

**KIDWAI MEMORIAL  
INSTITUTE OF ONCOLOGY,**

**Dr.M.H.Marigowda Road, Bengaluru-560 029.**



**ANNUAL REPORT  
FOR THE YEAR – 2018**

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## **1. Director's Message**

It is my pleasure and privilege to write a foreword for the Institute's Annual Report, especially to unveil the performance of Institute.

This Annual Report contains detailed information about the services rendered to the patients, activities of various departments, research and development activities at the institute and courses and training programs conducted in the field of Oncological sciences.

For over 60 years, the KMIO has grown from a private humanitarian venture in the early 1950&60's to a Regional Cancer Centre in 1980's, delivering Tertiary Medical Care to thousands of Cancer patients from our State and different parts of our Country and abroad. KMIO has strived hard to help lakhs of patients along the way who are grappling with the ill effects of cancer. KMIO has been able to provide vital and compassionate support for poor cancer patients.

The medical fraternity of KMIO are committed and dedicated to excellence in patient care, teaching and research. KMIO's commitment to cancer care, research, education and awareness has a long been acclaimed and KMIO's unique tradition of providing exceptional patient care, medical education, and research opportunities to benefit both the community at large and physicians in training is also acknowledged by many.

Over the last few decades there is a increase in the number of Cancer patients, With the limited staff & financial resources the Doctors & staff of KMIO have been multitasking and striving hard to deliver good treatment to our patients.

We have accomplished so much, but there is still so much more to do, and never before has there been such an immediate urgency for your help. It is through the generosity of our many donors and the dedication of caring individuals & groups that we have been able to endow the numerous patient welfare programmes and improve the institute's infrastructure etc. Dear friends, KMIO simply could not exist without your help.

KMIO have been an integral part of the community for over 60 years and shall remain committed to making a difference in the fight against this dreaded disease. Donations to the Institute are exempted from Income Tax under section 80(g) and under section 35(i) (ii) of Income Tax Act, 1961.

Thank you,

**Dr. C Ramachandra**

Director

## 2. Mission and Vision of KMIO

### Mission

Our MISSION is to provide STATE-OF-THE-ART Cancer Care Services to the poor and needy Cancer Patients by

- 1) Delivering specialized cancer care services;
- 2) Providing training and preparing the next generation of cancer professionals;
- 3) Ensuring that people suffering from cancer are treated effectively through our services;
- 4) Providing awareness to patients and patient's attenders regarding cancer risk factors associated with to habits like tobacco usage, alcohol consumption, dietary habits, etc.;
- 5) To improve the health and healing of cancer patients.

### Vision

Our VISION for the Institute is as follows:

- 1) To be Cancer Centre of Excellence in the Country.
- 2) To establish a state-of-the-art Multi-disciplinary OPD Infrastructure for Ambulatory and Laboratory cancer care.
- 3) To establish a state-of-the-art Patient Ward Infrastructure for cancer treatment.
- 4) To establish a state-of-the-art OT Complex.
- 5) To establish a state-of-the-art Community Oncology Centre (COC) Infrastructure.
- 6) To establish a state-of-the-art Nursing College Infrastructure.
- 7) To upgrade and modernize Student Hostels.
- 8) To revamp the existing Blocks in the Institute through redevelopment and renovation.
- 9) To increase the availability of medical equipments such as PET CT, MRI and CT Scan to reduce patient waiting time for diagnosis.
- 10) To strengthen Academics in the Institute by introducing New Oncology courses and by improving the already existing Oncology courses.
- 11) To strengthen the Translational and Clinical Research Programme.
- 12) To establish Private and Insurance Patient Block and Facilities.

- 13) To upgrade and modernize PCC Kalburgi from Tertiary Cancer Care Centre and Regional Cancer Centre.
- 14) To establish a robust Information and Communication Technology (ICT) system in the Institute.
- 15) To improve quality, safety and security related infrastructure and framework for patients, attenders, staff, infrastructure, etc.
- 16) To transform into Environmental Friendly Institute.
- 17) To establish Peripheral Cancer Centers at other Districts.

## ABOUT KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY, BENGALURU

Kidwai Memorial Institute of Oncology (KMIO), Bangalore is a Regional Cancer Centre (RCCs). KMIO is a recognized exclusive tertiary cancer care center cum academic and research institutes, delivering modern health care by groups of trained professionals and paraprofessionals coming together as interdisciplinary teams and has facilities for advanced medical investigation and treatment. KMIO was accorded RCC status on 1st Nov 1980 by Government of India and is a member of UICC and recognized by WHO. KMIO is State Government Autonomous Institute. The Indian Council of Medical Research has recognized this referral Institution as a research organization.

Kidwai Memorial Institute of Oncology commemorates the memory of one of the most distinguished sons of India. Shri Rafi Ahmed Kidwai, who played a great role in the freedom struggle and later worked shoulder to shoulder with other national leaders in strengthening the roots of democracy and secularism in our country. The then Governor of Bombay donated 20 acres of the Campus land and Rs.1.00 lakh for the Radiotherapy machine.

KMIO was conceived by the City Fathers as far back as 1957 as a private venture, it was the taking over of the project by the Government of Karnataka in 1971 that finally set the ball rolling to the Inauguration of the institute on 26th June 1973. The Government of Karnataka by an order on 27th December 1979, converted the institute into an autonomous Institution, to enable it not only to mobilize resources and expertise from other national and international agencies

but also, consequent thereof, to develop and grow further into a pioneer and model in the field of Oncology in Karnataka. The Institute was registered on 8th January 1980 as an independent body. The first Director of the Institute- Dr.M.Krishna Bhargava took charge as Director of the autonomous institute on 23rd January 1980. Monday the 21st April 1980 was a momentous day for the Institute, Shri B. Shankaranand, Union Minister for Health and Family Welfare, Government of India, formally inaugurated the autonomous Kidwai Memorial Institute of Oncology.

The Kidwai Memorial Institute of Oncology has, with its autonomous status, finally evolved into a Tertiary Cancer Institute providing modern multidisciplinary total patient care, conducting medical/clinical research, promoting cancer education programs both at the institute and in the community and initiating planned epidemiological studies in this part of the country. The autonomy of the Centre confers maximum centralized administrative and management authority over planning and execution, budgets, allocations staff appointments and procedures ensuring thereby the most important attribute of such a Centre—the excellence in quality of all work rendered.

The Institute stands poised today on the threshold of a future with an endless potential and promise in the service of cancer patients in particular and in cancer control in general in the State of Karnataka and in the Country.

## SERVICES OFFERED

### **Blood Bank**

It has facility to provide blood transfusion services, to train medical and Para-medical personnel in related areas and to function as an apical medical and research department in the state in this field. Voluntary blood donation and routine preparation of blood components. Strict adherence to quality control at all phases of donor selection, donor room procedures, screening and processing of blood, and serological procedures for grouping and typing of blood are followed. The facility is licensed by the Drugs Controller of India.

### **Clinical Psychology**

This Unit is primarily clinical- clinical service with academic and research activities. Patients requiring psychological assessment and management are referred to the clinical psychologist through a written referral. The patients can be referred from anywhere along the continuum of cancer i.e., from before investigation until the terminal stage.

### **Anesthesiology & Pain Relief**

The Department offers Anaesthesia and Pain relief services for cancer treatment which includes Cancer Surgery - curative, reconstructive, and palliative using advanced technology and equipments. Our operation theatre complex consist of eight state of art fully equipped operation theaters rooms with 10 bedded, ICU. We have 15 bedded step down ICU to take care of post operative patients.

### **Biochemistry**

It is a comprehensive department involved in patient care, teaching and research. A spectrum of routine clinical chemistry investigations with special chemistry tests like tumor markers are being carried out in

the department for patient care. Equipped with state of the art machines like spectrophotometric, chemiluminescence based auto-analysers, PCR, RT-PCR caters approximately 10,00,000 tests annually. To ensure the quality reports released, regular internal quality control and external quality control programs are undertaken.

The department is actively engaged in several teaching programs. The Undergraduate programs for Allied Health Sciences (AHS) like B.Sc. Medical Laboratory Technology course, Postgraduate programs like Ph.D. affiliated to Rajiv Gandhi University of Health Sciences (RGUHS). In addition, guidance and facilities are extended to Postgraduate Medical and Dental students for their dissertation work. A number of undergraduate and post graduate non-medical students from other universities are regularly posted for training programs

### **Community Oncology**

This Department is Conducting : Screening and detection for various cancers; Daily check-up for women and men; Training programmes for medical personnel about awareness and early detection; Anti-tobacco campaigns; Health camps all over Karnataka. Dept. has a Mobile Cancer Detection Unit.

### **Epidemiology And Biostatistics**

It includes both Population Based Cancer Registry of Bangalore and Hospital Based Cancer Registry and are included under the network of National Cancer Registry Programme of India (ICMR) The faculty is involved in Teaching covering topics on Epidemiology and Biostatistics for various Super speciality, Post graduate medical courses and also Para medical courses such

as Nursing and students of Allied Science courses offered by the Institute. The statistical consultation is offered to the students in the data analysis of their Dissertation/Doctoral thesis.

### **Gynaecological Oncology**

The Department is involved in the Prevention, early detection, investigations, diagnosis, treatment both surgery and chemotherapy, follow up and palliative care of women with Gynaecological Cancers. The Department is actively involved in clinical research. The Department is allotted 6 operations days in a week where a variety of Gynaecological Surgeries, including Laparoscopic surgeries and Robotic surgeries are performed.

### **Head And Neck Onco-Surgery**

Head and Neck Surgery is done for Tumors of the Mouth; Pharynx (Throat); Larynx (Voice Box); Esophagus; Thyroid Gland; Parathyroid Gland; Parotid and Other Salivary Glands; Soft Tissue Tumors; Bone Tumors; Tumors of the Dentoalveolar Structures, Nasal Cavity and Sinuses, Base of the Skull, Ear Canal and Temporal Bone, Nerves and Blood Vessels of the Neck; Skin Cancers; Melanoma.

The Dept. is equipped with state of the art Robotic Surgery machine, CO2 laser machine, High end operating microscope, Micro-drill, Xenon head light, provides minimally invasive endoscopic laser surgery, organ preservation surgery, Supra-major surgery with plastic reconstructive surgery with all the major free micro vascular flap surgery,

The minor OT is used for Nasal endoscopic biopsy, Direct laryngoscopic biopsy, Dressings throughout the week. OPD is equipped with modern ENT

examination tables, 0 0 nasal endoscopes, 90 0 Hopkins endoscopes with recording features.

### **Medical Oncology**

The Department of Medical Oncology is responsible for diagnosing and treating all cases of hematological malignancies as well as administering chemotherapy to solid tumors in various settings. The Dept. is committed to improving the diagnosis and treatment of adult patients with cancer. To meet this mission there is a broad range of basic Research, Clinical Research, Patient Care and Teaching activities. The Department has its own medical minor O.T., where all the minor procedures such as Bone Marrow Aspirations / Biopsy, Ascitic and Pleural Tapping, Trucut Biopsy etc, are carried out under full aseptic precautions. The Department also provides Specialist clinics for autologous stem cell transplantation for malignancies like Non-Hodgkin's lymphoma, Hodgkin's lymphoma, and multiple myeloma.

### **Microbiology**

Microbiology Department is diagnosing majority of opportunistic infections seen in immunocompromised patients, some of them using the latest molecular tools. Routine tests include identification of bacteria, fungi and parasites & antibiotic sensitivity of bacterial isolates, relevant serological investigation and identification of opportunistic pathogens which are commonly encountered in a cancer center. In addition, the Department has the expertise to offer molecular diagnosis for some of the common infections in cancer patients: The department has facilities for human immunology based work including cell culture, Magnetic Associated Cell Sorting. Nonisotopic InSitu Hybridization



(NISH) and Realtime PCR is being done presently for detection and quantitation of viruses in various clinical specimens. The department is actively involved in microbiological surveillance of the brachytherapy unit, OT and ICU routinely. Bone marrow transplant room surveillance and water analysis are performed whenever required and random sterility checking of blood units and collection bags are performed. The department is involved in infection monitoring, MRSA screening and at regular intervals, surveys the antibiotic resistance patterns amongst organisms isolated at our center. The department perform water analysis, testing the efficacy of disinfectants, food handlers testing for carrier status, etc.

### **Nuclear Medicine**

This Department has Dual Head Gamma Camera with 5 isolation wards for radioactive treatment and conducting all gamut of investigation. With advent of PET CT and recent newer treatment, Nuclear Medicine has come to forefront in the management of Oncology patients. Shortly, the Dept. is getting state of art PET CT and SPECT CT with new 6 bedded isolation wards. Dept. has planned to start post graduate teaching program in : DNB Nuclear Medicine for Doctors; and, BSc Nuclear Medicine for Technical personal.

### **Radiation Oncology**

Radiation Oncology is one of the main specialties in catering services to the patients attending KMIO. It has adequate Radiation Therapy, Teletherapy, Brachytherapy facilities. The department actively participates in Multidisciplinary clinics, teaching and research activities at KMIO. As both the numbers of cancer patients and the percent who receive radiation therapy is increasing, the Institute has made efforts in creating the necessary medical and paramedical training infrastructure to train and create the

specially trained necessary manpower. The Dept. has adequately skilled and trained radiotherapy staff for each of these machineries like fulltime radiation oncologists, radiation physicists, radiation therapy technologists or radiotherapists, nurses, and support personnel.

### **Pathology**

The Dept. of Pathology has grown from strength to strength and has the following Units under its umbrella, viz Unit of Histopathology, Unit of Cytology, Unit of Haematology, Unit of Cytogenetics and the recently formed Unit of Oncopathology. The Dept. of Pathology caters to most of the routine Pathology investigations and also specialised tests like immunohistochemistry, FISH, conventional Cytogenetics and Flow Cytometry. A molecular Pathology laboratory will also be established shortly. The academic courses such as (i) M.D. Pathology; Fellowships in Tumour Pathology; and B.Sc. in Medical Laboratory Technology are available in the Dept. Postgraduate students (MD Pathology) from all over the state are posted regularly for oncopathology training.

### **Palliative Medicine**

The Dept. is providing Palliative care services and is one of the pioneers in obtaining and dispensing oral morphine solution. Many patients had the privilege of pain control with oral morphine solution and continuing care. The palliative care networks with hospice and home care services in Bangalore. At present it has a multi- disciplinary team of doctors, nurses, pharmacist, social worker and volunteers. It has out- patient services which functions 6 days a week and has 20 beds for inpatients. With a good team and support of large number of dedicated volunteers the department has expanded to incorporate, a day care Centre as a

recreational services for patients and caretakers in a day of every week

### **Pediatric Oncology**

Pediatric Oncology is functioning as a separate unit in the Department of Medical Oncology from July 1992. At the 41st meeting of governing council held on 29th December 2008 it was created as Department of Pediatric oncology. The department of Pediatric Oncology was created as an independent department with effect from 28th March 2009 as per official memorandum no KMIO/EST/1/94/2008-09 dated 28.3.2009

### **Radiodiagnosis**

The Department of Radiodiagnosis from its inception, continues to play an important and significant role in the overall health care and academic activities of the Institute. The department is well equipped with Imaging Equipment including X-Ray machines, mammography, Ultrasonography, colour Doppler, Whole Body CT Scanners and MRI. Throughout the year patients are referred for Investigation from all over Karnataka State as well as from neighbouring states. Tests are performed mainly for malignant disorders, but non-malignant conditions are also evaluated. Institute patients, staff members and referral patients from other hospitals are being regularly investigated.

### **Radiation Physics**

The department provides medical physics support to Radiation Oncology, Nuclear Medicine, Radio-diagnosis departments of KMIO and Regional Centre for Radiopharmaceuticals, BRIT, KMIO campus. Ph.D degree is being pursued in the department in various challenging topics in the field. The department conducts M.Sc. (Radiation Physics) programme affiliated to Rajiv Gandhi University of Health Sciences, Karnataka

and approved by Atomic Energy Regulatory Board (AERB), Mumbai with intake of 5 students per year. Classes are conducted by the expert faculty members of the department for M.D. (Radiotherapy), D.M.R.T., M.Sc. (Nursing), B.Sc. Radiotherapy Technology and Radio-Diagnosis technology programmes. The department is also recognized as one of the approved centers by AERB to conduct one year Internship programme for Medical Physics students as partial fulfilment of their curriculum for appearing for Radiological Safety Officer (RSO) examinations conducted by AERB.

### **Surgical Oncology**

Department of Surgical Oncology is constituted by 3 surgical units. Each unit is headed by Professors with vast experience and updated surgical skills. A major proportion of patients will receive treatment in the department be it in the form of radical surgery, palliative surgery or a kind word. The Surgical Oncology Department is actively involved in training M.Ch Super Specialty Post Graduate Students. There is an intake of 8 M.Ch PG students every year. Department follows a rigorous teaching programme such as Subject Seminars, Journal Clubs and case discussions covering all aspects of the subject ranging from basic Oncology to intricacies of management of specific cancers and evidence based patient care. Practical training in advanced surgical skills is imparted extensively between the three units and additional postings in other departments. The department also plays a role in inspiring and finessing young minds enrolled in M.S General Surgery post graduate courses all over Karnataka during their peripheral postings at our institute by teaching them the concepts of Surgical Oncology. The Department of Surgical Oncology is also involved in both theoretical and practical training of B.Sc. O.T Technology students affiliated to RGUHS. Each year 10 students are

admitted through selection by Karnataka Examination Authority.

### Psycho-oncology

Psycho oncology is an interdisciplinary area bringing together mental health and oncological fields to analyse the psychological, behavioural and social aspects of cancer. Cancer is an illness that comes with an unavoidable amount of distress from the beginning of its diagnosis further continuing into the treatment stages, and at the palliative care stage. It is important to look into the emotional, social and behavioural changes that occur in a patient and their caregiver's lives which will need psychological support from professionals such as psychiatrists, clinical psychologists, psychological counsellors,

and psychiatric social workers. Providing cancer patients and caregivers with coping strategies, adjustment techniques, stress management, pain management, relaxation techniques, and other emotional support. Supporting psychological wellbeing will not only improve the quality of life but also help the patient in having a more positive outlook and optimistic attitude towards the process and treatment.

## 1. Performance Statistics

<b>Registration</b>	
New Registration	18990
Follow-Up	309855
Out Patient	328845
Admission	7786
Readmission	9691
Toatal Inpatient	17477
Discharge	16527
Hospital Death	965
<b>Surgical Oncology</b>	
Minor Surgery	834
Major Surgery	4127
Total Surgery	4961
<b>Radiation Oncology</b>	
External RT	5731
Brachy Therapy	1808
TPS	7565
<b>Medical Oncology</b>	
Day Care	11298
Chemotherapy Inpatient	8379
Death	398
<b>Paediatric</b>	
No. of Cases Registered	627

Treatment Performed	1507
Death	110
<b>Nuclear Medicine</b>	
Thyroid Scan	178
Bone Scan	3987
GFR	3813
Liver Scan	7
Renal Scan	15
RAI 131	37
Muga Scan	94
Brain Scan	24
Salivary cintigraphy	1
Toxic Therapy with RAI 131	162
Palliative therapy	3
CA Thyroid	409
Imaging	409
<b>Total</b>	<b>9139</b>
<b>Radiology</b>	
Conventional Radiography	24633
Ultrasonography/Colour Doppler	16728
Mamography	2605
C.T Scan	22855

MRI Scan	3598
ECO	3918
CT RT Planning	1822
<b>Pathology _Histopatholoty</b>	
Biopsy	6900
No. of Blocks	3431
No. of Slides	
Review Case	
Review Slide	5443
Frozen	473
Special Strains	
<b>Histopathology</b>	<b>16247</b>
<b>IHC and Fish</b>	
IHC marker	30490
ER/PR and Her2 by IHC	
Her2 test by IHC Stomach	
Her2/Neu test by Fish	186
EWSR1 test by fish	
BCR/ABL test by FISH	
PML/RARA test by Fish	
RISH test	
<b>IHC and Fish</b>	<b>30676</b>
<b>Cytology</b>	
FNAC REGULAR	2676
USG –FNAC	3356
CTG – FNAC	440
C D CLINIC – FNAC	
CD CLINIC FNAC	
ASCITIC FLUID	672
PLEURAL FLUID	505
CSF	3492
SPUTUM	21
URINE	73
NIPPLE DISCHARGE	8
BRONCHIAL ASPIRATE	252
BRONCHIAL BRUSH	
PERITONEAL FLUID	
ESOPHAGEAL BRUSH	
STOMACH BRUSH	
GYNAE HOSPITAL	1149
GYNAE CD CLINIC	
GYNAE CD CAMP	710
GYNAE – CCI	
MAHATHI TRUST	221
MISCELLAENOUS	43

REVIEW SLIDES: FNAC	892
GYNAE	10
OTHERS	79
<b>TOTAL</b>	<b>14599</b>
<b>Haemetology</b>	
HAEMOGRAM	89666
ESR	551
BMA	3520
BMBx	2001
RS	175
CYTOCHEMISTRY	179
HB FP (PS)	23054
BT CT	548
CLINICAL URINE	556
FCM	793
PT APTT	3104
APIT	
240Hrs Lab CBC	
<b>TOTAL</b>	<b>124147</b>
<b>Cytogenetics</b>	
BMA	1647
PBL	151
FNA	239
FISH	17
PLEURAL FLUID	0
<b>TOTAL</b>	<b>2054</b>
<b>Microbiology</b>	
Investigations- Culture	<b>2018</b>
Urine	1050
Stool	625
Sputum	1972
Ent	788
Pus and Mis.	1462
Blood	3173
AFB Urinte/Sputums/PUS	397
Fungal culture	814
PFPCR	40
HIV	16847
HBsAg	16836
HCV	16437
<b>Total</b>	<b>60441</b>
<b>Biochemistry</b>	
<b>Routine Investigations</b>	
Glu	68110
UREA	82372

CREA	82783
TP	68179
ALB	69091
ALP	68170
BIL	68219
AST	68192
ALT	68192
LDH	12242
CAL	31831
CHOL	1891
UA	9548
Na	61278
K	61278
D.BIL	
<b>Total</b>	<b>821376</b>

**Special Invesitgations\_ tumour markers**

<b>AFP</b>	2754
CEA	4995
CA125	3876
PSA	1418
T3	5118
T4	5118
TSH	5408
TG	1250
ATG	957
ATPO	176
BHCG	1320
Ca19.9	2592
<b>TOTAL</b>	<b>34982</b>

## DEPARTMENT OF ANAESTHESIA & PAIN RELIEF



**Dr. Namrata Ranganath**

Professor and HOD

### INTRODUCTION

The Department was set up in 1981. Over the years, along with the development of medical sciences, the department has set up high standards in patient care, education and research. All clinical departments are anchored to this specialty. The Department offers Anaesthesia and Pain relief services for cancer treatment which includes Cancer Surgery - curative, reconstructive, and palliative using advanced technology and equipments. Our operation theatre complex consist of eight state of art fully equipped operation theatres rooms with 10 bedded, ICU. We have 15 bedded step-down ICU to take care of post-operative patients.

### Related Statistics of the Operations performed during 2018

	Male	-	Female
Major Surgeries -	1818	-	2309
Minor Surgeries -	454	-	380
Total Surgeries Performed	-	-	4961
			ICU - 4127

### Research activities/projects/completed projects, ongoing and New projects undertaken during this period

#### Ongoing Research Projects in the Department

- Comparison between different doses of intravenous dexmedetomidine for ease of intubation and maintenance of anaesthesia without muscle relaxant in carcinoma breast patients undergoing modified radical mastectomy
- Intranasal Dexmedetomidine as premedicant for patients with Head & Neck cancers undergoing Direct laryngoscopic evaluation : a prospective randomized study
- Effect of Intravenous Vitamin C and N Acetyl Cysteine on Postoperative Pain and Opioid Consumption after Laparoscopic Gynaecologic Oncology Surgery: A Comparative Randomized Controlled Trial.
- Effect of Intravenous Dexmedetomidine and Propofol Infusion for Tubeless Intravenous Anaesthesia for Microlaryngoscopy Procedures in Head and Neck Surgeries Anaesthetic management of Juvenile Nasopharyngeal Angiofibroma: Our experience in the last Decade
- Does Robot Assisted Lower abdominal oncological surgeries affect the determinants of early extubation: our early experience
- Does Pre operative multimedia video allay anxiety in oncoanaesthesia?

- Efficacy of Intraperitoneal Instillation Of Ropivacaine VS Placebo For Post Operative Analgesia in Laparoscopic Gynaecological Cancer Surgeries- A Prospective Randomised Controlled Study
  - Airway Management in Oral Oncosurgeries – A Prospective Observational Study
  - Use of Virtual Endoscopy in Airway Management of Head & neck Onco surgeries
  - “Outcomes of music as complementary medicine under general anaesthesia in patients undergoing visceral cancer surgeries - a prospective randomised clinical study”
  - To compare the accuracy of two measurements using different anatomical facial landmarks for determining appropriate size of oropharyngeal airway: a prospective cross over study.
  - Factors influencing the intubation techniques in base of tongue tumors- A prospective study in a tertiary cancer hospital.
  - A prospective comparative study assessing airway sealing pressure in Baska mask using two different techniques.
  - Analysis Of factors associated with difficult intubation in oral cancer surgery - a prospective randomized study
  - comparison of fresh gas flows for optimal oxygenation and ventilation in robot assisted lower abdominal onco-surgeries
1. Yaduraj MK , Somasekharam P Vinay DM Akhil rao A Comparative study of Epidural Pentazocine and Epidural Tramadol for postoperative analgesia in lower limb surgeries UK International Journal of Basic clinical pharmacology ; vol 6/issue 10/17 Oct 2018.
  2. Yaduraj MK , Somasekharam P Vinay DM Akhil rao ;A Comparative study between 0.5% Bupivacaine plain and 0.5% Bupivacaine with clonidine combination in Brachial plexus block by supraclavicular approach in upper limb surgeries under USG technique UK ndian Journal of Anesthesia and Analgesia ; vol 5 (1)/Jan 2018.
  3. Ramachandra chowdappa , ajeet Ramanai Tiwari , Namrata Ranganath, Rekha V. Kumar. Is there difference between anastomotic site and remnant stump carcinoma in gastric stump cancers?- a single institute analysis of 90 patients. Journal of Gastrointestinal Oncology. December 2018.
  4. Vinutha M, Rashmi N R, VB Gowda. Efficacy and safety of bupivacaine instillation through surgical drain in modified radical mastectomy. MedPulse International Journal of Anesthesiology. December 2018; 8(3): 191-195.
  5. Vinutha M, Rashmi N R, VB Gowda. Evaluation of the hemodynamic effect of bupivacaine wound instillation in modified radical mastectomy. MedPulse International Journal of Anesthesiology. December 2018; 8(3): 204-207.

**Publications published by the staff of the Department**



6. Ramachandra Chowdappa, Ajeet Ramamani Tiwari, Namrata Ranganath, Rekha V. Kumar. Modified Heidelberg technique of pancreatic anastomosis post pancreaticoduodenectomy – 10 years of experience South Asian Journal of cancer: 8(2) June 2018, 88-91.
  7. Bhavana.T Henjarappa K.S, Namrata Ranganath; A Randomised control study comparing intravenous fentanyl vs nebulised fentanyl for postoperative pain relief in patients undergoing elective breast surgeries under general anesthesia MedPulse International Journal of Anaesthesiology. December 2018; 8(3);168-173
  8. Namratha G C, Dinesh Kumar, Nalini Kotekar. Does Serum Lactate and Central Venous Saturation Predict Perioperative Outcomes in Patients Undergoing Off-Pump CABG. Open J Cardiol Heart Dis.19 Jan 2018.
    - Attended CME on physics at Vydehi institute of medical sciences, Bangalore 26thjanuary 2018.
    - Chaired a session on joint pain Facet to knee:Disability to Agility,ISSPCON 1-3<sup>rd</sup>feb 2018 NIMHANS ,Bangalore.
    - Facultyfor case presentation on thyroid swelling for elective thyroidectomy and patient with IHD and hypertension for incidental surgery on 9 march 2018 at BE ORATE.
- PG EXCEL 2018[Adichunchanagiri institute of medical sciences B G Nagar] – ‘Anaesthetic considerations for robotic assisted surgeries10th february 2018.
  - Conducted the CME On head and neck anaesthesia -an update. Panel Discussion on tracheal resection in oncological thyroid surgeries.
  - Attended ‘DIFFICULT AIRWAY WORKSHOP’ in St. John’s medical college 28,29 July 2018.
  - 1st national conference of the Society Of Oncoanaesthesia And Perioperative Care[SOAPCCON] in TATA MEMORIAL CENTRE [17-19<sup>th</sup>AUGUST] MUMBAI, Moderator-Panel discussion on management of head and neck surgeries,
    - Panelist in oncoanaesthesia an emerging super speciality?
  - BCLS AND ACLS COURSE from St. Johns medical college, Bangalore.
    - PALS Course obtained from IndiraGandhi Institute of Child Health, Bangalore.
  - Delivered a Lecturer on oncoanaesthesia and pain 64th National conference of Indian Society Of Anaesthesiologist

**Dr.V.B.Gowda**

**Professor**

**Dept of Anaesthesiology & Pain Relief**

- South zone Critical care Conference 2018

**Dr.Arathi.B.H**

**Associate Professor.**



**Dept of Anaesthesiology & Pain Relief**

- South zone Critical care Conference 2018

**Dr. Shashidhar.G.S****Associate Professor.****Dept of Anaesthesiology & Pain Relief**

- SOAPOCCON 2018- MUMBAI
- FACULTY IN Airway workshop 2018- MYSORE
- JOINT SECRETARY for Head and Neck CME-2018 conducted at Kidwai Memorial Institute of Oncology, Bangalore

**07. Papers published in National and International Journals , along with Title of the****paper, authors name, and name of the journal.****Scientific Publication :**

1. Vinutha M, Rashmi N R, VB Gowda. Evaluation of the hemodynamic effect of bupivacaine wound instillation in modified radical mastectomy. MedPulse International Journal of Anesthesiology. December 2018; 8(3): 204-207.
2. Vinutha M, Rashmi N R, VB Gowda. Efficacy and safety of bupivacaine instillation through surgical drain in modified radical mastectomy. MedPulse International Journal of Anesthesiology. December 2018; 8(3): 191-195.

**Dr. RASHMI N R**

1. Vinutha M, Rashmi N R, VB Gowda. Evaluation of the hemodynamic effect of bupivacaine wound instillation in modified radical mastectomy. MedPulse International Journal of Anesthesiology. December 2018; 8(3): 204-207.
2. Vinutha M, Rashmi N R, VB Gowda. Efficacy and safety of bupivacaine instillation through surgical drain in modified radical mastectomy. MedPulse International Journal of Anesthesiology. December 2018; 8(3): 191-195.

**Dr. HENJARAPPA K S**

1. A randomised control study comparing intravenous fentanyl vs nebulised fentanyl for postoperative pain relief in patients undergoing elective breast surgeries under general anesthesia MedPulse International Journal of Anaesthesiology December 2018; 8(3); 168-173

**DR. YADURAJ. M.K**

1. Yaduraj MK , Somasekharam P Vinay DM Akhil rao A Comparative study of Epidural Pentazocine and Epidural Tramadol for postoperative analgesia in lower limb surgeries UK International Journal of Basic clinical pharmacology ; vol 6/issue 10/17 Oct 2018.
2. Yaduraj MK , Somasekharam P Vinay DM Akhil rao ;A Comparative study between 0.5% Bupivacaine plain and 0.5% Bupivacaine with clonidine combination in Brachial plexus block by supraclavicular

approach in upper limb surgeries under USG technique UK ndian Journal of Anesthesia and Analgesia ; vol 5 (1)/Jan 2018.

Predict Perioperative Outcomes in Patients Undergoing Off-Pump CABG. Open J Cardiol Heart Dis. Jan 2018.

**DR. NAMRATHA G. C**

1. Namratha G C, Dinesh Kumar, Nalini Kotekar; Does Serum Lactate and Central Venous Saturation

**Faculty and Staff :**

<u>Name</u>	<u>Designation</u>
1. Dr.Namrata Ranganath	Professor and HOD
2. Dr.V.B.Gowda	Professor
3. Dr.Arathi .B.H	Associate Professor
4. Dr.Shashidhar .G.S	Associate Professor
5. Dr.Rashmi .N.R	Associate Professor
6. Dr.Henjarappa .K.S	Associate Professor
7. Dr.Kavitha Lakshman	Assistant Professor
8. Dr.Sumitha.C.S	Assistant Professor
9. Dr.Rachana .N.D	Assistant Professor
10. Dr.Mamatha .H.S	Assistant Professor
11. Dr.Yadhuraj .M.K	Assistant Professor
12. Dr. Roopa B.O	Assistant Professor
13. Dr. Namratha .G.C	Assistant Professor
14. Dr.Punita Priya .S	Assistant Professor
15. Vijayalakshmi.P	Anaesthesia technician
16. Krishnamurthy.C	Anaesthesia technician
17. Raju.V	Anaesthesia technician
18. Ankappa	Anaesthesia technician
19. Raju C	Anaesthesia technician
20. Naveesh.T.M	Anaesthesia technician

## ACADEMIC CELL

Officer-in-Charge  
(Officiating basis)



**Dr. Naveen,**  
Prof. & Head  
Dept. of Radiation Oncology

The Academic Cell has been in existence since 1987. The main objective and functioning of the Academic Cell is to facilitate continuing Medical Education in the speciality of Oncology. The Institute imparts training in various discipline sub specialties of Oncology to Post Graduate, Undergraduates, internees, nurses and Scientists of allied Sciences from various Medical/Paramedical Institutions in the State / Country.

### Courses offered:

In recognition of the facilities available at the Institute for Diagnosis, treatment and Research on Cancer patients, various Post Graduate, Undergraduates, and Diploma courses are offered and these courses are affiliated / Recognised by Rajiv Gandhi University of Health Sciences, Medical Council of India and National Board of Examinations.

### **I. Post Graduate (Super Speciality) Courses**

#### **Courses No. of Seats**

1. M.Ch (Surgical Oncology) -08
2. M.Ch (Gynec Oncology) -01
3. M.Ch (Head & Neck) - 01
4. D.M (Medical Oncology) -06
5. D.M (Peadiatric Oncology) -02

### **II. Post Graduate and Diploma Courses**

1. M.D. (Radiotherapy) - 09
2. M.D. (Pathology) - 04
3. M.D. (Microbiology) - 04
4. M.D. (Anesthesia) - 04
5. DNB (Radiodiagnosis)
  - Primary - 03
  - Secondary - 03
6. DNB (Anaesthesia)
  - Primary - 02
  - Secondary - 03
7. DNB (Pathology)
  - Primary - 02
  - Secondary - 02
8. Diploma in Radiotherapy- 03

### **III. Fellowship Programme**

1. Peadiatric Medical Oncology- 04
2. Paliative Care - 04
3. Tumor Pathology - 04
4. Head & Neck Cancer Surgery- 04
5. Oral Oncosurgery - 04
6. Onco Pathology - 04

### **IV. PG Allied Health Science Course**

- M.Sc. Radiation Physics -05
- M.Sc. Medical Imaging Technology -10
- M.Sc. Nursing -

### **V. Undergraduate Courses**

1. B.Sc. Medical Technology -10  
(Medical Laboratory Technology)
2. B.Sc Medical Technology -10  
(Imaging Technology)
3. B.Sc Medical Technology -10  
(Radiotherapy)
4. B.Sc. Operation Theatre Technology-10
5. B.Sc. Anaesthesia Technology -10
6. B.Sc. Nursing - 40

The selection of students for the Superspeciality courses D.M and M.Ch, Post Graduate course MD in Radiotherapy, MD Pathology, MD Microbiology, MD Anaesthesia and Diploma in Radiotherapy (DMRT) are done on Selection of through NEET-SS, NEET-PG All India basis, selection of Fellowship through written test and Interview by Institute. Selection of UG & PG in Allied Sciences through KEA. All Post Graduate (including Super Speciality), Diploma (DMRT) students are paid monthly stipend as per the rules of State Govt.

The departments of Pathology, Biochemistry, Microbiology and Radiation Physics are recognized for Ph.d programmes under RGUHS. Many students are pursuing for Ph.D in these departments.

In addition, the Government of India has recognized this Institute as one of the Institute of National Excellence and has been deputing Medical persons for W.H.O. fellowships for higher education and training in cancer treatment and

research. It has among its primary objectives, the promotion of a high standard patient care and aims to provide top notch integrated training programmes in the Oncological Sciences. The Institute has initiated a programme of Professional education, technology and expertise transfer through short term education/training programmes for under graduates, post graduate students from medical colleges/institutions/ nursing colleges of Karnataka as well as from other states of the country. In additions students pursuing Post Graduate studies various disciplines such as Biotechnology, Nursing, Social Work etc. are posted short term for Orientation classes / as Observers / trainees to the respective departments. The Doctors and Health Workers of MHFWS, Govt. of Karnataka are also trained by the institute with the main objective of imparting knowledge in prevention, diagnosis and treatment of cancer in early stage in their respective areas. The Academic Cell liaisons these activities between the Institute and other Institutions Medical Colleges.

#### **STAFF POSITION**

Sl. No.	Name	Designation
1	Dr. Naveen, Prof. & Head Dept. of Radiation Oncology	Officer-in-Charge (Officiating basis)
2	Sri. A. Sathyanarayana	Section Officer
3	Sri. S.G. Surendra Murthy	Asst. Social Scientist
4	Smt. H. Virgina Venkateshwari	First Division Assistant
5	Smt. Renuka .R.	Store clerk cum Typist

## DEPARTMENT OF BIOCHEMISTRY



**Dr.G.Ramesh**  
Prof. & HOD

The department of Biochemistry is a comprehensive department involved in patient care, teaching and research. A wide spectrum of clinical chemistry investigations including tumor markers are being routinely carried out in the department for the out-patients and in-patients of our hospital and also patients referred from other centers. The department is well equipped with State of art analyzers (for routine work) and has a regular quality control program to ensure the accuracy of laboratory results reported. Our laboratory does more than 7,00,000 tests annually. Turn around time for all the investigations is 4 hours. House keeping and waste management is done as per the Institute waste management policy.

### **Academic Activities:**

The department is actively engaged in several teaching programs. The 3 years B.Sc. Medical Laboratory Technology course is being conducted under the Rajiv Gandhi University of Health Sciences. Undergraduate and postgraduate medical students and students enrolled in the super specialty Oncology courses of the Medical University and from neighboring institutes are regularly posted to the department for training.

In addition, the department extends facilities and guidance to postgraduate medical and dental students for their

dissertation work. A number of undergraduate and post graduate non medical students from Bangalore University and other outside universities are regularly posted to the department for summer training programs.

### **Research Activities:**

Our laboratory is recognized by the Bhabha Atomic Research Centre for carrying out in vitro radioisotope work. The department is recognized by the Rajiv Gandhi University of Health Sciences, Karnataka State, to carry out research work for doctoral program. Our faculty members are recognized guides and have students registered for Ph.D. in Medical Biochemistry. Currently five candidates are working for their Ph.D. degree in department of Biochemistry under the RGUHS.

### **Research activities | Projects | Completed projects, ongoing and New projects**

**1. “A study of expression of cytokines in breast cancer patients”.**

*Supported by DST, Grant number: SERC/LS-0284/2010*

**2. Investigating galectin based potentiation of malignant ovarian cells within an ascites microenvironment**

*Supported by RGUHS*

**3. Role of hTERT expression and Length of telomeric DNA in breast cancer.**

*Supported by RGUHS*



- Till Date 13 students have been awarded PhD from Bangalore University & RGUHS.
- Summer research programs have been conducted for the graduate and Post Graduate students of different Universities.



### Ongoing projects:

1. "Role of the Cytoplasmic E-Cadherin Fragment in Ovarian Carcinoma and development of plasma based methylation biomarker panel for early diagnosis and prognosis." (RGUHS).
2. "Role of DNA methylation in predicting response to chemotherapy & understanding signalling pathways involved in ovarian carcinoma." (RGUHS).
3. " Aberrant promoter hypermethylation of tumor suppressor genes in endometrial carcinoma- correlation with clinicopathological parameters(RGUHS)

### Training activities:

- The department has been recognized by the RGUHS, Bangalore for the Ph.D program. Currently there are four students who have registered for a Ph.D under the RGUHS.

### 4. Papers published in National & International Journals, along with title of the paper, authors name, name of the journal:

1. **Thriveni K**, Raju A, Ramaswamy G, Krishnamurthy S, Kumar RV. Tumor necrosis factor: An inflammatory microenvironment marker in primary breast cancer patients. *Int J Mol Immuno Oncol* 2018;3:24-27.
2. **Thriveni K**, Raju A, Ramaswamy G, Krishnamurthy S, Impact of Gene Polymorphism of *TNF $\alpha$*  rs 1800629 and *TNF $\beta$*  rs 909253 on Plasma Levels of South-Indian Breast Cancer Patients. *Ind J Cancer*.2018;55:179-183.

**DEPARTMENT OF BIOCHEMISTRY****STATISTICS FROM THE MONTH OF JAN'2018 TO DEC'2018****(Routine Investigations)**

Month	Glu	URE	CRE	TP	ALB	ALP	BIL	AST	ALT	LDH	CAL	CHO	UA	Na	K
Jan	5802	6866	6896	5672	5767	5666	5670	5668	5668	888	2487	78	770	5138	5138
Feb	5322	6352	6391	5265	5323	5262	5268	5262	5263	859	2497	95	792	4845	4845
Mar	5656	6619	6656	5544	5620	5541	5546	5541	5541	953	2738	113	789	5027	5027
Apr	5459	6526	6556	5413	5525	5420	5419	5413	5413	892	2514	100	679	4777	4777
May	5660	7106	7141	5784	5871	5775	5782	5777	5777	943	2577	87	673	5075	5075
Jun	5435	6652	6683	5515	5589	5515	5522	5515	5515	896	2492	148	690	4682	4682
Jul	5943	7342	7382	6013	6111	6012	6016	6012	6012	882	2753	116	619	5284	5284
Aug	5776	7063	7103	5767	5862	5770	5771	5777	5777	837	2792	103	618	5294	5294
Sep	5494	6799	6824	5614	5678	5618	5614	5613	5613	1027	2589	88	774	5042	5042
Oct	5521	6859	6887	5613	5667	5610	5624	5622	5622	1189	2446	84	900	5157	5157
Nov	5474	6580	6611	5481	5535	5480	5483	5481	5481	1075	2392	92	795	5048	5048
Dec	5893	6933	6978	5823	5868	5826	5829	5835	5835	1126	2879	112	770	5234	5234
Contro	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675
<b>Total</b>	<b>6811</b>	<b>82372</b>	<b>82783</b>	<b>6817</b>	<b>6909</b>	<b>6817</b>	<b>6821</b>	<b>6819</b>	<b>6819</b>	<b>1224</b>	<b>3183</b>	<b>1891</b>	<b>954</b>	<b>6127</b>	<b>6127</b>

Grand Total 821349

**SPECIAL INVESTIGATIONS (TUMOUR MARKERS) (JAN'2018 TO DEC'2018)**

Month	AFP	CEA	CA125	PSA	T3	T4	TSH	TG	ATG	ATPO	BHCG	Ca19.9
Jan	185	382	276	89	403	403	422	92	82	03	104	161
Feb	183	375	259	94	405	405	445	105	70	05	88	205
Mar	233	403	296	121	359	359	373	75	68	07	100	217
Apr	236	431	288	96	386	386	417	89	72	08	96	213
May	226	437	285	109	435	435	452	85	67	03	85	221
Jun	221	393	301	119	418	418	435	91	64	04	115	214
Jul	246	449	304	117	432	432	448	88	63	06	110	241
Aug	191	403	278	120	403	403	426	70	47	04	76	212
Sep	179	349	309	94	380	380	402	97	85	16	79	200
Oct	187	342	292	102	335	335	357	91	84	21	103	160
Nov	195	347	315	87	386	386	425	79	64	18	92	185
Dec	222	334	323	100	426	426	456	118	91	21	122	193
Control	250	350	350	170	350	350	350	170	100	60	150	170
<b>Total</b>	<b>2754</b>	<b>4995</b>	<b>3876</b>	<b>1418</b>	<b>5118</b>	<b>5118</b>	<b>5408</b>	<b>1250</b>	<b>957</b>	<b>176</b>	<b>1320</b>	<b>2592</b>

Grand Total 34982

**ROUTINE INVESTIGATIONS - 821349**  
**SPECIAL INVESTIGATIONS - 34982**  
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**GRAND TOTAL - 856331**

**Faculty and Staff:**

<b><u>Name</u></b>	<b><u>Designation</u></b>
1. Dr.G.Ramesh	Prof. & Head
2. Dr.K.Thriveni	Asso.Prof.
3. Dr.Sandeep Kumar	Asst. Prof.
4. Mr.S.P. Vajra Kumar	Asst.Reseach Scientist
5. Smt.N.C.Vijayalakshmi	Chief Lab.Tech:
6. Mr.Syed Abdul Jameel	Senior Med.Lab.Tech.
7. Mr.D.Narasimulu	Senior Med.Lab.Tech.
8. Mr.Shivaswamy	Senior Med.Lab.Tech.
9. Mr.K.B.Lingaraju	Jr.Med.Lab.Technologist
10. Smt.G.S.Shivarathnamma	Jr. Med.Lab.Technologist
11. Smt.S.K.Kavitha	Jr. Med.Lab.Technologist



## DEPARTMENT OF BLOOD BANK & IMMUNO HAEMATOLOGY

**INTRODUCTION:** 1. Department of Immunohematology and blood transfusion provides supportive care to all the patients who visit or hospital. On an average of 10,000 blood units of blood are collected and around 18000 are issued annually. Almost 96%-98% component separation occurs in the department. As it is a cancer setup, maximum requirement lies of platelets and hence the component separation done is optimum so as to ensure maximum uptake and safety to the patient. components like fresh frozen plasma and platelet concentrate are issued to the patients undergoing chemotherapy and surgical intervention.

- Regular teaching sessions and hands on sessions are conducted for staff and also for students in order to have better understanding in blood science.
- Regular blood donation camps are conducted and motivation of blood donors is carried out. The maximum efforts are undertaken to ensure that all the blood collection is collected from voluntary non-remunerated blood donors.the blood bank is a regular participant of EQAS TRANSFUSION MODULE for external quality assessment, carried out by CMC, Vellore.



### Conference/seminars/workshops conducted by department:

On 15<sup>th</sup> January 2018 workshop related to implementation of apheresis and its importance was arranged at institute's auditorium in collaboration with rotary cantonment Bangalore trust. Knowledge regarding procedures of apheresis and its current scenario in Kidwai was discussed in the presence of Director, KMIO

### Participation at conference/seminars/workshops:

(a) Dr. Dholakiya Spruha K:  
CME for State Board Transfusion  
Nimhans NACO

(b) Dr. Dholakiya Spruha K and Dr. Satish Babu:  
Workshop regarding NAT facility to Government of Karnataka held at Bowring Institute.

**COLLECTIONS, ISSUES-UNITS FOR THE YEAR OF JANUARY 2018 TO  
DECEMBER 2018**

MONTH	COLLECTIONS BBC+CAMPS	OUTSIDE- RECEIVED PRBC- WB/PLT		ISSUES			HIV	HCV	HBSAg	
				PRBC	WB FFP	PLT				
January	766	143	1510	622	142	622	552	0	0	02
February	751	118	1183	444	303	444	427	0	0	04
March	874	325	1781	494	376	494	742	0	0	04
April	872	150	1351	595	276	595	502	0	0	01
May	860	143	353	817	36	817	564	01	01	05
June	942	94	1330	795	141	795	505	0	02	04
July	973	329	1287	718	249	718	683	0	0	06
August	1011	229	1583	670	332	670	448	01	0	08
September	685	299	1641	358	324	358	299	0	01	02
October	794	478	1330	360	431	360	451	01	01	01
November	628	271	642	295	330	295	414	0	0	03
December	766	156	1313	631	135	631	411	00	00	06

**Total of Issues Blood = 12614**

**Faculty and Staff:**

<u>Name</u>	<u>Designation</u>
1. Dr. Dholakiya Spruha K	Assistant professor
2. Dr. Satish Babu	Assistant Surgeon
3. Smt. Madevi	Asst. Social Welfare Officer
4. Sri Venkateshmurthy	Chief Lab. Technologist
5. Smt. Janet Andrade	Staff nurse
6. Smt. B.K.Shanthi	Staff nurse
7. Sri G. Krishnamurthy	Sr. Lab. Technologist
8. Sri Ashwath Reddy	Jr. Lab. Technologist
9. Smt. Amrutha	Jr. Lab. Technologist
10. Sri Rathan Kumar	Jr. Lab. Technologist
11. Sri Adiseshamurthy	Jr. Lab. Technologist

## DEPARTMENT OF COMMUNITY ONCOLOGY

### INTRODUCTION:

The essential components of Cancer Control Programme are Education, Prevention, Early detection, diagnosis, Treatment, Follow-up, after care and rehabilitation which form the three areas of prevention namely Primary, Secondary and Tertiary prevention.



Early detection and diagnosis are pre-requisite for adequate treatment of pre-cancer and early cancers. The aim of early detection and diagnosis is to examine and identify men, women and children who are generally asymptomatic and apparently healthy. The department of Community Oncology (erstwhile Mobile Cancer Education and Detection –MCEdu) has been established at the Kidwai Memorial Institute of Oncology since 1983. Initially the department consisted of two units viz; Base Unit

### Objectives:

The Main objectives of the department are,

- 1) To increase awareness among community through following means for prevention and early detection of cancer
  - a) through community outreach programs,
  - b) by involving citizens, citizen groups, NGOs, etc.
- 2) To enable ASHA workers, PHCs, CHCs, TLHs, DLHs, TCCC, NGOs, participating private hospitals, etc. to undertake screening (both opportunistic and systematic screening) for early detection of cancer.
- 3) To provide training and capacity building to ASHA workers, PHCs, CHCs, TLHs, DLHs and TCCC in the State for prevention, early detection, screening, diagnosis and treatment of cancer.
- 4) To develop and implement IT systems, software, tools, etc. required for effective implementation of State level Community Cancer Services for awareness, training, implementation, monitoring, evaluation, research and improvement.
- 5) To establish a State Level Center of Excellence Office at Kidwai Cancer Institute for Community Cancer Services.



## Linkages with Tertiary Cancer Centre (TCC)

The District is to be linked with nearby TCC, which will provide specialized services for early detection of Cancer at CHC level through camp approach. The TCC will further investigate the suspected cases of Cancer detected in the camp to confirm the diagnosis. The confirmed cases will be given appropriate treatment at TCC. The financial support for the treatment will be given under the programme or through other scheme. In the camp, the following activities proposed to be carried out:

- Screening of target population for early detection of Cancer
- Clinical and laboratory examination of suspected cases referred by health facilities.
- Follow up of already confirmed cancer cases
- Onsite hands-on-training of health care providers in cancer screening

## Awareness Programs

About a week Community awareness campaign will be organized just prior to the camp to create awareness in the community about the early warning signals of cancer, date, Time, place of screening camp to ensure maximum community participation, mobilization of target population to report for screening. Various local approaches for

creating awareness will be used such as person to person contact, miking, nukkad natak, wall writings, posters etc. Local NGOs and Village Health & Sanitation Committee, ASHA and local volunteers will be involved in awareness creation in the community.

## Training

The Health Care Providers such as doctors (including Gynaecologist & general surgeon), staff nurse and ANMs / ASHAs / ASHAs will be provided one day capsule training at district level on early warning signals of Cancers, Self and clinical examination of breast, and VIA technique for cancer cervix. Services of medical college will also be taken in training and organization of camp for screening.



The department in collaboration with Voluntary organizations conducts Cancer Education and Detection camps in various places (mostly in rural areas) of Karnataka and also neighbouring states. These camps are conducted as part of secondary prevention where the mass is screened through opportunistic screening programs by the team of specialised doctors. Considering the community work the Institute has been doing, Bharath Electronics Limited (BEL) under their CSR programme, donated a Hi tech Cancer

detection Bus at the cost of 2 crore Rupees during 2018. This bus is equipped with State of Art gadgets such as Digital X-ray machine, multi probe Ultrasound machine, Blood Analyser, Gynaec examination table, Colposcope, ECG apparatus and Bio Toilet inside the bus. This bus is used for screening people for early detection through camps. On an average the department conducts 6-8 camps and around 250-300 people are screened in each camp. The specialists from various departments of the Institute take part in the screening activities.

In addition to the above bus, another vehicle equipped with Mammography machine donated by America Kannada Koota Association (AKKA) also participates in the screening activities with the intention of screening Women for detection of Breast Cancer. People attending these camps are primarily screened for detection of Cancer cervix through PAP smear, Breast Cancers using clinical breast examination followed by Mammography and Ultrasonography (wherever indicated) and Oral examination for identifying oral cancers. The experts from the institute participate in creating Cancer Awareness among the people through lectures and these programmes are regularly conducted at High Schools and Colleges, Garment factories and through the camps organised by various NGO's. Lot of education materials have been developed by the department and this includes Audio-Visuals Aids and exhibition materials. Experts contribute for creating awareness among general public through Print and Electronic media. Flip charts, Pamphlets, Video films have been developed for this purpose. During these lectures various topics such as burden of cancer, causes of cancer, warning signs and symptoms for cancer, harmful effects of the tobacco and alcohol use, importance of healthy diet and personal hygiene are

covered. Those cases suspected /detected during camps are further referred to Kidwai for further investigations/treatment. In addition several community projects have been proposed as part of cancer control activities with the strategies as mentioned below.

## **Opportunistic screening through existing health system**

### **Cancer Cervix**

All women aged 35 to 50 years visiting district hospital/sub-district hospital/community health centre will be screened for cancer cervix using VIA technique by trained gynaecologist, staff nurse and ANMs / ASHAs / ASHAs. All suspected cases will be referred to TCC for final diagnosis and management.

### **Breast Cancer**

All women visiting district hospital/sub-district hospital/community health centre/Sub-centre may be taught breast self examination (BSE) to examine their breast once a month, within a week after the menstrual period with the flat of the hand. Any woman with the signs and symptoms should be ruled out of breast cancer by the doctors at PHC and above by Clinical Examination as described in the protocol to detect Cancer Breast.

### **Oral Cancer**

Pre-cancerous lesions or conditions are local or generalized disturbances that predispose to malignancy in a particular site associated with reverse smoking, beedi smoking and sub-mucous lesions. These conditions are amenable to early diagnosis and treatment.

All habitual tobacco users visiting hospital/sub-district hospital/community health centre/Sub-centre may be taught Self Examination of oral cavity. All doctors and nurses should be trained in examination of

oral cavity for any lesion. The Health Care Providers at CHC and above should examine all persons especially habitual tobacco users for any lesion in oral cavity. Oral cavity

includes lip, anterior 2/3 of tongue, floor of mouth, buccal mucosa, gingival mucosa and hard palate and as per the protocol.

In addition to the above staff, Doctors, Nursing Staff, Technicians and Supportive staff will be posted on rotation basis from various departments on the camp days. Faculty from the concerned departments will participate in the Awareness programme as and when required.

To expand the Preventive Oncology activities it has been proposed to upgrade the department to fulfilled Centre for Public Health

### KIDWAI MEMORIAL INSTITUTE OF ONCOLOGY, BENGALURU

#### DEPARTMENT OF COMMUNITY ONCOLOGY

#### DETAILS OF CANCER DETECTION CAMPS CONDUCTED FROM JANUARY 2018 TO DECEMBER 2018

Sl.No.	Date of Camp	Organiser/Venue	Place	No. screened	No. of Smears
	20-01-2018	Shravana Belagola	SHRAVANABELAGOLA	26	18
	06-01-2018	Lion's Club, Jayanagar/ Edagah-E jadeed shadub	BENGALURU	19	14
	10-02-2018	HANAGAL/ GADAG	HANAGAL	25	6
		Vanbi Siddapama/ Basaveshwara nagar	BENGALURU	10	3
	02-03-2018	Shivajinagar,	BENGALURU	11	8
	04-03-2018	Putturu	PUTTURU	19	19
	25-03-2018	KANAKAPURA	KANAKAPURA	44	29
	31-03-2018	ISC CHURCH, SHANTHI CHURCH, TUMAKURU	TUMAKURU	28	24
	05-04-2018	LION'S CLUB, BENGALURU/ SAI BABA	BENGALURU	20	17
	07-04-2018	HIGH COURT OF KARNATAKA	BENGALURU	78	64
	12-04-2018			45	26
	21-04-2018	BBMP HOSPITAL, DOUBLE ROAD	BENGALURU	88	69

	28-04-2018	LOKHANDE'S HOSPITAL, KALYANANAGAR	BENGALURU	16	13
	15-06-2018	PALACE GROUND.	BENGALURU	9	0
	16-05-2018			7	0
	29-06-2018	SLUM BOARD QUARTERS,	BENGALURU	53	15
	30-06-2018	BHARATHIYA INTERNITES PVT, BANNERAGHATTA	BENGALURU	95	56
	08-07-2018	ROTARY CLUB/ G.B.R.COLLEGE,	HOOVINA HADAGALI	20	11
	16-07-2018	VIJAYANAGAR DEPOT	BENGALURU	16	12
	22-07-2018	THANDYA ABHIVRUDHI ILAKHE/ HOSHALLI	HOSAHALLI THANDYA/ CHIKKAMAGALURU	10	9
	11-08-2018	ANJANAPURA	BENGALURU	44	32
	18-08-2018	PURANDARA TRUST/ HESARAGHATTA MAIN	BENGALURU	48	32
	19-08-2018	MARAVEKERE	MARAVEKERE	43	10
	15-09-2018	MOBILITY INDIA, JAYANAGAR	BENGALURU	52	47
	02-10-2018	RAVINDRA KALAKSHETHRA	BENGALURU	8	5
	31-10-2018	N.R.COLONY, BASAVANAGUDI	BENGALURU	17	17
	27-11-2018	GANGONDANAHALLI	BENGALURU	7	4
	28-11-2018	SAURASTRAPET	BENGALURU	29	25
	29-11-2018	BINNI MILL AREA	BENGALURU	12	10
	02-12-2018	S.G.PALYA	BENGALURU	11	8
	22-12-2018	MAGADI ROAD, K.P.AGRAHARA	BENGALURU	30	30
	24-12-2018	CHIKKANAYAKANA HALLI	CHIKKANAYAKANAHALLI	47	28
	25-12-2018	SRI RAMADAS, FORMER MINISTER/ MYSURU	MYSURU	5	2
	30-12-2018	MAHATHMA GANDHI SCHOOL/ KUNIGAL	KUNIGAL	9	7

**Staff of the Department:**

Dr. C. Ramachandra	Director & Head
Dr. C. Ramesh	Professor and HOD Dept. of Epidimeiology
Dr. A. Mahantesh	Assistant Surgeon
Smt. Vidya	Cytotechnician



## DEPARTMENT OF EPIDEMIOLOGY AND BIOSTATISTICS



**Dr.C.Ramesh**  
Prof. & HOD

### INTRODUCTION

The Department of Epidemiology and Biostatistics comprises of both the Hospital Based Cancer Registry and Population Based Cancer Registry. The Hospital Based Cancer Registry of the dept. collects information on each and every patient registered at Kidwai Memorial Institute of Oncology in a pre-devised questionnaire devised for the purpose by the National Cancer Registry Programme Project of the Indian Council of Medical Research. The Population Based Cancer Registry collects information on each and every resident (of Bangalore) cancer patient diagnosed/treated at any of the Hospitals/Nursing Homes/Pathology laboratories in addition to the vital statistics divisions of the Bangalore Urban agglomeration area apart from the base Institution (KMIO). The Hospital Based Cancer Registry provides information on the magnitude of cancer problem of a

given hospital in terms of various types of cancers, the treatment particulars and its outcome etc., which enables the Institution to plan for the management/control of the cancer disease. The data collected by the PBCR provides magnitude of cancer in a given community (i.e. Bangalore) in terms of rates in addition to types of cancers and trends of disease over the period based on which one can plan control measures, estimation of cancers in a given region. The Data abstracted is subjected to quality checks using the software developed and provided by National Cancer Registry Programme (ICMR) and data is widely publicised in national and International Publications / forum. The data from PBCR is included in Cancers Incidence in Five Continent Volumes published by IARC. The information so collected has helped registries to generate hypothesis enabling initiation of epidemiological studies for finding out possible causative factors for different cancers.

A total number of 18990 new cases have been registered during the year 2018 and 328845 follow-up visits have been recorded. In other words, about 60 new cases and about 900 follow-up patients visits KMIO daily for treatment. A total number of 17477 patients have been treated as inpatients during the year 2018. The Hospital has bed strength of 575.



### Leading sites of cancers in HBCR: 2018

**Males:** Oral cancers continue to be the most common form of cancers among males and accounts for 16.3% of the total cancers in males. Among Oral cancers, cancer of the Mouth is the most predominant site of cancer accounting for over 54 % of the oral cancers. The (other common cancers among males in order are Pharyngeal cancers (9.4 %), Lung Cancers (8.8%), Esophagus (6.0%), Larynx (5.6%), Stomach (5.5%)

**Females:** Cancer of the cervix uteri continues to be the most predominant site of cancer and accounted for 22.59 % of all cancers in females. Cancer of the breast is the second most common site (19.24 %) followed by cancers of oral cavity (10.76%), ovary (6.75%) and thyroid (4.32%). Over the years, a gradual increase in the proportion of cervical cancers and a marginal but steady increase in the numbers and relative proportion of breast cancers is observed.

Tobacco related cancers account for 33.7% of all cancers and males accounted for 47.4% of total male cancers and 20.6 % of all cancers in females in the HBCR

Among Males, Oral and Pharyngeal Cancer together account for 54.1 % and Esophagus cancer for 12.6%. Among

females, more than fifty percent of TRCs are Oral Cavity Cancers (56.2%) followed by Esophagus (19.5%) and Lung (12.1%). Together in both sexes, the Tobacco Related Cancers accounted for 33.7%



### Population Based Cancer Registry

The Population Based Cancer Registry at Kidwai Memorial Institute of Oncology (KMIO) was established during June 1981 with the main objective of assessing the magnitude and type of various cancers in Bangalore, and to provide a framework for controlling the impact of cancer in the community apart from carrying out research investigations on cancer aetiology through epidemiological studies. This registry was included under the network project of the National Cancer Registry Programme (NCRP) of Indian Council of Medical Research (ICMR) and the actual registration of cancer cases commenced from 1<sup>st</sup> January 1982.

Bangalore is the capital of the Indian state of Karnataka, located on the Deccan Plateau in the south-eastern part of Karnataka, Bangalore is well known as a hub for India's information technology sector.

As a large and growing metropolis, Bangalore is home to many well-recognized colleges and research

institutions in India. Numerous public sector industries, software companies, aerospace, telecommunications and defense organizations are located in the city. Bangalore is also known as the Silicon Valley of India because of its position as the nation's leading IT exporter. A demographically diverse city, Bangalore is a major economic and cultural hub.

Bangalore lies in the southeast of the Indian state of Karnataka. It is in the centre of the Mysore Plateau at an average elevation of 900 m (2953 ft ) and located at 12.97°N 77.56°E. Bangalore experiences a tropical climate with distinct wet and dry seasons. Due to its high elevation, Bangalore usually enjoys a more moderate climate throughout the year, although occasional heat waves can make things very uncomfortable in the summer. The coolest month is December with an average temperature of 15.4°C and the hottest month is April with an average high temperature of 32.8°C. Bangalore receives rainfall from both the northeast and the southwest monsoons.

The registry covers Bangalore Urban District which consists of Bruhat Bangalore Mahanagara Palike (BBMP) which consists of 198 wards and 38 death registration units; Bangalore Urban District has an area of 741km<sup>2</sup> with an estimated population of **11,440,000** as of 2018.

## INCIDENCE PATTERNS IN BANGALORE

### INCIDENCE CASES:

All new cases of cancer diagnosed in a defined population during a specified period of time are considered as incident cases. Hence all new cases of cancer diagnosed in the defined area of Bangalore Urban District during the year 2018 (1<sup>st</sup> Jan to 31<sup>st</sup> Dec) formed the incident cases.

Year	Incident cases			AAR/100000	
	Male	Females	Total	Male	Females
1982	973	1167	2140	90.7	117.5
1983	918	1087	2005	83.5	105.8
1984	934	1093	2027	81.8	105.9
1985	1030	1074	2104	88.7	98.9
1986	1056	1186	2242	87.4	105.9
1987	1191	1351	2542	99.3	118.4
1988	1291	1437	2728	102.5	121.0
1989	1336	1435	2771	100.8	114.2
1990	1379	1640	3019	101.9	128.4
1991	1407	1692	3099	103.0	131.9
1992	1505	1661	3166	100.8	117.6
1993	1612	1858	3470	103.4	126.3
1994	1451	1679	3130	87.3	106.8

1995	1606	1794	3400	92.2	110.8
1996	1486	1730	3216	82.3	97.2
1997	1500	1717	3217	82.7	99.3
1998	1625	1868	3493	87.0	103.4
1999	1707	2011	3718	86.1	103.5
2000	1896	2199	4095	94.4	110.9
2001	1938	2261	4199	93.3	112.9
2002	2008	2359	4367	96.7	116.1
2003	2039	2445	4484	96.5	116.1
2004	2157	2735	4892	95.2	120.2
2005	2430	2827	5257	102.0	118.6
2006	2655	3282	5937	108.6	133.5
2007	2971	3665	6636	117.4	143.0
2008	3068	3717	6785	118.3	132.2
2009	2961	3682	6643	109.6	134.4
2010	3284	3947	7231	116.9	139.4
2011	3550	4164	7714	123.0	142.1
2012	3929	4645	8574	114.3	135.6
2013	4501	5230	9731	125.0	146.5
2014	4796	5957	10753	126.5	157.3
2015	5162	6636	11798	128.9	161.8
2016	5528	7315	12843	131.3	166.3
2017	5894	7994	13888	133.7	170.7
2018	6260	8673	14933	136.1	175.2

**Proportion (%) of cases registered from major sources of registration**

Source	2017	2018	2019
	%	%	%
HCG	26.1	22.9	40.0
Kidwai	23.1	19.5	16.3
M S Ramaiah	3.7	7.0	4.8
Manipal Hospital	3.7	8.3	2.7
St. Johns	5.9	6.5	1.4
Curie Institute	0.2	0.7	10.2
Karunashraya	2.9	6.6	0.4
Apollo Hospital	4.1	4.7	4.9
St Marthas Hospital	2.4	2.1	2.6
Other Source	28.1	21.6	21.7
<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

**Leading Sites of Cancer**

The leading sites of cancer among males and females are shown in above figure. Among males, cancer of the lung continues to be the most predominant site of cancer constituting

10.1% of the total male cancers followed by cancers of the stomach (6.9%), prostate (6.4%), esophagus (5.4%) and Liver (4.3%). Among females, cancer of the breast is the most common cancer constituting 27.9% of the total

female cancers followed by cancer of the cervix (12.0%), ovary (6.4%), Mouth (3.8%) and Lung (3.8%). Altogether, the first ten leading sites of cancers among males and females accounted for 52.6.0% and 67.1% respectively.

#### Research Activities-Projects (On going):

1. “Hospital Based Cancer Registry – Bangalore” ,National Centre for Disease Informatics & Research (NCDIR) – ICMR (Oncoing since 1982)
2. “Population Based Cancer Registry – Bangalore” ,National Centre for Disease Informatics & Research (NCDIR) – ICMR (Oncoing since 1982)
3. Hospital Based Cancer Registry - A Study on Pattern of Care and Survival Studies of Cervix, Breast and Head and Neck Cancers

#### PAPER PUBLICATIONS BY STAFF OF THE DEPARTMENT

1. Cherungonath A, Appaji L, Padma M, Arunakumari BS, Arunkumar AR, Avinash T, **Vijay C R.** et al. Profile of acute lymphoblastic leukemia in children under 2 years of age. Indian J Med PaediatrOncol 2018;39:307-11.
2. Joseph B, Farooq N, Kumar S, **Vijay CR,** Puthur KJ, **Ramesh C,** et al. Breast-conserving radiotherapy with simultaneous integrated boost; field-in-field three-dimensional conformal radiotherapy versus inverse intensity-modulated radiotherapy – A dosimetric comparison: Do we need intensity-modulated radiotherapy? South Asian J Cancer 2018;7:163-6.

#### Department/Unit wise patient load – 2018(1.1.2018 to 31.12.2018)

UNIT	New Cases	Follow – up Cases	Total	Admission	Discharge	In patient Deaths
SUR	8050	28372	36422	4099	3934	208
MED1	1089	35489	36578	3626	3359	263
MED.2	928	28726	29654	3348	3142	199
PAED.	740	20386	21126	1695	1592	110
GYNA.	1137	20110	21247	887	847	36
H&N	2649	15173	17822	811	765	45
ORAL	1820	10380	12200	604	586	17
RT1	959	42916	43875	648	602	28
RT2	746	39045	39791	504	476	24
RT3	653	37291	37944	437	413	24
NM	143	8260	8403	241	246	0
PRC	76	23707	23783	577	565	11
<b>TOT.</b>	<b>18990</b>	<b>309855</b>	<b>328845</b>	<b>17477</b>	<b>16527</b>	<b>965</b>

**Estimated values from 2017 data**

<b>10 Leading Males</b>	<b>Males 2018</b>		<b>Males 2019</b>		
	<b>#</b>	<b>%</b>	<b>#</b>	<b>%</b>	
Oral pharynx	710	16.3	773	16.38	
Lung	407	9.4	442	9.37	
Esophagus	381	8.8	414	8.77	
Larynx	260	6.0	282	5.98	
Stomach	243	5.6	263	5.57	
Brain	239	5.5	260	5.51	
Hypopharynx	211	4.9	229	4.85	
NHL	200	4.6	217	4.60	
Leukaemia	156	3.6	168	3.56	
ALL OTHERS	153	3.5	166	3.52	
	1398	32.2	1521	32.23	
	3198	4345	100.0	4719	100.00
<b>10 leading sites</b>					
<b>Female</b>	<b>No</b>	<b>%</b>	<b>No</b>	<b>%</b>	
Cervix Uteri	1249	22.59	1301	22.58	
Breast	1064	19.24	1108	19.23	
Oral	595	10.76	620	10.76	
Ovary	373	6.75	388	6.73	
Thyroid	239	4.32	249	4.32	
Leukaemia	218	3.94	232	4.03	
Esophagus	209	3.78	217	3.77	
Brain, Nervous	145	2.62	151	2.62	
Corups Uteri	136	2.46	142	2.46	
Stomach	130	2.35	135	2.34	
ALL OTHERS	1172	21.19	1218	21.14	
	5530	100.00	5761	100.00	

<b>Oral Cancers - 2018</b>						
<b>Oral Cancers</b>	<b>Male</b>		<b>Female</b>		<b>Total</b>	
	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>	<b>No.</b>	<b>%</b>
Lip	15	2.09	16	2.65	31	2.35
Base of Tongue	101	14.17	17	2.83	118	8.97
Tongue	211	29.68	73	12.20	284	21.66
Gum	22	3.13	30	4.95	52	3.97
FOM	22	3.13	5	0.88	28	2.10
Palate	43	6.12	23	3.89	67	5.09
Oth.Mouth	296	41.68	437	72.58	733	55.86
Total	710	100.00	602	100.00	1312	100.00

<b>ESTIMATED TOBACCO RELATED CANCERS 2018</b>									
<b>Tobacco related sites</b>	<b>Males</b>			<b>Females</b>			<b>Total</b>		
	<b>No.</b>	<b>Percent to</b>		<b>No.</b>	<b>Percent to</b>		<b>No.</b>	<b>Percent to</b>	
		<b>TRC</b>	<b>ALL</b>		<b>TRC</b>	<b>ALL</b>		<b>TRC</b>	<b>ALL</b>
			<b>Sites</b>			<b>Sites</b>			<b>Sites</b>
ORAL CAVITY	710	34.4	16.3	602	56.2	11.6	1312	41.9	14.1
PHARYNX	407	19.7	9.4	86	8.0	1.7	493	15.7	5.3
OESOPHAGUS	260	12.6	6.0	209	19.5	4.0	469	15.0	5.0
LUNG	381	18.5	8.8	130	12.1	2.5	511	16.3	5.5
LARYNX	243	11.8	5.6	27	2.5	0.5	270	8.6	2.9
URI.BLADDER	60	2.9	1.4	18	1.7	0.3	78	2.5	0.8
<b>ALL TRC</b>	<b>2061</b>	<b>100.0</b>	<b>47.4</b>	<b>1072</b>	<b>100.0</b>	<b>20.6</b>	<b>3133</b>	<b>100.0</b>	<b>33.7</b>
<b>ALL SITES</b>	<b>4345</b>			<b>5193</b>			<b>9295</b>		

**Faculty and Staff :**

<b>Name</b>	<b>Designation</b>
1. Dr.C.Ramesh,	Professor & Head of the Department
2. C.R.Vijay	Assistant Professor
3. Dr.D.J.Jayaram	Senior Investigator
4. M.K.M.Gowda	Assistant Social Scientist (Upto May 2018)
5. B.J.Kumudini	Assistant Social Scientist
6. T.Venkatesh	Research Officer
7. K.Venkatesh	Statistical Assistant
8. C.Kumar	Data Entry Operator
9. P.Manjunath	Assistant Social Scientist
10. C.S.Dayananda	Assistant Social Scientist



## DEPARTMENT OF GYNAECONCOLOGY



**Dr. Pallavi V.R**  
Prof. & HOD

### 1. INTRODUCTION:

The Department of Gynaecologic Oncology is involved in the Prevention, early detection, investigations, diagnosis, treatment both surgery and chemotherapy, follow up and palliative care of women with Gynaecological Cancers. The Department is actively involved in clinical research.

The Department consists of a set of outpatient rooms and inpatients wards

(Special and General wards). The outpatient rooms in addition to the examining rooms have rooms for teaching sessions and Minor OT.

The outpatient clinic of the department runs 6 days a week (Monday to Saturday). The OPD clinic involves consulting patients – newly registered, Pre – operative, post operative, adjuvant chemotherapy for Gynaecological patients and follow up. OPD is opened on all working days (9:00am to 4: 00pm) and general holidays (9:00am to 1:00pm).

The Department is allotted 6 operations days in a week where a variety of Gynaecological surgeries, including Laparoscopic surgeries and Robotic surgeries are performed





## STATISTICS OF THE DEPARTMENT

New cases	Follow up cases	Total	Admissions	Re-Admissions	Total	Discharge	Deaths
1148	17771		819			687	31

Major Operations	Colposcopy	Leep	Vulva Scopy	Abdominal Tapping	Pleural Aspirations	Pap Smear	ECC, EB	Cervical Biopsy	IC D
600	103	6	5	692	55	1009	ECC – 195 EB - 200	721	10

### COURSES OFFERED

#### ➤ MCh PROGRAMME:

MCh Trainee Programme started in the Department from the year 2014 (No.KMIO/ AC/ Fellowship/ 1933/ 2009, dated 5.12.2009)

The Department provides MCh degree in Gynaecological Oncology. Every year one candidates are selected by entrance examination conducted by the Rajiv Gandhi University of Medical Sciences.

The course is of 3 years duration. During the course, the students are exposed to all kinds of treatment for gynecological malignancy – both surgery and chemotherapy. Apart from this, they have special postings during which they are posted to radiation Oncology, Pathology and various other oncology Departments / GI surgeries / urological surgeries.

MCh Surgical oncology students are posted in the department for

Gynaecological oncology exposure as part of their training programmers.

M.S (Obstetrics and Gynaecology) postgraduate students from various medical colleges in Karnataka are posted in the Department for oncology exposure as part of their training programmers.



### 3. ACADEMIC ACTIVITIES :

The academic activity of the department includes:

- Seminars on every Mondays
- Seminars / case presentations on every Saturdays
- Multi disciplinary seminars

- Classes for post graduates posted to the Department every day in the afternoons.
- Journal club once / twice monthly

### **MCh TRAINEES :**

#### ❖ **Final Year Batch Mch Trainees**

- Dr.Arptha.A ( Joined from 06.8.2015 to 31.07.2018)
- Dr.Kavitha Mahadevappa (Joined from 24.08.2016 to 03.08.2019)

#### ❖ **1<sup>st</sup> Year Batch MCh Trainees**

- Dr.Tejas (Joined from 10.08.2018 to 05.12.2021)



### **PARTICIPATION IN CONFERENCE/SEMINARS/WORKS HOP FOR 2018 .**

- ❖ **DR.U.D.BAFNA. (Professor and H.O.D)**  
Nil
- ❖ **DR.PALLAVI.V.R (Professor and HOD)**

- 1<sup>st</sup> International Robotic Gynaec Conference and Workshop at GEM Hospital, Coimbatore on 27<sup>th</sup>& 28<sup>th</sup> July 2018
- Colposcopic workshop CME conducted at SDM Medical College- Dharwad on 8<sup>th</sup> July 2018
- CME Programme at Ramaiah Medical College, Bangalore on 30<sup>th</sup> August 2018
- The meeting of selection committee for the project posts of Scientist (Medical) and Research Associate – I at NCDIR, Bengaluru on 25<sup>th</sup> October 2018

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#### ❖ **DR.PRAVEEN SHANKAR RATHOD (Assistant Professor)**

- Laparoscopic Wertheim's hysterectomy on 25<sup>th</sup> February 2018 in a "Endoworld 2018" International Conference Organised by IAGE society at Aurangabad on 25.02.2018
- The 38<sup>th</sup> ICON Conference at Kochi on 24<sup>th</sup> March 2018
- The Colposcopy CME and Workshop at Chikkamagaluru on 2<sup>nd</sup> June 2018
- The D.Y.P.ENDOCON 2018 Conference on 25<sup>th</sup> and 26<sup>th</sup> August 2018 at Kolhapur
- The 2<sup>nd</sup> YUVA – IAGE National Conference 2018 Conference on 3<sup>rd</sup> & 4<sup>th</sup> November 2018 at Taj Gateway Hotel, Calicut

### **PAPERS PUBLISHED:**

- DrShobha Krishnappa, Dr Umadevi. K, Dr Jayashree Natarajan,Dr Rajshekar. S Kunderagi, Dr Pallavi. V. R, Sri.

Vijay C. R, Dr P. Sridhar, Dr U. D Bafna

Primary Cytoreductive surgery (PS) and Neoadjuvant Chemotherapy (NACT) , Journal of medicine science and clinical research, Year 2018, Volume 06, Issue 02, Page No 119-125

- K. Shobha<sup>1</sup>• Natarajan Jayashree<sup>2,3</sup>• U. D. Bafna<sup>1</sup> Optimization cytoreductive surgery in relation to CA 125 in Epithelial ovarian cancer, Indian Journal of gynecologic Oncology, Year 2018, Volume 16, Issue 01, Article 13, Page No 1-6
- Dr.Rajshekar S.Kundargi, Dr.Shruthi Shivdas, Dr.Praveen Rathod, Dr.Shobha.K, Dr.Pallavi Ram.

Uterine Sarcomas - Correlation Between Histological Types And Outcome, International Journal Of Scientific Research, Volume-7 | Issue-11 | November-2018 | ISSN No 2277 - 8179 | IF : 4.758 | IC Value : 93.98

- Dr.Rajshekar S Kundargi, Dr.Shruthi Shivdas, Dr.Praveen Rathod, Dr.Shobha.K, Dr.Pallavi.Ram.  
Granulosa Cell Tumor Ovary: Review Of Cases At A Tertiary Care Center Abstract, International Journal Of Scientific Research, Volume-7 | Issue-11 | November-2018 | ISSN No 2277 - 8179 | IF : 4.758 | IC Value : 93.98

### Faculty and Staff:

Sl.No.	Name	Designation
1	Dr. U.D.Bafna	Professor and HOD (Retired on 30.06.2018)
2	Dr.Pallavi.V.R	Professor - Reported as HOD on 01.07.2018
3	Dr.Praveen.S.Rathod	Assistant Professor
4	Dr.Shobha.K	Assistant Professor
5	Dr.Rajashekar	Assistant Professor

## DEPARTMENT OF GENERAL DUTY DOCTOR

### INTRODUCTION

The first place of interaction between the patients reporting for the first time and the institute is at General Duty place. GDD is the place where the patient comes in contact with the physicians and staff of the Hospital. First impression are important and have an important bearing and whether the patient in continue treatment here and given a good report of it to other with similar diseases GDD (OPD) is functioning smoothly we have always dispersed all duties towards patient care sincerely we are bound and dedicated

to do our duty sincerely to maintain the reputation and the image of the

Institute our duties and responsibilities are as follows :

- 1) Attending New cases / referral cases
- 2) New cases include Vajapayi Arogyashree cases and other Govt. Scheme cases and staff clinic includes Staff of the Institute.
- 3) Attending Follow-up cases
- 4) Running Staff clinic
- 5) Attending calls from OPD/ Ward and Treatment room.

### STATISTICS :

Sl.No.	Case Details	Number of cases
1	New Cases	18,999
2	Hospital Registration	16,200
3	Follow Up Case	8,600
4	Staff Clinic	

### Facilty and Staff

#### Name

1. Dr. Chandramouli S
2. Dr.Prathiba K
3. Dr.Arunkumar B. Modi

#### Designation

- Assistant Surgeon  
Senior Medical Officer  
Assistant Surgeon

## DEPARTMENT OF HEAD AND NECK



**Dr. Rajshekar Halkud**  
Prof. & HOD

**Introduction:** The term "Head and Neck Cancer" encompasses a wide range of tumours that occur in several areas of the head and neck region, Head and Neck Surgery for Tumours of the Mouth; Pharynx (Throat); Larynx (Voice Box); Oesophagus; Thyroid Gland; Parathyroid Gland; Parotid and Other Salivary Glands; Soft Tissue tumours; Bone Tumours; Tumours of the Dent alveolar Structures, Nasal Cavity and Sinuses, Base of the Skull, Ear Canal and Temporal Bone, Nerves and Blood Vessels of the Neck; Skin Cancers; Melanoma.

Our treatment philosophy is based on multi-disciplinary team approach

emphasizing on organ preservation and restoration of form and function by advanced reconstructive surgery, and rehabilitative services. Our team consists of internationally renowned physicians in the field of head and neck oncology and state-of-art infrastructure. All patients are evaluated by senior consultants for the most optimal treatment options, and are discussed in a multidisciplinary tumour board if required to determine optimal treatment plan. Facilities available in the department of Head and Neck Oncology The Head and Neck Surgical Oncology has nine operating rooms doing major surgical work on all working days in a week department is equipped with state of the art Robotic Surgery machine, CO2 laser machine, High end operating microscope, Micro-drill, Xenon head light, provides minimally invasive endoscopic laser surgery, organ preservation surgery, Supra-major surgery with plastic reconstructive surgery with all the major free micro vascular flap surgery,

**The Details surgical procedure performed during 2018 are as follows :**

Month	Major Operations		Minor operations		Total Operations	
	Male	Female	Male	Female	Male	Female
January	75	24	580	111	655	135
February	50	18	537	95	587	113
March	47	26	579	111	626	137
April	44	23	504	103	548	126
May	62	22	495	103	557	125
June	61	24	484	98	545	122
July	70	33	553	97	623	130

August	63	15	537	74	600	89
September	47	24	455	88	502	112
October	50	20	525	101	575	121
November	50	25	475	92	525	117
December	39	20	521	111	560	131
<b>Total</b>	<b>658</b>	<b>274</b>	<b>6245</b>	<b>1184</b>	<b>6903</b>	<b>1458</b>



### Faculty and Staff:

<b>Name</b>	<b>Designation</b>
1. Prof: Rajshekar Halkud,	Professor and Head
2. Prof: Krishnappa R,	Professor
3. Dr. Purushottam Chavan,	Associate Professor
4. Dr. Siddappa K T ,	Associate Professor
5. Dr. Samskruthi Murthy,	Assistant professor
6. Dr. Rathan Shetty K.S,	Assistant professor
7. Dr. Rakesh,	AD-HOC Assistant Prof Plastic Surgeon.
8. Dr. Veena G .Ganag,	Senior Resident and M.Ch Student
9. Dr. Krishna Prasad,	Senior Resident and M.Ch Student
10. Dr. Greshma,	Fellow in Head and Neck Oncology and Senior Resident
11. Dr. Aruna Dosapati,	Fellow in Head and Neck and Senior Resident
12. Dr. Sunayana.R.Sarkar,	Fellow in Head and Neck and Senior Resident
13. Dr. Deeksha,	Fellow in Head and Neck and Senior Resident
14. Dr. Vignesh .J,	Fellow in Head and Neck and Senior Resident
15. Dr. Shruti satish ,	Fellow in Head and Neck and Senior Resident
16. Dr. Sneha Poojary,	Senior Resident surgeon in Head & Neck Surgery
17. Dr. Diviya,	Senior Resident surgeon in Head & Neck Surgery
18. Dr. Vinayak Kurle,	Senior Resident surgeon in Head & Neck Surgery

## DEPARTMENT OF MEDICAL ONCOLOGY



**Dr. Lokanatha Dasappa**  
Prof. & HOD

### Introduction

The Department of Oncology is responsible for diagnosing and treating all cases of haematological malignancies as well as giving chemotherapy to majority of the solid tumors in various settings. The Department of Medical Oncology is committed to improving the diagnosis and treatment of adult patients with cancer. To meet this mission there is a broad range of basic Research, Clinical Research, Patient Care and Teaching.

The consultants of this Department are Qualified and highly experienced. Their efforts by committing themselves to patient care has resulted in improved survival rates and reduced Morbidity's.

The Department practices high dose rate chemotherapy, day care therapy. The Nursing Staffs as well as the junior doctors are well versed in caring for patients with

long term Venous Access Devices and Implantable Codes.

The Department of Medical Oncology consists of 9 faculty members and 18 Post Graduate students (D.M. Medical Oncology). The Department runs out patient clinic services were every day about 300 to 350 patients visit the OPD per day. At a time, around 85 in-patients are admitted for chemotherapy, management of complications and for work-up.



For every new patient, after a diagnosis is established, there is Departmental meeting for planning of treatment. The Department has its own medical minor O.T. where all the minor procedures such as Bone Marrow Aspirations / Biopsy, Ascitic and Pleural Tapping, True Cut Biopsy etc, carried out under full aseptic precautions.

The Department also provides Specialty for autologous cell transplantation for malignancies like non-Hodgkin's lymphoma, Hodgkin's lymphoma, and multiple myeloma.

### Related Statistics of the Department for 2018

#### OUT – PATIENTS DETAILS

Unit	Male	Female	Total
Unit – I	13921	15965	29886
Unit - II	13852	15652	29504

#### IN-PATIENTS DETAILS

Unit	Male	Female	Total
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Unit – I	2142	2987	5129
Unit – II	2548	3621	6169
<b>Discharges</b>			
Unit – I	2232	1890	4122
Unit –II	2345	1912	4257
<b>Deaths</b>			
Unit – I	102	98	200
Unit – II	112	86	198



#### **ACADEMIC ACTIVITIES :**

The academic activities of the department includes:

- ❖ Long seminars on every Tuesdays
- ❖ Case presentations on every Wednesday
- ❖ Journal club on every Thursdays
- ❖ Multi-disciplinary seminar on every Fridays
- ❖ Short seminars on every Saturday
- ❖ Multi-disciplinary Clinic on every Thursdays Morning

#### **COURSES OFFERED:**

The Department provides prestigious D.M. degree in Medical Oncology. Every year 6 candidates are selected by All India Entrance Examination conducted by the Rajiv Gandhi University of Medical Sciences. Out of this, 1 seat is reserved for

in-service candidates However, the No of DM seats are enhanced to 6 from August 2010.

The course is of 3 years duration. The examinations are held in the month of June- July. The examinations are conducted in 2 parts, the first part comprises of a written examination for 90 marks. The paper contains 90 multiple choice questions. Around 5 candidates are selected on the basis of merit list of this theory examination. The second part comprises interview of 10 marks. The final merit list is made by adding both theory and interview marks. Candidates are selected on the basis of final merit list.

During the course, the students are exposed to all kinds of treatment for all solid tumours and haematological malignancies. Apart from this, they have special posting during which they are posted in paediatric oncology, haematology, and various other oncology Departments.

M.D. Medicine students from various medical colleges in Karnataka are getting trained in oncology during their special posting to KCI.



**3. Faculty and Staff :**

<b><u>Name</u></b>	<b><u>Designation</u></b>
1. Dr K. Govind Babu	Professor & H.O.D
2. Dr D. Lokanatha	Professor
3. Dr Linu Abraham Jacob,	Associate professor
4. Dr.Suresh Babu.	Assistant professor
5. Dr.K.N.Lokesh	Associate Professor
6. Dr.Rajeev,	Assistant professor
7. Dr.A.H.Rudresh,	Assistant professor
8. Dr.K.N.Lokesh,	Assistant professor
9. Dr.Smitha.C.Saldhana,	Assistant Professor
10. Dr.G.V.Giri,	Assistant Professor
11. Shri Para Shiva Murthy,	ECG technician
12. Shri B.S. Govind Raju,	ECG technician

## DEPARTMENT OF MICROBIOLOGY



**Dr.B.G.Sumathi**  
Prof. & HOD

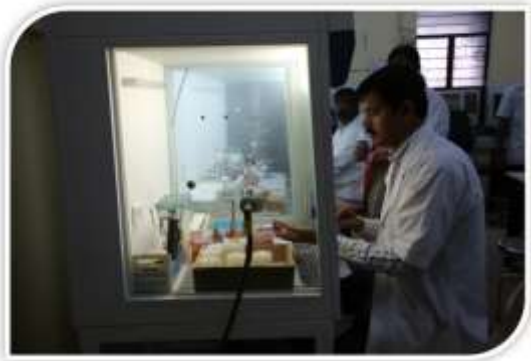
### INTRODUCTION:

The Department of Microbiology at Kidwai Memorial Institute of Oncology, Bangalore came into existence in 1980 to cater to the diagnosis of infections in cancer patients. The department has grown from a basic Bacteriology laboratory to a full-fledged Microbiology Department capable of diagnosing majority of opportunistic infections seen in immunocompromised patients, some of them using the latest molecular tools. On an average, the department gets about **53000** samples for serology and about **12000** samples for culture annually. The department is involved in the care of cancer patients by offering services using state of the art instruments at par with best hospitals and laboratories. Routine tests include identification of bacteria, fungi and parasites & antibiotic sensitivity of bacterial isolates, relevant serological investigation and identification of opportunistic pathogens which are commonly encountered in a cancer center. In addition the Department has the expertise to offer molecular diagnosis for some of the common infections in cancer patients: e.g. Invasive Fungal Infection,

*Toxoplasma gondii*, *Cytomegalovirus*, *Pneumocystis jirovecii*, *Epstein Barr virus* etc. The department has facilities for human immunology based work including cell culture, Magnetic Associated Cell Sorting. Nonisotopic *InSitu Hybridization* (NISH) and Real time PCR is being done presently for detection and quantitation of viruses in various clinical specimens. The department participates in a national external quality assurance programme and also maintains internal quality control for the tests routinely performed. The department is actively involved in microbiological surveillance of the brachytherapy unit OT and ICU routinely. Bone marrow transplant room surveillance and water analysis are performed whenever required and random sterility checking of blood units and collection bags are performed once a month. The department is involved in infection monitoring, MRSA screening and at regular intervals, surveys the antibiotic resistance patterns amongst organisms isolated at our center which helps guide the antibiotic policy in patients especially those on chemotherapy. The department is capable of performing water analysis, testing the efficacy of disinfectants, food handlers testing for carrier status, etc.



The department has organized various CME programmes for postgraduates in Medical Microbiology under the aegis of the Karnataka Chapter of Medical Microbiology. The faculty members of the department have also been invited to deliver Guest lectures pertaining to opportunistic infections and various other related topics at various Institutes around the country. The department has been associated with research work within the Institute and in collaboration with other prestigious Institutes and associations like National Center for Biological Sciences, Bangalore. and multicentre studies involving premier cancer Institutes across India.



Over the past 25 years, the department has the honour of diagnosing and reporting

rare opportunistic pathogens; some of these case reports being published in national and international journals. The department gets referrals from all over the city for diagnosing some of these rarer opportunistic pathogens and has attained the distinction of a center for diagnosing opportunistic infections in immunocompromised patients. The department also offers teaching to the students of B.Sc. Medical Laboratory Technology, B.Sc. Anaesthesia Technology, B.Sc. Operation Theatre, B.Sc. Radiodiagnosis, B.Sc. Radiotherapy, M.Sc. Nursing Oncology courses. Teaching of Medical graduates and postgraduates from other Institutes is also part of the teaching curriculum of the department. The department has been recognized for Ph.D and M. D courses, under the Rajiv Gandhi University of Health Sciences, Bangalore. Department also has the honour of having three MD (Microbiology) candidates registered under MCI and Dr. Sumathi B G Prof & Head, Department of Microbiology.

**Statistics ( January To December 2018)**

Type of	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Investigation													
<b><u>Culture</u></b>													
Urine	90	83	97	68	81	69	102	81	69	103	109	98	<b>1050</b>
Stool	51	51	67	45	64	54	45	45	58	54	39	52	<b>625</b>
Sputum	146	170	195	124	125	132	164	196	193	202	162	163	<b>1972</b>
ENT	46	55	92	63	55	53	63	76	70	67	66	82	<b>788</b>
Pus &	124	115	102	132	106	127	136	136	124	115	119	124	<b>1462</b>
Blood	244	246	333	230	193	205	302	268	245	329	280	298	<b>3173</b>
AFB/UR	46	17	29	30	17	14	32	19	21	18	25	27	<b>297</b>
<b><u>Mycolo</u></b>													
Fungal	54	51	63	41	51	71	78	71	76	78	87	93	<b>814</b>
PF PCR	3	0	2	2	4	0	4	8	9	5	3	0	<b>40</b>
<b><u>Serolog</u></b>													
HIV	1327	1324	1392	1424	1464	1529	1531	1420	1273	1378	1420	1365	<b>16847</b>
HBsAg	1316	1327	1368	1424	1465	1530	1535	1419	1271	1381	1413	1369	<b>16836</b>
HCV	1275	1290	1370	1424	1416	1521	1451	1369	1244	1360	1388	1329	<b>16437</b>
<b>Total</b>	<b>4722</b>	<b>4729</b>	<b>5128</b>	<b>5007</b>	<b>5041</b>	<b>5305</b>	<b>5443</b>	<b>5108</b>	<b>4653</b>	<b>5092</b>	<b>5111</b>	<b>5000</b>	<b>60342</b>

**RESEARCH PUBLICATIONS**

**Harsha Vardhana**, Abhishek Basavarajegowda, Deepa S Anand “Effect of donor arm-washing on Microbial growth at phlebotomy site in first-time blood donors” Hematology & Transfusion International Journal November 2018; 6(6): 222-225.

**Faculty and Staff:**

<b><u>Name</u></b>	<b><u>Designation</u></b>
1. Dr.B G sumathi	Professor & Head of the Department
2. Dr.vijaykumar B R	Associate Professor
3. Dr.mahua sinha	Assistant Professor
4. Dr.harsha Vardhana.S,	Assistant Professor
5. Dr. Sahana shetty N S	Assistant Professor
6. Mohammed Shafiulla,	Assistant Research Scientist
7. Kumarswamy S R	Assistant Research Scientist
8. Smt. B C Jayasumangali,	Chief Lab Technologist
9. Sri H Shivalingaiah ,	Graduate Technologist
10. Sri K J Varghese	Jr. Lab Technologist
11. Sri Mahendra K M	Jr. Lab Technologist
12. Smt. Chaithrashree	Jr. Lab Technologist
13. Sri Parashuram Y Koti	Jr. Med. Lab Technologist
14. Sri Ramachandra	Ward Attender
15. Sri Narasimhaiah	Lab Attender
16. Sri. Lokesh R	Animal House Attender

## DEPARTMENT OF NUCLEAR MEDICINE

### INTRODUCTION

The department of nuclear medicine started in the year 1984, is catering to both diagnostic and therapeutic radionuclide services to the medical institutions, including Kidwai Memorial Institute Of Oncology, in the state and also from neighbouring states.

The department of Nuclear Medicine continues to function as a major centre for the management of thyroid carcinoma with high dose of Radioactive Iodine 131 therapy procedures and also in the management of functional thyroid disorders including thyrotoxicosis patients, palliative therapy with radionuclides for painful bone metastasis

With lutetium, strontium, phosphorus is being used.

The department is recognized for Radiation Safety Officer level III training programme by Atomic Energy Regulatory Board, Radiation Safety Division, Mumbai.



### ANNUAL STATISTICS FOR THE YEAR 2018 (01.01.2018 to 31.12.2018)

1. Thyroid scan	- 178
2. Bone scan	- 3987
3. Renogram / G.F.R studies	- 3813
4. Liver scan	- 07
5. Renal scan	- 15
6. Large dose scan with RAI 131	- 37
7. Muga cardiac scan	- 94
8. Brain scan	- 24
9. Salivary Scintigraphy	- 01
10. Toxic therapy	- 162
11. Palliative therapy	- 03
12. Ca thyroid	- 409
13. Imaging only	- 409
<b>Total number</b>	<b>- 8731</b>

**Faculty and Staff:**

<b><u>Name</u></b>	<b><u>Designation</u></b>
1. Dr.Harish .B	Associate professor.
2. Dr.K.S.Venkatesh Murthy	Assistant professor.
3. Smt.Rajini,H.J.	Nuclear Medicine Technologist
4. Nagaiah,A.	Nuclear Medicine Technologist
5. JagadishNuclear	Nuclear Medicine Technologist
6. Smt.Preetaleela bai	Graduate Laboratory Technician
7. Vacant	X ray technician
8. Vacant	Senior typist
9. Smt. Saritha Muthanna	Staff nurse

## DEPARTMENT OF ORAL ONCOLOGY



**Dr.K.S.Sabitha**  
Prof. & HOD

### Introduction:

Department Of Oral Oncology , Kidwai Memorial Institute Of Oncology, Bengaluru caters to the need of oral cancer patients from all across the country. The department runs OPD as well as minor and major OT throughout the week. New cases, follow up of old cases are done in OPD.

In minor OT dressing, biopsies, extraction and various minor surgical procedures are

being performed where as major cases are taken up in major OT. The department also provides learning opportunities to post graduates as well as Mch students posted in the department from various parts of the country. In addition, the department also runs fellowship program to teach new budding surgeons, various aspects of oral cancer.

Department of Oral Oncology was established in the Year 1973.

### Teaching programme :

- In addition to attending to Oral Cancer patients, the department conducts Fellowship course in Oral Oncology awarded by RGUHS.
- Hands on training to MCh Surgical Oncology post graduate students.
- Training post Graduate students in MDS Oral and Maxillofacial surgery

**Research :** Department is conducting Research project in screening & treatment methodology in Oral cancer.

### The details of surgical procedure performed during 2018 are as follows :

MONTH	MAJOR		MINOR		MINOR		TOTAL	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
JANUARY	14	21	4	0	33	46	51	67
FEBRUARY	12	15	2	7	34	41	48	63
MARCH	9	25	0	2	50	50	59	77
APRIL	16	25	3	9	42	64	61	98
MAY	12	27	2	2	50	55	64	84
JUNE	14	21	3	4	48	57	65	82
JULY	14	28	5	5	56	50	75	83
AUGUST	12	27	4	7	49	44	65	78
SEPTEMBER	14	21	5	8	34	53	53	82
OCTOBER	18	15	5	7	42	35	65	57
NOVEMBER	13	25	8	3	29	52	50	80
DECEMBER	10	23	8	7	34	58	52	88
<b>TOTAL</b>	<b>158</b>	<b>273</b>	<b>49</b>	<b>61</b>	<b>501</b>	<b>605</b>	<b>708</b>	<b>939</b>

**Faculty and Staff:**

<b><u>Name</u></b>	<b><u>Designation</u></b>
1. Dr.K.S Sabitha	Professor and Head of the Department
2. Dr.Nadimul Hoda	Assistant Professor
3. Dr Rajani.B.C	Assistant Professor



## **DEPARTMENT OF PALLIATIVE MEDICINE**

Palliative care services was started as a sub-unit by Department of Anaesthesiology in the year 1988. The unit started with a doctor, nurse and a pharmacist as a team. The unit has the credit of being one of the pioneers in obtaining and dispensing oral morphine solution as early as 1988, since then many patients had the privilege of pain control with oral morphine solution and continuing care.

In the year 2009 it branched into a separate department as Department of Palliative Medicine. In the last two decades the department has taken care of 50,000 patients needing palliative care services. The palliative care networks with hospice and home care services in Bangalore. At present it has a multi- disciplinary team of doctors, nurses, pharmacist, social worker and volunteers. It has out- patient services which functions 6 days a week and has 20 beds for inpatients. With a good team and support of large number of dedicated volunteers the department has expanded to incorporate, a day care centre as a recreational services for patients and caretakers in a day of every week

### **Academic activities :**

Essentials of Palliative Care Course which is conducted twice a year, recognized by Indian Association of Palliative Care.

Fellowship programme for post MBBS/MD/MS for one year since 2014 affiliated to Rajiv Gandhi University of Health Sciences.

Initiation to start MD in palliative care is under process.

Out- reaches programmes (camps) to remote rural areas to deliver awareness of palliative care services.

National and International workshops.

Department has to its credit of hosting two International Conferences in the year 2000 and 2013.

Kidwai Memorial Institute of Oncology with the Government of Karnataka has launched the Karnataka State Policy (3<sup>rd</sup> State to introduce) in the year 2017 to ensure Palliative Care services to reach all the areas in Karnataka and to make the availability of essentials drugs of palliative care.

**STATISTICS:**

MONTH	NUMBER OF PATIENTS VISITED OPD	NUMBER OF NEW /REFERRED PATIENTS	NUMBER OF PATIENTS STARTED ON ORAL MORPHINE SOLUTION
JANUARY	867	260	75
FEBRUARY	879	231	66
MARCH	913	262	72
APRIL	976	283	95
MAY	992	271	97
JUNE	994	285	76
JULY	1113	296	113
AUGUST	1115	287	85
SEPTEMBER	976	264	81
OCTOBER	996	240	78
NOVEMBER	871	211	86
DECEMBER	1127	219	103
<b>TOTAL</b>	<b>11819</b>	<b>3109</b>	<b>1027</b>

**TOTAL NUMBER OF PATIENTS ADMISSION , DISCHARGES AND DEATH AT PALLIATIVE CARE WARD**

2018	ADMISSION	DISCHARGE	DEATH
JANUARY	56	55	1
FEBRUARY	43	41	2
MARCH	41	41	0
APRIL	41	40	1
MAY	49	47	2
JUNE	45	40	4
JULY	61	57	4
AUGUST	40	37	3
SEPTEMBER	49	47	2
OCTOBER	50	47	3
NOVEMBER	32	32	0
DECEMBER	40	40	0
<b>TOTAL</b>	<b>547</b>	<b>524</b>	<b>22</b>

**Faculty and Staff:**

SL. NO.	NAME	DESIGNATION
1	Dr.K.B.Lingegowda	Professor and Head
2	Dr.Shivalingappa	Assistant Surgeon
3	Dr.Mala S .N	Assistant Surgeon
4	Smt. Saroja. G	Pharmacist
5	Smt .Juliet Anand	Staff Nurse

## DEPARTMENT OF PATHOLOGY

**Dr. Rekha V Kumar**  
Prof. & HOD

### INTRODUCTION

The Department of Pathology is one of the biggest departments in Kidwai with a total permanent staff strength of 44. It forms the backbone on which cancer therapy is based.

The department offers mainly diagnosis of cancer, with a limited infrastructure for cancer research. The department is recognized by MCI for MD Pathology subspecialty course by sanctioning 4 seats in the year 2017.



The various sections under Pathology department are:

1. Histopathology
2. Cytopathology
3. Cytogenetics
4. Haematology

### HISTOPATHOLOGY UNIT



### INTRODUCTION

In the Histopathology section, the sample load is around 13,000 to 14,000 annually inclusive of referred slides from other hospitals for opinion. Frozen section is being done as a routine. This facilitates an accurate diagnosis in cases where there is a diagnostic problem and in grey zone areas. Immunohistochemistry with around 100 markers and FISH are being done when necessary to provide accurate diagnoses.

The unit has external quality control participation (EQAS) with the National Cancer Grid (NCG EQAS) conducted by TATA Memorial Hospital, Mumbai for Diagnostic Surgical Pathology, Minimum Data Set Reporting (MDSR), Tissue Processing & IHC.



**ACHIEVEMENTS:** Staff of surgical pathology are well trained in Oncopathology. In addition, most of them have specialized training in molecular techniques both in India and abroad.

### Statistics for the year 2018 – Histopathology

Month	No of biopsy	No. of surgical / OP specimen	Review Case	Frozen
Jan	576	287	415	41
Feb	542	268	412	43
Mar	561	280	411	38
Apr	589	294	455	35
May	597	297	442	62
June	618	309	450	42
July	669	324	522	46
Aug	597	298	543	34
Sept	499	249	423	35
Oct	530	264	464	34
Nov	534	267	489	32
Dec	588	294	417	31
<b>Total</b>	<b>6900</b>	<b>3431</b>	<b>5443</b>	<b>473</b>

### Annual Statistics for the year 2018 IHC & FISH Laboratory Department of Pathology

Sl. No.	Type of Investigations	Jan	Feb	Mar	Apr.	May	June	July	Aug	Sep	Oct	Nov	Dec	Total
1	IHC Tests	1803	1865	2306	2407	2535	2542	2634	2751	2855	3219	2828	2745	30490
2	FISH test	18	8	12	13	17	12	18	15	21	21	14	17	186

**Faculty and Staff:**

<u>Name</u>	<u>Designation</u>
1. Dr. Rekha V Kumar	Prof. & Medical Superintendent
2. Dr. C.S. Premalata	Professor & Head
3. Dr. Usha Amirtham	Associate Professor
4. Dr. Champaka.G	Associate Professor
5. Dr. Akkamahadevi Patil,	Associate Professor
6. Dr. Suma M.N	Asst. Professor
7. Dr. Geeta V. Patil Okaly	Asst. Professor
8. Mr. Prashantha Kumar	Asst. Research Scientist
9. Mr. Lokesh Babu	Graduate Med. Lab. Technologist
10. Smt. Jagadevi	Sr. Lab. Technician
11. Sri. Srinivasa	Jr. Lab. Technician
12. Smt. Shobha B.R	Jr. Lab. Technician
13. Smt. Syeda Zarthaj Hashmi	Jr. Lab. Technician
14. Smt. Shilpa B	Jr. Lab. Technician
15. Sri. Srinivasamurthy	Jr. Lab. Technician
16. Smt. Rekha Vani S	Data Entry Operator
17. Smt. Indira S	Data Entry Operators

Fluorescent in situ hybridisation(FISH). Funded by research grant from RGUHS-2017

**Dr.Champaka G**

- Principal Investigator “ VNOCI project in collaboration with IISc, Bangalore from Kidwai.

**Dr. Akkamahadevi Patil**

- Co-Principal Investigator – ‘Tuberous Sclerosis Complex (TSC)-related cell signalling in the pathogenesis of Hepatocellular carcinoma’ – Collaboration Research Project , RGUHS(KMIO)-IISc, Bengaluru . Doing Study on FNA material
- Principal Investigator – “Evaluation of BRCA1 dysfunction by estimation of BRCA1 and its repressors by multimodality testing

**1. Research Activities, Department of Pathology****ONGOING PROJECTS****Dr. C.S. Premalata**

- Principal Investigator: Mantle cell lymphoma: subtyping into prognostic groups based on immunohistochemistry by using the antibodies SOX 11, Cyclin D1, CD5 and Ki 67, Clinicopathological correlation and detection of t(11, 14) by

in high grade serous ovarian carcinoma- RGUHS Project



### Dr.Suma MN

- Co- investigator in - Feasibility studies towards using multifunctional nanoprobe for cervical cancer specific multimodal therapeutics, Collaborative project funded from RGUHS collaborated with IISC, Bangalore- status-completed.

## 2. Participation at Conference / Seminar / Workshops

### Dr. C.S. Premalata

- 20<sup>th</sup> October 2018 participated as delegate in CME on “Breast Cancer Programme” organized by Surgical Oncology, Kidwai Cancer Institute , Bangalore.
- 3<sup>rd</sup> – 4<sup>th</sup> November 2018 participated in the Workshop as a Faculty on “Progress and Controversies in Gynecologic Oncology” organized by KSC-AGOICON 2018 at Bangalore.

- 16<sup>th</sup> June 2018 participated as a Faculty in “ CME in Lung and Pleural Pathology” organized by Kidwai Memorial Institute of Oncology.
- 15<sup>th</sup> – 16<sup>th</sup> June 2018 participated in CME on “An International update on Targeted and Immunotherapy in Lung Cancer – 2018”.
- 24<sup>th</sup> March 2018 participated as a Faculty in the Workshop on “Common Cancer “ organized by National Cancer Grid Travelling” at Yenepoya University, Mangalore.
- 10<sup>th</sup> and 11<sup>th</sup> March 2018 participated as a delegate in the ISCCP Conference 2018 in association with Kidwai Cancer Institute.

### Dr. Usha Amirtham

- 20<sup>th</sup> October 2018 participated as Faculty in CME on “Breast Cancer Programme” organized by Surgical Oncology, Kidwai Cancer Institute , Bangalore.
- 16<sup>th</sup> June 2018 participated as a Faculty and Organising Secretary in “ CME in Lung and Pleural Pathology” organized by Kidwai Memorial Institute of Oncology.

### Dr. Champaka G

- CME in Gynaecological Pathology – An Update, 10<sup>th</sup> December 2018, KMIO, Bengaluru.
- 15<sup>th</sup> – 16<sup>th</sup> June 2018 participated in CME on “An International update on Targeted and Immunotherapy in Lung Cancer – 2018”.
- 16<sup>th</sup> June 2018 participated as a Faculty in “CME in Lung and Pleural Pathology” organized by Kidwai Memorial Institute of Oncology.
- 20<sup>th</sup> October 2018 participated as Faculty in CME on “Breast Cancer Programme” organized by Surgical Oncology, Kidwai Cancer Institute, Bangalore.
- Symposium on Molecular medicine and Oncology, July 9, 2018

#### **Dr. Akkamahadevi Patil**

- CME in Gynaecological Pathology – An Update, 10<sup>th</sup> December 2018, KMIO, Bengaluru.
- 15<sup>th</sup> – 16<sup>th</sup> June 2018 participated in CME on “An International update on Targeted and Immunotherapy in Lung Cancer – 2018”.
- 16<sup>th</sup> June 2018 participated as a Faculty in “CME in Lung and Pleural Pathology” organized by Kidwai Memorial Institute of Oncology.
- 20<sup>th</sup> October 2018 participated as Faculty in CME on “Breast Cancer Programme” organized by

Surgical Oncology, Kidwai Cancer Institute, Bangalore.

#### **Dr. Suma M.N.**

- Guest lecture on Pathology, genetics and recent advances in GIST- CME on Gastrointestinal Pathology, organized by the Department of pathology, Indira Gandhi Medical College and Research Institute, Puducherry on March 2018
- Faculty in CME in lung and pleural pathology- conducted by Kidwai memorial Institute of Oncology 19th May 2018
- As a resource person for a talk on Update in Pathology of lung Tumors in “Update on management of carcinoma of lung” held on 19th January 2018 at Sri Devaraj Urs Academy of Higher education and Research

#### **Dr. Ashwini Nargund**

- CME in Gynaecological Pathology – An Update, 10<sup>th</sup> December 2018, KMIO, Bengaluru.
- 20<sup>th</sup> October 2018 participated as Faculty in CME on “Breast Cancer Programme” organized by Surgical Oncology, Kidwai Cancer Institute, Bangalore.
- Speaker at and Faculty - Oral Presentation on Cytomorphology of Paediatric Anaplastic Large cell lymphoma at rare sites – study of four cases 41<sup>st</sup> European Congress of Cytology, Madrid Spain, 10-13<sup>th</sup> June 2018.
- Speaker at and Faculty in KAPCON 2018, Preconference

Cytology Workshop – 3<sup>rd</sup> October 2018, KMIO, Bangalore.

**Dr. Geeta V. Patil Okaly**

- 20<sup>th</sup> October 2018 participated as delegate in CME on “Breast Cancer Programme” organized by Surgical Oncology, Kidwai Cancer Institute , Bangalore.
- 16<sup>th</sup> June 2018 participated as a delegate in “ CME in Lung and Pleural Pathology” organized by Kidwai Memorial Institute of Oncology.
- 15<sup>th</sup> – 16<sup>th</sup> June 2018 participated in CME on “An International update on Targeted and Immunotherapy in Lung Cancer – 2018”.
- CME in Gynaecological Pathology – an update KMC/CME/559/2018 10.12.2018
- Singh S, Amirtham U, **Premalata CS**, Lakshmaiah KC, Viswanath L, Kumar RV. Spectrum of metastatic neoplasms of the brain: A clinicopathological study in a tertiary care cancer centre. *Neurol India*. 2018 May-Jun;66(3):733-738. doi: 10.4103/0028-3886.232333. PMID: 29766934
- Kumar RV, Panwar D, Amirtham U, **Premalata CS**, Gopal C, Narayana SM, Patil Okaly GV, Lakshmaiah KC, Krishnamurthy S. Estrogen receptor, Progesterone receptor, and human epidermal growth factor receptor-2 status in breast cancer: A retrospective study of 5436 women from a regional cancer center in South India. *South Asian J Cancer*. 2018 Jan-Mar;7(1):7-10. doi: 10.4103/sajc.sajc\_211\_17. PMID: 29600224

**7. Paper published in National and International Journals along with Paper, Authors name, Name of Journal**

**Dr. C.S. Premalata**

- Lakshmaiah KC, Asati V, Babu KG, Lokanath D, Jacob LA, Babu MCS, Lokesh KN, Rajeev LK, Rudresh AH, Saldanha S, Koppaka D, Patidar R, **Premalata CS**. Role of prephase treatment prior to definitive chemotherapy in patients with diffuse large B-cell lymphoma. *Eur J Haematol*. 2018 Mar 22. doi:10.1111/ejh.13068 PMID: 29569279
- Amita K, Suma MN, Shankar SV, **Premalata CS**, Sanjay M. Primary follicular lymphoma of disguised as multiple miliary like lesions: A case report and review of literature. *Indian J Pathol Microbiol*. 2018;61(3):446-449. doi: 10.4103/IJPM.IJPM\_126\_17. PMID: 30004079
- **Premalata C. S.** , Ashwini Nargund . Mature T and NK/T cell lymphomas: a study from a tertiary cancer centre. *International journal of scientific research* 2018. Vol.6 ; 9 :9-11.



- Deepika V, **Premalata C S**. Primary breast lymphomas: an immunomorphologic study of a rare entity. International journal of Scientific Research 2018. 6 ; 10.

#### Dr. Usha Amirtham

- Kumar RV, Panwar D, Amirtham U, **Premalata CS**, Gopal C, Narayana SM, Patil Okaly GV, Lakshmaiah KC, Krishnamurthy S. Estrogen receptor, Progesterone receptor, and human epidermal growth factor receptor-2 status in breast cancer: A retrospective study of 5436 women from a regional cancer center in South India. South Asian J Cancer. 2018 Jan-Mar;7(1):7-10. doi: 10.4103/sajc.sajc\_211\_17. PMID: 29600224.
- Singh S, Amirtham U, **Premalata CS**, Lakshmaiah KC, Viswanath L, Kumar RV. Spectrum of metastatic neoplasms of the brain: A clinicopathological study in a tertiary care cancer centre. Neurol India. 2018 May-Jun;66(3):733-738. doi: 10.4103/0028-3886.232333. PMID: 29766934

#### Dr. Champaka G.

- Dr. Bindu Joseph, Dr. Kurian J Puthur, Dr. Rekha V. Kumar, Dr. Champaka G, Dr. V. Lokesh, Dr. Ashok Shenoy et al. Computed Tomography for staging in Head and Neck and oral cancer. How accurate are we?. Are we underestimating our clinical target volume? Journal of Medical Science and Clinical Research Vol. 06, issue 11, November 2018.

- Geeta V. Patil Okaly, Rekha V. Kumar, Namrata Kaul and Champaka, G, 2018 : Adenoid cystic carcinoma of minor salivary gland and rare sites, International Journal of Current Research, 10, (11), 74919-74922.

- P. Varsha, D. Champaka, Rekha V. Kumar, S. Krishnamurthy. Pathological Spectrum of Gastrointestinal stromal tumors – A 1.5 year experience at Kidwai Cancer Institute. International Journal of Scientific Study, Sept 2018, Vol. 6, issue6.

#### Dr. Akkamahadevi Patil

- Cytological Diagnosis Of Follicular Dendritic Cell Sarcoma With Review Of Literature – Study of Four of Four Cases Ashwini Nargund , **Malathi Mukunda Pai** (Corresponding author ) Akkamahadevi Patil, Priya Dharmalingam, Chennagiri S Premalata: Paripex – Indian Journal of Research, Pathology; Volume-7; Issue-9; September- 2018 |ISSN - 2250-1991 | IF : 6.761 | IC Value; 86.18
- Ashwini Nargund, Malathi Mukund Pai, Akkamahadevi Patil, Baalu Sadasivan, **Geeta V Patil Okaly**, Priya Dharmalingam, Padma Maneya : Cytomorphology of paediatric anaplastic large cell lymphoma at rare extranodal sites- case series, International journal of scientific research, volume-7, issue-8, August 2018.
- Cytological diagnosis of extramedullary hematopoiesis-

presenting as mass-like lesion: A study of four cases: **Malathi M**, Ashwini Naragund, Baalu S, Akkamahadevi Patil: *MedPulse International Journal of Pathology*. March 2018; 5(3):80-84

#### Dr. Suma M.N.

- Primary Cutaneous B cell Lymphoma: A single center 5 year experience , in Indian Journal of Cancer, Vol. 55, Issue:2, Page 134-137, Dec 2018, Linu Abraham Jacob, Vikas Asati, KC lakshmaiah, Babu K Govind, Dasappa Lokanatha, Suresh MC Babu, KN Lokesh, AH Rudresh, LK Rajeev, Nikita J Mulchandani, Abhishek Anand, Deepak, Koppaka, **Suma Narayana Mysore**.
- Estrogen receptor, Progesterone receptor, and human epidermal growth factor receptor status in breast cancer: a retrospective study of 5436 women from a regional cancer centre in South India in South Asian Journal of Cancer 2018; 7:7-10 Kumar RV, Panwar D, Amirtham U, Premalata C.S., Champaka G, **Suma Mysore Narayana**, Geetha V. Patil Okaly, Lakshmiiah K.C., Krishnamurthy S.
- A stranger in the Backyard: a rare case of retroperitoneal squamous cell carcinoma in Indian Journal Of Surgery, 19<sup>th</sup> September 2018. Joseph Mathew, Kirthiga Ramalingam, Ramesh C Sagar, K

V Veerendra Kumar, **Suma Mysore Narayana**

#### Dr. Geeta V. Patil Okaly

- Geeta Vikram Patil Okaly Dipti Panwar, Kavitha Bidadi Lingappa 1. Prasanna Kumari 1, Abhishek Anand 2, Prashantha Kumar, Manju Hosur Chikkalingaiah, Rekha Vijay Kumar (2018). FISH and Her2/neu equivocal immunohistochemistry in breast cancer. Indian Journal of Cancer, Volume XX, issue XX, month 2018
- Ashwini Nargund, Malathi Mukund Pai, Akkamahadevi Patil, Baalu Sadasivan, **Geeta V Patil Okaly**, Priya Dharmalingam, Padma Maneya : Cytomorphology of paediatric anaplastic large cell lymphoma at rare extranodal sites- case series, International journal of scientific research, volume-7, issue-8, August 2018.
- **Geeta V. Patil Okaly**, Rekha V. Kumar, Namrata Kaul and Champaka, G, 2018 : Adenoid cystic carcinoma of minor salivary gland and rare sites, International Journal of Current Research, 10, (11), 74919-74922.
- Estrogen receptor, Progesterone receptor, and human epidermal growth factor receptor status in breast cancer: a retrospective study of 5436 women from a regional cancer centre in South India in South Asian Journal of Cancer 2018; 7:7-10 Kumar RV, Panwar D, Amirtham U, Premalata C.S.,

Champaka G, Suma Mysore  
Narayana, Geetha V. Patil

Okaly, Lakshmiiah  
K.C., Krishnamurthy S.

## CYTOPATHOLOGY UNIT

### INTRODUCTION

The Cytology unit was started in the year 1974, it offers cytodiagnostic services to all patients of Kidwai, and also to those referred from other hospitals and Institutions. It also caters to cancer detection camps conducted by Community Oncology department of KMIO in various parts of Karnataka and neighbouring states.

The Cytology unit handles and average of 12,000 specimens per year, half of which are Fine needle aspiration

cytology specimens comprising of routine FNA, ultrasound and CT guided FNA. The other half includes Gynaec Cytology and Non-gynaec Cytology consisting of fluid Cytology, brushing and washings from various sites (Statistics enclosed)

The department also offers short term technical training to Cytotechnicians, Cytotechnologists, Pathologists and post graduates in the department of Pathology and Gynaecology. The unit has external quality control participation with the Indian Academy of Cytologists.

## ANNUAL STATISTICS FOR THE YEAR 2018

TYPE OF MATERIAL	POSITV E	SUS P	AGUS		LSIL		HSIL		T V	CAND IDA	POST RT	NEGATIV E	US	TOTAL
			F R	FN	CIN 1	H P V	C I N 2	CIN3						
FNAC - REGULAR	1729	23										924		2676
U S G - FNAC	1721	34										1600	1	3356
C T G - FNAC	212	4										223	1	440
ASCITIC FLUID	231	3										438		672
PLEURAL FLUID	167	4										334		505
C S F	22	-										3003	467	3492
SPUTUM	3	-										17	1	21
URINE	8	2										63		73
NIPPLE DISCHARGE	-	-										9		9
BRONCHIAL ASPIRATE	28	2										217	5	252
STOMACH BRUSH														
GYNEAC - HOSPITAL	48	4	5	13	9	5	1	20	9	18	20	966	31	1149
GYNEAC - BSOG														
GYNEAC - C D CAMP	-	-	-	4	3	4	-	7	3 5	36	-	615	6	710
MAHATHI TRUST	-		1	-	1	1	-	-	1 1	9	-	191	7	221
PERICARDIAL FLUID	1	2										20	-	23
MISCELLANIOUS	1											18		19
REVIEW SLIDES F N A C	574	25										233	59	891
GYNEAC	4				1	-	-	1	-	-	-	3	1	10
OTHERS	38	3										36	3	80
<b>TOTAL</b>	<b>4787</b>	<b>106</b>	<b>6</b>	<b>17</b>	<b>14</b>	<b>10</b>	<b>1</b>	<b>28</b>	<b>55</b>	<b>63</b>	<b>20</b>	<b>8910</b>	<b>582</b>	<b>14599</b>

TOTAL NO OF CASES	14599	HOSPITAL BASED	MAHATHI TRUST	C D CLINIC	C D CAMP	C C I	R S SLIDES
TOTAL NO OF SLIDES	31281	12687	221	-	710	-	981

- Attended as delegate in CME “IHC interpretation” in TMH held on 25-11-2018

**2. Paper published in National and International Journals along with Paper, Authors name, Name of Journal**

**Dr. Balu S**

- Ashwini Nargund, Malathi Mukund Pai, Akkamahadevi Patil, Baalu Sadasivan, **Geeta V Patil Okaly**, Priya Dharmalingam, Padma Maneya : Cytomorphology of paediatric anaplastic large cell lymphoma at rare extranodal sites- case series, International journal of scientific research, volume-7, issue-8, August 2018.
- Cytomorphology of Paediatric Anaplastic Large Cell Lymphoma- At Rare Extranodal Sites – Case Series , - Ashwini Nargund, **.Malathi Mukunda Pai** , Akkamahadevi Patil, Baalu Sadasivasan, Geeta V Patil Okaly, Priya Dharmalingam Padma Maneya; International Journal of Scientific Research, Pathology Vol 7 | Issue-8 | August-2018
- Cytological diagnosis of extramedullary hematopoiesis-presenting as mass-like lesion:A study of four cases: **Malathi M**, Ashwini Naragund, Baalu S, Akkamahadevi Patil: *MedPulse International Journal of Pathology*. March 2018; 5(3):80-84

**Dr. Malathi M**

- Cytological Diagnosis Of Follicular Dendritic Cell Sarcoma With Review Of Literature –Study of Four of Four Cases Ashwini Nargund , **Malathi Mukunda Pai** (Corresponding author ) Akkamahadevi Patil, Priya Dharmalingam, Chennagiri S Premalata: Paripex – Indian Journal of Research, Pathology; Volume-7;Issue-9; September-2018 |ISSN - 2250-1991 | IF : 6.761 | IC Value; 86.18
- Cytological diagnosis of extramedullary hematopoiesis-presenting as mass-like lesion:A study of four cases: **Malathi M**, Ashwini Naragund, Baalu S, Akkamahadevi Patil: *MedPulse International Journal of Pathology*. March 2018; 5(3):80-84
- Ashwini Nargund, Malathi Mukund Pai, Akkamahadevi Patil, Baalu Sadasivan, **Geeta V Patil Okaly**, Priya Dharmalingam, Padma Maneya : Cytomorphology of paediatric anaplastic large cell lymphoma - At rare extranodal sites- case series, International journal of scientific research, volume-7, issue-8, August 2018.

### Dr. Ashwini Nargund

- Ashwini Nargund, Malathi Mukunda Pai, Akkamahadevi Patil, Priya Dharmalingam, Chennagiri S Premalata, Cytological Diagnosis of Follicular Dendritic Cell Sarcoma with review of literature—Study of four cases, Paripex—indian journal of research : Volume-7 | Issue-9 | September-2018
- Dr.Ashwini Nargund, Dr.Malathi Mukunda Pai, Dr.Akkamahadevi Patil, Dr.Baal Sadasivan, Geeta V Patil Okaly, Dr.Priya Dharmalingam, Dr.Padma Maneya, Cytomorphology of Paediatric Anaplastic large cell lymphoma at rare extranodal sites – Case series, international journal of scientific research : Volume-7 | Issue-8 | August-2018
- Mature T And Nk Cell Lymphomas: A Study From A Tertiary Cancer Care Centre: Dr.Premalata C S, Dr. AshwiniNargund, INTERNATIONAL JOURNAL OF SCIENTIFIC RESEARCH, Volume-7 | Issue-10 | October-2018 |
- Cytological Diagnosis Of Follicular Dendritic Cell Sarcoma With Review Of

Literature - Study Of Four Cases, Ashwini Nargund, Malathi Mukunda Pai, Akkamahadevi Patil, Priya Dharmalingam, Chennagiri S Premalata, INDIAN JOURNAL OF RESEARCH Volume-7 | Issue-9 | September-2018.

### Dr. Priya D.

- Ashwini Nargund, Malathi Mukunda Pai, Akkamahadevi Patil, Priya Dharmalingam, Chennagiri S Premalata, Cytological Diagnosis of Follicular Dendritic Cell Sarcoma with review of literature—Study of four cases, Paripex—indian journal of research : Volume-7 | Issue-9 | September-2018
- Dr.Ashwini Nargund, Dr.Malathi Mukunda Pai, Dr.Akkamahadevi Patil, Dr.Baal Sadasivan, Geeta V Patil Okaly, Dr.Priya Dharmalingam, Dr.Padma Maneya, Cytomorphology of Paediatric Anaplastic large cell lymphoma at rare extranodal sites – Case series, international journal of scientific research : Volume-7 | Issue-8 | August-2018

**Faculty and Staff:**

<u>Name</u>	<u>Designation</u>
1. Dr. Balu S.	Professor
2. Dr. Malathi M	Associate Professor
3. Dr. Ashwini Nargund	Asst. Professor
4. Dr. Priya D.	Asst. Professor
5. Smt. J. Kalavathi	Cytotechnologist
6. Sri. Suresh D. Satpute	Cytotechnologist
7. Smt. Mahalakshmi N.	Cytotechnician
8. Smt. Umamaheshwari	Cytotechnician

**HAEMATOLOGY UNIT****INTRODUCTION**

The Haematology unit performs haemograms for all cancer patients and those attending Cancer Detection Clinic. These include 80-120 pediatric and 150-250 adult haemograms per day. The division takes part in the external quality assurance program conducted by AIIMS, New Delhi. 10-20 bone marrow aspirates and biopsy are processed and reported. These

include new cases and follow up of haematological malignancies. Detailed characterization of leukemias with the full range of cytochemistry is being done. Flow Cytometry for acute and chronic leukaemias is being done. In addition, clinical pathology tests are performed. Teaching of DNB (Path), B.Sc. (MLT) and MD (Path) students is under taken

## Statistics for the year 2018 - Haematology

	HAEMOGR AM	ESR	BMA	BMBX	RS	CYTO CHEMIS TRY	FP(PS)	BT CT	CLINICAL URINE/ST OOL	FCM	PT-APTT	TOTAL
JAN	7567	58	307	168	8	45	2089	57	60	71	52	10482
FEB	7827	45	290	175	16	20	1065	45	45	56	117	9701
MAR	7438	60	313	174	16	15	1950	55	58	56	199	10334
APRIL	7328	40	305	165	13	10	1998	50	58	70	309	10346
MAY	7290	50	311	176	14	20	2124	45	40	69	317	10456
JUNE	7303	40	317	185	10	25	1978	48	30	76	315	10327
JULY	7986	48	287	155	19	10	1968	40	48	58	349	10968
AUG	7430	45	303	167	14	5	1999	38	42	72	345	10460
SEP	7450	40	290	171	19	4	1779	35	45	68	269	10170
OCT	7510	40	294	155	17	15	2035	40	45	60	240	10451
NOV	7140	45	201	140	14	5	2066	45	40	58	298	10052
DEC	7397	40	302	170	15	5	2003	50	45	79	294	10400
<b>TOTAL</b>	<b>89666</b>	<b>551</b>	<b>3520</b>	<b>2001</b>	<b>175</b>	<b>179</b>	<b>23054</b>	<b>548</b>	<b>556</b>	<b>793</b>	<b>3104</b>	<b>124147</b>

### Faculty and Staff:

<u>Name</u>	<u>Designation</u>
1. Dr.Raghavendra HV	Professor
2. Dr.Namrata N.R	Associate Professor
3. Dr.Shankaranand B	Associate Professor
4. Dr.Madhumathi D.S	Associate Professor
5. Mr.Jayadev Naik	Asst. Research Scientist
6. Mr.Mahesh S.	Graduate Medical Lab. Technologist
7. Sri Mohan Kumar	Cytotechnician
8. Smt.Sarojamma	Jr. Lab. Technician
9. Mrs.Madhushree	Jr. Lab. Technician

### Participation at Conference / Seminar / Workshops

#### Dr. Shankaranand B.

- CME in Gynaecological Pathology at KCI
- An International update on targeted and immunotherapy in lung cancer – 2018.



## CYTOGENETICS UNIT

### INTRODUCTION

The cytogenetics facility at Kidwai Memorial Institute of Oncology was established in 1989 as a subsection of the Pathology department. Major contributions were made to the establishment of chromosomal changes in patients with various forms of haematological malignancies and solid tumors. The facility offers cytogenetic analysis of haematological malignancies and solid tumors to the department of medical, paediatrics and surgical oncology departments in the form of routine diagnosis for the patients on therapy to see the cytogenetic response. Also, we receive samples of clinical cases from other referral hospitals. GTG banding is used routinely for karyotyping. Visual and automated karyotyping is routinely in practice. The unit is involved in substantial

research activities and publications in national and international journals. In addition, training is offered periodically in the above subject by qualified and resourceful staff.

### Achievements:

Chromosomal analysis has been performed and diagnosis of the disease is made on over 1550 cases in 2014 and 1521 cases in 2015 till date, on bone marrow, peripheral blood and FNA samples. In addition, the Unit has academic achievements in publishing 4 papers in reputed journals.

At present, a research project has been sanctioned from Vision Group on Science and Technology, Government of Karnataka.

### Statistics for the year 2018 - Cytogenetics

MONTH	BMA	PBL	FNA	FISH	TOTAL
JAN	133	25	16	01	<b>175</b>
FEB	143	18	15	03	<b>173</b>
MAR	136	19	25	01	<b>181</b>
APR	117	16	29	01	<b>163</b>
MAY	138	18	18	01	<b>175</b>
JUNE	157	12	21	03	<b>193</b>
JULY	117	12	21	1	<b>151</b>
AUG	138	05	16	1	<b>160</b>
SEP	155	7	24	1	<b>157</b>
OCT	120	9	6	1	<b>136</b>
NOV	133	04	25	04	<b>162</b>
DEC	160	6	22	01	<b>189</b>
<b>TOTAL</b>	<b>1647</b>	<b>151</b>	<b>239</b>	<b>17</b>	<b>2014</b>

**Research activities and projects:****On Going Projects****Dr. Shanthala S.**

Ongoing PhD research project: “Exploration of aberrations in ESR1 gene and its clinical significance in hormone receptor positive progressive breast cancers”, at Kidwai Memorial Institute of Oncology, Bangalore.

**Participation at Conferences/ Seminars/ Workshops:****Dr.Kavitha.B.L**

- Speaker at and Faculty in KAPCON 2018, Preconference Cytology Workshop – “Do More with Less” - 3<sup>rd</sup> October 2018, KMIO, Bangalore.
- An International update on targeted and immunotherapy in lung cancer – 15<sup>th</sup> – 16<sup>th</sup> June, 2018.
- Speaker at and Faculty in the CME on “Lung and Pleural Pathology” on 19.5.2018

**Dr. Shanthala S.**

- Speaker at and Faculty in KAPCON 2018, Preconference Cytology Workshop – 3<sup>rd</sup> October 2018, KMIO, Bangalore.

**Papers published in national and international journals****Faculty and Staff:**

<u>Name</u>	<u>Designation</u>
1. Dr. B. L.Kavitha	Associate professor & Head of Cytogenetic Unit
2. Dr. C. Obula Reddy	Associate professor
3. Dr. Shanthala S	Assistant Professor
4. Mr. M. Mahadevaprasad	Assistant Research Scientist
5. Mr. B.K. Prabhakar	Lab. Technologist

**Dr. Kavitha B.L.**

- Geeta Vikram Patil Okaly Dipti Panwar, Kavitha Bidadi Lingappa 1. Prasanna Kumari 1, Abhishek Anand 2, Prashantha Kumar, Manju Hosur Chikkalingaiyah, Rekha Vijay Kumar (2018). FISH and Her2/neu equivocal immunohistochemistry in breast cancer. Indian Journal of Cancer, Volume XX, issue XX, month 2018

**Dr. Shantha S.**

- Shanthala S, Subramanya H. Immunohistochemical Study of Hormonal Receptors in Endometrium of Women with Dysfunctional Uterine Bleeding: A Two Year Experience of a Tertiary Care Center. Arch Med 2018;10(6):2.

**8.Courses Offered:**

- MD (4 seats) in Pathology
- Fellowship in Tumor Pathology
- B.Sc. MLT

In addition MD Pathology students of Medical Colleges from all over Karnataka are posted in the Department of Pathology for Oncopathology experience.

## DEPARTMENT OF PAEDIATRIC ONCOLOGY



**Dr.M.Padma**  
Professor & I/c HOD

### INTRODUCTION

Paediatric Oncology is functioning as a separate unit in the Department of Medical Oncology from July 1992, At the 41<sup>st</sup> Meeting of Governing Council held on 29<sup>th</sup> December 2008 it was created as Department of Paediatric oncology.

The Department of Paediatric Oncology was created as an independent Department with effect from 28<sup>th</sup> March 2009 as per Official Memorandum No:KMIO/EST/1/94/2008-09 dated 28.3.2009.



### ACTIVITIES:

The Department trains D.M. students in Paediatric Oncology, Medical Oncology,

Fellowship Students in Pediatric Haemato-oncology and Post-graduate students posted from various medical colleges of Karnataka.

### 5. 5. ACADEMIC - DOCTORS /RESIDENTS/REGISTARS/STUDENT S

Dr. Jyothi .M  
Dr. Pooja .G.C  
Dr. Prerana . S Nesargi  
Dr. Aarthi .N  
Dr. Veena  
Dr. Saksham Singh

### 6.MEDICAL EDUCATION - TEACHING AND LEARNING (Lecture/Seminar/Symposium/CME)Scheduled as per MCI/RGUHS)

Daily ward rounds and discussion for DM students, Fellowship and Paediatric Postgraduates. Weekly case discussion / Journal club / Seminar.



### RESEARCH ACTIVITIES/PROJECTS COMPLETED PROJECTS ONGOING AND NEW PROJECTS UNDERTAKEN DURING THIS PERIOD (2018)

1. Breastfeeding and its associated risk factors in children with leukemia: A retrospective Study.  
**Appaji L, Suresh R, Kalapar,**

Sudha R, Manjunatha SN. Indian J Med Paediatr Oncol 2018;39:312-5

2. Anoop C, Appaji L, Padma M, Arunakumari BS, Avinash T, Madhumati DS. Profile of Malignancies in Children Under 2 Years of Age- Study from a Tertiary Care Cancer Centre in South India. BMH Medical Journal.2018; 5(2):37-42
3. Cherungonath A, Appaji L, Padma M, Arunakumari B S, Arunkumar A R, Avinash T, Vijay C R, Madhumati D S. Profile of acute lymphoblastic leukemia in children under 2 years of age. Indian J Med Paediatr Oncol 2018; 39:307-11

**8. PAPERS PRESENTED IN STATE/ NATIONAL/ INTERNATIONAL CONFERENCES: Nil**

**9. POSTERS PRESENTED IN STATE/ NATIONAL INTERNATIONAL CONFERENCES:**

1. Umme Uzra, Avinash T. Region Wise Distribution of Childhood Malignancies in The State of Karnataka and A Road Map to Shared Care Model. 22<sup>ND</sup> Annual

Paediatric Haematology Oncology Conference; 2018 Dec 1-2; Bengaluru: KA.

2. Pediatric non lymphoblastic NHL tertiary cancer centre experience
3. Undifferentiated embryonal sarcoma of liver a rare entity at a tertiary cancer center.

**10. FACULTY IN STATE/ NATIONAL/ INTERNATIONAL CONFERENCES/ WORKSHOPS:**

All faculties / Staff participated in various committees of PHOCON 2018 as committee members. They also conducted pre -conference workshop. They also were chair Person / Speaker / Moderator for the scientific talks.

**11. GUEST LECTURES:**

Early Diagnosis of Cancers in Neonates and Young Infants, Comprehensive Newborn Screening Programme Training for RBSK Medical Officers and Paediatricians, Bengaluru, November, 2018.

**12. PARTICIPATION AT CONFERENCE / SEMINAR/WORKSHOPS DURING THE YEAR (2018)**

1. Phocon 2018 at Bangalore : Dept. Of Paediatric Oncology was on the organizing committee of PHOCON 2018. Dr L Appaji was the organizing Chair person of the event.

**STATISTICS**

Year of 2018 (01.01.2018 to 31.12.2018)			
	Female	Male	Total
New Registration	446	294	740
In-Patients	1034	1397	1695
Discharges	955	637	1592
Death	72	38	110

**Faculty and Staff:**

<b><u>Name</u></b>	<b><u>Designation</u></b>
1) Dr.M.Padma	Professor & I/c HOD
2) Dr.A.R.Arun Kumar	Assistant Professor
3) Dr.T.Avinash	Senior Medical Officer
4) Dr.B.S.Aruna Kumari, Professor (Retired on 30.04.2014 & Joined as a Adhoc Basis on 01.10.2014)	
5) Dr.L.Appaji	Professor (Retired on 31.3.2015 & Joined as a Adhoc Basis on 06.05.2015)
6) Dr.Nuthan Kumar M.K	Assistant Professor

## DEPARTMENT OF RADIATION PHYSICS



**Dr.M.Ravikumar**  
Professor and HOD

### INTRODUCTION:

The Department of Radiation Physics, Kidwai Memorial Institute of Oncology is organized to extend services related to the scientific aspects of applications of ionizing radiations in therapeutic and diagnostic Oncology. The important areas involve radiation Physics related to patient treatment and care, with particular relevance to delivery of radiation dose in radiotherapy for optimal clinical outcome. Utmost care is taken to avoid delivery of incorrect radiation dose or incorrect spatial distribution of radiation dose in the treatment volume. The different aspects of Medical physics are Radiological Dosimetry, Radiation Treatment Planning in external beam and Brachytherapy, Quality Assurance (QA) of radiation delivery which includes QA of the treatment delivery machines, radiation detecting and measuring instruments etc.



Imparting medical physics and radiological physics training are also looked after by trained medical physics faculties. The Radiation safety Officer (RSO) approved by the Atomic Energy Regulatory Board (AERB), Mumbai is responsible for the Surveillance of overall radiological safety in the safe use of sealed and unsealed radioisotopes in the Institute. Dr. S.Sathiyam and Dr. Shwetha B are AERB approved RSO's in the Institute. They submit Annual Status information on the issues related to Radiation safety to Regulatory Authority (AERB) on annual basis in the form of reports, on the proper functioning of radiotherapy machines, radiation dose inter comparison results, safe use of radiation sources and waste disposal of unsealed radioisotopes used for diagnosis and therapy.



The personnel monitoring of all the radiation workers of the Institute is carried out using Thermo luminescent (TLD) Dosimetry badges, which are

measured and maintained by M/S Avantech Laboratories, Chennai and annual dose reports are scrutinized.



The department is recognized to carry out research in the field of Radiation Physics by Rajiv Gandhi University of Health Sciences, Karnataka- the first of its kind in the entire state. The department conducts M.Sc. (Radiation Physics) programme affiliated to Rajiv Gandhi University of Health Sciences, Karnataka and approved by Atomic Energy Regulatory Board (AERB), Mumbai with intake of 5 students per year. Classes are conducted by the expert faculty members of the department for M.D. (Radiotherapy), D.M.R.T., M.Sc. (Nursing), B.Sc. Radiotherapy Technology and Radio-Diagnosis technology programmes. The department is also recognized as one of the approved centers by AERB to conduct one year Internship programme in Medical Physics as partial fulfillment of their curriculum for appearing for Radiological Safety Officer (RSO) examinations. Under the central government SCI (State Cancer Institute) project the institute got sanctioned with 4 more state of the art linear accelerators (3

– Elekta Versa HD and 1 Infinity) which are capable of treating SRS, SRT, IGRT, Gating and IMRT cases are under Installation and Commissioning process. Two more HDR (one with Cobalt source and the other with Iridium Source) machines, two dedicated 16 slice CT Simulator (M/S. Philips), Permanent implant brachytherapy unit and respective QA, Dosimetric equipment purchase is under process.

<b>MODALITIES</b>	<b>Statistics</b>
<b>CLINAC - DHX</b>	
3DCRT Technique	<b>212</b>
Boost Treatment (3D)	<b>39</b>
IMRT Technique	<b>205</b>
Boost Treatment (IMRT)	<b>62</b>
<b>CLINAC-DBX</b>	
3DCRT Technique	<b>688</b>
Boost Treatment (3D)	<b>98</b>
IMRT TREATMENT	<b>50</b>
Boost Treatment (IMRT)	<b>15</b>
<b>UNIQUE</b>	
3DCRT Technique	<b>269</b>
Boost Treatment (3D)	<b>12</b>
IMRT Treatment	<b>472</b>
Boost Treatment (IMRT)	<b>40</b>
<b>INFINITY</b>	
VMAT Technique	<b>162</b>
IMRT Treatment	<b>107</b>
<b>VERSA HD-3</b>	
VMAT Technique	<b>73</b>
IMRT Treatment	<b>102</b>
<b>MANUAL PLANNING</b>	
Manual calculation (Co-60)	<b>1994</b>
Special Technique	<b>253</b>
<b>CONTOURING</b>	
Manual contouring	<b>333</b>
Remarking	<b>131</b>

## Publications

1. Ananda Giri babu Alagar, **Ganesh kadirampatti Mani** and Kaviarasu karunakaran Dose (2018) ‘Calculation Accuracy of AAA and AcurosXB Algorithms for Small Central and Interface Lung Lesions - Verification with Gafchromic Film Dosimetry’ Asian Pac J Cancer Prev.:Vol.19 (1):253-59.
2. Karthikeyan Nithiyantham, **Ganesh K. Mani**, Sambasivaselli R, Maniyan P,

Senniandavar V, Sandeep Jain (2018) ‘Characterization of small photon field outputs in a heterogeneous medium using X-ray voxel Monte Carlo dose calculation algorithm’ Journal of Radiotherapy in Practice. Vol 17(1): 114-123.

## Faculty and Staff:

Sl.	Name	Designation
1.	Dr.M.Ravikumar	Professor and HOD
2.	Dr.K.M.Ganesh	Professor
3.	Dr.S.Sathiyam	Professor
4.	Dr.Shwetha .B	Associate Professor
5.	Dr.C.Varatharaj	Associate Professor
6	Dr.Senthil Manikandan	Assistant Professor
7	Sri S.D.Annaiyah	Bio Medical Engineer
8	Sri M.Venkataswamy	Graduate Lab Technician
9	Smt. Mamatha Rani.N	Graduate Lab Technician
10	Sri T.VijayaReddy	Mould Room Technician
11	Sri C.N.Manjunath	Plant Operator
12	Sri K.P.Eswarappa	Data Entry Operator



## RADIO DIAGNOSIS



**Dr. Raghuram. P**  
Professor & HOD

### INTRODUCTION

The Department of Radiodiagnosis from its inception, continues to play an important and significant role in the over all health care and academic activities of the Institute. The department is well equipped with Imaging Equipment including X-Ray machines, mammography, Ultrasonography, colour Doppler, Whole Body CT Scanners and MRI. Through out the year patients are referred for Investigation from all over Karnataka State as well as from neighbouring states. Tests are performed mainly for malignant disorders, but non-malignant conditions are also evaluated. Institute patients, staff members and referral patients from other hospitals are being regularly investigated. The department is staffed with well-qualified and trained personnel.



### ACADEMIC ACTIVITIES

1. The department is accredited centre for DNB Radio diagnosis for three primary
2. and three post DMRD candidates. The Department has a full fledged Seminar room and library.
3. Regular teaching programmes are conducted with practical discussions of radiographs
4. Ultrasound CT and MRI.
5. B.Sc., Medical Imaging Technology (Radiodiagnosis) Course is conducted by the department.
6. Several batches of students are going through this course, which is of 3 Years duration.
7. M.sc., Medical Imaging Technology (Radiodiagnosis) Course is run by the department.
8. Several Students are going through this course, which is of 2 Years duration
9. Post Graduate, Under Graduate Students from various Medical, Dental and Nursing Colleges trained in
10. various departments of Institute including Radiodiagnosis. Post Graduate students of various
11. departments in the Institute Vis., M.ch (Surgical oncology) MD (Radiotherapy) DM (Medical Oncology) Other
12. B.Sc., Courses also have regular postings in the department of Radiodiagnosis.
13. Radiologists and Technicians are given specialized training specifically in Ultrasonography, CT and MRI.



