



Dr. N.G.P ARTS AND SCIENCE COLLEGE

(Autonomous)
COIMBATORE - 641 048.

Newsletter
2015-2016

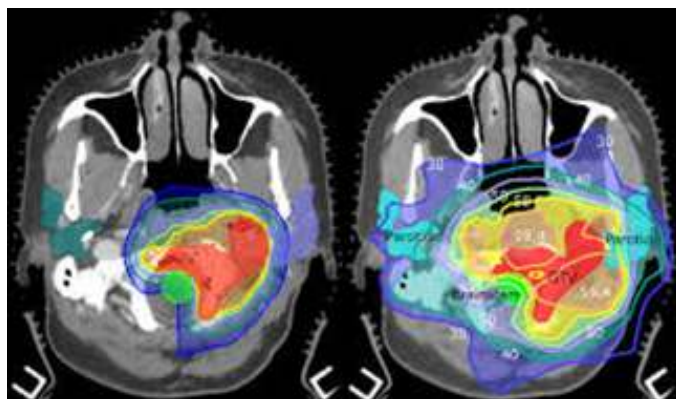
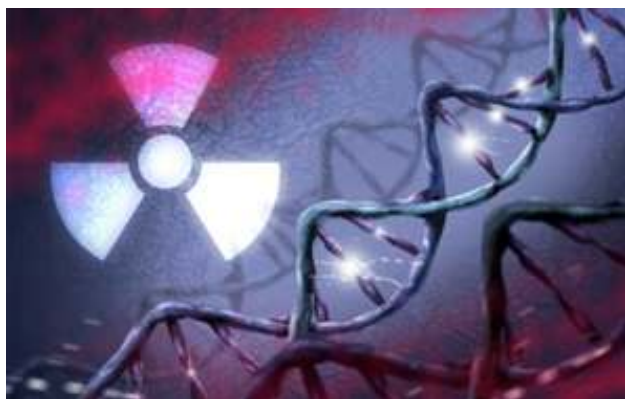
Issue III

Private Circulation Only



RIFF

Department of Medical Physics



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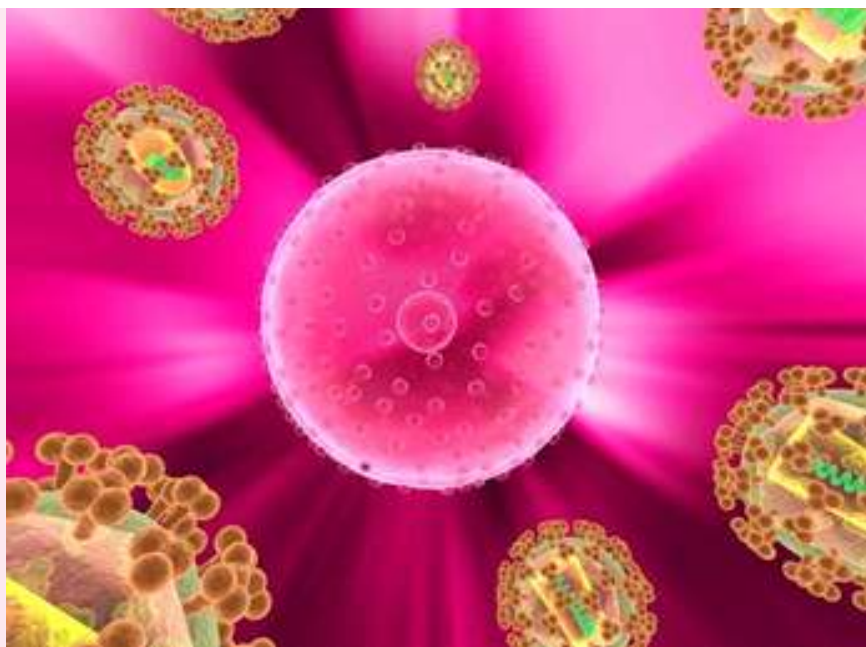
Dr. P.R. Muthuswamy

Editor

Mrs. Jayanthi. S

Course Coordinator

Assistant Professor of Medical Physics



"Visualizing solutions for accurate diagnosis and treatment"

Vision

Mission

The goal of the Department is to cultivate an educational environment which provides the full spectrum of learning opportunities in clinical medical physics, radiation oncology and radiobiology. The curriculum is flexible and designed to enable a student to optimize their learning experience throughout their two years programme. It is an expectation that upon the completion of the programme a student will be an outstanding "Radiation Oncology Physicist" capable of making an immediate impact in either an academic or community practice setting.



