

MRI Subject Screening Questionnaire

Please complete the survey below.

Thank you!

THE MOUNT SINAI HEALTH SYSTEM

BIOMEDICAL ENGINEERING AND IMAGING INSTITUTE

MAGNETIC RESONANCE IMAGING (MRI) SUBJECT SCREENING QUESTIONNAIRE

Date of Imaging Appointment: [appointment_date_intro]

Subject Name: [subject_lastname_intro], [subject_firstname_intro]

Birthdate: [subject_dob_intro]

Insurance Gender (Gender selected under insurance): [insurance_gender_intro]

Gender Preferred Pronoun: [gender_identity_intro]

Study Principal Investigator: [pi_name]

Study Coordinator/Nurse: [study_coordinator]

Medical Record Number (MRN): [mrn_intro]

Please respond to items 1-23 below. This information will allow us to determine your eligibility for a MRI scan.

1. Do you have a pacemaker, AICD, internal pacing wires, EKG leads, loop recorder, or Holter monitor? ☐ Yes ☐ No

2. Do you have an implanted stimulator (including bone growth stimulator, spinal stimulator or cochlear or other ear implant) or medication infusion pump? ☐ Yes ☐ No

STOP! Did you choose "YES" response to either question above? ☐ Yes ☐ No

A "YES" response requires discussion with Radiology Technologist or Physician before proceeding. Answering "YES" to either question means that it may not be appropriate for you to get an MRI Exam for safety reasons. Someone from the Radiology department will contact you. STOP!

3. Have you had brain surgery, or do you have metallic clips (aneurysm clips) in your head? ☐ Yes ☐ No

4. Have you ever had eye surgery or implants? ☐ Yes ☐ No

5. Have you ever worked around metal lathe, had metal shavings or fragments in your eye(s), or had shrapnel (war or gunshot) injury anywhere in your body? ☐ Yes ☐ No

6. Have any devices been placed in your blood vessels (e.g., stent, filter, coil, or vascular port/catheter)? ☐ Yes ☐ No

7. Do you have an implanted tissue expander? ☐ Yes ☐ No

8. Do you have a replaced heart valve, other prosthesis or any other surgical implant? ☐ Yes ☐ No

9. List any other type of metal in or on your body:

(Please put N/A if not applicable or NONE)

10. Do you have a history of rectal surgery or severe hemorrhoids? (For patient with pelvic or prostate scans) ☐ Yes ☐ No

11. Do you have any of the following? (please select all that apply)

- ☐ Tattoo(s)
 - ☐ Permanent make-up
 - ☐ Piercing(s)
 - ☐ None of the above
-

11a. If you checked that you have a TATTOO(s), was it done in the United States? ☐ Yes ☐ No

11b. Please list where on your body do you have tattoo(s):

12. Do you wear hearing aid(s), either in the ear canal or on the surface? (If YES, MUST BE REMOVED before entering MRI scanner room)

☐ Yes ☐ No

13. Do you wear transdermal medication patch (e.g. , Nitroglycerin, Nicotine, etc.)? (If YES, MUST BE REMOVED before entering MRI scanner room)

☐ Yes ☐ No

14. Do you have kidney/renal disease, liver disease or diabetes?

☐ Yes ☐ No

15. Do you have any ALLERGIES?

☐ Yes ☐ No

15a. If YES, please specify allergies:

16. Are you claustrophobic (afraid of enclosed or tight spaces)?

☐ Yes ☐ No

17. Are you wearing RFID (Radiofrequency ID Device)? (e.g., a wristband on an inpatient)

☐ Yes ☐ No

18. If FEMALE, are you (or could you be) pregnant? [subject_female_intro]

18a. When was your last menstrual period? [period_date_intro]

19. Are you receiving gadolinium contrast ("dye") for your MRI scan?

☐ Yes ☐ no ☐ Not Sure

19a. If you will be receiving gadolinium contrast ("dye") for your MRI scan, confirm that you are aware you have had an opportunity to read the medication guidelines in the MRI Scan Guidelines page found below:

☐ Yes ☐ No
(Please refer to the MRI Scan Guidelines page below. You can also download a copy for your record.)

