

Curriculum Vitae

Personal Information

Name	LALIT MOHAN AGGARWAL	
Father's Name	Shri Brij Bhushan Aggarwal	
Date of Birth and Place	July 4, 1966, Nahan (HP)	
Gender	Male	
Nationality	Indian	
Present Designation & Pay Scale	Professor (Radiological Physics) Course Coordinator (PG Diploma in Medical Technology)	
Pay Scale	PB-4, 37400-67000 (GP 10,000)	
Address for Correspondence	Dept of Radiotherapy & Radiation Medicine, Institute of Medical Sciences, Banaras Hindu University, Varanasi (UP) - 221005 Email: lalitm@bhu.ac.in , lmaggarwal@yahoo.com , Phone 09336936073	
Permanent Address	S/o Shri BB Aggarwal, Kumhar Gali, 2620/10, Chota Chowk, Distt. Sirmaur (HP) Nahan -173001, Tel: 01702-224476	

Academic Qualifications

Examination	Name of Board/ University	Year of passing	Percentage of Marks	Div./ Grade	Subjects/Specialization
High School	HP Board, Shimla	1981	61.00 %	1 st	Science, Maths, SS, Hindi, drawing
Intermediate/+2	HP University, Shimla	1983	55.5%	2 nd	Physics, chemistry & Maths
BSc (Non-Medical)	HP University, Shimla	1985	64.00%	1 st	Physics, chemistry & Maths
PG Diploma in Radiological Physics	Mumbai University, Mumbai	1989	71.00%	1 st	Radiological Physics
MSc (Med Physic)	Anna University, Chennai	1994	77.00%	1 st	Medical Physics
All examinations passed in 1st attempt					

Research Degree

Degree	Title	Date of Award	University
Ph.D. (Biophysics)	Characterization of Demineralized bone and plantar Pressure points for evaluation of Human Gait: Electrical & Biomechanical study	March 22, 2006	Panjab University, Chandigarh

Details Positions Held

Post Held	Employer	Period of Employment	
		From	To
Professor (Radiological Physics)	IMS, BHU, Varanasi	April 2016	Continuing
Associate Professor (Radiological Physics)	IMS, BHU, Varanasi	Feb 2011	April 2016
Course Coordinator, PGDMT (Radiotherapy)	IMS, BHU, Varanasi	2007	Continuing
Radiological Safety Officer	IMS, BHU, Varanasi	July 2004	Dec 2013
Lecturer Medical Physics	Govt Medical College, Chandigarh	Sept 2000	July 2004
Sr Medical Physicist	Oswal Cancer Hospital, Ludhiana	Sept 1995	Aug 2000
Medical Physicist	Oswal Cancer Hospital, Ludhiana	June 1991	Aug 1995
Tr Medical Physicist cum Tutor Coordinator	Oswal Cancer Hospital, Ludhiana	Oct 1989	June 1991
RT Technician	Oswal Cancer Hospital, Ludhiana	Sept 1986	Oct 1988

Awards and Honors

- **Prof. D. V. Rai Memorial Distinguished Scientist Award** by Shobhit Biomedical Society, Shobhit University Meerut. October 2023
- **Dr NC Singhal Oration** by Association of Medical Physicists of India) Northern Chapter Dec 2022
- **The Order of Academic Excellence in Publication Award (2020-21, 2022-23)** by IMS, BHU
- **UICC–ICRETT Fellowship, undertaken at Harper Hospital, Detroit, USA, 1996**
- **All India topper** in the written exam of College of Medical Physicists of India, 2010
- **Second Prize in the All India Medical Physics Essay Contest (2006), “Medical Physics: A Road Map for Next Century”**
- **Best Paper Award** (As Co-author) - 2
- **Second Best Paper Award** (As Co-author) - 2

Teaching Experience

- Since 1989, teaching DNB, MD, Diploma (Med Technology) Students

Experience in Guiding Research

No. of MD and PhD completed	12 +4
No. of PhD under supervision	2
No. of MD under supervision	2
No. of MSc Dissertation supervised	7

Papers/Guest Lecturers Personally Presented at Conferences:

- 41 (Thirty Nine) (Details enclosed as Annexure-III)

Conferences, Seminars, Symposia, Workshops Attended:

- 71 (Seventy one) (Details enclosed as Annexure-IV)

Reviewer/ Referee for Journals:

- Journal of Medical Physics
- Indian Journal of Nuclear Medicine
- Journal of Cancer Research and Therapeutic
- Brachytherapy

Membership/Fellowship of professional societies:

- **Life member** - Association of Medical Physicists of India
- **Life member** - Association of Radiation Oncologists of India
- **Life member** – Indian Society of Biomechanics
- **Founder Member** - College of medical Physicists of India
- **Certified Member** - College of medical Physicists of India
- **Life Member** – Indian College of Radiation Oncology

Special Training

- AROI-ESTRO Teaching Course “Advanced Technologies in Radiation Oncology”, November 9-12, 2019 Varanasi
- One week **Brachytherapy Clinical Training** at Department of Radiation Oncology, September 9-13, 2019, University of Munich, Germany
- 2nd ESTRO-AROI GYN Teaching Course “3D Radiotherapy with a Special Emphasis on Implementation of MRI/ CT Based Brachytherapy in Cervical Cancer”. March 8- 11, 2018 Lucknow, India
- One week **Training course in Linear Accelerator** at Maria Sklodowska-Curie Memorial Cancer Center and Institute of Oncology, Gliwice, Poland, May 15-19, 2017
- **Varian Advanced Technique (IMRT/RA) Clinical School**, Yashoda Hospital, Hyderabad, September 1-5, 2014 (One week)
- **Eclipse Administration and Physics Course**, Varian Medical System, December 10-13, 2013
- **Radiosurgery Best Practices, Symposium**, Novalis Circle, January 18-20, 2013
- **Symposium on Radiosurgery**, Novalis Circle, New Delhi, 2011
- Two weeks **College on Medical Physics, BARC**, Mumbai in collaboration with the Abdus Salam **ICTP**, Italy November 12 - 23, 2007.
- 5th **TMH Practicum 2007 teaching course on QA in high precision RT.**
- **Virtual Simulation Workshop** conducted by Siemens, India at AIIMS, N Delhi
- One week **Radiation Safety Officer Course**, Bhabha Atomic Research Centre (BARC), Mumbai (1994)
- One month field training (part of DipRP course) at Regional Cancer Centre, Trivandrum, 1989

Special Courses

- **Refresher course in Medical Sciences**, UGC Academic Staff College, BHU, Varanasi, February 12 – March 4, 2013
- **Workshop for Academic Administration**, UGC Academic Staff College, BHU, Varanasi, October 7-9, 2013
- **Refresher course in Medical Sciences** organized by UGC-Academic Staff College, BHU, Varanasi February 12 – March 4, 2013.
- **Research Methodology Art and Science of Paper writing**, DST – PURSE and Medical Education Unit of Faculty of Medicine, IMS, BHU, August 27-28, 2011

Publications, Presentations, Research work

Book	1
Peer Reviewed Research Papers (Annexure –I)	30
National	26
International	4
Citations - Google Scholar	1591
Guest Lectures	30
Chapter in books	4
Abstract in journals	33
Other published abstracts	47
Articles	8

Research Projects as PI

- Design and Fabrication of High Dose Rate Brachytherapy applicators and phantoms under DST (innovation Development and Deployment) sanctioned amount Rs 59,47,582/-, 2022 **(PI)**
- Study the Metabolic Biomarkers as Predictive Response to Radiation Exposure: Rapid Assessment of Radiation Signatures in Biological Fluid (Plasma) to Enhance Astronaut Safety and Performance. Sanctioned amount ₹1,54,22,275/-. Funding Agency Indian Space Research Organisation, Department of Space. December 2024 **(Co-PI)**
- Organ dose evaluation in diagnostic radiology, 1992 **(Co-PI)**
- Quality assurance in diagnostic x-ray installations & optimization of patient dose, 1999-2001 **(Co-PI)**

List of patents granted

1. An improved HDR brachytherapy applicator apparatus, Ref. No. P.1788.in, Application no. 201911044724, Date of filing November 04, 2019, Patent No. 554408, Date of Grant : 14/11/2024

List of patents filed

1. BHU Interstitial high dose rate (HDR) brachytherapy template for treatment of gynecological and prostate cancer. Ref.No. TEMP/E-1/63145/2024-DEL, Application no. 202411054534, Date of filing July 17, 2024
2. BHU Intracavitary High Dose Rate (HDR) Brachytherapy Applicator Set for Treatment of Gynaecological Cancer. Ref.No. TEMP/E-1/105550/2024-DEL, Application no. 202411091379, Date of filing November 23, 2024

Short term/Specialist Courses conducted

- Training Course on Radiation Safety for RT Technologists **as convener** (29/3/2006 – 4/4/2006)
- Workshop on Radiation Safety in Teaching & Research **as convener** (12/1/2011)
- Courses developed - PG Diploma in Medical Technology (Radiotherapy), 2007

Examinership

PhD Examiner,

- All India Institute of Medical Sciences, New Delhi
- Pravara Institute of Medical Sciences, Loni
- HNB University, Srinagar (Uttarakhand)
- Mumbai University
- Tribhuvan University, Nepal
- Ranchi University, Ranchi
- Shobhit University, Meerut
- National Institute of Technology, Jaipur
- Lovely Professional University
- SRM University, Lucknow
- Panjab University, Chandigarh
- Bharathidasan University is a university Tiruchirappalli
- Bharathiar University, Coimbatore, Tamilnadu
- **MSc and BSc (Medical Technology) Examiner**, Rajasthan University of Health Sciences, Jaipur
- **Diploma in Medical Technology (RT) Examiner**, Magadh university, Patna
- **MSc and BSc (Medical Technology) Examiner**, Panjab University, Chandigarh, PGIMER, Chandigarh

Other activities/Responsibilities:

- **Member Editorial Board**, Journal of Medical Physics
- **Member Editorial Board** lore Journal of Cancer
- **Member Editorial Board**, International Journal of Radiology & Radiation Therapy
- **Member Editorial Board** Journal of Biological Engineering Research and Review
- Member Board of Studies, Faculty of Paramedical Sciences, UP University of Medical Sciences, Saifai, Etawah, 2019-till date
- **Vice President** Association of Medical Physicists of India - NC April 2012- March 2014
- **Executive Member** of Association of Medical Physicists of India for 2007-2009, 2009-2011, 2013-2015, 2015-2017
- **Executive Member**, Indian Brachytherapy Society (IBS) 2022-2024
- **Member Board of Trustee** of Association of Medical Physicists of India for 2011-2013
- **Board members** College of Medical Physicists of India for 2009-2011
- **Executive Member** of UP-Delhi Chapter of AMPI for April 2006- March 2008
- **Secretary General** Association of Medical Physicists of India - NC April 2008- March 2010
- **Designed and hosted** www.ampi-nc.org website (2008)
- **Chaired the Scientific sessions** in conferences
- **Judge for best paper** in conferences
- **International Organization for Medical Physicists, Library Incharge, Ludhiana (1998-2000)**

Administrative Experience

- **Nodal Officer**, to coordinate Training programmes to create awareness among faculty, staff and students about investment in stock market with the help of Securities and Exchange Board of India (SEBI) 2024-
- **Coordinator Student Wellness Cell**, BHU October 2022- August 2024
- **Deputy Chief Proctor**, Institute of Medical sciences, BHU June 2023-August 2024
- **Proctor**, BHU, October 2017 - 2019.
- **Course Coordinator**, PG Diploma in Medical Technology (Radiotherapy)
- **Member**, Departmental Purchase Committee, Radiotherapy, BHU, Varanasi
- **Member**, Departmental Policy Planning Committee, Radiotherapy, BHU, Varanasi
- Member, an **advance team of observers**, BHU PMT examination Delhi team 2005, 2006, 2007 & 2008

