

### **3. Evaluative Report of the Department (Jan to Dec -2017)**

1. Name of the Department      **Radiotherapy**
2. Year of establishment          **1986**
3. Is the Department part of a college/Faculty of the university?  
    **Faculty of the University.**
4. Names of programs offered (UG, PG, PharmD, Integrated Masters; M.Phil., Ph.D., Integrated Ph.D., Certificate, Diploma, PG Diploma, D.M./M.Ch., Super specialty fellowship, etc.)    **UG, PG, Ph.D.**
5. Interdisciplinary programs and departments involved: **Tumor Board & Telemedicine Classes.**
6. Courses in collaboration with other universities, industries, foreign institutions, etc.    **Research Projects with IITR & CDRI.**
7. Details of programs discontinued, if any, with reasons                      **NA.**
8. Examination System: **Annual**/Semester/Trimester/Choice Based Credit System : **Annually for B.Sc. Radiotherapy Technology Students & once in 3 years for M.D. Radiotherapy Students.**
9. Participation of the department in the courses offered by other departments  
    **Medical Education Department Classes, EBM.**  
    **Dept. of Anesthesia - BLS/ACLS Course.**
10. Number of teaching posts sanctioned, filled and actual(Professors/Associate Professors/Asst. Professors/others)

	Sanctioned	Filled	Actual (including CAS & MPS)
Professor in Radiotherapy	<b>01</b>	-	-
Radiologist	04	-	-
Lecturer C.T. Scan	01	-	-
Lecturer in Radiotherapy	01	01	01
Lecturer In Medical Physics	02	02	02
Reader In Radiotherapy	01	-	-
Reader In Medical Physics	01	01	01
Assistant Radiotherapist	01	01	01

11. Faculty profile with name, qualification, designation, area of

specialization, experience and research under guidance

Name	Qualification	Designation	Specialization	No. of Years of Experience
Dr. Rajeev Gupta	M.D.	Professor	Radiotherapy	20 yrs & 10 mth
Dr. N.K. Painuly	M.Sc., D.R.P., Ph.D	Professor	Med. Physics	22 yrs 5 mth
Dr. Kirti Srivastava	M.D.	Professor	Radiotherapy	14 yrs 3 mth
Dr. Seema Gupta	M.D.	Professor	Radiotherapy	15 yrs 3 mth
Dr. Rajendra Kumar	M.D.	Asso. Professor	Radiotherapy	12 yrs 3 mth
Dr. Sudhir Singh	M.D., FICS	Asso. Professor	Radiotherapy	7 yrs 3 mth
Shri Navin Singh	M.Sc, D.R.P	Assist. Professor	Med. Physics	8 yrs 3 mth
Shri Teerthraj Verma	M.Sc, D.R.P	Assist. Professor	Med. Physics	6 yrs 3 mth
Miss. Shraddha Srivastava	M.Sc, D.R.P	Assist. Professor	Med. Physics	03 yrs 3 mth

12. List of senior Visiting Fellows, adjunct faculty, emeritus professors  
NA.

13. Percentage of classes taken by temporary faculty - program-wise  
information NA.

14. Program-wise Student Teacher Ratio:

(i). 1:1 for Seminar & Demonstration.

(ii). 1:1 for M.D. Thesis.

15. Number of academic support staff (technical) and administrative staff:  
sanctioned, filled and actual.

Staff	Sanctioned	Filled	Actual (including CAS & MPS)
<b>Technical Staff</b>			
C.T. Technician	03	02	03
X-Ray Technician	04	04	04
Radiography Technician	04	-	04
Radiotherapy Technician	04	-	04
Dark Room Assistant	01	01	01
Administrative Staff	-	-	-
Clerk	02	02	02
Computer Operator/Record Keeper	01	-	01

16. Research thrust areas as recognized by major funding agencies

**Head & Neck Cancer, Gastrointestinal Cancer & Carcinoma Cervix.**

17. Number of faculty with ongoing projects from a) national b) international

funding agencies and c) Total grants received. Give the names of the funding agencies, project title and grants received project-wise.  
**NA.**

18. Inter-institutional collaborative projects and associated grants received  
a) National collaboration b) International collaboration **NA.**
19. Departmental projects funded by ICMR; DST-FIST; UGC-SAP/CAS, DPE; DBT, ICSSR, AICTE, etc.; total grants received.

**Prof. M.L.B. Bhatt**

**Ongoing Projects funded by DST**

1. Project title- “ **Chronobiological approach for early prediction of anthracycline induced cardiotoxicity.**”
20. Research facility / centre with
- state recognition
  - national recognition
  - international recognition
- International recognition.**
21. Special research laboratories sponsored by / created by industry or corporate bodies : **Institute having its own Laboratories.**

**Publications:**

- \* Number of papers published in peer reviewed journals (national / international) : International

**Dr. Rajeev Gupta**

1. Expression of Radioresistant Gene PEG10 in OSCC Patients and Its Prognostic Significance Shankar Sharan Singh<sup>1</sup> , Rajendra Kumar<sup>1</sup> , Vandana Singh Kushwaha<sup>1</sup> , Madan Lal Brahma Bhatt<sup>1</sup> \*, Anshuman Singh<sup>2</sup> , Anupam Mishra<sup>3</sup> , Hari Ram<sup>4</sup> , Devendra Parmar<sup>2</sup> , Rajiv Gupta<sup>1</sup>
2. Role of matrix metalloproteinase 13 gene expression in the evaluation of radiation response in oral squamous cell carcinoma Shankar Sharan Singh, Madan Lal Brahma Bhatt, Vandana Singh Kushwaha, Anshuman Singh, Rajendra Kumar, Rajeev Gupta, and Devendra Parma

