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Editorial

Predatory journals: Concern for the authors and evaluators

Researches and explorations are built up over the past experiences of others who have worked in the field earlier. The incremental knowledge gets collected and slowly comes into the practice. It underlines that all contributory papers do have minor or major impact on our shared knowledge. Many a times the topic may be complex and controversies might be raging. In such scenario the quality of the incremental knowledge put forth by the individual researchers to the pool of already existing information becomes crucial. The quality of academic papers published in journals is ensured by rigorous editorial review and peer-review. However, the publications of journals need money. Earlier, the majority of the journals were published by academic associations. Many journals were charging readers for the access of the paper but there were no or a little publication charges for the authors. Lately, the journals with the concept of free access to the readers came into the picture as these free papers were more likely to be read and cited by the readers. Journals started charging authors to make the papers free to their readers and such modality was called free access journals. However, this trend gave rise to many unscrupulous publishers who started publishing any article without rigorous peer review for a fee from the authors. Scientists and researchers do need published papers to establish their credentials for getting jobs and promotions and these predatory journals don't hesitate in publishing any damn thing. There are prestigious journals available which charge the authors but maintain strict peer review system to uphold the quality. Most of the predatory journals charge much less than reputed ones as their expenses are minimal. Authors must not fall prey to such predatory journals as it may jeopardize their cause. Now-a-days employers, evaluators, editors and administrators have become aware of such fake publications and strictly wean out such papers. Unfortunately many Indians are involved in this shoddy business. Recently, an Indian publisher was fined 50 million dollar by a US court for deceptive practices. The potential researchers must be aware of such journals. Some tell-tale signs include low article processing charges, promising fast publications, broad scope of the journal, submission of paper by e-mail, persistent advertising emails seeking papers, grammatical mistakes in e-mail, web-site and papers and absence of indexing from reputed data-bases and even the display of false or self-styled Impact Factor. Checking of the impact factor for the journal in question at Journal Citation Reports (JCR) or SJR (SCImago Journal and Country Ranking) may be a good option. Librarian Jeffrey Beall from University of Colorado, Denver maintained a list of potentially problematic journals from 2008 to 2016 which was taken off from web-site in 2017. Though not without controversies the list is still in web archive and may be helpful in detecting the journals with dubious distinctions if used along with other factors.

Pratik Kumar

MEDICAL PHYSICS INPUTS IN A CANCER HOSPITAL AT SILCHAR, A REMOTE PART OF INDIA

Dr. Ramamoorthy Ravichandran, Head, Medical Physics,
Cachar Cancer Hospital and Research Centre,
Silchar-788 015, Assam

Radiotherapy and cancer care became unaffordable to bulk of the society, not because of the Era of New High Technologies; but based on non optimal priorities selected by concerned professionals. 'Tailoring Needs' is one of human approaches in life and therefore we have to look at 'careful outsourcing' of our meager resources. Well tested cobalt teletherapy (60 years Indian track record) and easily affordable brachytherapy have become slowly extinct because of following so called 'global policies'. In the north-eastern part of India, all along, there had been problem of human resources; and there is inadequate infrastructure for the radiotherapy care. In November, 2017 the Regional Cancer Centre at Guwahati is taken over by the Department of Atomic Energy (DAE), Govt. of India.

At Silchar, a cancer hospital (CCHRC) was started in 1993 in the Barak Valley, as a local non-governmental voluntary organization, run only on donations. Till 2015 there was no Governmental support received. In 1995, one 300 mA X-ray machine and 50mA mobile x-ray were the only facilities. In 2006, with Department of Atomic Energy, Government of India, a Theratron-780E cobalt machine was installed. A Xio treatment planning system along with a Siemens CT Simulator were commissioned simulataneously. In 2013, a six channel microSelectron HDR was commissioned in the telecobalt bunker itself. About 3000 new patients are registered annually, and 400 new patients receive radiotherapy. About 50% are head and neck cancer patients, because of highest incidence of cancer in north eastern region.

