

# ASSOCIATION OF RADIATION ONCOLOGISTS OF INDIA

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This newsletter is edited by **Dr. Gautam Kumar Sharan** on behalf of Association of Radiation Oncologists of India  
The views expressed are that of authors/ contributors

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JAWAHARLAL NEHRU CANCER HOSPITAL & RESEARCH CENTRE, BHOPAL

# Emerging role of proton therapy for Esophageal cancer

## The strength of evidence is gaining momentum

**Rishan Thimma Sudarsan, Srinivas Chilukuri**

Department of Radiation Oncology, Apollo Proton Cancer Centre, Chennai

Esophageal Cancer: Story so far

Esophageal cancer is the sixth leading cause of cancer-related deaths and the seventh most common cancer worldwide. Esophageal cancer and its treatment differ largely between the West and the East because at least in part these are two different diseases: squamous cell cancers (SCC) are the prevailing tumor type in most parts of Asia arising from the upper and middle third of esophagus whereas it is esophageal adenocarcinoma (AC) arising from the lower third which is the most prevalent in the west. Esophageal cancer in principle is a “surgical disease”, in which R0 resection by primary surgery is the key determinant of good outcome.

Patients with locally advanced disease have a higher risk of locoregional and distant disease relapse with surgery alone and they are managed with combined modality therapy. The standard of care for patients with potentially resectable disease is “tri-modality” therapy involving pre-operative chemoradiotherapy (CRT) followed by esophagectomy. Multiple clinical trials have demonstrated that the addition of CRT prior to surgery improves outcomes compared to surgery alone. The CROSS trial, which included patients with locally advanced esophageal cancer who were randomized to either surgery alone or pre-operative CRT to a dose of 41.4 Gy in 23 fractions with concurrent weekly carboplatin and paclitaxel followed by surgery showed that a pathologic complete response rate of 23% for AC and 49% for SCC and demonstrated improvements in margin negative resection rates, lymph node clearance, locoregional control (LRC), and overall survival (OS).

CRT is also a potentially curative treatment for patients with unresectable or inoperable non-metastatic disease. The Radiation Therapy Oncology Group (RTOG) trial 8501 which included patients with locally advanced esophageal cancer who were randomized to either radiotherapy alone (64 Gy in 32 fractions) or CRT consisting of 50 Gy in 25 fractions with concurrent 5-fluorouracil and cisplatin demonstrated improvements in OS, LRC, and distant metastasis with the addition of chemotherapy to RT. Importantly, this study demonstrated long-term survivorship in approximately 20–25% of patients receiving CRT with no long-term survivors in the radiotherapy alone cohort, thus establishing CRT as the standard of care in patients not eligible for surgery

Treatment related toxicity & non-cancer deaths: A reality that is under-recognized

For patients with esophageal cancer treated with CRT, a substantial proportion experience acute and/or late treatment-related toxicities. In the CROSS trial, a majority of patients experienced fatigue, cytopenia, nausea, or anorexia during CRT, while approximately 20% experienced grade 3+ (serious or life-threatening) toxicities. Additionally, a large proportion of patients experienced major post-operative complications including pulmonary complications (46%), cardiac complications (21%), anastomotic leakage (22%), or death (6%). Similarly, in RTOG trial 8501, 44% of patients experienced “severe” toxicities while 20% experienced life-threatening toxicities. While disease recurrence remains the major cause of death for esophageal cancer patients treated with CRT, a significant proportion of patients will die of non-cancer causes including cardiac, pulmonary, and/or renal failure in the first few years following completion of treatment. The high rate of treatment-related adverse events with current photon-based CRT regimens and surgery has curbed enthusiasm for exploring more intensified chemotherapy or RT regimens. Even in contemporary series, such as one from MD Anderson Cancer Centre published recently which included 320 patients of esophageal cancer treated with Intensity modulated radiation therapy (IMRT) and 159 with proton beam therapy (PBT), showed that 18% had grade 3 cardiac events at a median of 7 months, with 81% events occurring within 2 years of chemoradiation. This study demonstrated that IMRT was associated with increased risk of grade 3+ cardiac events with HR of 1.746 (95% CI 1.065-2.862) which was statistically significant ( $p=0.027$ ). This study cohort had 23% of patients with pre-existing cardiac ailments. In India where the metabolic syndrome is highly prevalent, cardiac toxicity is of even bigger concern.

#### Potential role and evidence so far for proton therapy in esophageal cancer

Single institute retrospective analysis that was published in 2017, compared proton beam therapy and IMRT in esophageal cancers treated with definitive chemoradiation. In this study, which analyzed 343 patients from the years 2010-2014, 132 patients were treated with proton beam therapy and 211 with IMRT. In comparison to IMRT, PBT had significantly better overall survival ( $p=0.011$ ), progression free survival (PFS) ( $p=0.001$ ), distant metastasis-free survival (DMFS) ( $p=0.031$ ), as well as marginally better locoregional failure-free survival (LRFFS) ( $p=0.075$ ). On multivariate analysis, IMRT had worse OS (HR 1.454;  $p=0.01$ ), PFS (HR 1.562,  $p=0.001$ ) and LRFFS (HR 1.461,  $p=0.041$ ) than PBT. Subgroup analysis also revealed to have higher 5-year OS (34.6% vs 25%,  $p=0.041$ ) and PFS rate (33.5% vs 13.2%,  $p=0.005$ ) in PBT group for stage III disease. No significant differences in treatment related toxicities were seen in both groups. These results paved way for Phase IIB randomized control trial (RCT) published in 2020.

Prospective trial from MD Anderson tried to analyze whether dosimetric advantages with PBT translate to improved clinical outcomes in esophageal cancer. This study analyzed 107 patients, (61 patients with

IMRT and 46 patients with PBT) from the years 2012- 2019, with a median follow up of 44.1 months. Among them, 51 patients underwent surgery post chemoradiotherapy, and 80% of the PBT patients were treated with passive scattering technology. This study analyzed Total Toxicity Burden (TTB) as its primary end point, which proved to be unique and was specifically created for esophageal cancer patients which evaluates the total patient experience throughout the cancer journey, accounting for cumulative adverse events that can occur over a period of 52 weeks, with weighted measures that reflect the severity or grade of toxicities.