19b. Will your contrast MRI be done on your abdomen, liver, and/ or pancreas?

☐ Yes ☐ No

19c. Do you have any of the following?

- ☐ On Dialysis
- ☐ Age > 60
- ☐ Single Kidney
- ☐ Kidney cancer
- ☐ History of kidney surgery
- ☐ Other kidney disease (chronic kidney disease, on dialysis, etc)
- ☐ High blood pressure or taking medication to keep your blood pressure controlled
- ☐ Diabetes or taking medication to lower your blood sugar
- ☐ Allergy to contrast (MRI contrast)
- ☐ Latex allergy
- ☐ NONE OF THE ABOVE

19d. Do you have any of the following:

- ☐ On Dialysis
- ☐ Allergy to contrast
- ☐ Latex allergy
- ☐ For women only: Any chance of pregnancy
- ☐ NONE OF THE ABOVE

19e. If you had a reaction to contrast, please describe:

Information about MRI continue with questions after reading.

ABOUT YOUR MRI SCAN:

Magnetic resonance imaging (MRI) uses a very strong magnet to visualize structures in your body to help diagnose disease. Because of the magnetic fields, you may not be permitted in the scanner if you have certain surgical devices or other metal in your body. The MRI technologist will ask further about any positive responses to the screening questions on the front.

For your scan you will lay on a moveable table that slides into the scanning "bore" (the tube). The technologist can see and hear you at all times, but you will be given a squeeze ball to alert the technologist if you need to come out of the scanner. However, motion does significantly affect image quality, and with our very high resolution scanners a small amount of motion may blur critical structures. So you are encouraged to remain as still as possible for the duration of the scan. Your technologist can tell you how long your specific examination will take.

After all of the images have been acquired and processed, a radiologist (a board-certified doctor specializing in imaging) will study your images and generate a report. Clinical reports are typically available to your doctor within 24 hours, although in some circumstances your report may take longer. Your doctor will use the report along with your history, lab work and other testing to discuss your diagnosis and any recommended treatments with you.

We aim to make your MRI as pleasant as possible.

FOR INDIVIDUALS HAVING AN MRI SCAN WITH GADOLINIUM CONTRAST:

GADOLINIUM CONTRAST MEDICATION GUIDE			
MULTIHANCE® (møl-tè-han(t)s)	Eovist® (ē-ō-vist)	Gadavist® (gad-a-vist)	Dotarem® (doh-ta-rem)
gadobenate dimeglumine	gadoxetate disodium	gadobutrol	gadoterate dimeglumine
Injection for intravenous use			

What is GADOLINIUM CONTRAST?

GADOLINIUM CONTRAST (or gadolinium-based contrast agent, **GBCA**) is a type of prescription medicine that is used with a magnetic resonance imaging (MRI) scanner to see problems in your body. Your doctor has reviewed your medical records and has determined that you would benefit from using a GBCA with your MRI exam.

What is the most important information I should know about GBCAs?

- GBCA is a medicine that may be given to you for your magnetic resonance imaging (MRI) procedure.
- GBCAs contain a "heavy metal" called gadolinium. Small amounts of gadolinium can stay in your body including the brain, bones, skin and other parts of your body for a long time (several months to years).
- There are no known harmful effects from gadolinium staying in the body in patients with normal kidneys. More studies on the safety of gadolinium are underway.
- The amount of gadolinium that stays in the body is different for different gadolinium medicines. Gadolinium stays in the body more after Omniscan or Optimark than after Eovist, Magnevist, or MultiHance. Gadolinium stays in the body the least after Dotarem, Gadavist, or ProHance.
- Some people feel pains, tiredness and skin, muscle or bone ailments for a long time. These conditions haven't been directly linked to GBCAs.
- People who get many doses of gadolinium, pregnant women & young children may be at increased risk from gadolinium staying in the body.
- Some people with kidney problems who get gadolinium can develop a condition with severe thickening of the skin, muscles and other organs in the body (nephrogenic systemic fibrosis). **Your healthcare provider should screen you to see how well your kidneys are working before you receive a GBCA.**
- It is considered safe for a mother to nurse/breastfeed after receiving GBCA. It is not necessary to modify nursing or to pump and discard.