- **Deputy incharge, BHU PMT** examination Delhi centre, 2009, 2010 & 2011.
- **Convener**, Radiological (Radiation) committee, BHU, 2010,2011
- Member **BHU Convocation Procession Committee**, 2012-2019
- Member Anti Ragging Squad, IMS BHU 2017- 2024
- Member University Anti Ragging Squad, BHU 2019 -2025
- Co-convener, Sports Sub Committee, Annual Day Function 2016, 2017
- Convener, Invitation Sub Committee, Annual Day Function 2018
- Member, Sports Sub Committee, Annual Day Function 2020
- Member University Biosafety committee 2019 – April 30, 2023
- Member GATI project

Organizational Activities

- Convener, Tableau (Jhanki) procession – 2025 on the occasion of celebrating Foundation Day of BHU
- Co-convener Interfaculty Youth Festival - Spandan 2025
- Co-convener, IMS Annual sports meet 2017 and 2018.
- Convener, Invitation Sub-Committee, Annual Day function, IMS, BHU, 2018
- Organizing Secretary, AMPICON-NC 2016
- **Chairman, Scientific committee**, National Conference of Indian Society of Radiographers & Technologist, 2015
- **Joint Secretary**, National Conference on. Present Scenario and Future Trends in Biomedical Engineering and Healthcare Technologies 2014
- **Convener**, Scientific Committee, Training Programme for Radiation Therapy Technologists: The Need to Make it More Effective, AMPICON-NC, 2011
- Convener, Workshop on radiation safety in teaching & Research, BHU, Varanasi, 2011
- **Joint Secretary**, National Conference of Medical Physics, 1997
- **Secretary**, Scientific Committee, AMPICON-NC, 2010
- **Treasurer**, National Conference of AROI, 2006
- I was member of **various committees for many national/regional conferences**
- **Table Tennis Secretary**, University Club, BHU - 2006-2007 & 2010-continuing.

Member Selection Committee

- AIIMS, New Delhi
- AIIMS, Guwhati
- AIIMS, Patna
- PGIMER, Chandigarh
- SGPGI, Lucknow
- Uttar Pradesh University of Medical Sciences (UPUMS), Saifai, Etawah
- Panjab University, Chandigarh
- Indira Gandhi Institute of Medical Sciences (IGIMS), Patna

Chief Guest/ guest of honor, etc

- Chief guest, Republic day function at High school
- Distinguished Guest, Rakt Kranti blood donation camp August 13, 2025 at SS Hospital, BHU, Varanasi

Place : Varanasi

Lalit Mohan Aggarwal

Dated: March 10, 2016

Annexure-I

RESEARCH PAPERS
(Publications, Invited talks, thesis, Presentations)

Book

1. **Aggarwal LM**, Mandal A and Tandon P (2011) "Introduction to Ionizing Radiation & Safe Practices" Poddar Publication, Varanasi

Chapters in books

1. Rai DV, Kohli KS and **Aggarwal LM** (2009) Human Locomotion: Gait and Plantar Pressure, in "Trends in Medical Physics and Biomedical Instrumentation" Edited by D. V. Rai and Raj Bahadur, New Era International Imprint, New Era Book Agency, 110 - 117
2. Rai DV, **Aggarwal LM** and Verma YP (2009). "Energy sources and health effects" in Emerging Trends in Biomedical Science & Health, edited by DV Rai, RC Sobti and Raj Bahadur, IK International Publishing House Pvt, Ltd. 207-222
3. Rai DV and **Aggarwal LM** (2006) "Radioactive Radiations in Environment & Health Hazards" in Environmental Biophysics facts and issue in human health Edited by Rai DV, PU Publication 56-87, 2006
4. Singh R, Gupta R, **Aggarwal LM**, Koul A and Rai DV (2005) "Thermodynamic Properties of Bone" In Biomechanics, edited by R.K. Saxena and P. Mishra, Anamaya Publishers, New Delhi, 125-130

Publications (Peer reviewed Journals)

As a corresponding/First Author

- | Publication | I.F. |
|---|------|
| 1. Prieau, V Gogul; Aggarwal, Lalit Mohan ; Mourya, Ankur; Choudhary, Sunil; Shajid, Syed M.; Mandal, Abhijit; Singh, Ankita. A dosimetric study to evaluate the inverse planning simulated annealing (IPSA) and hybrid inverse planning optimization (HIPO) algorithms in HDR brachytherapy of cervical cancer. Journal of Cancer Research and Therapeutics 21(3):p 576-582, Apr–Jun 2025. DOI: 10.4103/jcrt.jcrt_1335_24 | 1.3 |
| 2. Pitchaikannu V, Aggarwal LM , Choudhary S. Harnessing scatter radiation for sustainable energy: Coconut shell-based activated carbon electrodes for high-performance supercapacitors in radiology applications. Radiation Physics and Chemistry. 2025 Apr 1;229:112470. | 3.3 |
| 3. Maurya AK, Aggarwal LM , Choudhary S. (2024) Body Composition Analysis Techniques and Its Application in Oncology: A Review. Nutrition and Cancer. 76(8), 666–675. https://doi.org/10.1080/01635581.2024.2353942 | 2.4 |
| 4. Choudhary S, Pandey A, Singh A, Mourya A, Gupta N, Shajid SM, Venkatachalam GP, Rai S, Agarwal S, Venkatraman P, Aggarwal LM . Comparision of Intravaginal with Interstitial Brachytherapy in Cervical Cancer after Inadvertent Hysterectomy: A | |

Retrospective Study. (*accepted for publication*)

5. Shajid SM, **Aggarwal LM**, Mourya A, Choudhary S, Prian V G, Singh A, Oommen S. A comparison of TG-43 and TG-186 dose calculation algorithms for treatment planning of intra-cavitary brachytherapy using tandem and ovoid applicator. *J Contemp Brachytherapy*. 2024 Aug;16(4):289-296. doi: 10.5114/jcb.2024.143138. Epub 2024 Sep 12. PMID: 39628821; PMCID: PMC11609851. 1.2
6. Mourya A, Aggarwal LM, Choudhary S, Sharma N, Mishra R, Prakash C, Shahi UP. Feasibility of 3D Printer to Design an Intracavitary Applicator for the Treatment of Cervical Cancer Patients with a High Dose Rate Brachytherapy System. *Phys Eng Sci Med* **48**, 623–634 (2025). <https://doi.org/10.1007/s13246-025-01529-x> 2
7. Mondal K, Mourya A, Choudhary S, Mandal A, Singh A, **Aggarwal LM**. Plan quality score to evaluate the dwell time deviation restricted inverse planning by simulated annealing and graphically optimized treatment plans for template based interstitial brachytherapy. *Cancer/Radiothérapie*. 2023 Apr 21. DOI: <https://doi.org/10.1016/j.canrad.2022.10.006> 1.2
8. Kumar C P, **Aggarwal LM**, Bhasi S, Sharma N. Unified Dosimetry Quality Audit Index: an integrated Monte Carlo model-based quality assurance ranking for radiotherapy treatment of glioblastoma multiforme. *Radiation Effects and Defects in Solids*. 2023 Mar 4;178(3-4):258-99. 1.3
9. **Aggarwal LM**. Review of the book: The intensity-modulated radiation therapy – A clinical overview. *J Med Phys* 2022;47:309-10. 0.7
10. Mourya A, Choudhary S, Sharma N, Shahi UP, Singh G, Pradhan S, **Aggarwal LM**. A mathematical model to predict the different isodose volumes using TRAK value in HDR intracavitary brachytherapy for revised Manchester and ICRU-89 based Point A plans using computer tomography images. *Journal of Cancer Research and Therapeutics*. 2022 Oct 1;18(4):1105. 1.3
11. Mourya A, **Aggarwal LM**, Choudhary S, Shahi UP, Sharma N, Prakash R, Mishra R. Feasibility of using polytetrafluoroethylene flexible implant tube for interstitial brachytherapy patients. *Brachytherapy*. 2022 Nov 1;21(6):754-63. 1.8
12. Mourya A, **Aggarwal LM**, Choudhary S. Evolution of brachytherapy applicators for the treatment of cervical cancer. *Journal of Medical Physics*. 2021 Oct 1;46 (4):231. .7
13. Shrivastava A, Mishra SP, Pradhan S, Choudhary S, Singla S, Zahra K, **Aggarwal LM**. An assessment of serum oxidative stress and antioxidant parameters in patients undergoing treatment for cervical cancer. *Free Radical Biology and Medicine*. 2021 May 1;167:29-35. 8.6
14. Shrivastava A, **Aggarwal LM**, Krishna CM, Pradhan S, Mishra SP, Choudhary S, Patel CB, Singla S, Singh RK. Diagnostic and prognostic application of Raman spectroscopy in carcinoma cervix: A biomolecular approach. *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*. 2021 Apr 5;250:119356. 4.6
15. Mourya A, Choudhary S, Shahi UP, Sharma N, Gautam H, Patel G, Pradhan S, **Aggarwal LM**. A comparison between revised Manchester Point A and ICRU-89–recommended Point A definition absorbed-dose reporting using CT images in intracavitary brachytherapy for patients with cervical carcinoma. *Brachytherapy*. 2021 Jan 1;20(1):118-27 1.8

16. **Aggarwal LM**. Advances in Medical Technology and its Impact on Health Care in Developing Countries. Int J Radiol Radiat Ther 2017, 2(2), 1-2
17. **Aggarwal L M**, Kheruka SC and Gambhir S (2015). Evaluation of Performance of different display systems used in Nuclear Medicine Imaging. Journal of Biological Engineering Research and Review, 2(1), 33-36.
18. Kajaria A, Sharma N, Sharma S, Pradhan S, **Aggarwal LM**. Review of Monte Carlo Simulation in Radio Therapy Treatment Planning System for Modelling of Radiation Transport & Dose Calculation. VAICHARIKI ISSN 2249-8907, Vol. III, Issue 4, 260-268. December 2013
19. **Aggarwal LM**, Oommen S, Parthiban VO, Passi K, Vashistha R and Singh B (1999) .7
Variation in electron out put and percentage depth dose in presence of lead cut outs in Mevatron-74" J.Med.Phy. Vol 24 no.2, 44-46

As co-author

1. Boopathi M, Khanna D, Venkatraman P, Sahay J, Sureka CS, , Raju V, **Aggarwal LM** and Choudhary S. Fabrication and Characterization of Beam Quality Phantom for External Beam Radiotherapy. Iranian Journal of Medical Physics. 2024 Mar 1;21(2):93-101.
2. Shajid SM, Mandal A, Mondal K, Priean V G, Mukherjee B, Pandey PC, Mishra H, Mishra R, Patel GR, Mourya A, Aggarwal LM. Enhancing Fricke Xylenol Gel Dosimeter's Response to Radiation with Optimized Preparation Methods. Iranian Journal of Medical Physics. 2025 Feb 1;22(1):44-9.
3. Venkatraman P, **Aggarwal LM**, Choudhary S, Sureka CS, Sellan P, Kannanannan R, Sakthivel C and Mabelrani S. Effect of photon irradiation on seed propagation and seedling growth of Radish and Spinach. Modern Phytomorphology. 2024, Vol 19, 103 - 109. DOI: 10.5281/zenodo.200121
4. Venkatraman P, **Aggarwal LM**, Choudhary S. Carbon-based brilliance: a novel approach to renewable energy in radiotherapy centers. Radiation Protection Dosimetry. 2024 Jul;200(11-12):1189-96.
5. Shrivastava A, Kumar A, **Aggarwal LM**, Pradhan S, Choudhary S, Ashish A, Kashyap K, Mishra S. Evolution of Bioelectric Membrane Potentials: Implications in Cancer Pathogenesis and Therapeutic Strategies. The Journal of Membrane Biology. 2024 Aug 25:1-25. 2.9
6. Praveen Kumar C, **Aggarwal LM**, Bhasi S, Sharma N. A Monte Carlo simulation-based decision support system for radiation oncologists in the treatment of glioblastoma multiforme. Radiation and Environmental Biophysics. 2024 Apr 25:1-48 2.3
7. Singh A, Mani N, Aggarwal LM, Agarwal S, Mourya A, Verma A, Bagchi A, Gupta N, Choudhary S. Dose at posterior-inferior border of symphysis point: A predictor for vaginal stricture in cervical cancer. Brachytherapy. 2023 Sep 1;22(5):616-22. 1.8
8. Agarwal S, Jaiswal I, Shahi UP, Mandal A, **Aggarwal LM**, Singh A, Jaiswal A, Yadawa N. Accelerated hypofractionated chemoradiation for locally advanced head and neck cancer during COVID 19 pandemic: A tertiary care experience. Journal of Cancer Research and Therapeutics. 20(1):p 404-409, Jan–Mar 2024. | DOI: 10.4103/jcrt.jcrt_1747_22 1.3
9. Shrivastava A, Singh G, Tiwari K, Mishra SP, Pradhan S, **Agarwal LM**, Singh SK. A study for evaluating clinical relevance of circulating cell-free DNA in cervical cancer. J Cancer Res 1.3

Ther. 2020 Sep 27.

