



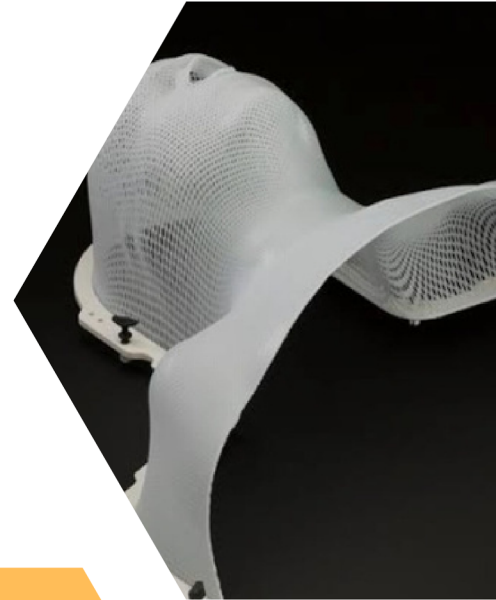
E-NEWSLETTER  
VOL-01/24



# 1<sup>ST</sup> NEWSLETTER

# ARO BIHAR CHAPTER

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**DR RAJIV RANJAN PRASAD**

**PRESIDENT  
AROI-BIHAR CHAPTER**



**Dear All**

I extend my heartfelt congratulations to Dr. Richa Chauhan and the dedicated editorial team for the successful launch of the inaugural AROI-Bihar newsletter. This achievement marks a significant milestone, and I commend your efforts in bringing this valuable resource to our members.

I would also like to take this moment to convey my warmest wishes to all the members and office bearers for a joyful, healthy, and prosperous 2024..

As a vibrant and enthusiastic team, we stand at the threshold of exciting possibilities, ready to elevate the AROI (Bihar Chapter) to new heights. Our recent executive committee meeting was not only fruitful but also inspiring. Witnessing the committee members stepping forward with renewed zeal to undertake various association activities was truly heartening.

The registration of our chapter remains a top priority, and I'm pleased to report that it is a work in progress. We have developed a comprehensive academic calendar tailored for residents in radiation oncology. Looking ahead, an ESTRO course is scheduled to take place at AIIMS, Patna, towards the end of this year. Additionally, the annual AROI-BC meeting is set to be held at the Mahavir Cancer Centre in the middle of this year. Numerous other activities are in the pipeline, promising to keep us engaged throughout 2024.

Recognising that radiotherapy is integral to cancer care, it is crucial to address the existing shortfall in Bihar's linear accelerators and brachytherapy units. Collaborative efforts between the governments of Bihar and India, exemplified by the State Cancer Centre of IGIIIMS, AIIMS Patna, and the comprehensive cancer centre at Muzaffarpur in collaboration with TMH Mumbai, showcase strides towards bridging this gap.

Mahavir Cancer Santhan and the expansion of radiotherapy services at Patna Medical College are commendable steps forward. It's also heartening to witness private-sector cancer centres offering advanced radiation treatments. I am sure that in the years to come, many more cancer centres offering radiotherapy services will be commissioned in different parts of the state. With governments offering various schemes for cancer patients and support from a few non-governmental organisations, many such patients are now able to get high-quality treatment without out-of-pocket expenses.

The increasing number of radiation oncology residents and technologists graduating from Bihar bodes well for narrowing the gaps in human resources in the coming years.

The integration of computer technology and artificial intelligence in radiation oncology represents an exciting era for our field. While progress has been made, there's much more to be done.

As your president, I am fully committed to supporting the AROI-Bihar Chapter's activities and rely heavily on the support of its dedicated members.

Let us unite and work collaboratively towards our shared goals.

Thank you.

**Dr Rajiv Ranjan Prasad**  
**Director- Radiation Oncology**  
**Cancer Institute,**  
**Jay Prabha Medanta Super speciality Hospital**



## **DR. (PROF.) RAJESH KUMAR SINGH**

### **SECRETARY**

### **AROI BIHAR CHAPTER**

## Message

#### **Dear Members of AROI,**

I have immense pleasure in writing this message as the Secretary General of AROI Bihar Chapter.

As the 5th AROICON(BC) 2023 came to an end, I am very happy and pleased to have met so many members, colleagues, friends and students in the conference after a long time after Covid. The organizing team of 5th AROICON (BC) 2023 did a commendable job hosting the conference with good scientific content and great hospitality. I congratulate all the delegates and members for joining us a memorable conference at State Cancer Institute, IGIMS, Patna. I am extremely happy and proud to have served our esteem association, in the capacity of Secretary General, AROI Bihar Chapter.

I have tried to the best of my ability to bring in transparency and efficiency in the working of our association. Our Vision is to make AROI and its members to reach greater heights with excellent knowledge and unmatched skills in Oncology. Our Academic activities will continue with the new vigour and passion that I inculcated into the College. Apart from this, we all should join hands in collaborative research work.

In India, the incidence of cancer is increasing rapidly; therefore, it is important to step up cancer literacy and knowledge among the population. We should also serve the community by creating awareness.

about Cancer and motivate the general public to screen themselves to catch the disease early when it is completely curable. I hope that a health camp should be arranged at village/town level will lead to early detection which is important in the management and treatment of cancer and also prevention by making necessary changes in lifestyle.