It was also applicable to both surgical and non-surgical patients, with economic implications. This study showed that the posterior mean TTB was 2.3 times higher for IMRT (39.9) compared to PBT (17.4). Also, the mean postoperative complication score (POC) was 7.6 times higher for IMRT (19.1) compared to PBT (2.5). The posterior probability that mean TTB was lower for PBT

compared to IMRT was 0.9989, which exceeded the trial's stopping boundary of 0.9942 at 67% interim analysis. The 3-year PFS rate (50.8% vs 51.2%) and 3-year OS (44.5% vs 44.5%) were similar between both groups. Other secondary end points like evaluation of lymphopenia, showed that the counts declined to significantly greater degree with IMRT (33%vs 14% at 4th week and 52% vs 27% at 5th week) compared to PBT. Posthoc dosimetric analysis showed that the target volumes were equivalent between both arms, however, PBT delivered significantly higher mean doses to GTV (52.6 vs 52.3Gy,  $p=0.006$ ) and PTV (52.4 vs 52.1 Gy,  $P=0.02$ ). PBT also yielded significantly lower doses to total lung parameters (V5, 41.4% vs 19.7%, V20 13.6% vs 8.4%, mean lung dose, 8.4 Gy vs 4.8 Gy,  $p<0.001$  for all) as well as mean doses to the heart (19.8 vs 11.3 Gy,  $p<0.001$ ) and liver (12.1 vs 2.4Gy;  $p<0.001$ ) but similar maximum spinal cord doses (38.4 vs 38.3 Gy,  $p=0.47$ ). The differences could be more pronounced in IMPT compared to passive scattering, and early reports have been encouraging.

Based on the above experience, a trial-NRG-GI006 has been activated, which is a Phase III RCT, that will accrue 300 patients with esophageal cancer, with primary objective of overall survival and Grade 3 cardiopulmonary events, which is expected to complete by 2027.

Our initial experience so far with PBT for esophageal cancers has been encouraging. In all patients, the heart and lungs were significantly spared compared to a rival tomotherapy plan. For example, in one of the patients of middle third esophageal cancer, the mean heart dose was 7.85Gy (Helical Tomotherapy plan dose 18.2Gy) and V20 was 18.5% (compared to 27% with Tomotherapy), with spinal cord maximum dose less than 40Gy. Both the pictures below demonstrate excellent conformity of radiation dose and significant sparing of dose anteriorly to heart and laterally to lungs



## **Radiotherapy Practices During COVID-19 Pandemic**

**Dr Munish Gairola, MD, DNB, Director, Radiation Oncology**

**Dr Parveen Ahlawat, DNB, Consultant, Radiation Oncology**

**Dr Sarthak Tandon, DNB, Consultant, Radiation Oncology**

**Rajiv Gandhi Cancer Institute & Research Centre, Delhi**

SARS-CoV-2 a new corona virus is spreading rapidly. It caused outbreak, and WHO on march 11th 2020 declared it a public health emergency of international concern. Then followed an unprecedented, near-complete global lockdown. However the situation continued to worsen. Covid-19 pandemic has massively disrupted healthcare system and hence lives. This outbreak has laid bare the lack of capacity of Indian health-care system to fight back such infectious disease. Patients with cancer are particularly prone to this new viral infection since these patients have compromised immune status contributed by the disease itself and the multiple treatments they have undergone. During the early period of pandemic, cancer treatment was either discontinued or postponed. But we have realized that this virus is here to stay until the vaccine is developed. Hence it is not appropriate to deprive cancer patients of life-saving treatment such as radiotherapy. Delaying radiotherapy will lead to disease progression, reduced benefits from it, and higher mortality. Therefore canceling or delaying radiotherapy is not logical. We, at Rajiv Gandhi Cancer Institute and Research Centre, New Delhi made the decision to continue providing care in such challenging and difficult times. While the aim was to deliver radiotherapy without much delay, of equal importance was to ensure the safety and protection of all the health-care workers involved in the department. We emphasize more on the modification of treatment rather than postponing.

Following policies are laid down in order to deliver radiotherapy safely:

- Telemedicine is being increasingly used for follow up patients
- OPD consultations are scheduled on staggered basis
- Staffs are trained to screen and triage patients at the entry point of hospital premises
- Patients are being prioritized based on their diagnosis, stage, expected prognosis and urgency for starting radiotherapy
- Attempt has been to defer or delay radiotherapy when it is expected that risk of disease progression has minimal effect on outcomes
- Doctors, nurses and other staffs are being rotated for duties
- Maintaining strict protocol of one-patient one-attendant only is being followed
- Radiotherapy is being deferred for symptomatic Covid-19 positive patients until symptoms are resolved and declared noninfectious by our infectious disease physician