## STATISTICS

### STATISTICS - 2018

Sl.No	TYPE OF Investigations	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEP	OCT	NOV	DEC	TOTAL
1	Chest	1632	1617	1730	1791	1377	1841	1973	1912	1345	1790	1675	1833	<b>20516</b>
2	Neck	85	140	155	153	217	177	120	168	151	221	164	169	<b>1920</b>
3	Ba.Swallow	15	27	11	16	17	24	21	39	11	15	27	20	<b>243</b>
4	Extremities	S84	53	121	16	16	76	60	79	43	102	110	85	<b>845</b>
5	TL Spine	22	24	46	5	3	35	12	21	38	39	34	45	<b>324</b>
6	Skull	13	10	7	4	3	17	25	11	10	28	10	19	<b>157</b>
7	PNS	3	3	4	1	0	5	10	6	7	9	18	14	<b>80</b>
8	Others	70	35	0	109	0	86	57	79	26	66	10	10	<b>548</b>
9	Ultrasound	1003	1009	1014	966	1130	1167	1134	1132	1000	1026	1050	1141	<b>12774</b>
10	U/S FNAC	300	217	317	230	335	346	397	399	300	290	246	249	<b>3626</b>
11	Mammography	205	168	174	193	205	208	222	176	167	281	185	421	<b>2605</b>
12	U/S. Breast	25	39	25	27	46	20	29	14	23	43	15	22	<b>328</b>
13	C.T.Scan	1168	1635	1939	1696	1950	1969	1925	1953	1960	1805	2072	2346	<b>22418</b>
14	CT FNAC & Biopsy	37	50	50	42	33	35	32	30	25	75	76	22	<b>437</b>
15	CT RT Planning	204	158	123	108	112	119	117	119	115	195	216	236	<b>1822</b>
16	MRI	181	338	212	222	223	282	493	398	249	249	333	300	<b>3598</b>
17	Echo	358	300	242	232	365	317	348	362	260	316	372	446	<b>3918</b>



#### FACULTY AND STAFF DETAILS

1	<b>Dr. Raghuram. P.</b>	Professor & HOD
2	<b>Dr. Madhu.S.D</b>	Associate professor
3	<b>Dr. Anuradha Kapali</b>	Associate professor
4	<b>Dr. Anuradha</b>	Assistant professor
5	Mr.Pape Gowda S.N.	Medical imaging technologist
6	Mrs. Shanthi S.	Medical imaging technologist
7	Mr.Sathya Prasad C	Medical imaging technologist
8	Mr.Anantha Raman	Medical imaging technologist
05	Mr.Sudhir.N.	Medical imaging technologist
06	Mr.Maheshwara Murthy	Medical imaging technologist
07	Mr. Sridhara.K.A	Medical imaging technologist

#### RESEARCH PUBLICATIONS

Anuradha [Kapali A](#), Jaipal [BR](#), [Paramalli R](#), [Atmakuri SKumar](#). [Hepatic Angiomyolipoma: A Radiological Dilemma](#). Oncology, Gastroenterology and Hepatology Reports. 2016;5(2):60-62.

Patil DD, Pujalwar S. Singh YD. Hallervorden Spatz disease. J. Evolution Med. Dent. Sci. 2018;7(52): 5570-5572, DOI: 10.14260/jemds/2018/1232.

## DEPARTMENT OF RADIOTHERAPY (RADIATION ONCOLOGY)



**Dr.V.Lokesh**  
Prof. & HOD

### INTRODUCTION

The Department of Radiation Oncology is headed by Professor Dr.V.Lokesh M.D, Since 01.09.2016. Radiation Oncology is one of the major specialities in Cancer Treatment. Radiation Oncology department has been rendering services at KMIO and caters to more than 70% of the patients attending KMIO. More than 6000 patients are being treated with Radiation Therapy annually and about 350 -400 patients are treated per day with Teletherapy and about 1500 patients treated with Brachytherapy annually. Cure rates of patients treated with curative intent is over 60%. The Department handles a huge load of Cancer patients with limited staff of consultants, Resident Surgeons, Post Graduate Students and Medical Physicists. It has sophisticated state of the art Tele therapy like 3DCRT, IMRT, HDR & LDR Brachytherapy with Brachy-vision & Abacus facilities as out lined below. The department actively participates in all Routine Patient Care involving Diagnosis, Investigations, Treatment & Follow-up, and Palliative Care of the Cancer patients.

Multidisciplinary Management, Teaching and research activities are actively pursued by the Department of Radiation Oncology at KMIO. The Department is also generating MD & Diploma (Radiotherapy/Radiation Oncology) manpower along with the Radiotherapy Technologist as per RGUHS & MCI guidelines.



## PATIENT TREATMENT DETAILS : Radiation Oncology



### PATIENT TREATMENT DETAILS

<b>Patient treatment work load</b>	<b>Year (2018)</b>
Total number of patients seen in OPD	1,47,237
Total number of patients in IPD	3660
Weekly clinical work load for OPD	2045
Weekly clinical work load for IPD	87
Total number of patients given	a)5731 b)74546 c)1808 d) 5757 e)3160 f) 47846
(a) Radiotherapy (b) Teletherapy (no. of fractions given) (c) Brachytherapy (d) TPS Planning (e) Mould Room procedure (f) Chemotherapy	
<b>(a) Radio Therapy</b> <b>(b) Teletherapy (No. of Fractions Given)</b> <b>(c) Brachytherapy</b> <b>(d) TPS Planning</b> <b>(e) Mould Room Procedure</b> <b>(f) Chemo Therapy</b>	5731 74546 1808 5757 3160 47846





### **PUBLICATIONS FROM THE DEPARTMENT**

1. HB Govardhan, Nelson N, Khaleel, Roy M. Development of Comprehensive Yoga Program for Cervical Carcinoma. *J Integr Oncol.* 2018; 07.
2. Joseph B, Farooq N, Kumar S, Vijay CR, Puthur KJ, Ramesh C, et al. Breast-conserving radiotherapy with simultaneous integrated boost; field-in-field three-dimensional conformal radiotherapy versus inverse intensity-modulated radiotherapy - A dosimetric comparison: Do we need intensity-
3. Katke A, Thejaswini B, Sundar S, Nanda R, Amritham U, Giri G. Rosai-Dorfman Disease - Five Years Retrospective Analysis from Tertiary Cancer Center. *Gulf J Oncol.* 2018 Jan 1;1:11-7.
4. Bindhu Joseph, Vishal Malavade, Nisarga V M, Vijay C R, Ramesh C, Lokesh Vishwanath Target delineation in high-grade glioma do CTV margins make a difference? *ESTRO ACROP* versus *RTOG* guidelines a comparative dosimetric study.

modulated radiotherapy? *South Asian J Cancer.* 2018;7(3):163-6.

- Advances in Modern Oncology Research 2018;4(6)
5. BindhuJoseph, Kurian J Puthur, Rekha V Kumar, Champaka G, Lokesh V, Ashok Shenoy, Sabitha K S, Ramesh C. Computed tomography for staging in head and neck and oral cancer. How accurate are we? Are we underestimating our clinical target volume? – Journal of medical science & clinical research 2018; 06(11): 616-22
  6. Sunil RA, Bhavsar D, Shruthi MN, Kunikullaya US, Vyas RK, Parikh A, Mehta MJ, Patel PN. Combined external beam radiotherapy and vaginal brachytherapy versus vaginal brachytherapy in stage I, intermediate- and high-risk cases of endometrium carcinoma. Journal of contemporary brachytherapy. 2018 Apr;10(2):105.
  7. Sunil. R.A, D. Bhavsar, S. M.N, S. P. Shah, and S. U. Kunikullaya, “Treatment Outcome InExtranodal Non-Hodgkin’s Lymphoma Of Different Subsites In Head And Neck Region,” Journal of Evidence Based Medicine and Healthcare, vol. 5, pp. 2169–2173, Jul. 2018.
  8. Vishwanathan B, Mandal SK, Kumar R, Ramprakash HV (2018) Image guided robotic interstitial brachytherapy, a new innovative treatment for malignancies. Hematol Med Oncol 3: DOI: 10.15761/HMO.1000153
  9. Tiwari R, Narayanan GS, Jayakumar V, Narayanan S, Vishwanathan B, Mandal SK, et al. The promise of image-guided brachytherapy of better clinical outcomes in treatment of cervical cancer: Does it deliver? An Indian scenario. Gynecologic Oncology [Internet]. 2018 Sep 1;150(3):420–5
  10. Manjula M.V, Y.S. Pawar, Ashok S, Karthikeyan K. Altered Fractionation Intensity Modulated Radiotherapy with concurrent chemotherapy in head and neck cancer : a feasibility study. Int J Med Res Rev 2018; 6 (08): 503-509. doi: 10.17511/ijmrr.2018.i08.16.
  11. Pawar Y.S., Manjula M.V., K. Ramalingam, S. Ashok, Volumetric modulated arc therapy and concurrent chemotherapy for esophageal cancers: Dosimetric comparison with 3D conformal radiotherapy and early clinical results. Int J Med Res Rev 2018; 6(08): 435-443. doi:10.17511/ijmrr.2018.i08.07.
  12. M.Q Baiq, Asha Latha D, Ajay G.V, Mamun Khan, Is Complementary and Alternative Medicine (CAM), New Hope in Field of oncology?, PARIPEX-INDIAN JOURNAL OF RESEARCH : 2018; 6(7)
  13. Supriya J Chopra, Ashwathy Matthew, AmithaMaheshwari, Neeraj Batla.... Siddanna Palled et al. National cancer grid of India consensus guidelines on the management of cervical cancer. Journal of Global Oncology. 2018;4(1-15).

<p style="text-align: center;">Dr. V.LOKESH M.D.            PROF &amp; HEAD OF THE DEPARTMENT  <b>DEPARTMENT OF RADIATION ONCOLOGY</b>            Kidwai Memorial Institute of Oncology, Bangalore</p>		
Out Patient Services		
RO Unit 1	RO Unit 2	RO Unit 3
OPD DAYS: MONDAY&THURSDAY	OPD DAYS: TUESDAY & FRIDAY	OPD DAYS: WEDNESDAY & SATURDAY
<p style="text-align: center;">Dr. V.LOKESH M.D.            PROFESSOR &amp; HEAD OF UNIT            RO 1            HEAD OF THE            DEPARTMENT</p>	<p style="text-align: center;">Dr. B. THEJASWINI.            M.D.PROFESSOR &amp; HEAD            OF UNIT RO 2</p>	<p style="text-align: center;">Dr. T .NAVEEN            M.D.PROFESSOR &amp; HEAD            OF UNIT RO 2</p>
<p>Dr. BINDHU JOSEPH M.D.            ASSOCIATE PROFESSOR</p> <p>Dr. R SIDDANNA. PALLED M.D.            ASSOCIATE PROFESSOR</p>	<p>Dr. R NANDA. M.D.            ASSOCIATE PROFESSOR</p> <p>Dr.ARADHANA.KATKE            DMRT DNB ASSOCIATE            PROFESSOR</p>	<p>Dr.TANVIR PASHA            M.D.ASSOCIATE            PROFESSOR</p>
<p>Dr. H B GOVARDHAN. M.D.            ASSISTANT PROFESSOR</p> <p>Dr.IBRAHIM KHALEEL M.D.            ASSISTANT PROFESSOR</p>	<p>Dr.R. VINAYKUMAR            M.D.ASSISTANT            PROFESSOR</p> <p>Dr.SHAMSUNDAR M.D.            ASSISTANT PROFESSOR</p>	<p>Dr. P SRIDHAR.            M.D.ASSISTANT            PROFESSOR</p> <p>Dr.UDAYKRISHNA M.D.            ASSISTANT PROFESSOR</p>
VARIAN Treatment Planning Room	<p>Dr. Y.S. PAWAR, ASSISTANT PROFESSOR            Dr.MANJULA, ASSISTANT PROFESSOR</p>	
ELEKTA Treatment Planning Room	<p>Dr.K P.JAGANNATH M.D.ASSOCIATE PROFESSOR            DR. R.A. SUNIL, ASSISTANT PROFESSOR            DR.SANJEETH MANDAL, ASSISTANT PROFESSOR            DR.D. ASHA LATHA, ASSISTANT PROFESSOR</p>	
BRACHYTHERAPY	<p>DR.NIKHILA, ASSISTANT PROFESSOR            DR.NITHIN BHASKAR, ASSISTANT PROFESSOR</p>	



**LIST OF RADIOTHERAPY TECHNOLOGISTS**

<b>SL NO</b>	<b>NAME</b>	<b>Designation</b>
1	Mr. M.S. Nagesh	Chief RT Technologist
2	Mr. R. Prabhu shankar	Graduate RT Technologist
3	Mr. Venkata ramanappa	Graduate RT Technologist
4	Mr. N. Javaraj	RT Technologist
5	Mr. Gopi Raghunath	RT Technologist
6	Mr. R.G. Hegde	RT Technologist
7	Mr. Santhana Krishna	RT Technologist
8	Mr. Keshava murthy	RT Technologist
9	Mr. D.K. Vishwa kumar	RT Technologist
10	Mr. Bullappanavar Revanappa	RT Technologist
11	Mrs.B.C.Yamunavva	RT Technologist
12	Mr. L.H. Somashekar	RT Technologist

## DEPARTMENT OF SURGICAL ONCOLOGY



**Dr. Ravi Arjunan**  
Professor

### INTRODUCTION :

The Department of Surgical Oncology is involved in the evaluation, diagnosis, treatment (mainly surgical), follow up and palliative care of patients with cancer of breast, thyroid, lung, Gastrointestinal system, genitourinary system, Bone and soft tissue, skin, as well as mediastinal tumors. Endoscopic procedures are performed on all OPD days.



The Department is also involved in training of M.Ch Surgical oncology residents (In OPD, Wards, and in operation theatres). MS General Surgery students, teaching of Bsc OT technology students. The Department consists of three units headed by Professors. Each unit has 2 OPD days and 4 operation theatre days in a week (Minor, major and supra major

surgeries and minimal access surgeries are performed regularly)

Department has a set of outpatient rooms and each unit has wards with 30 beds. The outpatient rooms in addition to the examining rooms have rooms for teaching sessions, endoscopy room, and a Minor OT (where minor procedures like pleural fluid tapping, Intercostal drainage tube insertion, biopsies, abdominal paracentesis, drain removal and dressings are done on regularly).

### ACADEMIC ACTIVITIES :

- Seminars on every Monday.
- Case presentations on every 3rd Saturday.
- Multi disciplinary seminars.
- Classes for post graduates posted to the Department every day in the afternoons.
- Journal club on alternate Friday.



### COURSES OFFERED

The Department undertakes training for MCh degree in Surgical Oncology. Every year 8 candidates are selected by entrance examination conducted by NEET.

The course is of 3 years duration. During the course, the students are exposed to all types of treatment for solid tumors. Apart from this, they have special postings

during which they are posted to Radiation Oncology, Pathology, and Medical Oncology for 15 days each and various other oncology Departments like Head and Neck Oncology / Oral Oncology /Gynaecological Oncology for 3 months each and other Oncology institutes like Tata memorial hospital, Adyar cancer institute for 15 days each.

B.Sc OT Technology course is offered which is for a period of three years followed by 6 months of internship.

M.S (General surgery) postgraduate students from various medical colleges in Karnataka are posted in the Department for oncology exposure as part of their training programmers.



### **PAPERS PUBLISHED**

1. Reconstructing diaphyseal tumors using radiated (50 Gy) autogenous tumor bone graft.Puri A, Byregowda S, Gulia A, Patil V, Crasto S, Laskar S.J Surg Oncol. 2018 Jul;118(1):138-143. doi: 10.1002/jso.25092. Epub 2018 Jun 27.PMID: 29949650
2. Anaplastic large cell lymphoma presenting as bilateral endobronchial tumor in a young boy.Sawant AD, Patil VS, Gugalia PM, Kumar R, Jiwnani S, Karimundackal G, Pramesh CS.Lung India. 2018 Jan-Feb;35(1):66-69. doi: 10.4103/0970-2113.221727.PMID: 29319039 Free PMC article.
3. .

**2. STATISTICS OF THE DEPARTMENT SUCH AS NO. AND TYPES OF INVESTIGATIONS CARRIED OUT PATIENTS TREATED, NEW CASES, FOLLOWUP CASES, OPERATIONS (Surgery & Minor OT), etc. for the calendar year 2018**

<b>New cases</b>	<b>Follow up cases</b>	<b>Total</b>
6800	23040	29840

<b>No of Surgery</b>	<b>Minor OT Biopsy</b>	<b>Taping</b>	<b>ICD</b>	<b>Colono scope</b>	<b>OGD/ Endoscope</b>	<b>Broncho scope</b>
2243	1950	1530	1380	1480	1520	1250

<b>Supra Major</b>	<b>Major</b>	<b>Minor</b>
86	1055	862

**Faculty and Staff**

<b>Name</b>	<b>Designation</b>
1. Dr.C.Ramachandra	Professor
2. Dr.RaviArjunan	Professor
3. Dr.SyedAltaf	Professor
4. Dr. C. Srinivas	Associate Professor
5. Dr.Ashwathappa	Associate Professor
6. DrPrakash B V	Associate Professor
7. Dr.Arun H.N,	Assistant Professor ,
8. Dr.UdayKarjol,	Assistant Professor, Senior resident
9. Dr.PavanSugoor,	Assistant Professor, Senior resident

## **DEPARTMENT OF SOCIAL WELFARE**

### **Introduction:**

Social Welfare Department is aimed at supporting patients not only at times of acute crisis but during long periods of chronic illness. As counsellor, The SWO'S and ASWO'S Primary goal is to help patients and Family Members Adopt to the stresses of diagnosis and treatment with in today's complex health care system. ASWO's Major focus is to support the optimum adaptation of all patients to their cancer.

### **Objectives:-**

1. Enabling the patients to function, physically, socially, emotionally at the highest level possible within the constraints of the disease and treatment.
  2. Mobilizing and Potentiating the patients support system
  3. To facilitate the patients care of the treatment and rehabilitation during the course of treatment.
  4. To patients income assessment and to provide the appropriate care facilities by the SW Department
  5. The patients and attender to cope-up with the ailments during there future plans
1. To make patients aware of the treatment.
  2. To provide psychological and Emotional problems of the patients and their family members arising from the illness through Individual counselling and family therapy.
  3. Bereavement preparation and support
  4. Improve Communication and family relationship to foster mutual support among family members.
  5. Train voluntaries to serve the needs of patients. Family member and health agencies.
  6. Breast rehabilitation and Lympeodema care
  7. Attending to cases referred by concerned unit doctors
  8. Pre-Operative counselling
  9. Post-Operative counselling
  10. Education And awareness program such as cancer detection camp
  11. Organizing blood camps.
  12. Cultural activities, by Department of Kannada and culture Library play home.

### **Functions:-**

SWO'S and ASWO'S role is that of dealing with the emotional and social aspects of the illness through the medium of sound relationships with the patients, doctors, Nurses and other para-medical staff.

### **Finance assistance from various sources**

1. Prime minister relief fund
2. Chief minister relief fund
3. Arogya Bhagya Yojana
4. Advances From various government institutes.
5. Private funds from donors
6. Rastriya Arogya Needhi.
7. ESI

8. Patient Welfare Fund
9. Ayushman Bharath/Arogya Karnataka
10. KCMMRF
11. Scp/Tsp Yojana
12. Jyothi Sanjeevini Shcheme

1. **Prime minister relief fund:-** Recommendations of Treatment Expenditure and this Scheme patients covers from all over india.
2. **Chief minister relief fund:-** Recommendations of Treatment Expenditure and patient get monitory benefit from this Scheme.
3. **Arogya Bhagya Yojana:-** Who are all working under police department and Retired Employees also comes under this scheme. give the treatment on credit basis
4. **Advances From various government institutes:-** Government Institutions other then Jyothi sanjeevini scheme patients and other various private organization comes under this scheme
5. **Private funds from donors;-** Patients getting cheques from various private organization or person for treatment.
6. **ESI:-** who are working in factory's which employees have ESI Benefit that patients comes under this scheme for treatment.
7. **Patient Welfare Fund:-** poor patients who are not having BPL card produced income certificate

and get waiving off charges for investigation, surgery and drugs in this fund.

8. **KCMMRF;-** Karnataka chief minister relief fund poor patients who are produced income certificate less then Rs. 20000/- eligible for getting treatment up to Rs.50000/-.
9. **Scp/Tsp Yojana:-**Scheduled cast and scheduled tribe patients who are having caste certificate and income certificate are eligible for getting treatment in this scheme. up to Rs. 1,50,000/- per year.
10. **Rastriya Arogya Needhi:-** who are having BPL card and income certificate that patients comes under this scheme patients covers from all over india.
1. **Vajpayee Arogya Scheme:** this scheme who are have BPL card are eligible and get free treatment
2. **OPD Works:** opd's Aswo's look often PWF, KCMMRS, Reimbursement CMRF&PMRF including counselling, ward Rounds ect;,,
3. **Venkateshwara Dharmashala:** Rooms Rounds ,distribution of food fruits over all responsibilities comes under Aswo
4. **HAL:** who are working in HAL that patients get this scheme facilities who bring the approval letter from HAL on credit basis treatment get
5. **Jyothi Sanjeevini Scheme:** who are have KGID No that patients get free treatment for under this scheme

**Faculty and Staff :****Social Welfare Officers:**

1. Varadaraju
2. P.Lingaraju
3. Shivalinge gowda.M

**Assistant Social Welfare Officers:**

1. H.S.Shobha
2. D.P.Muthu Naik
3. N.Shivalingappa
4. Madevi
5. L.Annapurnamma
6. Jaya Jyothi
7. D.Shadaksharaiah
8. M.S.Jambaladinni
9. R.Muniyappa
10. K.G.Umesh
11. G. Chandrappa
12. Dr.B.Lokesh