My dream is to setup a Health Awareness School at district or block level with a team of expert doctors across India to impart the knowledge to the rest of the world on behalf of this great Association.

I would like to promise that I will always remain as one amongst you and look forward to your advice and suggestions to make AROI the best Association ever. It has been a challenging and learning experience for me in this office and I thank the office bearers, the executive committee, and all the members of AROI(BC) for supporting and standing by to me.

I am pleased with a very efficient and young team and extend my best wishes to them. I am sure they will do a great Job forward.

My best wishes to all members of the AROI, my colleagues and friends and wishing everyone a very happy new year 2024.

**Warm regards,**  
**Dr. (Prof.) Rajesh Kumar Singh**  
**Chief State Cancer Institute,**  
**IGIMS, Patna**



# ***Editor's Note***

A new year, and many new beginnings.

***Dr Richa Chauhan***  
Editor-in-Chief



It's an honour and pleasure to present the inaugural issue of the newsletter of AROI-BIHAR chapter. With this issue, we are pleased to introduce the new team of office bearers of AROI-BIHAR chapter.

The current newsletter is a repository of events and activities organized by various institutes in the last year. We acknowledge the hard work done by our members towards cancer prevention through awareness and screening programs on one hand and imparting quality cancer care on the other. We have also mentioned a list of forthcoming activities and special academic sessions for our post graduate students being organized by various institutes of the state of Bihar. We hope this inaugural issue sets the ball rolling and help to establish the newsletter as a forum for sharing of activities and ideas as well as celebrating the success and laureate of our members so that we can collectively achieve the goals of the association.

Finally, on behalf of the editorial team, I take this opportunity to thank all those who have volunteered to contribute to this newsletter and encourage others for contribution in future.

Looking forward for your comments, insights or suggestions at [editor.aroibihar@gmail.com](mailto:editor.aroibihar@gmail.com)

Happy Reading and wishing all of you a happy and healthy 2024.



***Dr Usha Singh***

## ***Editorial team***



***Dr Shraddha Raj***



***Dr Kanchan Singh***

## EXECUTIVE COMMITTEE MEMBERS AROI BIHAR



Dr. (Prof.) Rajiv Ranjan Prasad  
**President**



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**General Secretary**



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**Vice President**



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**Executive Member**

## EXECUTIVE COMMITTEE MEMBERS AROI BIHAR



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ExecutiveMember



**Dr. Nilesh Mani**  
ExecutiveMember



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**Dr. Usha Singh**  
Editorial Board  
(News Letter):



**Dr. Shraddha Raj**  
Editorial Board  
(News Letter):



**Dr. Kanchan Singh**  
Editorial Board  
(News Letter):



# Radiotherapy in the combined treatment: A Radiation Oncologist's perspective



**Dr. Shekhar Kumar keshri,**  
**DMRT & MD (Rad Onco) (CMC, Vellore)**  
**Senior Consultant & Chief radiation Oncologist**  
**Paras HMRI, Patna**

It is indeed a pleasure to be as a Vice president in current team AROI, Bihar chapter who is going to release a very first news letter under the aegis of AROI Bihar.

This definitely will help not only in exchange of our knowledge and thoughts in splendid manner but also to provide useful insight to our budding radiation oncologists in the community.

Unanimously, we have been emerged as a team and taken the responsibility to do deeds in this part of the country.

Radiation oncology is a very unique branch of medicine connected with clinical knowledge and also with appropriate knowledge of medical physics. In recent years, this approach has become increasingly absorbed with technological advances. New treatment technologies are evolving at a speedy rate in radiotherapy, you can say it could be possible by improvements in computer hardware and software in modern era.

Data suggests currently, more than 50% of all cancer patients can expect to receive radiotherapy during the course of their disease either in primary management (as a radical or adjuvant) or in palliative settings.

How the situation of this specialty need to be in future, it always has been a matter of debate many times in past national conferences. But I must emphasize we as a radiation oncologists and let's say as a clinical oncologists have potential to become the guardians of all oncology specialities. A million dollar question from all of us- do you think are we in Cinderella like situation in present clinical practice? Moreover, next question is- How to overcome?

At last, we must thank our editorial team led by Dr. Richa Chauhan to bring this newsletter to all of us.

We must also be thankful to Our president Prof. Dr. Rajeev Ranjan Prasad and Secretary Prof. Dr. Rajesh Kumar Singh to ignite team AROI Bihar this time to get this milestone.

In Modern era of oncology practice, combination of radiotherapy and chemotherapy is a recommended procedure in radical treatment of many cancers.

It is understood that there are four potential ways how combined therapy might improve the therapeutic index, now known as Steel Paradigm:

1. Spatial cooperation
2. Toxicity independence
3. Better protection of normal tissues
4. Enhancement of tumour response

Through the ionisation mechanism, radiotherapy causes directly or indirectly physical and chemical changes in the cell - mainly in its DNA.

