CT Cystogram

Updated 03/09/25
Reviewed 05/14/25

Indications - bladder mass, trauma, leak, rupture, post surgical injury.
Use CT Pelvis w/o Contrast charge (if IV not used) or CT Pelvis w/o + w/ Contrast (if IV given).

GENERAL SCAN NOTES

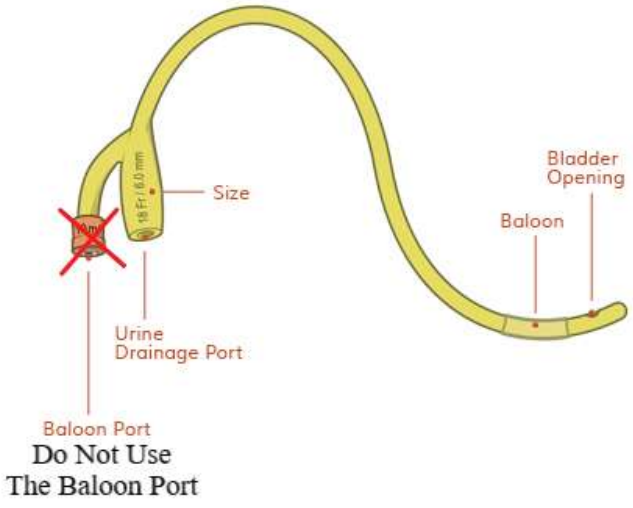
Move the patient's arms over his/her head if possible. Remove any metal from the imaging field of view.
Topogram - iliac crests through pubic symphysis (obtained during end inspiration).
Craniocaudal scan coverage - iliac crests through pubic symphysis (obtained during end inspiration).
Adjust FOV (field of view) on topogram to smallest without cropping anatomy.
IV Contrast:

Administer weight-based **Omnipaque-300** - **1 mL/kg** up to **150 mL** (100 mL minimum).
Inject at **2.5 mL/sec** followed by 40 mL saline flush, 20-gauge or larger in forearm or more proximal.
Only perform venous scan if exam ordered w/ + w/o contrast.

Oral Contrast: generally not given for this protocol.
For **GE scanners**, it is essential for the 1st recon thickness on the scanner to match the 1st recon thickness in this protocol book for the prescribed Noise Index to be valid. The 1st recon should generally be the thickest recon in the protocol.

Urinary Catheter Instructions:

Clamp the urinary catheter prior to the patient coming to CT. You need the bladder at least partially distended for the exam.
Identify the type of urinary catheter (i.e. Foley versus suprapubic).
Differentiate the urine drainage port from the balloon port. **NEVER USE BALLOON PORT**.
Ensure that the urinary catheter is clamped prior to connecting the contrast mixture.
Connect the contrast mixture tubing to the **drainage port**. **DO NOT USE BALLOON PORT.**
Remember to unclamp the urinary catheter prior to the patient leaving the CT department.



CT Cystogram

SIEMENS PARAMETERS & RECONS

For the **Pre Contrast**, **Venous**, **Cystogram** and **Post Void** phases:

	Scan Mode	kV	mAs	Care Dose	Care kV & Lvl	Pitch	Acq	Coll	Rot Time	Scan Time
Sensation 16	spiral	120	200	on	NA	0.80	16	1.5	0.5	13.0
Go Up 32	spiral	130	92	on	on 145	0.80	32	0.7	0.8	22.3
Sensation 64	spiral	120	200	on	NA	1.20	24	1.2	0.5	7.2
Definition 64	spiral	120	180	on	**off**	0.60	64	0.6	0.5	21.7
Go Top 64	spiral	120	112	on	on 145	0.80	64	0.6	0.5	8.1
Drive 128	spiral	120	147	on	on	0.60	128	0.6	0.5	10.9
Force 192	spiral	120	147	on	on	0.60	192	0.6	0.5	7.2

PRE CONTRAST PHASE

Name of Series	Thick	Interval	Kernel	Window	IR Lvl	Recon Direction
AX PRE	3.0	3.0	Br40 / B41f	mediastinum	3	head/feet
SAG PRE	3.0	3.0	Br40 / B41f	mediastinum	3	left/right

VENOUS PHASE (70 secs)

AX VENOUS	3.0	3.0	Br40 / B41f	mediastinum	3	head/feet
COR VENOUS	3.0	3.0	Br40 / B41f	mediastinum	3	front/back
SAG VENOUS	3.0	3.0	Br40 / B41f	mediastinum	3	left/right

CYSTOGRAM PHASE

Fill the bladder via the drainage catheter under gravity with up to 300 mL of contrast mixture. Stop infusing contrast if the patient experiences significant pain.