Teaching is carried out through didactic lectures, clinics and numerous teaching conferences, with emphasis on patient care, under the supervision of full-time staff. The department enjoys state-of-the-art equipment and operates several sites

- » Clinical Talks (Topic-based)
- » Physics/Radiobiology Talks
- » Case Presentations - focused on background / workup
- » Journal Club
- » Guest attending lectures
- » Visiting professors
- » Training and project to other cancer centers

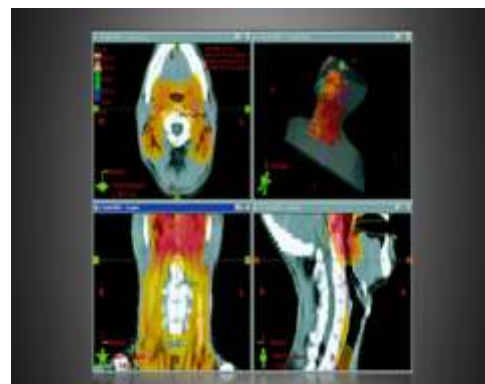
Linear Accelerator - Rapid Arc



Brachytherapy- GammaMed



Computed Tomography -Siemens



Treatment Planning System- Eclipse

LIST OF GUEST LECTURES:

Date	Topic	Guest
27.10.2015	MEDICAL IMAGING AND TECHNOLOGY	Mr. S. Pannerselvam Assistant Professor Sri Ramachandra Medical College Porur, Chennai
30.10.2015	RADIATION BIOLOGY	Dr. C.S. Sureka Assistant Professor, Department of Medical Physics Bharathiyar University Coimbatore
02.11.2015	NUCLEAR MEDICINE	Dr. K. Muthuvelu Profesor of Medical Physics Barnard Institute of Oncology Chennai
04.11.2015	RADIOTHERAPY	Dr. Varadharajan Chief Medical Physicist Department of Radiation Oncology Billroth Hospital Chennai
05.11.2015	RADIATION DOSIMETRY	Dr. Jeevanram Former Scientific Officer Atomic Energy Regulatory Board Kalpakkam
06.11.2015 To 07.11.2015	TREATMENT PLANNING SYSTEM AND SPECIAL ADVANCED TREATMENT TECHNIQUES	Mr. Muthukumar Senior Medical Physicist Apollo Hospital, Chennai



Guest Lecture in the topic of Medical Imaging and Technology
on 27.10.2016 at KMCH Tumor Board



Guest lecturer in the topic of Principles of
Treatment Planning System and Special Advanced
Treatment Techniques on 06.11.2016 - 07.11.2016
at KMCH Conference Hall.

EXTENSION ACTIVITIES

Kovai Medical Center and Hospital and Department of Medical Physics organized a Childhood Cancer Day on 14th Feb 2016 at KMCH Auditorium