Do not receive a GBCA if you have had a severe allergic reaction to any gadolinium-containing medication.

Please advise us of any medication allergies.

Before receiving a GBCA, tell your healthcare provider about all your medical conditions, including if you:

- have had any MRI procedures in the past where you received a GBCA. Your healthcare provider may ask you for more information including the dates of these MRI procedures.
- are pregnant or plan to become pregnant. It is not known if GBCAs can harm your unborn baby. Talk to your healthcare provider about the possible risks to an unborn baby if a GBCA is received during pregnancy.
- have kidney problems, diabetes, or high blood pressure
- have had an allergic reaction to dyes (contrast agents) including GBCAs

What are the possible side effects of GBCAs?

- Allergic reactions.** GBCAs can cause allergic reactions that can sometimes be serious. Your healthcare provider will monitor you closely for symptoms of an allergic reaction.

The most common side effects of GBCAs include: nausea, headache, feeling hot, rash, back pain or burning at the injection site.

These are not all the possible side effects of GBCAs. Call your doctor for medical advice about side effects. You may report side effects to FDA at 1-800-FDA-1088.

General information about the safe and effective use of GBCAs.

Medicines are sometimes prescribed for purposes other than those listed in a Medication Guide. You can ask your healthcare provider for information about GBCAs that is written for health professionals.

What are the ingredients in GBCAs?				
Medication	MULTIHANCE®	EOVIST®	GADAVIST®	DOTAREM®
Active ingredient	gadobenate dimeglumine	gadoxetate disodium	gadobutrol	gadoterate meglumine
Inactive ingredient(s)	Water	caloxetate trisodium, trometamol, hydrochloric acid and/or sodium hydroxide and water	calcobutrol sodium, trometamol, hydrochloric acid and water	DOTA, water for injection
Manufactured by	BIPSO GmbH-78224 Singen (Germany)	Bayer HealthCare Pharmaceuticals Inc		Catalent (pre-filled syringes) and Recipharm (vials)
Manufactured for	Bracco Diagnostics Inc., Monroe Township, NJ	Bayer HealthCare Pharmaceuticals Inc. Whippany, NJ 07981		Guerbet LLC, 821 Alexander Rd, Suite 204, Princeton, NJ
For more info	bracco.com, 1-800-257-5181	www.bayer.com or call 1-888-842-2937		www.guerbet.com, 877-729-6679

Download a copy of the above- click [here](#) for this attachment.

[Attachment: "MRIScreenMSD 100818-line 19 update (003).docx"]

20. Patient Age: [subject_age_intro]

21a. Subject Weight: [subject_weight_intro] [weight_measurement_intro]

21b. Subject Height: [subject_height_intro] [height_measurement_intro]

22. If applicable, please provide previous MRI scan date:

(Please put N/A if not applicable)

22a. Was this previous scan at any of the Mount Sinai locations?

☐ Yes ☐ No ☐ Not Sure
☐ Not Applicable

Did you require assistance in completing this questionnaire? [need_help_intro]

FOR SUBJECTS REQUIRING ASSISTANCE WITH QUESTIONNAIRE[]

Name of individual completing this questionnaire: [completing_name_intro]

Indicate relationship to Patient: [relationship_to_subject_intro]

Date questionnaire is completed: [form_date]

PLEASE MAKE SURE TO REVIEW ALL QUESTIONS AND ANSWERS BEFORE SUBMITTING

WARNING: THE MRI MAGNET IS ALWAYS ON!

Do not enter the MRI scanner room or the MRI environment if you have any question or concern regarding an implant, device, or object. Consult the MRI technologist or radiologist BEFORE entering an MRI room.

Please remove ALL jewelries PRIOR to coming for your MRI imaging visit. In addition, please AVOID wearing hard to remove jewelries or clothing that has metal in them.

FOR INTERNAL USE ONLY

Tech/ RN Verification

Question 1. Do you have a pacemaker, AICD, internal pacing wires, EKG leads or Holter monitor?

Was answered "YES"

(Tech comment on how this was resolved)

23a. Was this previous scan at any of the Mount Sinai locations?