**Dr. Kirti Srivastava**

## PUBLICATIONS – INTERNATIONAL:

### Oncology

S.No	Authors	Title	Journal, Year & vol
1.	Mohd. Abbas, Vandana Singh, <b>K. Srivastava</b> , M. banerjee	Glutathione S-Transference gene polymorphism and treatment outcome in cervical cancer patients under chemo-radiation.	PLOS One
2.	Kirti Srivastava, Sayan Paul, Kundan Singh Chauhal, Shamsundar S D, M C Pant, Punita Lal, M L B Bhatt, Rajeev Gupta, Sudhir Singh,	Concurrent Chemo-Radiation Vs Radiotherapy Alone In Carcinoma Cervix: A Randomized Phase III Trial	Asia Pacific Journal of Clinical Oncology, 2013
3.	Sayan Paul* , Kirti Srivastava**, Tamojit Chaudhari***, Srinivas Rathor****	Post Mastectomy Radiotherapy for early breast cancer with 1 to 3 axillary node positive disease: To Radiate or not to Radiate? *	Clinical Cancer Journal of Investigation- April 2013
4.	Anupam Kumar Srivastava1 Pankaj Kumar Singh, Kirti Srivastava,Dhramveer Singh, Divakar Dalela2, Srikanta Kumar Rath3, Madhu Mati Goel4, Madan Lal Brahma Bhatt	Diagnostic Role of Survivin in Urinary Bladder Cancer”	Asia Pacific Journal of Clinical Oncology, 2013
5.	Sushma Agrawal, Anil Maurya, Kirti Shrivastava, Shaleen Kumar, Mohan chandra Pant and Saroj kant Mishra.	Training the trainees in radiation oncology with telemedicine as a tool in a developing country: a two year audit	International Journal of Telemedicine and Applications 2009
6.	Saumya Pandey, Rama Devi Mittal, Madhu Srivastava, Kirti Srivastava, and Balraj Mittal,	Cyclooxygenase-2 Gene Polymorphisms and Risk of Cervical Cancer in a North Indian Population	International Journal of Gynecological Cancer ,2010

7.	Saumya Pandey, Rama Devi Mittal, Madhu Srivastava, Kirti Srivastava, Shalini Singh, Shruti Srivastava, Balraj Mittal	Impact of Toll- like receptors ( TLR ) 2 ( -196 to – 174 del ) and TLR 4 ( Asp299 Gly, Thr399Ile) in cervical cancer susceptibility in North Indian Women	Gynecology Oncology, 2009
8.	Mohd Abbas, Vandana Singh, K Srivastava, M Banerjee	Glutathione S- Transferase gene polymorphisms and treatment outcome in cervical cancer patients under concurrent chemoradiation.	PLOS ONE 2015
9.		Association of CYP1A1 gene variants rs4646903 (T>C) and rs1048943 (A>G) with cervical cancer in a North Indian population	
10		'Factors affecting Quality of Life of Cervical Cancer patients: A multivariate analysis'	Submitted to JCRT by Manju Verma

#### BMW

1	Reema Kumari, Kirti Srivastava, Anupam Wakhlu, Anshita Singh	Establishing Healthcare Waste Management in Medical University of India- A Successful Approach	Clinical Epidemiology & Global Health, 2013
2	Dr. K. Srivastava, Dr. A. Nischal, Dr.A. WakhluDr. M.Rathi , Dr.R.Kumari	Affordable and sustainable Biomedical waste management strategies in a large tertiary care hospital in a developing country: cost containment with optimal care	Accepted for presentation in ISWA world congress 2013 at Vienna

## **PUBLICATIONS - NATIONAL**

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Oncology  
BMW

S.No	Authors	Title	Journal, Year & vol
1	Kirti Srivastava, Anuradha Nischal Anupam Wakhlu, Anshita Singh rivastava,...	Cytotoxic Drug Disposal: Urgent Need For Guidelines	Journal of Indian Society of Hospital Waste Management, 2012
2	Reema Kumari, Kirti Srivastava, Anupam Wakhlu	Hospital Waste management	Journal of Physiology, 2012

## **ABSTRACTS PUBLISHED:**

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S.No	Authors	Title	Conference, Year
1	Md Abbas, Kirti Srivastava, Sayan Paul, Monisha Banerjee	Glutathione S-transferase (GSTT1&P1) Gene Polymorphisms & their Association with cervical cancer	International Conference on Genomics, genetic disease and diagnostics <b>February 2011</b>
2	Kirti Srivastava, Sayan Paul, Kundan Singh Chaufal, Shamsundar S D, M C Pant, Punita Lal, M L B Bhatt, Rajeev Gupta, Sudhir Singh,	Concurrent Chemo- Radiation Vs Radiotherapy Alone In Carcinoma Cervix: A Randomized Phase III Trial	AROICON JAIPUR 34 <sup>th</sup> Annual National Conference of the Association of Radiation Oncologist of INDIA on 24 <sup>th</sup> - 27 <sup>th</sup> <b>November, 2011</b>
3	MLB Bhatt, V K Srivastava, D P Mishra, M M Goel, D Mehrotra, Kirti Srivastava, RK Garg	Significance of plasma osteopontin (OPN) as a biomarker in squamous cell carcinoma of tongue.	Abstract #114257 <b>ASCO-2013</b>