Theoretically, radiation sensitisation can be achieved by a range of interactions:-

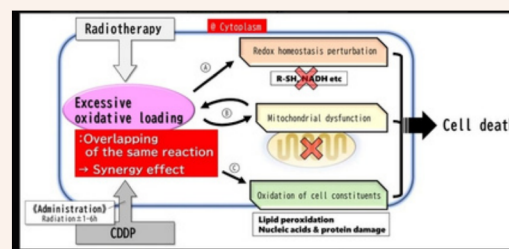
1. Direct increase of cell sensitivity to radiotherapy by damaging DNA,
2. Inhibiting accelerated repopulation,
3. Inhibiting cell repair,
4. Accumulation of cells in the radio-sensitive phase, or elimination of cells in the radio-resistant phase.
5. Improvement of cell oxidation.

## 1. Radiotherapy and cytotoxic agents combined

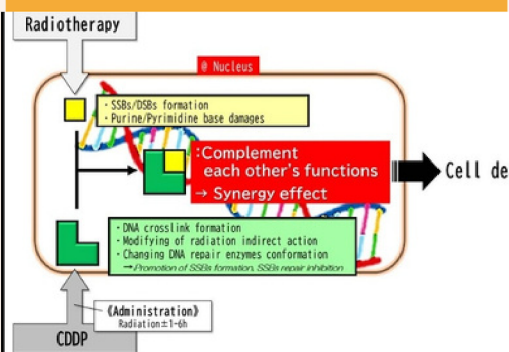
### 1. Platinum based drugs

Cisplatin (CDDP), which is often the cornerstone of multi-drug combination cancer therapies, is highly versatile and frequently used in combination with radiotherapy for the treatment of many cancers. Cisplatin consolidates DNA damages induced by irradiation - potentially repairable changes (e.g. interruption of the DNA strand) become lethal damage. It inhibits DNA synthesis and transcription, inhibiting repair of post-radiation damage to DNA. Cisplatin acts both in well oxidated and hypoxic cells.

Meanwhile, radiation facilitates cisplatin penetration into cancer cells and formation of its active metabolite.



Major reaction. The major reaction occurs mainly in the cytoplasm. Radiation and CDDP give cells an identical excessive oxidative loading response, resulting in a synergistic effect leading to cell death. The metabolic response to the excessive oxidative loading by CDDP reaches its maximum within 6 h and is rapidly resolved thereafter. Therefore, it is necessary to administer CDDP within 6 h before or after radiation in order to obtain the synergistic effect. (A) Radical scavengers and NADH/NAD<sup>+</sup> rate decrease → redox homeostasis perturbation → metabolic (Warburg effect, DNA repair, etc.) malfunctions. (B) Mitochondrial dysfunctions → more excessive and persistent oxidative stress, and apoptosis. (C) Oxidation of cell constituents (especially lipid peroxidation) → cell dysfunctions, destruction of cell components (DNA, etc.), ferroptosis.



Minor reactions. The minor reactions take place in the nucleus. The complementary combination of radiation-induced primary DNA strand breaks and CDDP-induced DNA damages (DNA crosslink, etc.) synergistically results in DNA damage and then cell death. Since the crosslinks of DNA by CDDP are metabolized in a few hours, it may be necessary to perform RT within a few hours after the administration of CDDP in order to obtain a sufficient synergistic effect. Abbreviations: SSBs, single-strand breaks; DBSs, double-strand breaks.

# Radiotherapy in the combined treatment : A Radiation Oncologist's perspective

## 2. Antimetabolites

The first cytostatic agent used in combination with radiotherapy was 5-fluorouracil. 5-fluorouracil affects cell distribution in the cell cycle, influencing cells in the S phase of the cell cycle, which are radiation resistant. It also causes re-oxygenation of hypoxic cells. Administration of 5-fluorouracil during radiotherapy by continuous infusion or orally is more efficient than in bolus.

3. Alkylating drugs - Mitomycin C inhibits DNA and RNA synthesis by interrupting cross bonds, mainly at guanine and cytosine pairs. Although mitomycin C is not cell cycle-specific, it arrests cells in the G2/M phase of the cycle. In combination with radiation, mitomycin C acts as radiosensitizer for cells in hypoxia and prevents repopulation.

Temozolomide damages DNA by DNA methylation in the position of O-6 guanine. The methylation triggers the abnormal DNA repair pathway, leading to increased cell sensitivity to irradiation and leads them to the apoptosis. Additionally, temozolomide inhibits repopulation of cancer cells.

4. Drugs affecting microtubules of the spindle apparatus- Vinca alkaloids affect the cell cycle itself - they cause depolymerisation of microtubules and interrupt functioning of the mitotic spindle.

This results in arresting cells in the radiotherapy sensitive M phase. They also inhibit repair of radiotherapy induced DNA damage.

Taxanes stabilise microtubules, thus inhibiting centrosomes, which leads to deceleration of mitosis and accumulation of cells in G2 and M phases of the cell cycle. Taxanes reduce parenchymal pressure and thus allow better oxidation of cancer cells, making them more sensitive to irradiation. Taxanes induce apoptosis.

## 5. Topoisomerase inhibitors

Etoposide and topotecan inhibit repair of post-radiation DNA damage, they arrest cells in G2 phase, process single breaks of DNA strands into double ones.

## II. Radiotherapy and targeted therapy combined

Many of targeted cancer therapies are ineffective at improving cure rates as monotherapy, there is ample preclinical evidence that they are both chemosensitizing and radiosensitizing, and can improve cure rates when utilized in combination treatment regimens.