☐ Yes ☐ No ☐ Not Sure
☐ Not Applicable

Question 2. Do you have an implanted stimulator (including bone growth stimulator, spinal stimulator or cochlear or other ear implant) or medication infusion pump?

(Tech comment on how this was resolved)

Was answered "YES"

Question 3. Have you had brain surgery, or do you have metallic clips (aneurysm clips) in your head?

(Tech comment on how this was resolved)

Was answered "YES"

Question 4. Have you ever had eye surgery or implants?

(Tech comment on how this was resolved)

Was answered "YES"

Question 5. Have you ever worked around metal lathe, had metal shavings or fragments in your eye(s), or had shrapnel (war or gunshot) injury anywhere in your body?

(Tech comment on how this was resolved)

Was answered "YES"

Question 6. Have any devices been placed in your blood vessels (e.g., stent, filter, coil, or vascular port/ catheter)?

(Tech comment on how this was resolved)

Was answered "YES"

Question 7. Do you have an implanted tissue expander?

(Tech comment on how this was resolved)

Was answered "YES"

Question 8. Do you have a replaced heart valve, other prosthesis or any other surgical implant?

(Tech comment on how this was resolved)

Was answered "YES"

Question 9. List any other type of metal in or on your body: [mpsq_q9]

(Tech comment on how this was resolved)

Was answered

Question 10. Do you have a history of rectal surgery or severe hemorrhoids? (For patient with pelvic or prostate scans)

Was answered "YES"

(Tech comment on how this was resolved)

Question 11a. Do you have any of the following?
(Please select all that apply)

Was answered with selection (s)

(Tech comment on how this was resolved)

- 1, Tattoo(s)
- 2, Permanent make-up
- 3, Piercing(s)

Question 12. Do you wear hearing aid(s), either in the ear canal or on the surface? (If YES, MUST BE REMOVED before entering MRI scanner room)

Was answered "YES"

(Tech comment on how this was resolved)

Question 13. Do you wear transdermal medication patch (e.g. , Nitroglycerin, Nicotine, etc.)? (If YES, MUST BE REMOVED before entering MRI scanner room)

Was answered "YES"

(Tech comment on how this was resolved)

Question 14. Do you have kidney/renal disease, liver disease or diabetes?

Was answered "YES"

(Tech comment on how this was resolved)

Question 15. Do you have any ALLERGIES?

Was answered "YES"

(Tech comment on how this was resolved)

Question 16. Are you claustrophobic (afraid of enclosed or tight spaces)?

Was answered "YES"

(Tech comment on how this was resolved)

Question 17. Are you wearing RFID (Radiofrequency ID Device)? (e.g., a wristband on an inpatient)

Was answered "YES"

(Tech comment on how this was resolved)

Question 18. If FEMALE, are you (or could you be) pregnant?

Was answered "YES"

(Tech comment on how this was resolved)

Question 19. Are you receiving gadolinium contrast ("dye") for your MRI scan?

Was answered "YES"

(Tech comment on how this was resolved)

Question 19a. If you will be receiving gadolinium contrast ("dye") for your MRI scan, confirm that you are aware you have had an opportunity to read the medication guidelines in the MRI Scan Guidelines page found below:

Was answered "YES"

(Tech comment on how this was resolved)

Question 19b. Have you had an allergic reaction to MRI contrast previously?

Was answered "YES"

(Tech comment on how this was resolved)

Linear GBCA guidelines

On Dialysis	Relative contraindication. Switch to macrocyclic Is the study necessary?*
Age > 80	Check creatinine
Single Kidney	Check creatinine
Kidney transplant	Check creatinine
Kidney cancer	Check creatinine
History of kidney surgery	Check creatinine
Other Kidney disease	Check creatinine
High blood pressure	Check creatinine
Diabetes	Check creatinine
Allergy to contrast	Assess details
Latex allergy	Use latex free gloves
For women only: Any chance of pregnancy?	Check pregnancy test

*Per policy:

Hemodialysis, Peritoneal Dialysis, or Risk for NSF

For patients on hemodialysis or peritoneal dialysis or at risk for NSF, it may be preferable to perform a CT with IV contrast instead of MRI.

