



**ISRRT**  
INTERNATIONAL  
SOCIETY OF  
RADIOGRAPHERS  
& RADIOLOGICAL  
TECHNOLOGISTS

## QA/QC in Direct Digital Radiography (DDR) and Computed Radiography (CR) by the QC Radiographer/Radiological Technologist

### Guidance Document

Quality assurance (QA) in DDR and CR is an integral process for monitoring and evaluating the overall performance of a Diagnostic Imaging department in terms of safety and quality. Quality control (QC) involves the measurement of key performance indicators of the DDR and CR systems. It is a reliable tool when innovative methods are installed and for the review of existing practice to enhance outcomes to the patient, the department and the community.

The DDR and CR QC radiographer's / radiological technologist's responsibility entails calibration and testing to ensure that the DDR and CR system performs within manufacturers' specifications and functions optimally.

The following flow chart serves as a global preliminary task chart for DDR and CR radiographers / radiological technologists in DDR and CR. It involves systematic teamwork among the radiographer, medical physicist and radiologist of the designated QC team. The professionals involved in DDR and CR QC should also collaborate with the service engineer to achieve the set objectives of the QA program.



## INITIATE

- Daily, monthly, annual routine QC procedures in DDR/CR and following repair, corrective actions by manufacturer, scheduled service, new installation
- Educational activities associated for DDR and CR systems and relevant auxillary equipment fine tuning i.e. monitors



## PERFORM

- Any self diagnostics procedure for QC/QA in image quality intergrated in the DDR and CR imaging systems in a timely manner and according to system manual and within departmental policy
- Basic routine tests as agreed by relevant authorities and in accordance with recognised standards



## CHECK

- Monitor inconsistencies in DDR and CR image quality indicator measurements and output dose levels and correlate findings with manufacturers' image quality reference values

(as defined by national guidelines and DDR/CT/QA manuals)



## ACT

- Consult findings with medical physicist and radiologist
- Perform DDR/CR system fine tuning and testing procedures according to operator's manual and departmental policy
- Contact manufacturer for corrective actions when required
- Record QC data and communicate outcomes with both, TQM and DDR & CR teams
- Repeat testing procedures to confirm any necessary corrective action is satisfactory

**Note:**  
**Must consider**  
**for variations in:**

1. Educational cultures
2. Professional role and responsibilities of radiographers/radiological technologists
3. National, regional, local and departmental policies
4. System and auxillary equipment (i.e. hardware and software)
5. Clinical settings
6. Socioeconomical factors