The combination of RT with commonly used targeted agents, such as vascular endothelial growth factor inhibitors, endothelial growth factor receptor inhibitors, and inhibitors of the PI3K/Akt/mTOR pathway are very much promising to improve outcome.

e.g. Cetuximab- In a large, multi-institutional, randomized trial, Bonner et al reported an OS benefit when adding cetuximab to RT in locally advanced head and neck squamous cell carcinoma (HNSCC), improved 5 year overall survival by 10%. (A landmark trial) (NEJM 2006;354:567-578)

## III. Radiotherapy and Immunotherapy combined

There is a strong preclinical rationale for combining radiotherapy (RT) and immunotherapy. RT can act as a vaccine, releasing tumour antigen and stimulating the immune system against the tumour, thereby potentiating the effects of immune checkpoint inhibitors on T-cell response.

We have the very positive example of the phase III PACIFIC trial, which demonstrated that administration of the PD-L1 inhibitor, durvalumab, after chemoradiotherapy (CRT) led to long-term progression-free and overall survival benefits in patients with stage III lung cancer. We have the equivocal trials too. Pembrolizumab + CRT was associated with a favourable trend toward improved EFS vs placebo + CRT in patients with LA-HNSCC, but the difference did not reach statistical significance. (Phase III KEYNOTE-412 trial, Ann Oncol. 2022;33(Suppl 7):S808-S869).

## Conclusions

It has been demonstrated that chemoradiotherapy brings significant benefits in local control of the disease, organ preservation and overall survival of patients with some cancers.

Now a days, addition of targeted treatment and immunotherapy to chemoradiotherapy is already changing standards of cancer treatments. There are many trials underway to assess effectiveness and potential toxicity of particular combinations. Therefore it is always advisable to select the patient for best feasible combination keeping mirror evidence in mind.



# EXTRACORPOREAL IRRADIATION in primary bone tumours: Our experience at MCS

**DR SUCHETA, DR VINITATRIVEDI, ,  
DR. RICHA CHAUHAN, DR KANCHAN SINGH**

*Depth of Radiation Oncology,  
Mahavir Cancer Sansthan*



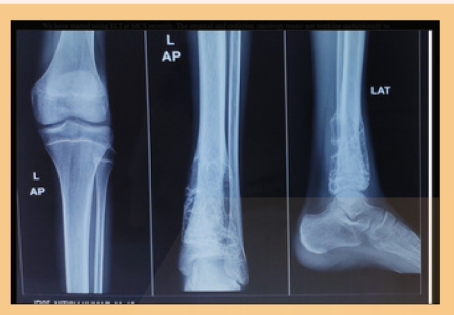
The therapeutic goals in the management of primary bone tumours include optimization of disease control in terms of local control and survival, maintenance of long-term function and minimization of late toxic effects. Surgery is a necessary component of curative therapy in most primary bone tumours and the specific surgical procedure is dictated by the location and extent of the primary tumour. Approximately two third of cases occur between 10 and 20 years of age.

Extracorporeal irradiation is a novel technique in which the tumour bearing segment of bone is excised en bloc; the tumour and the soft tissues are then removed from the bone, and the bone is irradiated and reimplanted back into the body. The use of extracorporeal irradiation (ECI) was first reported in 1968. The tumour-bearing bone segment is resected, treated with a single fraction of radiation therapy (RT) extracorporeally and reimplanted.

**P** primary malignant tumors of extremities present commonly in children and adolescents owing to active skeletal growth.



Figure: MRI and plain Xray images depicting tumour at distal end of tibia



No.	Age	Gender	Site	HPE
1	16	M	Distal tibia	Ewing's sarcoma
2	8	F	Femur	Osteosarcoma
3	12	F	Pro. Ulna	Ewing's sarcoma
4	4	F	Scapula	Rhabdomyosarcoma
5	7	M	Scapula	Ewing's sarcoma
6	16	F	Tibia	Ewing's sarcoma

The management of these tumors have evolved drastically over past two decades. Limb sparing strategies are preferred which involves multimodality treatment comprising surgery radiation and chemotherapy. Limb function can be preserved using prosthesis or bone graft but they impose financial burden especially in developing countries. More over prosthesis may lack anatomical stability. Hence recently there has been interest in using patient's tumour bone for reconstruction after sterilization.

We have started using ECI at MCS recently. The surgical and radiation oncology teams are working meticulously to provide optimal outcome for the patient. A total of 6 patients were taken within past 6 months for ECI.



# EXTRACORPOREAL IRRADIATION in primary bone tumours: Our experience at MCS

The patients belonged to paediatric and adolescents age group ranging from 4 to 16 years. A single dose of 50 Gy was delivered to the resected bone segments using AP /PA portals on linear accelerator and 6MV photons. The irradiated bones were reimplanted immediately as a biological graft. Postoperatively, immobilization was continued until there was radiographic evidence of union. We will analyse the long term outcomes in these patients



Figure: Irradiation of bone

ECI has several advantages over other methods of limb reconstruction. These include precise anatomic fit, preservation of joint mobility, avoidance of limb length discrepancy and problems associated with allograft, such as dependence on a bone bank, graft rejection, and the risk of viral transmission such as the human immunodeficiency and hepatitis C viruses. There is a psychological advantage to the patient of using own bone.

To conclude, limb salvage approach involving multidisciplinary team is the current recommended treatment of choice for primary malignant bone tumours whenever feasible. Extracorporeal irradiation is a convenient alternative to prosthesis due to its cost effectiveness in developing countries. Good functional results can be achieved. ECI is a relatively low-cost technique compared with the high cost of prostheses. However, the most important determinants of the feasibility of ECI include tumour location and extent, and appropriate selection of patients.

**Department of Radiation Oncology  
Mahavir Cancer Sansthan,  
Patna**

Limb sparing procedures are the preferred options for malignant bone tumours whenever feasible. Custom made prostheses or osteoarticular allografts can be used for reconstruction but prostheses are expensive and cannot be afforded by all patients in developing countries. Moreover, high complication rates, with 30% infection and 23% non union, have been reported using allografts, especially in children. Patients with graft complications had a significantly lower probability of graft survival, resulting in a worse functional outcome.

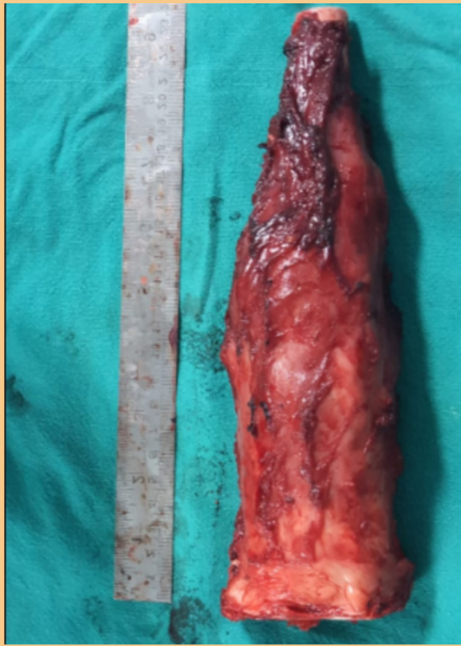


Figure: Extraction of bone segment and scraping



# Role of HPV vaccines in Cervical cancer Elimination



**Dr Shraddha Raj**  
**Associate Professor**  
**Dept of Radiation Oncology**  
**SCI,IGIMS, Patna**

The month of January is being celebrated as Cervical Cancer Awareness month across the globe to emphasize the importance of awareness to achieve the goal of Cervical cancer elimination.

The global strategy of World Health Organization (WHO) defines cervical cancer elimination as an incidence <4 per 100000 women per year. Achieving the 90-70-90 targets by all countries is needed by year 2030 to eliminate the disease by the end of this century.

- 90: 90% of girls get full HPV vaccine by the age of 15 years
- 70: 70% of women get screened by the age of 35 years and again by the age of 45 years
- 90: 90% of women with precancerous disease and 90% of women with invasive cancer get managed.



## HPV Vaccine

It is a well-established fact that Human Papilloma Virus (HPV) is the most common etiological factor behind the causation of cervical cancer. HPV16 and 18 are responsible for almost 70% of all cervical cancer cases, 41% to 67% of high-grade cervical lesions and 16 to 32% of low-grade cervical lesions. The other six most common HPV types- 33, 35, 45, 52 and 58 constitute further 20% of cervical cancers globally.

HPV vaccines act by generating immunogenic response against the virus prior to its exposure.

## Available vaccines

We all are fortunate to witness an era where various commercially available options are present. US- FDA approved vaccines Bivalent (Cervarix, 2vHPV), Quadrivalent (Gardasil, 4vHPV) and Nonavalent (Gardasil, 9vHPV) were available since more than a decade, but now the much cheaper indigenous option for India has also arrived. CERAVANAC qHPV is a bivalent HPV vaccine which may prove to be a milestone for India in achieving its elimination goals.

## Dose schedule

Though CDC (Centre for Disease control and prevention) still recommends two dose schedule for girls till 14 years of age and three dose schedules for girls of 15 or more years, SAGE (WHO Strategic Advisory Group of Experts on Immunization) has emphasized the importance of single dose regimen for HPV vaccine recently, the immunogenicity of which was comparable to the two-dose regimen.

Updated dose schedules for HPV (based on WHO-SAGE recommendations) are as follows:

- one or two-dose schedule for the primary target of girls aged 9-14
- one or two-dose schedule for young women aged 15-20
- Two doses with a 6-month interval for women older than 21.

Immunocompromised individuals, including those with HIV, should receive three doses if feasible, and if not at least two doses. There is limited evidence regarding the efficacy of a single dose in this group. HPV Immunisation among boys may be helpful in order to reduce prevalence of HPV infection in the community and protection from HPV cancers in men (anogenital, oropharyngeal, etc).

# DR PRITANJALI SINGH

VICE PRESIDENT  
AROI BIHAR CHAPTER  
PROFESSOR & HEAD,  
DEPT. OF RADIATION ONCOLOGY  
AIIMS, PATNA



## HEAD & NECK CONTOURING WORKSHOP

*12-13 August 2023*



A two day Head & Neck contouring workshop was also organized by department of Radiation of Oncology, AIIMS-Patna, under supervision of Dr. Pritanjali Singh. In a two day long workshop was conducted by Dr. Kainickal CT (Additional Professor, Regional Cancer Centre Thiruvananthapuram) explained about the contouring guidelines of carcinoma oral cavity, Carcinoma Oropharynx, Carcinoma hypopharynx, Carcinoma Larynx, Carcinoma Nasopharynx. He also discussed imaging in case based management in Head & Neck cancer. The session was discussed, it was an interactive session. Faculties from IGIMS, PMCH, NMCH & Mahavir Cancer Sansthan Hospital & students from various institute of Bihar & neighbor state participated in the workshop.



# WORLD HEAD & NECK CANCER DAY CELEBRATION 27th July 2023

On the occasion of World Head & Neck Cancer day 27th July, a CME was organized by the dept. of Radiation Oncology in association with dept. of Surgical Oncology AIIMS – Patna under banner of AROI Bihar. The organizing chairman & co-chairman were Dr. Pritanjali Singh (HOD, Department of Radiation Oncology) & Dr. Jagjit Pandey (HOD, Department of Surgical Oncology) respectively. The organizing secretary & co-secretary were Dr. Harikesh Bahadur Singh (Assistant Professor, Department of Radiation Oncology) & Dr. Nilesh Mani (Assistant Professor, Department of Radiation Oncology)

Programme was inaugurated by our chief Patron Prof. (Dr.) G.K. Pal, Executive Director, AIIMS – Patna along with Saraswati Vandana. The occasion was graced by the presence of Padma Shri Dr. J.K. Singh, Dr. B.Sanyal (Director MCS) and Dr. C.M.Singh (Medical Superintendent, AIIMS-Patna), Dr. Prem Kumar (Dean Research, AIIMS-Patna). In CME various eminent oncologist from the different part of India came. The talk on prevention and screening of Head & Neck Cancer enlightened by Dr. Abhishek Shankar (Assistant Prof. Department of Radiation Oncology AIIMS – Delhi). Dr. Jagjit Pandey elaborated in brief on the recent advances and technology of Head & Neck cancer surgery. Current approaches to reconstruction for head and neck cancer was explained by Dr. Veena Singh (Additional Professor & HOD, Department of Plastic Surgery, AIIMS – Patna).

Dr. Vineeta Trivedi (HOD, Department of Radiation Oncology, Mahavir Cancer Sansthan, Patna) has briefly explained the role of chemo-radiation in oral cavity cancer, Dr. Manishan Singh (Medical Director of Mahavir Cancer Sansthan, Patna) elaborate on Immunotherapy in Head & Neck Cancer. Dr. Umesh kumar Bhadani (Professor & HOD, Department of Anesthesia, AIIMS-Patna) highlighted the importance of palliative care in Head & Neck cancer patients.

A case based panel discussion was moderated by Dr. Pritanjali Singh and panelist were Dr. Shivendra Choudhary, Dr. Subhas, Dr. Dinesh Kumar Singh, Dr. Richa Chauhan, Dr. Shekhar Kumar, Dr. Surabhi, Dr. Tashibal Azhar.





# FLASH Radiotherapy: The Science Behind and The Challenges Ahead

Organized by

**Association of  
Radiation Oncologists  
of India -Bihar Chapter**

Date: 28<sup>th</sup> July, 2023 Friday

Time: 7 PM to 8 PM

## Speaker



### Dr. T. Ganesh

Certified Medical physicist American Board of Radiology  
Ex. Chief Medical Physicist, Manipal Hospitals Dwarka, New Delhi  
Associate Editor, Journal of Medical Physics  
Former Chairman, College of Medical Physics of India

## Chairpersons



### Prof. Dr. JP Agrawal

Head of the department of  
Radiation Oncology TMH, Mumbai



### Dr. Anusheel Munshi

Head, Radiation Oncology, Manipal  
Hospital, Dwarka, New Delhi



### Prof. (Dr.) Biswajit Sanyal

Director Administration  
Mahavir Cancer Sansthan Patna

## President

**Dr. Rajiv Ranjan Prasad**

## Secretary

**Dr. Rajesh Kumar Singh**

# 5TH AROICON - BIHAR CHAPTER



The 5th AROICON (Bihar Branch) was organized on 23rd and 24th December, 2023 under the aegis of State Cancer Institute, IGIMS, Patna. Dr. (Prof.) Rajesh Kumar Singh Chief SCI, IGIMS, Patna was the organizing secretary of this scientific event. With the theme “Never give up”, the conference was well attended and appreciated by oncologists from Bihar and other states of the country. The scientific sessions were meticulously designed to improve the understanding, perception and action in the field of cancer treatment and patient care. The conference provided an opportunity for the researchers to present their latest findings and learn about recent developments in the field. Eminent national faculties including Dr. Amit Jain of Meerut, Dr. Abhishek from AIIMS New Delhi, Dr. Sushma Aggarwal from SGPGI, Lucknow, Dr. S K Verma from Indore, Dr. Anoop from RIMS Ranchi, Dr. T.M. Singh from Bokaro, Dr. Sameer Hazra from Dhanbad gave their excellent lectures. Dr. Manisha Singh, Dr. RK Goswami, Dr. Amit, Dr. Ridu, Dr. Shiv Shankar Mishra, Dr. Arvind Kumar, Dr. S. Sirkar, Dr. Vineeta Trivedi, Dr. Rita Rani, Dr. Miraj, Dr. Rajiv, Dr. Zeenat, and Dr. Richa have also contributed their lectures. The sessions were chaired by Dr. (Prof.) Binde Kumar, Dr. Prem Kumar, Dr. Seema, Dr. Sanyal, Dr. Sudhakar, Dr. Naresh, Dr. Rajeev, Dr. Sahi, Dr. Keshari, Dr. Vinod, Dr. Santosh, and Dr. Dinesh.

Dr. Bishwajit Sanyal, Dr. J.K. Singh, Dr. Sudhakar Singh and Dr. P.N. Pandit were awarded Lifetime Achievement Award for outstanding contribution in the field of cancer treatment. Orations organized in the memory of world-renowned cancer doctors and son of soil Dr. A.D. Singh and Dr. Rangi Prasad were the major highlight of the conference. During the conference, various competitions were also organized in which junior and senior residents participated enthusiastically and prizes were also distributed to the winning participants.



# 5TH AROICON-BIHAR CHAPTER



*Prof. Dr. Bishwajit Sanyal*



*Padma Shri Dr. J.K. Singh*



## LIFETIME ACHIEVEMENT Award



*Prof. Dr. P.N. Pandit*



*Prof. Dr. Sudhakar Singh*

"DO NOT FOLLOW WHERE THE PATH MAY LEAD.  
GO INSTEAD WHERE THERE IS NO PATH AND LEAVE A TRAIL."  
RALPH WALDO EMERSON



# ORATION



## Oration 1: Latest Challenges in Radiation Oncology (Dr. A. D. Singh) by Dr. T. M. Singh

## Oration 2: Role of Radiation in Ovary Cancer (Dr. Rangi Prasad) by Dr. S. K. Verma

### Poster Presentation Competition

- 1 1st Prize-Dr. Puja Bhagat, SR, Radiation Oncology, SCI, IGIMS, Patna
- 2 2nd Prize - Dr. Deepali B Patil, Medical Physics, SCI, IGIMS, Patna
- 3 3rd Prize-Dr. Raina Rana, JR Radiation Oncology, SCI, IGIMS, Patna

### Quiz Competition

- 1 1st Prize-Dr. Kaniz Fatima, JR Radiation Oncology, SCI, IGIMS, Patna
- 2 2nd Prize-Dr. Priti Minakshi, JR Radiation Oncology, SCI, IGIMS, Patna
- 3 3rd Prize- Dr. Rohit Saini, SR AllIMS, Patna

### Slogan Writing Competition

- 1 1st Prize- Mr Anil Kumar Singh, Medical Photographer, IGIMS- For " NEVER GIVE UP "
- 2 2nd Prize - Dr. SK Monirul Mondal, JR3, Radiation Oncology, SCI, IGIMS - For "The CAN' in CANCER indicates than we 'CAN' beat it. Let's beat it together"
- 3 3rd Prize- Dr. Puja Bhagat, Radiation Oncology, SCI, IGIMS- For "Life Long or Short, We are here to alleviate the pain"



# HEALTH CUM CANCER AWARENESS CAMP UNDER AROI BIHAR CHAPTER



*Dr. (Prof.) Rajesh Kumar Singh*

**Secretary-General**

**AROI (Bihar Chapter)**

**Chief State Cancer Institute,  
IGIMS, Patna**

**S**TATE CANCER INSTITUTE IGIMS, PATNA has organised a Health Camp cum Cancer Awareness on date 14/01/2024 (Sunday) under the banner of AROI Bihar Chapter at Village: Grahatha Khurd, PO+PS: Brahampur, District - Buxar, PIN - 802112, Bihar (INDIA).



The Health Camp started at 10:00 AM and ended at 05:00 PM. The 250 villagers of nearby villages including males and females of different age groups were examined and advised as per their need and also to include some yoga with their daily activity for their good health.



The Health Camp cum Cancer Awareness Camp was arranged by a team of Doctors, Nurses and Health workers. First of all, the villagers have been aware of the Cancer and cause of Cancer. Dr. (Prof.) Rajesh Kumar Singh, Secretary-General of AROI (Bihar Chapter) was leading the Camp.



The Doctor's team took the history of the patients who were found with some irregularities for a long time. They have been instructed to prevent Bidi/Cigarette and Gutkha. There were five patients found suffering from cancer and have been advised to consult a cancer hospital.



# AROI BIHAR ACADEMIC CALENDAR FOR POST GRADUATE STUDENTS

## MONTHLY CALENDAR

Co-ordinator  
Dr. Rita Rani, MCS



**FEBRUARY**

**MAHAVIR CANCER  
SANSTHAN**

**MARCH**

**AIIMS**

**APRIL**

**STATE CANCER  
INSTITUTE**

**MAY**

**NMCH**

**JUNE**

**PARAS HOSPITAL**

**JULY**

**SAVERA HOSPITAL**

**AUGUST**

**JP MEDANTA SS**

**SEPTEMBER**

**PMCH**

# Upcoming Events



## **AIIMS, PATNA**

*1ST FEBRUARY 2024*

Celebration of the initiation of  
radiotherapy services



## **ALL CANCER HOSPITALS**

*4TH FEBRUARY 2024*

World Cancer Day celebration



## **IGIMS, PATNA**

*5 FEBRUARY 2024*

Program on cancer on the occasion of  
IGIMS Institute Day.

