

SUNY DOWNSTATE MEDICAL CENTER
UNIVERSITY HOSPITAL OF BROOKLYN
POLICY AND PROCEDURE

No. CT-9A

Subject: CT DOSE MONITORING

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Reviewed by: Donna McKenzie

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TJC Standards: PC.01.02.15 (EP.5) The hospital documents the (computed tomography dose index [CTDI vol], dose length product [DLP], or size-specific dose estimate [SSDE]) on every study produced during a diagnostic computed tomography (CT) examination.

EC.02.04.03 (EP.17),A diagnostic medical physicist Measures the radiation dose (in [CTDI vol]) produced by each diagnostic CT imaging system for four CT protocols: adult brain, adult abdomen, pediatric brain, and pediatric abdomen.

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Issued by: Radiology Department

I. PURPOSE

To ensure the CTDI index from diagnostic CT exams does not exceed the dose index ranges identified in the imaging protocols

II. DEFINITION:

Computed Tomography Dose Index (CTDI-): is commonly used in conjunction with patient size to estimate the patient absorbed dose.

III. RESPONSIBILITIES

Radiology Departments and staff involved in development, implementation and monitoring. CT Technical staff and CT Supervisors

IV. POLICY

All CT Technologist supervisors will monitor the CTDI volume displayed at the modality console, to ensure established CTDI levels are not exceeded. CTDI levels will be established by the Radiation Safety Officer for the following protocols:

- Adult Brain

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- Adult abdomen
- Pediatric Brain
- Pediatric Abdomen

The CTDI volume measured for each of the above must be within 20% of the display CTDI volume registered on the modality console. This information will be documented on the CTDI analysis form.

V. PROCEDURE/GUIDELINES

1. The CT Technologist and/or the CT supervisor will print a minimum of two doses pages from the modality each day. The following information will be taken from the dose page and logged into the CTDI Analysis form
 - Date
 - MR# Patient age
 - Gender
 - Procedure
 - CTDI Vol. Displayed on modality console
 - Displayed CTDI vol. Compared to protocol range of 20% variance
 - Action taken if out of range.
2. The above information will be analyzed and compare to the established CTDI ACR levels. (See attached sheet with ACR recommended CTDI levels which will serve as the benchmark)
3. If CTDI levels are found to be out of range the Radiation Safety Officer will review the protocol for possible revision.

All potential protocol revisions will be made in consultation with the supervising Radiologist.

VI. ATTACHMENT

- ACR Reference Dose levels.
- ACR Recommended CTDI Volumes

VII. REASON FOR REVISION

Review

VIII. REFERENCES:

- TJC Standards

UHB Policy (RAD-12) <http://www.downstate.edu/regulatory/pdf/policies/RAD-12.pdf>

Date Reviewed	Revision Required (Check One)		Responsible Staff Name and Title
9/2001	Yes		James Shanahan, Director Radiology Department
12/2015	(Yes)	No	Vincent Monte Assoc. Director Radiology Department
10/2018	Yes	(No)	Vincent Monte Assoc. Director Radiology Department
	Yes	No	