K. Ramadas, Head, Dept. of Radiation Oncology	Member
4. Dr. Beela Sarah Mathew, Professor, Dept. of Radiation Oncology	Member
5. Dr. Aswin Kumar, Additional Professor, Dept. of Radiation Oncology	Member
6. Dr. Mallika Balakrishnan, Additional Professor, Dept. of Anaesthesiology	Member
7. Dr. Swapna R. Nath, Head, Division of Microbiology & NABH Nodal Officer	Member
8. Dr. Anoop TM, Associate Professor, Dept. of Medical Oncology	Member

9	Dr. Bintha R, Associate Professor, Dept. of Paediatric Oncology	Member
10	Smt. Sreelekha R, Chief Nursing Officer	Member
11	Smt. Jaya TS, Head, Housekeeping Division	Member
12	Sri. Dinesh PS, Pharmacist Gr I	Member
13	Sri. Suresh G, Stores Officer	Convener

o. Committee on Safe Radiotherapy Practice

1	Dr. K. Ramadas, Head, Dept. of Radiation Oncology	Chairman
2	Dr. Sajeed A, Additional Director (Administration)	Member
3	Dr. Francis V. James, Professor, Dept. of Radiation Oncology	Member
4	Dr. Beela Sarah Mathew, Professor, Dept. of Radiation Oncology	Member
5	Dr. Raghu Kumar P, Additional Professor, 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	Member
8	Concerned staff/Concerned Division/ Department	Member
9	Dr. Thayal Singh Elias, Head, Division of Radiation Physics and Radiation Safety Officer	Convener

p. Library Committee

1	Dr. Rekha A. Nair, Director	Chairperson
2	Dr. N. Geetha, Additional Director (Academic)	Member
3	Dr. A. Sajeed, Medical Superintendent (till 11.01.2021)	Member
4	Dr. Madhu Muralee, Medical Superintendent (from 12.01.2021)	Member
5	Dr. M. Venugopal, Head, Dept. of Radiodiagnosis	Member
6	Dr. K. Jayasree, Head, Dept. of Pathology	Member
7	Sri. K.R. Gopakumar, Controller of Finance (till 30.01.2021)	Member
8	Sri. Y. Ahammed Kabeer, Controller of Finance (from 01.02.2021)	Member
9	Dr. V. Vishnu, Librarian cum Information Officer Gr I	Convener

Right to Information Act

a. Appellate Authority

Dr. Geetha N, Additional Director (Academic)
(till 13.01.2021)

Dr. Sajeed A, Additional Director (Administration)
(from 13.01.2021)

b. Public Information Officer

Dr. Sajeed A, Medical Superintendent (till 13.01.2021)
Smt. Asha NM, Welfare Officer (i/c) (from 13.01.2021)

c. Assistant Public Information Officer

Sri. Sajeesh CK, Clinical Records Assistant

d. Number of Applications

Received	:	129
Disposed	:	129
Pending	:	Nil

e. Penalties levied for non-supply of information: Nil

f. Cases pending with State Information Commission: Nil

Internal Control Mechanism

- Staff used exclusively for internal audit: I
- Audit committee meetings: Nil
- 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.
- Other matters
 - Grievance redressal mechanism: Committee for redressal of complaints of sexual harassment against female employees.
 - Official Language Act : Implemented
 - Computerisation : Completed