4	Singh U, Anjum, Qureshi S, Negi N, Singh N, Goel M, Srivastava K	Comparative study between liquid based cytology & conventional pap smear for cytological follow up of treated patients of cancer cervix	Indian J Med res. 2016 March 147(3);263-267
5	Abbas M, Kushwaha VS, Srivastava K, Raza ST, Banerjee M	Impact of GSMTM1, GSTT1 and GSTP1 genes polymorphisms on clinical toxicities and response to concomitant chemoradiotherapy in cervical cancer	Br. J. Biomed Sci 2018 June 18
6	Singh N, Negi N, Srivastava K, Agarwal G	A cohort study of vulvar cancer over a period of 10 years and review of literature	India J cancer 2016 July-Sep 5,3(3), 412-415
7	Singh AK, Kushwaha JK, Anand A, Sonkar AA, Husain N, Srivastava K, Singh S	Human papilloma virus in oral cavity cancer and relation to change in quality of life following treatment-a pilot study from northern India	Indian J Surg Oncol, 2016 Dec: 7(4)-386-391. Epub 2016 Sep 22
8	Mall P, Chand P, Singh BP, Rao J, Siddharth R, Srivastava K	Effectiveness of positioning stents in radiation-induced xerostomia in patients with tongue carcinoma: a randomized controlled trial	Int J Prosthodont, 2016 Sep-Oct: 29(5):455-60. doi: 10.11607/IJp.4499
9	Singh R, Bhatt ML, Singh SP, Kumar V, Goel MM, Mishra DP, Srivastava K, Kumar R	Expression levels of tetraspanin KAI1/CD82 in breast cancers in north Indian females	Asian Pac J Cancer Prev, 2016;17(7):3431-6
10	Yanochen K, Siddharth R, Singh SV, Singh RD, Aggarwal H, Mishra N, Tripathi S, Srivastava K,	A pilot study to evaluate the efficacy of cerrobend shielding stents in preventing adverse radiotherapeutic effects in buccal carcinoma patients	J Cancer Res Ther, 2016 Jan-Mar;12(1):314-7, doi: 10.4103/0973-1482.154015.

	Verma T, Kumar P		
11	Verma A, Kushwaha HN, Srivastava AK, Srivastava S, Jamal N, Srivastava K, Ray RS	Piperine attenuates UV-R induced cell damage in human keratinocytes via NF-KB, Bax/Bcl-2 pathway: An application for photoprotection	J Photochem Photobiol B, 2017 Jul; 172-148. doi: 10.1016/j.jphotobiol.2017.05.018 Epub 2017 May 19
12	Asnani M, Srivastava K, Gupta HP, Kunwar S, Srivastava AN	A rare case of giant vaginal fibromyoma	Intractable rare Dis Res, 2016 Feb;5(1):44-6. doi: 10.5582/irdr.2015.01037
13	Abbas M, Kushwaha VS, Srivastava K, Banerjee M	Glutathione S-transferase gene polymorphisms and treatment outcome in cervical cancer patients under concomitant chemoradiation	PLoSOne, 2015 Nov 16;10(11):e0142501. doi: 10.1371/journal.pone.0142501.e Collection 2015
14	Abbas M, Srivastava K, Imran M, Banerjee M	Association of CYP1A1 gene variants rs4646903 (T>C) and rs1048943 (A>G) with cervical cancer in a north Indian population	Eur J Obstet Gynecol Repod Biol, 2014 May; 176:68-74. doi: 10.1016/j.ejogrb.2014.02.036. Epub 2014 Mar 4
15	Chaudhuri T, Paul S, Srivastava K	Primary granulocytic sarcoma of lip- A rare extramedullary presentation of myeloid leukaemia	Indian J Med Paeditr Oncol, 2013 Apr;34(2):126-7. doi: 10.4103/0971-5851.116212
16	Paul S, Chaudhari T, Pant MC, Parmar D, Srivastava	Association of cytochrome P450 2C9 polymorphism with locally advanced head and neck squamous cell carcinoma and response to concurrent cisplatin-based radical	South Asian J Cancer, 2014 Jul;3(3):154-8 doi: 10.4103/2278-330X, 136771



		chemoradiation	
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### ***BOOK CHAPTERS/NEWS BULLETIN***

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Sn.	Name of the Book	Chapter	Author
1	Molecular Biology Alfa Publications	Role of Oxidative stress and Antioxidant in carvical cancer patients	Mohhammad Abbas, Kirti Srivastava, Monisha Banerjee
2	Book on Gynecological malignancies	Facilities at KGMU	Dr Rekha Sachan, Kirti Srivastava
3	News Letter	Establishment of BMWM Facility at KGMU ( Volume -1, 2012)	Editors: BMWM Team