About 15 medical physicists left the institution till 2015 with very short service of median 9 months; which include 3 physicists sponsored by the hospital. Most of the medical physicists were from Tamilnadu, because there are not many courses conducted in northern parts of India. When all the licenses were withheld by Regulatory Authority (AERB) due to non-availability of RSO, the author was requested to organize/give medical physics inputs, and from August, 2016 organized efforts started in building up services. The hospital wanted to replace the existing telecobalt machine, with a view that cobalt radiotherapy is obsolete technology, and most of the head and neck patients had severe skin sequelae; and could not complete radiotherapy. From July 2015, brachytherapy services also was interrupted.

In September, 2016 a treatment plan with Aluminium Tissue Compensator for head and neck treatments was introduced, and presently patients could complete radiation doses upto 70Gy without interruptions; thereby a revisit of cobalt teletherapy was possible. Thanks to efforts from the hospital to receive INR 107 lakhs for new cobalt source of 190 RMM from BRIT, India; and re-loading of cobalt machine was carried out in March, 2018.

The time has come for our hospital to enter Linac Era with INR 1000 Lakhs released from Government of Assam(GOA) in November 2016; and M/s Tata Trust is giving memorandum of understanding (MOU) with GOA, and in this context, a matching grant for building Linac civil structures, along with QA instruments to be purchased for the installation of Clinac iX (Varian) high energy linear accelerator. From June 2017, two Ir-192 brachy sources were loaded at 6 monthly intervals, resuming brachy treatments.

Medical Physics unit was responsible in proposing the development of nuclear medicine facilities including SPECT, PET-CT equipments in the first phase and Radio-iodine therapy facilities in the next phase. Architectural drawings are getting cleared. A grant-in-aid to the tune of INR 1200 Lakhs is obtained from Airport Authority of India with hospital's efforts. The 300mA x-ray machine room built in 1995 was not according to AERB stipulations; the room was re-built incorporating all shielding considerations in December 2016. Mechanical modifications were made by removing bulky old fluoroscopy counterweight screen, and the 22 years old machine was made operating smoothly. The new design facilitated localization radiographs (a concept of poor man's simulator) using the diagnostic machine. 2 more medical physicists positions are created to support introduction of state of the art radiotherapy services by mid-2019. A need for conventional iso-centric simulator was felt necessary to supplement existing 12 year old CT-Simulator machine; to help in simple localizations for external beam and brachytherapy; and hospital is trying to get necessary grants for indigenous simulator.

With Society of Microwave Engineering (SAMEER) and Department of Electronics (DOE, Govt of India), a project to build X-ray Blood Irradiator with two 400KV Xray tubes and turn-table is under progress in IIT, Mumbai for our hospital. Medical physics services is likely to be up-graded to get the telecobalt machine to be used for getting accreditation from AERB for establishment of Radiological Standards laboratory for beam level dosimeters calibration for the north-eastern region. We quantified the quantum of personnel exposures in case of Teletherapy Source Stucking Emergency, and brought out objectively that there is no significant risk with telecobalt machine, as being projected by the linac manufacturers.

So far there were 7 publications and 13 scientific presentations by the medical physics department. This presentation clearly brings out that with organized medical physics inputs, optimization to use available resources for better patient care is possible. Even equipments could be purchasable in radiotherapy, but human resources in radiation oncology and medical physics appear to be nightmare, especially in peripheral context. With >75% of cancer patients in majority of sites could be treated with high care, using existing facilities, it appears that we should organize our thinking process and provide solutions supporting such centres. Budding medical physicists in large numbers have to appreciate ground realties,

instead of focusing interests in 'corporate approach' and 'positions' only in metropolitan cities. Alleviating human suffering is the 'motto' of medical physics, since inception of the profession; and medical physicists have a dedicated responsibility to their nation. As India is in the forefront in the arena of medical physics, we have to develop rural institutions to augment cancer care facilities, because Indian sub-continent cannot try to duplicate western world infrastructure. Quality human resources only can make lead in this direction. Cachar Cancer Hospital and Research Centre strives to achieve such methodology with available meager financial resources. This write up clearly projected that an institution which remained dormant for 2 decades (1993-2015) and trying to make an impact in the last 2 years is only because of medical physics unique efforts, and the whole institution acknowledges it.