ACCOUNTS

2020-2021

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

BALANCE SHEET AS ON 31st MARCH 2021

Sch.	Liabilities	Current Year (Rs.)	Previous Year (Rs.)	Sch.	Assets	Current Year (Rs.)	Previous Year (Rs.)
I	CAPITAL FUND	3,842,329,187.97	3,638,844,258.97	VI	FIXED ASSETS	4,019,303,801.60	3,535,760,221.60
II	SPECIFIC FUNDS	438,340,353.33	429,891,908.26	VII	INVESTMENTS	1,676,804,926.02	1,436,493,350.89
	Grant in aid - GOI for State Cancer Institute	10,182.00	20,369,014.00		CURRENT ASSETS AND LOANS & ADVANCES		
	GRANT FROM GOVT OF KERALA	5,737,569.20	4,982,697.20	VIII	CLOSING STOCK	111,739,798.44	172,557,707.00
	GRANT IN AID- GOK FOR KARUNAGAPALLY PROJECT	-		IX	ADVANCES-OTHERS & OTHER CURRENT ASSETS	242,132,603.10	134,483,458.88
	CCL FUND	209,460,053.00	209,460,053.00	X	INVESTIGATION FEES RECEIVABLE	649,237,873.30	848,502,707.13
III	RADIO THERAPY RESEARCH FUND	725,621.00	725,621.00	XI	BALANCE WITH BANK	441,908,847.49	347,824,047.79
	CURRENT LIABILITIES AND PROVISIONS			XII	CASH IN HAND	1,420,045.71	269,274.01
IV	CURRENT LIABILITIES -OTHERS	527,829,725.80	502,259,792.33	XIII	INCOME & EXPENDITURE ACCOUNT	432,966,555.28	464,079,014.13
	PROVISION FOR DA ARREARS		8,000,000.00				
	PROVISION FOR GRATUITY	-16,521,207.00	-16,521,207.00				
	provision for medi purchase KMSCL	97,849,223.00					
	PROVISION FOR DOUBTFULL DEBTS	211,196,608.32	36,007,809.24				
V	CREDITORS FOR GOODS SUPPLIED	111,146,657.88	182,759,228.50				
VI	PROVISION FOR DEPRECIATION	2,147,410,476.44	1,923,190,605.93				
	TOTAL	7,575,514,450.94	6,939,969,781.43		TOTAL	7,575,514,450.94	6,939,969,781.43

As per our report of even date attached

For J Singh & Associates
Chartered Accountants
FRN 110266W
Densil Fernando
Partner

M. No. 208859
UDIN: 22208859ADFUNT1339

Thiruvananthapuram
17.01.2022

Dr. Rekha A Nair
Director, RCC

Ahammed Kabeer Y
Controller of Finance

REGIONAL CANCER CENTRE SOCIETY,TRIVANDRUM (Reg.No. 567/81) INCOME AND EXPENDITURE ACCOUNT FOR THE YEAR ENDED 31st MARCH 2021

Sch.	Expenditure	Current Year (Rs.)	Previous Year (Rs.)	Sch.	Income	Current Year (Rs.)	Previous Year (Rs.)
	Opening Stock	172,557,707.00	150,704,465.72		Grant-in-aid; Govt of Kerala	743,864,000.00	627,423,200.00
A	Purchases,medicines,chemicals etc	484,902,121.40	750,997,043.50		Investigation fees	682,487,965.22	786,027,269.78
B	Salaries and Allowances	931,178,155.70	912,271,964.80		Medicine Receipts	509,870,262.00	633,934,257.14
	Uniform and Liveries	449,944.00	978,112.00	L	Interest Income	60,385,453.39	43,647,685.50
C	Rent,Rates & Taxes	2,021,912.00	1,734,006.00	M	Training Fees	30,168,092.00	27,691,376.00
D	Postage ,Telephone & Telegram	670,962.50	673,920.00	N	Miscellaneous Income	6,893,723.00	15,640,541.95
E	Travelling Expenses	24,296.00	135,135.00	O	Training Fund	10,955,537.00	0
F	Printing and Stationery	2,493,471.00	5,896,360.00		Closing Stock	111,739,798.44	172,557,707.00
	Advertisement Charges	653,889.00	400,294.00				
G	Electricity and water Charges	51,900,726.00	58,333,971.00				
H	Repairs and Maintenance	11,070,258.00	6,170,416.00				
I	Service contract Charges	15,028,377.00	59,130,835.00				
	Audit Fees	175,820.00	913,720.00				
J	Computer Expenses	784,121.00	911,656.00				
	Books & Periodicals	21,081.00	19,550.00				
	Investi.charges to RGC Biotechnology	0	1,097,000.00				
	Expenses to NTR	354,206.00	2,798,071.00				
K	Miscellaneous Expenses	49,038,217.30	51,457,490.15				
	Doubtfull debts	175,188,799.08	36,007,809.24				
	Medical treatment staff & dependents	4,514,506.00	31,853,608.00				
	Depreciation	224,219,870.51	201,507,581.35				
	Excess of Income over Expenditure	28,512,989.26	32,929,028.61				
	TOTAL	2,156,364,831.05	2,306,922,037.37		Total	2,156,364,831.05	2,306,922,037.37