However, if potential benefits of a GBCA-enhanced MRI exam are felt to outweigh the risk in an individual patient and there is no suitable alternative, the referring physician and patient should be informed of the risks of GBCA administration, and both should agree with the decision to proceed with GBCA injection.

1. If administration of contrast agent is deemed necessary, the patient may receive either full dose ~~Gadavist~~ or ~~weight-based Eovist~~ (maximum 10 mL). Informed consent for these patients is no longer required. The lowest dose of GBCA necessary to obtain the needed clinical information should be used in at-risk patients, and dose should generally not exceed the recommended single dose.

2. Peritoneal dialysis likely confers a lesser protective role than hemodialysis in preventing NSF and should not be performed after administration of GBCAs. However, initiation of hemodialysis is not generally recommended in patients in whom chronic hemodialysis has not already been established, as it is unclear if the benefits outweigh the risks.

Among dialysis patients, dialysis session is recommended as closely as possible after the MRI, preferably on the same day.

ii. ~~Multihance~~ should be avoided in patients with eGFR \leq 30. Group II macrocyclic agents (i.e. ~~Gadavist~~) are preferred in this population.

Macrocytic GBCA guide

For healthcare worker use only:

On Dialysis	Risk/benefit evaluation.*
Allergy to contrast	Assess details.
Latex allergy	Latex free gloves.
For women only: Any chance of pregnancy?	Check pregnancy test.

*Per policy:

Hemodialysis, Peritoneal Dialysis, or Risk for NSF

For patients on hemodialysis or peritoneal dialysis or at risk for NSF, it may be preferable to perform a CT with IV contrast instead of MRI.

However, if potential benefits of a GBCA-enhanced MRI exam are felt to outweigh the risk in an individual patient and there is no suitable alternative, the referring physician and patient should be informed of the risks of GBCA administration, and both should agree with the decision to proceed with GBCA injection.

1. If administration of contrast agent is deemed necessary, the patient may receive either full dose Gadavist or weight-based Eovist (maximum 10 mL). Informed consent for these patients is no longer required. The lowest dose of GBCA necessary to obtain the needed clinical information should be used in at-risk patients, and dose should generally not exceed the recommended single dose.

2. Peritoneal dialysis likely confers a lesser protective role than hemodialysis in preventing NSF and should not be performed after administration of GBCAs. However, initiation of hemodialysis is not generally recommended in patients in whom chronic hemodialysis has not already been established, as it is unclear if the benefits outweigh the risks.

Among dialysis patients, dialysis session is recommended as closely as possible after the MRI, preferably on the same day.

ii. MultiHance should be avoided in patients with eGFR \leq 30. Group II macrocyclic agents (i.e. Gadavist) are preferred in this population.

Question 22a. Was this previous scan at any of the Mount Sinai locations?

Was answered "YES"

(Tech comment on how this was resolved)

If individual assisting subject is a RN or MD, was the information corroborated by chart history? [corroborated_intro]

CONTRAST SCREENING (FOR GADOLINIUM PATIENTS)

☐ CHECK if drawn as Point-of-Care Test in Radiology

DRAWN:

REVIEWED:

RESULTS:

eGFR (mL/min/1.73m²)

eGFR Results

- ☐ African American (AA)
☐ non-African American (non-AA)

Creatinine (Cr):
(mg/dL)

SCREENING (q 14, 15, 18) AND LAB RESULTS REVIEWED BY:

(Insert Initials above)

GADOLINIUM INJECTION RECORD

Contrast Agent:

SITE:

VOLUME (mL):

FLOW RATE (mL/s):

OUTCOME:

(See electronic / supplementary documentation for details)

- ☐ Routine injection
☐ Contrast Reaction
☐ Extravasation
☐ Other Event

INJECTING PERSONNEL Name:

Injecting Personnel TITLE:

INJECTING PERSONNEL Signature:

Name of MRI Tech Reviewing MRI Subject Safety
Screening Responses:

Name of Registered Nurse (RN) Reviewing MRI Subject
Safety Screening Responses:
