Colonography

Siemens Flash

Application Examples: failed colonoscopy, screening

Oral Contrast	See *Colon Preparation*
IV Contrast / Volume	No
Breath Hold	Expiration

Prone	
Detector Collimator	Acq 128 x 0.6 mm
Care kV	On / 120 kV
Care Dose 4D	On / 55mAs
Rotation Time (seconds)	0.5
Pitch	1.4
Typical CTDIvol	3.71 mGy ± 50%

Supine & Decubitus	
Detector Collimator	Acq 128 x 0.6 mm
Care kV	On / 120 kV
Care Dose 4D	On / 80mAs
Rotation Time (seconds)	0.5
Pitch	1.4
Typical CTDIvol	5.40 mGy ± 50%

Topogram: Lateral & AP, 512 mm

Prone	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	1 x 0.7	B10f	Off	Abdomen	AXIAL PRONE	PACS & TR	Flythrough
Recon 1	3D:COR	2 x 1	B30f	2	Abdomen	COR PRONE	PACS	Coronal MPR

Topogram: Lateral & AP, 512 mm

Supine	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	1 x 0.7	B10f	Off	Abdomen	AXIAL SUPINE	PACS & TR	Flythrough
Recon 2	Axial	5 x 5	B30f	2	Abdomen	AXIAL SUPINE 5MM	PACS	None
Recon 3	3D:COR	2 x 1	B30f	2	Abdomen	COR SUPINE	PACS	Coronal MPR
Recon 4	3D:SAG	3 x 3	B30f	2	Abdomen	SAG SUPINE	PACS	Sagittal MPR

Topogram: Lateral & AP, 512 mm

RT Decub	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	1 x 0.7	B10f	Off	Abdomen	AXIAL RT DECUB	PACS & TR	Flythrough
Recon 2	3D:COR	2 x 1	B30f	2	Abdomen	COR RT DECUB	PACS	Coronal MPR

Topogram: Lateral & AP, 512 mm

LT Decub	**Recon Type**	**Width / Increment**	**Algorithm**	**Safire**	**Window**	**Series Description**	**Networking**	**Post Processing**
Recon 1	Axial	1 x 0.7	B10f	Off	Abdomen	AXIAL LT DECUB	PACS & TR	Flythrough
Recon 2	3D:COR	2 x 1	B30f	2	Abdomen	COR LT DECUB	PACS	Coronal MPR

Exam Preparation:

The patient will take oral preparation prior to arrival. See *Colon Preparation* for full details.

Have the patient change into a gown instructing the patient to undress from the waist down, and if female, remove bra as well. Meanwhile, set up the insufflator by first opening the CO2 tank and then turning on the machine. Start with the pressure set between 20-25 mmHg and prepare the tubing, but do not connect tubing to the insufflator yet. Check balloon tip with 30ml air.

Assist the patient on the table into a right lateral decubitus position. Gently insert the tip to the blue mark identified on the tubing and inflate balloon. Connect tubing to insufflator. Check tubing for residual stool as this may restrict proper air flow. If tubing fills with fluid, you must run through the column and into the pouch. If you have stool filling entire bag, remove tip and begin again.

Begin by flowing 2 liters of CO2 into the large bowel. Make sure the flow rate (green button) is illuminated indicating air flow. Rotate the patient to a supine position and flow another 2 liters of CO2 while watching the pressure during insufflation. You may need to decrease pressure if the patient is experiencing too much cramping then slowly increase pressure to patient toleration. Note the insufflator will reset after 4 liters and every 2 liters thereafter—you will need to push the green button (FLOW STOP /RUN) to reinitiate flow. Turn the patient to a left lateral decubitus position and proceed with another 2-4 liters. After a total of 8 liters of inflation, turn the patient to a prone position and place pillow under the patient's chest to allow adequate distention. This is a mere guideline for adequate distention. Center for an abdomen and pelvic CT. Make sure CO2 is continuing to flow in patient while scanning.

Scan Instructions:
First, take AP topogram to make sure adequate distention—you should see air filled throughout the entire large bowel. If inadequate wait and continue to fill with another 2 liters of CO2. If there is adequate distention, have the patient hold their breath on expiration and scan from top of flexures through rectum to include entire large bowel. Technique is stated above—adjust according to patient habitus.

Next, turn the patient to a supine position and repeat previous scan instructions. Make sure the patient orientation on scanner parallels the patient position before proceeding. Take AP topogram making sure large bowel is still distended adequately and the patient is centered in scan range. Again, be sure to keep insufflator continually flowing to insure proper distention throughout exam. If satisfied with inflation, have the patient hold their breath on expiration and scan from top of flexures through rectum to include entire large bowel keeping FoV consistent with previous series.

If a portion of bowl in not fully visualized or distended, you may be instructed to scan the patient in a right and/or left lateral decubitus. Check with Radiologist before scanning decubitus. If you need to visualize the ascending colon or cecum (right side) you will turn the patient to a left lateral decubitus; if you need to visualize the descending colon or sigmoid (left side) you will turn the patient to a right lateral decubitus.

After imaging is complete, provide immediate relief to patient by discontinuing flow of CO2. Then, disconnect tubing from insufflator and deflate balloon on enema tip. Gently remove the tip from the patient and discard. Be sure to turn off insufflator and close the CO2 tank.

Send all images to PACS and end exam in Epic. Inform 3D technologist exam is complete.