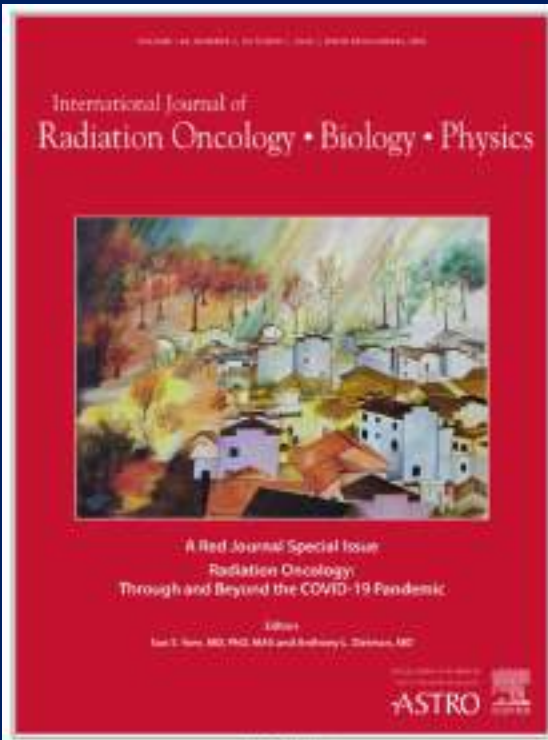


- Radiotherapy for asymptomatic Covid 19 positive patients are managed with utmost precautions such as full-body PPE which includes body-suit, face-shield, shoe-cover, goggles and N95 mask for full team involved in patient care
- Patients and their relatives in OPD areas and patient's waiting areas are to sit with adequate distance with each other
- Patients being planned for elective treatment are first being tested for Covid 19 before they are allotted bed
- Patients who require urgent admission are admitted in a special isolation ward and shifted to ward only after confirmation of negative Covid 19 test
- Covid 19 patients who require radiotherapy are being treated as last patient of the day
- Hypofractionation schedules are being increasingly used to shorten the overall treatment time
- The multidisciplinary tumor board meeting are held are virtual using social network applications

**Image: Radiotherapy delivery process for a Covid-19 patient**



# Congratulations



An oil painting on canvas by Dr. Nidhi Patni has been published on the cover page of IJROBP, Volume 108, Issue 2.

Dr Patni is a senior consultant and HOD of radiation oncology at Bhagwan Mahaveer Cancer Hospital

Jaipur. She has established this department and has been instrumental in all its advancements. She is an alumna of prestigious Tata Memorial Hospital, Mumbai.

She finds painting to be very relaxing after a tiring day and feels rejuvenated as it lifts her spirits and soothes her nerves.

AROI CONGRATULATES Dr Patni on this recognition!

## "Lockdown" by Nidhi Patni, MD

### IJROBP

Volume 108, Issue 2

**About the Image:** The unprecedented is being experienced by one and all across the globe. A tiny strand of RNA has curbed everything. Following the corona virus pandemic, all activities have come to grinding halt. Cities, Roads, Offices, Colleges, Schools, playgrounds, cinema halls, malls, airports and railway stations all wear a deserted look. There is hubbub in the hospital and screams of the thousands, who have been silenced forever. There is not a single human being affected by this malady.

There is a big pause, a pause on stressful, busy and hectic lives. But the dark clouds of this pause have not one, but many silver linings. Nature has revived, soft breeze ruffling the leaves is cleaner, we are hearing and seeing the birds which we have not seen since ages, sky is deeper blue, river beds are now easily visible.

This 6.5'x4.5' oil painting on canvas is showing the blissful serenity of a village as it breaks in the glory of sun during the lockdown. Though the word 'lockdown' brings gloom, anxiety and stress but here, I have shown its optimism using bright shades of reds, oranges and yellows radiating hopes- this too shall pass.

# CONGRATULATIONS

## FICRO 2020 FELLOWSHIP INDIAN COLLEGE OF RADIATION ONCOLOGY



**DR RAKESH JALALI**

Medical Director & Head  
Radiation Oncology  
Apollo Proton Cancer Centre, Chennai



**DR VEDANG MURTHY**

Professor  
Department of Radiation Oncology  
Tata Memorial Centre, Mumbai



**DR SUPRIYA CHOPRA**

Professor  
Department of Radiation Oncology  
Tata Memorial Centre, Mumbai



**DR REENA ENGINEER**

Professor  
Department of Radiation Oncology  
Tata Memorial Centre, Mumbai



**DR GAUTAM K SHARAN**

HOD, Radiation Oncology  
Jawaharlal Nehru Cancer Hospital &  
Research Centre, Bhopal



**DR JAINEET SACHDEVA**

Professor  
Department of Radiation Oncology  
Christian Medical College, Ludhiana





## Quiz Winners

### 34th ICRO Sun PG Teaching Programme

First Prize



Dr LINKON BISWAS

MOHAMMED

NRS Medical College, Koltata

Second Prize



Dr RASHMI SARAWAGI

AIIMS, New Delhi

Third Prize

Dr BASALATHULLAH AR

NIMS, Hyderabad

AROJ & ICRO WISHES ALL ITS MEMBERS A VERY HAPPY FESTIVE SEASON

May Mata bless you  
On this auspicious day  
of Navratri,  
And may on this  
festive season dhan,  
Yash and samriddhi  
come your way.

Happy  
*Navratri*



## BOOK REVIEW

### Bethesda Handbook of Clinical Oncology,

South Asian Edition Adapted For Local Practices, Conditions & Therapeutics

Jame Abraham & James L Gulley

### SAE Editor: Sayan Paul

Dr Gautam Kumar Sharan

Jawaharlal Nehru Cancer Hospital & Research Centre, Bhopal

“Bethesda Handbook of Clinical Oncology” is a very popular, evidence based comprehensive handbook of clinical oncology which I have been using as a desk reference since almost a decade. This has been a very useful reference for students and for practitioners. Whenever we read books written by foreign authors (most of the oncology books are by foreign authors) we always need to search for Indian data to complement because naturally these books quote their own data and figures. Above all the practice pattern in India is not essentially same as in west. The more prevalent cancers we see in India are infrequently seen in the west e.g. Head and neck cancers, cancer cervix etc. The stages of the cancer that we encounter are mostly advanced stages where as in the west early stages are diagnosed more frequently. We do have constraint of recourse. So a book which is authentic, evidence based as well as include our data, Our evidences and guidelines were the need of the hour. This work has been wonderfully done by a team of young and enthusiastic oncologists from different parts of India who have edited “Bethesda Handbook of Clinical Oncology” for its exclusive South Asian Edition and included our data, our evidences, and our guidelines. The cancers we see in our clinic more frequently have been given more emphasis. The Indian, European and US guidelines have been compiled and included in the respective chapters. The most fascinating thing about the book is the incorporation of flowcharts in each chapter showing the management pathway of that type of cancer which I feel will be of much use for students and the practitioner as ready reference and for quick recapitulation before the examination. This is the book an oncologist should have as reference book for day to day practice to get all the data she or he needs to discuss with the patient and for clinical decision making.

