

Absolute Dose Values in Computed Tomography

SOMATOM Force

Reference values		Switzerland ¹	Germany ²	European Union ³	USA ⁴
Head Routine	CTDI _{vol} [mGy]	65	60	60	75
Thorax Routine	CTDI _{vol} [mGy]	15	10	30	21
Abdomen Routine	CTDI _{vol} [mGy]	15	15	35	25

Default Siemens Protocol		Standard IR values ^{*/**/****/*****}	Put your current values here
Head Routine	CTDI _{vol} [mGy]	47.32	
Thorax Routine	CTDI _{vol} [mGy]	2.66	
Lung Low Dose SPS ^{****}	CTDI _{vol} [mGy]	0.38	
Abdomen Routine	CTDI _{vol} [mGy]	9.83	

- 1 Bundesamt für Gesundheit (Merkblatt R-06-06, Diagnostische Referenzwerte in der Computertomographie, 01.04.2010).
- 2 Bundesamt für Strahlenschutz (Diagnostische Referenzwerte für diagnostische und interventionelle Röntgenanwendungen vom 22. Juni 2016).
- 3 European Guidelines on Quality Criteria for Computed Tomography (<http://www.dr.s.dk/guidelines/ct/quality/htmlindex.htm>).
- 4 American College of Radiology (CT Accreditation Program Requirements, Clinical Image Quality Guide, Amended 2014).

*Values are based on the default protocols of the SOMATOM Force with *syngo CT VA50A* and an average sized patient of 1.75 m and 75 kg

**Iterative Reconstruction ADMIRE is used

***In clinical practice, the use of ADMIRE may reduce CT patient dose depending on the clinical task, patient size, anatomical location, and clinical practice. A consultation with a radiologist and a physicist should be made to determine the appropriate dose to obtain diagnostic image quality for the particular clinical task. Image quality as defined by low contrast detectability using a model observer method for evaluation. Equivalent low contrast detectability can be achieved with 80% to 85% less dose using ADMIRE at highest strength level for thin (0.6 mm) reconstruction slices in measured and simulated body and head phantoms for low contrast objects with different contrasts. See ADMIRE data sheet for further information. measured and simulated body and head phantoms for low contrast objects with different contrasts. See ADMIRE data sheet for further information.

****SPS: Selective Photon Shield/ Tin Filter is used

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