### **Dr. Seema Gupta**

1. **Seema Gupta**, Vandana Kushwaha, Sandeep Verma, Huma Khan, M.L.B. Bhatt, Nuzhat Husain, Mahendra Negi, Vivek Bhosale, Ashim Ghatak. Understanding molecular markers in recurrent oral squamous cell carcinoma treated with chemoradiation. *Heliyon*. 2016;2(12),e00206.
2. **Gupta S**, Khan H, Kushwaha VS, Husain N, Negi M, Ghatak A, Bhatt ML. Impact of EGFR and p53 expressions on survival and quality of life in locally advanced oral squamous cell carcinoma patients treated with chemoradiation. *Cancer Biol Ther*. 2015;16(9):1269-8.
3. Khan H, **Gupta S**, Husain N, Misra S, Negi M, Jamal N, Ghatak A. Correlation between expression of Cyclin-D1, EGFR and p53 with chemoradiation response in patients of locally advanced oral squamous cell carcinoma. *Elsevier's Biochimica et Biophysica Acta (BBA) Clinical*. 2015;3,11–17.

4. Kushwaha VS, **Gupta S**, Husain N, Khan H, Negi M, Jamal N, Ghatak A. Gefitinib, Methotrexate and Methotrexate plus 5-Fluorouracil as palliative treatment in recurrent head and neck squamous cell carcinoma. *Cancer Biol Ther.* 2015;16(2):346-51.

## **Dr. Rajendra Kumar**

### **A. Scientific Publication , Case Report & Abstracts (20)**

#### **Paper Publications (11)**

- 1. A prospective randomized comparison of concurrent chemo radiation with neo-adjuvant and Adjuvant chemotherapy with concurrent chemo-radiation alone for locally advanced carcinoma cervix.**

Indian Journal of medical and  
Paediatric Oncology:  
Vol.XX, IssueXX, June2018

- Singh Rahul MD, Bhatt M.L.B. MD, **Kumar Rajendra MD**, Srivastava Kirti MD, Grover RK MD, Shukla Pragya MD, Ratauri P Vijay MD, Roopali MD, Gaur Jalaj MD, Saha Mandira MD, Kishan Dewesh MD.

- 2. Expression of Radioresistant gene PEG 10 in OSCC patients and its Prognostic Significance.**

Asia Pacific Journal of Cancer  
Prevention,  
Vol. 18, 1513-1518, June 2017

- Shankar Sharan Singh; **Rajendra Kumar**; Vandana Singh Kushwaha; M Lal Brahm Bhatt ;Anshuman Singh; Anupam Mishra ; Hari Ram ; Devendra Parmar ; Rajiv Gupta.

- 3. Role of Matrix metalloproteinase 13 gene expression in the evaluation of radiation response in Oral Squamous cell Carcinoma.**

Journal of Carcinogenesis, Vol.XX,  
IssueXX April 2017

- Shankar Sharan Singh ; M Lal Brahm Bhatt; Vandana Singh Kushwaha; Anshuman Singh; **Rajendra Kumar**; Devendra Parmar.

#### **4. Expression Levels of Tetraspanin KA11/CD82 in breast cancer in North Indian Females.**

Asia- Pacific Journal of Cancer

Prevention

Vol 17/2016 Pg No-

1-6

- Richa Singh<sup>1</sup>, Madan Lal Brahma Bhatt<sup>1\*</sup>, Saurabh Pratap Singh, Vijay Kumar, Madhu Mati Goel, Durga Prasad Mishra<sup>6</sup>, Kirti Srivastava<sup>1</sup>, Rajendra Kumar<sup>1</sup>,

#### **5. Evolution of KiSS1 as a prognostic biomarker in North Indian Breast Cancer Cases**

Asia pacific Journal of Cancer Prevention

Vol. 17, 2016 Pg. no.-1789-1795

- Richa Singh<sup>1</sup>, Saurabh Pratap Singh<sup>2</sup>, Sanjeev Misra<sup>3</sup>, Vijay Kumar<sup>4</sup>, Madhu Mati Goel<sup>5</sup>, Durga Prasad Mishra<sup>6</sup>, Rajendra Kumar<sup>1</sup>, Madan Lal Brahma Bhatt<sup>1\*</sup>

#### **Altered Transcriptional and Translational Levels of Nm23H1 in North Indian Breast Cancer females and it's Prognostic relevance.**

International Journal Of Current Research Vol. 8,

Issue 07,

July, 2016, Pg. 34081-34086

Richa Singh<sup>1</sup>, Madan Lal Brahma Bhatt<sup>1\*</sup>, Saurabh Pratap Singh, Vijay Kumar, Madhu Mati Goel, Durga Prasad Mishra<sup>6</sup>, Rajendra Kumar<sup>1</sup>.

#### **6. Clinico-epidemiological study of oral squamous cell carcinoma : A tertiary care centre study in North India.**

Journal Of Oral Biology and

Craniofacial Research

Vol 6, Issue 1, Jan – Apr 2016, Pg 32-35

- Mahendra Pratap Singh, Vijay Kumar, Akesh Agarwal, Rajendra Kumar, M.L.B. Bhatt, Sanjeev Mishra

#### **7. Association of Genetic polymorphism of X-Ray repair cross complementing 1 gene in locally advanced laryngeal cancer and with treatment response to chemo-radiation**

International Journal of Science and

Research (IJSR)

Acceptance Vol.5, Issue 3, March 2016

- Dr. Ratori Vijay Pashuram , Dr. Rajendra Kumar, Prof. MLB Bhatt, Dr. Parmar, Dr.Singh, Dr. Rahul Singh, Dr. Jalaj Gaur

**8. Expression Of Epidermal Growth Factor Receptor (EGFR) And Its Correlation With Response In Locally Advanced Carcinoma Of Uterine Cervix Treated With Chemo-radiation**

International Journal of Science and Research (IJSR-2017)

(Accepted)

- Pranay Katepogu ; Rajendra Kumar ;Kirti Srivastava  
;M.L.B.Bhatt;Sudhir Singh.