AX CYSTO	3.0	3.0	Br40 / B41f	mediastinum	3	head/feet
COR CYSTO	3.0	3.0	Br40 / B41f	mediastinum	3	front/back
SAG CYSTO	3.0	3.0	Br40 / B41f	mediastinum	3	left/right

POST VOID PHASE

Perform a post void scan if the patient has had recent bladder surgery, bladder procedure or trauma. Unclamp the drainage catheter and allow to drain for 5 mins before scanning the patient.

AX POST VOID	3.0	3.0	Br40 / B41f	mediastinum	3	head/feet

CT Cystogram

GE PARAMETERS & RECONS

For the **Pre Contrast**, **Venous**, **Cystogram** and **Post Void** phases:

	Scan Type	SFOV	kV	mA Range	Noise Index	Smart mA	Slice Thick	Beam Coll	Pitch	Speed	Rot Time	Dose Red	ASIR	Scan Time
LS 16	helical	large	120	50-440	16.36	on	2.5	20	1.375	27.50	0.6	NA	NA	4.4
Opt 540	helical	large	120	50-440	16.36	on	2.5	20	1.375	27.50	0.6	NA	NA	4.4
LS VCT 64	helical	large body	120	50-650	16.36	on	2.5	40	1.375	55.00	0.5	50	50	1.8
Disc VCT 64	helical	large body	120	50-650	16.36	on	2.5	40	1.375	55.00	0.5	NA	NA	1.8

PRE CONTRAST PHASE

Name of Series	Thickness	Interval	Recon Algorithm	Window Width/Level	Recon Direction	
AX PRE	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**
SAG PRE	2.5	2.5	std full	400/40	left/right	

VENOUS PHASE (70 secs)

AX VENOUS	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	
COR VENOUS	2.5	2.5	std full	400/40	front/back	**Must be first recon.**
SAG VENOUS	2.5	2.5	std full	400/40	left/right	

CYSTOGRAM PHASE

Fill the bladder via the drainage catheter under gravity with up to 300 mL of contrast mixture. Stop infusing contrast if the patient experiences significant pain.

AX CYSTO	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**
COR CYSTO	2.5	2.5	std full	400/40	front/back	
SAG CYSTO	2.5	2.5	std full	400/40	left/right	

POST VOID PHASE

Perform a post void scan if the patient has had recent bladder surgery, bladder procedure or trauma. Unclamp the drainage catheter and allow to drain for 5 mins before scanning the patient.

AX POST VOID	**2.5**	**2.5**	**std full**	**400/40**	**head/feet**	**Must be first recon.**

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PHILIPS PARAMETERS & RECONS

For the **Pre Contrast**, **Venous**, **Cystogram** and **Post Void** phases:

	Scan Mode	kV	Avg mAs	Dose Index	3D Dose	Pitch	Detect	Colli	Rot Time	Scan Time
Incisive 128	helical	120	115	20	on	1.00	64	0.625	0.75	3.8

PRE CONTRAST PHASE

Name of Series	Thick	Interval	Filter	Window	iDose	Recon Direction
AX PRE	3.0	3.0	B	mediastinum	3	head/feet
COR PRE	3.0	3.0	B	mediastinum	3	front/back

VENOUS PHASE (70 secs)

AX VENOUS	3.0	3.0	B	mediastinum	3	head/feet
COR VENOUS	3.0	3.0	B	mediastinum	3	front/back
SAG VENOUS	3.0	3.0	B	mediastinum	3	left/right

CYSTOGRAM PHASE

Fill the bladder via the drainage catheter under gravity with up to 300 mL of contrast mixture. Stop infusing contrast if the patient experiences significant pain.

AX CYSTO	3.0	3.0	B	mediastinum	3	head/feet
COR CYSTO	3.0	3.0	B	mediastinum	3	front/back
SAG CYSTO	3.0	3.0	B	mediastinum	3	left/right

POST VOID PHASE

Perform a post void scan if the patient has had recent bladder surgery, bladder procedure or trauma. Unclamp the drainage catheter and allow to drain for 5 mins before scanning the patient.

AX POST VOID	3.0	3.0	B	mediastinum	3	head/feet