Association of Radiation Oncologists of India

NEWSLETTER

S A M P A N D A N

QUATERLY NEWSLETTER | March 2016 | VOLUME 11, ISSUE 1

Newly Elected AROI President's Address

Prof U P Shahi, President , AROI

Institute of Medical Sciences,Banaras Hindu University, Varanasi.Uttar Pradesh ,PIN 221 005

Dear Friends

Namaskar, My Greetings from Varanasi, the city of Lord Vishwanath

Following the sad demise of Prof M C Pant,I was given the responsibility of the President,AROI for the remaining period.I am thankful to the executive committee and the general body to express confidence and showering your blessings upon me. I am fully aware of the importance of being the President of great AROI . I have spend 33 years in the field of Radiation Oncology and seen the field from close quarters. I offer my dedicated service for the cause of advancement of Cancer care, particularly the radiation Oncology in India .

Radiotherapy as a medical branch has witnessed tremendous progress during last 2-3 decades in India as well as internationally. In India, we have advanced cancer centers / institutes with the state of art facilities . At the same time, there are many centers struggling hard to have bare minimum facilities in term of manpower expertise and appropriate equipments. The magnitude of cancer burden has increased at an alarming pace and requires multi pronged attack from those concerned with cancer care including the government, the treating doctors ,anti-cancer research team and various groups like our association of radiation Oncologists.

The AROI has a bigger role to play by broadening the scope and responsibilities of radiation oncologists to include various and all inclusive dimensions helping to provide Comprehensive Cancer solutions to the country. Radiotherapy certainly lies at the center of all anti cancer efforts. We must not forget that a radiation oncologist is involved with patient care from diagnosis, treatment ,follow up and rehabilitation till probably the end of the patient. It is important that we must try to look beyond radiotherapy alone.The curriculum needs a revision/modification to develop better clinicians with stronger diagnostic and treating capabilities. Teaching and training the specialists should be reviewed and revised to incorporate newer developments in the subject.

The AROI suggests the govt. to develop a network of cancer care facilities throughout the country keeping the Radiation Oncology facility at its center, It should follow a pyramidal arrangement .The row at the base should comprise basic units with availability of Core Level total care facilities to provide comprehensive care(600 -750 basic centers with 2 treatment units each). The topmost level should comprise National cancer Institutes (4-5 in No. ,in the 4 corners and in the central part of India.) These NCIs must be having highest level of state of art facilities for Cancer care ,research and teaching. Between the above two rows ,there should be Tertiary Cancer centers (120-150 in No.) and state level cancer Institutes (40-50 in No.) to take care of higher needs. The Govt. should direct the funds in organized manner to fulfil the above program.

The foremost issue is right communication and better understanding amongst us ,the professionals. A multi institutional collaboration be evolved to create strong relationship at local to the region, state and the national level. BEING TOGETHER IS SUCCESS BUT BEING ALONE IS JUST LONELINESS AND LOSS. Let us try to move forward. A small step in right direction may take us to a giant Leap in alleviating human sufferings. Of course It requires collective wisdom of all of us.

I express me heartfelt thanks to Dr Rajesh Vashistha,the SECRETARY GENERAL of AROI who has worked hard and complete dedication to take the association to greater heights. I pay my deep regards to all the members of the executive committee of AROI and all the esteemed members of the Association. I wish you all the best for HOLI ,the festival of colours ,unity and fraternity.

Thanks

Dr. Uday P Sahi

From AROI, ICRO office &
AROI Newsletter Editorial Board

Wishing you and your family a Very Happy Holi

This year we are going to publish our new directory, for that we need your small up graded CV. Please send it on drvashistha@gmail.com. It will help us to direct communication, circulation of Journal and identification for election voting.

In the month of June we are going to ask papers for best papers (PG and Post PG up to 5 years experience) and proffered paper for two group less than 40 years and more than 40 years. Fellowship applications for different age groups. Be ready for same.

This year national conference will be held in Bhubaneswar, please give your valuable inputs.

With warm regards,

Dr. Rajesh Vashistha
Secretary General AROI

Inside this issue:

NEW TRENDS IN RADIOTHERAPY

Dr. Rakesh Vyas, Director, GCRI, Ahmedabad

The accurate target delineation with maximum normal tissue sparing is the gold standard of Radiotherapy treatment. Continuing improvements in techniques and technologies are increasing the precision in Radiotherapy treatment planning and accuracy in treatment delivery. SRS, SRT, IMRT and IGRT were new developments in the field of Radiotherapy until few years back. The advances in imaging techniques like CT scan, MRI, PET, fusion PET/CT, have also helped a lot in improving the precision. These all helped in improved outcomes and less treatment related toxicity by sparing normal tissues. But still there are many challenges like reducing the treatment time, controlling the organ movements, targeting the tumour cells with sparing the normal tissues completely which lead the clinicians and researchers in developing the new advances in the field of Radiotherapy.

Notable new developments in Radiotherapy field to date are 4D imaging, Stereotactic Body Radiotherapy (SBRT), Particle Therapy and nanotechnology. Adoptive Radiotherapy is also an important advancement. Thus in past decade, the leap in radiotherapy treatment is overwhelming.

Recent technological advances are:

4-D imaging and motion management:

Respiratory-induced organ motion presents a significant challenge in treatment of thoracic as well as abdominal tumours, the movement can be greater than 3 cm if the motion is not controlled actively.

Four-dimensional imaging refers to the acquisition of spatial motion information over time. This can be done with CT, PET or MRI. The instantaneous breathing phase information can be obtained through the real-time position management (RPM) system, spirometry and pressure belts. Thus 4D imaging helps a lot in delineating the target in all the direction with improving the accuracy and outcomes.

SBRT:

SBRT is term applied in US by ASTRO for the management and delivery of image guided high dose Radiation therapy with tumour ablative intent within a course of treatment that does not exceed 5 fractions. SBRT is used to treat primary lung tumours as well as metastatic tumours i.e. lung and liver mets. Advantage of SBRT is a non-invasive substitute for other local modalities with less toxicity. SBRT has emerged as a versatile strategy with a wide range of applications with many different types and stages of cancer. It requires careful attention in patient selection and technical quality assurance for effective and safe implementation.

Helical Tomotherapy:

The tomotherapy system has a 6 MV LINAC and detector array mounted opposite each other on a ring gantry that continuously rotates while the couch is translated through the gantry. MVCT image on the tomotherapy system is performed. Tomotherapy is a popular IGRT treatment approach, with multiple dosimetric studies supporting its potential benefits.

Proton therapy:

Proton therapy offers the promise of reduction in the side effects compared with photon therapy by reducing the dose to non-targeted tissues. The burgeoning interest in proton therapy is related to its potential to improve the therapeutic ratio.

The only obstruction in this treatment facility is its cost, current proton therapy equipment and facilities are up to 10 fold more expensive than conventional Radiation therapy facilities.

Carbon ions:

Carbon ion therapy is an innovative Radiotherapy modality that is mostly dedicated to cancers considered as unresectable and radioresistant to photons. Its radiobiologic properties combine the advantages of the high dose distribution conformity of protons for deep tumours and the higher biological effectiveness of high LET particles. In few countries like Japan, Germany, they have started the projects with promising results.

Robotic Radiotherapy:

Robotic Radiotherapy is a frameless Robotic Radiosurgery system. This has mainly two parts, a small linear accelerator and a robotic arm which can deliver the radiation from any direction to any part of the body. Owing to its high cost, it is not available widely.

Other new trends in the management of malignancies are the role of preoperative chemo-radiotherapy in carcinoma rectum and carcinoma oesophagus. Use of targeted therapy along with the Radiotherapy.

Extracorporeal Radiotherapy in treatment of bone tumours is also gaining the interest of many clinicians. This technique allows very high dose almost up to 50Gy in single fraction to the tumour with no damage to normal tissues.

Above all, the latest trend of putting Radioactive microspheres in the blood stream to treat the malignancy has shown new hope in the future of Radiotherapy. Yttrium-90 microspheres are used in treatment of hepatocellular carcinoma. (90)Y microspheres, which carry the radiation, are selectively taken up by the tumour without damaging the normal tissues thus preserving the normal liver. The result of improving survival is also promising.

Challenges in introduction of new advances:

The potential or actual use of new advances raise few questions like cost, efficacy and ethics. The use of such high-end costly advances also needs properly qualified and trained staff, appropriate human resources, infrastructure requirements capable of handling the modalities efficiently and effectively.

The new advances should be introduced in contest of the particular country's requirements. Additional clinical trials are necessary to demonstrate the advantages.

Dr. Rakesh Vyas, Director, Gujrat Cancer & Research Institute, Ahmedabad

Quality Management Program/Quality Indicators_ Our experience

A Quality Management Program/Quality Indicator Program is important for continuous monitoring and improvement in any process. It is important that an institution has all the policies, procedures and processes well documented and 'in place' in a robust manner .

Appropriate number of personnel and resources must be allocated in terms of time, administrative support, space so that culture of quality and safety becomes a habit. And to make it happen, appropriate mechanism must be in place for regularly reassessing and updating the policies, procedures and processes in documentary form.

A quality indicator with scoring system can help not only in positioning an institute among peers but keep a tab on its efficacy through internal audits. External audits/accreditation create pressure and motivation to overcome the problems.

A systematic approach is required to document any shortcoming and each staff must be trained to achieve the documented indicator. Triggers for each indicator failure with corrective actions should be discussed, reported and reviewed whether for treatment equipment or patient specific procedure. Lack in reporting can lead to failure repeatedly.

In India, Atomic Energy Regulatory Board (AERB) does an annual audit on machine performance and installation of new equipment. However an audit like Novalis Circle covers clinical part too. Whatsoever national and international protocols (AAPM reports, RTOG guidelines) are followed must cover is activity and put an indicators for same with score.

Some checks must be peer reviewed like machine output and performed annually e.g. IAEA/WHO TLD postal dosimetry output audit.

Our experience is that an institute must invest in dosimetry and QA equipment from very beginning, invest in training of personnel across all bands initially and have an ongoing program to augment their skills in respective domain. Must incorporate structured process for evaluation for continuous improvement.

Munjal RK,
Chief Medical Physicist,
Max Cancer Centres
NEW DELHI

Program Reports

AROI Rajasthan Chapter meet at Udaipur

Dear AROI Members,

It is my pleasure to write a brief summary of the activities of elite event of 7th Biannual conference of Rajasthan chapter of Association of Radiation Oncologist of India, held on 19th and 20th December 2015, in City of Lakes - Udaipur. The event was successfully conducted under the banner of GBH- Memorial cancer hospital, Udaipur, with Dr. Rajesh Pasricha as organizing secretory. It was an opportune time to get an instant academic update from renowned faculty from all over the country. It is gratifying to note that this conference covered comprehensive treatment and recent advances in management of major malignancies.

The academic programme was carried out in 3 sessions viz head and neck cancer, breast cancer and gynac cancers that included thought provoking lectures and brain storming panel discussions.

Second day of the conference had paper presentations by PG students and top two presentations were awarded Travel Fellowships by Raj chapter of AROI.

Special thanks and recognition goes to all the AROI members and participants for the succesful execution of the conference.

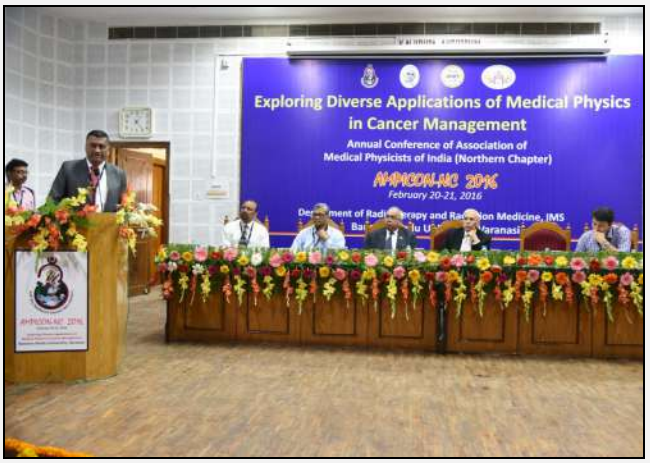
Sincerely,

Dr. Rajesh

AMPICON-NC-2016 meet at Varanasi

AMPI-NC-2016 was hosted by Department of Radiotherapy and Radiation Medicine, Institute of Medical Sciences, Banaras Hindu University during February 20-21, 2016.

The theme of the conference was "Exploring Diverse Applications of Medical Physics in Cancer Management". Prof. MC Misra, Director, All India Institute of Medical Sciences, New Delhi was Chief Guest of the Inaugural function. He released the proceedings of the conference and in his inaugural speech highlighted the importance of Medical Physicists in health care and stressed upon the need of quality education for medical physicists. He insisted that BHU as well as AIIMS must have degree courses in Medical Physics. Nearly 250 delegates from India and few from abroad participated in this annual event. The conference was well attended and organized. Executive



Members of AMPI, Trust Members of AMPI and Board members of

CMPI participated in good numbers. There was participation from trade members who displayed their products in exhibition area. The Scientific programme of the AMPICON-NC 2016 was well appreciated by the participants Sixty five papers were presented. The Dr NC Singhal oration was delivered by Dr Kamlesh Passi. There was an interesting panel discussion on "Will Co-60 replace the Ir-192 source for Brachytherapy?" The panelists included Radiation Oncologists, Medical Physicists and representative from Trade. It was concluded that Co-60 based Brachytherapy is need of the hour to avoid frequent import and replacement of Ir-192 sources. However, more clinical studies are required with Co-60 source.

Many eminent speakers spoke on various subjects ranging from Cyber knife, IMRT/IGRT, SRS, VMAT, Brachytherapy, Imaging, Immobilization, etc. Dr Chary, Dr S Hukku, Dr AK Rath, Dr Chougule, Dr T Ganesh, Dr Dayanand, Dr Pankaj, Dr Sushmita, Dr Maria, Dr Rituraj, Dr Kheruka, Dr V Subramani, Mr Saji, Dr Gautam and many more spoke on various topics highlighting applications of Medical Physics in cancer management. There was a special teaching session organized by CMPI for students and budding physicists, which was well attended.

The best paper session was quite interesting in which young physicists presented their research and participants enjoyed the healthy competition for award. Best paper for oral presentation was awarded to Mr Avinav Bharti (ACDTRC, Bhatinda) and Mr Gaganpreet (PU, Chandigarh). The best paper for poster was awarded to Mr Prabhat Krishna (ACTREC, TMH, Mumbai) and Mr Deepak Thapar (RNT Medical College, Udaipur). In the valedictory function Prof Satyjit Pradhan, Chairman Organizing Committee thanked the participants for attending the conference. Prof Chougule, President AMPI and Dr Manoj, President AMPI-NC thanked the organizers for successfully organizing the conference. All the participants applauded the efforts of Dr Abhijit Mandal for a well crafted scientific programme which was conducted as per schedule with clock move precision.

Participants clicked photographs on decorated rickshaw and enjoyed the Morning Ganga Aarti and boating on the Ghats of Ganges.

Lalit M Aggarwal
Organizing Secretary

NRS Medical College, Kolkata PG students and faculty observing Gynaecological Cancer Day on 11.3.16 by bway of panel discussion. *Input by Dr Phalguni Gupta, Associate Professor*

Best of ASTRO India In Collaboration of AROI May 14-15, 2016

Organised by

Division of Radiation Oncology
Medanta The medicity, Gurgaon

Contact
Dinesh Kumar 9811710626
Email: bestofastroindia@medanta.org

Organising Secretary: Dr.Tejinder Kataria
teji1960@gmail.com

Employment opportunities (Radiation Oncologists)
Fortis Memorial Research Institute, Gurgaon
Associate Consultant 1
Attending consultant 1
Contact:monica.sethi@fortishealthcare.com

FARO invites abstracts and extends travel support to young oncologists to participate in Kyoto, Japan

FARO is going to organise FARO conference Kyoto, Japan. Interested candidates send the e-abstract to the secretary General AROI, on drvash-istha@gmail.com AROI, before 12-March-2016.
Details are given below:-
Scientific Program
For this Meeting, we ask the Council Members (delegates) of each country to be responsible for collecting and submitting the abstracts from their own organizations to the organizing committee of the first FARO Meeting.

Please refer to FARO or AROI website for more details.

The abstract submission will start on April 10, 2016 and be open until May 31.

Travel Support

Travel support will be provided to 30 presenters (100,000 yen/person, about US$900/person).

This will be provided on need-basis in order to maximize the opportunities of participation for preferably young colleagues.

We hope that you will understand our philosophy in the selection.

The details will be provided in a near future.

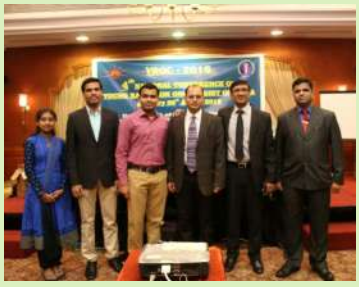
27th AROI UPCON-2016 concludes successfully at RMLIMS, Lucknow

Dept of Radiation oncology RMLIMS Lucknow successfully organized 27th annual conference of UP Chapter on March 19-20, 2016. The convention had a thematic focus on **"Emerging Paradigms in Precision Radiotherapy & Oncology Practices"** . It was conference full of academic activities and great hospitality. **Prof. M.C. Pant** Oration was introduced to enshrine his pioneering contribution in oncology. The inaugural oration most aptly was conferred to Prof. G. K. Rath who shared his view on *"***Emerging Paradigms in precision radiotherapy".**

Input by Dr Madhup Rastogi,

4th YROC 2016 held successfully at Rajkot by Aaruni Hospital on Jan 29-31, 2016.

It was organized under the Gujarat-MP chapter by Dr Hemendra Mod, Director Aaruni Hospital Pvt Ltd Rajkot The main conference was attended by 150 delegates from across India.
The conference covered all burning topics from young radiation oncologist's point of view and included brain, head and neck, GI and GU as well as dedicated radio surgery track. There were 20 oral proffered paper presentations and 20 poster presentations by the students. The GBM was presided over by Dr R Vashistha and saw the YROC 2017 going to Dr V Shanker at Geetanjali Medical College Udaipur.



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National / international

April 2016

16-17 **1st ICRO Teaching Programme, Bikaner**
Dr.Shankar Lal Jakhar
drsjakhar@gmail.com

May 2016

14-15 **Best of ASTRO India**
Dinesh Kumar: + 91 9811710626
Email ID: bestofastroindia@Medanta.org

July 2016

9-10 **International Cancer Congress**
Dr Ajay Mehta, Organizing Secretary
ajayonco@hotmail.com

Oct 2016

15-16 NZAROICON, 2016, GGSMCH, Faridkot
Organizing Secretary
nzaroifdk2016@gmail.com

Nov 2016

24-27 AROICON, 2016, Cuttack, http://www.aroicon2016.com/
Organising Secretary, Dr. Surendranath Senapati
snsenapati2007@gmail.com

Dec 2016

24-27 AROI ESTRO teaching course
Dr. Sumit Basu
drsumeetbasu@gmail.com Cell: +91 9860721029

Other events to look forward

22nd ICRO PG teaching programme (2016)

Aurangabad (Maharashtra chapter),

Guwahati(North east Chapter).

Young Radiation Oncology Forum (YORF) 2017

Dr.Shankar Vangipuram, GCC, Udaipur
Phone: +91-80031-54436
drshankarvangipurapu@gmail.com
Final dates announced later.

YROC Winners

BEST PAPER:

1) DR VIBHAY PAREEK- JUPITER HOSPITAL THANE
2) DR RAMA VAGHMARE- NIZAMS HYDERABAD
3) DR SEETHA MOHANDAS- RCC TRIVANDRUM

BEST POSTER:

1)DR MOHAMMED AFSAL K RCC TRIVANDRUM
2) DR R KI POTHAMSETTY- KNMH,ALLAHABAD
3) DR ANUPAMA DARAPU CMC VELLORE

CT SIM Inaugurated at AHRCC

A new era has begun in the Acharya Harihar Regional Cancer Centre, Cuttack, with greetings of New Year 2016. The Hon'ble Chief Minister Sj. Naveen Patnaik dedicated two

Linear Accelerator with IMRT, IGRT, SRS, SRT and VMAT technology along with 64 slices of CT simulator (somatum) for the people of Odisha. Besides the 5 existing Radiation Oncologists, two Asst. Prof Dr. Manoj Kumar Behera and Dr. Monali Swain have joined in the department of Radiotherapy at AHRCC. With the existing 4 medical physicist Miss Itishree have also joined in the department of medical physics. 16 Radiation Technologist, 2 mould room technologist and 2 dosimetrists have joined in this team. With the vision of the State Govt. and the leadership of Dr. S.N.Senapati, Professor and Head of the department of Radiotherapy and Dr. P.K. Hota Head of Medical Physics, this institution is going to deliver the latest state of art in the field of Radiotherapy to the people of Odisha. Shortly PET CT and MRI are going to be installed.

Radiobiology course at Mumbai

11th Clinical Radiobiology course was conducted at Jupiter hospital, Mumbai. The course was organized by Dr Manish Chandra senior consultant under chairmanship of Dr R.L. Bhalavat and

course educator Prof Manoj Gupta of Shimla. The course was attended by 52 MD and DNB students from Maharastra and adjoining state. The one day program was highly appreciated by students.

MGIMS,Wardha gets Linac

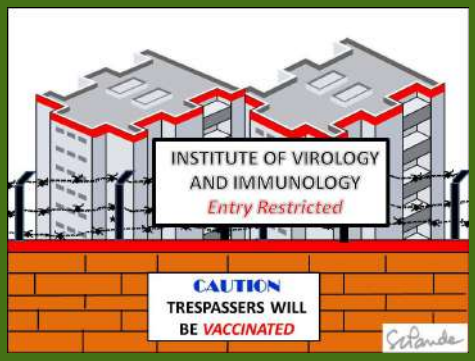
Ultra modern state of art, Duel Energy Linear Accelerator with multiple electron energy with I.M.R.T. [Intensity Modulated Radiotherapy] with 3D

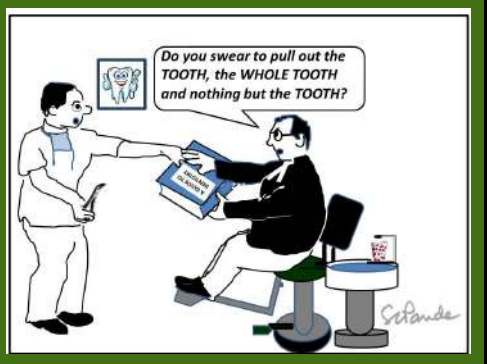
C.R.T.[Conformal Radiotherapy] Linear Accelerator imported from USA was inaugurated on 1st February 2016 by Honorable Mr. Hansrajji Aher, Union Minister of Dept. of Chemical, Fertilizer and Pharmaceutical Ministry GOI at Dept. of Radiation oncology of Kasturba Hospital and MGIMS, Wardha.