**9. “SU-GG-T-154: Use of I’<sup>m</sup>RT matrix X for routine dynamic MLC- QA and IMRT dose verification”.**

Journal- Medical Physics

June 2008, vol 35 issue 6. P2761

- Anup Bhardwaj, SC Sharma, FD Patel, S Ghoshal, AS Oinam, R Kapoor, Rajendra Kumar Goswami.P.

**10. “Prospective evaluation of High-dose intermittent synchronous cisplatin with Radiotherapy versus Radiation alone in advanced Head and Neck cancer”.**

Journal of clinical Radiotherapy and

oncology Vol.1,

No. 1-2: 19-24, March/June 2001

- Rajendra Kumar. M.D. ,Jyoti Narain Dwivedi, MD, DMRT, Kamal Sahni, DMRT, MD, A.K. Dixit ,MD, DRM, S.A. Siddiqui , MD, M.L.B. Bhatt.

**Case Report (02)**

**1. Classic biphasic Pulmonary blastoma in an adult patient-A case report.**

International Journal Of Science And

Research

Volume 5 Issue 3, March 2016 Page

No. 80-82

- Dr. Rajendra Kumar, Dr. Vijay P. Raturi, Dr. Manoj Jain, Dr. M.L.B. Bhatt

**2. Paratesticular metastases from a medulloblastoma”. A case report**

Asia- Pacific Journal of Clinical Oncology, 2008; 4:

68-70

- Rakesh Kapoor, Sunil Choudhary, Rajendra Kumar, Vijay Mahesh, Radhika, SC Sharna, and Bishan D Radotra

## **PUBLISHED ABSTRACTS (7)**

1. **“An Attempt at organ conservation in Gastric Lymphoma”**- A Retrospective Study. at  
J.K. Cancer Institute G.S.V.M. Medical College, Kanpur – Feb 97.
  - **Kumar Rajendra**, Agarwal S., Gosh A, Sahni K., JK Cancer Institute G.S.V.M. Medical College Kanpur
  
2. **“Evaluation of Role of Neo-Adjuvant or Concurrent Chemotherapy in Advanced Head and Neck Cancer of oral cavity”** - at Regional Cancer Centre, Kamla Nehru Hospital, Allahabad, Feb 1998.
  - **Kumar Rajendra**, Verma Rajendra, Agarwal S., Gosh A, Sahni K., JK Cancer Institute G.S.V.M. Medical College Kanpur
  
3. **“Prospective evaluation of High-dose intermittent synchronous cisplatin with Radiotherapy versus Radiation alone in advanced Head and Neck cancer”** - XIV<sup>th</sup> U.P. Chapter Convention, Association of Radiations Oncologists of India, K.G. Medical College, Lucknow, April – 2001.
  - **Rajendra Kumar**. M.D. ,Jyoti Narain Dwivedi, MD, DMRT, Kamal Sahni, DMRT, MD, A.K. Dixit ,MD, DRM, S.A. Siddiqui , MD, M.L.B. Bhatt,  
  
Department of Radiotherapy J.N. Medical college, AMU Aligarh and  
Department Of Radiotherapy, J.K Cancer Institute, G.S.V.M. Medical college Kanpur.
  
4. **“Multimodal Treatment of Brain Tumor, A Retrospective study”**, XIV<sup>th</sup> U.P. Chapter Convention, Association of Radiations Oncologists of India, K.G. Medical College, Lucknow, April – 2001.
  - Dr. M.L.B. Bhatt, Prof S.A. Siddiqui, **Dr Rajendra Kumar**, Dr. ZAbiullah and Dr. V.K. Srivastava Department of Radiotherapy and Department Of surgery, J.N Medical College , AMU, Aligarh.
  
5. **“Conventional vs Short course radiotherapy in patients with GBM with poor prognostic factors”** - at 6th EBM, CNS tumors, TMH Mumbai Feb. 2008 .
  - **Rajendra Kumar**, Kapoor Rakesh, ShababL Angurana, Sushmita Ghoshal, Suresh C Sharma, Vinay Kumarat Department Of Radiotherapy, PFIMERRCC, Chandigarh

6. "Comparative analysis of changes in cancer profile in three different decadal years "of UP Chapter Silver Jubilee Convention AROI at Allahabad on 8<sup>th</sup>& 9<sup>th</sup> June 2013.
  - Patel A, Singh S, Singh V, Kumar S, Panth M.C., Verma J, Srivastava PK, Gupta R, Srivastava k, Pauily NK, **Kumar Rajendra** , Verma T.Department of Radiotherapy KGMU Lucknow
7. **Departmental audit of Head & Neck Carcinoma of the year 2010 at K.G.M.U. Lucknow U.P.** "of UP Chapter Silver Jubilee Convention AROI at Allahabad on 8<sup>th</sup>& 9<sup>th</sup> June 2013.
  - Prakash Chandra ,M Srivastava. Jamal N, Pant M.C. , Singh S, Verma J, Srivastava PK, Gupta S, **Kumar Rajendra**, Panuily NK, Kumar N, Verma T Department of Radiotherapy KGMU Lucknow.

