HEALTH HOLDING

HAFER ALBATIN HEALTH CLUSTER
MATERNITY AND CHILDREN HOSPITAL

Department:	Radiology Department		
Document:	Multidisciplinary Policy and Procedure		
Title:	Magnetic Resonance Imaging Policy		
Applies To:	All Radiology Staff , Anaesthesia Staff, Physicians and Nurses		
Preparation Date:	January 05, 2025	**Index No:**	RD-MPP-008
Approval Date:	January 19, 2025	**Version :**	2
Effective Date:	February 19, 2025	**Replacement No.:**	RD-MPP-008(1)
Review Date:	February 19, 2028	**No. of Pages:**	12

1. PURPOSE:

1.1 To maintain the safe practice in MRI unit at maternity and children hospital, and to protect MRI staff, hospital staff, patients and visitors from the hazard of any incidents that might be happened.

2. DEFINITIONS:

2.1 **Magnetic Resonance Imaging (MRI) Technique**–is used in radiology to generate images of organs in the body for diagnostic imaging. MRI scanning is based on the science of NMR using strong magnetic fields, radio waves, and field gradients to generate images of the organs in the body.

2.2 **Magnetic Resonance Imaging (MRI) Scanner** – consists of a large, powerful magnet that a patient lies in.

2.3 **Radio Wave Antenna**– is used to send signals to the body and then receive signals back. These returning signals are converted into images by a computer attached to the scanner. Imaging of almost any part of the body can be obtained in any plane.

2.4 **Most Clinical Magnets**– are superconducting magnets, which require liquid helium. Because of the potential hazards associated with MRI, anyone accessing the MRI environment must be either trained or screened. Patients must undergo a comprehensive screening to ensure that an MRI procedure is appropriate for them.

3. POLICY:

3.1 **Supervisor of MRI unit is responsible to:**

- 3.1.1 Implement MRI policies and procedures
- 3.1.2 Update MRI policies and procedures
- 3.1.3 Provision of MRI safety training
- 3.1.4 Quality monitoring and improvement

3.2 **MRI safety personnel divided into:**

- 3.2.1 **First Level MRI Personnel:** Those who have passed minimal safety educational efforts to ensure their own safety as they work within Zone – 3 (such as: patients, radiology staff and other hospital employee).
- 3.2.2 **Second Level MRI Personnel:** Those who have been more extensively trained and educated in the broader aspects of MRI safety issues (MRI Specialists, Radiologists, MRI Nurse and Anesthesiologist).

3.3 **MRI Unit includes four divided safety zones**, the access to these zones is restricted in MRI facilities and hospitals and the boundary of each zone in this four-zone safety system is defined by its purpose and distance from the MRI scanner:

- 3.3.1 **Zone – 1:** This region includes all areas that are freely accessible to the general public.
  - 3.3.1.1 This area is typically outside the MR environment itself and is the area through which patients, health care personnel, and other employees of the MRI site access the MRI environment.

3.3.2 **Zone – 2:** Controlled access area, where all ferromagnetic objects is must be removed from patients, staff, or others.

3.3.2.1 All the answers to MRI screening questions, patient histories, etc. are typically obtained.

3.3.3 **Zone – 3:** A restricted area, only allowed for screened MRI patients and personnel.

3.3.3.2 There are two MRI personnel at all times in Zone – 3 during scanning.

3.3.4 **Zone – 4:** A totally restricted area where the magnet is located.

3.3.4.1 Access to Zone – 4 should only be possible by passing through Zone – 3.

3.4 **Staff training on MR safety:**

3.4.1 All new radiology employees should complete the orientation and basic training in MRI unit within their hospital orientation program.

3.4.2 All hospital employee should complete the MRI safety orientation within their hospital orientation program.

3.4.3 The training on MRI safety for all radiology staff will be annually.

3.4.4 The MRI safety training should include the presentation of technical and medical background of MRI safety.

3.5 **Screening Process:**

3.5.1 MRI screening must be done before any MRI exam is indispensable and evaluates the magnetic and geometric properties of implants or foreign bodies, and their potential interactions with the magnetic fields in an MRI system.

3.5.2 Non – emergent patients should be safety screened by a minimum of 2 separate individuals. At least one of these individuals should be level 2 MRI personnel. At least one of these 2 screens should be performed orally or interactively.

3.5.3 Emergent patients and their accompanying non – MRI personnel may be screened only once, providing the screening individual is level 2 MRI personnel. There should be no exceptions to this.

