

**KIDWAI MEMORIAL
INSTITUTE OF ONCOLOGY,**

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



**ANNUAL REPORT
FOR THE YEAR – 2017**

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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

1. 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.

2. Performance Statistics

New Registration	17874
Follow-Up	277179
Out Patient	295053
Admission	5879
Readmission	10744
Toatal Inpatient	16623
Discharge	15711
Hospital Death	969
Surgical Oncology	
Minor Surgery	996
Major Surgery	3383
Total Surgery	4379
Radiation Oncology	
External RT	4529
Brachy Therapy	1420
TPS	5979
Medical Oncology	
Day Care	9838
Chemotherapy Inpatient	6799
Death	343
Paediatric	
No. of Cases Registered	
Treatment Performed	

Nuclear Medicine	
Thyroid Scan	199
Bone Scan	3560
GFR	3619
Liver Scan	5
Renal Scan	18
RAI 131	53
Muga Scan	122
Brain Scan	24
Salivary cintigraphy	2
Toxic Therapy with RAI 131	195
Palliative therapy	2
CA Thyroid	322
Imaging	322
Total	8443

Conventional Radiograpy	23365
Ultrasonography/ Colour Doppler	13598
Mamography	2062
C.T Scan	18916
MRI Scan	2854
ECO	3359
CT RT Planning	1527
Pathology _Histopatholoty	

Biopsy	10021
No. of Blocks	67964
No. of Slides	73898
Review Case	4886
Review Slide	16746
Frozen	511
Special Strains	489
Histopathology	
IHC and Fish	174515
IHC marker	2615
ER/PR and Her2 by IHC	1034
Her2 test by IHC Stomach	36
Her2/Neu test by Fish	54
EWSR1 test by fish	27
BCR/ABL test by FISH	8
PML/RARA test by Fish	6
RISH test	8
IHC and Fish	3788

Cytology	
FNAC REGULAR	2665
USG –FNAC	3179
CTG – FNAC	249
C D CLINIC – FNAC	
CD CLINIC FNAC	
ASCITIC FLUID	556
PLEURAL FLUID	383
CSF	3305
SPUTUM	12
URINE	51
NIPPLE DISCHARGE	8
BRONCHIAL ASPIRATE	237
BRONCHIAL BRUSH	
PERITONEAL FLUID	7
ESOPHAGEAL BRUSH	
STOMACH BRUSH	
GYNAE HOSPITAL	1049
GYNAE CD CLINIC	83
GYNAE CD CAMP	883
GYNAE – CCI	1441
MAHATHI TRUST	1159
MISCELLAENOUS	22
REVIEW SLIDES: FNAC	697
GYNAE	11
OTHERS	84
TOTAL	16081
Haemetology	
HAEMOGRAM	81355
ESR	636
BMA	3500
BMBx	2120
RS	201
CYTOCHEMISTRY	546
HB FP (PS)	24525
BT CT	545
CLINICAL URINE	602
FCM	738
PT APTT	2657
APIT	
240Hrs Lab CBC	
TOTAL	11323

Cytogenetics		2017
BMA		1517
PBL		163
FNA		243
FISH		14
PLEURAL FLUID		1
TOTAL		1938
Microbiology		
Investigations- Culture		2017
Urine		1010
Stool		595
Sputum		1103
Ent		512
Pus and Mis.		1310
Blood		2628
AFB		
Urinte/Sputums/PUS		274
Fungal culture		377
PFPCR		22
HIV		15625
HBsAg		15613
HCV		14841
Total		53910
Biochemistry		
Routine Investigations		2017
Glu		61678
UREA		69928
CREA		71716
TP		60916
ALB		61425
ALP		60829
BIL		60873
AST		60796
ALT		60796
LDH		9512
CAL		21308
CHOL		1525
UA		7928
Na		54567
K		54567
D.BIL		10
Total		718374

Special Invesitgations_ tumour markers	
AFP	2193
CEA	4087
CA125	3601
PSA	1060
T3	4084
T4	4084
TSH	4308
TG	1062
ATG	758
ATPO	143
BHCG	1158
Ca19.9	1991
TOTAL	28529

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 2017.

Male – Female

Major Surgeries - 2054 – 1329

Minor Surgeries - 487 – 509

Total Surgeries Performed - 4379

ICU- 3383

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

Publications published by the staff of the Department

1. Yaduraj MK , Somasekharam P Vinay DM Akhil rao ;A Comparative study between 0.75% Ropivacaine

plain and 0.75% Ropivacaine with opioid additive Buprenorphine in Brachial plexus block by supraclavicular approach in upper limb surgeries UK Journal of Evidence based medicine ; vol 4/issue74/ 14september 2017.

2. Yaduraj MK , Somasekharam P Vinay DM Akhil rao A Comparative study of Intravenous Dexmedetomidine and Oral clonidine in Attenuating the pressor response and rise in intraocular pressure during laryngoscopy and intubation UK International Journal of Basic clinical pharmacology ; vol 6/issue10/17 Oct 2017.
3. Yaduraj MK , Somasekharam P Vinay DM Akhil rao; A Comparative study between 0.5% Bupivacaine with dexamaethasone combination and 0.5% Bupivacaine with clonidine combination in Brachial plexus block by supraclavicular approach in upper limb surgeries under USG technique UK Journal of Evidence based medicine ; vol4/issue73/ 11september 2017.
4. Rashmi N R , V B Gowda, Shashidhar G S, Suresh Chengode Intraarticular fentanyl compared with morphine for pain relief following arthroscopic surgery of knee April 2017; 2(1): 06-11.
5. Rashmi N.R, Shashidhar G.S, Balabhaskar S, Kiranchand N; Comparison of intracuff air, lignocaine, lignocaine with sodium bicarbonate and ketamine for attenuating post-operative sore throat. MedPulse International Journal Of Anesthesiology, July 2017; 3(1); 05-08

Participation in conference / seminars / workshops during the year 2017

Dr.Namrata Ranganath
Professor & HOD
Dept of Anaesthesiology & Pain Relief

- Conducted the CME;Panel discussion on Thoracic surgeries at Thoracic anaesthesia CME Kidwaiat GovindswamycentreNimhans Bangalore 10th July 2017
- Delivered a Lecturer on oncoanaesthesia and pain 64th National conference of Indian Society Of Anaesthesiologist [ISACON 2016] Ludhiana 25-29 NOV 2017
- Faculty at BEORTE Nimhans Bangalore.Feb 2017
- Anaesthetic Management of Pheochromocytoma -CME Update May 7th 2017[Endocrine anaesthesia] Bangalore Medical college, Bangalore.
- Oral robotic workshop-“ Delivered a lecturer o laser in head and neck surgeries” May15th 2017.
- Delivered a Lecture on Anaesthetic considerations in robotic assisted surgeries ISACON Karnataka Bellary august2017.
- Delivered a lecturer on Airway resection surgeries -A Team Approach -International conference on preoperative care of cancer patients-what”s new [october 14th - 15th2017] AIIMS new Delhi.
- OrganisedOncoanaesthesia CME In Indian cancer Congress 2017 Bangalore, Moderated panel discussion on thoracic anaesthesia
- Anaesthesia and cancer recurrence- Apollo Recent Updates in Anaesthesia on November 19, 2017.NIMHANS Bangalore

07. Papers published in National and International Journals, along with Title of the

paper, authors name, and name of the journal.

Dr. VB GOWDA

1. Rashmi N R , V B Gowda, Shashidhar G S, Suresh Chengode Intraarticular fentanyl compared with morphine for pain relief following arthroscopic surgery of knee April 2017; 2(1): 06-11.
1. Rashmi N.R, Shashidhar G.S, Balabhaskar S, Kiranchand N; Comparison of intracuff air, lignocaine, lignocaine with sodium bicarbonate and ketamine for attenuating post-operative sore throat. MedPulse International Journal Of Anesthesiology, July 2017; 3(1); 05-08
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Dr. RASHMI N R

1. Rashmi N.R, Shashidhar G.S, Balabhaskar S, Kiranchand N; Comparison of intracuff air, lignocaine, lignocaine with sodium bicarbonate and ketamine for attenuating post-operative sore throat. MedPulse International Journal Of Anesthesiology, July 2017; 3(1); 05-08
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morphine for pain relief following arthroscopic surgery of knee April 2017; 2(1): 06-11.

DR. YADURAJ. M.K

1. Yaduraj MK , Somasekharam P Vinay DM Akhil rao ;A Comparative study between 0.75% Ropivacaine plain and 0.75% Ropivacaine with opioid additive Buprenorphine in Brachial plexus block by supraclavicular approach in upper limb surgeries UK Journal of Evidence based medicine ; vol 4/issue74/ 14september 2017.
2. Yaduraj MK , Somasekharam P Vinay DM Akhil rao A Comparitive study of Intravenous Dexmedetomidine and Oral clonidine in Attenuating the pressor response and rise in intraocular pressure during laryngoscopy and intubation UK International Journal of Basic

clinical pharmacology ; vol 6/issue10/17 Oct 2017.

3. Yaduraj MK , Somasekharam P Vinay DM Akhil rao; A Comparative study between 0.5% Bupivacaine with dexamaethasone combination and 0.5% Bupivacaine with clonidine combination in Brachial plexus block by supraclavicular approach in upper limb surgeries under USG technique UK Journal of Evidence based medicine ; vol4/issue73/ 11september 2017.

Faculty and Staff :

Name

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

Designation

- Professor and HOD
- Professor
- Associate Professor
- Associate Professor
- Associate Professor
- Associate Professor
- Assistant Professor
- Assistant Professor
- Assistant Professor
- Assistant Professor
- Assistant Professor
- Assistant Professor
- Assistant Professor
- Assistant Professor
- Anaesthesia technician
- Anaesthesia technician
- Anaesthesia technician
- Anaesthesia technician
- Anaesthesia technician

ACADEMIC CELL

Officer-in-Charge
(Officiating basis)



Dr. K.M. Ganesh
Prof. & Head
Dept. of Radiation Physics,

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 specialities 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

<u>Courses</u>	<u>No. of Seats</u>
1. M.Ch (Surgical Oncology)	- 08
2. M.Ch (Gynec Oncology)	- 01
3. M.Ch (Head & Neck)	- 03
4. D.M (Medical Oncology)	- 06
5. D.M (Peadiatric Oncology)	- 02

II. Post Graduate and Diploma Courses

1. M.D. (Radiotherapy)	-	06
2. M.D. (Pathology)	-	04
3. M.D. (Microbiology)	-	04
4. M.D. (Anesthesia)	-	04
5. DNB (Radiodiagnosis)		
	Primary	- 1
	Secondary	- 1
6. DNB (Anaesthesia)		
	Primary – 2	Secondary – 2
7. DNB (Pathology)		
	Primary	- 2
	Secondary	- 2
8. Diploma in Radiotherapy	-	03

III. Fellowship Programme

1. Peadiatric Medical Oncology	- 02
2. Paliative Care	- 04
3. Onco- Pathology	- 02
4. Head & Neck Cancer Surgery	- 02
5. Oral Onco-surgery	- 02

IV. PG Allied Health Science

Course

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

V. Undergraduate Courses

1. B.Sc. Medical Technology	- 10
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- (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 Super-speciality 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 persuing 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 persuing Post Graduate studies various disciplines such has 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.