### **Dr. Sudhir Singh**

#### **Publications**

1. Akshay Anand , Suyash Singh , Abhinav A. Sonkar , Nuzhat Husain , Kul Ranjan Singh , **Sudhir Singh** , Jitendra K. Kushwaha Expression of vitamin D receptor and vitamin D status in patients with oral neoplasms and effect of vitamin D supplementation on quality of life in advanced cancer treatment **Contemp Oncol (Pozn) 2017; 21 (3): 145–151**
2. Sandip Barik, **Sudhir Singh**, Seema Gupta, Naseem Jamal, Devendra Parmar, Ankur Dhawan, MLB Bhatt Association of polymorphism of Enzyme Thiopurine Methyl Transferase in Head & Neck Squamous Cell Cancer and treatment response to Concurrent Chemo Radiotherapy **Sandip Barik et al JMSCR Volume 05 Issue 04 April 2017**
3. Tridiv Katiyar, Shailendra S. Maurya,Feza Hasan, Arvind P. Singh, Anwar J. Khan, Rahat Hadi, **Sudhir Singh**, Madan L.B. Bhatt, and Devendra Parmar\* Association of Cytochrome P450 1B1Haplotypes With Head and Neck Cancer Risk **Environmental and Molecular Mutagenesis 00:00^00 (2017)**

## **Navin Singh**

### **PROJECT UNDERTAKEN**

Implementation of forward intensity modulated radiation therapy treatment planning of breast cancer on a Cobalt-60 treatment unit.

**Principle Investigator:** Dr Navin Singh, Assistant Professor, Department of radiotherapy.

### **Fellowship**

**ICTP-IAEA fellowship** on “Monte Carlo Radiation Transport and Associated Data Needs for Medical Applications” held at [International Centre for Theoretical Physics](#) (ICTP), **Trieste, Italy** from 18 September 2017 to 29 September 2017.

### **Publications**

1. **Singh N**, Sharma SD, Painuly NK, Mandal A, Agarwal LM, Sinha A. Underdosing of the Maxillary Sinus for Small Fields used in Newer Radiotherapy Techniques: Comparison of TLD and Monte Carlo Data. [J Cancer Res Ther](#). 2018; 14(2):351-356.
2. Ahamed S , **Singh N** , Gudipudi D , Mulinti S, Kumar A , Soubhagya B , Sresty M. Assessment of monitor unit limiting strategy using volumetric modulated arc therapy for cancer of hypopharynx. [Phys Med](#). 2017;35:73-80.
3. Mandal A, Ram C, Mourya A, **Singh N**. Small Field Depth Dose Profile of 6MV Photon Beam In A Simple Air-Water Heterogeneity Combination: A Comparison Between AAA Dose Estimation With TLD Dose Measurement. [J Cancer Res Ther](#). 2017;13(3):491-497.
4. Puzhakkal N, Kochunny AK, Padannayil NM, **Singh N**, Chalil JE, Umerb JK. Comparison of treatment plans: a retrospective study by the method of radiobiological evaluation. Pol J Med Phys Eng. 2016;22(3):61-68
5. Sinha A, **Singh N**, Dixit BM, Painuly NK. Assessment of S Values for  $I^{131}$  and  $Y^{90}$  based on the Digimouse voxel Phantom. [J Cancer Res Ther](#). 2016 (**Accepted for publication**)
6. Sinha A, **Singh N**, Dixit BM, Painuly NK, Patni HK, Yadav A. Evaluation of Electron Specific Absorbed Fractions in organs of Digimouse Voxel Phantom using Monte Carlo Simulation code FLUKA. J Biomed Phys Eng. 2016 (**Accepted for publication**)

## **Ms. Shraddha Srivastava**

### **Achievements from 2016- 2018**

Name: Shraddha Srivastva

Department: Dept. Of Radiological Physics

Mob.no.: 9936933854

E-mail: [shraddha\\_srivastava06@yahoo.com](mailto:shraddha_srivastava06@yahoo.com)

### **Ongoing Research Project**

Working as Principal Investigator on Intramural project entitled '*Escalation of dose to Gross tumor volume utilizing MRI based image guided adaptive brachytherapy (IGABT) in advanced carcinoma cervix, a phase III randomized controlled trial*' sanctioned by K.G.M.U.

### **Publications**

1. **S. Srivastava**, N. Kumar Painuly, S. Prasad Mishra, K. Srivastava, N. Singh, S. Singh, M. Lal Brahma Bhatt. Evaluation of volumetric doses of organs at risk in carcinoma cervix patients with HDR intracavitary brachytherapy and comparison of CT-based and conventional plans. Journal of Biomedical Physics and Engineering (**Accepted for publication in December 2017**).

### **Conferences attended**

1. Participated in 'World Congress of Medical Physics and Biomedical engineering' held between June 3, 2018 to June 8, 2018 at Prague, Czech Republic.
2. Participated in Annual conference of Association of Medical Physicists of India organised by KIMS Hospital during 18<sup>th</sup>-20<sup>th</sup> November, 2016.