Acknowledgements

Dr. Ravi Kannan, Director, and Senior Consultant in Surgical Oncology had been the source of inspiration for the timely encouragements and guidance; and I acknowledge him for kind permission.

RESULT OF DEBATING CONTEST

Pratik Kumar, Professor, Medical Physics Unit, IRCH, AIIMS, Delhi

Medical Physics Gazette organized a Debating Contest in 2018 inviting write-up from the readers in "Favour" or "Against" the proposal **"The Cobalt-60 based modern radiotherapy is relevant to the Indian scenario"**. The Contest generated enough interest and we received 18 entries from all over India. However, a curious fact was that all entries were in "Favour" of the proposal, even from the professionals working at the centers equipped with all modern gadgets. This prompted me to check whether the selection of the language of the topic is biased. It may happen that the usual golden mean or the desire to strike balance among the quality, reach and cost of the treatment has influenced the thinking of our Medical Physicists which may be a good sign of practical and reasoned choices. It is not that Linac based and other modern modalities of treatment are not finding favour among the Medical Physicists but their expressions in this Debating Contest may be from the perspective of the population and the privilege of the knowledge of a radiation professional which have probably lead the contestants to send all entries in "Favour" of the topic. **I invite readers to comment why we got all the entries in "favour" of the above proposal of the Debating Contest. The detailed and selected one(s) may be published under "Letter to the Editor" in the next issue of MPG.**

For evaluation of the entries all submissions were anonymised and sent to 8 judges who scored the entries on a structured scale. The confidentiality was maintained throughout the evaluation process and all contestants and judges were oblivions to all others. Even the scorer or editorial staff at my place who was collating the data was not aware of the identity of either the judges or the contestants.

The top 10 contestants in order of merit and with average percentile score are:

Mr. S.D. Mishra, HCG-MNR Curie Cancer Centre, Ongole (A.P.) – 86.61
Dr. K.N. Govind Rajan, PSG Hospital, Coimbatore – 86.03
Dr. Biplab Sarkar, Manipal Hospitals, Delhi – 83.94
Mr. Sukhvir Singh, INMAS, DRDO, Delhi – 82.94
Mr. Mithun Sajeev, RCC, Thiruvananthapuram – 81.162
Mr. Pawan Kumar Singh, AIIMS, Patna – 81.157
Mr. K. Srinivasan, BSR Cancer Hospital, Bhilai – 80.35
Mr. Joshua Sahay, Bharathiar University - 79.88
Mr. Gaurav Kumar Jain, SMS Medical College, Jaipur – 78.45
Ms. Ranjana Agarwal, Lions Cancer Detection Trust, Surat – 77.05

In fact, the announcement of the contest promised to give prize of Rs. 5000/- to the top entry each in "Favour" and "Against" the proposal. Since there is no entry in "Against" category it is decided to give Second Prize as well in the "Favour" category. Mr. S.D. Mishra wins FIRST PRIZE of Rs. 5,000/- and Dr. K.N. Govind Rajan claims SECOND PRIZE of Rs. 4,000/- .

Medical Physics Gazette expresses gratitude to following judges who undertook the tough task of evaluation. These are **Dr. K.J. Mariadas**, Lucknow; **Dr. N Vijayprabhu**, Puducherry; **Dr. Raghuram Nair**, Thiruvananthapuram; **Dr. P. K. Hota**, Cuttack; **Dr. A. Pichandi**, Bangalore; **Dr. K.R. Muralidhar**, Hyderabad; **Dr. G. Bharanidharan**, Chennai and **Dr. Anoop Kumar**, Lucknow.

The prizes were sponsored by **M/S TeamBest Theratronics Asia Pvt. Ltd**.

WINNING ENTRY: FIRST PRIZE

THE COBALT-60 BASED MODERN RADIOTHERAPY IS RELEVANT TO THE INDIAN SCENARIO: FOR THE PROPOSAL

Mr. S.D. Mishra, HCG-MNR Curie Cancer Centre, Ongole (A.P.)