The radiation oncology chapter has been edited thoroughly and basics of radiation oncology have been added. In every chapter the radiation part has been rewritten and given proper importance. The book is up to date and includes all the data and evidences available till May 2020 .

I congratulate Dr Sayan Paul the editor of the book and the excellent team of contributors for their tremendous effort.

The contributors are very well known eminent persons of our fraternity. Each of them are authority in their subjects.



## OBITUARY: Prof Mithilesh Kumar



On 27 July 2020 at 2.30 pm we lost our ex HoD Prof Dr. Mithilesh Kumar who succumbed to Corona at AIIMS Patna at the age of 75 years He earned many laurels for himself and Radiotherapy Deptt PMCH Patna. He was one of the great pillars of Radiation oncology especially for Bihar After Prof KK Singh he headed the Radiotherapy Deptt PMCH Patna from 1999 till 2014 after giving charge to Prof Dr. P N Pandit.

He remains a life member of AROI and holds many important positions He guided many postgraduates spread all over Country With his demise not only Deptt of Radiotherapy Patna rather the whole oncology family AROI Bihar and Jharkhand including the medical fraternity of Bihar suffered a great loss. He was among one of the longest-serving doctor and HoD Cancer Deptt PMCH Patna The state has lost a dedicated doctor serving humanity The aforesaid worlds where expressed for him in a condolence meeting held on behalf of Deptt of Radiotherapy Patna and AROI Bihar maintaining social distancing etc by Prof Dr. P N Pandit HoD and secretary AROI in his memory to the gathering Dr. Ravi Byahut expressed his gratitude towards him as a great teacher, Dr. Sangita Narain expressed his administrative capacity during his tenure ,Dr. Dipak Kumar expressed his good days and association with Prof Dr. Mithlesh Kumar from AROI Bihar President Dr. J K Singh expressed grief on sad demise Among important doctors who consoled his death included Dr. Rajesh Kr Singh HoD IGIMS others such as Dr. Richa. Dr. Dinesh Dr. Shradha Dr. Shekhar Keshari Paras Dr. Pritanjali HoD AIIMS Patna Dr. Anup RIMS Ranchi Dr. Anita Singh HoD NMCH Dr. Sudhakar Singh HoD DMCH Dr. Mukesh Bharati Dr. Kunal IGIMS Dr. Aftab Dr. Manisha Singh MCS Dr. Vineeta Trivedi and Dr. Abhishek Anand of Paras and many more doctors prayed God for his soul in rest in peace

**Prof Dr. P N Pandit HoD Radiotherapy Deptt and Secretary, AROI Bihar**

## OBITUARY: Prof Abhijit Basu



Prof Abhijit Basu (LM-267) was born on 30th of December 1948. He did his MBBS from NRS Medical College Kolkata, following which he joined Government Health Service. He later did his DMRT and MD in Radiotherapy from Kolkata, his dissertation guide being Dr. Saroj Gupta, a doyen of Oncology. He later did the DNB in Radiotherapy. He served as Faculty and Head of the Department at a number of Teaching Hospitals in West Bengal including Medical College Hospital, Kolkata where he served as Professor and Head between 2004 and 2012, when he retired

from service. Following his retirement, he served as Senior Faculty and Teacher for DNB (Radiotherapy) at Narayana Superspeciality Hospital, Howrah (WB), a role he held at the time of his demise on 19th of July 2020 at Peerless Hospital, Kolkata from complications of COVID-19 infection.

Prof Basu was a Faculty and Examiner for DMRT and MD (Radiotherapy) under University of Calcutta and subsequently The West Bengal University of Health Sciences for almost two decades, as well as many other Universities across India. He was also an Appraiser and Guest Faculty for DNB (Radiotherapy) at Cancer Centre Welfare Home, Thakurpukur, Kolkata and an inspector for MD (Radiotherapy) appointed by the Medical Council of India. He was also appointed as an Expert on Cervical Cancer and Palliative Care by the WHO. He delivered the Inaugural Dr. Saroj Gupta Oration in 2017 and received the Lifetime Achievement Award in 2018 by the Association of Radiation Oncologists of India (West Bengal chapter).



He was a renowned academic with many publications to his name in scientific journals and a beloved teacher to generations of trainees in Radiation Oncology, Radiotherapy Technology and Nursing. While being warm and empathetic, he was always able to retain his dignity and command respect. His classes were a favourite with all categories of students, whether physicians, nurses or technologists, in combining encyclopedic knowledge with lucid communication.

His knowledge and interests extended far and wide beyond Oncology, or indeed, the medical field. He was an aficionado of literature and theatre and a wonderful raconteur. He was also an able administrator with a lightness of touch and understanding of the felt needs of all his staff members.



He lived a full life, teaching till the end, and also delighting in the company of his young grand-daughter. While the end did not come in the serene manner he deserved, he fought valiantly against the dreaded virus for as long as he was able. Prof Basu is survived by his wife and son, both well-known medical academicians in their own right, and while he leaves a great void in the lives of all those who knew and loved him, he will live on forever in our hearts



## OBITUARY: Dr P P Mohanty

**DR. P.P. MOHANTY**  
Senior Consultant Radiation Oncologist



**DR. P.P. MOHANTY**  
Department: Radiation Oncology

### Education Qualifications

- MBBS
- MD (Radiotherapy)

### Experience

- 2011 - To present: Senior Radiation Oncologist, Yashoda Cancer Institute
- 2010 - 2011: Head of Department, Radiation Oncology, Arora Cancer Hospital, New Delhi
- 2005 - 2010: Yashoda Cancer Institute, Hyderabad as Senior Radiation Oncologist.
- 2002 - 2005: As senior registrar in Lucknow

