

Body CT Protocol Changes in 2024:

Most important: Irrespective of the study, any CT study covering entire chest should have axial MIP lung window reformat to be sent to PACS by default.

Rationale: Lung nodules (lung cancers) are frequently missed if we do not have axial MIP lung window, so it is of top priority that we do axial MIP lung window in all CT study covering entire chest; NOT needed for CT abdomen/pelvis covering lung bases.

CT chest - PE (pulmonary embolus):

Update: The major change here is that we will scan from inferior to superior.

Rationale: This is the gold standard and we used to scan this way "back in the day". Most PEs lay distal. When a patient is unable to adequately hold his/her breath, motion in lung base causes significant image degradation in that specific area, so scanning from bottom to top will help to minimize this issue.

Update: Every PE study use a dual injection saline flush.

Rationale: 2 purposes:

1. To reduce perivenous streak artifact
2. Allows a lesser contrast dose to do the same job.

CT Enterography:

Update: The delay has been changed from 40sec to 50sec.

Rationale: 40 second delay is too early; it is going to be more late arterial rather than early portal venous; 50 seconds should be used as in this article.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3474054/>

"Maximal small bowel enhancement on MDCT has been reported by Schindera et al [17] to be 50 s after administration of intravenous contrast or 14 s after aortic peak enhancement."

CT Cystography:

Update: Added "If patient is non-verbal, or altered and unable to indicate fullness,, do not allow more than 500cc contrast in bladder. 300cc-500cc is average."

Rationale: Added since patients may be nonverbal or altered.

CT Urogram:

Update: Added in patient prep: "Please check that urinary bladder is moderately distended on non-contrast phase before injecting IV contrast. If not, wait 5-10 minutes then scan with IV contrast."

Rationale: Non distended urinary bladder will lead to missing early bladder cancer, which is the most important indication of performing CT urogram.

CT Chest HRCT:

Update: Axial MIP to series 2 (inspiration phase).

Rationale: axial MIP needed in all CT study covering entire chest; specified here cause multiple series with entire chest coverage→ so need in inspiration phase specifically.

CT Abd/Pel or CT Abd for Hypervascular Malignancy:

--Added to autosend all series (2,3,4) in Standard algorithm

--Changed to send only series 4 in Bone algorithm

CT chest, abdomen, pelvis routine

Update: Verbiage of non-hypervascular tumor changed to HYPOVASCULAR

Rationale: To avoid confusion of using negative prefix of “non-hypervascular”. Plz refer to the updated list of HYPERVASCULAR vs HYPOVASCULAR tumor.

CTV Abd/Pel:

Update: Delay changed from 180 sec to 135 seconds.

Rationale: Reference article:

Alduk, A. M., & O'Sullivan, G. E. R. A. R. D. (2018). CT venography: technique and indications. *Endovasc Today*, 17(7), 60-62.

Please note that CTV is different from CT with venous delay (which is portal venous phase) but CTV is systemic vein (as IVC, iliac veins).CTV (or late venous delay) is excellent to evaluate acute or chronic DVT, venous disease, thrombus of venous system, malignancy, bilateral swollen limbs.

CT abdomen (all protocols):

Update: Coverage is from above the diaphragm to the iliac crest level; updated verbiage is “iliac crest level”

Rationale: Different description for the lower extent of the abdomen FOV, so iliac crest would be easy standard landmark.

CT Chest- dry Lung screening

Update: “Must include in patient history current smoking status, and number of pack years. This information is found in the note as entered by the Navigator in the chart.” If not found in the chart, could ask patient and document those 2 information in PACS note section.

Rationale: This information is crucial for eligibility and reimbursement of this CT study.