As per our report of even date attached

Ahammed Kabeer Y
Controller of Finance

Dr: Rekha A Nair
Director, RCC

Thiruvananthapuram
17.01.2022

For J Singh & Associates
Chartered Accountants
FRN I 10266W
Densil Fernando
Partner

M. No. 208859
UDINI: 22208859ADFUNT1339

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

SCHEDULE -VI

Amount INR

ITEM	Sch.	Gross Block			Depreciation			Net Block			
		Original cost 01.04.2020	Additions	Deductions	Cost on 31.3.2021	Up to 31.3.2020	Rate %	Additions	Total up to 31.3.2021	As on 31.3.2020	As on 31.3.2021
Air Conditioner	1	79,405,201.35	85,420.00	-	79,490,621.35	53,935,934.09	15.00%	3,833,203.09	57,769,137.18	25,469,267.26	21,721,484.17
Building	2	606,957,698.57	910,528.00	-	607,868,226.57	294,087,465.57	10.00%	31,378,076.10	325,465,541.67	312,870,233.00	282,402,684.90
Civil Works	3	309,140.63	-	-	309,140.63	217,631.80	10.00%	9,150.88	226,782.68	91,508.83	82,357.95
Cobalt Unit	4	18,123,455.30	-	-	18,123,455.30	17,302,466.05	15.00%	123,148.38	17,425,614.43	820,989.25	697,840.87
Hospital Equipments & Other Assets (Projects)	5	71,953,412.00	-	-	71,953,412.00	55,903,686.00	15.00%	2,407,458.90	58,311,144.90	16,049,726.00	13,642,267.10
Electrical Installation	6	115,909,150.90	-	-	115,909,150.90	83,636,337.60	15.00%	4,840,921.99	88,477,259.59	32,272,813.30	27,431,891.31
Hospital & Lab Equipments	7	1,878,060,316.97	335,002,134.00	-	2,213,062,450.97	1,125,931,695.90	15.06%	1,63,680,418.44	1,289,612,114.34	752,128,621.07	923,450,336.63
Assets (Donations)	8	370,112.00	-	-	370,112.00	358,601.27	15.00%	1,726.61	360,327.88	11,510.73	9,784.12
Fire Detection	9	16,209,614.00	350,460.00	-	16,560,074.00	9,674,127.69	15.00%	1,032,891.95	10,707,019.64	6,535,486.31	5,853,054.36
Gas & Cylinder	10	10,384,532.05	-	-	10,384,532.05	9,143,217.00	15.00%	186,197.26	9,329,414.26	1,241,315.05	1,055,117.79
Computer Hardware & Software	11	81,226,845.80	1,000,172.00	-	82,227,017.80	73,909,668.66	40.00%	3,326,939.66	77,236,608.32	7,317,177.14	4,990,409.48
High Energy Linear Accelerator	12	52,987,763.00	-	-	52,987,763.00	49,053,364.00	15.00%	590,159.85	49,643,523.85	3,934,399.00	3,344,239.15
Furniture & Fittings	13	46,073,871.00	2,773,741.48	-	48,847,612.48	24,854,540.63	10.00%	2,399,307.23	27,253,847.86	21,219,330.85	21,593,764.62
Land	14	1,000.00	-	-	1,000.00	-	-	-	-	1,000.00	1,000.00
Library Books & Journals	15	114,528,703.09	7,107,143.00	-	121,635,846.09	73,294,911.14	15.00%	7,251,140.25	80,546,051.39	41,233,791.95	41,089,794.70
Lift & Elevator	16	27,265,560.00	-	-	27,265,560.00	18,749,974.31	15.00%	1,277,337.85	20,027,312.16	8,515,585.69	7,238,247.84
Low energy linear accelerator	17	3,611,489.40	-	-	3,611,489.40	3,174,840.50	15.00%	65,497.34	3,240,337.84	436,648.90	371,151.56
Capital Work in Progress	18	370,564,031.60	136,061,878.00	-	506,625,909.60	-	-	-	-	370,564,031.60	506,625,909.60
Office Equipments	19	7,934,880.43	502,300.00	-	7,985,110.43	4,298,407.89	15.00%	553,005.37	4,851,413.26	3,636,472.54	3,133,697.17
Solar Power Generation System- M/s ANERT	20	6,208,809.00	-	-	6,208,809.00	3,024,148.94	15.00%	477,699.01	3,501,847.95	3,184,660.06	2,706,961.05
Telemedicine Projects	21	7,718,623.00	-	-	7,718,623.00	7,216,087.28	15.01%	75,432.54	7,291,519.82	502,535.72	427,103.18
Telephone Equipments	22	6,638,706.00	60,412.00	-	6,699,118.00	5,429,624.44	15.00%	190,424.03	5,620,048.47	1,209,081.56	1,079,069.53
Vehicles	23	6,753,931.60	-	-	6,753,931.60	4,412,706.59	15.00%	351,183.75	4,763,890.34	2,341,225.01	1,990,041.26
Water Supply & Drainage	24	6,563,373.43	141,462.00	-	6,704,835.43	5,581,168.58	15.00%	168,550.03	5,749,718.61	982,204.85	955,116.82
TOTAL		3,535,760,221.12	483,543,580.48	-	4,019,303,801.60	1,923,190,605.93	-	224,219,870.51	2,147,410,476.44	1,612,569,615.67	1,871,893,325.16