It was a sad Friday afternoon when news reached us in the Dept of Radiation Oncology at MPMCC Varanasi on the sudden demise of Dr. ParthaPratim Mohanty. I remembered Dr. PP as I had called him from my days at Yashoda Hospital between Dec 2018 and Feb 2020. I remember first coming face to face with him and thought that he looks very serious. Later as we conversed, he turned out to be quite jovial. He gave me a lot of inputs on life in Hyderabad and along with Dr. Sayan Paul and Dr. Kausik Bhattacharya were the few people I knew before hand when I moved into Hyderabad. Therefore, on Friday 24<sup>th</sup> September 2020, when I got the news on Dr. PP's demise, I was shocked and couldn't place immediately "who". Dr. PP had been supportive of my efforts in Hyderabad and had guided me in my practice. I feel sad for the loss to his family, his friend circle and to the radiation oncology community as a whole. His friends (including me) will miss his absence in their circle. I would like to express my sincere condolences to his family for their loss

Dr Ashutosh Mukherji  
Professor & Head Department of Radiation Oncology  
Tata Memorial Centre, Mumbai  
MPMMCC & HBCH, Varanasi



## **OBITUARY: Dr T Aloysius Raj**



Dr T Aloysius Raj MS MD DMRT, Consultant Oncologist, Pandai Hospital, Penang, Malaysia is no more, he expired on 2nd October 2020 at 7 am IST at Penang due to prolonged cardiac illness. He was former professor of Radiotherapy, Madras Medical college, consultant at the Dr Ray Hospital, St Thomas Hospital and Best Hospital Chennai.

May his soul rest in peace, AROI pray thealmighty to give courage and strength to the family.

He was a Life Member of AROI

**Dear Friends,**

**As we all are aware that our last AROI Directory was published in 2016 but since then till date, a lot of new members have joined, so for that we have to update our directory.**

**Any member with some new suggestions and amendments is welcome to come forward for this purpose and take the responsibility completely for publishing the new directory. He/she should be in contact with new members to be included for their CVs so that maximum CVs can be added.**

**The total expenditure for that would be around Rs. 6-7 lakhs and he/she should arrange the funds too on his own.**

**Kindly go through and let me know.**

Dr Rajesh Vashistha  
President, AROI  
M 9316911970

## 34<sup>th</sup> ICRO SUN PG TEACHING PROGRAMME - 2020 WEBINAR

The year 2020 has put a full stop to our lives due to COVID 19 Pandemic and as a result of this ICRO, the academic wing of AROI has to postpone its teaching activities across the country to next year-2021. The AROI-ICRO Executive committee decided to teach our PG students in the form of WEBINARS which is the new normal in teaching now. In this context the 34th ICRO SUN PG Teaching Program is being conducted as a Webinar on Genitourinary Malignancies for 2nd year and 3rd year MD /DNB Radiation Oncology Students to participate.

The 34th ICRO SUN PG Teaching Webinar is designed in such a way that students can understand the basics as well as evidence based advancements in the management of GU Malignancies. They can also have live interactions with the Faculties who are experts in the field of GU Malignancies during the webinar and get their queries answered.

We chose the 30th, 31st of July and 1st of August 2020 for the program, three consecutive days and five lectures everyday and planned from 5.00pm to 7.30pm. While there were many Webinars being done every other day in India, We had a astonishing 120 paid registrations and there were nearly 150 participants across India watching the Webinar every day and the attendance tracker revealed 99% of participants sitting and listening to the entire two and half hours on all three days.

We covered the Radiological Anatomy for GU Malignancies and also the nuances of RT Planning in Prostate Cancer on Day 1, the advancements in the management of Bladder and Testicular Tumours on Day 2 and finally about RCC, Ureteric Malignancies and Innovations in RT for Prostate cancer including Proton Therapy and Brachytherapy on the last day. The Faculties were crystal clear in their presentations and explanations about the topic given to them.

It was designed in such a way that the students sit at home and learn about GU Malignancies which would help them to perform well in their Examinations.

All the speakers did an excellent job and the participants were very happy and interactive and were firing questions for every lecture. The final day we organised the ICRO Quiz and selected the top three and they will be honoured in our next Annual National Conference of AROI apart from being Sponsored completely to attend the Conference.

Winners:

First- Dr.Linkon Biswas, Nil Ratan Sarkar MC, Kolkata

Second- Dr.Rashmi Sarawagi, AIIMS, New Delhi

Third- Dr.Basalathullah AR Mohammed, NIMS, Hyderabad

The three day Webinar ended in a happy note with all the lectures completed on time and lots of appreciations from the students saying that they are looking forward to such programmes regularly. This was very motivating to the ICRO team to do more such Webinars in the near future.

Last but not the least our sincere thanks go to Mr.Arvind Suri, SUN oncology who was a strong pillar of support in doing this Webinar and to Webstream World Communications.

## Best Of ASTRO 2020, Amritsar

Best of ASTRO 2020 was organised on 15th 16th August 2020 . Due to covid19 the conference was organised as virtual conference. 987 delegates registered including 253 International delegates from 12 countries. Besides delegates 132 faculty members from all over India participated. 87 abstracts from 13 tracks Breast, CNS, Gastrointestinal, Genitourinary, Gynaecology, Head and Neck, Haematology, Lung, Palliative Care, Patient safety, Tumour and Radiobiology and Medical physics were read out. The abstracts were discussed at the end of



each tract by eminent faculty members across the country . There was a a lecture on nanotechnology in nutrition. Dr G K Rath Director NCI presided over inaugural function. Dr Rajesh Vashistha President AROI. Dr P Vijayanand Reddy Chair AROI, Dr G V Giri Secretary AROI Dr Kaustav Talpatra, Dr V Srinivasan Secretary AROI and Dr Neeraj Jain Organising Secretary were dignitaries for inaugural function. Concluding remarks were given by Dr Rajesh Vashistha President AROI.





## 13<sup>th</sup> AROI ICRO Radiobiology Teaching Course (Webinar) Organized by AIIMS Rishikesh

The 13<sup>th</sup> AROI ICRO Clinical Radiobiology teaching course was conducted on a virtual platform from 26<sup>th</sup> to 29<sup>th</sup> August 2020, organized by AIIMS Rishikesh.