10. Barik, Bijay Kumar, Sovan Sarang Dhar, Rumita Singh, Abhijit Mandal, **Lalit Mohan Aggarwal**, Uday Pratap Shahi, and Sunil Choudhary. "Dose optimization comparison study of inverse planning simulated annealing [IPSA] and hybrid inverse planning optimization [HIPO] in interstitial brachytherapy of head and neck cancer." *Journal of Medical Imaging and Radiation Sciences* 52, no. 3 (2021): 417-421. 2.1
11. Choudhary S, Gupta N, Misra S, Munnee NN, Kumar A, Ranjan R, Dhar SS, Kumar D, Mourya A, **Aggarwal LM**. Comparison of two hypofractionated radiotherapy schedules in locally advanced postmastectomy breast cancer patients. *Journal of Cancer Research and Therapeutics*. 2020 Oct 1;16(6):1331. 1.3
12. Mourya A, **Aggarwal LM**, Choudhary S. Letter to the editor on the research article "Total reference air kerma can accurately predict isodose surface volumes in cervix cancer brachytherapy. A multicenter study". *Brachytherapy*. 2021 Jan 1;20(1):290. 1.8
13. Choudhary S, Gupta N, Verma CP, Das A, **Aggarwal LM**, Tewari M, Mandal A, Asthana AK. Influence of adjuvant therapy on pattern of failure and survival in curatively resected gallbladder carcinoma. *Journal of Cancer Research and Therapeutics*. 2021 Jul 1;17(4):1064. 1.3
14. Chauhan, Tejpratap, Varsha Rani, Bhupendra Sahu, Adity Sharma, Subhash Chand Kheruka, Sanjay Gambhir, Veeresh Dube, **Lalit M. Aggarwal**, and Ruchi Chawla. "Negatively charged liposomes of sertraline hydrochloride: Formulation, characterization and pharmacokinetic studies." *Journal of Drug Delivery Science and Technology* (2020): 101780. 4.9
15. Kumar, Deepak, Satyajit Pradhan, Sunil Choudhary, **Lalit M. Aggarwal**, Avipsa Das, Sovan Sarangdhar, Prashant Kaser, and Satish Dewangan. "A comparison of six fractions per week chemoradiation versus five fractions per week of conventional chemoradiation in carcinoma cervix: A prospective controlled study." *Journal of Cancer Research and Therapeutics* 15, no. 6 (2019): 1296. 1.3
16. Shrivastava, A., Aggarwal, L. M., Mishra, S. P., Khanna, H. D., Shahi, U. P., & Pradhan, S. (2019). Free radicals and antioxidants in normal versus cancerous cells—An overview. *Indian Journal of Biochemistry and Biophysics (IJBB)*, 56(1), 7-19
17. Kajaria A, Sharma N, Sharma S, Pradhan S, Mandal A and **Aggarwal LM** "Monte Carlo Study of Unflattened Photon Beams Shaped by Multileaf Collimator." *Journal of Biomedical Physics & Engineering* 9.2 (2019): 137. (1.5)
18. Shrivastava SK, Sinha SK, Srivastava P, Tripathi PN, Sharma P, Tripathi MK, Tripathi A, Choubey PK, Waiker DK, **Aggarwal LM**, Dixit M. Design and development of novel p-aminobenzoic acid derivatives as potential cholinesterase inhibitors for the treatment of Alzheimer's disease. *Bioorganic chemistry*. 2019 Feb 1;82:211-23. 4.7
19. Singh Priti, **Lalit Mohan Aggarwal**, Stephen A. Parry, and Mercy J. Raman. "Radiation dosimetry and repair kinetics of DNA damage foci in mouse pachytene spermatocyte and round spermatid stages." *Mutagenesis* 33, no. 3 (2018): 231-239 4.3
20. Mourya A, Aggarwal LM, Mandal A, Shahi UP, Ram C, Asthana AK and Pradhan S (2018) An inexpensive method of small photon field dosimetry with EBT3 radiochromic film. *Health Technol*. 2018, 24(7), 1-7 2.6
21. Dhar, SS, Shahi, UP, Singh, T Asthana, AK, Pradhan S, **Aggarwal LM**, Choudhary S. Mandal S and Kumar D.. A Prospective Study to Evaluate the Feasibility and Outcome of Completing Concurrent Chemo-radiation and Brachytherapy Within 4 Weeks Using Two 0.4

- Different Chemotherapy Regimens in Carcinoma Cervix. Indian J Gynecol Oncolog (2018) 16: 21
22. Kajaria A, Sharma N, Sharma S, Pradhan S, Mandal A and **Aggarwal LM**, (2017). Monte Carlo study of a flattening filter-free 6 MV photon beam using the BEAMnrc code. Biomedical Research 2017; 28 (4): 1566-1573
 23. Singh N, Sharma SD, Painuly NK, Mandal A, **Aggarwal LM** and Sinha A (2018). 1.3 Underdosing of the maxillary sinus for small fields used in newer radiotherapy techniques: Comparison of thermoluminescent dosimeter and Monte Carlo data. JCRT, 2018 Apr 1;14(2):351-356.
 24. Kajaria A Sharma N Sharma S Pradhan S Mandal A and **Aggarwal LM**. Study of the dosimetric properties of an unflattened 6-MV photon beam by using the BEAMnrc code. *Journal of the Korean Physical Society*, 2016, 69(4), 657-665.
 25. Kajaria A Sharma N Sharma S Pradhan S Mandal A and **Aggarwal LM**. Monte Carlo Calculations of 6MV Varian Linac photon beam Special Characteristics using the BEAM code. Int J of Appl Engin Res 2016, 11(14): 8185-8194
 26. Kajaria A Sharma N Sharma S Pradhan S Mandal A & **Aggarwal LM**. Analysis of Radiation Transport through Multileaf Collimators Using BEAMnrc Code. American Journal of Biomedical Engineering 2016, 6(4): 124-131
 27. Kajaria A Sharma N Sharma S Pradhan S Mandal A and **Aggarwal LM**. Monte Carlo study of unflattened photon beams shaped by Multileaf Collimators. Journal of Biomedical physics and Engineering 2016, 1-14
 28. Kajaria A Sharma N Sharma S Pradhan S Mandal A and **Aggarwal LM**. Study of unflattened photon beams shaped by Multileaf Collimators using BEAMnrc code. Journal of Radiotherapy in practice 2016, 15(4): 392-401 0.5
 29. Kheruka S, **Aggarwal LM**, Sharma N, Naithani U, Painuly N, Maurya A and Gambhir S. 0.5 "Evaluation of SPECT Images obtained with and without copper filter by Segmentation. Indian J Nucl Med. 2016 31 (2): 114-118.
 30. Das A, Srivastav GN, Singh TB, Pradhan S, Aggarwal LM. Assessment of Quality of Life in Patients with Advanced Lung Cancer Receiving Chemotherapy. Indian Journal of Preventive and Social Medicine 2016; 47 (1-2): 102-112.
 31. Kajaria, A., **Aggarwal, L. M.**, Sharma, S., & Sharma, N. (2015). Monte Carlo Simulation of Co-60 Teletherapy unit and validation of outcome with dosimetric data published in BJR 25. Journal of Biological Engineering Research and Review, 2(2), 30-34
 32. Chawla R, Solanki HS, Kheruka SC, Gambhir S, Dube V, Aggarwal LM, and Mishra B. 2.2 "Polylactide-co-glycolide nanoparticles of antitubercular drugs: formulation, characterization and biodistribution studies". Therapeutic Delivery 5.12 (2014): 1247-1259.
 33. Singh, Rashmi, H. B. Govardhan, Satyajit Pradhan, Anand Kumar, R. C. Shukla, U. P. Shahi, and **L. M. Agrawal**. "Colour Doppler-an evaluation tool for assessment of breast tumour size, axillary lymph node size and chemotherapeutic response." Journal of Cancer Treatment and Research 2, no. 2 (2014): 9-15.
 34. Govardhan, H. B., Satyajit Pradhan, Rashmi Singh, Prakash Swain, and **Lalit Aggarwal**. "A aggressive osteosarcoma of mandible with lung metastasis in a 5 year child: A case report." Cancer Research Journal 2014, 2(2), 15-17. <https://doi.org/10.11648/j.crj.20140202.11>

35. Singh, Rashmi, H. B. Govardhan, Satyajit Pradhan, P. Swain, Anand Kumar, R. C. Shukla, U. P. Shahi, and **L. M. Aggarwal**. "Ultrasound-an evaluation tool for assessment of breast tumour and axillary lymph node size." *Int. J Med Imaging* 2014, 2(3), 59-62.
36. Passi K, **Aggarwal LM**, Vashistha R, Singh B, Kaur P., Gupta SJ and Kehwar TS. Variation in applicator positions during interfraction high-dose rate., *Journal of Radiotherapy in Practice*. 2013, 12(4), 305-317 0.5
37. Kheruka S, Hutton BF, Naithani U, **Aggarwal LM**, Painuly N, Maurya A and Gambhir S. A new method to correct the attenuation map in simultaneous transmission/emission tomography using $^{153}\text{Gd}/^{67}\text{Ga}$ radioisotopes. *J Med Phys*. 2012; 37(1): 46–53 0.7
38. Kheruka S, Naithani U, **Aggarwal LM**, Painuly N, Maurya A and Gambhir S. An Investigation of a Sinogram Discontinuity Artifact on Myocardial Perfusion Imaging. *J. Nucl. Med. Technol*. 2012; 40 (1): 25-28 1.8
39. Kheruka S, Naithani U, Maurya A, Painuly N, **Aggarwal L**, Gambhir S. A study to improve the image quality in low-dose computed tomography (SPECT) using filtration. *Indian J Nucl Med*. 2011 Jan; 26(1):14-21. 0.5
40. Mandal A, Asthana AK, Singh R and **Aggarwal LM** (2010). Workload Modeling for Teletherapy Unit. *J Cancer Res Ther* 6(1) 27-30 1.3
41. Sharma N and **Aggarwal LM** (2010) Automated medical image segmentation techniques. *J Med Physics* 35 (1), 3-14. 0.7
42. Sharma N, Ray AK, Sharma S, Shukla KK, **Aggarwal LM** and Pradhan S (2009) Segmentation of Medical Images Using Simulated Annealing Based Fuzzy C Means Algorithm *Int. J. Biomed Eng & Tech* 2(3), 260-278 0.6
43. Mandal A, Asthana AK and **Aggarwal LM** (2008) Development of an electronic radiation oncology patient information management system. *Journal of Cancer Research and Therapeutics* 3(3), 178-185 1.3
44. Sharma N, Ray AK, Sharma S, Shukla KK, Pradhan S and **Aggarwal LM** (2008) Segmentation and classification of medical images using texture-primitive features: Application of BAM-type artificial neural network. *J Med Physics* 33 (3), 119-126. 0.7
45. Mandal A, Asthana AK and **Aggarwal LM** (2007) Clinical significance of cumulative biological effective dose and overall treatment time in the treatment of carcinoma cervix. *J Med Physics* 32 (2), 68-72 0.7
46. Rai DV , **Aggarwal LM** and Raj Bahadur (2006) "Plantar pressure changes in normal and pathological foot during bipedal standing" *Ind J Ortho* 40 (2), 119-122 1.3
47. Rai DV and **Aggarwal LM** (2006) The study of plantar pressure distribution in normal and pathological foot. *Pol J Med Phys Engg* 12 (1) 25-34
48. Mandal A, Asthana AK, **Aggarwal LM** (2005) Inexpensive Digital Image Management System for Conventional Radiotherapy Simulator. *Journal of Medical Physics*. Vol 30 (1), 29-31 0.7
49. Rai DV, Darbari R and **Aggarwal LM** (2005). "Age- related Changes in the elemental constituents and molecular behaviour of bone" *Indian J. Biochem. Biophys.* 42, 127-130
50. Rai DV and **Aggarwal LM** (2005) "Study of morphological changes in demineralized bone". *Int J. Mendel* Vol 22(5-6)