Faculty and Staff:

Sl. No.	Name	Designation
1	Dr. K.M. Ganesh Prof. & Head Dept. of Radiation Physics	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 5,00,000 tests annually. Turn around time for all the investigations is 5 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 four candidates are working for their Ph.D. degree in department of Biochemistry under the RGUHS. The lab is well equipped for molecular research work.



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

1. **“The relationship of VEGF polymorphisms with plasma VEGF levels and tumor VEGF expression in epithelial ovarian cancer and their prognostic importance”.**

Supported by ICMR Grant No: 2010-04560 Ref No: 5/13/28/10/NCD-III

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

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

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

Supported by RGUHS

4. **“Methylation Pattern of Gene Promoter Associated with Human Ovarian Carcinoma”.**

Supported by DBT grant No. BT/PR/13440/MED/30/267/2009.

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

Supported by 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.
- 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.



6. 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.** An Analysis of Polymorphism Lymphotoxin alpha +252 A>G in South Indian Breast Cancer Patients. *International Journal of Hematology and Oncology* 2017;27: 229-236.
2. **Thriveni K, Raju A.** Integrity of genomic DNA isolated from heparin treated human leukocytes by a modified protocol. *IOSR Journal of Dental and Medical Sciences* 2016; 15:97-100.

STATISTICS FROM THE MONTH OF JAN'2017 TO DEC'2017**(Routine Investigations)**

Month	Glu	UREA	CREA	TP	ALB	ALP	BIL	AST	ALT	LDH	CAL	CHOL	UA	Na	K	D.BIL
Jan	5026	5867	5871	5022	5071	5013	5013	5007	5007	649	1517	64	548	4362	4362	2
Feb	4699	5323	5341	4566	4598	4560	4560	4554	4554	610	1480	44	481	4007	4007	2
Mar	5126	5906	5925	5004	5063	4996	4998	4997	4997	664	1721	79	538	4478	4478	2
Apr	4854	5635	5687	4826	4860	4817	4822	4816	4816	643	1513	60	537	4291	4291	-
May	5371	4643	6171	5276	5297	5268	5273	5269	5269	718	1668	63	603	4736	4736	-
Jun	5137	5836	5869	5058	5085	5054	5056	5052	5052	666	1667	71	536	4529	4529	-
Jul	5344	5990	6014	5232	5253	5218	5224	5219	5219	722	1768	100	569	4606	4606	-
Aug	5052	5685	5704	5048	5080	5033	5042	5031	5031	729	1587	75	601	4374	4374	1
Sep	4793	5519	5540	4698	4730	4694	4700	4688	4688	758	1577	78	603	4254	4254	1
Oct	5002	6145	6159	5092	5130	5087	5096	5084	5084	889	1924	84	778	4612	4612	1
Nov	5183	6185	6217	5114	5211	5114	5114	5104	5104	923	2025	76	748	4690	4690	-
Dec	5416	6519	6543	5305	5372	5304	5300	5300	5300	866	2186	56	761	4953	4953	1
Control	675	675	675	675	675	675	675	675	675	675	675	675	675	675	675	-
Total	61678	69928	71716	60916	61425	60829	60873	60796	60796	9512	21308	1525	7928	54567	54567	10

SPECIAL INVESTIGATIONS (TUMOUR MARKERS) (JAN'2017 TO DEC'2017)

Month	AFP	CEA	CA125	PSA	T3	T4	TSH	TG	ATG	ATPC	BHCG	Ca19.9
Jan	160	302	236	63	308	308	319	94	85	08	97	131
Feb	166	281	257	70	278	278	294	66	44	02	102	126
Mar	145	304	286	50	281	281	301	53	38	09	84	134
Apr	162	317	276	80	255	255	273	90	73	05	84	148
May	179	340	292	65	300	301	319	68	59	15	97	147
Jun	151	297	265	76	286	286	312	61	47	10	74	153
Jul	155	324	297	82	322	322	348	68	44	08	67	148
Aug	196	338	253	97	290	290	309	62	44	02	79	189
Sep	144	270	233	71	276	276	288	60	38	04	61	140
Oct	154	299	288	84	402	401	412	84	56	07	75	168
Nov	153	325	288	68	338	338	362	78	49	06	91	162
Dec	178	340	280	84	398	398	421	108	81	07	97	175
Control	250	350	350	170	350	350	350	170	100	60	150	170
Total	2193	4087	3601	1060	4084	4084	4308	1062	758	143	1158	1991

ROUTINE INVESTIGATIONS - 718374

SPECIAL INVESTIGATIONS - 28529

GRAND TOTAL - 746903

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
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. Smt.Liza Prakash	Senior Med.Lab.Tech.
7. Mr.Syed Abdul Jameel	Senior Med.Lab.Tech.
8. Mr.D.Narasimulu	Senior Med.Lab.Tech.
9. Mr.Shivaswamy	Senior Med.Lab.Tech.
10. Mr.K.B.Lingaraju	Jr.Med.Lab.Technologist
11. Smt.G.S.Shivarathnamma	Jr. Med.Lab.Technologist
12. Smt.S.K.Kavitha	Jr. Med.Lab.Technologist

DEPARTMENT OF BLOOD BANK & IMMUNO HAEMATOLOGY

INTRODUCTION: Department of Immunoematology 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.



Conference/seminars/workshops conducted by department:

- 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.

On 01/10/2017, to mark the day of nation voluntary blood donors', Kidwai blood bank in collaboration with KSAPS (Karnataka State Aids Prevention Society) conducted a workshop at institute auditorium. The occasion was graced by the project Director of KSAPS, local MLA of the present constituency and other dignitaries along with The Director, KMIO. Many of the frequent camp organizers and voluntary blood donors were felicitated during the workshop.

COLLECTIONS, ISSUES REACTIVE UNITS
FOR THE YEAR JANUARY 2017 TO DECEMBER 2017

MONTH	COLLECTIONS BBC+C AMPS	OUTSIDE-RECIVED			ISSUES				HIV	HCV	HBSA g
		PRBC-WB/PLT/FFP			PRBC / WB / PLT/ FFP						
JANUARY	667	320	209		337	328	337	389		01	01
FEBURARY	577	234	141		501	74	501	364			02
MARCH	552	366	119		474	75	474	564			03
APRIL	763	406	433		640	122	640	579			01
MAY	611	290	170		587	18	587	667			06
JUNE	642	410	169		632	10	632	718			
JULY	618	712	50		492	125	492	518			01
AUGUST	592	399	164		553	39	553	610	01		02
SEPETEMBER	941	126	147		724	24	724	614			03
OCTOBER	476	375	336		367	107	367	802	01		01
NOVEMBE R	882	354	783	101	806	70	806	563			06
DECEMBER	671	309	749		554	113	554	635	02		02
TOTAL :-	<u>7992</u>	<u>4301</u>	<u>3470</u>	<u>101</u>	<u>6667</u>	<u>1295</u>	<u>6667</u>	<u>7023</u>	<u>04</u>	<u>01</u>	<u>28</u>

Research Activities/projects:

Approach of staff nurses towards blood transfusion

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
12. Sri Ramu.L	Second Division Clerk

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 specialize 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 confirm cases will be given appropriated 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 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 capsular 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 2crore Rupees during 2019. 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

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 publised 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 17874 new cases have been registered during the year 2017 and 2,77,179 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 16,623 have been treated as inpatients during the year 2017. The Hospital has bed strength of 575.



Leading sites of cancers in HBCR: 2017

Males: Oral cancers continue to be the most common form of cancers among males and accounts for 16 % of the total cancers in males. Among Oral cancers, cancer of the Mouth is the most predominant site of cancer accounting for over 53.2 % of the oral cancers. The (other common cancers among males in order are Pharyngeal cancers (9.4 %), Lung Cancers (8.8%), Leukaemia(6.7 %), and Esophagus (6.0%).

Females: Cancer of the cervix uteri continues to be the most predominant site of cancer and accounted for 22.6 % of all cancers in females. Cancer of the breast is the second most common site (19.2 %) followed by cancers of oral cavity (10.8 %), ovary (6.7 %) and thyroid (4.3%). 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 36.5% of all cancers and males accounted for 47.1 % of total male cancers and 19.2 % of all cancers in females in the HBCR

Among Males, Oral and Pharyngeal Cancer together account for 25.4 and Esophagus and stomach of cancer for 14.7%. Among females,

In Females, more than fifty percent of TRCs are Oral Cavity Cancers (56.1%) followed by Esophagus (19.7%) and Lung (12.2%). Together in both sexes, the Tobacco Related Cancers accounted for

31.5%.



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 1st 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 defence 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.

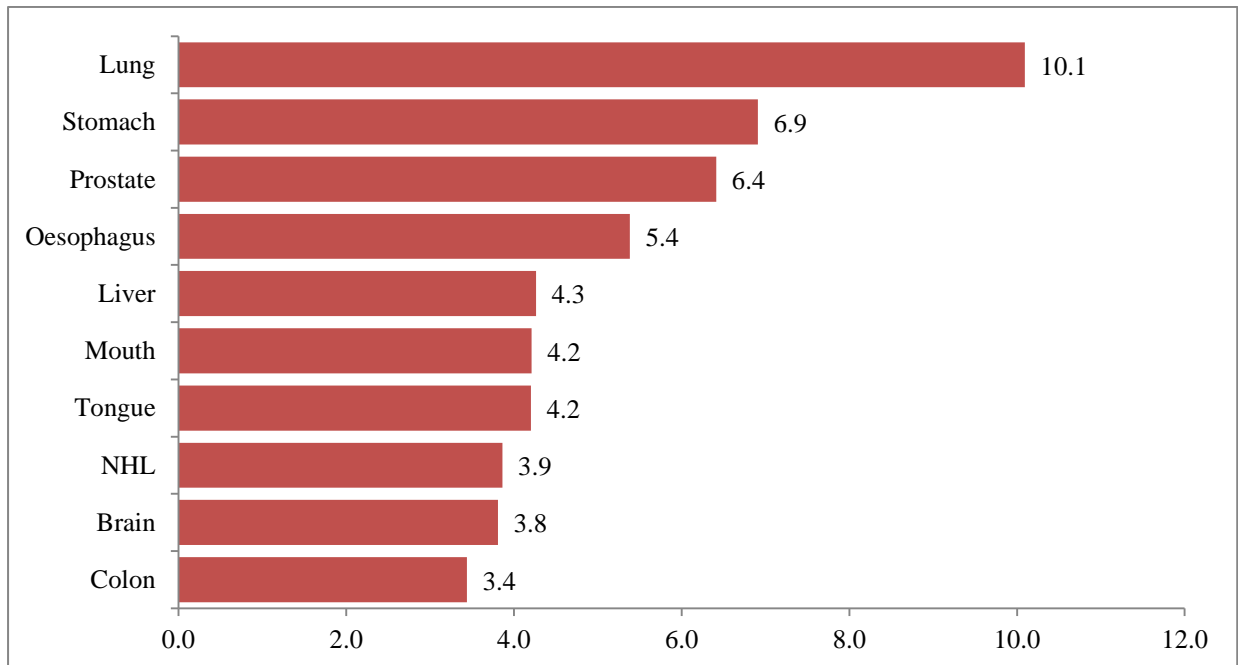
The registry covers Bangalore Urban District which consists of Bruhat Bangalore Mahanagara Palike (BBMP) which consists of 198 wards and 38 death registration units; Bangalore Urban District has an area of 741km² with an estimated population of **10,990,000** as of 2017.

