AUDIT TITLE
Clinical Audit of Low Radiation Dose CT KUB Studies for Suspected Urinary Tract Calculi

DESCRIPTOR
CT KUB is the gold standard for investigating renal colic. Due to the high prevalence of urinary tract calculi and its recurrent nature, cumulative effective radiation doses from repeated investigations can be high. Radiologists can accurately evaluate for urolithiasis using CT scans with an effective dose of 3 mSv or less.

TARGET
Target should be set to achieve a feasible local standard based on current literature (e.g., at least 80% of studies having an effective dose of less than 3 mSv).

METHODS
One hundred of the institution’s most recent CT KUB studies should be collected. Dose-Length Product (DLP) should be collected to calculate the effective dose. Patient information should include study indication, scan length and width at the iliac crests.

ACTION PLAN
In collaboration with a physicist, CT technologists, and radiologists, numerous measures consistent with current literature should be applied to achieve the target.

Changes may include:
(i) decreasing the scan length to one cm above the kidneys to the pubic symphysis;
(ii) adjusting the noise tube current modulation parameter to increase the noise level;
(iii) setting a maximum and minimum tube current range; and
(iv) use [or increase the level] of iterative reconstruction.

Image quality should be closely monitored to ensure that the resulting images are of sufficient diagnostic quality.

TARGET NOT ACHIEVED
Suggestions for improvement if the dose target is not achieved include:
(i) consultation with CT physicist;
(ii) education sessions and other behavior change strategies.

REFERENCES

4. AAPM Report, No. 96


SUBMITTED BY
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SAMPLE DATA COLLECTION STRATEGY

<table>
<thead>
<tr>
<th>Patient Identifier</th>
<th>Study Indication</th>
<th>DLP (mGy cm)</th>
<th>Effective Dose (mSv)</th>
<th>Scan Length</th>
<th>Patient Width</th>
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