As per our report of even date attached

Thiruvananthapuram
17.01.2022

Dr. Rekha A Nair
Director, RCC

Ahammed Kabeer Y
Controller of Finance

For J Singh & Associates
Chartered Accountants
FRN 110266W
Densil Fernando
Partner
M. No. 208859

UDIN: 22208859ADFUNT1339

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(Reg. no. 567/81)
CANCER CARE FOR LIFE SCHEME
INCOME AND EXPENDITURE ACCOUNT FOR
THE YEAR ENDED 31st MARCH 2021

Sch.	Particulars	Current Year (Rs.)	Previous Year (Rs.)	Sch.	Particulars	Current Year (Rs.)	Previous Year (Rs.)
	Reimbursement to Patients	13,333,730.41	16,492,271.13		Interest on FD & Investments	15,933,200.00	17,364,634.00
	Excess of Income over Expenditure	2,599,469.59	872,362.87				-
	Total	15,933,200.00	17,364,634.00		Total	15,933,200.00	17,364,634.00

Thiruvananthapuram
17.01.2022

Dr. Rekha A Nair
Director, RCC

Ahammed Kabeer Y
Controller of Finance

As per our report of even date attached
For J Singh & Associates
Chartered Accountants
FRN 110266W
Densil Fernando
Partner
M. No. 208859
UDIN: 22208859ADFUNT1339

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 2021, the Income and Expenditure Account for the year 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 2021, and of its financial performance for the year 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

I) We further report that;

- a. We have obtained all the information and explanations, which to the best of our knowledge and belief were necessary for purposes of audit.
- b. In our opinion, proper books of account have been kept by Society so far as appears from our examination of those books.
- c. The Balance Sheet and the Income and Expenditure account dealt by this report are in the agreement with the Books of Accounts.
- 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.

Thiruvananthapuram
17/01/2022

For J Singh & Associates
Chartered Accountants
FRN 110266W

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.I 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

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.

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
17.01.2022

Dr. Rekha A Nair
Director, RCC

Ahammed Kabeer Y
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. 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.159682840.48 for the amount shown as difference of KASP rate
3. RCC is extending credit facilities to various institutions and an amount of Rs. 40.69 lakh and 1.14 crore are outstanding in Tamil Nadu CM comprehensive Health Insurance Scheme and ECHS(Ex-service men contributory Health Scheme) respectively appears to be doubtful and hence a provision amounting to Rs.155059558.60 was created during the year.
4. Investigation fees include income from registration fees, ward charges, nuclear medicine, radiotherapy, surgery and lab.
5. 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 .49,82,697/- and similarly Grant-in-Aid from Government of India of Rs. 2,03,69,014/- 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
17.01.2022

