MOSTAFA AHMED HASHEM SOLIMAN

RADIATION ONCOLOGY MEDICAL PHYSICS CONSULTANT, & RADIATION PROTECTION EXPERT

SUMMARY

Clinical Medical physics consultant with strong experience in radiation oncology, advanced radiotherapy techniques, treatment planning, quality assurance, and radiation safety. Skilled in multidisciplinary clinical collaboration to ensure accurate, safe, and effective radiation dose delivery for patient care.

CONTACT

+20 101 024 7754

mos_soliman@yahoo.com

masoliman@aun.edu.eg

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https://www.aun.edu.eg/SECI/mostafa-ahmed-hashem

google_scholar

https://scholar.google.com/citations?hl=en&user=SBPdwdgAAAAJ

EXPERIENCE

Radiation Oncology Medical Physicist and Radiation Protection Expert, Radiation Oncology and Nuclear Medicine Department, South Egypt Cancer Institute, Assiut University.

2000, present — Assiut, Egypt

- *Technical skills in Three-Dimensional Conformal Radiation Therapy (3-D CRT), Intensity Modulated Radiation Therapy (IMRT), Volumetric Modulated Arc Therapy (VMAT), Image-Guided Radiation Therapy (IGRT) and Stereotactic Body Radiation Therapy (SBRT).*
- Ability to exercise independent professional judgment in the performance and evaluation of calibration, acceptance testing, and *clinical commissioning procedures for all types of external beam photon and electron beam delivery systems.*
- *Performed quality assurance checks on radiation therapy equipment to ensure accurate and safe treatment delivery.*
- *Conducted patient-specific dose calculations and treatment simulations using advanced software and imaging techniques.*
- *Collaborated with radiation oncologists and other healthcare professionals to develop treatment plans for cancer patients.*
- *Perform pre-treatment, on-treatment, and post-treatment chart reviews and implement corrections within required timelines.*
- *Offer clinical consultation to physicians for treatment planning dose delivery, to assure accurate radiation dose.*
- *Actively participate in chart rounds with other members of the team to review contours, prescription, treatment plans, and verification images.*
- *Expertise in the professional, scientific, and technical aspects of shielding methods for external beam radiation delivery systems, radiation survey methods, developing procedures, setting action levels, delivering radiation safety training, and reporting.*
- *This includes an in-depth knowledge of regulatory requirements and guidelines for radiation shielding and personnel protection.*
- *Provided radiation safety training to staff members and ensured compliance with regulatory guideline.*
- *Participated in research projects and clinical trials to evaluate new treatment techniques and technologies.*
- *In collaboration with other team members, provide technical direction on machine maintenance and repairs, providing physics support as required.*

EXPERIENCE CON.

Assistant Professor of Medical Radiation Physics, Physics Department, Faculty of Science, Assiut University.

2024–2025, part time Assiut, Egypt

- Teaching Postgraduate courses (Master and Doctorate of Medical and Radiation Physics) “Radiotherapy, Nuclear Medicine, & Computer and Imaging Modeling".

Assistant Professor of Medical Radiation Physics, Radiography and Medical Imaging Technology Department, Faculty of Applied Health Sciences Technology, Sphinx University.

2022–2023, part time Assiut, Egypt

- Teaching undergraduate Courses of Medical Physics “Dosimetry Technique, Instrumentation and Electric Measurement”.

Assistant Professor of Medical Radiation Physics, Physics Department, Faculty of Science, Assiut University.

2019–2022, part time Assiut, Egypt

- Teaching Postgraduate Courses of Medical Physics Diploma “Radiation Therapy, Nuclear Medicine, Training, and research".

Assistant Professor of Medical Radiation Physics, Physics Department, Faculty of Science, King Abdulaziz University, Jeddah, Kingdom Saudi Arabia

2015–2018

- Teaching Postgraduate and undergraduate Courses of Medical Physics “Radiation Therapy, Medical Radiation physics, Radiation Dosimetry, Radiation physics, General Physics, Nuclear Medicine, Quality Control and Radiation Protection”.

EDUCATION

- Doctor of Philosophy in Radiation Medical Physics, University of Assiut University, Egypt, 2013.
- Master in Radiation Medical Physics, University of Assiut University, Egypt, 2010.

CERTIFICATIONS

- Radiation Protection Expert (RPE0147M), Egyptian Nuclear and Radiological Regulatory Authority.
- Healthy Physicist (HP-63) Ministry of Health & Population – Egypt.

ACADEMIC SUPERVISION & GRADUATE MENTORSHIP

PhD Supervision:

- Currently supervising (1) PhD candidates at stage of doctoral research.

Master’s Degree Supervision:

- Co-supervised (3) Master’s theses in (Medical and Radiation Physics), (2) theses successfully completed and defended, currently supervising (1) Master’s students.

➢ Mentored students in proposal development, methodology selection, thesis writing, and oral defense preparation. and provided advanced academic guidance in research design, methodology, data analysis, academic writing, and publication in indexed journals.

Selected Supervised Theses

- Aml Saleh Ahmed Alassdei, MSc, Measurement and Evaluation of the Impact of a Carbon Fiber Couch on The Dose Distribution in Radiation Oncology, Faculty of Science, Assiut University, Egypt, 2024 (Completed).
- Manar Ahmed Hassan Sayed, MSc, Effect of Exposure to Photon Radiotherapy on Degree of Conversion, Microleakage, Microhardness and Compressive Strength of Resin Composite Restoration, Faculty of Dentistry Minya University, Egypt, 2025 (Completed).

PUBLICATIONS

- **Effect of Photon Radiotherapy on Degree of Conversion and Compressive Strength of Nanohybrid Resin Composite Restoration: An in Vitro Study**, Ain Shams Dental journal (ASDJ), Dental material science section, Vol 38 (June 2025).
- **Measuring and Assessing the Effect of a Carbon Fiber Couch on Radiotherapy Dose Distribution**, Assiut University Journal of Multidisciplinary Scientific Research (AUNJMSR), Vol. 53(2): 238- 254 (2024).
- **Measurement and Evaluation of the Impact of a Carbon Fiber Couch in Radiation Oncology**, Assiut University Journal of Multidisciplinary Scientific Research (AUNJMSR), Vol. 53(1): 22- 37 (2024).
- **The Effects of Paraffin Wedge Filters on The Electron Beam Therapy**. Imperial Journal of Interdisciplinary Research (IJIR), 2:(3) 161-164 (2016).
- **Application of Virtual Wedge in Electron Beams of Mevatron Linear Accelerator**. International Journal of Applied Sciences and Engineering 1:(2) 201-206 (2013).
- **Three dimensional CT-based evaluation of the supraclavicular and infraclavicular nodes and calculation of the administrated dose**. journal of Cancer Therapeutics and Research 2 (2013).
- **Three dimensional CT-based evaluation of the supraclavicular and infraclavicular nodes and calculation of the administrated dose. journal of Cancer Therapeutics and Research 2 (2013).**
- **Asymmetric open field-in-field can replace wedged fields in tangential whole breast irradiation. Gastric & Breast Cancer 10:(4) (2011).**
- **Dose Measurement and Calculation of Asymmetric X-Ray Fields from Therapeutic LINAC. Arab Journal of Nuclear Sciences and Applications 44: 367-374 (2011).**
- **Measurements and Calculation for Different Electron beam Shielding Block Shapes in Therapeutic LINAC. Arab Journal of Nuclear Sciences and Applications 36: 319-324 (2003).**

SKILLS

- Skills to ensure the quality of radiation delivery by planning, implementing and directing a quality control program, radiation surveys, and shielding design.
- Interpersonal Communication, Organizational, Teaching, and Advanced Computer skills.
- Strong understanding and ability to use all types of radiation measuring devices. Strong knowledge of radiation safety regulations and guidelines. Excellent problem-solving and analytical skills. Effective communication and interpersonal abilities.
- Programming: Visual Basic, Visual C++, FORTRAN, Matlab. MS Office: Word, Excel, Access, and Power point. User Programs: DOS, Windows, UNIX, Linux, Internet and Computer's Hardware.