MALABAR CANCER CENTRE

DIVISION OF ONCOPATHOLOGY,

DEPARTMENT OF CLINICAL LABORATORY SERVICES & TRANSLATIONAL RESEARCH

SIX-MONTH CERTIFICATE COURSE FOR CYTOTECHNICIAN WITH SIX-MONTH STIPENDARY INTERNSHIP

PROSPECTUS

2018-19

INTRODUCTION

Malabar Cancer Centre, Thalassery (MCC) is an autonomous institution under Health and Family Welfare Department, Government of Kerala, started with an aim to establish a comprehensive cancer centre, providing the much-required oncology care to the population of Northern region of Kerala and vicinity parts of Karnataka and Tamil Nadu. MCC is providing a full spectrum of Oncological Care as an autonomous not-for-profit institution funded by the State Government and other sources.

Malabar Cancer Centre now has full-fledged laboratory divisions of Oncopathology which includes Histopathology & Cytopathology which has state of the art and automated equipments being used for cancer diagnosis. Today we are in a position to offer training and impart knowledge to student technician community who can be employed country wide. They can absorbed into the ambitious cervical cancer eradication programme which is being envisaged by the Government of Kerala. This will also be in keeping with our social responsibilities. An added advantage would be that it will also provide the hospital industry with the much needed hands to cope with the increasing patient work load

ABOUT THE COURSE

Cytopathology is the branch of Pathology that studies and diagnoses disease on a cellular level. Cytopathology is commonly used to investigate diseases involving a wide range of body sites, **not** only to aid in diagnosis of cancer, but also to detect **inflammatory** and infective conditions. It is often a first line investigation in the approach to disease diagnosis. The course aims at creating trained technical manpower to prepare cytology smears and samples.

FOR WHOM

AGE:

The applicants will not be above the age of 25 years as on 1-1-2018. The upper age limit is relaxed by six years for SC/ST candidates and 2 years in the case of OBC candidates.

Basic Qualification and Experience

The applicants for Cytotechnician course should have Diploma in Medical Laboratory Technicians (DMLT-3 year course) from any recognized University in India with one year experience

OR

Diploma in Medical Laboratory Technicians Course (DMLT-2 year course) from any recognized University in India with two year experience

OR

BSc MLT from a recognized University in India

The candidates will have to appear for a written examination(Multiple choice question paper) followed by interview.

KEY FEATURES

- Hands on practical experience in the field of cytology
- Handling & processing cytology smears and effusion fluid & FNA samples
- Staining techniques with Papanicolau & Giemsa techniques
- Cell block preparation and processing
- Cytocentrifuge technique for CSF cytology
- Liquid based cytology for Gynaec and Non-gyneac cytology

KEY DATES

Last date of application: 15/02/2018

Date of written exam & interview: 10/03/2018

Date of course commencement: April 2018

SELECTION

The candidates will have to appear for a written examination of duration 45 minutes on the subject, which consists of 100/50 multiple choice questions.

The selection of candidates will be based on the grade /mark obtained in the written examination. In the case of a tie in in the mark/grade, the marks of the final BSc/Plus two examination will be considered.

If the candidates has published papers/thesis/research work on the subject, may produced before the Interview Board for perusal if so desired by the Interview Board

DURATION AND COURSE OF TRAINING

The duration of the course will be 6 months. The course of training will be conducted in the Oncopathology Division of MCC, Thalassery as per the syllabus prescribed

CENTRE

Malabar Cancer Centre, Division of Oncopathology, Thalassery, Kannur, Kerala

NUMBER OF SEATS: **2**

PROMOTION

An examination will be conducted at the end of the course with written, oral and practical test. A minimum of 50% of the marks in each subject is eligible for a pass. Minimum requirement for successful completion- attendance, number of smears taken, colposcopy attended, camps attended

A certificate will be given to the successful candidate. Candidates failing in any subject have to undergo additional course or extension of training period as decided by the authorities

COURSE FEE

Course fee Rs 15,000/-. At the time of admission- Rs 7500/-. Balance amount- Rs 7500/-(in two installments)

APPLICATION FEE: **Rs 300/-**

COURSE COVERAGE

MODULES	TOPICS
Introduction	▪ Epidemiology and Natural History of Cancer ▪ National importance, current scenario, prevention, awareness, risk factors etc
Fixation	▪ Various fixatives used for micro anatomic techniques ▪ Principles of fixation, ▪ pre-fixation, ▪ coating and spray fixation, ▪ mailing of unstained smears, ▪ preservation of fluid specimens
General principles of staining	▪ Natural & Synthetic stains. ▪ Papanicoloaou staining technique & preparation of stains. ▪ **Advantages & disadvantages.** ▪ Hematoxylin-Eosin (H&E) ▪ Romanowsky Type stains-(Geimsa ,MGG) ▪ Diff-Quick, Supravital stains & Special purpose stains
Clearing & mounting	▪ Different clearing and mounting agents ▪ Manual and automation
Microscopy, basic concepts	▪ Use of Microscope. Different types, principles of Light Microscopy
Quality control measures in staining techniques	▪ Internal & external quality control measures
Demonstration	▪ Staining techniques ▪ Preparation of various stains.
Normal Histology & Cytology of epithelial & connective tissues.	▪ Cell structure ,functions with recent advances
Gynaecological Cytology	▪ Anatomy, structure & physiology of female genital tract (FGT). ▪ Correlation of structure of FGT & ovarian hormones
Various cytological indices.	▪ Cytology from birth to menarche, hormonal cytology of menstrual cycle (ovulatory & anovulatory)

	▪ Cytology of menopause. ▪ Hormonal cytology techniques ▪ Collection of smears for hormonal assessment ▪ Various types of cells in vaginal smear ▪ Changes according to different phases of menstrual cycle.
Collection of gynaecological material	▪ Vaginal smear ▪ Cervical smear ▪ Pool smear. ▪ VCE method ▪ endocervical & endometrial smear & various collection. ▪ Colposcopy , biopsy etc .. ▪ **Demonstration of the above techniques**
Cervical cytology	▪ Normal cells, ▪ Reserve cells, ▪ Inflammatory cells, ▪ Endocervical regeneration. ▪ **Demonstration of above**
Inflammatory lesions of the female genital tract	▪ Acute & chronic inflammation ▪ Candida ,Trichomonas vaginalis , Bacterial vaginosis , ▪ HSV, Actinomyces ,Chlamydia…. etc ▪ **Demonstration of inflammatory & infectious organisms**
HPV association & cervical lesions	▪ **Demonstration of HPV changes.**
Cervical carcinogenisis	▪ Etiological factors of carcinoma ▪ Concept of development of carcinoma cervix, ▪ Pre- cancerous lesions
Pre- cancerous lesions of uterine cervix	▪ Histology & cytology ▪ Classification of dysplasia , CIN & SIL
Reporting format	▪ Bethesda system of reporting of cervical precancerous and cancerous lesions ▪ Light microscopic features of malignant cells ▪ **Demonstration of cervical lesions.**
Carcinoma in situ & microinvasive carcinoma	▪ Definition & cytology with basic histopathology. ▪ Demonstration of carcinoma insitu
Invasive carcinoma of uterine cervix	▪ Different types of carcinoma ▪ Cytology of squamous, adeno, adeno–squamous and other differentiation ▪ Cytology of adenocarcinoma of endocervix ▪ Demonstration of different malignancies

Atrophic smear	▪ Autolytic atrophy & its problem in differentiating from malignancy including demonstration
Endometrial cytology: collection	▪ Cytology of normal. ▪ Hyperplasia. ▪ Malignancies. ▪ Value of cytology in ovarian malignancies. Pouch of Douglas aspiration & needle aspiration of ovarian mass & miscellaneous. ▪ Demonstration of the above.
Radiation changes	▪ Normal & malignant cells. ▪ Demonstration of the above
Collection of non-gynaecological material	▪ **CSF - Preparation techniques** ▪ **Respiratory tract cytology** ▪ Processing of sputum , bronchial brushing , bronchial washing, bronchial lavages . ▪ FNAC- Transthoracic and guided ▪ **GIT & Urine cytology** ▪ Serous effusions – peritoneal , ascitic , pericardial fluids ▪ Demonstration of the above techniques
Concentration techniques in cytology	▪ Centrifugation ▪ Cyto-centrifugation ▪ Membrane filters ▪ Monolayer cell block techniques ▪ Immunocytochemistry on cell block.
Fine Needle Aspiration Cytology	▪ Scope and objectives ▪ Common sites of FNAC like breast , thyroid , salivary gland , lymph node, liver … etc ▪ Cytology of common lesions of above sites. ▪ Advantages and disadvantages of FNAC. ▪ Collection techniques of FNAC
Techniques of Fine Needle Aspiration and Smear preparation	▪ Rapid Onsite evaluation (ROSE) of FNAC of superficial organs /guided procedures
Oral cavity	▪ Pre cancerous and Cancerous conditions
Advances in cytology	▪ Liquid Based Cytology ▪ Monolayer slide preparation technique - gynaecological and non gynaecological samples. ▪ Principles, Basic concepts. ▪ Different types –SurePath ,ThinPrep ,MonoPrep ..etc ▪ Adavantages and disadvantages. ▪ Immunohistochemistry

Molecular techniques	▪ Polymerase chain reaction ▪ RT- PCR ▪ FISH ▪ Flow cytometry
Cancer control programmes	▪ To attend early cancer detection campaigns , ▪ volunteer training programmes , ▪ awareness classes , exhibition etc
Organization of cytology laboratory	▪ Specimen acceptance and adequacy ▪ Specimen preparation and staining-quality control
Laboratory safety measures	▪ Guidelines of storing and handling chemicals and equipments ▪ Infectious hazards

TRAINING METHOD

Theory: Lectures, seminars, group discussions

#**Practical:** demonstration of laboratory techniques and slides.

LOG BOOK

To be maintained on a daily basis recording number of smears processed, academic sessions attended etc.

CAPBILITY EXPECTED AT END OF COURSE

Hands on experience in handling & processing cytology smears and effusion fluids & FNA samples,

Staining techniques with Papanicolaou & Giemsa techniques.

Cell block preparation and processing

Cytocentrifuge technique for CSF cytology

Liquid based cytology for Gynaec & Non-gynaec cytology

Organization of Cytopathology laboratory

MALABAR CANCER CENTRE

(an autonomous centre under Govt. of Kerala)

Moozhikkara (PO), Thalassery, Kannur-670 103

Ph: 91 490 2355881, Fax: 91 490 2355880

Application Form for Cytotechnician Course 2018-19

Name (In Block letters):	(Affix Recent Passport Size Photograph Here)
Age:	
Gender:	
Address for Communication:	
Phone Number:	
Email:	
Religion / Caste:	
Place of Birth:	
Name of Father / Mother:	

Educational Qualification

Exam Passed	Specialization	College/ Institute	Board / University	Year of Passing	Percentage Marks	Class / Grade

Experience

From Date	To Date	Duration (mo)	Institute	Designation	Job Profile

Present Job/ Position:

Any Other Achievements:

Details of payment of application fee:

a) RTGS/NEFT Reference No:
b) Date of Remittance:
c) Name of Bank:
d) Branch Name:
e) Amount:
f) Remarks if any:

Declaration

I……do hereby declare that the information furnished above is true to the best of my knowledge and belief.

Place:

Date: Signature

……..

For Office Use Only

Reg.No