Dr. Rekha A Nair
Director, RCC

Ahammed Kabeer Y
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 2020-21 The Regional Cancer Centre Society, Thiruvananthapuram has received Rs. 3135.760 lakh under the head of account 2210-05-105-52-36 (NP) Grant in Aid-Non Salary and Rs. 4302.88 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.881/2020/H&FWD dated 14/05/2020	266.97
2	GO.(Rt).No.1152/2020/H&FWD dated 24/06/2020	266.97
3	GO.(Rt).No.1324/2020/H&FWD dated 21/07/2020	266.97
4	GO.(Rt).No.1507/2020/H&FWD dated 17/08/2020	266.97
5	GO.(Rt).No.1706/2020/H&FWD dated 21/09/2020	266.97
6	GO.(Rt).No.1716/2020/H&FWD dated 22/09//2020	1000.00
7	GO.(Rt).No.2508/2020/H&FWD dated 05/11/2020	266.97
8	GO.(Rt).No.39/2021/H&FWD dated 05/01/2021	266.97
9	GO.(Rt).No.753/2021/H&FWD dated 25/03/2021	266.97
	Total	3135.76
B	Head of Accounts-2210-05-105-31 (NP)-Grant in Aid -Salary	
1	GO.(Rt).No.748/2020/H&FWD dated 21/04/2020	478.10
2	GO.(Rt).No.881/2020/H&FWD dated 14/05/2020	478.10
3	GO.(Rt).No.1152/2020/H&FWD dated 24/06/2020	478.10
4	GO.(Rt).No.1324/2020/H&FWD dated 21/07/2020	478.10
5	GO.(Rt).No.1507/2020/H&FWD dated 17/08/2020	478.10
6	GO.(Rt).No.1706/2020/H&FWD dated 21/09/2020	478.10
7	GO.(Rt).No.2508/2020/H&FWD dated 05/11/2020	478.10
8	GO.(Rt).No.39/2021/H&FWD dated 05/01/2021	478.08
9	GO.(Rt).No.753/2021/H&FWD dated 25/03/2021	478.10
	Total	4302.88
	Grand Total (A+B)	7438.64

2. The amount was used during the year 2020-21 for the following purposes:

Sl.No	Purpose	Amount (Rs.in Lakhs)
1	Operational expenditure including salary	7438.64
	Total	7438.64

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

Thiruvananthapuram
17.01.2022

Dr. Rekha A Nair
Director, RCC

Ahammed Kabeer Y
Controller of Finance

For J Singh & Associates
Chartered Accountants

As per our report of even date attached

GRA & Co.
CHARTERED ACCOUNTANTS

Chaitaniya,
T.C.54/2214-2
Sreedharan Pillai Road
Pappanamcode P.O.
Thiruvananthapuram-695018
Telephone: 0471 2495939
Mobile: 9349990489
Email: ajithkumarc@yahoo.co.in

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 P.O., Thiruvananthapuram-695011, Kerala State for the year ended 31st March 2021 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 2020-2021 was Rs.6,28,09,887.66
2. Foreign Contribution worth Rs.59,60,626.69 was received by the Association during the year ended 31st March 2021.
3. Interest accrued on foreign contribution and other income derived from foreign contribution or interest thereon of worth Rs. 35,29,650.00 was received by the Association during the financial year 2020-21.
4. The balance in foreign contribution account together with interest earned thereon at the end of the financial year 2020-2021 was Rs.6,75,65,964.35
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.
6. The information furnished above and in the Balance Sheet and statement of Receipts and Payments is correct, as checked by me.
7. The association has utilized the foreign contribution received for the purpose(s) it is registered or granted prior permission under Foreign Contribution (Regulation) Act, 2010

THIRUVANANTHAPURAM
19th October 2021

UDIN: 21209348AAAABE6976

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(Reg. No. 567/81)
Foreign contribution for Research Projects
Balance Sheet as at 31st March 2021