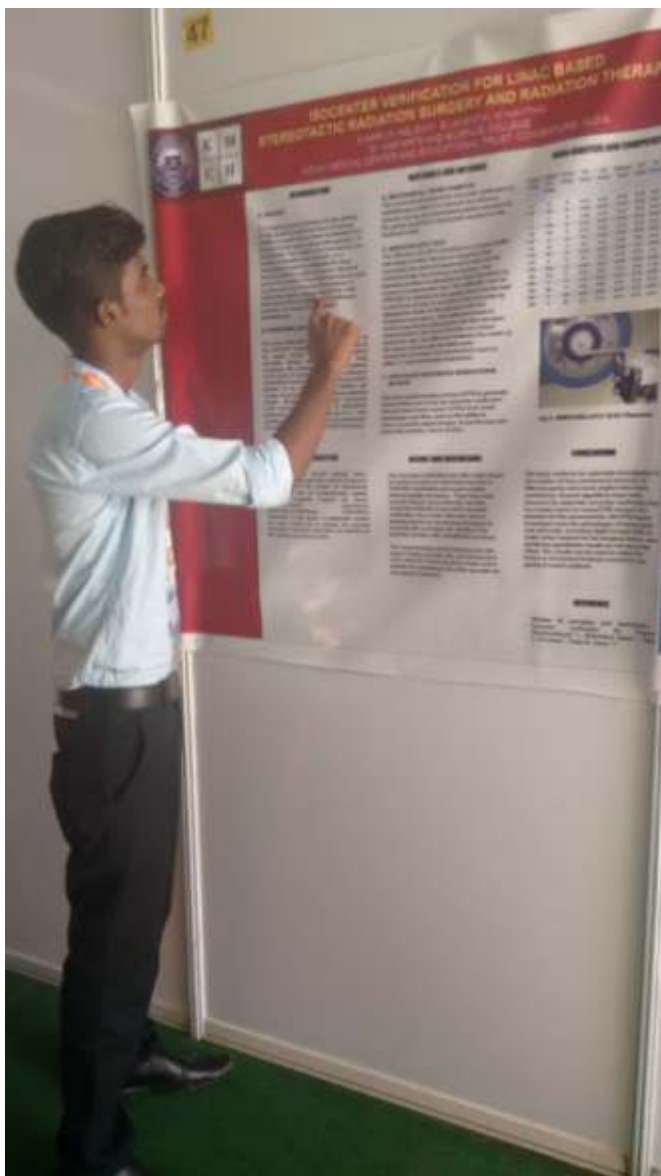


ACHIVEMENTS OF STUDENTS

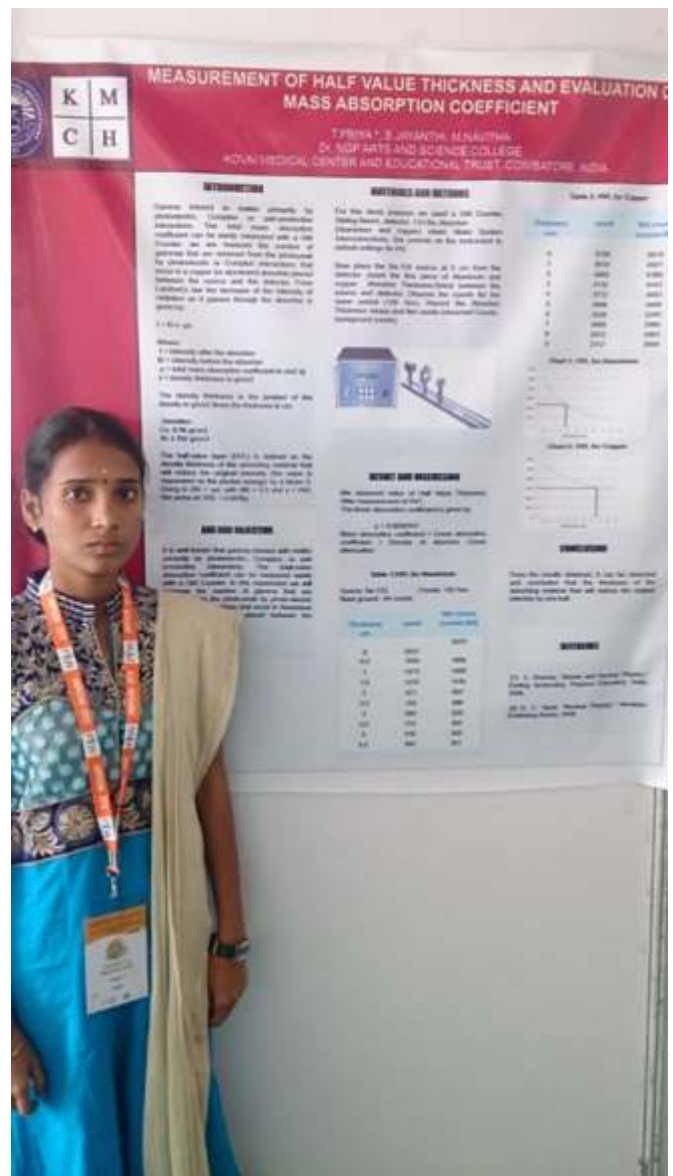
I & II M.Sc Medical Physics students participated in the 36th AMPICON 2015 on 20th-22nd Nov 2015 in the topic of "Expanding the vision, Enhancing the capabilities "conducted by Regional Cancer Center, Trivandrum.