A short inaugural ceremony on 26<sup>th</sup> August was attended online by AROI & ICRO office bearers. The meeting began with an inspiring address by the Director & CEO of AIIMS Rishikesh, Padamshri Prof. Ravi Kant, who was the chief guest.

There was an overwhelming response from both residents and consultants in Radiation Oncology for the course. Total 1020 registrations were received both from all over India and abroad, with 650 national and 370 international participants. Being on a virtual platform, there were participants from Singapore, Malaysia, Philippines, Srilanka, Nepal and Indonesia. More than 950 participants attended the meeting on the first day and around 750 participants were there for the rest of the days. The course was conducted by Prof. Manoj Gupta, Head department of Radiation Oncology and Dean AIIMS Rishikesh from 5.30 pm to 7.00 pm on all four days. The course covered all basic aspects of radiobiology as well as advanced techniques like stereotactic radiotherapy and reirradiation. The contents of the course and teaching of Prof Manoj Gupta was greatly appreciated by all participants. There was an opportunity to clarify the doubts and Prof Manoj Gupta answered all the queries at the end of each session. Participants in many centers attended in groups with projection on large screen.

Dr Rajesh Vashista, President AROI informed that recorded session of this course will be uploaded on AROI website soon.



## MINUTES OF MEETINGS: ICRO

The 3 virtual meetings held so far i.e. PROADVANCE,( 25-27 June), 34th ICRO-SUN (30th-1st Aug) and the BOA (15th-16th) were reviewed and the members felt that the meetings had been a success.

On further discussion, it was decided to continue and complete the ICRO-SUN pharma PG teaching programs by December. The ICRO was requested to hold the two remaining meetings, one in October and the other in December. The teaching program on Physics would be held in the month of February 2021.

It was emphasized by the Chairman of the ICRO, that the attendance to the teaching programs should be strictly monitored and only those students attending the complete course be allowed to attend the quiz and given certificates. Mr. Suri assured that this would be adhered to and offered help for any infrastructure required to hold any meeting other than the scheduled ones also.

The Secretary ICRO, brought to the attention of the members that the response to the AROI- ICRO webinars was very good overall, and the format of holding the teaching over 3 days would continue. There had been till date over 700 registrants for the Radiobiology course to be held between 26 - 29th of this month with over 200 overseas registrants.

Regarding the ESTRO courses, both the Advanced technology and the Gynecology teaching programs to be held by the WB chapter later this year and early next year, have been postponed and the ESTRO secretariat and faculty have been duly informed due to the prevailing situation.

With no further details for discussion the meeting ended with best wishes for the Radiobiology program and thanks to all the attendees on short notice

## AROI-ICRO TEACHING COURSES: Minutes of Meeting

### 1. AROI-ICRO PRODVANCE Course:

The EC decided to conduct the program as a webinar over 2-3 days with 2-3 hrs Session per day, with topic being Stereotaxy. The Central committee of ICRO will organize the program, Dr Pradhan and Dr Srinivasan will take the responsibility of the program content and duration. Mr. Suri has agreed to get the logistics for the program through SUN pharma educational grant.

Tentative dates: Mid June, all the members agreed to the above.

### 2. SUN ICRO Program:

The EC discussed and decided to have SUN ICRO as webinar. The topic will be Genito Urinary; program will be done over 3 days with 2 to 3 hrs of daily sessions. The ICRO Central committee will take the responsibility of Organizing the event.

After accessing the response of this program the decision regarding further Programs will be taken. SUN Pharma will provide the required logistics for the program (Up to 4 hrs of online slot daily for 3 or more days, along with platform for Q & A and other Interactions)

### 3. Radiobiology Program:

The EC again approved to conduct Radiobiology course online. Dr Manoj Gupta proposed to hold one online meeting of radiobiology in third week of June as a staggered program, based on the response will decide about holding further programs. Dr Vashistha said he has spoken to INTAS Pharma and they have agreed to take Care of the logistics of this program.

All AROI-ICRO teaching programs this year (2020) will be conducted by central ICRO and AROI only. It was also decided that the local chapters who were given responsibility of hosting the AROI- ICRO programs for this year (2020)

#### 1. AROI-ICRO PRODVANCE

#### 2. AROI ICRO SUN PG teaching course

#### 3. AROI ICRO Intas Radiobiology course;

will host it as per revised schedule next year(2021).

#### 4. AROI -ESTRO Advanced Technology Course.

The Executive committee decided that the upcoming advanced technology Course to be held in Kolkata will be postponed to December 2021. The same will be communicated to ESTRO.

#### 5. AROI -ESTRO Gyn Teaching Course

The above course is scheduled in March 2021. Young Radiation oncology meeting- to be held in January 2021. The EC decided to review the situation in August regarding these meetings.

The committee decided that it will meet again to decide regarding this program after 2-3 months depending on the COVID situation.

## AROI-ICRO PRODVANCE COURSES:

### 6. AROICON 2020

In view of the current COVID crisis, AROICON stands cancelled for this year, however it will be held in Delhi under the North Zone either in 2021 or 2022 depending on the schedule of 3rd ICC.

### 7. 3rd ICC

The committee discussed the probability of 3rd ICC 2021 also getting postponed but the final decision will be taken by the ICC committee in this month.

8. **Invitation for AROI Fellowships** for this year & extension of completion of fellowships of 2019. The Executive committee decided not to call for AROI fellowships this year as the fellowships provided in AROICON 2019 have not been completed and these fellows will be given one more year extension to complete their fellowship.

### 9. FICRO Awards

The committee decided to invite the applications for FICRO awards. The selected Members will be given the fellowship in the subsequent AROICON.

Dr Pradhan and Dr Srinivasan will take the responsibility of FICRO.

