Subject: COMPUTED TOMOGRAPHY (CT) ACR DOSE Reference Levels

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I. PURPOSE
To maintain CT dose levels within or below recommended ACR Reference Dose levels

II. DEFINITION:

CT Dose: is that amount of radiation that is imparted and absorbed in tissue during a CT examination...

ACR Reference Dose Levels: Dose of Radiation which The ACR has identified as being the maximum dose which should be imparted to tissue during a CT exam.

A. Adult Head- 75-80 mGy
B. Adult Abdomen- 25-30 mGy
C. Pediatric Abdomen- 25mGy* or 7.5mGy – 10mGy *
D. Pediatric Head – 35-40 mGy (based on 1 year old)

III. RESPONSIBILITIES
Technologist, Attending Radiologist and/or Radiology Resident, Medical Physicist
CT Manager, and Radiation safety officer.

IV. POLICY
CT-9 CT DOSE MONITORING

All CT Technologist will utilize all available methods of reducing and minimizing radiation exposure to CT patients utilizing principle of ALARA.

V. PROCEDURE/GUIDELINES
   a. All CT technologists will adhere to the established protocols that have been designed to minimize patient exposure.
   b. All CT technologist will utilize the Dose reduction Software available on the Philips Brilliance 64 Scanners to minimize patient exposure.
   c. The CT manager will conduct a weekly review of the CTDI volume’s as recorded in RADIMETRICS ALERT DASH BOARD. The CT MANAGER & RSO will investigate CTDI levels in the form of alerts that exceed the established threshold (ACR reference levels) jointly. A determination of the reason for the exposure exceeding the threshold levels will be identified and noted in the alert acknowledgement section. Each individual alert will be closed and removed from the alert dashboard. The Radiation Safety Officer will decide if notification/reporting of the exposure value to the patient’s PCP is warranted based on the degree of exposure.
   d. The RSO will report alerts that are Sentinel events at the Radiation Safety committee meeting.
   e. All CTDIvol for each CT procedure will be incorporated into the Physician’s interpretive report.

VI. ATTACHMENT
   * ACR Recommended CTDI volume. The pediatric abdomen dose estimate limit as reported by the scanner using a 16cm phantom. If the scanner reports values using a 32cm phantom, the approximate limits would be 7.5 to 10mGy based on a 40 to 50lb pediatric patient.

VII. REASON FOR REVISION
Review of current ACR standards

VIII. REFERENCES:
• TJC Standards


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<tr>
<th>Date Reviewed</th>
<th>Revision Required (Check One)</th>
<th>Responsible Staff Name and Title</th>
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<tr>
<td>9/2001</td>
<td>Yes</td>
<td>James Shanahan, Director Radiology Department</td>
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<tr>
<td>12/2015</td>
<td>(Yes) No</td>
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<td>01/19</td>
<td>(YES)</td>
<td>Maxine Barnes, Radiation Safety Officer</td>
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