Amount INR

Previous Year As on 31/03/2020	LIABILITIES		Current Year As on 31/03/2021	Previous Year As on 31/03/2020	PROPERTY & ASSETS		Current Year As on 31/03/2021
	CAPITAL FUND		-		FIXED ASSETS	-	
42,969,661	RESEARCH FUND (Sch.1)		46,315,440.95				
				57,350,967	INVESTMENTS		62,097,470.00
19,840,227	FC PROJECT FUND (Sch.2)		21,250,523.40		(Schedule 3 attached)		
					CURRENT ASSETS &		
	CURRENT LIABILITIES				LOANS AND ADVANCES		
-	Salary Recovery	-		8,604	Cash in Hand	20,638.00	
				866,099	Cash at Bank	2,136,626.85	
292,744	Payable to Res: Project a/c		375,407.50		(SBI A/c No.57036240199)		
				4,236,333	Interest Accrued but not due	2,730,443.00	
				613,629	Tax Deducted at Source	929,194.00	
				7,000	Imprest	7,000.00	
				20,000	Rent Deposits	20,000.00	5,843,901.85
63,102,632	TOTAL		67,941,371.85	63,102,632			67,941,371.85

Vide my report of even date attached.

THIRUVANANTHAPURAM
19th October 2021

FINANCE MANAGER
(Projects)

DIRECTOR

GRA & Co.
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 2021

RECEIPTS	Amount (Rs)	PAYMENTS	Amount (Rs)
To Opening Balance:-		By Project Expenses:-	
Cash in Hand	8,604	" Revenue Expenses paid	4,465,148
Cash at Bank	866,099	" Capital Expenses paid	186,320
Receipts-Research Funds	-	Other expenses paid	78,296
Foreign Receipts (Sch.2)	5,960,627	Salary Recovery Account	49,158
Recovery from Salary	49,158	Taxes paid	9,050
Tax Recoveries	9,050	Term Deposits	5,744,061
Term Deposit SBI	5,744,061		
Interest Received	51,699		
		To Closing Balance:-	
		Cash in Hand	20,638
		Cash at Bank	2,136,627
TOTAL	12,689,298	TOTAL	12,689,298

THIRUVANANTHAPURAM
19th October 2021

FINANCE MANAGER
(Projects)

DIRECTOR

GRA & Co.
CHARTERED ACCOUNTANTS

GRA & Co.
CHARTERED ACCOUNTANTS

Chaitaniya,
T.C.54/2214-2
Sreedharan Pillai Road
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Telephone: 0471 2495939
Mobile: 9349990489
Email: ajithkumarca@yahoo.co.in

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 31st March 2021, 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 31st March 2021, 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 the 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 account 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.

THIRUVANANTHAPURAM

19th October 2021

UDIN: 21209348AAAABE6976

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 2021

Previous Year As on 31/03/2020	LIABILITIES		Current Year As on 31/03/2021	Previous Year As on 31/03/2020	PROPERTY & ASSETS		Current Year As on 31/03/2021
9,963,578	CAPITAL FUND		9,963,577.62	118,142	FIXED ASSETS (Schedule-5)		148,532.11
	<u>EARMARKED FUNDS</u>						
127,530,292	R&D Fund (Sch.1)	139,148,892.85		239,501,110	INVESTMENTS (Schedule-6)		264,989,092.00
25,181,500	Dept: General Fund (Sch.2)	13,953,319.45					
1,315,548	Internal Project Fund (Sch.3)	1,937,684.62					
46,639,350	Project Fund (Sch.4)	61,661,591.71					
2,500,000	Grant in aid-Infosys	2,500,000.00			CURRENT ASSETS & LOANS & ADVANCES		
50,000,000	Endowment Fund-Infosys	<u>50,000,000.00</u>	269,201,488.63				
				152,593	Cash in Hand - Sch-7	107,433.00	
	<u>OTHER CURRENT LIABILITIES</u>			5,318,025	Cash at Bank - Sch-8	6,490,164.01	6,597,597.01
250,044	Security Deposits	252,584.00			Other Current Assets and Loans & Advances (Schedule-9)		15,821,120.13
-	- EPF Recovery	-		21,711,654			
-	- Goods & Service Tax	227,134.00					
96,821	Sundry creditors -Others	1,043,486.00					
3,324,391	Int. on Endowment -Infosys	6,868,071.00	8,391,275.00				
266,801,524			287,556,341.25	266,801,524			287,556,341.25

Vide my report of even date attached.

