

MRI Urinary Bladder

Updated 11/25/23

Reviewed 05/14/25

Indications: bladder mass, bladder diverticulum, female urethral/periurethral diverticulum.

Once patient arrives in the department, tell him/her not to use the bathroom and give the patient 16 oz water to drink immediately.

The bladder needs to be at least partially distended for the best exam.

If the patient has a Foley catheter, clamp it before exam to distend the bladder. Remember to unclamp it at the end of the exam.

Full Pelvis FOV: Iliac crests to few slices below introitus/anus (top/bottom coverage), greater trochanter to

greater trochanter (right/left coverage), anterior pelvic wall skin to posterior buttock skin (front/back coverage).

Bladder FOV: centered on bladder, FOV 13-15 cm, 320 x 320 matrix, cover several slices beyond bladder wall and mass in every plane.

If a MR cystogram is needed, the dilution is 2 mL Clariscan or 1 mL Gadavist added to 250 mL normal saline and mixed well.

The patient will need a Foley catheter for a cystogram.

Go to MRIMaster.com for a guide of proper positioning.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice	Field of View
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GLUCAGON - 1 mg slow IV push **just before** beginning imaging.

T2 TSE	T2 TSE AX	ax	no	3.5	0.5	top	bladder
T2 TSE	T2 TSE SAG	sag	no	3.5	0.5	right	
T2 TSE	T2 TSE COR	cor	no	3.5	0.5	front	
T2 HASTE/SSFSE	T2 AX	ax	no	7	1.4	top	full pelvis
T2 HASTE/SSFSE	T2 FS AX	ax	yes	7	1.4	top	
T1 VIBE/LAVA	T1 FS PRE SAG	sag	yes	3.5	0.6	right	
T1 VIBE/LAVA	T1 FS PRE AX	ax	yes	3.5	0.6	top	

GLUCAGON - 1 mg slow IV push **just before** giving IV contrast.

CONTRAST - 2 mL/sec standard dose gadolinium (0.2 mL/kg Clariscan or 0.1 mL/kg Gadavist) followed by 20 mL saline flush.

T1 VIBE/LAVA	T1 FS 20 SEC AX	ax	yes	3.5	0.6	top	full pelvis
T1 VIBE/LAVA	T1 FS 60 SEC AX	ax	yes	3.5	0.6	top	
T1 VIBE/LAVA	T1 FS POST SAG	sag	yes	3.5	0.6	right	
T1 VIBE/LAVA	T1 FS POST COR	cor	yes	3.5	0.6	front	
Diffusion (b50, b1000, ADC)	DIFFUSION AX	ax	yes	6	1	top	

Roll the patient 3 times on scanner to mix the excreted contrast in bladder.

T1 VIBE/LAVA	T1 FS 5 MIN AX	ax	yes	3.5	0.6	top	full pelvis
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RECONS:

axial and sagittal subtractions