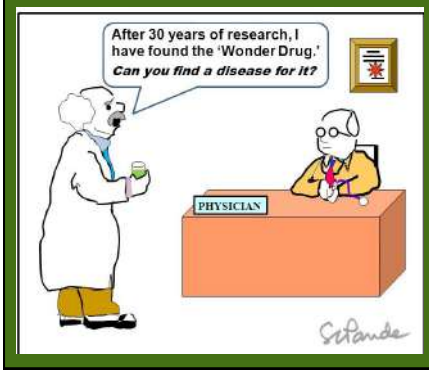
This machine will be boon for the cancer patients of entire Vidharbh region to get treatment at nominal cost occasion.

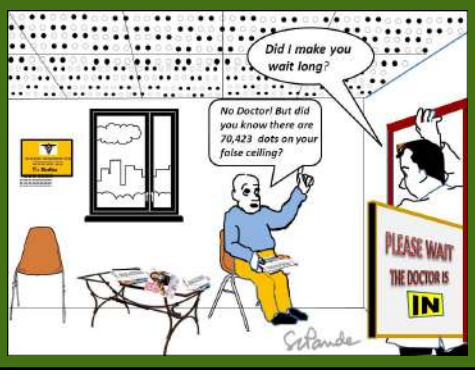
Humour in our life

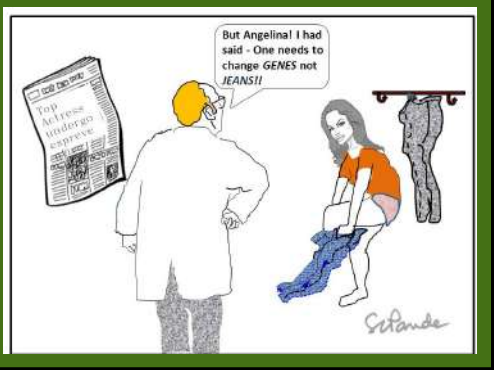
It was quite a surprise when Dr. Rajesh sent a few cartoons from Dr. Subodh. Cartoons always bring smiles on readers' faces. They destress you and have so much entertainment packed in one picture. Appreciate Dr. Subodh's endeavor to cheer up Radiation Oncology Community. Kudos!











Response to last issue question

Relevance of multi-centric trial and our preparedness, your take?

It is interesting when you put a question to learned audience and come out with interesting answers. Before I put those answers, let us have some basic understanding of all this means to a practice.

Clinical trials are patient oriented research with a project which is temporary in nature, gives individuals opportunity to do academic activity anytime. Trials could be interventional, could be diagnostic or prognostic, confirmatory to test a hypothese, could be prospective, could be to judge parameters clinically relevant and these could be multicentric to have patients recruited from more than one clinic or institution.

Draft proposals are usually evaluated by experts and review panels before funding decisions. Trials could have commercial interest or could be protected under a patent in exceptional cases.

Preparation includes which medical condition will be studied, what main research questions will be answered, what primary hypotheses will be tested and on what kind of sample size to be statically significant.

One need to have complete understanding of experimental and control conditions or interventionas, application of dose and mode of application. For diagnostic or index tests, gold standards must be described.

Once the trial begins, key inclusion or exclusion criteria are applied, outcome efficiency endpoints are set , trials durations are set, how many centres to participate are decided.

And all this requires lot of evidence, quality of earlier studies and how your hypotheses fits in same.

Answers gathered had mixed reactions, Govt. Research Institutes are part of multi centric trials run by central bodies like ICMR, Pharma/Equipment companies do carry out their multicentric studies in Government and Private Institutes. AROI sponsored trials are yet to take place, However to play significant role in global research dynamics, India must prepare itself for rightful place by becoming research proactive country.

Question of this issue

Radiation induced Immunotherapy, your story.

Please send your reply for publication in next issue of AROI newsletter to deepak.arora3@maxhealthcare.com