

An overview of key departments at RCC

Medical Oncology



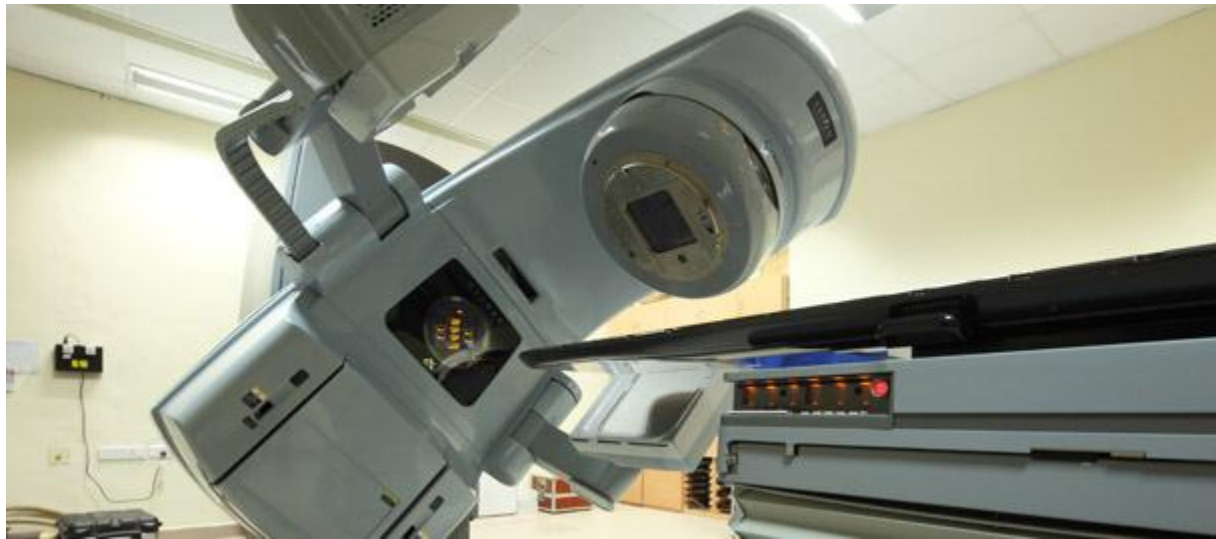
Responsible for the diagnosis and management of haematological and lymphoreticular malignancies and sarcomas under 'A' clinic. Medical Oncology specialist doctors are also responsible for the diagnosis and management of other solid tumors where chemotherapy is indicated in the Breast clinic (C), Gynaec and Genitourinary clinic (D) and Chest and Gastrointestinal clinic (E).

Anaesthesiology



The Department of Anaesthesiology plays a pivotal role in the peri-operative management of patients undergoing surgery at RCC for a variety of cancers. The department equipped with state-of-the-art equipment, provides anaesthetics for oncosurgeries of long duration including high risk cases of malignancies presenting with complications of chemotherapy and/or radiotherapy. A state-of-the-art simulation Lab has been set up with a grant from Department of Science and Technology, Govt. of India under FIST programme. Simulation based learning activities are also undertaken for both persons within the hospital and candidates from outside the institution.

Radiation Oncology



The department has the capability to plan and execute all modern radiotherapy techniques such as 3DCRT, IMRT & VMAT, IGRT, Respiratory Gating, Radio Surgery (SRS), Total Skin Irradiation, Prone breast Treatment, Deep Inspiratory breath hold technique, TBI, SRT and SBRT. It is equipped with a digital simulator, a 4D CT simulator, Five Linear Accelerators (One ring gantry Linear Accelerator, three C arm high energy and one C arm low energy Linear Accelerators) and one Tele-Cobalt machine. There is a dedicated brachytherapy suite with HDR (Microselectron) treatment facility.

Department of Surgical Services



The surgical services department houses the division of Head and Neck Surgery, Division of Surgical Oncology and Division of Gynaecological Oncology. The department is a specialized field of medicine that focuses on the surgical management of cancer. It involves the diagnosis, treatment, and prevention of various types of cancer through surgical procedures.

Department of Pathology



Pathology Department is one of the vital supportive facilities of RCC. It plays an essential role in the institution's mission to improve patient care and for early detection of cancers. Diagnostic Pathology Services include Surgical Pathology, Haematopathology and Cytopathology. In addition to the routine laboratory services, this department is providing ancillary diagnostic techniques - Immunohistochemistry (IHC), Frozen Section reporting, Liquid Based Cytology (LBC), Flow cytometry, FISH tests and RT-PCR for diagnosis and prognostication.

Division of Cancer Epidemiology and Biostatistics



Overview

The Division of Cancer Epidemiology and Biostatistics applies, develops, and teaches the skills needed to understand the determinants of cancer and implements dedicated initiatives to :

- Increase knowledge and application of modern epidemiological and bio-statistical techniques among postgraduate students and researchers
- Increase the quality and output of research in RCC
- Provide bio-statistical consulting and statistical analysis for their scientific publication & thesis preparation
- Conduct Cancer Epidemiological Research projects in collaboration with Scientific Organizations.
- Provide reliable and a high quality cancer intelligence service through hospital and population-based cancer registries.

- Contribute methodological services to individual research projects from protocol development to project finalization
- Conduct Density mapping and environmental factors of cancer in South Kerala using Geographic Information System (GIS).

Division of Cancer Research



Division of Cancer Research is housed by a group of scientists with interdisciplinary proficiency working on different aspects of diagnostic, prognostic and therapeutic areas of oncology. Various laboratories in the Division of Cancer Research are carrying out active research in the fields of molecular and cellular aspects of tumor biology and related topics.

Imageology



Facilities available

Digital Radiography System (DR)
Computerised Radiography System (CR)
Plain X-rays – Routine and Special views
Special Investigations
Barium Swallow, Barium Meal
Barium Enema
Intravenous Urography
Portable X-ray

DEXA Scan

Ultrasound – all routine studies, Doppler study, Elastography

Mammography (screening and diagnostic)

3D Digital Mammography, Tomosynthesis

Contrast enhanced Mammography

Stereotactic Biopsy, Wire localization

Dual Energy Dual Source 256 Slice CT Scan

Angiography

3D reconstruction

3T MRI of brain, spine, pelvis and abdomen including MR Angiography

MR Venography, Breast and Prostate, MR guided breast biopsy

PACS (Picture Archiving and Communication System)

PACS is a combination of hardware and software dedicated to the short and long term storage, retrieval, management, distribution and presentation of images. Electronic images and reports are transmitted digitally via PACS. The main purpose is to replace hard film copiers with digital images that can be used and seen by several different medical professionals and different medical automation systems simultaneously and irrespective of distance.

Paediatric Oncology



Paediatric Oncology Department of Regional Cancer Centre (RCC), Thiruvananthapuram established 40 years back in 1982 is the first stand-alone Paediatric oncology unit of its kind in India. The Department provide dedicated childhood cancer care to all children below the age of 14 years registered in RCC with all kinds of malignancies (haematological malignancies & solid tumors). The Department has a general ward having 39 beds with the first row functioning as a High Dependency Unit (HDU), & a 4 bedded state-of-the-art Paediatric Intensive Care Unit (PICU) with two ventilators. Annually we manage approximately 550-580 newly diagnosed paediatric cancer patients, 22,000 out-patients, and 2100 in-patients.

Nuclear Medicine



The Nuclear Medicine Division of RCC provides both diagnostic and therapeutic services.

The diagnostic services are primarily performed on a PET-CT scanner and two dual-head gamma camera, one with SPECT-CT system (GEInfinia II). This includes studies with FDG Scan for tumour imaging and Gallium-68 DOTATATE scan for neuroendocrine tumours, PSMA (Prostate-Specific Membrane Antigen) scan for prostate cancer, MDP bone scan, both small dose and high dose ^{131}I scan for thyroid, $^{99\text{m}}\text{TcO}_4$ scan for thyroid, DTPA Renograms, DMSA for renal scan as well as DMSA (V) scan for medullary carcinoma thyroid, Sestamibi scan for tumour imaging, and parathyroid imaging. Hepatobiliary imaging, sialoscintigraphy, MUGA scan, a RBC-labelled blood pool imaging.

In vitro immunoassay services include assay of hormones (T₃, T₄, TSH, fT₃, fT₄, aTG, ATPO, PTH, Testosterone, Prolactin), Tumor markers like (AFP, CEA, PSA, TG, b2Microglobulin, Calcitonin, CA125, CA 19.9)

Therapeutic services include treatment of thyrotoxicosis and carcinoma thyroid with I-131, ^{177}Lu -DOTATATE/PSMA therapy for metastatic neuroendocrine tumours and prostate cancer.

Microbiology



The Division offers round the clock specialised diagnostic services in the areas of Bacteriology, Mycology, Parasitology, Mycobacteriology and Virology.

The division has the state-of-the-art facilities like BacT/Alert automated blood culture system, VITEK 2 automated identification and sensitivity system, VIDAS enzyme linked fluorescent assay, GeneXpert Cartridge Based Nucleic acid Amplification Test (CBNAAT) automated PCR system, BIOFIRE Filmarray Infectious Syndromic Panel testing system, BIORAD- Real Time PCR, VITEK MS Prime - MALDITOF automated identification system and fluorescent microscope for detection of AFB and fungal elements in specimens which constitutes a major technological improvement with a positive impact on the workflow of the laboratory and turnaround time of specimens. The division is also a Designated Microscopy Centre for detection of tuberculosis under the National Tuberculosis Elimination Programme (NTEP).

Palliative Medicine



The Division provides specialist medical care working in close collaboration with other oncology services, physiotherapist & nutritionist. The goal is to provide the best possible patient and family centered care and thereby improve the quality of life of those we serve. Our division is the only one among all the Regional Cancer Centres in the country to manufacture oral morphine formulations, which is given free to poor patients and at subsidized rates to those who can afford to pay.

Nursing Services



The Nursing division is responsible for the safety, recovery, symptom control and rehabilitation of the patients in wards, day care chemotherapy units, OPDs, high dependency units, operation theatres and specialty clinics.

Library and Information Services



Regional Cancer Centre maintains a modern research and reference library with a strong focus on oncology and related subjects. The library primarily acts as a comprehensive Oncology Resource Centre and it intends to disseminate right information to the right user at the right time. With the state-of-the-art information infrastructure, RCC library commits to keep oncology professionals up-to-date, even in the midst of information deluge of the present context.