### **Workshops attended**

1. AROI-ESTRO teaching course from March 8, 2018 to March 11, 2018 at Dr. R.M.L.I.M.S, Lucknow.
2. Medical writing workshop in June, 2017 at Kalam Center, King George's Medical University, Lucknow.

### **Publication by Prof. N.K. Painuly- 07**

- \* Monographs
- \* Chapters in Books                      **NA.**
- \* Books edited                              **NA.**
- \* Books with ISBN with details of publishers                      **NA.**
- \* Number listed in International Database (For e.g. Web of Science,



Scopus, Humanities International Complete, Dare Database - International Social Sciences Directory, EBSCO host, Medline, etc.)

- \* Citation Index – range / average
- \* SNIP
- \* SJR
- \* Impact Factor – range / average
- \* h-index

22. Details of patents and income generated **NA.**

23. Areas of consultancy and income generated **NA.**

24. Faculty selected nationally / internationally to visit other laboratories / institutions / industries in India and abroad **NA.**

25. Faculty serving in

- a) National committees b) International committees c) Editorial Boards d) any other (specify)

26. Faculty recharging strategies (Refresher / orientation programs, workshops, training programs and similar programs).

#### **National & International Conferences & CME Programme.**

27. Student projects

- percentage of students who have taken up in-house projects including inter-departmental projects : **Thesis Projects.**
- percentage of students doing projects in collaboration with other universities / industry / institute : **50% Students**

28. Awards / recognitions received at the national and international level by

- Faculty
- Doctoral / post doctoral fellows
- Students

29. Seminars/ Conferences/Workshops organized and the source of funding (national / international) with details of outstanding participants, if any.

**National AROI , Details of International Speakers.**

**Annual Conference of Association of Medical Physicists of India (Northern Chapter) during February 2014.**

30. Code of ethics for research followed by the departments

**Ethical Committee Decisions.**

31. Student profile program-wise:

Name of the Program (refer to question no. 4)	Applications received	Selected		Pass percentage
		Male	Female	
Students of B.Sc. Radiotherapy Technology Course-2015	NA	4 Male & 1 Female		80%
Students of B.Sc. Radiotherapy Technology Course-2015	NA	3 Male & 1 Female		100%
Students of B.Sc. Radiotherapy Technology Course-2016	NA	4 Male		-
Students of M.D. Radiotherapy-2014	NA	6 Male		100%
Students of M.D. Radiotherapy-2015	NA	3 Male 3 Female		100%
Students of M.D. Radiotherapy-2016	NA	2 Male & 3 Female		-

32. Diversity of students

Name of the Program (refer to question no. 4)	% of students from the same university	% of students from other universities within the State	% of students from universities outside the State	% of students from other countries
B.Sc. Radiotherapy Technology Course -2014	-	100%	-	-
B.Sc. Radiotherapy Technology Course -2015	-	100%	-	-
B.Sc. Radiotherapy Technology Course -2016	-	100%	-	-
M.D. Radiotherapy -2014	16.66%	50%	33.33%	-
M.D. Radiotherapy -2015	16.66%	50%	33.33%	-
M.D. Radiotherapy -2016	20%	60%	20%	-

33. How many students have cleared Civil Services and Defense Services examinations, NET, SET, GATE, USMLE, PLAB, GPAT, NCLEX, CGFNS,

IELTS and other competitive examinations? Give details category-wise.

NA.

34. Student progression

<b>Student progression</b>	<b>Percentage against enrolled</b>
UG to PG	NA.
PG to M.Phil,DM / M Ch / DNB	NA.
PG to Ph.D.	NA.
Ph.D. to Post-Doctoral	NA.
Employed <ul style="list-style-type: none"> <li>• Campus selection</li> <li>• Other than campus recruitment</li> </ul>	NA.
Entrepreneurs	NA.

35. Diversity of staff

<b>Percentage of faculty who are graduates</b>		<b>Percentage</b>
of the same university	Dr. M.L.B. Bhatt Dr. Rajeev Gupta Dr. Sudhir Singh	30%
from other universities within the State	Dr. Kirti Srivastava Dr. Seema Gupta Dr. Rajendra Kumar Dr. Navin Singh Dr. Teerthraj Verma	50%
from universities from other States	Dr. Shraddha Srivastava	10%
from universities outside the country	Dr. N.K. Painuly	10%

36. Number of faculty who were awarded M.Phil.,DM, M Ch, Ph.D., D.Sc. and D.Litt. during the assessment period : **Ph.D. Examinations - 03**

37. Present details of departmental infrastructural facilities with regard to
- a) Library : **Available**
  - b) Internet facilities for staff and students : **Available**
  - c) Total number of class rooms : **One**
  - d) Class rooms with ICT facility and 'smart' class rooms : **One**
  - e) Students' laboratories : **One**
  - f) Research laboratories : **One**
38. List of doctoral, post-doctoral students and Research Associates
- a) from the host institution/university - **03 (under Prof. N.K. Painuly)**
  - b) from other institutions/universities - **02 (under Prof. N.K. Painuly).**
39. Number of post graduate students getting financial assistance from the university.
- NA.**
40. Was any need assessment exercise undertaken before the development of new program(s)? If so, highlight the methodology.

