

MRI Lesion Detection

Updated 02/17/20

Reviewed 05/14/25

Indications: newly diagnosed breast cancer, follow-up after neoadjuvant therapy, post lumpectomy with positive margins, high-risk & intermediate-risk patients, metastatic cancer of probable breast origin, inconclusive diagnostic evaluation. Patient is scanned in the prone position to decrease respiratory motion artifact. Rotate images to anatomic position prior to sending images to PACS.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
T2	T2 AX BILAT	ax	no	4	1	top
STIR	STIR AX BILAT	ax	no	4	1	top
3D T1	T1 FS PRE RIGHT	sag	yes	2	none	right
3D T1	T1 FS PRE LEFT	sag	yes	2	none	right
T1	T1 FS DYN	ax	yes	1.6	none	top

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

3D T1	T1 FS DYN	ax	yes	1.6	none	top
3D T1	T1 FS DYN	ax	yes	1.6	none	top
3D T1	T1 FS DYN	ax	yes	1.6	none	top
3D T1	T1 FS DYN	ax	yes	1.6	none	top
3D T1	T1 FS DYN	ax	yes	1.6	none	top
3D T1	T1 FS POST RIGHT	sag	yes	2	none	right
3D T1	T1 FS POST LEFT	sag	yes	2	none	right

RECONS:

axial subtraction of the 1st dynamic post contrast sequence
sagittal subtractions of right and left breast
horizontal & vertical MIP spinners the 1st dynamic post contrast sequence

MRI Implant Integrity

Updated
11/18/2023

Indications: implant rupture, implant deformity, assess implant deformity.

Patient is scanned in the prone position to decrease respiratory motion artifact.

Rotate images to anatomic position prior to sending images to PACS.

IV contrast is not given for this protocol.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	first slice
STIR	STIR AX BILAT	ax	no	4	top
T1	T1 AX BILAT	ax	no	5	top
STIR	STIR RIGHT	sag	no	4	right
T1	T1 RIGHT	sag	no	5	right
STIR	STIR LEFT	sag	no	4	right
T1	T1 LEFT	sag	no	5	right

MRI Implant Integrity

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

Indications: implant rupture, implant deformity, assess implant deformity.

Patient is scanned in the prone position to decrease respiratory motion artifact.

Rotate images to anatomic position prior to sending images to PACS.

IV contrast is not given for this protocol.

Pulse Sequence	PACS Name	plane	fat sat	water sat	slice (mm)	gap (mm)	first slice
T1	T1 AX BILAT	ax	no	NA	4	1	top
T2	T2 AX BILAT	ax	no	NA	4	1	top
STIR	STIR AX BILAT	ax	no	no	4	1	top
STIR	AX SILICONE	ax	no	yes	4	1	top
STIR	SAG RIGHT SILICONE	sag	no	yes	4	1	right
STIR	SAG LEFT SILICONE	sag	no	yes	4	1	right

MRI Breast Combo

Updated 05/04/25

Reviewed 05/14/25

Indications: combined lesion detection & implant integrity protocols.

Patient is scanned in the prone position to decrease respiratory motion artifact.

Rotate images to anatomic position prior to sending images to PACS.

Pulse Sequence	PACS Name	plane	fat sat	water sat	slice (mm)	gap (mm)	first slice
T1	T1 AX BILAT	ax	no	NA	4	1	top
T2	T2 AX BILAT	ax	no	NA	4	1	top
STIR	STIR AX BILAT	ax	no	no	4	1	top
STIR	AX SILICONE	ax	no	yes	4	1	top
STIR	SAG RIGHT SILICONE	sag	no	yes	4	1	right
STIR	SAG LEFT SILICONE	sag	no	yes	4	1	right
3D T1	T1 FS PRE RIGHT	sag	yes	NA	2	none	right
3D T1	T1 FS PRE LEFT	sag	yes	NA	2	none	right
T1	T1 FS DYN	ax	yes	NA	1.6	none	top

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

3D T1	T1 FS DYN	ax	yes	NA	1.6	none	top
3D T1	T1 FS DYN	ax	yes	NA	1.6	none	top
3D T1	T1 FS DYN	ax	yes	NA	1.6	none	top
3D T1	T1 FS DYN	ax	yes	NA	1.6	none	top
3D T1	T1 FS DYN	ax	yes	NA	1.6	none	top
3D T1	T1 FS POST RIGHT	sag	yes	NA	2	none	right
3D T1	T1 FS POST LEFT	sag	yes	NA	2	none	right

RECONS:

axial subtraction of the 1st dynamic post contrast sequence

sagittal subtractions of right and left breast

horizontal & vertical MIP spinners the 1st dynamic post contrast sequence

MRI Breast Biopsy

Updated 05/09/25

Reviewed 05/14/25

Patient is scanned in the prone position to decrease respiratory motion artifact.

Use MRI Breast Core Biopsy Right and Breast Core Biopsy Left charges.

Rotate images to anatomic position prior to sending images to PACS.

Pulse Sequence	PACS Name	plane	fat sat	slice (mm)	gap (mm)	first slice
3D T1	T1 FS PRE RIGHT	sag	yes	2	none	right
3D T1	T1 FS PRE LEFT	sag	yes	2	none	right
T1	T1 FS PRE AX	ax	yes	1.6	none	top

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

3D T1	T1 FS 1 MIN AX	ax	yes	1.6	none	top
3D T1	T1 FS 2 MINS AX	ax	yes	1.6	none	top

Send axial subtractions of both post contrast sequences to PACS.

Target the lesion to biopsy.

Place needle guide and obturator.

3D T1	T1 FS OBTURATOR	ax	yes	1.6	none	top
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Perform biopsy and place biopsy clip.

3D T1	T1 FS CLIP	ax	yes	1.6	none	top
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To mammography for post clip placement imaging.