51. Passi K, **Aggarwal LM**, Singh H, Vashistha R, Singh R, Upreti RR, and Jain S (2004) "Treatment of intraoral cancers and some unconventional sites" J Med Physics 29 (1), 21-25 0.7
52. Jain N, Vashistha R, Kaur P, **Aggarwal LM**, Passi, K, Arora R and Jain S (2000) Carcinoma anorectum-Preliminary experience with external radiotherapy combined with intraluminal brachytherapy. J Med Physics 25 (2), 72-74 01.7
53. Kaushal V, Joshi CP, Passi K, Maria KJ, **Aggarwal LM**, Kheruka S, Kaushal, J (1990) "Occupational exposure to staff of a major Radiological Centre-Trend in radiation safety. J Med Physics 15(2) 141-143 0.7

Published Articles

1. Kheruka S, **Aggarwal LM**, Naithani U, Maurya A, Gambhir S and Garg N (2013) "Computed tomography in hybrid imaging" Roentgen Technology, Vol. 9, 1-10
2. **Aggarwal LM**, Mandal A and Tandon P (2011) Personnel Monitoring: A Precursor to Radiation Safety. Rad Oncol 11(2) 53-58
3. Singh H, Kaushal V and **Aggarwal LM** (2006) Electron beam therapy. Rad Oncol 6(2) 74-80
4. **Aggarwal LM**, Pradhan S, Mandal A, Suhag V, Shahi UP and Asthana AK (2004) Electron beam therapy: Physical characteristics and clinical applications. Proceedings of XV U.P.Chapter Convention of AROI 32-39
5. Mandal A, Asthana AK, **Aggarwal LM** and Shrivastava R (2004) Advancement of Radiotherapy in 109 years (1895-2004) – But still miles to go ahead... Proceedings of XV U.P.Chapter Convention of AROI, 55-60
6. Pradhan S, **Aggarwal LM**, Kumar V and Asthana AK (2004) Status of cancer and radiation oncology in India. Proceedings of XV U.P.Chapter Convention of AROI 61-69
7. Passi K, Maurya AK, **Aggarwal LM**, Singh H, Vashistha R (2001) "Radiotherapy Planning: Past & Recent Developments" SMRITI Update Vol V-2, 5-7
8. **Aggarwal LM**, Singh S, and Passi K, (2001)"A review of radiation hazards & safety in radiotherapy and radiology" SMRITI Update Vol V-2, 8-11

Invited talks/Guest lectures/ Panelist

1. Interstitial Brachytherapy. Online Master classes in Medical Physics-2025 organized by AIIMS. Guwhati.
2. Advances in Brachytherapy and Future Challenges.Dr. Lalit Mohan Aggarwal and Dr. Sunil Choudhary. 7th INTERNATIONAL MEDICAL OLYMPIAD CONFERENCE ON Global Health: Emerging Trends and Future Challenges. November 15– 17, 2024, Panjab University, Chandigarh
3. Dr NC Singhal Oration "My Journey as a Medical Physicist: Mistakes & Learnings" at annual conference of by Association of Medical Physicists of India (Northern Chapter), SRMS, Bareilly, Dec 2022
4. Panelist in a panel discussion on Extends of the frontiers of Medical Physics in Diagnostic Radiology, Nuclear Medicine and Radiotherapy: Current Issues and Way Forward, Virtual conference on Radiation application in Medicine 2021

5. Guest Lecture on “Radiation Protection” in Physics Webinar Organized by Association of Radiation Oncologists of India(UP) October 2020
6. Invited lecture on “Plan Evaluation in Head & Neck Brachytherapy” in 35th ICRO PG teaching Course on Brachytherapy October 29-31, 2020
7. Coordinated "Radiation and Cancer Physics session" during the Virtual conference on "Best of ASTRO India" August 2020
8. Webinar on Radiation Protection & Quality Assurance, Under the aegis of Association of Radiation Oncologists of India(UP) August 9, 2020
9. “History Teaches: Radiation Safety in Radiotherapy & Radiography” Regional Seminar: An Update on Radiation Safety, Feb 23, 2019
10. “Radiotherapy and Biomedical Engineering” National. QIP sponsored Short Term Course on BioMEMS & bioinstrumentation, December 10-16, 2018
11. “Linear Accelerator Components & Their Functions” ICRO Teaching course on Medical Physics, December 22-23, 2018
12. “Basics of Radiation Safety” Winter School “Beyond the standard model physics” Dept of physics January 24 – February 14, 2016
13. “Radiation Workers in Medical Institutions: A Force to Combat Radiation Emergencies” delivered at National Conference of Indian Society of Radiographers & Technologist (NCISRT-2015) organized by Govt. Medical College & Hospital, Chandigarh on 25th-26th September 2015.
14. “Basics of Radiation Safety” delivered at Summer School on Nuclear and Particle Physics Organized by Dept of physics, BHU, Varanasi September 23 –October 12, 2015.
15. “Radiation Safety: An Important Issue” delivered at Workshop on Physics of Particle Nuclei & Related Instrumentation Organized by Dept of physics, BHU, Varanasi January 27-31, 2015
16. Implementation of eLORA has enhanced the efficacy of regulatory affairs (2014), Annual conference of Association of Medical Physicists of India, Loni.
17. “Probable Errors in Treatment Delivery: An Overview” delivered at Annual Conference of Association of Medial Physicists of India (Northern Chapter), Lucknow 2014
18. “Interaction of radiation with matter, detection and measurement of radiation” delivered at Radiation Safety Certification programme for Regularization of Radiation Therapy Technologists - 2013 (RS-RTT-2013) at MD Oswal Hospital, Ludhiana, April 2013
19. “Radiological Safety: Why and How?” delivered at workshop on Quality Control of Nuclear Medicine Instrumentation (QC of SPECT/CT & PET/CT as per NEMA and AERB) at PGIMER, Chandigarh April, 2013.
20. “Radiation safety and Biomedical applications” delivered at Physics department of MMV, BHU, Varanasi, March 11, 2013.
21. “Linear Accelerator technology”. 13th ICRO teaching course for post graduate students in radiation oncology at Central University of Punjab, Bhatinda, November 4-5, 2012
22. “Delhi University Incident: BHU Experience” delivered at Medical Physics forum, Sanjay Gandhi PGI, Lucknow Nov 2012
23. curriculum for medical physics education in India 2012, CMPI workshop on designing national curriculum for medical physics education in India, CMC, Vellore June 22-23, 2012
24. Tele-planning: Annual conference of Northern Chapter of AMPI, New Delhi, 2012

25. "Radiation Hazards Evaluation and Control" delivered at Summer school on experimental nuclear physics organized by Dept of Physics, Banaras Hindu University, Varanasi from September, 5-25, 2011
26. "Role of RSO in Emergency Handling in Research Institution" delivered at Awareness Programme on Radiation Safety Aspects of Use of Ionising Radiations in Research Applications jointly organized by AERB and Panjab University, Chandigarh, August 10-11, 2011
27. "Training Programme for Radiation Therapy Technologists: The Need to Make it More Effective" delivered at 16th Annual Conference of Association of Medical Physicists of India (Northern Chapter), Ludhiana 2011
28. Medical Physics Education - Past, Present & Future (2010), Annual Conference of Association of Medical Physicists of India, Lucknow, 2010
29. Medical Physics: Present Status & Future Direction (2010), Annual conference of Northern Chapter of AMPI, Agra, 2010
30. "Advances in medical imaging: boon for radiation oncology", Updates in Medical Physics & annual meeting of UP-Delhi Chapter of AMPI 2007
31. "Medical Technologist and Radiological Safety" Lalit M Aggarwal. Presented at 9th annual conference of Association of Radiation Therapy Technologists of India Patna 2005
32. "Linear Accelerator Technology: Indian Scenario" Lalit M Aggarwal and Kamlesh Passi. Presented at 11th national conference of Society of Indian Radiographers, Chandigarh 2004
33. Quality Assurance in diagnostic Radiology – Facts and figures" Lalit M Aggarwal, K Passi, P P Singh and Subhash Singh, 1st national conference of society of medical radiation technology 2001

MSc Thesis

1. "Study of Different Display Systems Used in Nuclear Medicine Imaging" carried under guidance of Dr AV Lakshmanan at Anna University, Chennai (1994)

PhD Thesis

2. Characterization of Demineralized bone and plantar Pressure points for evaluation of Human Gait: Electrical & Biomechanical study" Carried out under the guidance of Dr DV Rai at Panjab University (2005)

Best Paper Awards

1. K.Passi, **L.M. Aggarwal**, V.O.Parthiban, R.Vashistha, D.Sharma & H.Singh (1998) "Reconstruction of geometry of Iridium implant and its effect on dose computation" J.Med.Phy. Vol 23 no.3 108-109
2. A.Mandal, A.K.Asthana, **L.M.Aggarwal** (2005) Digital Imaging System for Conventional Simulator to cope The Requirement of Modern Radiation Oncology Center: Indigenous Efforts.. "ONCOSCOPE" at International Conference on Emerging Trends in Radiation Oncology. September. (2nd Best paper award)
3. Sarkar A, Shahi U P, Asthana A K, Pradhan S, **Aggarwal L M**, Mandal A (2007) Assessment of cancer care continuum of diagnosis, treatment and survival in geriatric cancer patients presented at AROICON-2007, Chennai
4. Nandi M, Shahi U P, Asthana A K, Pradhan S, **Aggarwal L M**, Mandal A (2009) Audit of Cancer Patients From Uttar Pradesh(UP):A Report of University Based Two Years' Retrospective Analysis presented at AROIUP Chapter Conf-2009, Berily (Nainital).

