Quality improvement tools in radiation medicine – the experience of Colombia and Latin America

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1. IMPORTANCE OF QUALITY ASSURANCE IN RADIATION MEDICINE

Quality assurance consists of structured procedures and actions aimed at maintaining a high level of quality diagnosis or treatment of patients.

- Diagnostic imaging
- Radiation treatment
- Education and training
- Research and Development

The constant growth of medical technology requires tools (international and national guides, equipment, etc) that allow to guarantee excellent diagnosis and treatment with ionizing radiation.
The importance of accurate radiological diagnosis and the possibility of increasing doses in view of technical advances in equipment and complexity of procedures, drives the need for **QA in diagnostic radiology**.

Comprehensive clinical audits represent an important component of any QA programme.
Colombian Experience

DOSE REDUCTION IN PEDIATRIC CT

90%
2b. Tools for Quality Improvement in Nuclear Medicine

Colombian Experience

Implementation of QUANUM, Nuclear Medicine Service at the National Cancer Institute

PROJECT: “INNOVATION IN THE NUCLEAR MEDICINE SERVICE AS A DIFFERENTIATION STRATEGY TO IMPROVE THE COMPETITIVENESS OF THE NATIONAL CANCER INSTITUTE IN CANCER MANAGEMENT”
First visit of QUANUM

2013

Two SPECT/CT, one PET/CT and Radiometabolic Therapies are performed With I-131, Lu-177 DOTA, Lu-177 PSMA y Ra-223.

2019

Four rooms for the administration of therapies with high activity and a specific environment for the administration of low-dose outpatient therapies

A system of dumping for waste from radiometabolic therapies

2022

QUANUM Audit.

Updates have been made and improvement plans implemented under the findings finding QUANUM version 3.0.

To date, there are 15 PCOS (Standardized Operating Procedures) for diagnosis and therapy as described in QUANUM version 3.0.
2c. Tools for Quality Improvement in Radiotherapy

Physics Aspects of the Quality Assurance in Radiotherapy: Quality Control Protocol

IAEA HUMAN HEALTH SERIES
No. 14
Planning National Radiotherapy Services: A Practical Tool

IAEA HUMAN HEALTH SERIES
No. 31
Accuracy Requirements and Uncertainties in Radiotherapy

Comprehensive Audits of Radiotherapy Practices: A Tool for Quality Improvement

Quality Assurance Team for Radiation Oncology (QUATRO)
Colombian Experience

DAILY CHECK BEAMS

Energy: 6MeV (X-Rays)
Survey Developed in 13 Countries: Argentina, Barbados, Bolivia, Chile, Colombia, Cuba, Honduras, Paraguay, Peru, Uruguay and Venezuela

3. Some results of the IAEA Project, RLA6091 in Latin America

Dr. Simone Kodlulovich Renha, Ph.D

Project RLA6091 “Enhancing Capacity Building of Medical Physicists to Improve Quality and Safety in Medical Practices”
Thank you for your attention!