Introduction

Nobody in the scientific community of radiation oncology will oppose the modernisation of technology of Cobalt-60 based or Linac-based radiotherapy. The modernisation is a continuous process. The new technology outwits the old one.

At one time Cobalt-60 units dominated the scene of radiotherapy. The generation of electron beams by Linac and demonstration of its use in combination with the photon in radiotherapy relegated Cobalt units. Finally, MLC based IMRT phased out Cobalt-60 units from the US and western countries. IMRT demonstrated the use of low energy photons and outwitted the electron-photon combination technique. Recently, many scientific publications are indicating that new treatment modalities such as intensity modulated radiotherapy and image-guided radiotherapy can also be equally facilitated in the cobalt-60 unit with commercially available cobalt source.

This may start a serious reconsideration of cobalt-60 based radiotherapy.

The Indian Radiotherapy Scenario

Over the years, the lack of improvement in the technology in cobalt units left these units to carry out only simple treatments mostly in underdeveloped and developing countries. One government estimate shows that there is a wide gap in availability of radiotherapy machines against the IAEA norm of one such unit per ten lakh population. . An estimate shows that India needs more than 1000 radiotherapy units to cope up the treatment of cancer patients. There are only few hundred radiotherapy equipments available for radiotherapy. This gap is not easy to bridge as the radiotherapy equipments are imported and they are very costly [1]. The international statistics show a very grim picture of cancer care in the country. The reports indicate that the cancer incidence in India is increasing alarmingly and the cancers especially related to women have become the major killers of Indian women. More than 60% of cancer patients require radiotherapy as the only or as an adjuvant therapy, The most of radiotherapy facilities are concentrated in cities and towns. There are around 40% cancer patients do not have access to radiotherapy facility in India. The radiotherapy practice in India followed the western radiotherapy practice of relegating cobalt units from radiotherapy scene. Even many radiotherapy professionals do not want to work on cobalt units.

The conventional Cobalt-60 radiotherapy has proved its relevance to the Indian scenario of radiotherapy on the basis of following strong points in its favour.

1. These radiotherapy equipments are cost-effective (with respect to equipment cost, cost of the bunker, electrical supply and maintenance of the equipment). This will increase further if more indigenous cobalt-60 radiotherapy machine are manufactured in India. Till recently, no serious efforts were made in this direction. We have seen the unceremonious demise of indigenous cobalt unit Gammarex on the grounds of technical issues. Most of the radiotherapy units are imported. Now some efforts are made in this direction with the introduction of Bhabhatron Cobalt-60 units.
2. Cobalt-60 radiotherapy units have been effective in use in treating radical and palliative cases of most of the cancers requiring radiotherapy in India for last many years,
3. Simple physics of dosimetry,
4. Less staff requirement and
5. Less downtime-owing to its simple design and operations.

The cost-effectiveness of technology has been the most important issue in our country since the government has been spending only around 4 % of GDP on health. Cancer is one of the health problems in the gamut of health.

Modernisation of Cobalt-60 radiotherapy in Indian Context

The technological advancement should be for the betterment of majority of the human beings. Radiotherapy is the major tool to fight against the menace of cancer.

When we talk of the relevance of Cobalt-60 based modern radiotherapy in context of India, then we have to think of the extent of modernisation that should enhance the effectiveness of the conventional Cobalt-60 based radiotherapy cost effectively rather than a costly and non-affordable technology merely to compete with the linear accelerator-based technology.

The cost-effectiveness of cobalt units is owing to getting a deep penetrating well collimated ionizing radiation beam with simplicity. This also reduces maintenance and running costs as compared with linear accelerators. The less downtime makes these units more suitable to deliver radiotherapy to more needy cancer patients. Practically, multi-beam conformal plans with the help of treatment planning system on CT slices give high-quality radiotherapy plans. Conformal plans created using cobalt beams blocked appropriately give clinically acceptable radical radiotherapy plans for most of the sites of cancer. This has been shown and proved in scientific paper [2]. A cobalt -60 machine with MLC and motorised wedges facility can be utilised along with good treatment planning system and basic mould room facility to deliver high-quality radiotherapy to needy cancer patients in India.