#### **Need for M.Sc. in Medical Physics :**

1. **Patient Service** - Medical physicists have many responsibilities and a major role to play in areas of radiology and radiation oncology. These fields use very sophisticated and expensive equipment, and physicists are responsible for much of its design, testing, quality assurance and most importantly treatment planning. Despite many efforts by several colleges/universities to run medical physics program, number of medical physicists working is not sufficient to cater to the needs of many hospitals. Therefore, there is surely a need to begin such professional training programs/courses to produce more physicists so as to ensure an accurate treatment plan and delivery.
2. **Research and Development** - There is a rising need for more PhDs and research activities in Medical physics. Initiating academic programs/courses in medical physics will provide a base for development of new instrumentation and technology. Therefore there is a growing emphasis on medical physicist as they play an important role in radiation related areas primarily radiation oncology, radiology and nuclear medicine.
3. **Academics**- Medical physicists working as a faculty at universities and colleges, help train future medical physicists, resident physicians, medical students, and technologists who operate various types of

equipment. They also conduct courses in medical physics and radiobiology for students. Such teaching programs provide a way to build more knowledge pillars in healthcare sector hence stressing on the need to begin medical physics related course in present scenario.

41. Does the department obtain feedback from
- a. faculty on curriculum as well as teaching-learning-evaluation? If yes, how does the department utilize the feedback?
  - b. students on staff, curriculum and teaching-learning-evaluation and how does the department utilize the feedback?
  - c. alumni and employers on the programs offered and how does the department utilize the feedback? **NA.**
42. List the distinguished alumni of the department (maximum 10)
1. **Late. Dr. M.C. Pant- Padamshri, B.C. Roy Awardee, D.sc, President AROI, worked as Director, RMLIMS, Lucknow, and as Vice Chancellor, Hemwati Nandan Bahuguna Medical University, Dehradun.**
  2. **Dr. Shaleen Kumar, Head, Dept. of Radiotherapy, SGPGIMS, Lucknow.**
  3. **Dr. Neeraj Rastogi, Asso. Professor, Dept. of Radiotherapy, SGPGIMS, Lucknow.**
  4. **Dr. Rohini Khurana, Asso. Professor, Dept. of Radiotherapy, RMLIMS, Lucknow**
  5. **Dr. A.K. Pandey, Head of The Dept.**
  6. **Dr. Madhup Rastogi, Asso. Professor, Head, Dept. of Radiotherapy, RMLIMS, Lucknow**
  7. **Dr. M.K. Gupta, Professor, Dept. of Radiotherapy, I.G.M.C., Shimla**
  8. **Dr. Rahat Hadi, Assist. Professor, Dept. of Radiotherapy, SGPGIMS, Lucknow.**
  9. **Dr. Aasiya Matin, Myeloma Institute, Arkansas, U.S.A.**
  10. **Dr. Shyam Sundar, Assist. Professor, Dept. of Radiotherapy,, Kidwai Memorial Institute of Oncology, Bangaluru.**
43. Give details of student enrichment programs (special lectures / workshops / seminar) involving external experts.
- Radiobiology Course.**
44. List the teaching methods adopted by the faculty for different programs including clinical teaching.
1. **Seminars**
  2. **Demonstration**
  3. **Case Presentation**
  4. **Lectures.**

45. How does the department ensure that program objectives are constantly met and learning outcomes are monitored?

**Periodical objectives examination.**

46. Highlight the participation of students and faculty in extension activities.  
NA.

47. Give details of “beyond syllabus scholarly activities” of the department.  
NA

48. State whether the program/ department is accredited/ graded by other agencies? If yes, give details. NA.

49. Briefly highlight the contributions of the department in generating new knowledge, basic or applied.

**Share basic knowledge with other Department in different lectures in CGR & Journal Club applied in tumor board and try to develop Institutional protocol & guideline.**

50. Detail five major Strengths, Weaknesses, Opportunities and Challenges (SWOC) of the department.

**Major Strength:**

1. Rich faculty strength
2. Rich Residents strength
3. Reputed 100 years old Institute
4. Good Scientific/Academic facilities
5. Supportive administration.

**Weakness:**

1. Majority of patient case coming in advance stage so cure is not possible.
2. Delay in establishment of new unit
3. Lacking newer machine
4. Due to lack of modern treatment modalities publications in journal is very difficult.
5. Long waiting list of patients due to limited machines.

**Opportunities:**

1. Good curriculum for B.Sc. Students.
2. Good curriculum for P.G. Students.
3. Good curriculum for M.B.B.S. Students (posting classes).
4. Good platform to interact with faculties of national & International Institute.
5. Good projection to other Institutes.

**Challenges:**

1. Difficulty to meet the expectations of general public.
2. Difficulty to meet the expectations of Government.
3. To cure almost incurable disease.

4. To provide comfort in terminally ill patient.
5. To update and enrich faculty members with current changes in cancer management.

51. Future plans of the department.

1. Establishment of a cancer centre along with various disciplines of Oncology.
2. Creation of preventive Oncology wing.
3. Development of community Education Program.

#### **4. Declaration by the Head of the Institution**

I certify that that the data included in this Self-Study Report (SSR) are true to the best of my knowledge.

This SSR is prepared by the institution after internal discussions, and no part thereof has been outsourced.

I am aware that the Peer team will validate the information provided in this SSR during the peer team visit.



Signature of the Head of the institution

With seal:

**Vice Chancellor**  
King George's Medical University, Uttar Pradesh  
Lucknow

Place: Lucknow

Date: