
Audit 20

1) Audit Title

Impact of Variation in Volume of Injected Contrast in CT on Image Quality, Diagnostic Confidence and Dose.

2) Standard against which the audit topic is to be compared

This audit examines whether varying the volume of injected contrast (working within agreed parameters on volume/concentration) can reduce radiation dose whilst maintaining image quality and diagnostic confidence.

3) Source of standard (or reference document)

Generally, the volume and concentration of IV contrast injected will depend on a variety of factors e.g., renal function, type of scan, patient weight – these factors will be determined according to local, national, international guidances and protocols.

4) Type of audit - clinical, BSSD related (optimisation), reporting / patient focussed**5) Target / compliance percentage to be achieved**

Maintaining image quality and diagnostic confidence whilst reducing required radiation dose by variation in injected contrast during CT.

6) Item or variable to be audited

A variety of CT procedures/studies can be evaluated which require intravenous contrast injection. The survey could be extended to include oral contrast where applicable.

7) Method: Retrospective / Prospective / Other

This audit is best performed prospectively.

8) Data or information to be collected

Effect on image quality/diagnostic confidence and required radiation dose according to variation in IV contrast volume/concentration used in CT procedures.

9) Sample details (categories, number of patients, collection time period)

To be decided locally, including type of CT procedures evaluated.

10) Target achieved (yes / no / not applicable)

Maintaining image quality/diagnostic confidence, monitoring the effect on radiation dose at the lowest possible radiation dose.

11) Actions to be taken if the target is not met

CT contrast volume will need to be adjusted (within agreed parameters) if there is reduction in image quality/diagnostic confidence and/or increased radiation doses required.

12) Timing for re-audit (yes / no / not applicable)

Periodic re-auditing is recommended to ensure image quality/diagnostic confidence is maintained and procedural dose remains acceptable with injected CT contrast variation.