## **PARAS HOSPITAL**

*MARCH 2024*

Cervical cancer



## **NMCH, PATNA**

*OCTOBER 2024*

A seminar on breast cancer

## **IGIMS, PATNA**

*OCTOBER 2024*

A seminar on breast cancer and  
palliative care





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# UPDATES ON CERVICAL CANCER : PREVENTION AND TREATMENT

**DATE : 8TH MARCH 2024**

**VENUE : PARAS HMRI HOSPITAL,  
PATNA**

## **ORGANISERS**

- **Dr. Shekhar Keshri**  
Chief Consultant, Radiation Oncology
- **Dr. Sneha Jha**  
Chief Consultant, Radiation Oncology
- **Dr. Shiv Shankar Mishra**  
Consultant, Radiation Oncology



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**6TH AROICON**



Patna, Bihar | 14th-15th September 2024

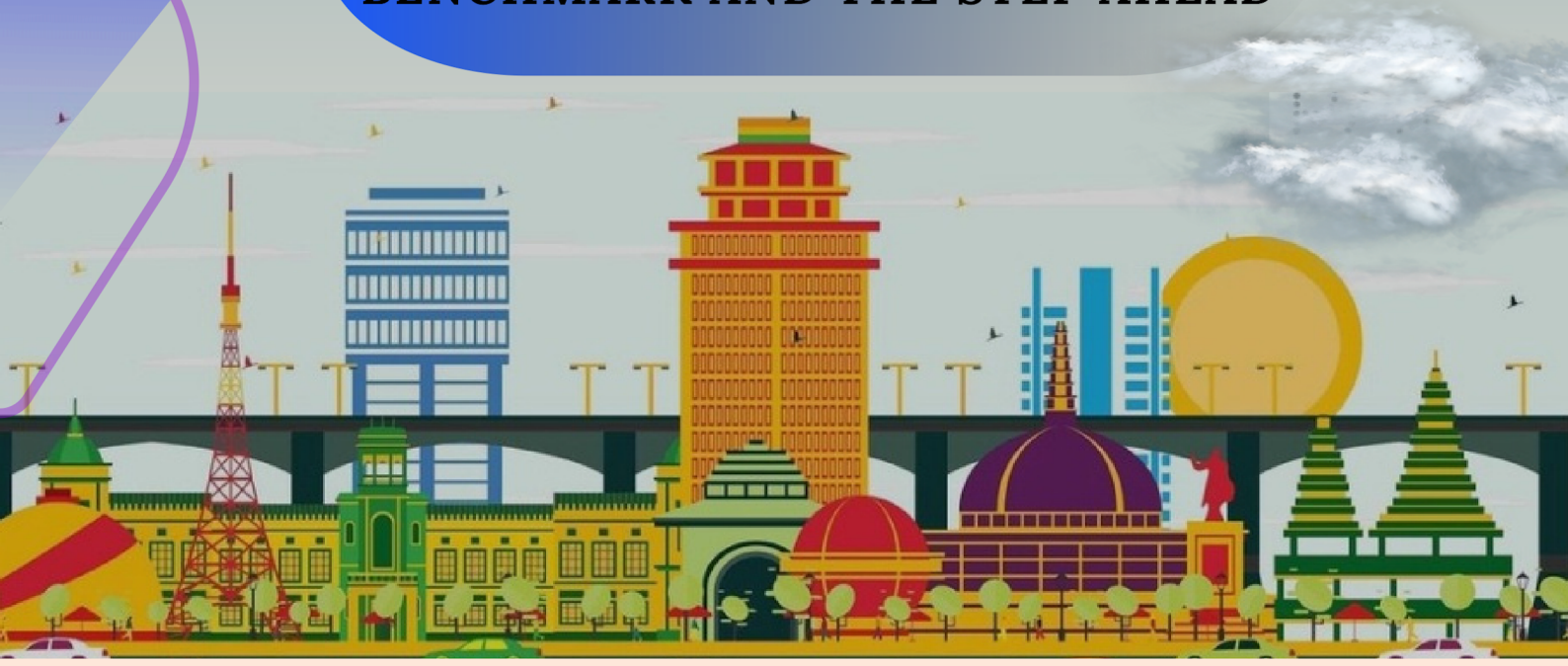
# 6th Annual Conference AROICON


*BIHAR CHAPTER  
2024*

Organised by:  
Department of Radiation  
Oncology  
**MAHAVIR CANCER  
SANSTHAN**



**THE PRACTICE OF  
RADIATION ONCOLOGY  
BENCHMARK AND THE STEP AHEAD**





SKILLED ENOUGH  
- TO -  
*Become*  
- AN -  
**ONCOLOGIST**  
CRAZY ENOUGH  
TO *Love* IT  
#OBI1962

***Dear Members, Let's connect  
Do share your write-ups, ideas,  
suggestions, achievements and  
photograph of events by sending  
email at*** [editor.aroibihar@gmail.com](mailto:editor.aroibihar@gmail.com) 