### 10. Elections.

The EC decided that no elections will be held this year due to extra ordinary circumstances and also the new EC will not be able to take over in the GBM as AROICON 2020 stands cancelled.

It was unanimously decided for the same executive to continue till next year and to call elections in 2021 as per date schedule, also that state chapters also can follow the same procedure adopted by central committee.

11 **Best of ASTRO** –Amritsar-It will be decided by Dr. Neeraj Jain to hold as virtual meeting or postpone .He will inform within this month

### 12. Regarding Funding for JCRT.

Dr Vashishta informed the EC and Dr Kishore Singh that Rs 5 lakh has been deposited in the JCRT account (published by wolters kluwer) and further fund will be transferred shortly in July end /August 1st week.

### 13 Regarding bank issues –

Dr. Rajesh Vashishta informed to members that we have saving accounts in SBI by name of AROI, AROI-ICRO.

We are finding difficulties in banking foreign transactions & according to banking rules - Association accounts should be current accounts.

We have to change the account status from saving to current account with signature of President, Secretary & Treasurer & operated by either any person.

All members agree for all points





## Indian College of Radiation Oncology (ICRO)

*Academic Wing of*

## Association of Radiation Oncologists of India (AROI)

### 35<sup>th</sup> ICRO PG Teaching Program

29<sup>th</sup> October to 31<sup>st</sup> October, 2020

Time: 5:00 PM - 8:00 PM

On  
**'BRACHYTHERAPY'**

Organised by,  
**AROI & ICRO**

### Meeting Link

<https://webstream.streamcart.com/live/35sunicro>

This educational initiative is supported by



# Course Goal

## 35<sup>th</sup> ICRO SUN PG TEACHING PROGRAM ON BRACHYTHERAPY

Brachytherapy is considered to be an ultimate form of Conformal Radiation therapy. Brachytherapy fulfils all the goals of modern day radiotherapy in terms of favorable efficacy and reduced toxicity. Brachytherapy treatment is now available with the state-of-the-art technology, high patient acceptability, cost-effectiveness, and a personalized treatment approach, proves to be a preferred mode of treatment.

Benefits of brachytherapy is delivering radiation from the 'inside, out' and there by radiation dose is delivered precisely to target tumor area and does not travel through healthy tissue. Thus the surrounding healthy tissue is spared from unnecessary radiation or surgical trauma leading to reduced side effects and favourable functional outcomes.

Brachytherapy not only increases the therapeutic index but is also an irreplaceable component of contemporary cancer care. There is a renewal of interest in training the young postgraduate students of this immortal art by conducting this 35<sup>th</sup> ICRO SUN PG Teaching Programme Webinar on Brachytherapy.

This Webinar covers the basic Radiobiology and Brachy physics aspects along with the recent advancements in Cervical Cancer Brachytherapy on day one. The next day will be dealing with the usefulness of Brachytherapy in Breast and Head & Neck Cancers with video demonstrations of implant procedures. On the final day we cover the role of Brachytherapy in GI Malignancies, Extremity Sarcomas, Prostate and in Paediatric population.

The 35<sup>th</sup> ICRO SUN PG Teaching Webinar is designed in such a way that students can understand the basics as well as the advancements in Brachytherapy for different sites. They can also have live interactions with the Faculties who are experts in the field of Brachytherapy during the webinar and get their queries answered.

The Webinar will conclude with the ICRO QUIZ and the top three winners will be honoured with an award and free Registration; Travel and Accommodation to the next Annual National Conference of AROI.

### NATIONAL OFFICE BEARERS



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**DR. VIJAY ANAND REDDY P**

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**President Elect, AROI**  
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**Secretary General, AROI**  
**DR. G V GIRI**

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### ICRO OFFICE BEARERS



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**Secretary, ICRO**  
**DR. V SRINIVASAN**

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## WEBINAR COORDINATOR - Part 1

**Dr. V. Srinivasan,**  
MIOT INTERNATIONAL, Chennai

Time	Topic	Speaker
05.00 pm- 05.30 pm	Radiobiology of Brachytherapy (25 mins) (5mins Q & A)	Prof. Manoj Gupta, AIIMS, Rishikesh.
05.30 pm- 06.00 pm	Brachytherapy Physics and Isotopes relevant to practice (25 mins) (5mins Q & A)	Prof. K. Thayalan, Dr. KMH, Chennai
06.00 pm- 07.30 pm	<b><u>SESSION ON CANCER CERVIX BRACHYTHERAPY</u></b>	
06.00 pm- 06.30 pm	Intracavitary Brachytherapy – Modern day Applicators and Techniques (25 mins) (5mins Q & A)	Prof. Umesh Mahant Shetty, TMH, Vizag
06.30 pm- 07.00 pm	Interstitial Brachytherapy in Cervix - Advancements (25 mins) (5mins Q & A)	Prof. M. G. Janaki, MS Ramaiah MC, Bengaluru
07.00 pm- 07.30 pm	ICRU 89 – Time to move beyond Point A (25 mins) (5mins Q & A)	Prof. Bhavana Rai, PGI, Chandigarh
07.30 pm- 08.00 pm	<b><u>SESSION ON SURFACE MOULD BRACHYTHERAPY</u></b>	
07.30 pm- 08.00 pm	Applications of Surface Mould Brachytherapy- Techniques and Execution (25 mins) (5mins Q & A)	Dr. K. Gunaseelan, JIPMER, Puducherry
08.00 pm	<b>LOGOUT</b>	

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### Webinar Coordinator - Part 3