INCIDENCE PATTERNS IN BANGALORE

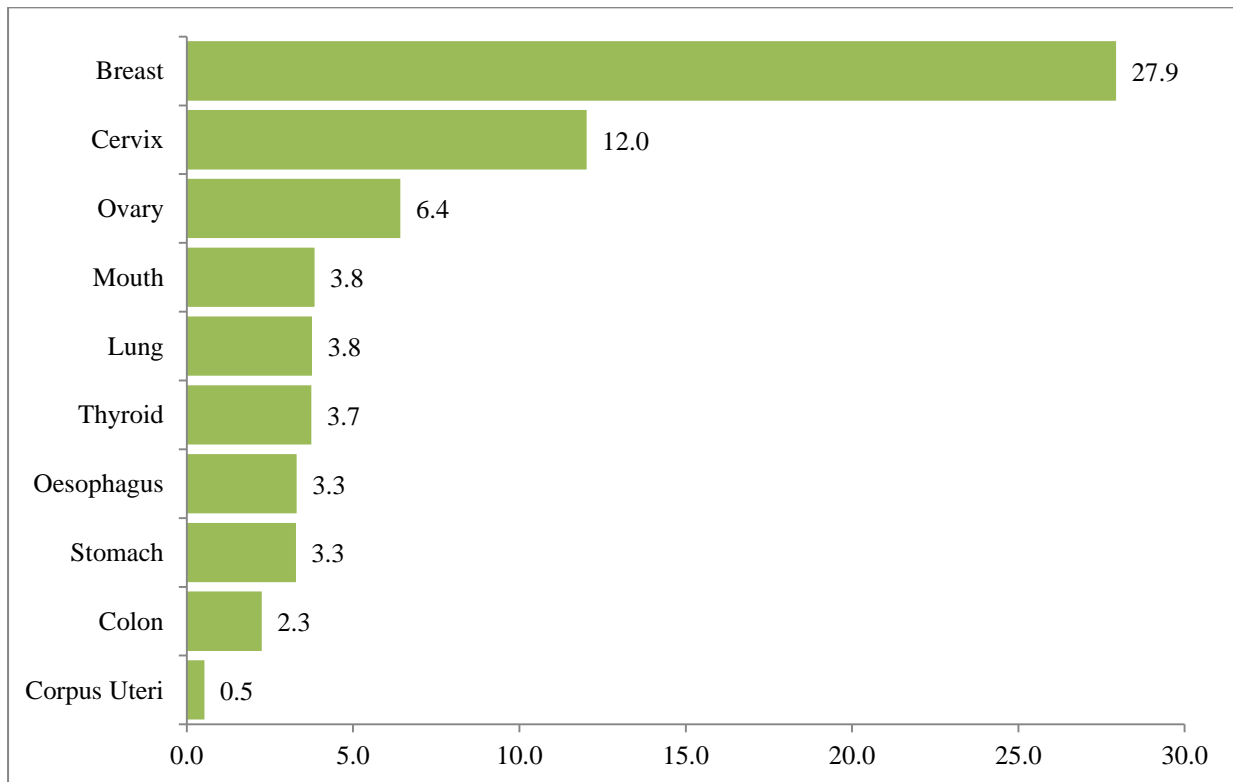
INCIDENCE CASES:

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 2017 (1st Jan to 31st 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

Leading sites of cancers in PBCR:**Males**

Females



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.

**KARNATAKA CANCER INCIDENCE PROJECTION USING 2012-2014 INCIDENCE CRUDE RATES,
BENGALURU**

Males

District	2015	2016	2017	2018	2019	2020	2021
BELGAUM	2467	2497	2527	2558	2590	2622	2654
BAGALKOTE	974	987	1000	1014	1028	1042	1057
BIJAPUR	1160	1181	1203	1225	1248	1271	1295
BIDAR	886	897	908	919	930	942	954
RAICHUR	989	1002	1016	1031	1045	1059	1074
KOPPAL	721	732	743	755	766	778	790
GADAG	540	544	549	554	559	564	569
DHARWAD	958	971	984	997	1011	1024	1038
UTTARA KANNADA	721	725	729	733	737	741	746
HAVERI	826	835	843	852	861	869	878
BELLARY	1353	1382	1413	1444	1476	1509	1542
CHITRADURGA	844	851	859	866	873	881	888
DAVANAGERE	988	995	1003	1011	1019	1026	1034
SHIMOGA	872	877	882	887	892	897	902
UDUPI	570	578	586	594	603	612	622
CHIKMAGALUR	547	546	545	545	544	543	543
TUMKUR	1329	1334	1338	1343	1348	1353	1358
BANGALORE-URBAN	5681	5906	6141	6386	6640	6905	7181
MANDYA	889	891	893	895	898	900	902
HASSAN	870	873	876	880	883	887	890
DAKSHINA	1048	1061	1075	1089	1104	1120	1136
KODAGU	266	266	266	266	266	266	266
MYSORE	1536	1555	1574	1594	1614	1634	1655
CHAMARAJANAGAR	507	509	512	514	517	519	522
GULBARGA	1351	1373	1395	1418	1442	1465	1489
YADGIR	621	634	647	660	674	688	702
KOLAR	787	796	804	813	822	831	840
CHIKKABALLAPURA	640	646	652	658	664	670	676
BANGALORE RURAL	523	531	540	549	557	567	576
RAMANAGARA	541	544	547	550	552	555	559
KARNATAKA	32000	32518	33051	33599	34163	34742	35339

Females

District	2015	2016	2017	2018	2019	2020	2021
BELGAUM	3100	3141	3182	3224	3267	3311	3355
BAGALKOTE	1241	1259	1277	1295	1313	1332	1351
BIJAPUR	1433	1460	1488	1516	1545	1575	1605
BIDAR	1091	1106	1120	1134	1149	1164	1179

RAICHUR	1271	1290	1309	1328	1348	1367	1388
KOPPAL	917	931	945	960	974	989	1004
GADAG	685	692	698	705	712	719	726
DHARWAD	1207	1225	1244	1263	1283	1303	1323
UTTARA KANNADA	910	915	921	927	933	939	944
HAVERI	1019	1030	1042	1053	1065	1077	1089
BELLARY	1716	1756	1796	1838	1880	1924	1969
CHITRADURGA	1063	1074	1084	1095	1106	1118	113
DAVANAGERE	1243	1255	1267	1279	1291	1304	1316
SHIMOGA	1129	1138	1147	1155	1164	1173	1182
UDUPI	796	804	813	823	833	844	856
CHIKMAGALUR	716	717	717	718	719	720	720
TUMKUR	1691	1700	1708	1717	1725	1734	1744
BANGALORE-URBAN	6672	6939	7216	7506	7808	8122	8450
MANDYA	1137	1141	1144	1147	1150	1153	1157
HASSAN	1131	1136	1141	1146	1151	1156	1162
DAKSHINA	1378	1396	1414	1433	1453	1474	1496
KODAGU	354	354	355	356	357	358	359
MYSORE	1963	1991	2020	2050	2079	2110	2141
CHAMARAJANAGAR	652	657	661	666	670	675	680
GULBARGA	1683	1711	1740	1769	1799	1830	1861
YADGIR	791	807	824	842	859	878	896
KOLAR	993	1004	1015	1026	1037	1048	1060
CHIKKABALLAPURA	801	809	817	825	833	841	849
BANGALORE RURAL	639	649	660	671	682	693	705
RAMANAGARA	686	690	695	699	704	709	714
KARNATAKA	40109	40775	41461	42166	42892	43639	44408

**PAPER PUBLICATIONS BY STAFF OF
THE DEPARTMENT**

Research Activities-Projects (On going):

- | | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ol style="list-style-type: none"> 1. “Hospital Based Cancer Registry – Bangalore” ,National Centre for Disease Informatics & Research (NCDIR) – ICMR (Ongoing since 1982) 2. “Population Based Cancer Registry – Bangalore” ,National Centre for Disease Informatics & Research (NCDIR) – ICMR (Ongoing since 1982) 3. “ Pattern of Care and Survival Studies of Cancers of Breast, Cervix and Head and Neck Cancers” - Project under National Cancer Registry Programme funded by Indian Council of Medical Research, New Delhi (On going since 2006). | <ol style="list-style-type: none"> 1. Vijay C R, Dr. Lokesh V, Dr Ramesh et al. Epidemiology of Oral cancer-A Hospital based Case Control Study in Bengaluru. Journal of Medical Science and Clinical Research: December 2017: 5 (08): 26216-26221. 2. Vijay C R, Dr Ramesh C, Dr P Sridhar, DrGopalakrishnappa, Dr V Lokesh. “Gall bladder Cancer Incidence Trend over the time period in Bengaluru” Population Based Cancer Registry (1982-2012). Journal of Medical Science and Clinical Research: August 2017: 5 (08): 26210-26215. 3. Dr B G Sumathi, Vijay C R, Kumaraswamy, Mohd. Shaffiulla. A |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

comprehensive Overview of Staphylococcus aureus Isolates from Cancer Patients. JMSCR Volume 05 Issue 12 December 2017. 32185-32193.

The following staff from KMIO attended the 33rd NCRP on 28 - 30th November 2017 will be held at Amrutha Institute of Medical Sciences, Cochin

4. Joseph B, Farooq N, Shafeeque MN, Sathiyam S, Lokesh V, **Ramesh C, Vijay C R.** Hypofractionation in postmastectomy breast irradiation. How safe are we in using standard tangentials?. Asian J Oncol 2017;3:101-5.

1. Dr. C. Ramesh, Prof. & Head, Co-Principal Investigator
2. Dr. C.R. Vijay, Associate Professor (HBCR)
3. Dr .B.R. Gopalakrishnappa, Sr. Biostatistician, (PBCR)

Meeting Attended by Registry Staff:

Department/Unit wise patient load – 2017(1.1.2017 to 31.12.2017)

UNIT	New Cases	Follow – up Cases	Total	Admission	Discharge	In patient Deaths
SUR	7217	24934	32151	4740	4468	285
MED1	1073	29061	30134	3050	2877	181
MED.2	1020	25019	26039	2954	2753	211
PAED.	670	15183	15853	1267	1158	98
GYNA.	1210	18930	20140	928	855	58
H&N	2442	12953	15395	824	804	37
ORAL	1706	11188	12894	595	579	19
RT1	871	38794	39665	634	619	31
RT2	745	37621	38366	487	475	23
RT3	560	34671	35231	381	376	11
NM	272	7510	7782	267	232	0
PRC	88	21315	21403	496	515	15
TOT.	17874	277179	295053	16623	15711	969

Faculty and Staff :

Name	Designation
1. Dr.C.Ramesh,	Professor & Head of the Department
2. C.R.Vijay	Assistant Professor
3. Dr.D.J.Jayaram	Senior Investigator
4. V.Bhadraiah	Assistant Social Scientist (Upto May 2017)
5. M.K.M.Gowda	Assistant Social Scientist
6. B.J.Kumudini	Assistant Social Scientist
7. T.Venkatesh	Research Officer
8. K.Venkatesh	Statistical Assistant
9. C.Kumar	Data Entry Operator
10. P.Manjunath	Assistant Social Scientist (From: Sept.2017)
11. C.S.Dayananda	Assistant Social Scientist (From: Sept.2017)

DEPARTMENT OF GYNAECONCOLOGY



Dr. Pallavi V.R
Prof. & HOD

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
1210	18930	20140	449	455	928	855	58

Major Operations	Colposcopy	Leep	Vulva Scopy	Abdominal Tapping	Pleural Aspirations	Pap Smear	ECC, EB	Cervical Biopsy	ICD
561	85	5	2	686	59	1185	ECC – 300 EB-300	550	7

COURSES OFFERED**❖ M.Ch. PROGRAMME:**

M.Ch Trainee Programme started in the Department from the year 2014

(No. KMIO/ AC/ Fellowship/ 1933/ 2009, dated 5.12.2009)

The Department provides M.Ch. 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 gynaecological 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.

M.Ch 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.

**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

M.Ch TRAINEES :**❖ Final Year Batch MCh Trainees**

- Dr.Praveen.S.Rathod
(Joined from 22.8.2014 to 25.07.2017)

- Dr.Arptha.A (Joined from 06.8.2015 to 31.07.2018)
- ❖ **2nd Year Batch MCh Trainees**
 - Dr.Kavita Mahadevappa (Joined from 24.08.2016 to 03.08.2019)
- ❖ **1st Year Batch MCh Trainees**
 - Dr.Yamini Kansal (Joined on 01.9.2017 to 05.12.2020)



PARTICIPATION IN CONFERENCE/SEMINARS/WORKSHOP FOR 2017

- **DR.U.D.BAFNA. (Professor. And . H.O.D.)**
 - The 4th Minimally invasive onco surgery (MIOS) workshop on 7-8 January 2017
- **DR.PALLAVI.V.R (Professor)**
 - CME on Carcinoma Cervix” to be held in Department of Obstetrics and Gynecology, JIPMER, Pondicherry on 16th and 17th September 2017
 - 2nd Robotic Surgery Workshop and Master Class at Amrita Institute of Medical Sciences, Kochi on 7th and 8th October 2017
- **DR.PRAVEEN SHANKAR RATHOD (Assistant Professor)**
 - The Colposcopy workshop in Dr.Sri Rajendhra Centenary Auditorium, JSS Hospital MG

- Road, Mysuru on 4th February 2017
- The International Gynae Cancer Congress 2017 in Dharamshila Hospital And Research Centre Vasundhara Enclave, Delhi on 18th & 19th February 2017
- The Colposcopy workshop in A.J Institute of Medical Sciences & Research Centre, Mangaluru on 28th & 29th October 2017

PAPERS PUBLISHED:

- Dr.Pallavi Venkateshaiah Reddihalli, Dr.Arptha Anantharaju, Dr.Uttamchand Dungarmal Bafna, Dr.Rathod Pravee, Dr.Krishnappa Shobha, Dr.Rajshekar. Menstrual and Reproductive function following treatment of malignant Germ cell tumors of the ovary and high risk gestational Trophoblastic neoplasm of uterus , International Journal of Scientific Research Year April 2017, Volume 6, Issue , page no. 193-195

AWARDS & SCHOLERSHIPS :

Dr.Praveen (Assistant Professor)

- 1st prize for a laparoscopic surgery video presentation by the IASO NATCON Society in a second Indian Cancer Congress International Conference, Bengaluru, November 2017.
- International Gynaec Oncology Fellowship Award by Prof. ShashikantLele, Roswell Park Cancer Institute, Buffalo, NY, USA, March 2017.

Faculty and Staff:

Sl. No.	Name	Designation
1	Dr. U.D.Bafna	Professor and HOD
2	Dr.Pallavi.V.R	Professor
3	Dr.Praveen.S.Rathod	Assistant Professor (doing MCh Gynaecological oncology course under in-service quota from 22.8.2014 to 25.07.2017)
4	Dr.Shobha.K	Assistant Professor (Deputed to do Mch Surgical oncology course under in-service quota from 15.8.2016 to 04.08.2019)
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	17,674
2	Hospital Registration	16,200
3	Follow Up Case	8,600
4	Staff Clinic	5300

Facilty and Staff

<u>Name</u>	<u>Designation</u>
1. Dr. Chandramouli S	Assistant Surgeon
2. Dr.Prathiba K	Senior Medical Officer

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 2017 are as follows :

Month	Major Operations		Minor operations		Total Operations	
	Male	Female	Male	Female	Male	Female
January	52	18	536	191	588	209
February	47	14	437	143	484	157
March	48	21	504	134	552	155
April	52	21	654	170	706	191
May	45	23	619	127	664	150
June	68	29	660	121	728	150
July	54	18	754	112	808	130
August	43	17	514	173	557	190
September	50	21	653	97	703	118
October	59	9	654	102	713	111
November	51	16	643	117	694	133
December	39	16	614	93	653	109
Total	608	223	7242	1580	7850	1803



Teaching post graduate students

Medical Education: Multidisciplinary tumour board held on every Monday at 2.30 pm in the OPD Departmental Seminars held on every alternate week on Wednesday at 2.30 pm in seminar hall Live laser surgery workshop was held 23& 24 Feb 2009 by the department in the institute auditorium International faculty Dr G. Peretti came to conduct the course. IFHNOS World tour was organized by the faculty of Head and Neck Oncology, The International Federation of Head and Neck Oncologic Society (IFHNOS) World tour 2010 was held in Bangalore on the 13th-15th of October 2010. IFHNOS is offering a global continuing

medical education program featuring the most respected leaders in the field of Head and Neck Surgery and Oncology Masters course in head and neck oncology was held on 9th - 10th August 2013, in the institute auditorium. 4th International Head & Neck Symposium and Live Interactive Workshop on Trans-Oral Robotic surgery & Trans oral Laser Microsurgery " to be held at Kidwai Memorial Institute of Oncology on 15th and 16th May 2017.

Department of Head and Onco-surgery had resident training program for several decades and trained several people and started Fellowships in Head and Neck Oncology since 2009, which were recognized by Rajiv Gandhi University of Health Sciences. Bangalore.

From the academic year 2016-17 department of Head and Neck Onco-surgery got permission from Medical council of India to start M.ch in Head and Neck Surgery

Publications in National journals 2017

1. A Modified PMMC flap with improved vascular supply of random part of the flap.

Siddappa K Thammaiah, Krishnappa
Ramachandrappa .MedPulse-international
medical journal. february2017,4(2):213-216.

2. Transabdominal assisted ICD insertion
minimises the malposition of tubes our

experience compared with standard
technique. Siddappa K Thammaiah,
Krishnappa Ramachandrappa. MedPulse-
international medical journal.february2017,
4(2):207-209.

Faculty and Staff:

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 tumours 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 10 faculty members and 18 Post Graduate students (D.M. Medical Oncology). The Department runs outpatient clinic services every day about 200 to 250 patients visit the OPD per day. At a time, around 75 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 2017

OUT – PATIENTS DETAILS

Unit	Male	Female	Total
Unit – I	13261	15342	28603
Unit - II	13320	15112	28432

IN-PATIENTS DETAILS

Unit	Male	Female	Total
Unit – I	1756	2523	4279
Unit – II	2203	3356	5559
Discharges			
Unit – I	1924	1252	3176
Unit –II	1903	1720	3623
Deaths			
Unit – I	98	80	178
Unit – II	93	72	165



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.

Faculty and Staff :

<u>Name</u>	<u>Designation</u>
1. Dr. K.C.Lakshmaiah,	Professor & H.O.D
2. Dr D. Lokanatha	Associate professor
3. Dr K. Govind Babu	Associate professor
4. Dr Linu Abraham Jacob,	Associate professor
5. Dr.Suresh Babu.	Assistant 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,MBBS,MD,DM.,	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 (as per 2019 statistics). 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 2017)

Type of	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec	Total
Investigation													
Culture													
Urine	85	84	99	80	89	69	93	89	68	96	80	78	1010
Stool	42	51	56	48	58	62	39	34	42	39	59	65	595
Sputum	90	97	115	60	76	68	79	74	125	93	111	115	1103
ENT	33	59	49	46	46	41	41	37	27	38	38	57	512
Pus &	105	103	128	123	92	113	97	96	116	406	105	126	1310
Blood	206	174	271	186	197	197	213	219	278	246	235	206	2628
AFB/UR	29	24	24	24	11	24	16	21	22	22	32	25	274
Mycolo													
Fungal	31	59	44	30	31	21	31	16	19	22	34	39	377
PF PCR	1	1	1	1	4	2	0	1	2	4	3	2	22
Serolog													
HIV	1296	1269	1258	1249	1443	1236	1357	1245	1171	1333	1440	1428	14625
HBsAg	1294	1267	1255	1246	1445	1242	1356	1245	1171	1338	1434	1320	15613
HCV	1201	1137	1177	1212	1382	1181	1397	1233	1110	1283	1368	1260	14841
Total	4413	4325	4477	4305	4874	4256	4619	4310	4150	4620	4939	4621	53910

RESEARCH PUBLICATIONS

Dr B.G Sumathi, Vijay C. R, Kumarswamy, Mohd Shafiulla Journal of Med Science and Clin. Res. JMSCR December 2017 Vol 105, Issue 12, Pg 32185 – 93.

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
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 2017 (01.01.2017 to 31.12.2017)

1. Thyroid scan	- 199
2. Bone scan	- 3560
3. Renogram / G.F.R studies	- 3619
4. Liver scan	- 05
5. Renal scan	- 18
6. Large dose scan with RAI 131	- 53
7. Muga cardiac scan	- 122
8. Brain scan	- 24
9. Salivary Scintigraphy	- 02
10. Toxic therapy	- 195
11. Palliative therapy	- 02
12. Ca thyroid	- 322
13. Imaging only	- 322
Total number	- 8442

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
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 2017 are as follows :

MONTH	MAJOR OPERATIONS		MINOR OPERATIONS IN MAJOR OT		MINOR OPERATIONS IN MINOR OT		TOTAL OPERATIONS	
	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE	MALE	FEMALE
JANUARY	14	28	2	0	40	49	56	77
FEBRUARY	15	18	2	2	36	44	53	64
MARCH	22	21	3	4	24	50	49	75
APRIL	9	19	0	2	25	47	34	68
MAY	13	20	2	3	45	60	60	83
JUNE	15	15	1	1	36	52	52	68
JULY	13	23	4	2	50	61	67	86
AUGUST	15	19	2	2	45	45	62	66

SEPTEMBER	18	14	5	3	20	31	43	48
OCTOBER	10	19	4	2	32	37	46	58
NOVEMBER	13	17	2	3	16	47	31	67
DECEMBER	12	16	3	0	18	42	33	58
TOTAL	169	229	30	24	387	565	586	818

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
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



Dr.K.B.Lingegowda
Professor and Head

INTRODUCTION :

Palliative care services was started as a sub-unit by Department of Anesthesiology 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 (3rd 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:

2017	NUMBER OF PATIENTS VISITED OPD	NUMBER OF NEW /REFERRED PATIENTS TO THE DEPARTMENT	NUMBER OF PATIENTS STARTED ON ORAL MORPHINE SOLUTION
JANUARY	1272	223	55
FEBRUARY	708	193	41
MARCH	951	264	54
APRIL	898	203	75
MAY	1061	194	66
JUNE	915	230	61
JULY	926	232	67
AUGUST	1058	248	89
SEPTEMBER	809	189	56
OCTOBER	871	161	71
NOVEMBER	758	231	76
DECEMBER	673	219	71
TOTAL	10900	2587	782

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

2017	ADMISSION	DISCHARGE	DEATH
JANUARY	49	45	04
FEBRUARY	31	28	02
MARCH	50	47	03
APRIL	57	55	02
MAY	51	46	05
JUNE	39	38	01
JULY	59	56	03
AUGUST	43	41	02
SEPTEMBER	47	45	02
OCTOBER	35	33	02
NOVEMBER	42	40	02
DECEMBER	33	30	03
TOTAL	536	504	32

Faculty and Staff:

SL. NO.	NAME	DESIGNATION
1	Dr.K.B.Lingegowda	Professor and Head
2	Dr.Shivalingappa Basavaraju	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 2017 - Histopathology

MONTH	NO. OF BIOPSY / SPECIMEN	NO.OF BLOCKS	NO. OF SLIDES	REVIEW CASE	NO. OF REVIEW SLIDES	FROZEN	SEPCIAL STAINS
JAN	883	6198	6966	413	1088	45	32
FEB	808	5984	5984	369	901	34	28
MAR	870	5743	6429	432	1506	35	37
APR	860	6188	6953	422	1566	42	53
MAY	815	5333	5793	465	1441	47	52
JUNE	948	6656	6996	406	1550	38	50
JULY	875	5812	6226	391	1566	38	35
AUG	777	5632	5947	388	1460	34	28
SEP	758	5210	5562	348	1487	45	40
OCT	767	5122	5417	401	1506	47	50
NOV	822	5108	5719	413	1822	44	44
DEC	838	4978	5906	438	1428	42	40
TOTAL	10021	67964	73898	4886	16746	511	489

Annual Statistics for the year 2017

IHC & FISH Laboratory Department of Pathology

Sl. No	Type of Investigations	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total
1	IHC markers	221	188	272	223	231	209	239	217	201	191	222	201	2615
2	ER/PR & HER2 TEST BY IHC	76	92	95	96	98	84	76	61	65	91	103	92	1034
3	HER-2 TEST BY IHC (Stomach)	3	4	9	2	3	0	4	3	3	1	1	3	36
4	HER-2/neu TEST BY FISH	8	5	4	5	4	3	1	5	4	7	3	5	54
5	EWSR1 TEST BY FISH	2	2	4	3	1	5	2	2	0	2	2	1	27
6	BCR/ABL TEST BY FISH	1	0	1	2	0	1	0	0	1	0	1	1	8
7	PML / RARA TEST BY FISH	0	0	0	1	1	0	2	1	1	0	0	0	6
8	RISH TEST	0	2	0	0	2	0	1	0	1	0	2	0	8
Grand Total														3788

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
1. Dr. Rekha V Kumar	Prof. & Head
2. Dr. C.S. Premalata	Professor
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



- Invited member of the IARC, Lyon, France, funded Pathology Review Panel of the “HPV-AHEAD” Indo-European project on “HPV infection and head & neck cancers”(2011-2017)-completed

Research Activities, Department of Pathology

ONGOING PROJECTS

Dr .Rekha V. Kumar

- Co-investigator on the DBT-funded "Virtual National Oral Cancer Institute" project- JNCASR Dr. Tapas Kundu (PI) (2017)



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

Participation at Conference / Seminar / Workshops

Dr. Rekha V. Kumar

- Guest lecture on "Approach to bone tumours" and Slide Seminar on "Bone tumours-Shadows & Mirages",VIN PATH CON 2017-IAPM conference on bone,soft tissue and dermatopathology at Vinayaka Mission's Kirupananda Variyar Medical College,Salem- January 25th,2017
- Guest lecture on "Small round cell tumours" at CDE programme – "Patho Panorama" at Vokkaligara Sangha Dental College and Hospital, Bangalore- February 8th, 2017
- Chairperson of session on CNS lesions at the NPSICON 2017 at NIMHANS, Bangalore-April 22nd,2017
- Guest lecture on " Approach to bone tumours" and "Slide Seminar" at KMC, Manipal-May 2017
- Guest lectures on " Case based studies" and " IHC in breast lesions" at the 2nd International multi-disciplinary breast cancer conference and update at BMCRI, Bangalore-July 2017
- Chairperson on session on "Grey-zone lymphomas" at the CME on Haematolymphoid Disorders, Sri Shankara Cancer Hospital,Bangalore-September 2nd,2017. Honoured for "lifetime achievement".
- Chairperson of session on "Borderline tumours and low grade ovarian carcinomas" at the 6th Annual Conference of the KSCAGOICON-2017 at Bangalore-September 23-24th,2017
- Guest lecture on " Pathology of Breast Cancer- a primer" and "Slide Seminar" at BGS - GIMS, Bangalore-October 26th, 2017
- Panelist in Panel discussion of oral tumours "Field cancerisation & second primary" and Speaker for the motion on the debate on " Risk stratification in early breast cancer-IHC is the right choice" at the 2nd Indian Cancer Congress, Bangalore-November 9th-12th,2017

Dr. C.S. Premalata

- 30th June to 2nd July 2017: 14-ICML LUGANO – 2017 participated as delegate organized by Mumbai Hematology Group, Mumbai.

- 14th and 15th July 2017- Participated as a judge for oral paper presentation at 2nd International Multi-disciplinary breast cancer conference and updates at Bangalore Medical College and Research Institute.
- 2nd September 2017-Participated as a faculty at the conference on Haematolymphoid Disorders, held at Sri Shankara Cancer Foundation, Bengaluru.
- 4th and 5th November 2017- Participated as faculty at the International CME in Gynecological Pathology at Cybercity conventions, Hyderabad.
- 9th- 12th November 2017- Participated as panelist at the 2nd Indian Cancer Congress held at Clark's Convention centre, Bengaluru.

Dr. Usha Amirtham

- An international update on plasma cell Dyscrasias, KMIO, 11th & 12th Feb 2017, CME
- 8th- 12th November 2017- at the 2nd Indian Cancer Congress held at Clark's Convention centre, Bengaluru - Panelist.
- CME in breast disorder, Bangalore Medical College, 18th March 2017 (Faculty)

Dr. Champaka G

- An international update on plasma cell Dyscrasias, KMIO, 11th & 12th Feb 2017, CME
- 9th- 12th November 2017- at the 2nd Indian Cancer Congress held at Clark's Convention centre, Bengaluru.

- 4th International Head and neck symposium and live interactive: Trans-oral robotic Surgery and trans-oral laser microscopy, May 15, May 16 2017
- 1st Annual update in lymphoma 28-29 October 2017 – Mumbai. "A clinicopathological update on lymphoma together we treat better".

Dr. Akkamahadevi Patil

- 1st Annual update in lymphoma 28-29 October 2017 – Mumbai. "A clinicopathological update on lymphoma together we treat better".
- 9th- 12th November 2017- at the 2nd Indian Cancer Congress held at Clark's Convention centre, Bengaluru.

Dr. Suma M.N.

- 2nd Indian Cancer Congress 8th - 12th Nov 2017, Bangalore, India
- Pathfinders, Global Pathology Conference – 2017, 7th & 8th Oct 2017, Bangalore
- 2nd September 2017-CME on Haematolymphoid Disorders, held at Sri Shankara Cancer Foundation, Bengaluru.

Honors/ Awards received by

Dr. Suma M.N.:

- CReDo workshop in cancer Research methodology (International collaboration for Research methods Development in Oncology) – conducted by

National Cancer grid, Lonavala,
Mumbai February 2017

Dr. Geeta V. Patil Okaly

- Preceptorship Programme on Molecular testing in lung cancer 12th – 13th August 2017 at TMH, Mumbai.
- Diabetes Control and Complication Summit (DCCS) one day CME on 28th Oct 2017 Bangalore.
- 2nd Indian Cancer Congress, 8th – 12th Nov 2017, Bangalore.

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

Dr. Rekha V. Kumar

- Swamyvellu Krishnamurthy, Durgesh Kumar, Kumar Harish H, **Rekha V Kumar**. UTERINE LEIOMYOSARCOMA WITH CUTANEOUS AND FIBULAR BONE METASTASIS: A RARE CASE REPORT. International Journal of Anatomy, Radiology and Surgery[serial online] 2017 July [cited: 2017 Nov 6]; 6:SC01-SC03.
- Khan, A.A., Solanki, H.S., Patel, K., Nanjappa, V., Kumar, K., **Kumar, R.V.**, Kumari, A., Manoharan, M., Karunakaran,

C., Murugan, S., Gupta, R., Gupta, R., Khanna-Gupta, A., Mathur, P.P., Prasad, T.S.K., Pandey, A., Chatterjee, A. and Gowda, H. A multi-omic analysis to characterize cigarette smoke induced molecular alterations in esophageal cells [Abstract]. In: Abstracts of the NGBT conference; Oct 02-04, 2017; Bhubaneswar, Odisha, India: Can J biotech, Volume 1, Special Issue, Page 64. <https://doi.org/10.24870/cjb.2017-a51>

- Mena M, Lloveras B, Tous S, Bogers J, Maffini F, Gangane N, **Kumar RV** et al.(2017) Development and validation of a protocol for optimizing the use of paraffin blocks in molecular epidemiological studies: The example from the HPV-AHEAD study. PLoS ONE 12(10): e0184520.
- Premalata CS, Deepika V, **Kumar RV**. Primary CNS lymphomas: an immunohistochemical study from a regional cancer centre.IJSR 2017; 6(9): 9-11
- Sunitha N, Champaka G, **Kumar RV**, Lakshmaiah. Her2/Neu Expression in Gastric and Esophagogastric Junction Adenocarcinoma. Int J Sci Stud 2017;5(3):61-66.
- Dasappa L, Lakshmaiah K C, Babu G, Abraham LJ, Babu S,

- Kumar RV**, Lokesh K N, Rajeev L K, Rudresha A H, Rao SA, Garg S. Colorectal cancer presenting as ovarian metastasis. *Clinical Cancer Investigation J* 2017; 6:92-6
- Suresh Babu MC, Garg S, Lakshmaiah KC, Babu KG, **Kumar RV**, Loknatha D, *et al.* Colorectal cancer presenting as bone metastasis. *J Can Res Ther* 2017; 13:80-3.
 - Gheit T, Anantharaman D, Holzinger D, Alemany L, Tous S, Lucas E, Prabhu PR, Pawlita M, Ridder R, Rehm S, Bogers J, Maffini F, Chiocca S, Lloveras B, **Kumar RV** *et al.* Role of mucosal high-risk human papillomavirus types in head and neck cancers in central India. *International Journal of Cancer* 141(1), March 2017
 - Suma MN, Premalata C, Suresh babu M, Amirtham U, Bharathnur S, **Kumar RV**. ALK Positive diffuse large B-cell lymphoma: An archival study from a regional cancer centre in South India. *JMSCR* Volume 05 Issue 01 January 2017
 - C. Ramachandra, Sharma Vikas, S. Krishnamurthy, S. Ramesh, L. Appaji, **Rekha Kumar**. Extended Right Hepatectomy by Liver Hanging Maneuver in an Infant with Hepatoblastoma. *Indian Journal of Surgical Oncology* · October 2016 DOI: 10.1007/s13193-016-0555-8
- Dr. C.S. Premalata**
- **Premalata C S**, Deepika V, Rekha V Kumar. Primary CNS lymphomas: An Immunomorphologic study from a regional cancer centre. *International journal of Scientific Research*. September 2017. 6:9;9-11.
 - Smrita S, **Premalata CS**, Kavitha B L, Prassanakumari, Madhu S D, Rekha V Kumar. Primary Ewing Sarcoma/Primitive Neuroectodermal Tumor of the Kidney: An aggressive neoplasm mimicking Wilms' tumor. *International journal of Scientific Research*. March 2017;6:9. 30-32.
 - Suma MN, Premalata CS, Suresh babu M, Amirtham U, Bharathnur S, Kumar RV. ALK Positive diffuse large B-cell lymphoma: An archival study from a regional cancer centre in South India. *JMSCR* Volume 05 Issue 01 January 2017
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Sciences. 2015;4:7. PubMed Indexed.

Dr. Usha Amirtham

- Suma MN, Premalata C, Suresh babu M, Amirtham U, Bharathnur S, **Kumar RV**. ALK Positive diffuse large B-cell lymphoma: An archival study from a regional cancer centre in South India. JMSCR Volume 05 Issue 01 January 2017
- A spectrum of primary pulmonary neuroendocrine tumors from a regional cancer centre in South India. Usha Amirtham, Nikitha J. Mulchandani, Premalata CS, Shankaranand Bharatnur, Rekha V. Kumar. Vol 5, Issue 7, 2017. Journal of Medical Science and Clinical Research.

Dr. Champaka G.

- Sunitha N, Champaka G, **Kumar RV**, Lakshmaiah. Her2/Neu Expression in Gastric and Esophagogastric Junction Adenocarcinoma. Int J Sci Stud 2017;5(3):61-66.
- Her2/neu expression in gastric and esophagogastric junction adenocarcinoma, International journal of Scientific study, June 2017, Vol 5, issue 3.

Dr. Akkamahadevi Patil

- Co-author in "Myelomatous pleural effusion: A rare case entity reported from tertiary care center in South India. Babu GK, Saldanha SC, Lokesh KN, Suresh Babu ML, Patil AD, Kiran PR, Lakshmaiah KC, Lokanatha D. Published in Lung India, 2017, 34:176-8

Dr. Suma M.N.

- A Case of Urachal Yolk Sac tumor with spontaneous Rupture in a child. Journal of pediatric hematology/oncology 2017; 39(2); e82-e84. T.L. Suma, DCH, DNB, Subramaniam Ramanathan, MD, M. Padma, MD, L. Appaji, MD, DM and MN Suma, MD.
- Seminoma of undescended testis with urinary bladder metastasis: A case report with review of literature in Urol Ann 2017; 9:77-9. Syed Althaf, Kiran Shankar, Vishnu Kurpad, M.N. Suma.
- Sarcomatoid carcinoma of the penis in Indian Journal of Surgical Oncology, March 2017, Volume 8, Issue 1, pp 85-87, Kiran Shankar, M. Vijay Kumar, C. Srinivas, Sandeep Nayak, M.N. Suma.
- Histomorphological and anatomical analysis of primary

- extranodal non-Hodgkin lymphoma – ten years study from a tertiary cancer centre in South India – Sch. J. App. Med. Sci. 2017;5(1C):205-215, Suma Mysore Narayana, Chenagiri Premalata, Usha Amirtham, Geetha Kurlekar, Rekha V. Kumar.
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 - Suresh babu MC, Govind babu K, Lakshmaiah KC, Lokanatha D, Premalata CS, Suma MN, Rajeev LK, Linu JA., Lokesh K, Rudresh AH, Sunny Garg, Vishwanath S. Head and neck lymphomas- Tip of the iceberg? International Journal of Sciences. 2015;4:7. PubMed Indexed.
 - Case report – Plexiform schwannoma of vulva with brief review of literature. Dipti panwar, Suma Mysore Narayana and Geeta V. Patil in International Journal of current medical and pharmaceutical research – 28th July 2017
 - Diagnosis of a case of papillary – cystic variant of acinic cell carcinoma on fine needle aspiration cytology. Myriad of cytomorphological features. Narayana Suma M, Padmini J, Parthiban R, Madhumita J, Natarajam G, Revadi PS.
- Dr. Geeta V. Patil Okaly**
- Case report – Plexiform schwannoma of vulva with brief review of literature. Dipti panwar, Suma Mysore Narayana and Geeta V. Patil in International Journal of current medical and pharmaceutical research – 28th July 2017
 - Her/neu Testing in 432 consecutive breast cancer cases using FISH & IHC – A comparative study. Journal of clinical and Diagnostic Research 2017, Apr. Vol-II (4):ECO1-ECO5.
 - Rajiv LK, Patidar R, Babu G, Babu MC, Lokesh KN, Okaly GV. Rare case of primary synovial sarcoma of lung. Lung India 2017.

CYTOPATHOLOGY UNIT

INTRODUCTION

The Cytology unit was started in the year 1974, it offers cyto-diagnostic 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 neighboring 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-gynae Cytology consisting of fluid Cytology, brushing and washings from various sites.

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.

Statistics for the year 2017 CYTOLOGY

TYPE OF MATERIAL	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUG	SEP	OCT	NOV	DEC	TOTAL
FNAC REGULAR	234	242	235	196	261	213	178	228	193	202	245	238	2665
USG –FNAC	260	255	289	290	284	314	280	230	189	270	253	265	3179
CTG – FNAC	27	11	19	15	19	23	22	15	18	19	27	34	249
C D CLINIC – FNAC													
CD CLINIC FNAC													
ASCITIC FLUID	41		47	52	68	39	55	45	43	49	51	66	556
PLEURAL FLUID	45		38	38	33	30	33	34	32	31	33	36	383
CSF	297	243	280	251	308	289	284	298	250	262	271	272	3305
SPUTUM			3	-			3			3	-	3	12
URINE	13	5	5	7	3	9	1	1	2	2	1	2	51
NIPPLE DISCHARGE				1		2	1		1	-	-	3	8
BRONCHIAL ASPIRATE	16	10	19	16	16	26	12	18	31	19	30	24	237
BRONCHIAL BRUSH													
PERITONEAL FLUID						4			3				7
ESOPHAGEAL BRUSH													
STOMACH BRUSH													
GYNAE HOSPITAL			101	90	114	108	105	99	63	120	145	104	1049
GYNAE CD CLINIC			83										83
GYNAE CD CAMP		172	239	106	52	112	34	34	28		50	56	883
GYNAE – CCI		161	681	176	290	124			9				1441
MAHATHI TRUST		194	292		222	118		333			-		1159
MISCELLAENOUS REVIEW SLIDES: FNAC		69	54	48	72	76	58	77	50	59	62	72	697
GYNAE				1	3	3	1	2		-	1	-	11
OTHERS		11	6	8	9	3	10	6	3	5	12	11	84
TOTAL	933	1969	1795	1662	1758	1493	1078	1421	915	1044	1186	1187	16441

Research Activities, Department of Pathology

ONGOING PROJECTS

Dr. Malathi M

- High Productivity, Intelligent Screening tool for Cervical Cancer- Developing a portable screening tool for screening cancer cervix in collaboration

with a soft ware company- Mr. Adarsh Natarajan, Aindra Systems Pvt. Ltd. Bangalore - 560078

2. Participation at Conference / Seminar / Workshops

Dr. Malathi M.

- 28-1-17 : CME on Treasure Hunt in Pathology at SVMCH &

RI, Pondicherry as Guest Speaker

- 11th & 12th Feb. 2017 - Plasma Cell Dyscrasias- An International Update – KMIO, Bangalore.
- 10 - 12 Nov.2017: Cytocon-2017- Workshop on Lymph node Cytology at NEIGRIHMS, Shillong.
- 47th National cytology conference as Judge for oral Papers

Dr. Ashwini Nargund

- Plasma Cell Dyscrasias- An Intl Update, 11th & 12th Feb. 2017 - KMIO, Bengaluru.
- ICC, Pathology 2017, Nov 12th, Bangalore
- 4th International Head and neck symposium and live interactive: Trans-oral robotic Surgery and trans-oral laser microscopy, May 15, May 16 2017

Dr. Priya D.

- CME on lymphoma held in sri shankara cancer hospital and research center

Paper presentation.

- Tamoxifen induced changes in endometrium of breast cancer patients-a clinicopathological study of 25 cases. - AGOI 5TH annual conference

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

Dr. Balu S

- Balu S, Sridhar P, Rahul Loni , Vedamanasa I. Gliosarcomas: Are they still dreadful? JMSCR, Vol 05, issue 08, Page 26094-98/ August 2017.

Dr. Ashwini Nargund

- Her/neu Testing in 432 consecutive breast cancer cases using FISH & IHC – A comparative study. Journal of clinical and Diagnostic
- Research 2017, Apr. Vol- II (4):ECO1-ECO5.

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
9.	

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 2017 - Haematology

MON TH	HAE MOG RAM	ES R	BM A	BM Bx	RS	CYT OCH EMIS TRY	HB FP (PS)	BT CT	CLINI CAL URINE	FC M	PT APT T	TOTA L
JAN	6328	38	297	184	16	34	1944	34	41	62	104	9148
FEB	5853	38	249	160	11	37	1846	40	45	48	115	8442
MAR	6613	60	303	184	18	57	2112	45	55	49	167	9663
APR	6245	55	273	170	18	52	1975	45	50	51	170	9104
MAY	6601	53	295	175	18	57	2159	48	42	66	143	9657
JUNE	7342	60	319	203	18	35	2022	53	56	69	134	10311
JULY	7542	55	311	186	18	45	2229	55	54	72	43	10610
AUG	7450	55	303	166	18	38	2029	58	53	63	249	10482
SEP	6119	61	269	168	18	35	2099	45	49	62	302	9227
OCT	7421	55	298	165	10	45	2050	40	53	61	351	10549
NOV	6866	53	280	169	18	58	1978	40	52	61	450	10025
DEC	6975	53	303	190	20	53	2082	42	52	74	429	10273
TOT AL	81355	636	3500	2120	201	546	24525	545	602	738	2657	11323

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
1. Dr.Raghavendra HV	Professor
2. Dr.Namrata	Associate Professor
3. Dr.Shankaranand	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. Madhumathi**

- Basics of Flow cytometry and its application in Haematological malignancies” at Christ college, Bangalore August 2017 as Faculty
- Participated as a delegate in 2nd Indian Cancer Congress, Bangalore.
- 1. **Paper published in National and International Journals along with Paper, Authors name, Name of Journal**

Dr. Shankaranand B.

Suma MN, Premalata C, Suresh babu M, Amirtham U, Bharathnur S, **Kumar RV**. ALK Positive diffuse large B-cell lymphoma: An archival study from a regional cancer centre in South India. JMSCR Volume 05 Issue 01 January 2017

Dr. Madhumathi DS

- Vijayanarasimha D, Madhuathi DS, Kumari P, Naik J, Appaji L, Lakshmidevi V. The phenotypic characteristics of infantile acute leukaemia in a regional cancer center from South India. J. Appl. Hematol 2017;8:61-7
- Jacob Abraham Linu, MS Namratha Udupa, DS Madhumathi, KC Laskshmaiah, K. Govind Babu., D. Lokanatha, MC Suresh Babu, KN Lokesh, LK Rajeev and AH Rudresha. Study of Clinical haematological and cytogenetic profile of patients with acute erythroid leukaemia. Ecancermedicalscience, ecancer 2017, 11:712 DOI; 10.3332/ecancer:2017, 712.

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 hematological malignancies and solid tumors. The facility offers cytogenetic analysis of hematological malignancies and solid tumors to the department of medical, pediatrics 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 2017 - Cytogenetics

MONTH	BMA	PBL	FNA	FISH	PLEURAL FLUID
JAN	138	11	22		1
FEB	89	12	13		-
MAR	128	14	14	1	-
APR	117	12	25	1	-
MAY	141	17	23	-	-
JUNE	130	13	16	-	-
JULY	143	4	28	-	-
AUG	117	14	23	1	-
SEP	112	19	20	5	-
OCT	124	19	19	-	-
NOV	127	11	23	1	-
DEC	151	17	17	5	-
TOTAL	1517	163	243	14	1

5. Research activities and projects:

Dr. PRASANNA KUMARI

Prognostic evaluation of RUNX1 gene in childhood Precursor B cell Acute lymphoblastic leukemia with intrachromosomal amplification of chromosome 21 (iAMP21) - 2017

6. Participation at Conferences/ Seminars/ Workshops:

Dr.Prasannakumari,

- “2nd Indian Cancer Congress” on 8th-12th Nov 2017, at Bengaluru.
- National Symposium on “Cytogenetics to Genome” on 27th sept 2017 at Hassan.
- National Symposium on “Genetics in Clinical Medicine”(Exploring the role of Genetics in Medicine) on 15th & 16th Sept 2017 at Jubilee center for medical Research, Trissur, Kerala.
- ISHG – 2017 International symposium on “Trends in Human Genetic Research & Management” 42nd Annual meeting of The Indian Society of Human Genetics” Held on 2nd – 4th March 2017, at IISC, Bengaluru.

Dr.Kavitha.B.L

- “2nd Indian Cancer Congress” on 8th-12th Nov 2017, at Bengaluru.
- ISHG – 2017 International symposium on Trends in Human Genetic Research

& Management 42nd Annual meeting of The Indian Society of Human Genetics” Held on 2nd – 4th March 2017, at IISC, Bengaluru

Dr.Obul Reddy

- “2nd Indian Cancer Congress” on 8th-12th Nov 2017, at Bengaluru.
- ISHG – 2017 International symposium on Trends in Human Genetic Research & Management 42nd Annual meeting of The Indian Society of Human Genetics” Held on 2nd – 4th March 2017, at IISC, Bengaluru

7. Papers published in national and international journals

Dr. Prasannakumari

- Prasannakumari Sampathkumar, Shanthi Velusamy, Namrata Rajkumar, M Padma (2017) “A Novel Translocation: t(2;14)(p12;q32) in a Case on Precursor B- Acute Lymphoblastic Leukemia”. Inaian Journal of Medical and paediatric Oncology. Vol 38:3:407-408.
- Divya Vijayanarasimha, Madhumathi.D.S, Prasannakumari, Jayadeva Nayak, L Appali, V.Lakshmidevi (2017) “The Phenotypic Characteristics of Infantile Acute Leukemia in a Regional Cancer Center from South India” Journal of Applied Hematology, Vol.8:2:61-67.

Dr. Obul Reddy

- A complex variant t(3;15)(q26;q13) representing cryptic/masked acute promyelocytic leukaemia with a novel breakpoint of chromosome 15 – a case report. Sandhya Appachu, Chintaparthi Obula Reddy, Nagesh T

Sirsath, Kuntejowdahalli C
Lakshmaiah and Prasannakumari.

Elevated Serum Haptoglobin is associated with Clinical Outcome in Triple-Negative Breast Cancer Patients. Umaira Tabassum, Obula Reddy, Geetashree Mukherjee.

2. Courses Offered:

- B.Sc. MLT
- MD Pathology (4 seats)

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

Faculty and Staff:

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

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 41st Meeting of Governing Council held on 29th December 2008 it was created as Department of Paediatric oncology.

The Department of Paediatric 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.



ACTIVITIES:

The Department trains D.M. students in Pediatric Oncology, Medical Oncology, Fellowship Students in Pediatric Haemato-oncology and Post-graduate students posted from various medical colleges of Karnataka.

5. ACADEMIC - DOCTORS /RESIDENTS/REGISTARS/STUDENTS

Dr. Jyothi .M
Dr. Pooja .G.C
Dr. Anup -Fellowship student, Paediatric Oncology.
Dr. Prerana .S Nesargi
Dr. Aarthi .N

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 (2017)

1. Atypical Teratoid rhabdoid tumor of the central nervous system: Case series from a regional tertiary care cancer centre in South India.
Appaji L., Aruna kumari B.S., Babu K.G., Premalatha CS, Pramod KPR, Bhat Gr, Prem C. J
Cancer Res Ther, 2017:13(6):1015-22.

8. PAPERS PRESENTED IN STATE/ NATIONAL/ INTERNATIONAL CONFERENCES: NIL

9. POSTERS PRESENTED IN STATE/ NATIONAL INTERNATIONAL CONFERENCES:

Avinash T, Appaji L. The Role of NGO and Civil Society in Management of Childhood Malignancies: A 5 Year Journey. Mid Term CME of Paediatric Haematology and Oncology Chapter of Indian Academy of Paediatrics; 2017 Jul 1-2; New Delhi: DL

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

- 1) Pre-Conference-Workshop.
PEDICON 2017-National Conference of Indian Academy of Paediatrics. Bangalore.
Road map to Paediatric Palliative Care Services.

11. PARTICIPATION AT CONFERENCE / WORKSHOPS DURING THE YEAR (2017)

1. Phocon 2017 at Kolkata : Dr Arun Kumar A.R, Assistant Professor, attended the Conference.
2. Poster presentation on Childhood APML (Clinical scenario and outcome 5 years study)



12. INFORMATION TO PATIENTS

- A. OPD Timings - 9am to 1pm & 2pm to 4pm
- B. OPD days - Monday to Saturday
- C. Procedure to see the Doctors, what to do in case of emergency - walk in as well as prior appointment taken for next visit. In case of emergency unit doctors will be contacted / bring the patient to day car emergency ward (room no. 32).

D. In Patient, Ward name, Bed strength
under the department:

and 6 PICU beds in Jindal ward.

75 In-Patients are housed in
KAPOOR ward and ANIKETHANA
WARD

STATISTICS

Year of 2017-18 (01.01.2017 to 31.12.2017)			
	Female	Male	Total
New Registration	401	269	670
In-Patients	843	1051	1267
Discharges	783	375	1158
Death	61	37	98

Faculty and Staff:

<u>Name</u>	<u>Designation</u>
1) Dr.M.Padma	Professor & I/c HOD
2) Dr.A.R.Arun Kumar	Assistant Professor
3) Dr.T.Avinash	Assistant Surgeon
4) Dr.B.S.Aruna Kumari, Professor (Retired on 30.04.2014 & Joined as a Adhoc Basis on 01.10.2014)	Professor (Retired on 31.3.2015 & Joined as a Adhoc Basis on 06.05.2015)
5) Dr.L.Appaji	Assistant Professor
6) Dr.Nuthan Kumar M.K	(Reported the Duty on 20.12.2017)

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 Bare 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 services of RSO are extended to Department of Diagnostic Radiology, Nuclear Medicine and Regional Centre for Radio Pharmaceuticals (RCR), BRIT, KMIO Campus on radiation safety issues.



The Clinac DHX - dual high energy linear accelerator has 120 pairs of multi leaf collimator, electronic portal imaging device (EPID), dynamic wedge function (DW), 3D conformal radiotherapy (3D CRT) facility and intensity modulated radiotherapy (IMRT) delivery etc. The 3D radiation field analyzer with all necessary dosimeters available in the department will confirm quality radiation dose delivered to the patients. The Eclipse and Brachyvision 3D computerized treatment planning system with networking capabilities with CT, linear accelerator, EPID and other peripheries is also available. There are three functional telecobalt machines catering to, maximum number of cancer

MODALITIES	Statistics - 2017
CLINAC – DHX	
3DCRT Technique	408
IMRT Technique	398
Boost Treatment	178

patients receiving radiotherapy daily. The Institute has commissioned a new low energy accelerator (UNIQUE) with EPID facility and is put for patient use after obtaining all the necessary regulatory clearances from AERB.

Our department is the only approved centre by Rajiv Gandhi University of Health Sciences in Karnataka for pursuing Ph.D in the field of Radiation Physics. We have at present 4 research scholars perusing their Ph.D degree on full-time basis. The fourth batch of M.Sc. Radiation Physics students were admitted during the academic year 2016-17 with 4 candidates. The AERB, RGUHS and Government of Karnataka has approved the department for starting M.Sc.(Radiation Physics) programme earlier. Teaching of Radiological physics and radiation safety are carried out for MD/DMRT radiotherapy postgraduates and RD and RT undergraduate student technologists. Field training for Post graduate students from BARC, Mumbai, Anna University, Chennai, Bharathiar University, Coimbatore, Manipal University, Manipal and Bharathidasan University, Tiruchirapalli is also provided every year. The department also provides one year internship training for 8 fresh students (5 with stipend and 3 without stipend), after which the candidates would be eligible to work as Medical Physicist across the country and abroad.

CLINAC-DBX	
3DCRT Technique	652
Boost Treatment	122
UNIQUE	

3DCRT Technique	252
Boost Treatment (3D)	18
IMRT Treatment	425
Boost Treatment (IMRT)	62
MANUAL PLANNING	
Manual calculation (Co-60)	1939
Special Technique	356
Manual Electron	18
CONTOURING	
Manual contouring	314
Remarking	142
MOULD ROOM TECH.	
Orfit mould	2510
Template	69
Electron cutout	4
Thermocol cuttings	25
BRACHYTHERAPY	
HDR	
ICBT	228
OVOIDS	26
Sorbo	41
ISBT	89
Surface Mould	3
ILBT	14
MANUAL BRACHYTHERAPY	
ICBT	282
OVOIDS	16
Sorbo	15

Publications

- Godson HF, Ravikumar M, Sathiyam S, Ganesh K M, Ponmalar R. The effect of influence quantities and detector orientation on small-field patient-specific IMRT QA: comparison of measurements with various ionization chambers. Radiol Phys Technol. 2017;10:195-203.
- Ponmalar YR, Ravikumar M, Sathiyam S, Ganesh K M, Arun R, Godson HF. Response of nano Dot optically stimulated luminescence dosimeters to therapeutic electron beams. J Med Phys. 2017;42(1):42-7.
- Ponmalar YR, Ravikumar M, Ganesh KM, Sathiyam S, Arun R, Godson HF. Dosimetric characterization of Optically Stimulated Luminescence Dosimeter (OSLD) with therapeutic photon beams for use in clinical radiotherapy measurements. J Can Res Ther. 2017;13:304-12.
- Vasanthan Sakthivel, Ganesh kadirampatti Mani, Sunil Mani, Raghavendirani Boopathy., Comparison of treatment planning techniques in treatment of carcinoma of left breast: second cancer perspective. Radiation Physics and Chemistry 2017 Vol. 132, page: 41-45.
- Vasanthan Sakthivel, Ganesh Kadirampatti Mani, Sunil Mani, Raghavendirani Boopathy, Jothybasu Selvaraj. (2017) 'Estimating second malignancy risk in Intensity Modulated Radiotherapy and Volumetric modulated Arc therapy using mechanistic radiobiological model in radiotherapy for carcinoma of left breast' Journal of Medical Physics Vol. 42(4): 234-240.
- Vasanthan Sakthivel, Ganesh Kadirampatti Mani, Sunil Mani, Raghavendirani Boopathy. (2017) 'Radiation-induced second cancer risk

- from external beam photon radiotherapy for Head and Neck cancer: impact on in-field and out of field organs' Asian Pac J Cancer Prev. Vol. 18, Page: 1897-1903.
7. Vasanthan Sakthivel, Ganesh Kadirampatti Mani, Sunil Mani, Raghavendiran Boopathy., Radiation-induced second cancer risk from stereotactic ablative radiotherapy (SABR) for lung cancer: a review of planning studies. Journal of Radiotherapy in Practice 2017, Page:1-11.
8. Sangaiah Ashokkumar, Ganesh KM, Ramalingam K, Karthikeyan K, Jagadheeskumar N. (2017)
- 'Dosimetric Validation of Volumetric Modulated Arc Therapy (VMAT) Using AAPM TG-119 Benchmark Plans in an Upgraded CLINAC 2100CD for Flattening Filter Free (FFF) Photon Beams' Asian Pac J Cancer Prev. 26;18(11):2965 .