IMRT is a very costly technology which has still to prove itself as a mainstay treatment. IMRT and IGRT are out of reach of the majority of cancer patients in India. If we think of these facilities in Cobalt-60 units, then they will require all complex electronics and dedicated computers for that. This and all other sophisticated accessories will not be cost-effective and will not serve the purpose of providing affordable radiotherapy to the needy cancer patients in the Indian context.

Conclusion

In the light of the above facts, we can conclude that there is a strong case for the continuation of Cobalt-60 based cancer treatment in India. There is an equally strong case for the modernisation of this technology to enhance the clinical benefits by harnessing this cost-effective technology. Cobalt 60 unit with multi-leaf collimators and TPS planning on CT scan slices is enough to give a high-quality radical radiotherapy treatment in the Indian context. The relevance of this basic and well-tried technology will remain in vogue for another few decades till it reaches to all needy cancer patients. The Cobalt-60 technology should not be thrown to dustbin rather it should be utilised along with the technologies developed for Linear accelerators in a judicious and cost-effective manner.

References

1. Government of India, Department of Atomic Energy. http://dae.nic.in/?q=node/294
2. Adams EJ, Warrington AP. A comparison between cobalt and linear accelerator-based treatment plans for conformal and intensity-modulated radiotherapy. Br J Radiol. 2008 ;81(964):304-10.

The best students are those who want to know, not those who want to show.

The Mother

KARNATAKA CHAPTER OF AMPI: WORKSHOP ON ADVANCED TREATMENT PLANNING

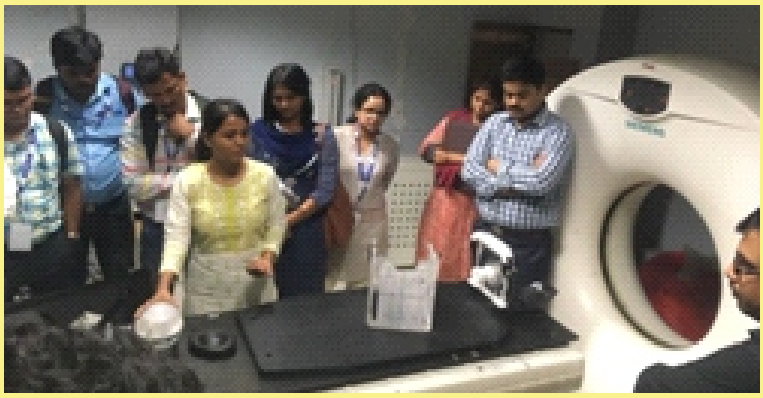
Dr A Pichandi, Head, Medical Physics, HCG Bengaluru; Dr M. Ravikumar, Chairman K Chapter; E. Rajadurai, Secretary, K Chapter

Karnataka Chapter of AMPI and HCG oncology jointly conducted a workshop on "Advanced treatment planning" during 15-16 September, 2018 at Bangalore. Almost 100 clinical physicist from various states participated in the event. First day of the workshop was held at Hotel Ramanashree Richmond circle Bangalore while the second day of the workshop which included the Planning practices was held at HCG center, Bengaluru. Plan competition, first of its kind in India was initiated by HCG and over 200 got registered for the competition. All submitted plans were analysed by PlanIQ plan metrics software from Sun Nuclear Corporation. About 68 competitors submitted the plans, out of which top 10 plans were discussed in the workshop and one winner and three runners up were awarded. All the high scorers used VMAT planning technique to get the desired scores except one Tomo Helical and 1 Sliding window IMRT. First day witnessed delegates actively involved in scientific discussions. There were 6 Sessions starting with Clinician perspective of treatment planning. Basics of Treatment planning, various algorithms of optimization to dose calculations, clinical validation and QA of Treatment planning systems, technical nuances of correcting heterogeneities, discussion on small fields, Radiobiological planning, Plan Evaluation were of great interest among the delegates. We had presentations on Machine learning and AI, Advancement in brachytherapy planning, TBI techniques. To keep the event lively and informative, a panel discussion session on "CT or MRI-What Future holds" had experts in the field to debate on the topic. Finally first day ended with Trade session by vendor representative from Varian, Elekta, PTW and Accuary presented on their products. Second Day was marked with planning workshop with Hands-on session on planning using 15 Eclipse workstation, 5 Monaco workstation and 3 Accuray Precision workstations. All delegates rated this workshop fruitful with suggestion to extend the hands on session.

