



PARKVIEW

COMPREHENSIVE CANCER CENTER

April 5, 2013

U.S. Nuclear Regulatory Commission
Region III
Materials Licensing Section
2443 Warrenville Road
Suite 210
Lisle, Illinois 60532

RE: Amendment No. 112 to NRC Material License No. 13-01284-02

Dear Madam or Sir:

Parkview Health would like to amend its Byproduct Materials License, Number 13-01284-02 to add Qingya(Frank) Zhao, Ph.D. as an Authorized Medical Physicist for materials licensed under 10 C.F.R. 35.600. Enclosed is NRC Form 313A (AMP) and a copy of his resume and American Board of Radiology Board Certification.

Any questions regarding the above matter should be directed to the undersigned at 260-260-9145, or fax to 260-266-9246.

Sincerely,

Yuenian (Neal) Zhang, Ph.D.
Radiation Safety Officer
Parkview Health
11141 Parkview Plaza Drive
Fort Wayne, Indiana 46845
neal.zhang@parkview.com

RECEIVED APR 10 2013

The American Board of Radiology

*Organized through the cooperation of the
American College of Radiology, the American Roentgen Ray Society,
the American Radium Society, the Radiological Society of North America,
the Section on Radiology of the American Medical Association,
the American Society for Radiation Oncology, the Association of
University Radiologists, and the American Association of Physicists in Medicine.*

Hereby certifies that

Qingya Zhao, MS

*Has pursued an accepted course of graduate study and clinical work; has met certain standards
and qualifications, including passing the examinations conducted under the authority of
the American Board of Radiology, demonstrating to the satisfaction of the Board qualification
to practice; and is therefore awarded the Board's certification in*

Therapeutic Medical Physics

AMP Eligible



Certificate No. P5683

*Ongoing validity of this certificate is contingent upon
meeting the requirements of Maintenance of Certification.*

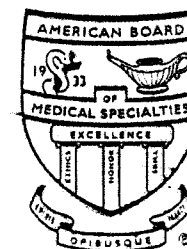
*This diplomate of the American Board of Radiology
is permitted to use the **DABR** mark to signify this certification.*

Eric J. Harty
President

Richard T. Morin
Secretary-Treasurer

Hayden R. ...
Executive Director

DABR



Effective: May 23, 2012

**AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE
AND PRECEPTOR ATTESTATION
[10 CFR 35.51]**

APPROVED BY OMB: NO. 3150-0120
EXPIRES: (05/31/2015)

Name of Proposed Authorized Medical Physicist

Qingya Zhao

Requested Authorization(s) (check all that apply) ☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s) ☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

PART I -- TRAINING AND EXPERIENCE
(Select one of the three methods below)

*Training and Experience, including Board Certification, must have been obtained within the 7 years preceding the date of application or the individual must have obtained related continuing education and experience since the required training and experience was completed. Provide dates, duration, and description of continuing education and experience related to the uses checked above.

☒ **1. Board Certification**

- a. Provide a copy of the board certification.
- b. Go to the table in 3.c. and describe training provider and dates of training for each type of use for which authorization is sought.
- c. Skip to and complete Part II Preceptor Attestation.

☐ **2. Current Authorized Medical Physicist Seeking Additional Authorization for use(s) checked above**

- a. Go to the table in section 3.c. to document training for new device.
- b. Skip to and complete Part II Preceptor Attestation

☐ **3. Education, Training, and Experience for Proposed Authorized Medical Physicist**

- a. Education: Document master's or doctor's degree in physics, medical physics, other physical science, engineering, or applied mathematics from an accredited college or university.

Degree	Major Field
College or University	

- b. Supervised Full-Time Medical Physics Training and Work Experience in clinical radiation facilities that provide high-energy external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services.

☐ Yes. Completed 1 year of full-time training in medical physics (for areas identified below) under the supervision of _____ who meets the requirements for an Authorized Medical Physicist.

AND

☐ Yes. Completed 1 year of full-time work experience in medical physics (for areas identified below) under the supervision of _____ who meets the requirements for an Authorized Medical Physicist.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

b. Supervised Full-Time Medical Physics Training and Work Experience (continued)

If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.

Description of Training/ Experience	Location of Training/License or Permit Number of Training Facility/Medical Devices Used+	Dates of Training*	Dates of Work Experience*
Medical Physics			
Performing sealed source leak tests and inventories			
Performing decay corrections			
Performing full calibration and periodic spot checks of external beam treatment unit(s)			
Performing full calibration and periodic spot checks of stereotactic radiosurgery unit(s)			
Performing full calibration and periodic spot checks of remote afterloading unit(s)			
Conducting radiation surveys around external beam treatment unit(s), stereotactic radiosurgery unit(s), remote after loading unit(s)			

Supervising Individual**

License/Permit Number listing supervising individual as an
authorized Medical Physicist

for the following types of use:

☐ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☐ Gamma stereotactic radiosurgery unit(s)

+ Training and work experience must be conducted in clinical radiation facilities that provide high-energy external beam therapy (photons and electrons with energies greater than or equal to 1 million electron volts) and brachytherapy services.

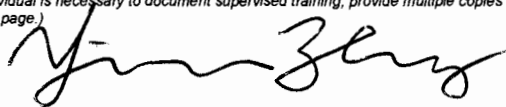
* 1 year of Full-time medical physics training and 1 year of full time work experience cannot be concurrent.

** If the supervising medical physicist is not an authorized medical physicist, the licensee must submit evidence that the supervising medical physicist meets the training and experience requirements in 10 CFR 35.51 and 35.59 for the types of use for which the individual is seeking authorization.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

c. Describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Hands-on device operation	Radiation Oncology, Parkview Health, Forte Wayne, Indiana July 2012 - April 2014		
Safety procedures for the device use	Radiation Oncology, Parkview Health, Forte Wayne, Indiana July 2012 - April 2014		
Clinical use of the device	Radiation Oncology, Parkview Health, Forte Wayne, Indiana July 2012 - April 2014		
Treatment planning system operation	Radiation Oncology, Parkview Health, Forte Wayne, Indiana July 2012 - April 2014		
Supervising Individual <small>If training is provided by Supervising Medical Physicist, (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)</small> 		License/Permit Number listing supervising individual as an authorized Medical Physicist 13-01284-02	

for the following types of use:

☒ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☐ Gamma stereotactic radiosurgery unit(s)

If Applicable:

Authorization Sought	Device	Training Provided By	Dates of Training
35.400 Ophthalmic Use of strontium-90			

d. Skip to and complete Part II Preceptor Attestation.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

☒ I attest that Qingya Zhao has satisfactorily completed the requirements in
Name of Proposed Authorized Medical Physicist
10 CFR 35.51(a)(1) and (a)(2).

OR

2. Education, Training, and Experience

☐ I attest that _____ has satisfactorily completed the 1-year of full-time
Name of Proposed Authorized Medical Physicist
training in medical physics and an additional year of full-time work experience as required by 10 CFR 35.51(b)(1).

AND

Second Section

Complete the following:

☒ I attest that Qingya Zhao has training for the types of use for which authorization
Name of Proposed Authorized Medical Physicist
is sought that include hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system.

AND

Third Section

Complete the following:

☒ I attest that Qingya Zhao has achieved a level of competency sufficient to
Name of Proposed Authorized Medical Physicist
function independently as an Authorized Medical Physicist for the following:

☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s)
☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

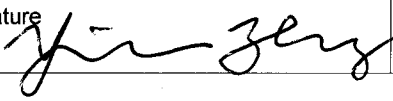
AND

Fourth Section

Complete the following for preceptor attestation and signature:

☒ I meet the requirements in 10 CFR 35.51, or equivalent Agreement State requirements for Authorized Medical Physicist for the following:


☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s)
☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

Name of Preceptor Yuenian Zhang	Signature 	Telephone Number (260) 266-9145	Date 3/29/2013
License/Permit Number/Facility Name 13-01284-02 Parkview Health			

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

c. Describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Hands-on device operation	Radiation Oncology, Parkview Health, Forte Waye, Indiana July 2012 - April 2014		
Safety procedures for the device use	Radiation Oncology, Parkview Health, Forte Waye, Indiana July 2012 - April 2014		
Clinical use of the device	Radiation Oncology, Parkview Health, Forte Waye, Indiana July 2012 - April 2014		
Treatment planning system operation	Radiation Oncology, Parkview Health, Forte Waye, Indiana July 2012 - April 2014		
Supervising Individual <small>If training is provided by Supervising Medical Physicist, (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)</small>		License/Permit Number listing supervising individual as an authorized Medical Physicist	
		13-01284-02	
for the following types of use:			
<input checked="" type="checkbox"/> Remote afterloader unit(s) <input type="checkbox"/> Teletherapy unit(s) <input type="checkbox"/> Gamma stereotactic radiosurgery unit(s)			

If Applicable:

Authorization Sought	Device	Training Provided By	Dates of Training
35.400 Ophthalmic Use of strontium-90			

d. Skip to and complete Part II Preceptor Attestation.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

☒ I attest that Qingya Zhao has satisfactorily completed the requirements in
Name of Proposed Authorized Medical Physician
10 CFR 35.51(a)(1) and (a)(2).

OR

2. Education, Training, and Experience

☐ I attest that _____ has satisfactorily completed the 1-year of full-time
Name of Proposed Authorized Medical Physician
training in medical physics and an additional year of full-time work experience as required by 10 CFR 35.51(b)(1).

AND

Second Section

Complete the following:

☒ I attest that Qingya Zhao has training for the types of use for which authorization
Name of Proposed Authorized Medical Physician
is sought that include hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system.

AND

Third Section

Complete the following:

☒ I attest that Qingya Zhao has achieved a level of competency sufficient to
Name of Proposed Authorized Medical Physician
function independently as an Authorized Medical Physicist for the following:

- ☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s)
☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

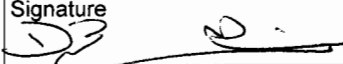
AND

Fourth Section

Complete the following for preceptor attestation and signature:

☒ I meet the requirements in 10 CFR 35.51, or equivalent Agreement State requirements for Authorized Medical Physicist for the following:

- ☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s)
☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

Name of Preceptor Danny Dickow	Signature 	Telephone Number (260) 266-9144	Date 3/29/13
License/Permit Number/Facility Name 13-01284-02 Parkview Health			

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

3. Education, Training, and Experience for Proposed Authorized Medical Physicist (continued)

c. Describe training provider and dates of training for each type of use for which authorization is sought.

Description of Training	Training Provider and Dates		
	Remote Afterloader	Teletherapy	Gamma Stereotactic Radiosurgery
Hands-on device operation	Radiation Oncology Indiana University Jan 2008 - July 2008 Jan 2011 - May 2011		
Safety procedures for the device use	Radiation Oncology Indiana University Jan 2008 - July 2008 Jan 2011 - May 2011		
Clinical use of the device	Radiation Oncology Indiana University Jan 2008 - July 2008 Jan 2011 - May 2011		
Treatment planning system operation	Radiation Oncology Indiana University Jan 2008 - July 2008 Jan 2011 - May 2011		
Supervising Individual <small>If training is provided by Supervising Medical Physicist, (If more than one supervising individual is necessary to document supervised training, provide multiple copies of this page.)</small> Eric Slessinger		License/Permit Number listing supervising individual as an authorized Medical Physicist 13-02752-03	

for the following types of use:

☒ Remote afterloader unit(s) ☐ Teletherapy unit(s) ☐ Gamma stereotactic radiosurgery unit(s)

If Applicable:

Authorization Sought	Device	Training Provided By	Dates of Training
35.400 Ophthalmic Use of strontium-90			

d. Skip to and complete Part II Preceptor Attestation.

AUTHORIZED MEDICAL PHYSICIST TRAINING AND EXPERIENCE AND PRECEPTOR ATTESTATION (continued)

PART II – PRECEPTOR ATTESTATION

Note: This part must be completed by the individual's preceptor. The preceptor does not have to be the supervising individual as long as the preceptor provides, directs, or verifies training and experience required. If more than one preceptor is necessary to document experience, obtain a separate preceptor statement from each.

First Section

Check one of the following:

1. Board Certification

☒ I attest that Qingya Zhao has satisfactorily completed the requirements in
Name of Proposed Authorized Medical Physicist
10 CFR 35.51(a)(1) and (a)(2).

OR

2. Education, Training, and Experience

☐ I attest that _____ has satisfactorily completed the 1-year of full-time
Name of Proposed Authorized Medical Physicist
training in medical physics and an additional year of full-time work experience as required by 10 CFR 35.51(b)(1).

AND

Second Section

Complete the following:

☒ I attest that Qingya Zhao has training for the types of use for which authorization
Name of Proposed Authorized Medical Physicist
is sought that include hands-on device operation, safety procedures, clinical use, and the operation of a treatment planning system.

AND

Third Section

Complete the following:

☒ I attest that Qingya Zhao has achieved a level of competency sufficient to
Name of Proposed Authorized Medical Physicist
function independently as an Authorized Medical Physicist for the following:

☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s)
☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

AND

Fourth Section

Complete the following for preceptor attestation and signature:

☒ I meet the requirements in 10 CFR 35.51, or equivalent Agreement State requirements for Authorized Medical Physicist for the following:

☐ 35.400 Ophthalmic use of strontium-90 ☐ 35.600 Teletherapy unit(s)
☒ 35.600 Remote afterloader unit(s) ☐ 35.600 Gamma stereotactic radiosurgery unit(s)

Name of Preceptor <u>Eric Stessinger</u>	Signature <u>[Signature]</u>	Telephone Number <u>317-944-1188</u>	Date <u>4/1/2013</u>
License/Permit Number/Facility Name <u>13-02052-03 & 12-02752-08, Permits: RONCO1, RONCO2, RONCO4, RONCO5 / FACILITY: IU Medical Center</u>			

Qingya (Frank) Zhao

4053 Teague Place, Carmel, IN 46074

Phone: (317) 709 - 4160 (H); (317) 709 - 7836 (M)

Email: zhaoqy4@gmail.com

Objective: To apply for the Assistant Professor position at University of Florida Proton Therapy Institute

Education:

Ph.D.	2011	Medical Physics Purdue University, West Lafayette, IN
MS	1999	Computer Science University of Massachusetts, Amherst, MA
B.S.	1994	Applied Physics Tsinghua University, Beijing China

Grants, Honors, and Awards:

2011	Co -Investigator of Varian Research Contract, titled "Optimization of 4D Proton Treatment Planning with Interplay Effects".
2010	Junior Investigator Award by the Sino-American Network for Therapeutic Radiology and Oncology (SANTRO), 2010.
2010	Best presentation award by 2010 AAPM Ohio River Valley Chapter Spring symposium.

Board certification: Certified by the American Board of Radiology (ABR)

Trainings:

October 2010	Geant4 Monte Carlo workshop, Stanford University, CA
July 2009	Varian Eclipse treatment planning and administration training course, Las Vegas, NV
01/2008–06/2008	Internship at Department of Radiation Oncology Indiana University School of Medicine, Indianapolis, IN
07/2008–10/2008	Internship at Department of Radiation Oncology University of Texas Southwestern Medical Center, Dallas, TX

Working Experience:

07/2012 – present

Medical Physicist, Parkview Comprehensive Cancer Center, Fort Wayne, IN

12/2008 – 6/2012

Medical Physicist, Indiana University Health Proton Therapy Center (IUHPTC),
Bloomington, IN

Adjunct Assistant Professor, Department of Radiation Oncology,
Indiana University School of Medicine, Indianapolis, IN

Clinical Experiences in Proton Therapy:

- QA for proton radiotherapy, including patient specific measurement, monthly, quarterly and annual QA of proton treatment machines
- Treatment simulation
- Proton treatment planning with Eclipse and CMS treatment planning systems.
- Chart check and treatment plan check

- Commissioning the Eclipse treatment planning system for uniform scanning proton beam
- Proton output factor modeling

Clinical Experiences in Photon Therapy:

- IMRT: QA
- HDR: planning, daily QA and treatment delivery
- Brachytherapy/LDR: treatment planning
- Chart check and treatment plan check
- Linac (Variant machines) monthly and annual QA
- CT monthly QA

08/2004 – 08/2005

Medical Physics Researcher, Massachusetts General Hospital, Boston, MA

- Designed and implemented a deformable image registration software package
- Developed an image visualization application with CT/PET overlaying functions

06/1999 – 08/2003

Software Developer, Net2Phone Inc. Boston, MA

- Designed and implemented software systems for tele- and web-communication applications, using C++ and java.
- Internationalizing the software system with customized implementation of the software systems on different computer platforms, such as windows and Unix.

Publications

(i) Refereed Journal Articles

1. Huanmei Wu, **Qingya Zhao**, Minsong Cao, Indra Das, A line-profile based double partial fusion method for acquiring planning CT of oversized patients in radiation treatment, *Journal of Applied Clinical Medical Physics*, Vol 13, Number 2, Pages 20-31, 2012.
2. Vadim Moskvina, Chee-Wai Cheng, **Qingya Zhao**, and Indra J. Das, Comment on "Comparison of secondary neutron dose in proton therapy resulting from the use of a tungsten alloy MLC or a brass collimator system", *Med. Phys.* 39, 2303-2305, 2012.
3. **Qingya Zhao**, Huanmei Wu, Chee-Wai Cheng, Indra Das, Dose monitoring and output correction for the effects of scanning field changes with uniform scanning proton beam, *Medical Physics*, 38, 4654-4661, 2011.
4. D. F. Nichiporov, A. V. Klyachko, K. A. Solberg, **Qingya Zhao**, Performance Characteristics and Long-term Calibration Stability of a Beam Monitor for a Proton Scanning Gantry, *Radiation Measurements* Volume 46, Issue 2, February 2011, Pages 244–249.
5. **Qingya Zhao**, Huanmei Wu, Mark Wolanski, Daniel Pack, Peter A. S. Johnstone, Indra J. Das, A sector-integration method for dose/MU calculation in a uniform scanning proton beam, *Phys. Med. Biol.* 55, N87–N95, 2010.
6. Chee-Wai Cheng, Mark Wolanski, **Qingya Zhao**, Leia Fanelli, Archana Gautam, Daniel Pack, and Indra J. Das, Dosimetric characteristics of a single use MOSFET dosimeter for in vivo dosimetry in proton therapy, *Med. Phys.* 37, 4266-4273, 2010.
7. Huanmei Wu, **Qingya Zhao**, Ross Berbeco, Seco Nishioka, Hiroki Shirato, S B Jiang, Gating based on internal/external signals with dynamic correlation updates, *Physics in Medicine & Biology*. 53, 7137–7150, 2008

8. Huanmei Wu, Gregory Sharp, **Qingya Zhao**, Hiroki Shirato and Steve Jiang, Statistical analysis and correlation discovery of tumor respiratory motion, *Phys. Med. Biol.* 52. 4761-4774, 2007.
9. Huanmei Wu, George Sandison, Li Zhao, **Qingya Zhao**, Hiroki Shirato and Steve Jiang, Correlation between parameters describing tumor motion and its location in the lungs, *Australas. Phys. Eng. Sci. Med.* Vol. 30, No 4, 2007, 341-344, 2007.

