



South Asia Centre for Medical
Physics and Cancer Research

SCMPCR

Newsletter

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QUALITY EDUCATION AND HEALTH SCIENCE FOR PATIENT BENEFIT

News & Events

Medical Physics Day 2025 at AECH (NORI), Islamabad, Pakistan

Islamabad, Pakistan-November 22, 2025: Energy Commission Hospital (AECH), NORI Islamabad hosted Medical Physics Day 2025 with a full-day program that combined opening remarks, two technical sessions, poster session and Q&A segment.



The event opened with registration, followed by a formal inaugural session that included Holy recitation, the National Anthem, and welcome remarks. The session also highlighted the importance of the International Day of Medical Physics. Attention was drawn to the vital role medical physicist's play in modern healthcare. Emphasis was placed on patient safety, quality assurance, and the growing responsibility of the profession in advancing clinical practice.

First Technical Session: Clinical Practice, Safety, and Advanced Planning

The first technical session focused on strengthening clinical practice and supporting the growth of medical physics in Pakistan through quality, safety, training, and research. Topics included “Introduction to POMP, where do we stand” and “Strengthening Clinical Practice through Implementation of Peer Review Practice in Medical Physics.”

The session also covered patient protection and internal dosimetry, along with technology and treatment-planning themes. Presentations discussed internal dosimetry and patient protection, innovations in isotope production, and treatment techniques such as SFRT using grid. Research oriented talks highlighted precision methods and computational tools, including personalized internal dosimetry of [¹⁷⁷Lu] Lu-hydroxyapatite for radiosynovectomy, efficiency analysis of spine SBRT across platforms, and a Python-integrated TOPAS framework for compensator design and variable RBE analysis in proton beam therapy.

A dedicated Q&A and poster display followed, allowing participants to engage directly with the presented work before the lunch break.

Second Technical Session: Measurement, Emerging Modalities, and Future Directions

The second technical session highlighted practical measurement workflows, advanced modalities, and future-facing tools for clinical and research use. It included work on CyberKnife beam characterization, such as measurement of off-center ratios (OCRs) using Gafchromic EBT3 films for variable apertures.

Emerging and advanced treatment approaches were also discussed, including accelerator-driven BNCT for cancer care and Monte Carlo-based investigations such as Geant4 dosimetric analysis for radiotherapy in patients with specific implants.

The session further explored digital transformation in the field through Generative AI-based medical physics reference applications, and it addressed the future trend of dosimetry audits in Pakistan, emphasizing the role of independent verification and continuous improvement in patient safety.



Community Impact and Closing

Programs like this strengthen the medical physics community. They create a shared space for learning. They also help connect clinical needs with research ideas. When medical physicists discuss peer review, dosimetry, advanced planning, and audits together, the whole system becomes safer and more consistent.

The event concluded with participant comments, concluding remarks, and a formal summary and appreciation for attendees and contributors.