I M.Sc Medical Physics students participated in the 20th Association of Medical Physicist Of India TN & PY- 2015 on 6th to 7th Feb 2016 in the topic "Medical Physics- Enriching Tomorrow "conducted by Healthcare Global Enterprises, Bangalore Institute of Oncology.

II M.Sc., Medical Physics Students Ms. Abisarooba Iswarya.V, Mr. Harvin Nelson.A, Ms.Jincy.C.D, Mr. Naresh Kumar.M, Ms. Priya.T, Ms. Nivetha.V and Ms. Uma Mageswari.M.B Presented a Poster presentation in the 36th Association of Medical Physicist of India at Regional Cancer Center, Trivandrum.



II M.sc., Medical Physics Student Mr. Harvin Nelson presented a poster presentation in the topic of Isocenter verification for Linac based SRS / SRT



II M.sc., Medical Physics Student Ms. Priya.T presented a poster presentation in the topic of Measurement oh half value thickness and evaluation of mass absorption coefficient.

STAFF PARTICIPATION

Mrs. Jayanthi.S, Ms. Navitha.M has participated in the 36th AMPICON 2015 on 20th - 22nd Nov 2015 in the topic of "Expanding the vision, Enhancing the capabilities" conducted by Regional Cancer Center, Trivandrum.

Mrs. S. Jayanthi underwent Faculty Development Programme for three days training in PTW - Dosimetric System at Freiburg - Germany on April 20th -22th 2015.



Training at Aster Medicity - Kochi



Training at American Institute oncology - Hyderabad.

CLINICAL TRAINING UNDERGONE BY THE STUDENTS

II M.Sc Students underwent one month (May 2015 - June 2015) training programme and one month project programme (January 2016 - February 2016) to familiarize themselves about the Radiotherapy department to various cancer centers all over India. The facilities in which students training and project include, but are not limited to the following :

- Intensity Modulated Radiation Therapy (IMRT)
- Intensity Modulated Arc Therapy (IMAT; Rapid Arc)
- Image Guided Radiation Therapy (IGRT - CBCT, kV, others)
- Stereotactic Body Radiation Therapy (SBRT)
- Gamma Knife Treatment
- Respiratory Gated Radiation Therapy
- PET-CT or MRI-CT fusion for target delineation
- Remote afterloading HDR brachytherapy.

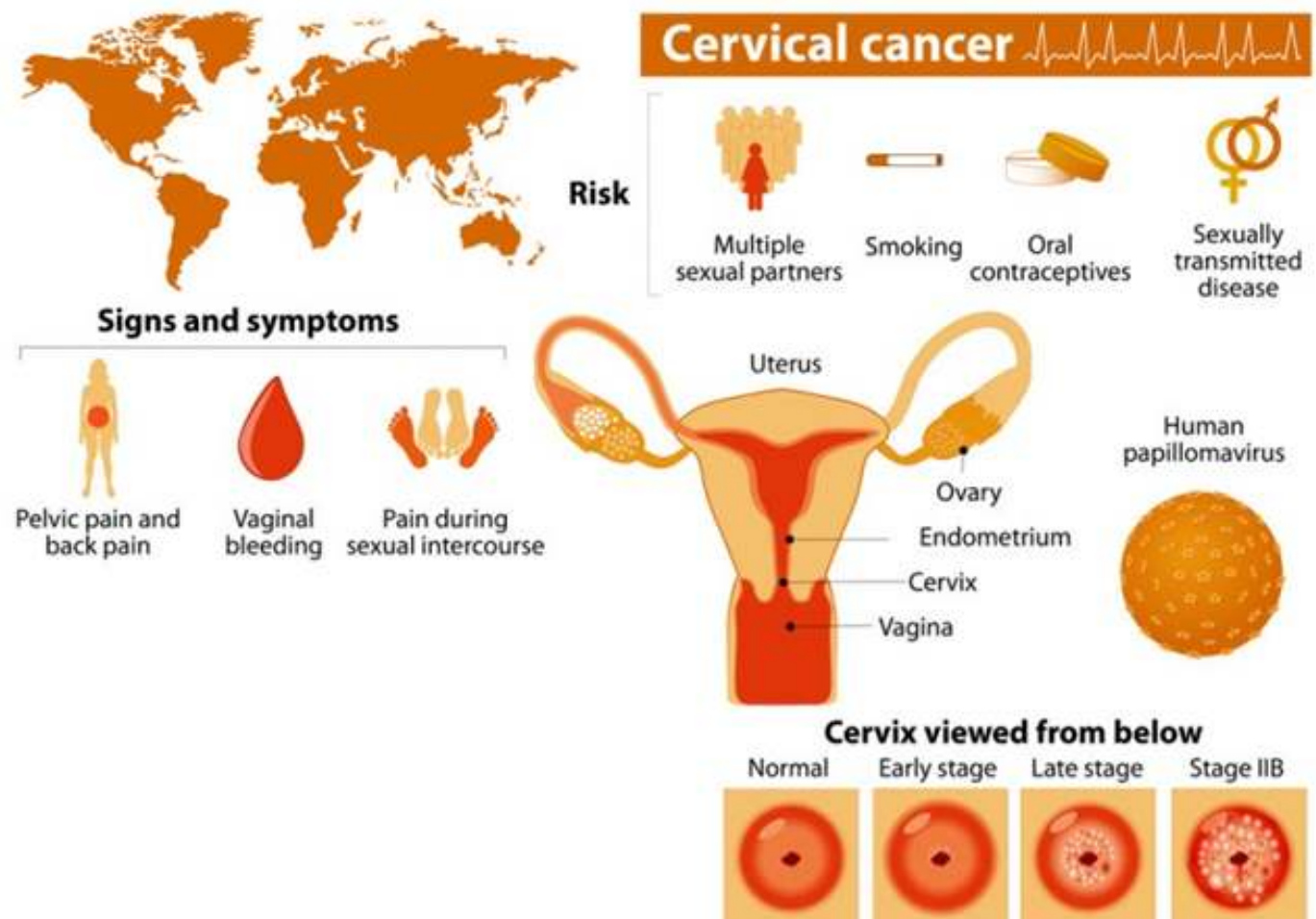


Training at Omega Cancer Hospital - Hyderabad



Cervix Cancer

The cervix is the lower part of the uterus, the place where a baby grows during pregnancy. Cervical cancer is caused by a virus called Human papillomavirus (HPV). The virus spreads through sexual contact. Most women's bodies are able to fight HPV infection. But sometimes the virus leads to cancer. You're at higher risk if you smoke, have had many children, use birth control pills for a long time, or have HIV infection.



Cervical Cancer

quick facts

Regular Pap smear tests decrease a woman's chances of developing cervical cancer by 5 times

It is the 2nd most common cancer affecting women.

Cervical cancer is caused by a common virus known as human papillomavirus (HPV).

High number of pregnancies increases risk.

Each year, about 500,000 women worldwide are diagnosed with cervical cancer and more than 270,000 die from it.

Women who smoke are 2 times more at risk than non-smokers.

Regardless of age, all females risk exposure to the HPV virus as it can spread via skin contact and sexual intercourse.

Usage of contraceptives is a factor of cervical cancer.

Sexually transmitted infections like Chlamydia, Herpes may cause cervical cancer.

Early sexual experience increases risk of cervical cancer.



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