(ii) Refereed Conference proceedings

1. **Qingya Zhao**, Huanmei Wu, Indra Das, Quality Assurance of Compensators for Proton Therapy, accepted by World Congress on Medical Physics and Biomedical Engineering, 2012.
2. Li Zhao, I. J. Das, **Qingya Zhao**, A. Thomas, J. Adamovics and M. Oldman, "Determination of the depth dose distribution of proton beam using PRESAGE TM dosimeter," *J Phys Conf Series* 250, 012035 (012031-012034), 2010.
3. **Qingya Zhao** and Huanmei Wu, Quality Assurance of Internal/External Tumor Motion, in the processing of the 3rd International Conference on Bioinformatics and Biomedical Engineering, 832-836, 2009.
4. Huanmei Wu, **Qingya Zhao**, Li Zhao, Knowledge Discovery from Tumor Respiratory Motion Data, in the proceeding of 2008 International Conference on BioMedical Engineering and Informatics pp. 297-301, 2008.
5. Huanmei Wu, **Qingya Zhao**, Ross Berbeco, Seco Nishioka, Hiroki Shirato and Steve Jiang, Correlation identification between internal/external motion signals, *Medical Imaging: Physics of Medical Imaging. Proceedings of the SPIE*, Volume 6913, pp. 69131P-69131P-10, 2008.

(iii) Refereed Conference Abstracts/Presentations

1. **Qingya Zhao**, Huanmei Wu, Chee-Wai Cheng, Indra Das, Comparing the Effects of Tumor Motion Patterns and Beam Delivery Timing between Scattering and Uniform Scanning Proton Beam, oral presentation by 2011 Annual Meeting of the American Association of Physicists in Medicine.
2. **Qingya Zhao**, Huanmei Wu, Chee-Wai Cheng, Indra Das, Comparison of Respiratory Motion Effects between Scattering and Uniform Scanning Proton Beam, 50th Annual Meeting of the Particle Therapy Co-Operative Group, 2011.
3. Indra J. Das, **Qingya Zhao**, Chee-Wai Cheng, Peter A.S. Johnstone, Patterns of Technical Treatment Parameters in Proton Beam Therapy, 50th Annual Meeting of the Particle Therapy Co-Operative Group, 2011.
4. Huanmei Wu, **Qingya Zhao**, Chee-Wai Cheng, Indra Das, Gamma spectrum of therapeutic proton beam for the design and shielding of treatment room electronics, 50th Annual Meeting of the Particle Therapy Co-Operative Group, 2011.
5. **Qingya Zhao**, Huanmei Wu, Chee-Wai Cheng, Indra Das, Tumor motion effects for scattering proton beam and uniform scanning proton beam, oral presentation in Sino-American Network for Therapeutic Radiology and Oncology (SANTRO) symposium 2010.
6. **Qingya Zhao**, Huanmei Wu, Chee-Wai Cheng, Indra Das, Impact/effect of respiratory motion in proton beam therapy with uniform scanning, oral presentation at AAPM Ohio River Valley Chapter spring symposium 2010.
7. **Qingya Zhao**, Huanmei Wu, Chee-Wai Cheng, Indra Das, Impact/effect of respiratory motion in proton beam therapy with uniform scanning, accepted as oral presentation by 49th Annual Meeting of the Particle Therapy Co-Operative Group, 2010.
8. Huanmei Wu, Minsong Cao, **Qingya Zhao**, Indra Das, Impacting Parameter Analysis for IMRT Quality, accepted by 2010 Annual Meeting of the American Association of Physicists in Medicine.
9. **Qingya Zhao**, Huanmei Wu, Daniel Pack, Chee-Wai Cheng, Indra Das, The Effect of Scanning Pattern and Dose Rate On Output Factor for Uniform Scanning Proton Beam, accepted by 2010 Annual Meeting of the American Association of Physicists in Medicine.
10. **Qingya Zhao**, Huanmei Wu, Indra Das, Chee-Wai Cheng, Analysis of Influential Factors of Dose Delivery to a Moving Tumor in Proton Radiotherapy Using Uniform Scanning

- Beam, oral presentation at 2010 Annual Meeting of the American Association of Physicists in Medicine.
11. Slessinger E, Pepin E, **Qingya Zhao**, Zhao L, Das IJ, Dose Correction in Lung for HDR Breast Brachytherapy, *Med. Phys.* **37**, 3198 (2010).
 12. Hsi W, Schreuder A, Zheng Y, Ding X, **Qingya Zhao**, Das IJ. Scattering Factor of Energy-Stacking Layer On Outputs of Modulated Protons Using Uniform Scanning Technique, *Med. Phys.* **37**, 3290 (2010)
 13. Cheng CW, Zhao L, Wolanski M, Allgower C, **Qingya Zhao**, James J, Dikeman K, Mills M, Li M, Frye D, Lu X, Srivastava S, Das IJ, Johnstone PAS. Implications for Proton Therapy Treatment Planning of Tissue Characterization Curves From Different CT Scanners, AAPM, 2010.
 14. Huanmei Wu, **Qingya Zhao**, Minsong Cao, Indra Das, CT Data Restoration from Small-Bore CT Scanner for Obese Patients, presentation at the 95th Scientific Assembly and Annual meeting (RSNA 2009).
 15. **Qingya Zhao**, Huanmei Wu, Mark Wolanski, Drake Hecksel, Daniel Pack, and Indra Das, MU Calculation for Uniform Scanning Proton Beam, *Med. Phys.* **36** 2795, 2009.
 16. **Qingya Zhao**, Huanmei Wu, Li Zhao, and Indra Das, A Simple Method for Quality Assurance of Proton Compensators, *Med. Phys.* **36** 2574, 2009.
 17. Huanmei Wu, Chuan He, **Qingya Zhao**, Ross Berbeco, Hiroki Shirato, and Seco Nishioka, Evaluation of Internal/External Correlation with Missed Volume, *Med. Phys.* **36** 2502, 2009.
 18. Huanmei Wu, Yuenian Zhang, **Qingya Zhao**, and Bryce Lord, Assessment of Lung Tumors Treatment Accuracy Using CyberKnife Synchrony Model, *Med. Phys.* **36** 2463, 2009.
 19. Nichiporov D, Klyachko A, Solberg K, **Qingya Zhao**. Performance Characteristics and Long-term Calibration Stability of a Beam Monitor for a Proton Scanning Gantry, 11th Neutron and Ion dosimetry Symposium (NEUDOS-11), 2009.
 20. Das IJ, Moskvina V, **Qingya Zhao**, Cheng CW, Johnstone PAS. Optimum Beam Energy and Treatment Room Setup For A Clinical Proton Beam Therapy, Particle Therapy Co-Operative Group (PTCOG), 2009.
 21. McDonald M, Kuros-Zolnierczuk J, **Qingya Zhao**, Das IJ, JohnstonePAS. Aperture Variability in Proton Beam Therapy for Prostate Cancer, Particle Therapy Co-Operative Group (PTCOG), 2009.
 22. Nichiporov DF, Solberg K, Klyachko A, Das IJ., **Qingya Zhao**, Investigation of humidity effects on beam monitor performance in a proton clinical gantry. *Med Phys* **36** (6) 2607, 2009.
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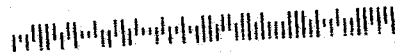


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