

MALABAR CANCER CENTRE, THALASSERY

(POST GRADUATE INSTITUTE OF ONCOLOGY SCIENCES AND RESEARCH (PGIOSR))

*An autonomous Institution under Health & Family Welfare Department,
Government of Kerala)*

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INSTITUTIONAL FELLOWSHIP PROGRAMME

Brochure

June -2026



MALABAR CANCER CENTRE, THALASSERY

The Malabar Cancer Centre (MCC) in Thalassery is an autonomous, not-for-profit institution under the Health and Family Welfare Department of the Government of Kerala, established in 2001 to provide comprehensive oncology care to over 1.5 crore people across Northern Kerala and neighboring regions of Karnataka, Tamil Nadu, and Mahe. Registered as a society governed by a 23-member body chaired by the Honorable Chief Minister of Kerala, the center serves as a vital hub for treatment, research, and training of international standards, currently maintaining over 200 in-patient beds. MCC offers a full spectrum of services including radiotherapy, chemotherapy, surgical oncology, palliative care, and community outreach for early detection, ensuring that approximately 95-97% of its patients receive free treatment through various government financial assistance schemes based on their economic status. The main modalities of treatment offered by MCC to patients, presently, include radiotherapy, chemotherapy, onco-surgery and palliative care. The Centre also carries out Community Oncology activities including cancer awareness and early detection programmes. The institute caters to patients from 7 districts of Northern Kerala in addition to the neighbouring states of Tamil Nadu, Karnataka and Mahe (a total population of over 1.5 crores).

Location: Kodyeri, Thalassery, Kannur District, Kerala.

Thalassery (formerly Tellicherry) is a commercial town on the Malabar Coast in Kannur district, in the state of Kerala, India, bordered by the districts of Mahe (Pondicherry), Kozhikode, Wayanad and Kodagu (Karnataka). The town of Thalassery is historically renowned for its 3 “C “ s of *Cake, Circus and Cricket*. Thalassery is at times referred to as the city of cricket, cakes and circus. It was a British bastion in the pre-independence era with marked contributions of colonial rule. Thalassery municipality was formed on 1st November 1866 according to the Madras Act 10 of 1865 of the British Indian Empire, making it the second oldest municipality in the state. At that time the municipality was known as Thalassery Commission, and Thalassery was the capital of North Malabar. G. M. Ballard, the Malabar collector, was the first President of the municipal commission. Later a European barrister, A. F. Lamaral, became the first Chairman of Thalassery municipality. Thalassery grew into a prominent place during European rule, due to its strategic geographic location. Thalassery has played a significant historical, cultural, educational and commercial role in the history of India, especially during the colonial period.

INTRODUCTION

The Global and National Cancer Landscape

Cancer remains a critical health crisis, accounting for roughly 12.5% of all global deaths, with a disproportionate 65% of this mortality occurring in developing countries. Beyond the immense human suffering, cancer exerts a staggering socio-economic burden, generating nearly \$895 billion in annual global economic losses—amounting to approximately 1.5% of the world's GDP.

While international cancer incidence metrics remain high, India faces an escalating crisis. The nation's most prevalent malignancies—breast, cervical, head and neck, lung, and colorectal cancers—differ markedly from Western profiles. Due to demographic shifts, an aging population, and a declining infectious disease mortality rate, annual new cancer cases in India are projected to reach 1.7 million by 2035, with national cancer-related mortality doubling to 1.5 million annually. This systemic challenge is exacerbated by a stark disparity between healthcare costs and localized purchasing power. India's public healthcare investment has historically hovered under 1.5% of its GDP, shifting a massive out-of-pocket financial burden onto vulnerable families and creating severe geographical imbalances in specialized care infrastructure.

The Research and Manpower Deficit

Oncological research in India is facing a significant shortfall; despite holding 17% of the global population, the nation contributes to a mere 1.5% of worldwide clinical trials. This deficit is driven by an overwhelming clinical patient load, limited funding, and a critical shortage of medical professionals trained in Good Clinical Practice (GCP), bioethics, and subspecialized translational oncology. To build an equitable and self-reliant healthcare framework, the country must prioritize continuous, high-end manpower training tailored specifically to regional cancer profiles.

MCC-PGIOSR: Addressing the Burden Through Data-Driven Interventions

As a premier tertiary cancer care and academic institution under the Government of Kerala, Malabar Cancer Centre (Post Graduate Institute of Oncology Sciences and Research) serves as a vital regional anchor. The institutional data reflects a rapid, high-volume operational expansion directly meeting this healthcare gap:

- **Surgical and Subspecialty Throughput:** The Department of Surgical Oncology has scaled from a single unit into four divisions and three dedicated units operating four modular theaters. This infrastructure handles massive regional caseloads, exemplified

by the advanced Robotic Surgery Unit, and the Dedicated Neurosurgical and Ocular Oncology Unit.

- **Advanced Hematology & Immunotherapy:** The center has established a leading Bone Marrow Transplant (BMT) program—completing over 40 transplants annually—while simultaneously pioneering affordable, **CAR-T Cell Therapy** to mitigate financial toxicity for relapsed B-cell malignancies.
- **Translational Oncology Infrastructure:** Powering the next generation of precision medicine, the MCC Cancer Biobank has preserved 4,218 specimens linked to longitudinal data, serving as Kerala's first disease-specific tissue repository to accelerate indigenous biomarker discovery.

The Strategic Imperative for Fellowship Programs

To sustain this sophisticated clinical ecosystem and address the severe shortage of specialized oncological manpower, MCC-PGIOSR has institutionalized structured, competency-based Fellowship Programs. These advanced subspecialty curricula move beyond generalized medical education to provide intensive clinical exposure, multidisciplinary research training, and hands-on experience under expert faculty guidance.

By utilizing the institute's high-volume caseloads and state-of-the-art facilities—including the Molecular Tumor Board (MoTB) and dedicated diagnostic platforms—fellows are trained in evidence-based, precision practices. The institution currently offers specialized fellowship courses across a robust spectrum of critical disciplines:

- **Clinical & Surgical Fellowships:** Gastrointestinal Oncology, Gynaecologic Oncology, Solid Tumor Oncology, and Hemat-Oncology & Bone Marrow Transplantation.
- **Diagnostic & Diagnostic-Support Fellowships:** Molecular Pathology, Oncopathology, and High-Precision Radiotherapy, Apheresis Medicine.
- **Supportive & Perioperative Fellowships:** Oncoanaesthesiology, Psycho-oncology, Oncology Nutrition, and Clinical Research.

By bridging the gap between advanced clinical technology and academic rigor, the fellowship programs at MCC-PGIOSR are not only addressing regional treatment deficits but are actively developing the highly skilled medical workforce required to lead India's future oncology landscape.

FELLOWSHIP PROGRAMMES

ALL FELLOWSHIP PROGRAMS CONDUCTED BY MCC ARE INSTITUTIONAL FELLOWSHIP PROGRAMS.

General Institutional Mandates (Applicable to all tracks):

- **Age Limit:** Candidates must not exceed **45 years** of age as of 1st January of the current academic year.
- **Council Registration:** A valid Medical Council of India (MCI) / National Medical Commission (NMC) registration certificate is mandatory for all tracks (except Oral Oncology, which requires a valid Dental Council of India / DCI or MCI registration).

#	Fellowship Speciality	Duration	Vacancies	Essential Academic Eligibility
1	Gastrointestinal Oncology	1 Year	01	MCh / DNB in Surgical Oncology OR MCh / DNB in Surgical Gastroenterology OR MS / DNB in General Surgery
2	Head & Neck Oncology	2 Years	01	MS / DNB in Otorhinolaryngology (ENT) OR DLO OR MS / DNB in General Surgery
3	Oral Oncology	2 Years	01	MDS in Oral & Maxillofacial Surgery
4	Breast Oncology	1 Year	01	MS in General Surgery OR DNB in General Surgery
5	Onco-Anaesthesiology	1 Year	01	MD / DNB in Anaesthesiology OR Diploma in Anaesthesiology
6	Hemato-Oncology & BMT	1 Year	02	MD / DNB in General Medicine OR Pediatrics OR MD in Transfusion Medicine OR MD in Pathology
7	Solid Tumor Oncopathology	1 Year	01	MD / DNB in Pathology
8	Hematopathology	1 Year	01	MD / DNB in Pathology
9	Molecular Pathology	1 Year	01	MD / DNB in Pathology
10	Solid Tumour Oncology	1 Year	01	DM / DNB in Medical Oncology OR MD / DNB in Radiation Oncology OR MD / DNB in General Medicine
11	Apheresis Medicine	1 Year	01	MD / DNB in Transfusion Medicine OR MD / DNB in Pathology OR DCP in Clinical Pathology

****THESE PROGRAMS DO NOT HAVE THE RECOGNITION OF REGULATORY BODIES OR UNIVERSITIES.***

THE PROGRAMS ARE STRUCTURED SO THAT CANDIDATE WILL GET ADEQUATE EXPOSURE AND PRACTICAL KNOWLEDGE IN RESPECTIVE FIELDS

1. FELLOWSHIP IN GASTROINTESTINAL ONCOLOGY

OBJECTIVE OF THE PROGRAMME

The objective of the fellowship program is to provide the training foundation for those individuals who want to pursue their professional career in the field of Gastro Intestinal (GI) oncology through training in the areas of basic as well as interdisciplinary management, complex oncologic procedures and research. This additional expertise emphasizes critical analysis of clinical problems and development of additional skills in the performance of techniques required for the practice of this subspecialty, including consultation skills and multidisciplinary treatment planning, with emphasis in basic and clinical research methodologies. It has another great vision of providing more expert cancer specialists to the society in order to provide a better quality management of disease for the people even in the lower levels of the community.

EDUCATIONAL OBJECTIVES

The goals of this fellowship are to provide comprehensive, multidisciplinary training to individuals who are committed to a career in Gastrointestinal oncology. The fellowship program will be a one year course. The fellowship training will provide a broad exposure to a multidisciplinary management in basic oncological concepts including the Surgical aspects, Radiotherapy and Medical Oncology Upon completion of a one-year fellowship, the surgeon may aim to possess the following characteristics: a) Expertise in the multidisciplinary management of patients with GI cancers. b) Oncological aspects of Surgery in GI cancers c) Broad knowledge and comprehension in principles of: radiation oncology, medical oncology, oncopathology, diagnostic radiology/nuclear medicine and research d) Judgment and ability to perform complex tumor resections and an understanding of the technical limitations of the procedure e) Appreciation of scientific methodology, study design, clinical trials and data analysis f) Ability to practice effectively in an academic, tertiary care setting and to participate in medical education and translational research.

FELLOWSHIP CURRICULUM

The fellowship must provide clinical and/or didactic exposure to the following

- a) Evaluation and multidisciplinary management of Colorectal, gastroesophageal, pancreaticobiliary and retroperitoneal tumours.
- b) Open as well as Minimally invasive surgery- laparoscopic and robotic procedures.
- c) Basics of grossing and pathological evaluation of GI cancers.
- d) Radiation and medical oncology relevant to the field
- e) Research in GI cancers.
- f) Epidemiological and preventive aspects of GI cancers

2. FELLOWSHIP IN HEAD & NECK ONCOLOGY

OBJECTIVE OF THE PROGRAMME

The aim is to provide the training foundation for those surgeons dedicated to careers in head and neck surgical oncology through training in the areas of interdisciplinary management, complex head and neck oncologic surgery and research. This additional expertise emphasizes critical analysis of clinical problems and development of additional skills in the performance of techniques required for the practice of this subspecialty, including consultation skills and multidisciplinary treatment planning.

EDUCATIONAL OBJECTIVES

The goals of these fellowships are to provide comprehensive, multidisciplinary training to individuals who are committed to a career in head and neck surgical oncology. The fellowship programme will be a two year course . The fellowship training will provide a broad exposure to the clinical problems encountered in a tertiary head and neck oncology practice. Upon completion of a two-year fellowship, surgeon is expected to possess the following:

- 1) Expertise in the multidisciplinary management of patients with head and neck cancer.
- 2) Broad-based knowledge and comprehension of principles of: radiation oncology, medical oncology, maxillofacial prosthetics, oncologic nutrition, head and neck pathology, diagnostic radiology/nuclear medicine and rehabilitation of speech and swallowing.
- 3) Expertise in conservation surgical procedures, judgment and ability to perform complex tumour resections, loco regional flap reconstructions and basics of
- 4) Microvascular free flap reconstructions.
- 5) Appreciation of scientific methodology, study design, clinical trials and data analysis.

FELLOWSHIP CURRICULUM

The fellowship will provide clinical exposure to the following

1. Oral cavity cancer & management
2. Oropharyngeal cancer & management
3. Laryngeal cancer & management
4. Hypopharyngeal cancer & management
5. Cervical esophageal cancer & management

6. Neck dissections and management of neck nodes
7. Paranasal sinus malignancy & management
8. Salivary gland neoplasms & management
9. Thyroid neoplasms & management
10. Head and neck melanoma & management
11. Skull base neoplasms & management
12. Head and neck sarcoma & management
13. Non-melanoma skin cancer & management
14. Partial laryngeal surgery
15. Head and neck reconstruction
16. Head and neck pathology
17. Radiation biology and therapeutic radiation oncology
18. Head and neck medical oncology
19. Maxillofacial prosthetics
20. Nutritional Oncology
21. Head and neck diagnostic radiology and nuclear medicine
22. Speech and language rehabilitation
23. Morbidity and mortality conferences
24. Journal clubs
25. Clinical research protocol
26. Reconstruction of post resection defects using local and regional flaps
27. Basic exposure to free flap reconstruction

3. FELLOWSHIP IN ORAL ONCOLOGY

OBJECTIVE OF THE PROGRAMME

The objective is to provide the training foundation for surgeons dedicated to careers in oral oncology through training in the areas of interdisciplinary management, complex oral oncologic surgery and research. This additional expertise emphasizes critical analysis of clinical problems and development of additional skills in the performance of techniques required for the practice of the subspecialty, including consultation skills and multidisciplinary treatment planning, with emphasis in basic and clinical research methodologies.

EDUCATIONAL OBJECTIVES

- a) The goals of these fellowships are to provide comprehensive, multidisciplinary training to individuals who are committed to a career in oral oncology.
- b) The fellowship programme will be a two year course
- c) The fellowship training will provide a broad exposure to the full range of clinical problems encountered in a tertiary oral oncology practice.
- d) Upon completion of a two-year fellowship, the surgeon will possess the following characteristics:
 - 1) Expertise in the multidisciplinary management of patients with oral cancer
 - 2) Broad-based knowledge and comprehension of principles of: radiation oncology, medical oncology, maxillofacial prosthetics, oncologic nutrition, oral pathology, diagnostic radiology/nuclear medicine and rehabilitation of speech and swallowing
 - 3) Expertise in conservation surgical procedures
 - 4) Judgment and ability to perform complex tumor resections
 - 5) Knowledge and/or skills in microvascular free flap reconstruction
 - 6) Appreciation of scientific methodology, study design, clinical trials and data analysis
 - 7) Ability to practice effectively in an academic, tertiary care setting and to participate in medical education and translational research.

FELLOWSHIP CURRICULUM

- 1) Oral cavity cancer & management
- 2) Oropharyngeal cancer & management

- 3) Neck dissections and management of neck nodes
- 4) Epidemiological and preventive aspects of oral cancers
- 5) Research activities in oral cancer
- 6) Surgical resection of oral cavity cancers
- 7) Reconstruction of post resection defects using local and regional flaps
- 8) Basic exposure to free flap reconstruction

Fundamental Components of the Fellowship

- a. The fellow must participate in the evaluation, management and care of a minimum of 200 oral cancer cases
- b. Participation in a minimum of 100 surgical procedures, representing the full scope of head and neck surgical oncology
- c. Intensive exposure to the interdisciplinary management of head and neck oncologic patients
- d. Participation in the development and implementation of head and neck oncologic research.

4. FELLOWSHIP IN BREAST ONCOLOGY (SURGICAL)

OBJECTIVE OF THE PROGRAMME

Breast cancer is the most common cancer affecting women in Kerala. The Fellowship Programme is initiated with an intent to train individuals to provide state of the art multidisciplinary care for patients with cancer, develop leaders in the field of oncology, and provide a rigorous academic experience in which fellows can participate in clinical, translational and basic science research. Fellows completing the programme will have finely honed skills in surgical diagnosis and treatment of breast cancers.

OBJECTIVES OF THE PROGRAMME

- 1) To provide expert clinical training in the diagnosis, evaluation, and treatment of breast cancer
- 2) To learn about the multidisciplinary approach in the management of breast cancer.
- 3) Training in assessing, clinical staging and treatment decisions in breast cancer.
- 4) Hands-on training in surgical procedures employed in the treatment of breast cancer including biopsy, mastectomy, breast conservation surgery, axillary dissection, sentinel lymph node biopsy and oncoplastic reconstruction techniques.

- 5) Exposure to advanced techniques like Lympha.
- 6) Orientation toward basic and advanced cancer research activities related to breast cancer
- 7) To actively take part in research activities of the department including clinical trials
- 8) To learn interpersonal communication skills and communication skills towards patients and their relatives.

FELLOWSHIP CURRICULUM

1. Breast cancer evaluation and multidisciplinary management
2. Surgical resection of breast tumor and management of the axilla.
3. Breast oncoplastic techniques
4. LYMPHA and management of lymphedema
5. Detailed study of the overall evolution of the management of breast cancer
6. Epidemiological and preventive aspects of breast cancer
7. Basic exposure to free flap reconstruction of mastectomy defects.

5. FELLOWSHIP IN ONCOANESTHESIOLOGY

OBJECTIVE OF THE PROGRAMME

The purpose is to provide training for Aspirant Anaesthesiologists in the field of Oncoanaesthesia and Research. This additional expertise emphasizes critical analysis of clinical problems and development of additional skills in the performance of techniques required for the practice of this subspecialty. The trainees will be allowed to administer Anaesthesia for therapeutic and diagnostic procedures in surgical oncology.

EDUCATIONAL OBJECTIVES

- 1) Anaesthetic care in the operating theatres for all types of surgical, diagnostic and therapeutic procedures. Hands-on experience of advanced techniques such as thoracic epidural, ultrasound guided nerve blocks; ultrasound guided difficult vascular access, difficult airway management techniques such as fibre-optic intubation/ videolaryngoscopy and advanced haemodynamic monitoring.
- 2) Training in anaesthetic management of critical and complex long duration surgeries such as free flap reconstruction surgeries, advanced hepato-pancreatico-biliary surgeries, video Assisted thoracoscopic surgeries, HIPEC surgery and cytoreductive surgeries
- 3) Non-operating room anaesthesia (NORA): training in anaesthesia outside Operating

- room like MRI, CT, Radiotherapy (RT), PET-CT and Radiofrequency Ablation
- 4) Postoperative Care Unit: Postoperative critical care of complex surgeries will also be part of the training.
 - 5) Pain management:
 - a. Providing pre- and post-operative pain management procedures like Epidural block, Patient controlled analgesia, Transdermal patch and regional nerve blocks.
 - b. Pain Clinic: Providing inpatient and outpatient chronic pain management.
 - 6) Academic activities include Topic discussions, Journal club, morbidity & mortality meetings and lectures in biostatistics. Appreciation of scientific methodology, study design, clinical trials and data analysis. Fellows have the opportunity to participate in the workshops/conferences for national and international audience

FELLOWSHIP CURRICULUM

1. Organization and functioning of operating theaters
2. Digital hospital information network and data processing
3. Pre-anaesthesia evaluation
4. Patient assessment in Post-anaesthesia care unit
5. Anaesthesia for Gastro-intestinal oncological surgery
 - a. Anaesthesia considerations in gastro-intestinal and hepatico-pancreatico-biliary surgeries
 - b. Advanced hemodynamic monitoring and fluid management
6. Anaesthesia for gynaec-oncological surgery
 - a. Perioperative considerations for debulking and cytoreductive surgery
 - b. DVT prophylaxis- mechanical and pharmacologic methods
7. Anaesthesia for uro-oncological surgery
 - a. Perioperative management of major radical uro-surgical procedures
8. Anaesthesia for breast and plastic surgery
 - a. Management of LD flap and TRAM flap surgeries-
9. Anaesthesia for head and neck oncological surgery
 - a. Head and neck free flap reconstructions
 - b. Difficult airway management- algorithm
10. Anaesthesia for thoracic oncological surgery
 - a. One lung ventilation
 - b. Introduction to double lumen tubes and bronchial blockers
 - c. Introduction to fiberoptic bronchoscopy
11. Anaesthesia for Ocular oncological surgery
12. Post Operative pain management
 - a. Patient controlled analgesia: machines, drugs, regimes
 - b. Post-operative epidural analgesia
13. Chronic pain management
 - a. Pharmacological management of chronic pain
14. Onco-critical Care

- a. Post-operative ventilation
- b. Weaning from ventilation strategies
- c. CLABSI,VAP,CAUTI bundles
- d. Fungal infections in ICU
- e. Enteral feeding: when to start, how?
- f. Sepsis guidelines

PRACTICAL TECHNIQUES IN ONCO-ANAESTHESIA

1. Arterial cannulation: catheter over needle (Jelco) and Seldinger technique (LeaderCath): Radial, femoral and dorsalis pedis artery cannulation.
2. Central venous cannulation- internal jugular,subclavian,femoral veins.
3. Regional anaesthesia techniques:
 - a. Sub arachnoid block
 - b. Epidural anaesthesia: lumbar and thoracic
4. Airway management devices:
 - a. LMA- Classic, proseal, supreme
 - b. I-gel
 - c. Flexo-metallic tubes
 - d. RAE tubes
 - e. MLS tubes
5. Difficult airway management techniques
 - a. Awake fiberoptic intubation
 - b. CMAC video laryngoscope
 - c. Cook- airway exchange catheters
 - d. Percutaneous cricothyrotomy (PCT)
 - e. Trans tracheal jet ventilation device
6. Advanced haemodynamic monitoring:Estimated Continuous Cardiac Output (ESCCO)technology.
7. Depth of Anaesthesia Monitoring-ENTROPY,BIS(Bispectral index)
8. Neuromuscular monitoring-TOF,DBS

6. FELLOWSHIP IN HEMATO-ONCOLOGY & BMT

OBJECTIVE OF THE PROGRAMME

1. Gain deep knowledge in the subject, both practical and theoretical aspects
2. Learn fundamentals of BMT and the application of BMT in various hematological disorders.
3. Orientation toward basic and advanced cancer research activities
4. To actively take part in research activities of the department
5. To learn interpersonal communication skills and communication skills towards patients and their relatives.

6. To learn about the applied laboratory aspects of the subject

The aim is to provide the training foundation for those individuals who want to pursue their professional career in the field of hemato oncology . This additional expertise emphasizes critical analysis of clinical problems and development of additional skills required for the practice of this specialty, including consultation skills and multidisciplinary treatment planning, with emphasis in basic and clinical research methodologies.

It has another great vision of providing more expert hematology specialists to the society in order to provide a better quality management of disease for the people even in the lower levels of the community.

EDUCATIONAL OBJECTIVES

- 1) The fellow must participate in the evaluation, decision making and management of hematological cancers.
- 2) Candidates will have BMT, Outpatient, Intensive chemotherapy and other inpatient chemotherapy postings. This should be followed strictly.
- 3) Candidates will be required to learn the basics in peripheral smear reporting and bone marrow aspirate reporting which are essential parts of learning the subject.
- 4) In addition they will have postings in the blood bank to learn the basics of stem cell collection and preservation techniques.
- 5) Candidate will have exposure to Flow cytometry evaluation of hematologic disorders and stem cell enumeration
- 6) Candidates should actively participate in the daily academic activity of the department/institution without any fail.
- 7) An attendance of 90% is mandatory for the completion of the course.
- 8) A log book should be maintained. This has to be submitted at the end of course
- 9) Candidate should preferably have publications in an indexed journal- two case reports or a prospective study- in his/her account for completion of the course

FELLOWSHIP CURRICULUM

- Diagnose and manage common and complex hematological malignancies.
- Evaluate and treat benign hematological disorders.
- Interpret advanced hematopathology, flow cytometry, cytogenetics, and molecular diagnostic reports.
- Plan and manage autologous and allogeneic stem cell transplantation.

- Recognize and manage transplant-related complications.
- Understand principles of cellular therapies including CAR-T cell therapy.
- Manage oncologic and hematologic emergencies.
- Conduct clinical research and participate in academic activities.
- Function effectively within multidisciplinary hematology and transplant teams.

7. FELLOWSHIP IN SOLID TUMOR ONCOPATHOLOGY

OBJECTIVE OF THE PROGRAMME

1. Gain deep knowledge in Oncopathology, both practical and theoretical aspects
2. To learn the current practices and recent advances in oncopathology.
3. To learn about fundamentals of molecular pathology
4. To learn the fundamentals of flow cytometry.
5. Orientation toward basic and advanced cancer research methodologies
6. To actively take part in research activities of the department
7. To learn interpersonal communication skills and communication skills towards patients and their relatives.

The aim is to provide the training foundation for those specialists who want to pursue their professional career in the field of oncopathology. This additional expertise emphasises development of additional skills required for the practice of this specialty, including consultation skills and contributing to multidisciplinary treatment planning. Tremendous emphasis is given in basic and clinical research methodologies. The vision is to provide more expert oncopathology specialists to the medical society in order to provide a better quality management of disease for all people in the community.

EDUCATIONAL OBJECTIVES

The goals of these fellowships are to provide comprehensive, multidisciplinary training to individuals who are committed to a career in onco-pathology. The fellowship programme will be a one year course. Upon completion of a one-year fellowship, the onco-pathologist will possess the following characteristics

1. Gain deep knowledge in the subject, both practical and theoretical aspects
2. To learn the current practices and recent advances in oncopathology.
3. To learn about the fundamentals of molecular pathology.

4. Orientation toward basic and advanced cancer research activities and conduct research studies
5. To learn interpersonal communication skills and communication skills towards patients and their relatives.

FELLOWSHIP CURRICULUM

The fellowship will provide detailed exposure to the following:

- 1) Detailed and thorough grossing, microscopic evaluation and diagnostic decision making in surgical materials of biopsies and radical excision specimens of Head& Neck.
- 2) Training in frozen sections and intraoperative consultations
- 3) Training in immunohistochemistry performance and interpretation
- 4) Training in techniques of DNA/RNA isolation, PCR and FISH
- 5) Journal clubs, seminars, case and topic presentations
- 6) Multispeciality board meetings with consultants of Surgical Oncology, Radiation Oncology and Medical Oncology
- 7) Workshops on Clinical research methodologies, Good Clinical Practices

8. FELLOWSHIP IN HEMATOPATHOLOGY

OBJECTIVE OF THE PROGRAMME

1. Gain deep knowledge in the subject, both practical and theoretical aspects
2. To learn the current practices and recent advances in hematopathology.
3. To learn about fundamentals of molecular pathology and flow cytometry.
4. Orientation toward basic and advanced cancer research activities
5. To actively take part in research activities of the department
6. To learn interpersonal communication skills and communication skills towards patients and their relatives.

The aim is to provide the training foundation for those individuals who want to pursue their professional career in the field of hematology and hematopathology. This additional expertise emphasises development of additional skills required for the practice of this specialty, including consultation skills and multidisciplinary treatment planning, with emphasis in basic

and clinical research methodologies. It has another great vision of providing more expert pathology specialists to the society in order to provide a better quality management of disease for the people even in the lower levels of the community.

EDUCATIONAL OBJECTIVES

- a. The fellow must participate in the diagnostic works which includes morphologic evaluation and decision making of hematological disorders.
- b. Candidates will have postings in the central laboratory division of Laboratory Haematology & Molecular oncology. This should be followed strictly.
- c. Candidates will be oriented in the techniques of transfusion medicine including component separation and apheresis.
- d. Candidates will require to learn the basics in Molecular and genetic methodologies as essential parts of learning the subject.
- e. In addition they will have postings in the division of bone marrow transplant to learn the basics of stem cell collection and preservation techniques.
- f. Candidate will have exposure to Flow cytometry evaluation of hematologic disorders and stem cell enumeration
- g. Candidates should actively participate in the daily academic activity of the department/institution without any fail.
- h. An attendance of 90% is mandatory for the completion of the course.
- i. A log book should be maintained. This has to be submitted at the end of course
- j. Candidate should preferably have publications in an indexed journal- two case reports or a prospective study- in his/her account for completion of the course

FELLOWSHIP CURRICULUM

The fellowship will provide exposure to the following

- 1) Evaluation and diagnostic decision making in bone marrow specimen, lymph node biopsies and radical excision specimens of suspected hematolymphoid neoplasms.
- 2) Training in immunohistochemistry
- 3) Training in flow cytometry
- 4) Training in hemostasis and coagulation
- 5) Training in molecular techniques
- 6) Journal clubs and topic presentations

- 7) Multispecialty board meetings
- 8) Clinical research methodologies

9. FELLOWSHIP IN MOLECULAR PATHOLOGY

OBJECTIVE OF THE PROGRAMME

The Fellowship in Molecular Pathology offers a unique opportunity for the trainee to acquire practical experience in cutting edge technology vital for successful pursuit of an academic career in molecular pathology. Fellows will be provided with grounding in molecular biology, experience with high level diagnostics, and opportunities to pursue research projects with a variety of investigators covering a broad range of oncology

EDUCATIONAL OBJECTIVES

During the course, in addition to performing regular diagnostic cytogenetic and molecular tests, the fellow will have to learn custom made test development in translational research. They will be guided in the preparation of study projects and resultant manuscript acceptable for publication in a peer-reviewed journal. The fellows will attend regular series of didactic lectures and seminars and present their work in national conferences. Fellows will also engage in teaching activities and offer didactic lectures to the laboratory technicians and medical technology students. Flexibility is allowed to encourage the development of special interests

FELLOWSHIP CURRICULUM

The fellowship will provide exposure to the following

A) 0-3 months- Lab work experience

- 1) Techniques in Biochemistry and Cell biology
- 2) Human Genetics & Molecular Biology
- 3) Ethics & lab accreditation
- 4) DNA and RNA isolation and PCR
- 5) Sanger Sequencing
- 6) FISH

B) 4- 6 months

- 7) Molecular hematology
- 8) Project in molecular diagnosis

C) 6- 9 months

- 9) Molecular diagnosis in solid tumor

D) 10-12 months

- 10) Overview of NGS and Proteomics

10. FELLOWSHIP IN SOLID TUMOR ONCOLOGY (MEDICAL)

OBJECTIVES OF THE PROGRAMME

1. To provide expert clinical training in the diagnosis, evaluation, and treatment of adult solid tumours
2. To learn about the multidisciplinary approach in the management of solid tumours
3. Orientation toward basic and advanced cancer research activities
4. To actively take part in research activities of the department including clinical trials
5. To learn interpersonal communication skills and communication skills towards patients and their relatives.
6. To learn about the applied laboratory aspects of the subject including the basics of molecular oncology related to solid tumors

The aim of the program is to offer state-of-the-art training in the diagnosis and management of adult solid tumors. This will provide the foundation for the multidisciplinary management of solid tumors and in the use of systemic agents in various solid tumors. This additional expertise emphasizes critical analysis of clinical problems and the development of additional skills required for the practice of this specialty, including consultation skills and multidisciplinary treatment planning, with an emphasis in basic and clinical research methodologies. As solid tumors constitute the majority of the cancers in our country and the world, to have professional training in the newer developments in the specialty and the comprehensive management of solid tumours will improve the cancer care and control activities in our country.

EDUCATIONAL OBJECTIVES

- 1) The fellow must participate in the evaluation, decision making and management of various solid tumours
- 2) Candidates will have Outpatient, Intensive chemotherapy unit, and other inpatient and day care chemotherapy unit postings. This should be followed strictly.
- 3) Candidates will require to attend multidisciplinary tumor boards regularly
- 4) Candidates have to gain expertise in the baseline evaluation, administration and monitoring of chemotherapy/Targeted therapy/hormonal therapy and immunotherapy.

- 5) Candidates should actively participate in the daily academic activity of the department/institution without any fail.
- 6) The candidate will be involved in the clinical research activities including the clinical trials conducted in the department
- 7) Candidates will have posting in rotation in the surgical oncology, radiation oncology, pathology, molecular oncology departments, radiology and palliative medicine to have adequate exposure in the multidisciplinary care
- 8) An attendance of 90 % is mandatory for the completion of the course.
- 9) A log book should be maintained. This has to be submitted at the end of course
- 10) Candidate should preferably have publications in an indexed journal- two case reports or a prospective study- in his/her account for completion of the course and at least one presentation in a national or international conference

FELLOWSHIP CURRICULUM

- 1) Independently evaluate, diagnose, stage, and manage patients with common solid tumors.
- 2) Develop evidence-based multidisciplinary treatment plans.
- 3) Deliver systemic therapy safely, including chemotherapy,
- 4) Immunotherapy, targeted therapy, and endocrine therapy.
- 5) Manage oncologic emergencies and treatment-related toxicities.
- 6) Interpret molecular diagnostics and apply it into clinical practice.
- 7) Participate in clinical research, quality improvement, and academic activities.

11. FELLOWSHIP IN APHERESIS MEDICINE

OBJECTIVE OF THE PROGRAMME

The Apheresis Medicine Fellowship is a structured, competency-based training programme designed to develop skilled clinicians and scientists in therapeutic apheresis, donor care, cellular therapy, and advanced laboratory support services. The fellowship provides comprehensive hands-on exposure to a wide range of apheresis procedures while integrating cross-disciplinary training in immunohematology, HLA testing, flow cytometry, and cell processing.

Our aim is to train future leaders capable of delivering high-quality patient care, advancing transfusion science, and contributing to cellular therapy practices.

EDUCATIONAL OBJECTIVES

Clinical responsibilities:

The post holder would be expected to perform daily clinical rounds, interact with clinical colleagues regarding blood transfusion needs for patients, suspected transfusion reactions and safe transfusion practices and respond to queries on these issues.

Targeted apheresis component therapy for hemo-oncology patients, BMT patients and patients with suspected transfusion reactions.

Management responsibilities:

The post holder would be expected to write / help other laboratory staff to write standard operating procedures, drafting policy documents, carrying out external Quality control, hemovigilance and timely audit.

Participation in equipment calibration, maintenance, and quality control activities and assessments undertaken by Drug Controllers and the NABH is also expected.

Academic responsibilities:

- 1) Journal Clubs and Seminars: The post holder would be expected to attend / present seminars and findings from recent scientific publications, in departmental and allied speciality meetings. Candidates should actively participate in the daily academic activity of the department/institution without any fail.
- 2) Audit and Research: The post holder would be expected to be involved in laboratory work, present papers in scientific conferences, and write articles for publication in indexed journals.
- 3) Teaching: The post holder would be expected to teach clinical, laboratory, and nursing staff, as and when required.

FELLOWSHIP CURRICULUM

Laboratory:

This would involve rotation in the various sections –

Therapeutic & Donor Apheresis

Fellows receive intensive training in the full spectrum of apheresis procedures, including:

- Donor selection, counselling, and adverse donor reaction management

- Stem cell collection (PBSC)
- Therapeutic plasma exchange (TPE), Leukapheresis & thrombocytapheresis,
- Red cell exchange
- Management of vascular access and procedure-related complications

Exposure to HLA & Immunogenetics Laboratory

To enhance understanding of transplant immunology, the fellowship offers structured rotations in the HLA Lab, including:

- Principles of HLA genetics and clinical relevance
- High-resolution HLA typing (SSO, NGS platforms)
- Antibody detection and identification (Luminex-based SAB)
- Crossmatch techniques (flow cytometric crossmatch)
- Donor–recipient compatibility assessment in HSCT
- Interpretation of reports for clinical decision-making

Training in Cell Therapy Laboratory

The fellowship integrates hands-on experience in cell therapy, including:

- Processing and cryopreservation of hematopoietic stem cells
- Quality control and viability assays

DUTIES AND RESPONSIBILITIES

The candidates will be full time residents of the institutions and will perform the duties and responsibilities of a full time resident in their respective departments. The learning process will be facilitated by;

- 1) Clinical expertise gained by working alongside experienced Oncologists.
- 2) Attendance in daily Multi-speciality tumor boards.
- 3) Teaching sessions, which would include interdisciplinary seminars (involving radiation, medical and palliative care besides the parent Unit.), Journal clubs, and case presentation.
- 4) Assisting and hands on experience in all procedures
- 5) Posting to Medical, Radiation, Community oncology and palliative care for an exposure to these areas of oncology.
- 6) Project work in the form of at least one publication in any oncology journal and involvement in community based intervention programmes for cancer
- 7) Lectures by experts in the field of basic sciences, preventive oncology, tumor registry, molecular biology & cancer genetics

FELLOWSHIP EXIT EXAMINATION

Fellowship Examination:

A] Internal assessment of the candidates by the faculty will be done on a continual basis with respect to the overall objectives of the course, and specifically with respect to their clinical skills, management of patients, seminars, journal club & tumor board presentations.

B] Final examination - by both internal & external examiner.

It will consist of :

I theory papers (100 marks)

Practical examination (40X2)= 80 marks (As per individual department curriculum)

Dissertation: 20 marks

SUBMISSION OF APPLICATION

Online Application:

The applications should be submitted ONLINE through our website <https://mcc.kerala.gov.in/>

Application Fee:

Application fee is **Rs.2,500/-** (Rupees Two Thousand Only). The application fee shall pay online through the payment gateway system provided in the online application

Selection process:

The selection will be based on a personal interview. A screening test may be performed based on the number of applicants as per institutional policy.

FEES AND STIPENDS

- One-time Fellowship Fee: **Rs. 50,000/- per annum** (excluding GST @ 18%).
- Library Fee: **Rs. 1,000/- per annum**.
- Alumni Fee: **Rs. 1,000/-** (one-time).
- Caution Deposit: **Rs. 10,000/-** (refundable).
- **Total payable:** Rs. 62,000/- in the first year and Rs. 51,000/- in the second year.
- Stipend: **Rs. 57,876/- per month** in the first year and **Rs. 58,968/- per month** in the second year.
- For sponsored candidates, the institution may decide the fee structure as appropriate.
- Annual fees once remitted will not be refunded if the candidate discontinues before completing the course.
- For BDS candidates joining the Fellowship in Dental & Maxillofacial Onco-Rehabilitation, the stipend will be **Rs. 30,000/- per month**.

FACULTIES

Institutional Faculty Directory

Department/Unit	Faculty Name	Qualifications	Designation
Surgical Oncology	Dr. Satheesan Balasubramanian	M.S., M.Ch. (Surgical Oncology)	Director & Professor
	Dr. Nizamuddin M.P.	M.S., M.Ch.	Professor & HOD
	Dr. Adarsh D.	M.S. (OBG)	Additional Professor
	Dr. Sandeep Vijay	M.S. (ENT), FHNSO	Associate Professor
	Dr. Anoop A.	M.S. (ENT), FHNSO	Associate Professor
	Dr. Ashitha	M.S. (OBG)	Associate Professor
	Dr. Bonny A. Joseph	M.S., M.Ch.	Associate Professor
	Dr. Raveena Nair	M.S. (ENT), FHNSO	Associate Professor
	Dr. Shamna Muhammed	M.S., M.Ch. (Plastic Surgery), Fellowship	Assistant Professor
	Dr. Sano A.S.	M.S., DrNB	Assistant Professor
	Dr. Parmita Tiwari	M.S., DNB (OBG), M.Ch. (Gyn Oncology)	Assistant Professor
	Dr. Aswin K.M.	M.S., M.Ch.	Assistant Professor
	Dr. Mekha Andrews	M.S., M.Ch.	Assistant Professor
	Clinical Hematology & Medical Oncology	Dr. Chandran K. Nair	M.D., DNB (Int. Medicine), D.M. (Clinical Hematology), Fellowship (Canada)
Dr. Praveen Shenoy		M.D., D.M.	Professor
Dr. Nandini Devi		M.D., D.M.	Associate Professor
Dr. Shoaib Nawaz		M.D., DrNB	Assistant Professor
Dr. Abhilash Menon		M.D., D.M.	Associate Professor
Dr. Arun Krishnan		M.D., D.M.	Assistant Professor
Dr. Jithin T.K.		M.D., D.M.	Assistant Professor
Dr. K.G. Gopakumar		M.D., D.M.	Assistant Professor
Dr. Vyshakh T		M.D., D.M.	Assistant Professor
Clinical Laboratory Services & Translational Research	Dr. Sangeetha K. Nayanar	M.D., DNB (Pathology)	Professor & HOD
	Dr. Parthiban R.	Ph.D. (Microbiology)	Additional

(Pathology)			Professor
	Dr. Sithara Aravind	M.D. (Pathology)	Additional Professor
	Dr. Mohandoss M.	M.D. (Transfusion Medicine)	Additional Professor
	Dr. Aswathy Krishnan M.	M.D., DNB (Pathology)	Associate Professor
	Dr. Anand Narayanan	M.D. (Pathology)	Associate Professor
	Dr. Deepak Roshan	Ph.D.	Associate Professor
	Dr. Vipin Gopinath	Ph.D.	Associate Professor
	Dr. Sindhu E.R.	Ph.D.	Associate Professor
	Dr. Kandathil Philip Joseph	M.D., DNB (Pathology), PDCC	Assistant Professor
	Dr. Vivek Nair	M.D. (Pathology), Fellowship in Oncopathology	Assistant Professor
	Dr. Sarath K.E.	M.D. (Microbiology)	Assistant Professor
	Dr. Anju Kurup	M.D. (Transfusion Medicine)	Assistant Professor
Radiation Oncology	Dr. Geetha M.	M.D. (Radiotherapy)	Professor & HOD
	Dr. Joneetha Jones	M.D., DNB (Radiotherapy)	Additional Professor
	Dr. Greeshma K.E.	DMRT, DNB (Radiotherapy)	Associate Professor
	Dr. Nabeel Yahiya	M.D. (Radiotherapy)	Assistant Professor
	Dr. Arun P. Narendran	M.D., DNB (Radiotherapy)	Assistant Professor
	Dr. Akhil P. Suresh	M.D. (Radiotherapy)	Assistant Professor
	Dr. Megha Prem	M.D. (Radiotherapy)	Assistant Professor
	Dr. Shija Merin	DNB (Radiotherapy)	Assistant Professor
	Dr. Kallyani	M.D. (Radiotherapy)	Assistant Professor
Oncoanesthesiology	Dr. Jeshma C.	DNB (Anesthesia)	Associate Professor
	Dr. Joon P.	M.D. (Anesthesia)	Associate Professor
	Dr. Sonali Opneja	M.D. (Anesthesia), EDAIC, IPAC	Associate Professor
	Dr. Roopesh	M.D. (Anesthesia), EDAIC	Assistant Professor
	Dr. Namrata Divakaran	M.D. (Anesthesia)	Assistant Professor
	Dr. Rahul K.V.	M.D. (Anesthesia)	Assistant

			Professor
Imageology	Dr. Ashish Pavanan	M.D. (Radiodiagnosis)	Assistant Professor
	Dr. Preethi	M.D. (Radiodiagnosis)	Assistant Professor
	Dr. Gayathri	M.D. (Radiodiagnosis)	Assistant Professor
Pulmonology	Dr. Arya Gopi	M.D., DM (Pulmonology)	Assistant Professor
	Dr. Dhyana	M.D., DNB, IDDCM, Fellow in Interventional Pulmonology & Thoracic Oncology	Assistant Professor
Palliative Medicine	Dr. Biji M.S.	MBBS, DPPM, MSc (Psychology)	Assistant Professor
Community Oncology	Dr. Neethu	MBBS, MPH	Assistant Professor
	Dr. Phinse Philip	BDS, MPH, Ph.D.	Assistant Professor
Cancer Registry & Epidemiology	Dr. Saina Sunilkumar	MBBS, MPH	Lecturer
	Dr. Ratheesan	M.Sc., Ph.D., MBA	Assistant Professor
	Dr. Bindu	M.Sc., Ph.D.	Assistant Professor
Dental & Maxillofacial Rehabilitation	Dr. Pramod Sankar S.	MDS (Prosthodontics)	Associate Professor
Clinical Research & Biostatistics	Mrs. Maya Padmanabhan	M.Sc., M.Phil.	Lecturer in Biostatistics
	Mr. Riyas	M.Sc.	Lecturer in Biostatistics
Psycho-Oncology	Mrs. Jisha Abraham	M.Sc., M.Phil.	Lecturer in Psycho-oncology

RULES AND REGULATIONS

- 1) The course is full time. Candidates are expected to perform all types of clinical, research and academic assignments as prescribed by the Academic Council of Malabar Cancer Centre.
- 2) It is a resident program of post-graduate training
- 3) Candidate is expected to wear identity card provided by MCC
- 4) **Dress code:** Lady candidates are expected to put up the hair during working hours. She is permitted to wear any decent dress preferably, Sari and churidhar. Gentleman candidates should wear formal shoes
- 5) **Attendance:** The candidate should mark the attendance in Biometric punching machine and also sign in the register kept in the department.
- 6) Completion of project work is compulsory for fellowship certification.
- 7) **Leaves:** Candidates will be eligible for 12 days leave during the programme. Not more than 5 days of leave will be granted together. Candidates who avail for more than 12 days of leave will have extension for those additional days of leave. Holiday leave/ holiday duty off will be given as per discretion of the Head of Department.
- 8) **Accommodation:** Accommodation is the responsibility of the candidate. For lady candidates, if available and formally requested in the Request form, shared room accommodation may be provided in the Nurses hostel. This is not guaranteed and it is not a right of the candidate. If accommodation is provided a nominal rent will be deducted from the stipend. A caution deposit of Rs. 1,000/- should be paid. This is refundable when the candidate vacates the hostel. Gentleman candidates are expected to find accommodation themselves.
- 9) Candidates should follow the rules and regulations of MCC.

CONTACTS

For any clarifications and queries, please feel free to contact;

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- Dr.Satheesan B, Professor & HOD, Department of Surgical Oncology, E-mail: directormcctly@gmail.com, Phone: 04902399212
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- Dr.Nizam M Pareekutty, Professor, Department of Surgical Oncology E-mail: drnizamudheen@gmail.com,, Phone: 04902399214
- Dr Jashma C ,Associate Professor Professor,Department of Oncoanesthesia E-mail: jashmanizam@gmail.com,, Phone: 04902399308
- Dr.Mohandoss M, Additional Professor, Division of Transfusion Medicine, E-mail: mohandossmurugesan@gmail.com, Phone: 0490 2399227
- Dr Pramod Sankar S, Associate Professor, Dentistry & Rehabilitation, E-mail: sankar.pramod@gmail.com, Phone: 0490 2399231
- Mrs.Maya Padmanabhan, Division Incharge,, Division of Clinical Research & Biostatistics, Email: mayapnambiar@gmail.com ,Phone 04902399249
- Mrs.Jisha Abraham,Division Incharge, Division of Psycho Oncology , Email: jishasarah@gmail.com, Phone:04902399268

Any technical queries regarding online applications please contact System Manager, Email: sm@mcc.kerala.gov.in with application Number (Phone: 0490-2399400, 2359881) Academic Office- Phone: 0490-2399249



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