REPORT ON WORKSHOP ON IMPLEMENTATION AND QUALITY ASSURANCE OF STEREOTAXY

Dr Bipasha Pal, Organising Secretary & Chief Medical Physicist, Narayana Superspeciality Hospital, Howrah, West Bengal

A one-day workshop entitled "Workshop on Implementation and Quality Assurance of Stereotaxy (WIQAS)" was organized at Narayana Superspeciality Hospital, Kolkata on 25th August, 2018, in collaboration with AMPI-Eastern Chapter. Two Keynote addresses were delivered by eminent Medical Physicists working in this field. The Keynote speakers were Dr. A.K. Rath of Hemlata Hospitals, Bhubaneswar, and Dr. V.K. Sathiya Narayanan, Ruby Hall Clinic, Pune. There was a very good attendance with a registration of around 55 delegates from Kolkata as well as nearby districts of Bankura, Jamshedpur and Siliguri. The unique perspectives of the Invited faculty on the subject of Stereotaxy were greatly appreciated by the delegates. There was a Clinical presentation by Dr Suman Mallik, HOD , Dept of Radiotherapy, NSH, and some proffered talks by AMPI (Eastern Region) Physicists. The sessions were interactive and vibrant. The post-lunch session consisted of Hands-On Demonstration of Simulation, Planning and Quality Assurance of Stereotaxy at the respective stations, by in-house faculty guided by the invited faculty. This generated a lot of interest with very active interaction between the participants and faculty. There was very positive feedback received from the delegates, and it has benefitted both those already practicing Stereotaxy in their clinics, as well as those who are planning to do so in future.



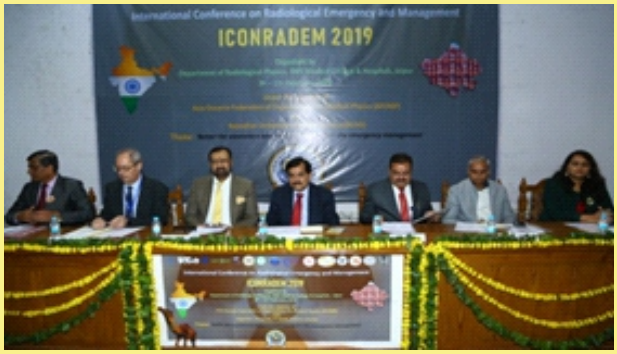
INTERNATIONAL CONFERENCE ON RADIOLOGICAL EMERGENCY AND MANAGEMENT: A REPORT

Prof. Arun Chougule, Department of Radiological Physics, SMS Medical College and Hospitals, Jaipur

An international conference on Radiological Emergency and Management was organized by the Department of Radiological Physics, SMS Medical College and Hospitals, Jaipur during 9-11 February 2019.

The theme of the conference was 'better the awareness and preparedness; better the emergency management'. 300 delegates from 13 countries participated in the conference.

This was organized in cooperation with IAEA (International Atomic Energy Agency), under the auspices of AFOMP (Asia-Oceania Federation of Organizations for Medical Physics) and RUHS (Rajasthan University of Health Sciences) and was endorsed by AAPM (American Association of Physicists in Medicine), IOMP (International Organization for Medical Physics), MEFOMP (Middle East Federation of Organizations for Medical Physics), INS (Indian Nuclear Society), AMPI (Association of Medical Physicists of India), AERB (Atomic Energy Regulatory Board), NMPAI (Nuclear Medicine Physicists Association of India), IARP (Indian Association for Radiation Protection), INSA (Indian National Science Academy) and ISRB (Indian Society for Radiation Biology). DAE (Department of Atomic Energy), Government of India was a knowledge partner. The inaugural programme was held at 'Sushrut Sabhagar', SMS Hospital Auditorium presided by Dr Sudhir Bhandari, Principal and Controller, SMS Medical College and Hospitals, Jaipur. Dr Pradeepkumar K S, Distinguished Scientist, Head, Radiation Safety Systems Division and Associate Director Health, Safety and Environment Group, Bhabha Atomic Research Centre Mumbai was the Chief Guest. Shri V K Jain, Outstanding Scientist and Director, NPCIL, RAPP Kota was Guest of Honour and Ramon De La Vega, Emergency Preparedness Coordinator, IAEA was Special Guest for the inauguration. Dr. DS Meena, Medical Superintendent, SMS Hospital Jaipur, Dr Arun Chougule, Organizing Chairman, and Mrs. Rajni Verma Organizing Secretary also addressed the gathering.



An exhibition on Radiological Safety, Bio-dosimetry, Emergency response and various radiation monitoring systems was arranged by BARC (Bhabha Atomic Research Centre), Mumbai, AMD (Atomic Minerals Directorate), Jaipur and RAPP, NPCIL (Rajasthan Atomic Power Plant, Nuclear Power Corporation of India Ltd), Kota team for public awareness. An Emergency Response Mobile unit was also at display. The scientific programme was started with a key-note address by Dr Pradeepkumar K S on Development of Systems and Methodologies for National level preparedness for response to Nuclear and Radiological emergencies/ threats. More than 40 invited talks from renowned radiation safety and management experts and above 60 abstracts from radiological professionals and young researchers of various related fields were the major highlight of the conference. The invited talks covered all relevant topics during the sessions titled Introduction to Radiological emergencies and Incidents, Radiation Emergencies in Radiotherapy and Radio-diagnosis, Radiation Effects and Emergency preparedness, IAEA Session, Cancer Epidemiology and Radiobiology, Potential Threats in Radiological Emergencies - Response Measures, Radiological Disaster Management and role of Armed forces, Radiation Dosimetry & Preparedness for Radiological Emergencies, Incident reporting, Radiation Protection & Legislations and Safety Considerations, Emergencies & their Management in Nuclear Medicine. A plenary talk on IAEA Safety Standards on preparedness and response to nuclear or radiological Emergencies by Ramon de la Vega, was the highlight of the second day. Two teaching sessions for students and young professionals were also arranged, which was attended by not only students, but also majority of the delegates very enthusiastically. Very active interactions, critical comments and strong discussions made this conference an outstanding one. A panel discussion on "Role of healthcare professionals in radiological emergencies: What is done? What needs to be done?" marked the end of the scientific sessions. The scientific proceedings of the conference have been published as the RUHS Journal of Health Sciences supplementary abstract issue (available at www.ruhsjhs.in). An e-Souvenir of the conference was also released.

A best oral presentation session which included 9 oral presentations and a best poster presentation session which included 12 poster presentations were an important part of the scientific programme. This was arranged to encourage and motivate students and young professionals to involve actively in academic and research work. Two prizes each comprising of certificate of appreciation and cash award was distributed to the winners.

Best Poster Awards:

First Prize: Ms. Akanchha Tripathi, INMAS, DRDO, Delhi

Second Prize: Mr. Lalit Panwar, Defence Laboratory, DRDO, Jodhpur

Best Oral Awards:

First Prize: Mr. Sandeep Chaudhary : INMAS, DRDO,

Second Prize: Mr. Ram Milan Sahani : Defence Laboratory, DRDO, Jodhpur

Cultural and entertainment night was arranged on first two days of the conference where students as well as professional performers showcased the rich Rajasthani cultural heritage. It was highly appreciated and thoroughly enjoyed by everyone.

The organizers appreciate the participation, cooperation and support of the organizations IAEA, AFOMP, RUHS, AMPI, IOMP, AAPM, ICTP, MEFOMP, INS, AERB, NMPAI, IARP, INSA, ISRB, NPCIL-RAPP, BARC, INMAS-DRDO, DLJ-DRDO, IPEM and DAE-GOI and everyone involved in this conference.

THREE CHEERS

Dr Jyoti Bisht, Lecturer & Medical Physicist, CRI, SRHU, Dehradun has been awarded Ph.D. in Nov. 2018 by Kumaun University, Nainital, Uttarakhand for the thesis entitled "V**olumetric radiation dosimetry studies in brachytherapy and its radiobiological evaluation**". Congrats!!!

Dr. Vindhyavasini Prasad Pandey, Prayag Raj, Uttar Pradesh has been awarded Ph.D. degree by Barkatullah University, Bhopal in April 2019 on the topic "**A study to determine the dosimetric behaviour of high energy megavoltage photon beams in an inhomogeneous medium**". Congrats !!!

Prof. Arun Chougule, Head, Deptt of Radiological Physics, SMS Medical College, Jaipur has been awarded with Outstanding Faculty of SMS in terms of Clinical Work and Research Publications on 26th January 2019. He was also awarded Life Time Achievement Award for cancer awareness, research, and treatment by Jaipur Cancer Relief Society on 1 June 2019. Congrats!!!

EMPLOYMENT NEWS

There are three vacancies for Medical Physicist (JR) at Deptt. of Radiological Physics, Dr S.N. Medical Collage, Jodhpur on temporary basis. The required academic qualification is Post M.Sc. Diploma in Radiological Physics or equivalent with one year internship. Salary approximately Rs. 54,000/-. For details, kindly contact **Dr Devesh Gupta** at gupdev65@gmail.com

Who's Where?

Mr. Bhagat Chand has joined Dr. Rajendra Prasad Govt. Medical College, Kangra at Tanda, Himachal Pradesh as Medical Physicist & RSO in November 2018. Earlier he served at Jindal institute of Medical Sciences, Hisar, Haryana.

A REPORT ON CIRMS 2019 MEETING AT NIST, USA

Dr Ganesan Ramanathan, Adjunct Faculty, Amritha University Medical Physics, Kochi & Emeritus Professor, Bharathiyar University, Coimbatore

Council of Ionizing Radiation Measurements and Standards (CIRMS) is a not-for-profit organization made up of individuals, organizations and corporations from national and international government, academic and private industry sectors having an interest in identifying strategic needs and directions for ionizing radiation measurements and standards.

CIRMS membership is composed of leaders and experts from the areas of medical radiation, occupational and environmental radiation protection, homeland security and materials effects/industrial processes based on radiation who have an interest in and wish to influence the direction of measurement programs, technologies and standards. Toward these ends, we gather, evaluate and disseminate information about measurement needs facing the four application disciplines with the aim to facilitate funding and the ultimate satisfaction of those needs. This year CIRMS meeting was organised at National Institute of Standard and Technology (NIST, www.nist.gov) at Gaithersburg, Maryland, USA during April 8-10, 2019. The most interesting talk was given at the plenary session on the topic of portable accelerator entitled "Making a Particle Accelerator on a Chip: Recent Advances and Potential Applications" by Dr. R. Joel England, Stanford Linear Accelerator Centre (SLAC), National Accelerator Laboratory.The you tube link https://www.youtube.com/watch?v=kG1TUhYLAeM gives the details about the research being undertaken at SLAC. It is a revolutionary development and once it is realised using nano technology and laser beams, linacs will be of shoe box size and cheap.

CMPI NEWS

Following Medical Physicists successfully passed College of Medical Physics of India (CMPI) Certification Examination 2018: **Mr. Jayadevan PM, Mr. Shaju Pilakkal, Mr. Ranjith CP, Mr. Libin Scaria, Mr. Rajesh Thiyagarajan, Mr. Jayaprakash V, Mr. Neeraj Kumar, Mr. Jose Raj, Mr. Mohamathu Rafic Kather Hussain, Mrs. Priya Jacob** and **Mr. Arvind Kumar.**

The top two rankers **Mr. Ranjith C P** and **Mrs. Priya Jacob** were conferred **First** and **Second Prize** of **Kingston Medical Physics Award of Excellence** respectively. Hearty Congratulations to all on their achievements!!!