**Dr. Gautam .K. Sharan,**  
Jawaharlal Nehru Cancer Hospital, Bhopal.

Time	Topic	Speaker
05.00 pm- 06.00 pm	<b>SESSION ON BRACHYTHERAPY in GI Malignancies</b>	
05.00 pm- 05.30 pm	ILBT in Oesophagus Malignancies - Indications(25mins) (5mins Q & A)	Prof. Sushmita Pathy, AIIMS, Newdelhi
05.30 pm- 06.00 pm	Brachytherapy in Rectal and Anal canal cancers-Evidences (25 mins) (5mins Q & A)	Dr. Suman Das, Apollo, Vizag
06.00 pm- 07.30 pm	<b>SESSION ON PAEDIATRIC, STS and PROSTATE MALIGNANCIES</b>	
06.00 pm- 06.30 pm	Indications and Outcomes of Brachytherapy in Paediatric Malignancies (25 mins) (5mins Q & A)	Prof. Siddhartha Laskar, TMH, Mumbai
06.30 pm- 07.00 pm	Organ Sparing Brachytherapy in STS : Evidence and Planning(25 mins) (5mins Q & A)	Dr. Ritika Harjani Hinduja, PD Hinduja Hosp, Mumbai
07.00 pm- 07.30 pm	Prostate Brachytherapy - Techniques and Applications(25 mins) (5mins Q & A)	Prof. Simon Pavamani, CMC, Vellore
07.30 pm- 08.15 pm	<b>ICRO QUIZ</b>	
08.15 pm	<b>LOGOUT</b>	

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07.30 pm- 08.15 pm	<b>ICRO QUIZ</b>	
08.15 pm	<b>LOGOUT</b>	

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# Eligibility & Selection Criteria

## For Indian Students

- 2<sup>nd</sup> and 3<sup>rd</sup> year MD / DNB (Radiation Oncology) Post Graduate students to be nominated by the Head of the Departments / Institutes
- AROI Membership is mandatory to apply for the Course.
- Registration will be based upon first-cum-first-served basis.
- Last date for submission of application with CV : 18<sup>th</sup> October, 2020. Seats are limited.
- Candidates will have to pay Registration fee of Rs. 1,000/- through online payment mode only. Account details for the same mentioned below.

Bank: State Bank of India  
Account Name: AROI - ICRO  
Account No: 30619770736  
Address: Millerganj, Ludhiana  
IFSC CODE: SBIN0000731

## For FARO members & SAARC countries:

- Registration fee is 20USD
- After making the payment, please mail the payment receipt to [secretaryicro@gmail.com](mailto:secretaryicro@gmail.com), [drvashistha@gmail.com](mailto:drvashistha@gmail.com) & [arvindsuri@sunpharma.com](mailto:arvindsuri@sunpharma.com)
- For any correspondence please contact Secretary, ICRO at [Secretaryicro@gmail.com](mailto:Secretaryicro@gmail.com) or [icro.git.2019@gmail.com](mailto:icro.git.2019@gmail.com). The decision of ICRO body will be final and binding

## Registration link

<https://webstream.streamcart.com/live/35sunicro>

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# APPLICATION FORM

(For Indian Students Only)

(please take print out, fill it and get it signed by the HOD.  
Mail the scan copy along with the payment receipt to  
secretaryicro@gmail.com, drvashista@gmail.com &  
arvindsuri@sunpharma.com)

## I would like to participate in the 35<sup>th</sup> ICRO PG teaching Program

Name { in CAPITAL letters only } : .....

.....

.....

Gender : Male  Female

AROI Membership No.: .....

Name of Institution : .....

.....

City ..... Pin code .....

State .....

PG Course: MD  DNB

Date of Enrolment to PG Course

Date: ..... Month ..... Year .....

Mobile No: .....

Email ID (write in CAPITAL letters only) .....

.....

.....

Signature .....

I recommend the candidature of above candidate for participation in  
35<sup>th</sup> ICRO PG Teaching Course.

Name of HOD: .....

Mobile No: .....

Email ID: .....

Date

Signature of HOD

Seal of Institute

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Name { in CAPITAL letters only) : .....

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Name of Institution, .....

.....

Country: .....

PG Course: .....

Date of Enrolment to PG Course

Date: ..... Month ..... Year .....

Mobile No: .....

Email ID (write in CAPITAL letters only) .....

.....

.....

Signature .....

\_\_\_\_\_

Account details for paying the registration fees

Bank: State Bank of India

Account Name: AROI - ICRO

Account No: 30619770736

Address: Millerganj, Ludhiana

IFSC CODE: SBIN0000731

SWIFT CODE- SBININBB281

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FARO WEBINAR SERIES

# RADIATION ONCOLOGY SERVICES IN ASIA

during COVID-19 Pandemic Era

## Sharing & Exchanging Experiences

### 1<sup>st</sup> FARO Webinar

Moderators:



Soehartati A. Gondhowiardjo



Miriam Calaguas



Presenting Countries:



Bangladesh



China



South Korea



Malaysia



India



Myanmar



Singapore



### 2<sup>nd</sup> FARO Webinar

Moderators:



Shyam Shrivastava



Tomoaki Tamaki

Presenting Countries:



Indonesia



Japan



Mongolia



Sri Lanka



Philippines



Thailand



Pakistan

Time:



Pakistan 15.30 (PKT)

India 16.00 (IST)

Sri Lanka 16.00 (SLST)

Bangladesh 16.30 (BST)

Myanmar 17.00 (MMY)

Bangkok 17.30 (ICT)

Jakarta 17.30 (WIB)

China 18.30 (CST)

Kuala Lumpur 18.30 (MYT)

Philippines 18.30 (PHL)

Singapore 18.30 (SGT)

Mongolia 18.30 (ULAT)

Seoul 19.30 (KST)

Tokyo 19.30 (JST)

### Topics of Discussion:

- ✓ How is the general COVID-19 situation affecting your country?
- ✓ How is your radiotherapy department in your hospital adjusting to the pandemic situation?
- ✓ How is radiotherapy service impacted by the pandemic?

Contact:

IROS Secretariat

pori.iros@yahoo.com

Nicholas +628192100193

Organized by :



IRORA

International  
Radiation Oncology  
Association

LIVE from:



Sept 25<sup>th</sup>:



REGISTRATION LINK

Oct 9<sup>th</sup>:



[bit.ly/IROSROOM11](https://bit.ly/IROSROOM11)

[bit.ly/IROSROOM12](https://bit.ly/IROSROOM12)