

Supplementary

Table S1 List of CT protocols represented in the more recent imaging data included for analysis. Portions of protocols with variable anatomic coverage are included only if the AAA would have been included within the field of view, and multiphase exams list only technique used during the phase that would best depict a AAA. Please note that these protocols are our current implementation and differences from historical scans (due to scanner differences and optimizations) are likely.

Protocol	Contrast, injection, scan delay	Coverage	Tube potential (kV)	Tube current (mA)	Scan Mode/Pitch	Detector Configuration	Slice Thickness (mm)	FOV (cm)
Aorta	IV, 4 mL/sec (120 mL), SmartPrep threshold set at 150HU with ROI on proximal abdominal aorta	Top of diaphragm to the symphysis pubis	120	Auto mA – Min. 150 to Max. 750	0.984:1 – 39.37 mm/rot	0.625 mm x 64 = 40 mm coverage, Noise Index 36	1.25	28-50
Routine	IV, 3 mL/sec (120 mL), 75 sec	Top of diaphragm to the symphysis pubis	120	Auto mA – Min. 150 to Max. 750	0.984:1 – 39.37 mm/rot	0.625 mm x 64 = 40 mm coverage, Noise Index 36	2.5	28-50
Ischemic Bowel/GI Bleed	IV, 3.5 mL/sec (120 mL), SmartPrep: ROI over proximal abdominal aorta with 150 HU threshold and 15 sec trigger delay, 75 sec	Top of diaphragm to the symphysis pubis	120	Auto mA – Min. 150 to Max. 750	0.984:1 – 39.37 mm/rot	0.625 mm x 64 = 40 mm coverage, Noise Index 36	2.5	28-50
Multiphase (Liver, Pancreas, Renal)	IV, 5 mL/sec (120 mL), delay adjusted per timing bolus time to peak	Top of diaphragm to the symphysis pubis	120	Auto mA – Min. 150 to Max. 750	0.984:1 – 39.37 mm/rot	1.25 mm x 64 = 80 mm coverage, Noise Index 36	2.5	28-50
CT Urography	IV, 3 mL/sec (120 mL), 110 sec	Top of diaphragm to the symphysis pubis	120	Auto mA – Min. 150 to Max. 750	0.984:1 – 39.37 mm/rot	.625 mm x 64 = 40 mm coverage, Noise Index 36	2.5	28-50
Renal Stone	None	Top of diaphragm to the symphysis pubis	120	Auto mA – Min. 150 to Max. 750	0.984:1 – 39.37 mm/rot	.625 mm x 64 = 40 mm coverage, Noise Index 36	1.25	28-50
CT Colonography	None	Top of colon to anus, supine and prone	120	50 mAs	1.375:1 55 mm/rot	.625 mm x 64 = 40 mm coverage	0.625	28-50

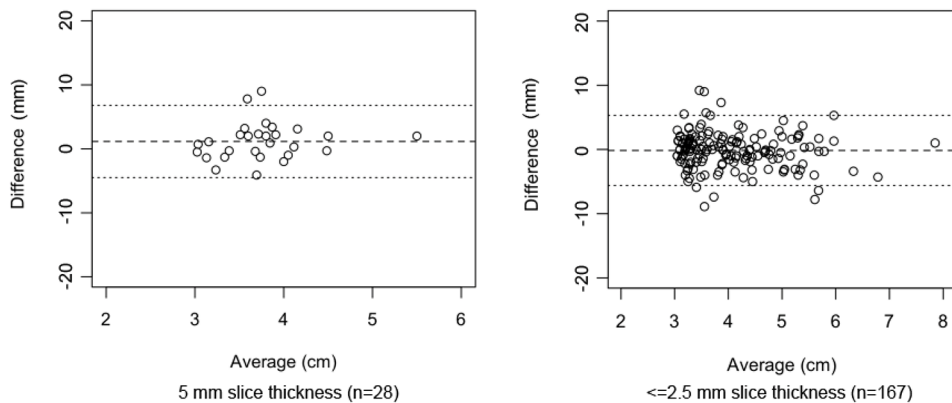


Figure S1 Bland Altman plots of abdominal aortic aneurysm (AAA) diameters from 195 CT cases, as measured using the double-oblique MPR method and as reported clinically, stratified by slice thickness (left – 5 mm slice thickness, right – ≤ 2.5 mm slice thickness). Note the similar spread of measurement difference for each slice thickness group.

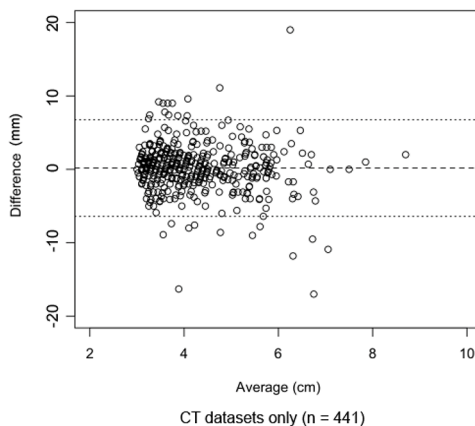


Figure S2 Bland Altman plot of abdominal aortic aneurysm (AAA) diameters from only the 441 CT scans, as measured using the double-oblique MPR method and as reported clinically. The measurement error of the clinically reported diameters is 3.3mm, identical to that when the entire CT+MRI dataset is analyzed.