Abstracts Published in Journals

1. Singh A, Choudhary S, Aggarwal LM, Verma A, Mourya A. GSOR08 Presentation Time: 12: 05 PM: Relationship between Late Bladder Toxicity & Dose to Bladder Sub-Volumes in Locally Advanced Cervical Cancer Treated with Interstitial Brachytherapy: A Prospective Study. *Brachytherapy*. 2024 Nov 1;23(6):S76-7.
2. Aggarwal LM, Choudhary S, Mourya A, Mani T, Bisht M. Indigenous HDR Brachytherapy Interstitial Perineal Template with a Novel Mechanism for Needle Locking and Fixation. InAAPM 66th Annual Meeting & Exhibition 2024 Jul 21. AAPM.
3. P. Venkatraman, and Lalit M Aggarwal "Renewable energy produce from scatter radiation through activated carbon"
4. Kalyan Mondal, Muskaan, Himanshu Mishra, Suresh Yadav, Anuj Vijay, Ritusha Mishra, Lalit Mohan Aggarwal, Shajid Syed Mohamed, Navin Singh, Abhijit Mandal "Exploring the appropriateness of conventional and unconventional methods of setup margin estimation in external beam radiotherapy"
5. Ankur Maurya, Chhape Ram, Abhijit Mandal, Satyajit Pradhan, Uday P Shahi, Sunil Choudhary, Lalit M Aggarwal. Small Photon Field Dosimetry with Radiochromic Film Using an Indigenously Developed Program. *J.Med.Phy*. Vol 32 (Suppl) S11-S12
6. Kaser P, Pradhan S, Prasad C, Narayan G, **Aggarwal L M** & Ghosh A (2017). Expression of DNA Repair Genes in Cervix Cancer Patients Undergoing CCRT. *International Journal of Radiation Oncology* Biology* Physics*, 99(2), S24
7. **Aggarwal LM**, Mandal A, Mourya A, Ram C and Pradhan S (2016) Indigenous Conventional Radiotherapy Simulator: Where we stand? Presented at 37th Annual Conference of Association of Medical Physicists of India at Hyderabad.
8. **Aggarwal LM**, Pradhan S, Sharma N , Sharma S ,and Kajaria A (2015) Clinical implementation and application of Monte Carlo methods in photon and electron dose calculation. *JCRT (Suppl-1)*, Vol 32, S93
9. Kajaria A, Sharma N, Sharma S, Pradhan S, and **Aggarwal LM** (2015). Monte Carlo study of a flattening filter-free 6 MV Varian Linac using the BEAMnrc code. *JCRT (Suppl-1)*, Vol 32, S93
10. **Aggarwal LM**, Mandal A, Asthana AK, Shahi UP and Pradhan S (2007) BRIT Manual After Loading Brachytherapy Kit for intracavitary: Initial Experience. *J.Med.Phy*. Vol 32 (Suppl) S11-S12
11. Mandal A, Asthana AK, Pradhan S, Shahi UP and **Aggarwal LM** (2006) Evaluation of clinical significance of cumulative biological effective dose and overall treatment time in the treatment of carcinoma cervix *J.Med.Phy*. Vol 31 (3) 138-139
12. Sharma N, Ray AK, Pradhan S, Sharma S and **Aggarwal LM** (2006) Indigenous Software For Computer Aided Analysis of Medical Images using Artificial Neural Network. *J.Med.Phy*. Vol 31 (3) 125-126
13. **Aggarwal LM**, **Mandal A**, Pradhan S, Shahi UP and Asthana AK (2006) Dosimetric Evaluation of Half Beam Blocked Fields. *J.Med.Phy*. Vol 31 (3) 198

14. "Planning of Radiotherapy department: Criteria & considerations" **LM Aggarwal**, Subhash Singh and B D Gupta" Journal of Medical Physics, 26,3, 198-199 (2001). Presented at International Conference on Radiation Physics and Radiation Safety at Mumbai
15. "The prediction of normal tissue complication probability of healthy tissue for non-uniform distribution in fractionated radiotherapy" T S Kehwar, C G Orton, S C Sharma and **LM Aggarwal**. Journal of Medical Physics, 26,3, 195-197 (2001). Presented at International Conference on Radiation Physics and Radiation Safety at Mumbai
16. "Ano-rectal carcinoma external RT supplemented with brachytherapy" Rajesh Vashistha, Neeraj Jain, Harpreet Singh, Parveen Kaur, **LM Aggarwal**, Kamlesh Passi, Raman Arora and Satish Jain J.Med.Phy. Vol 24 no.3 126-127, 1999
17. "Absorbed dose at the junction of two abutting radiation fields" K.Passi,, **LM Aggarwal**, V O Parthiban, Bhupinder Singh, R.Vashistha and A Verma J.Med.Phy. Vol 24 no.3 100-101, 1999
18. "Variation in electron dose due to air gap between applicator & patient skin in Mevatron –74" V O Parthiban, K.Passi,, **LM Aggarwal**, Bhupinder Singh, R.Vashistha and A Verma J.Med.Phy. Vol 24 no.3 127, 1999
19. "Dose specification and optimization in intracavitary and intraluminal brachytherapy" H.Singh, K.Passi, V.O.Parthiban, **LM Aggarwal** and R.Vashistha J.Med.Phy. Vol 23 no.3 109-110, 1998
20. "Dosimetry of blocked beams and its comparison with empirical relations" V.O.Parthiban, K.Passi, **LM Aggarwal**, B.Singh, R.Vashistha, D.Sharma and H.Singh, J.Med.Phy. Vol 23 no.3 147-148, 1998
21. "Conservative surgery of ca breast - how effective is iridium/electron boost in prevention of local recurrence" R.Vashistha, N. Jain, H.Singh, K.Passi, **LM Aggarwal**, P.Kaur and S. Jain J.Med.Phy. Vol 23 no.3 76-78, 1998
22. "Reconstruction of geometry of Iridium implant and its effect on dose computation" K.Passi, **L.M. Aggarwal**, V.O.Parthiban, R.Vashistha, D.Sharma & H.Singh J.Med.Phy. Vol 23 no.3 108-109, 1998
23. "Dose prescription, Reporting and calculation in brachytherapy: A practice followed at Oswal Hospital" Rajesh Vashistha, **Lalit M Aggarwal**, Neeraj Jain, Kamlesh Passi, Saji Oommen, Parveen Kaur and Harpreet Singh J.Med.Phy. Vol 22 no.3, 70-72 1997.
24. "Brachytherapy in early stage bulky carcinoma cervix" N.Jain, R.Vashistha, Kamlesh Passi, **Lalit Aggarwal**, P.Kaur, Harpreet Singh and V.Jain J.Med.Phy. Vol 22 no.3, 116-117, 1997.
25. "A non invasive method of treating intra-oral lesions" Kamlesh Passi, R.Vashistha, **Lalit Aggarwal**, Rupinder Singh and Harpreet Singh J.Med.Phy. Vol 22 no.3, 116, 1997.
26. "Palliative management of advanced and disseminated malignancy with radiotherapy" Rajesh Vashistha, Neeraj Jain, Kamlesh Passi, **Lalit Aggarwal**, Harpreet Singh, Ashok Goyal, Saji Oommen, Parmod Kumar. J.Med.Phy. Vol 21 no.3, 134-135 Sept. 1996.
27. "Performance of 10 MV Linear Accelerator: 10 year experiences" Kamlesh Passi, **Lalit Aggarwal**, Rajesh Vashistha Harpreet Singh, J.Med.Phy. Vol 20 no.4, 42-43 Dec. 1995.
28. "Electron beam therapy: Chest wall irradiation of cancer breast patients" Rajesh Vashistha Kamlesh Passi, S.Hukku, Parmod Kumar, Harpreet Singh, **Lalit Aggarwal**, Raman Arora, Parveen Kaur, Satish

Jain J.Med.Phy. Vol 20 no.4, 51-52 Dec.,1995

29. "Brachytherapy by Ir-192, technical difficulties and their solutions" Kamlesh Passi, **Lalit Aggarwal**, Rajesh Vashistha, J.Med.Phy. Vol 19 no.4, 51-52 Dec 1994.
30. "Experience in minimizing the down time and maintenance cost of the radiotherapy equipment" **LM. Aggarwal**, Kamlesh Passi, V O Parthiban, Rajesh Vashistha, Harpreet Singh and A Verma J.Med.Phy. Vol 24 no.3 129, 1999
31. "Intensity modulation during intracavitary application to deliver boost dose in carcinoma cervix" **Lalit M Aggarwal**, K.Passi, Harpreet Singh, Rajesh Vashistha, Parveen Kaur, Neeraj Jain, Arvind Verma and Veena J.Med.Phy. Vol 24 no.3 128-129, 1999
32. "Effect of change in field size and depth of measurement on wedge factor: a report" **L.M. Aggarwal**, V.O.Parthiban, K.Passi, B.Singh, D.Sharma, R.Vashistha and H.Singh J.Med.Phy. Vol 23 no.3 146-147, 1998
33. "Proto-type inexpensive loading device for thin Ir-192 wires" **Lalit Aggarwal**, Kamlesh Passi, Saji Oommen, V.O.Parthiban and R.Vashistha J.Med.Phy. Vol 22 no.3 105-106,1997
34. "Electron beam edge modifier: A solution for treatment of two abutting electron fields" **Lalit M.Aggarwal**, Colin G.Orton, Garry Ezzell, Rajesh Vashistha, Bhupinder Singh, Kamlesh Passi.J.Med.Phy. Vol 21 no.3, 139-141 Sept. 1996.
35. "Design and fabrication of inexpensive Styrofoam cutter" **Lalit Aggarwal**, Kamlesh Passi, Rajesh Vashistha, Harpreet Singh, Karan S.Dosi J.Med.Phy. Vol 20 no.4, 44 Dec.,1995
36. "Transmission studies of electrons of 5 - 12 MV energy in different materials" **Lalit Aggarwal**, Bhupinder Singh, Kamlesh Passi, Rajesh Vashistha, M.B.Singh J.Med.Phy. Vol 20 no.4, 50-51, Dec.,1995
37. "Study of different Display systems used in Nuclear Medicine Imaging" XV annual conference on medical physics, Nov. 1994, Ahemdabad.

Other presentations/published abstracts

1. Tandon P, **Aggarwal LM** and Hussain SA (2014) "Estimation of radiation dose to the caregivers/relatives of patients during the treatment of cancer thyroid and thyrotoxic patients in India". IAEA International Conference on Radiation Protection in Medicine - Setting the Scene for the Next Decade, Bonn, 3-7 December 2012.
2. Sharma N, Saxena S, Sharma S and **Aggarwal LM** (2014). " Parallel processing of image in multi core environment: it's application in medical imaging.
3. Kheruka S, Naithani U, Maurya A, Painuly N, **Aggarwal LM** and Gambhir S (2011). The study of beam hardening effect using additional copper filter on low dose CT. J Nucl Med; 52 (Suppl 1)
4. Kheruka, SC, Gambhir S, Naithani UC, Maurya AK, Painuly NK and **Aggarwal LM** (2010). Effect of beam hardening by using additional copper filter on low dose CT. IJNM 25(3), 126
5. Kheruka, S, U. Naithani, Maurya A, Painuly N, **Aggarwal L**, and Gambhir S (2011). "The study of beam hardening effect using additional copper filter on low dose CT." In *Society of Nuclear Medicine*

Annual Meeting Abstracts, vol. 52 (Supplement 1) , p. 2008..