THIRUVANANTHAPURAM
19th October 2021

FINANCE MANAGER
(Projects)

DIRECTOR

GRA & Co.
CHARTERED ACCOUNTANTS

PROJECT CELL
REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
(REG. No. 567/81)
Income and Expenditure Account
for the year ended on 31st March 2021

Previous Year As on 31/03/2020	EXPENDITURE	Current Year As on 31/03/2021	Previous Year As on 31/03/2020	INCOME	Current Year As on 31/03/2021
816,900	Salary Paid	1,248,194.00	5,275,370	Income from Projects	3,263,844.15
1,050	Travelling Expenses	1,000.00	11,856,399	Interest received	11,118,910.00
70,000	Audit Fee	70,000.00			
	Meeting Expenses	17,138.00			
5,899	Printing & Stationery	-			
1,000	Computer Stationery	-			
142	Postage Expenses	101.00			
3,073	Bank charges	2,405.41			
52,848	Other Miscellaneous Expenses	32,014.48			
27,934	Depreciation	54,029.92			
16,152,923	Excess of Income Over Expenditure	12,957,871.34			
17,131,769		14,382,754.15	17,131,769		14,382,754.15

Vide my report of even date attached.

THIRUVANANTHAPURAM
19th October 2021

FINANCE MANAGER
(Projects)

DIRECTOR

GRA & Co.
CHARTERED ACCOUNTANTS

REGIONAL CANCER CENTRE SOCIETY, TRIVANDRUM
PERIPHERAL CENTRE OF RCC AT NEENDAKARA
Receipts and Payments Account
for the year ended on 31st March 2021

Payments	Amount (Rs.Ps.)	Receipts	Amount (Rs.Ps.)
Salary	3040218.00	Grant-in-Aid received (G.O Rt.No.880/2020/H&FWD, Dt.14/05/2020)	885250.00
Non Salary	1077541.00	Grant-in-Aid received (G.O Rt.No.1365/2020/H&FWD, Dt.27/07/2020)	2000000.00
		Grant-in-Aid received (G.O Rt.No.2308/2020/H&FWD, Dt.15/12/2020)	655750.00
		Excess expenditure	576759.00
TOTAL	4117759.00	TOTAL	4117759.00

THIRUVANANTHAPURAM
21st February 2022

FINANCE MANAGER
(Projects)

DIRECTOR

GRA & Co.
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 (Rt.No.880/2020/ H&FWD, Dt.14/05/2020)	2210-05-200-97-31 (NP), Grant in Aid- Salary	6.38
2	Grant-in-Aid received (Rt.No.880/2020/ H&FWD, Dt.14/05/2020)	2210-05-200-97-36 (NP), Grant in Aid- Non Salary	2.48
3	Grant-in-Aid received (Rt.No.1365/2020/ H&FWD, Dt.27/07/2020)	2210-05-200-97-31 (NP), Grant in Aid- Salary	14.00
4	Grant-in-Aid received (Rt.No.1365/2020/ H&FWD, Dt.27/07/2020)	2210-05-200-97-36 (NP), Grant in Aid- Non Salary	6.00
5	Grant-in-Aid received (Rt.No.2308/2020/ H&FWD, Dt.15/12/2020)	2210-05-200-97-31 (NP), Grant in Aid- Salary	5.13
6	Grant-in-Aid received (Rt.No.2308/2020/ H&FWD, Dt.15/12/2020)	2210-05-200-97-36 (NP), Grant in Aid- Non Salary	1.42
	Total		35.41

Certified that out of **Rs. 35,41,000/-** of grants-in-aid sanctioned and received for the Peripheral Centre of Regional Cancer Centre at Neendakara, Kollam District during the Financial year **2020-21**, a sum of **Rs. 41,17,759/-** has been utilized for the purpose for which it has been sanctioned. The Receipts and Payments account duly audited attached with this utilization certificate.

DIRECTOR

21st February 2022

GRA & Co.

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

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