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.P.Senthil Manikandan	Assistant Professor
7	Sri S.D.Annaiah	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 - 2017

Sl.No	TYPE OF	JAN	FEB	MAR	APR	MAY	JUNE	JULY	AUGUST	SEP	OCT	NOV	DEC	TOTAL
1	Chest	1591	1552	1756	1540	1871	1585	1633	1555	1484	1723	1728	1691	19709
2	Neck	147	109	144	154	185	168	259	119	179	158	133	129	1884
3	Ba.Swallow	11	21	27	14	23	21	28	22	19	27	17	15	245
4	Extremities	90	45	48	26	68	88	50	54	62	37	74	48	690
5	TL Spine	35	16	20	23	17	25	25	4	26	17	33	18	259
6	Skull	11	8	13	12	8	13	13	0	22	0	12	10	122
7	PNS	4	1	2	5	0	10	0	0	2	4	3	6	37
8	Others	18	32	35	10	1	70	0	64	0	34	76	29	419
9	Ultrasound	835	837	960	885	1059	1188	1030	914	209	748	1056	988	10709
10	U/S FNAC	286	230	249	241	309	237	295	234	86	177	186	48	2578
11	Mammography	195	153	176	153	177	131	180	154	146	226	172	199	2062
12	U/S. Breast	23	24	18	14	21	36	41	51	21	17	17	28	311
13	C.T.Scan	1639	1594	1692	1768	1714	1740	1846	1753	1491	59	1674	1580	18550
14	CT FNAC &	23	35	20	25	20	45	30	4	36	37	38	53	366
15	CT RT	195	126	185	125	88	85	50	93	101	117	200	162	1527
16	MRI	267	171	243	195	174	243	228	261	205	267	374	226	2854
17	Echo	377	338	286	146	299	298	274	240	254	304	252	291	3359



RESEARCH PUBLICATIONS

Anuradha Kapali, Beerappa J, Raghuram P, Bangar R. Diagnostic accuracy of ultrasound imaging in Hashimoto's thyroiditis. Thyroid Res Pract 2017;14:28-31.

FACULTY AND STAFF DETAILS

1	Dr. Raghuram. P.	Professor & HOD
2	Dr. Madhu.S.D	Associate professor
3	Dr. Anuradha Kapali	Associate professor
4	Dr. Anuradha	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

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 outlined 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

Publications from the department

Sl.No.	Parameters	Year (2017)
1	Total number of patient consultations seen in OPD	143073
2	Total number of patients admissions (IPD)	3021
3	Total Number of Major Operations (ISBT/Permanent Implant/ICBT)	680
4	Total Number of Minor Operations (ILBT/V Ovoids/Sorbo/EUA / Assessment)	1487
5	Total Number of Day Care Operations (IDL/Biopsy/FNAC/Endoscopy)	269
6	Radiotherapy Cancer Treatment Given Annually (a) Number of patients (b) Teletherapy (no. of fractions given) (c) Brachytherapy (d) TPS Planning (e) Mould Room procedure (f) Radiation Sensitizer - Chemotherapy	a)4529 b)49408 c)1420 d)4559 e)2851 f)36065



1. Joseph B, Farooq N, Shafeeque MN, Sathiyar S, Lokesh V, Ramesh C, et al.

Hypofractionation in postmastectomy breast irradiation. How safe are we in using standard tangentials? *Asian J Oncol.* 2017 Jul 1; 03:101–5.

2. Govardhan HB, Thimmaiah N, Khaleel IA, Pradhan S, Jain R, Krishna U et al. Comparison of Incidental Radiation Dose to Axilla and Internal Mammary Nodal Area by Conventional, 3DCRT, and IMRT Technique in Carcinoma of Breast. *J Nucl Med Radiat Ther* 2017; 8: 325. doi:10.4172/2155-9619.1000325

3. Khaleel IA, Govardhan H. P17.06 Comparison of intensity modulated radiation therapy (IMRT) and conventional three dimensional conformal radiotherapy (3DCRT) in supratentorial astrocytic series WHO grade III- IV primary malignant brain tumors. *Neuro-Oncology.* 2017 Apr 19;19(suppl_3):iii117-iii117

4. Jalali R, Gupta T, Goda JS, Goswami S, Shah N, Dutta D, Krishna U et al. Efficacy of Stereotactic Conformal Radiotherapy vs Conventional Radiotherapy on Benign and Low-Grade Brain Tumors. Vol. 3, *JAMA Oncology.* American Medical Association (AMA); 2017. p. 1368.

5. Radhakrishna N, Yamini BK, Kadam AS, Shivashankar N, Vishwanathan C, Javarappa R. Acoustic analysis of voice in nonlaryngeal head and neck cancer patients post chemoradiotherapy. *J Cancer Res Ther.* 2017; 13(1):113-117. doi:10.4103/0973-1482.199386

STAFF DETAILS IN THE DEPARTMENT OF RADIATION ONCOLOGY

Dr. V.LOKESH M.D. PROF & HEAD OF THE DEPARTMENT		
RO Unit 1	RO Unit 2	RO Unit 3
OPD DAYS: MONDAY&THURSDAY	OPD DAYS: TUESDAY & FRIDAY	OPD DAYS: WEDNESDAY & SATURDAY
Dr. V.LOKESH M.D. PROFESSOR & HEAD OF UNIT RO 1 HEAD OF THE DEPARTMENT	Dr. B. THEJASWINI. M.D.PROFESSOR & HEAD OF UNIT RO 2	Dr. T .NAVEEN M.D.PROFESSOR & HEAD OF UNIT RO 2
Dr. BINDHU JOSEPH M.D. ASSOCIATE PROFESSOR Dr. R SIDDANNA. PALLED M.D. ASSOCIATE PROFESSOR	Dr. R NANDA. M.D. ASSOCIATE PROFESSOR Dr.ARADHANA.KATKE ^{DMRT} DNB ASSOCIATE PROFESSOR Dr.K.P.JAGANATH ASSOCIATE PROFESSOR	Dr.TANVIR PASHA M.D.ASSOCIATE PROFESSOR
Dr. H B GOVARDHAN. M.D. ASSISTANT PROFESSOR Dr.IBRAHIM KHALEEL M.D. ASSISTANT PROFESSOR	Dr.R. VINAYKUMAR M.D.ASSISTANT PROFESSOR Dr.SHAMSUNDAR M.D. ASSISTANT PROFESSOR	Dr. P SRIDHAR. M.D.ASSISTANT PROFESSOR Dr.UDAYKRISHNA M.D. ASSISTANT PROFESSOR

LIST OF POST GRADUATE STUDENTS

SL NO	NAME	YEAR-2017
1	Dr.Vedamanasa	MDRT
2	Dr.A.Sathish	MDRT
3	Dr.Nisma	MDRT
4	Dr.Tarakeshwari (In service)	MDRT
5	Dr.Vezokhoto	MDRT
6	Dr.Poorna Chandra Tejaswi	MDRT
7	Dr.Shubha Supriya	DMRT
8	Dr.Sweta kumari	DMRT
9	Dr.Saikumar (In-service)	MDRT
10	Dr.Hanan	MDRT

11	Dr.Jayashree	MDRT
12	Dr.Anup Hegde	MDRT
13	Dr.Mayadevi	DMRT
14	Dr.Vishal Malavade	MDRT
15	Dr.Kurian	MDRT
16	Dr.Hemalatha	MDRT
17	Dr.Mahantesh	MDRT
18	Dr.Fareena Taj	DMRT
19	Dr.Suman	DMRT

DEPARTMENT OF SURGICAL ONCOLOGY



Dr.S.Krishnamurthy
Prof. & HOD

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 B.Sc. 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)



1. 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 2017.

New cases	Follow up cases	Total
6200	25920	32120

No of Surgery	Minor OT Biopsy	Taping	ICD	Colono scope	OGD/ Endoscope	Broncho scope
1782	1850	1630	1380	1340	1430	1100

Supra Major	Major	Minor
150	924	1386



1. **CONFERENCES/ SEMINARS /WORKSHOPS CONDUCTED BY THE DEPARTMENT**

Conducted CME on BREAST CANCER in month of October.

PARTICIPATION IN CONFERENCE/SEMINARS/WORKS HOPFOR 2017.

NATCON 2017 Orissa
Mid term Natcon 2017
Oncosurg 2017 Mumbai

2. **PAPERS PUBLISHED:**

- Arjunan R, Kumar D, Kumar KV, Premlatha CS. Breast Cancer with Synchronous Renal Cell Carcinoma: A Rare Presentation. J Clin Diagn Res. 2016 Oct;10(10):XD03-XD05. doi: 10.7860/JCDR/2016/20362.8683. Epub 2016 Oct 1. PMID: 27891445; PMCID: PMC5121783.
- Arjunan, Ravi & Veerendrakumar, K.V. & Sailaja, S. & Kumar, H..

- (2017). Partial Sternal Resections in Primary and Metastatic Tumors with Nonrigid Reconstruction of Chest Wall. Indian Journal of Surgical Oncology. 8. 10.1007/s13193-017-0632-7.
3. Hebbar K A, K S, Deshmane VL, Kumar V, Arjunan R. Papillary carcinoma in median aberrant thyroid (ectopic) - case report. J Clin Diagn Res. 2014;8(6):QD01-QD3. doi:10.7860/JCDR/2014/7626.4463
4. Partial Sternal Resections in Primary and Metastatic Tumors with Nonrigid Reconstruction of Chest Wall.Ravi
- Arjunan, K.V. Veerendrakumar, S. Sailaja & H. Harish Kumar Indian Journal of Surgical Oncology volume 8, pages284–290(2017)
5. Arjunan, Ravi & Veerendrakumar, K.V. & Sailaja, S. & Kumar, H.. (2017). Partial Sternal Resections in Primary and Metastatic Tumors with Nonrigid Reconstruction of Chest Wall. Indian Journal of Surgical Oncology. 8. 10.1007/s13193-017-0632-7.

Faculty and Staff

Name	Designation
1. Dr.Krishnamurthy S	Professor
2. Dr.Veerendra Kumar	Professor
3. Dr.C.Ramachandra	Professor
4. Dr. Ravi Arjunan	Associate Professor
5. Dr.Syed Altaf	Associate Professor
6. Dr. Srinivas	Associate Professor
7. Dr.Ashwathappa	Assistant Professor

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 sanjevini 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