6. Sharma SK, Mandal A, **Aggrawal LM**, Shahi UP, Pradhan S and Asthana AK (2010). Change in Weight Loss & Inter Portal Distance during Radiotherapy: A Preliminary Study. Souvenir, 14th National conference of Association of RT Technologists of India, 81.
7. Anurag, Mandal A, **Aggrawal LM**, Shahi UP, Pradhan S and Asthana AK (2010). Design & Construction of X-ray viewer using Light Emitting Diodes. Souvenir, 14th National conference of Association of RT Technologists of India, 82.
8. Sen M, Mandal A, **Aggrawal LM**, Shahi UP, Pradhan S and Asthana AK (2010). Challenges Faced By Technicians and Patients During Radiotherapy : Proposed Solutions. Souvenir, 14th National conference of Association of RT Technologists of India, 84.
9. Singh P, Mandal A, **Aggrawal LM**, Shahi UP, Pradhan S and Asthana AK (2010). Fabrication of Immobilization, Quality Assurance and Simulation Devices: Local Efforts. Souvenir, 14th National conference of Association of RT Technologists of India, 80.
10. Tripathi P, Mandal A, **Aggrawal LM**, Shahi UP, Pradhan S and Asthana AK (2010). Dosimetric Evaluation of Quality of Thermoplastic Sheets provided by different Manufactures. Souvenir, 14th National conference of Association of RT Technologists of India, 83
11. Workload Modeling For Teletherapy Unit. Singh R, Mandal A, Asthana AK, Pradhan S, Shahi UP and Aggarwal LM. Abstract Book of XX U.P.Chapter Convention of AROI, February, 2008, SGPGIMS, Lucknow.
12. Challenges Faced By Patients During Radiation Therapy. Singh P, Asthana AK, Shahi UP, **Aggarwal LM**, Mandal A, Singh R, Upadhyaya K, Mishra V, Pradhan S. Abstract Book of XX U.P.Chapter Convention of AROI, February, 2008, SGPGIMS, Lucknow.
13. Transmission Dosimetry For Dose Verification in External Beam Radiotherapy. Mandal A, Asthana AK, Bhattacharia AK, Pradhan S, Shahi UP and **Aggarwal LM**. Abstract Book of XX U.P.Chapter Convention of AROI, February, 2008, SGPGIMS, Lucknow
14. Audit of Cancer Patients From Uttar Pradesh(UP):A Report of University Based Two Years' Retrospective Analysis. Nandi M, Asthana A K, Pradhan S, Shahi U P, **Aggarwal LM**, Mandal A. Journal of Cancer Research & Therapeutics . Vol. 5 No Suppl 2 pp S94-S95, 2008 presented at AROICON-2009, Hyderabad.
15. Sarkar A, Shahi UP, Asthana AK, Pradhan S, **Aggarwal LM**, Mandal A and Sinha DK (2006) Profiles of geriatric cancer patients: Experience from IMS, BHU.Proceeding of annual conference of AROI, 224
16. Kumar V, Pradhan S, Jain RK, **Aggarwal LM**, Sharan GK and Asthana AK (2206) Trial of paclitaxel and cisplatin concurrent with radiotherapy in patients with advanced stage head & neck cancer (2006). Proceeding of annual conference of AROI, 196
17. Sharan GK, Pradhan S, Kumar, V, **Aggarwal LM**, Sharma OP and Kumar M (2006) Abdominal and transrectal ultrasonography in the evaluation of carcinoma cervix. XVIII FIGO world congress of gynecology and obstetrics abstract book 65-66
18. Radiation Induced Meningioma Following High Dose Cranial Irradiation-Report of two Unusual cases. Pradhan S, Kumar V, Sharan GK, Asthana AK, **Aggrawal LM**, Mandal A. Abstract book of 27th National

conference of AROI, December 2005.

19. Kumar V, Pradhan S, **Aggarwal LM**, Shahi UP, Asthana AK and Sinha DK “ Paclitaxel and Cisplatin concurrent with radiotherapy in patients with advanced stage head and neck cancers” presented at XVII Annual Conference of AROI, Ahmedabad 2005
20. Shahi UP, Mandal A and **Aggarwal LM** “Cancer control through nanotechnology: A paradigm shift” presented at XVII Annual Conference of AROI, Ahmedabad 2005
21. “Trained Technologist: The Need of a Modern Radiotherapy Department” Ravi P Singh , **Lalit M Aggarwal**, Abhijit Mandal, Santosh Sharma, Uday P Shahi, Satyajit Pradhan and Anupam K Asthana. Presented at 9th annual conference of Association of Radiation Therapy Technologists of India Patna 2005
22. Singh R, **Aggarwal LM**, and Rai DV (2004) “Physiochemical Study of Bone” Proc. Of 28th All India Cell Biology Conference and symposium on Genome Biology, Dec. 1-3, NCHGSR, Panjab University Chandigarh p-99
23. **Aggarwal LM**, Singh R, Koul A and Rai DV (2004) “Analysis of bare foot plantar pressure in young healthy subjects” National Conference on Biomechanics, Nov. 19-21, organized by Center of Biomedical Engg. IIT New Delhi p-5
24. “Study of Duration of Various Sub Phases of Stance Phase of Gait: A Preliminary Report” Durg V Rai, **Lalit M Aggarwal** and Kirpal S Kohli. Proceeding of International Society for Postural & Gait Research, Sydney 2003
25. “Study of Pressure Points in Stance Phase of Gait: A Preliminary Report” Durg V Rai, **Lalit M Aggarwal** and Kirpal S Kohli. Presented at National Symposium on Biophysics, Roorkie 2003
26. “Quality Assurance Tests – Only way to improve image quality and radiation safety” Laxmi K Tewari, **Lalit M Aggarwal**, Suman Kochhar and Subhash Singh Presented at 9th national conference of Society of Indian Radiographers, Hyderabad 2002
27. “Role of Alternating chemotherapy vs radiation alone in treatment of locally advanced head & neck cancers” Sapna Manocha, H S Huda, Subhash Singh, B P Das, Sunita Sharma and **LM Aggarwal**, Annual Conference of AROI, Chandigarh 2001
28. “Role of MDR Brachytherapy in the management of oesophageal cancer” XV annual conference of northern chapter of association of surgeons, Ludhiana.
29. “How Risky is Job in a cancer Institute?” XVII Conference of Indian Association of Radiation Protection at Allahabad 1989
30. “Rectal Dosimetry in Carcinoma Cervix - A Comparative Study “ XIII annual conference of the association of Radiation Oncologist of India at Manipal.
31. “Evaluation of Bone Scan in Cancer “ XIII Conference of Northern India, Association of Surgeons at Ludhiana.
32. “A Survey of Radiation Safety and Quality Assurance in X-ray Installations” **Lalit M Aggarwal**, K Passi and S Singh. Presented at World Congress, Australia, 2003
33. “Safety Measures During Radiation Therapy “ **Lalit M Aggarwal**, Subhash Singh and Sapna Manocha,

Presented at Annual Conference of NZAROI, Ludhiana 2002

34. "Quality Assurance Tests & performance of linear accelerator" **Lalit M Aggarwal**, K Passi, R Vashistha, A Verma, Subhash Singh & TS Kehwar, Presented at Annual Conference of NZAROI, Amritsar 2001
35. **Aggarwal LM** "Efforts to minimize the down time and maintenance cost of the radiotherapy equipment" North Zone Chapter AROI N.Delhi 1998
36. "Early stage ca buccal mucosa – results of ext.RT combined with interstitial brachytherapy" XX Annual AROI Cuttack 1998
37. "Concomitant MTX and RT in advanced ca of head & neck – results and role of human placental extract in control of mucositis" XX Annual AROI Cuttack 1998
38. "Interstitial brachytherapy supplemented with ext.RT carcinoma tongue – results and tonicities" XX Annual AROI Cuttack 1998
39. "Surface mould: In hard palate cancer, A treatment modality" XX Annual AROI Cuttack 1998
40. "Intraluminal brachytherapy adjuvant to external radiotherapy in carcinoma esophagus – advantage effectiveness and tonicities" International conference on Medical Physics N.Delhi 1998.
41. "Breast conservative therapy with use of Iridium/electron boost in Ca Breast – A review of clinical data, future perspective" R.Vashistha, N.Jain, K.Passi, **L.Aggarwal**, H.Singh, P.Kumar, R.Arora and S.Jain. Presented at XIX annual conference of AROI, Indore 1997.
42. "Quality assurance tests: Experience with aging and overloaded therapy equipment" Kamlesh Passi, **Lalit M Aggarwal**, Saji Oommen, V.O.Parthiban, Rajesh Vashistha and Harpreet Singh. Presented at XIX annual conference of AROI, Indore 1997.
43. "Management of oral tongue carcinoma treated with external RT and Ir-192 - A trend in organ preservation" R.Vashistha, N.Jain, K.Passi, **LM Aggarwal**, H.Singh, S.Jain and R.Arora, J.Clin. Radn.Oncol, 10:49-51, 1995, XVII. AROI congress Suppl.
44. "Management of Oesophageal cancer by Combination of External and Intraluminal Radiotherapy" R. Vashistha, N.Jain, K.Passi, **LM Aggarwal**, P.Kaur, S.Jain and K.S.Dosi, Radiotherapy and Oncology'95 proceedings of AROI congress, 1995, 163-166.
45. "Management of oral tongue carcinoma treated with external RT and Ir-192 a trend in organ preservation" J. Clin. Radiother. Oncol. 10: 49-51,1995. XVII AROI Congress Suppl.
46. Passi K, **Aggarwal LM**, Vashistha R (1994) "Role of Contact Therapy with Selectron LDR- Other than the Conventional Sites" XIV annual Conference of Association of Medical Physicists of India at Nagpur.
47. **Aggarwal LM** (1994). Quality Assurance Test and Patient Dose reduction in Diagnostic Radiology" Annual Conference of Association of Medical Physicists of India (TN Chapter) at Madras

Annexure-II

Guest Lectures/ Papers Presented (Self)

Conferences/Workshop	Title	year
1. 7th INTERNATIONAL MEDICAL OLYMPIAD CONFERENCE ON Global Health: Emerging Trends and Future Challenges. November 15– 17, 2024, Panjab University, Chandigarh	Advances in Brachytherapy and Future Challenges	2024
2. Annual Meeting of the American Association of Physicists in Medicine (AAPM) Los Angeles, CA (USA) July 21 – July 25, 2024	Indigenous HDR Brachytherapy Interstitial Perineal Template with a Novel Mechanism for Needle Locking and Fixation	2024
3. National Conference PARACON-2024, Saifai	Career opportunities for Radio Imaging Technology (RIT) Allied Healthcare Professionals	2024
4. Annual conference of Association of Medical Physicists of India-Northern Chapter, 2024, New Delhi	Physics of Brachytherapy & Plan Evaluation	2024
5. International Conference on Medical Physics - 2023 , Mumbai	The impact of tumor volume on dose to pibs points in Brachytherapy of locally advanced cervical cancer: A dosimetric study	2023
6. 3 rd Indian Cancer Congress 2023, Mumbai	Design and Fabrication of Intracavitary Brachytherapy Applicator using 3D Printer for the Treatment of Cervical Cancer Patients	2023
7. Annual conference of Association of Medical Physicists of India (Northern Chapter), SRMS, Bareilly, Dec	My Journey as a Medical Physicist: Mistakes & Learnings”	2022
8. Annual conference of the Indian Brachytherapy Society	Calculation of Isodose Volumes from TRAK in HDR Intracavitary Brachytherapy	2022
9. Physics Webinar Organized by Association of Radiation Oncologists of India(UP)	Radiation Protection	2020
10. 35th ICRO PG teaching Course on Brachytherapy	Plan Evaluation in Head & Neck Brachytherapy	2020
11. Regional Seminar: An Update on Radiation Safety	History Teaches: Radiation Safety in Radiotherapy & Radiography	2019

12. QIP sponsored Short Term Course on BioMEMS & bioinstrumentation	▪ Radiotherapy and Biomedical Engineering	2018
13. ICRO Teaching course on Medical Physics	▪ Linear Accelerator Components & Their Functions	2018
14. 37th Annual Conference of Association of Medical Physicists of India at Hyderabad	▪ Conventional Radiotherapy Simulator: Where we stand?	2016
15. Basics of Radiation Safety	▪ Winter School "Beyond the standard model physics	2016
16. Annual Conference of AROI, Lucknow, 2015	▪ Clinical implementation and application of Monte Carlo methods in photon and electron dose calculation	2015
17. Radiation Workers in Medical Institutions: A Force to Combat Radiation Emergencies	▪ National Conference of Indian Society of Radiographers & Technologist (NCISRT-2015) organized by Govt. Medical College & Hospital, Chandigarh	2015
18. Basics of Radiation Safety	▪ Summer School on Nuclear and Particle Physics Organized by Dept of physics, BHU, Varanasi	2015
19. Radiation Safety: An Important Issue	▪ Workshop on Physics of Particle Nuclei & Related Instrumentation Organized by Dept of physics, BHU, Varanasi	2015
20. Implementation of eLORA has enhanced the efficacy of regulatory affairs	▪ Annual conference of Association of Medical Physicists of India, Loni	2014
21. Probable Errors in Treatment Delivery: An Overview	▪ Annual Conference of Association of Medical Physicists of India (Northern Chapter), Lucknow	2014
22. Interaction of radiation with matter, detection and measurement of radiation	▪ Radiation Safety Certification programme for Regularization of Radiation Therapy Technologists - 2013 (RS-RTT-2013) at MD Oswal Hospital, Ludhiana	2013
23. Radiological Safety: Why and How?	▪ workshop on Quality Control of Nuclear Medicine Instrumentation (QC of SPECT/CT & PET/CT as per NEMA and AERB) at PGIMER, Chandigarh	2013
24. Radiation safety and Biomedical applications	▪ DBT-Star College Scheme, Physics department of MMV, BHU, Varanasi	2013
25. Delhi University Incident: BHU Experience	▪ Medical Physics forum, Sanjay Gandhi PGI, Lucknow	2012

26. Curriculum for medical physics education in India	CMPI workshop on designing national curriculum for medical physics education in India, CMC, Vellore	2012
27. Tele-planning	Annual conference of Northern Chapter of AMPI, New Delhi	2012
28. Radiation Hazards Evaluation and Control	Summer school on experimental nuclear physics organized by Dept of Physics, Banaras Hindu University, Varanasi	2011
29. Role of RSO in Emergency Handling in Research Institution	Awareness Programme on Radiation Safety Aspects of Use of Ionising Radiations in Research Applications jointly organized by AERB and Panjab University, Chandigarh	2011
30. Annual Conference of Association of Medical Physicists of India (Northern Chapter), Ludhiana 2011	Training Programme for Radiation Therapy Technologists: The Need to Make it More Effective	2011
31. Workshop on radiation safety in teaching & Research, BHU, Varanasi, 2011	Instruments used for radiation detection	2011
32. International Conference on Medical Physics, Srinagar, 2007	BRIT Manual After Loading Brachytherapy Kit for intracavitary: Initial Experience	2007
33. Annual conference of UP- Delhi Chapter of AMPI, New Delhi, 2007	Advances in medical imaging: boon for radiation oncology (guest lecture)	2007
34. National Seminar on Recent Developments in Radio-Nuclide Imaging & Radiation Therapy, UP- Delhi Chapter of AMPI, Lucknow, 2006	Inexpensive Gadget & Indigenous Technique to Digitize Analog Medical Images (As Co-Author)	2006
35. 9 th annual conference of Association of Radiation Therapy Technologists of India Patna 2005	Medical Technologist and Radiological Safety (guest lecture)	2005
36. National Conference on Biomechanics, IIT New Delhi, 2004	"Analysis of bare foot plantar pressure in young healthy subjects"	2004
37. National Conference of Society of Indian Radiographers	Linear Accelerator Technology: Indian Scenario (Guest lecture)	2004
38. National Symposium on Biophysics, Roorkee 2003	"Study of Pressure Points in Stance Phase of Gait: A Preliminary Report"	2003
39. Annual Conference of NZAROI, Ludhiana 2002	"Safety Measures During Radiation Therapy "	2002

40. National conference of society of medical radiation technology, Chandigarh 2001	▪ Quality Assurance in diagnostic Radiology – Facts and figures (Guest lecture)	2001
41. Annual Conference of NZAROI, Amritsar 2001	▪ "Quality Assurance Tests & performance of linear accelerator"	2001
42. International Conference on Radiation Physics and Radiation Safety at Mumbai	▪ "Planning of Radiotherapy department: Criteria & considerations"	2001
43. annual conference on medical physics, Bangalore, 2000	▪ Quality Assurance Tests of X-ray Machine in and around Ludhiana: An Appraisal of Awareness about Radiation Protection and Quality.	2000
44. Workshop on brachytherapy, Ludhiana	▪ Preparation of Ir-192 sources	2000
45. annual conference on medical physics, Nov. 1999, Bhopal	▪ "Intensity modulation during intracavitary application to deliver boost dose in carcinoma cervix" ▪ "Experience in minimizing the down time and maintenance cost of the radiotherapy equipment"	1999
46. International conference on Medical Physics, AIIMS, New Delhi 1998	▪ "Effect of change in field size and depth of measurement on wedge factor: a report"	1998
47. annual conference on North Zone Chapter of AROI N Delhi 1998	▪ "Efforts to minimize the down time and maintenance cost of the radiotherapy equipment"	1998
48. annual conference on medical physics, Nov. 1997, Ludhiana	▪ "Proto-type inexpensive loading device for thin Ir-192 wires"	1997
49. XIX annual conference of AROI, Indore 1997.	▪ "Quality assurance tests: Experience with aging and overloaded therapy equipment"	1997
50. annual conference on medical physics, Nov. 1996, Chennai	▪ "Electron beam edge modifier: A solution for treatment of two abutting electron fields"	1996
51. Annual conference on medical physics, Nov. 1995, Jodhpur	▪ "Transmission studies of electrons of 5 - 12 MV energy in different materials ▪ Design and fabrication of inexpensive Styrofoam cutter"	1995
52. XV annual conference on medical physics, Nov. 1994, Ahmedabad.	▪ "Study of different Display systems used in Nuclear Medicine Imaging"	1994
53. Annual Conference of Association of Medical Physicists of India (TN Chapter) at Madras	▪ Quality Assurance Test and Patient Dose reduction in Diagnostic Radiology"	1994

Annexure-IV
Conferences, Workshops, and Symposia attended

year	Conferences, Workshops, and Symposia	Type of participation
2025	Annual Conference of Indian Brachytherapy Society.IBSCON2025 August 2024. National Cancer Institute, AIIMS, Jhajjar	Chairperson
2025	AMPICON-NC 2025. Adaptive Radiotherapy – Present & Future. Fortis Memorial Research Institute, Gurugram, April 26-27, 2025	Chairperson
2024	7th INTERNATIONAL MEDICAL OLYMPIAD CONFERENCE ON Global Health: Emerging Trends and Future Challenges. November 15– 17, 2024, Panjab University, Chandigarh	Guest Speaker
2024	Annual Conference of East Oncology Group "ONCOCON 2024"	Chairperson
2024	National seminar on Indigenous Cow,Organic Farming and Panchagavya Chikitsas. Sept 21-22,2024	Chairperson
2024	National Conference PARACON-2024, Saifai	Guest Speaker
2024	Annual conference of Association of Medical Physicists of India-Northern Chapter, 2024, New Delhi	Guest Speaker
2023	International Conference on Medical Physics - 2023 , Mumbai	Presented a paper Chaired a session
2023	3 rd Indian Cancer Congress 2023, Mumbai	Presented a paper
2023	International Conference on "Science of Rudraksha", Shobhit University Meerut, October 27-28, 2023	▪ Received Award
2023	Annual conference of the Indian Brachytherapy Society, Mahamana Pandit Madan Mohan Malviya Cancer Center and Homi Bhabha Cancer Hospital, Varanasi. August 2023	▪ Chair Person ▪ Panelist in panel discussion
2022	Annual conference of by Association of Medical Physicists of India (Northern Chapter), SRMS, Bareilly	▪ Dr NC Singhal Oration ▪ Chair Person

2022	Annual Conference of Association of Medical Physicists of India, November 2022	▪ Chair Person ▪ Judge for best poster ▪ Panelist in panel discussion
2022	“Brachytherapy to improve therapeutic index” Annual Conference of IBS	Presented paper Chaired a session
2021	Virtual conference on Radiation application in Medicine	Panelist in a panel discussion Best paper judge (Poster Session)
2021	37 th PG Teaching Course on Medical Physics	Course Co-coordinator
2021	CME organized by AIIMS Bhopal	Panelist
2020	35 th ICRO PG teaching Course on Brachytherapy	Guest lecture
2020	Radiation and Cancer Physics session during the Virtual conference on "Best of ASTRO India"	Session Coordinator
2020	Physics Webinar Organized by the Association of Radiation Oncologists of India (UP)	Guest Lecture
2019	An Update on Radiation Safety, Feb 23, 2019, Bhubneshwar	Guest Lecture
2018	National. QIP sponsored Short Term Course on BioMEMS & bioinstrumentation, IIT BHU, December 10-16, 2018, Varanasi	Guest Lecture
2018	ICRO Teaching course on Medical Physics, December 22-23, 2018, Jaipur	Guest Lecture
2018	Annual conference of Association of Radiation Oncologists of India (UP Chapter), Current Practices and Controversies in Management of Cancer October 13-14, 2018	Co- Convener Scientific Committee
2017	Annual Conference of UP Chapter of AROI, Kanpur October 2017	Chairperson
2017	17 th Asia Oceania Congress of Medical Physics and 38 th Annual Conference of Association of Medical Physicists of India, Jaipur	▪ Co-Convener Scientific Committee ▪ Presented paper
2016	37 th Annual Conference of Association of Medical Physicists of India at Hyderabad	▪ Presented paper ▪ Judge for best poster ▪ Member Scientific Committee
2016	Annual Conference of Medical Physicists of India (Northern Chapter) “Exploring Diverse Applications of Medical Physics in Cancer Management”.	▪ Organizing Secretary
2016	Safety Winter School “Beyond the standard model physics” Dept of physics January 24 – February 14, 2016	▪ Guest Speaker

2015	Annual Conference of Association of Radiation Oncologists of India (AROICON'15), Lucknow, November 26-29, 2015	▪ Chair Person ▪ Judge for Best Paper Award
2015	National Conference of Indian Society of Radiographers & Technologist (NCISRT-2015) organized by Govt. Medical College & Hospital, Chandigarh on 25th-26th September 2015.	▪ Invited speaker ▪ Chairman, Scientific Committee
	Summer School on Nuclear and Particle Physics Organized by Dept of physics, BHU, Varanasi September 23 –October 12, 2015.	▪ Invited speaker
2015	International Conference on Medical Physics, Radiation Protection and Radiobiology "ICMPRPR2K15" Jaipur, 20-22 February 2015	▪ Chair Person
2014	National Conference on. Present Scenario and Future Trends in Biomedical Engineering and Healthcare Technologies 2014	▪ Joint Secretary ▪ Invited speaker
2014	Annual conference of Association of Medical Physicists of India, Loni 20-22 Nov 2014	▪ Chair person ▪ Invited speaker in panel discussion
2014	Varian Advanced Technique (IMRT/RA) Clinical School. September 1-5, 2014, Hyderabad, India	▪ participant
2014	Onco Summit India 2014, Mumbai. July 10-12, 2014	▪ Delegate
2014	Annual conference of Northern Chapter of AMPI, KGMU, Lucknow, 2014	▪ Guest Speaker
2013	Eclipse Administration and physics Course. December 10-13, 2013, Mumbai.	▪ Participant
2013	Workshop on Quality Control of Nuclear Medicine Instrumentation (QC of SPECT/CT & PET/CT as per NEMA and AERB) at PGIMER, Chandigarh April, 2013.	▪ Guest Lecture
2013	Radiation Safety Certification programme for Regularization of Radiation Therapy Technologists - 2013 (RS-RTT-2013) at MD Oswal Hospital, Ludhiana, April 2013	▪ Guest Lecture
2013	Radiosurgery Best Practices, Novalis Circle Symposium, January 18-20, 2013, Goa, 2013	▪ Delegate
2012	13 th ICRO teaching course for post graduate	▪ Guest Lecture

	students in radiation oncology at Central University of Punjab, Bhatinda, November 4-5, 2012	
2012	Annual conference of Northern Chapter of AMPI, New Delhi, 2012	▪ Invited speaker in panel discussion
2012	CMPI workshop on designing national curriculum for medical physics education in India, CMC, Vellore June 22-23, 2012	▪ Guest Speaker ▪ Chairperson, Group Discussion
2011	DST – PURSE workshop on Art and Science of Paper writing organized by Medical education Unit of Faculty of Medicine, IMS, BHU, Varanasi August 27-28, 2011	▪ Delegate
2011	16th Annual Conference of Association of Medical Physicists of India (Northern Chapter), Ludhiana 2011	▪ Guest Lecture ▪ Member Scientific Committee
2011	Summer school on experimental nuclear physics organized by Dept of Physics, Banaras Hindu University, Varanasi from September, 5-25, 2011	▪ Guest Lecture
2011	Awareness Programme on Radiation Safety Aspects of Use of Ionising Radiations in Research Applications jointly organized by AERB and Panjab University, Chandigarh, August 10-11, 2011	▪ Guest Lecture
2011	Symposium on Novalis Circle, New Delhi, 2011	▪ Delegate
2011	Symposium on Novalis Circle, New Delhi, 2011	▪ Delegate
2011	Workshop on radiation safety in teaching & Research, BHU, Varanasi, 2011	▪ Convener of the workshop ▪ Demonstration of instruments used for radiation detection ▪ Presented vote of thanks in inaugural function
2010	Annual Conference of Association of Medical Physicists of India, Lucknow, 2010	▪ Invited Panelist, in panel discussion ▪ Member, scientific committee
2010	Annual conference of Northern Chapter of AMPI, Agra, 2010	▪ Invited Panelist, in panel discussion ▪ Chaired the session (Oration) ▪ Secretary, scientific committee ▪ Presented annual report in inaugural function
2009	International conference on Medical Physics, Radiation Protection & Radiobiology, Jaipur, 2009	▪ Presented annual report in inaugural function ▪ Chaired Scientific Session ▪ Member, organizing committee

2008	XXI UP Chapter Convention of AROI, Agra, 2008	▪ Judge, Best Paper ▪ Chaired Scientific Session ▪ Member, organizing committee
2008	International Conference on Medical Physics, Mumbai, 2008	▪ Judge, Best Paper ▪ Chaired Scientific Session
2007	International Conference on Medical Physics, Srinagar, 2007	▪ Presented a paper ▪ Rapporteur for poster session ▪ Member, organizing committee
2007	Annual conference of UP- Delhi Chapter of AMPI, New Delhi, 2007	▪ Delivered guest lecture ▪ Member, scientific committee
2007	Teaching Course/Workshop, TMH Annual Radiotherapy Practicum “QA in High Precision Radiotherapy”, 2007	▪ Delegate
2006	Annual conference of AROI, Varanasi, 2006	▪ Treasurer
2006	College of Medical Physics	▪ Delegate
2006	Symposium on virtual simulation, New Delhi	▪ Delegate
2006	National Seminar on Recent Developments in Radio-Nuclide Imaging & Radiation Therapy, UP- Delhi Chapter of AMPI, Lucknow, 2006	▪ Presented a paper
2005	9 th annual conference of Association of Radiation Therapy Technologists of India Patna 2005	▪ Delivered guest lecture
2004	Annual conference of AROI UP Chapter, Varanasi	▪ Member, organizing committee
2004	National Conference on Biomechanics, IIT New Delhi, 2004	▪ Presented a paper
2004	International Conference on Medical Physics, N Delhi, 2004	▪ Delegate, ▪ Member organizing committee
2003	National Symposium on Biophysics, Roorkie 2003	▪ Presented a paper
2003	Annual conference on medical physics, Patna, 2003	▪ Chaired the scientific session
2002	Annual Conference of NZAROI, Ludhiana 2002	▪ Presented a paper
2002	Annual conference on medical physics, Jaipur, 2002	▪ Rapporteur for poster session
2001	National conference of society of medical radiation technology, Chandigarh 2001	▪ Delivered Guest lecture
2001	Annual Conference of NZAROI, Amritsar 2001	▪ Presented a paper

2001	Annual Conference of AROI, Chandigarh 2001	▪ Delegate
2001	International Conference on Radiation Physics and Radiation Safety at Mumbai	▪ Presented a paper
2000	annual conference on medical physics, Bangalore, 2000	▪ Rapporteur for poster session ▪ Presented a paper
2000	Workshop on brachytherapy, Ludhiana	▪ Member, Organizing Committee ▪ Presented a paper
1999	annual conference on medical physics, Nov. 1999, Bhopal	▪ Presented a paper
1998	International conference on Medical Physics, AIIMS, New Delhi 1998	▪ Presented a paper
1998	annual conference on North Zone Chapter of AROI N Delhi 1998	▪ Presented a paper
1998	Annual Conference of IOA (Panjab Chapter), Ludhiana, 1998	▪ Delegate
1997	annual conference on medical physics, Nov. 1997, Ludhiana	▪ Joint Secretary ▪ Presented a Paper ▪ Member, scientific committee
1997	XIX annual conference of AROI, Indore 1997.	▪ Presented a paper
1997	Workshop on Quality Assurance in Imaging Sciences & Radiotherapy, Ludhiana, 1997	▪ Delegate
1996	annual conference on medical physics, Nov. 1996, Chennai	▪ Presented a paper
1996	100 years of Radioactivity, Workshop on brachytherapy, Chennai, 1996	▪ delegate
1995	Annual conference on medical physics, Nov. 1995, Jodhpur	▪ Presented a paper
1995	Annual Conference of Association of Radiation Oncologists of India, Lucknow, 1995	▪ Delegate
1994	XV annual conference on medical physics, Nov. 1994, Ahemdabad.	▪ Presented a paper
1994	Annual Conference of Association of Medical Physicists of India (TN Chapter) at Madras	▪ Presented a paper
1993	Annual conference on medical physics, Nagpur, 1993.	▪ Delegate

1993	Annual Conference of Association of Radiation Oncologists of India (TN Branch) Madras, 1993	▪ Delegate
1992	Course on Radiation Safety (CME Programme), Lucknow, 1992	▪ Delegate
1992	Annual Conference of Association of Radiation Oncologists of India (TN Chapter), Madras, 1992	▪ Delegate
1990	CME, Northern Chapter, IRIA, Ludhiana, 1990	▪ Delegate
1989	Annual conference of Society of Nuclear Medicine, Lucknow 1989	▪ Delegate

	PhD		
		Student	Status
1.	Artificial Intelligence Assisted Estimation of Body Composition and Its Impact on Management of Cancer Patients	Mr. Anil Kumar Maurya	Continuing
2.	The Double Burden: A Sociological Study of Role Strain in Indian Women Balancing Cancer Treatment and Caregiving Duties.	Ms. Shweta Singh	Continuing
3.	Monte Carlo Based Simulation Analysis of Flattened and Unflattened Photon Beams used in Radiotherapy	Mr. Ankit Kajaria - 2017	Completed
4.	Evaluation of oxidative stress and antioxidant status in patients undergoing treatment for carcinoma cervix	Mrs. Anju Srivastva-2021	Completed
5.	Modelling and Quantitative Assessment of Neoteric Devices for Dose Delivery in Brachytherapy	Mr Ankur Maurya-2022	Completed
	MTech		
6.	Additive Manufacturing for Oncology: Design and Development of Brachytherapy Applicators	Ms Megha Bisht-2025	Completed
	MD (Radiotherapy)	Student	Status
7.	Accelerated versus conventionally fractionated radiotherapy in cervical cancer – A prospective study	Dr S Sachin 2024	Completed
8.	Simultaneous modulated accelerated radiotherapy with induction chemotherapy in locally advanced head and neck cancer: A prospective study	Dr Varsha Kotari 2024	Completed
9.	Extreme Hypofractionation in Early Breast Cancer – A Prospective Study	Dr. Antra Bagchi 2023	Completed
10.	Comparison of intracavitary with interstitial brachytherapy in locally advanced cervical cancer	D. Rahul Kumar - 2023	Completed
11.	Feasibility of using volume based hdr bracket therapy in carcinoma cervix	Dr. Pummy Srivastava 2022	Completed
12.	A study to assess response in patient of head and neck cancer treated by accelerated hypofractionation followed by boost either via HDR Brachytherapy or IMRT	Dr. Sumit Agarwal - 2022	Completed
13.	Comparison of intracavitary with interstitial brachytherapy in locally advanced cervical cancer: a prospective randomized study	Dr. Ankita Singh-2022	Completed
14.	Prospective randomized comparison of conventional radiotherapy with IMRT in cancer cervix	Dr. Agrawal Navneet Kailash 2021	Completed
15.	Comparison of interstitial implant and forward IMRT as Boost Therapy in patients after breast-conserving surgery	Dr Ankita Pandey 2021	Completed

1.	A prospective randomized controlled study of comparison of conventional radiotherapy with Intensity Modulated Radiotherapy in treatment of post-operative carcinoma cervix patients.	Dr. Avishek Chakraborty 2021	Completed
2.	MRI Assessment of Carcinoma Cervix Patients Undergoing Radiation Therapy	Dr Ritika Ranjan 2020	Completed
3.	Image Based HDR Interstitial Brachytherapy for Head and Neck Cancer	Dr. Rumita Singh 2020	Completed
4.	Dosimetric Evaluation of external beam radiotherapy techniques in treatment of cancer cervix	Dr Vinita Kumari 2018	Completed
5.	A retrospective analysis of the impact of adjuvant therapy in post-operative carcinoma cervix patients	Dr Narvada Narain 2018	Completed
6.	A Prospective study for assessment of the role of DNA Repair genes ERCC1 and XRCC1 as predictors of response to concurrent Chemotherapy in patients of carcinoma cervix	Dr Prasjant Kesar 2017	Completed
7.	A comparison of Concurrent Chemoradiation with Six Fraction per week versus conventional chemoradiation in patients of carcinoma cervix	Dr Deepak Kumar 2016	Completed
8.	Profile of patients of advanced Biliary tract malignancies undergoing Biliary Stenting	Dr Lalatendu Moharana 2015	Completed
9.	A Phase II Study of Accelerated Fractionation Radio-Therapy Given in 4 Weeks (AFRT-4W) in Treatment of Advanced Head & Neck Squamous Cell Carcinoma (HNSCC)	Dr Dulal K Mondal 2015	Completed
10.	Evaluation of Seven Fractions per Week in Advanced Head and Neck Cancer	Dr Dev Kumar Chudoory 2012	Completed
MSc Medical Physics			
11.	Study of dwell time deviation constraints effects on inverse planning simulated annealing optimized plans if interstitial brachytherapy of cancer cervix	Mr. Joshua Sahay J 2020	completed
12.	Comparison of different intensity modulated arc therapy planning technique in carcinoma cervix	M Jayaprakash 2019	Completed
13.	Dosimetric comparison between TG-43 & TG-186 dose calculation algorithms in patients of carcinoma cervix treated with high dose rate intracavitary brachytherapy.	Ms Sudar Vizhi DS 2019	Completed
14.	Comparison of doses at various points of interest and dose volume analysis in patients of carcinoma cervix treated with high dose rate intracavitary brachytherapy as per ICRU 38 and ICRU 89 reports.	Ms Himani Gautam 2018	Completed

15.	Mathematical Model of real time dose guidance in 3DCRT using portal dose measurement	Mr Bijay K Barik 2018	Completed
16.	Patient Specific QA tests for IMRT and VMAT using different dosimetric tools: A comparative study	Radhika V Kartha 2017	Completed
17.	Comparison of treatment techniques applied to minimize the problem in cranio spinal and head & Neck malignancies	Ms Sajini S Kurup 2017	Completed