3.5.4 No empty responses will be accepted, each question must be answered with a "yes" or "no" or specific further information must be provided as requested

3.5.4.1 **NOTE:** The screening process and screening forms for patients, Non-MRI personnel, and MRI personnel should be essentially identical.

3.5.5 Before anybody is allowed to enter the MRI suite, it is essential to remove all objects that could potentially interact with the magnetic fields, and It is recommended that patients will wear gowns in the MRI environment to avoid metallic fasteners, loose metallic components, or metallic threads on clothing in the MRI suite.

3.5.6 Ferromagnetic detection device is also recommended for completing the process of patient screening.

3.5.7 Screen everyone who is going into Zone – 4: Visitors, maintenance staff and qualified Medical Physicists/MR Scientists.

3.5.8 Patient will be given an explanation of the procedure to ensure cooperation.

3.5.9 Patient given "call switch or squeeze ball" in the event of assistance being required.

3.5.10 In case of contrast administration, make sure about the patient allergy.

3.6 **Safety of special patient population:**

3.6.1 Special patient population:

3.6.1.1 Consent assigned by the responsible person in case of patient with special needs that include MRI and MRI contrast hazards signed by the responsible person.

3.6.1.2 The patient with special needs is screened in the presence of adults to improve self-report of harmful objects on their person.

3.6.1.3 Responsible person of patient with special needs may be allowed to access Zone – 4 after approval of the MR technologist.

3.6.1.4 Hearing protection is mandatory for responsible person of patient with special needs.

3.6.2 Pregnant MR female staff:

3.6.2.1 All pregnant health care practitioners are permitted to work in and around the MR environment throughout all stages of their pregnancy. Pregnant healthcare practitioners are requested not to remain within the MRI scanner room during actual data acquisition.

3.6.3 Pregnant Patients:

3.6.3.1 Pregnant patients may undergo MRI scans at any stage of their pregnancy if the referring physician and the supervising radiologist determine that the risk-benefit ratio to the patient warrants that the study be performed.

3.6.3.2 Pregnant patients may be allowed to have an MRI exam on a 3 Tesla magnet, if the area being imaged is a brain or extremity. Pelvis, abdomen or spine work should be on a 1.5.

3.6.3.3 The technologist is required to give the patient an information sheet about MRI's and pregnancy. This should be documented.

3.6.3.4 MR contrast agents should generally NOT be administered to pregnant patients, although exceptions may be made at the radiologist discretion.

3.6.4 Pediatric Patients:

3.6.4.1 Consent assigned by the responsible person in case of pediatric patient, that include MRI and MRI contrast hazards signed by the responsible person.

3.6.4.2 Children are screened in the presence of adults to improve self – report of harmful objects on their person.

3.6.4.3 Family member of pediatric patients may be allowed to access Zone – 4 after approval of the MR technologist.

3.6.4.4 Hearing protection is mandatory for family member.

3.6.4.5 Different MR examination for paediatric age group & the special examinations should be done for Inpatient only that requested by the concerning physician such as MRI orbit by an ophthalmologist , ENT different MRI cases by an otorhinolaryngologist, neurological MRI studies by a neurologist , etc.

3.6.4.6 Neonatal age group MRI that requested by neonatology consultant done with the supervision of neonatologist which take the decision for sedation or anesthesia.

3.6.4.7 Pediatric patient's preparation is included in inpatient policy.

3.6.4.8 Contrast medium of pediatric age group included in the contrast medium policy.

3.6.5 Claustrophobia, Anxiety and Sedation:

3.6.5.1 Patient with claustrophobia need an explanation about the MRI machine like (the MRI machine is not dark, and there is an opening on both sides of the tunnel, and we can see you and hear you during the MRI exam) to help the patient to be calm and to avoid the fear within the magnetic resonance machine.

3.6.5.2 If none of these techniques has worked sedation is the second choice for this conditions.

3.6.6 Prisoners/Detainees:

3.6.6.1 The examination will be done during the presence of police officers, head of department, and head of technologist, MRI technologist and security staff to avoid any problems and to secure the scanning environment.

3.6.6.2 Remove any sharp tools, medication, movable devices from scanning environment.

3.6.6.3 Monitor the patient carefully during the examination and inform the responsible about any abnormal action.

3.6.6.4 If the examination is necessary and in case that the patient uncooperative, sedation is advised.

3.7 **Safety of MR contrast agents:**

3.7.1 Precautions should be taken for I.V contrast media injection to control life – threatening reaction and contrast induced nephropathy.

3.7.1.1 **General Precautions Includes:**

3.7.1.1.1 General Consent Form

3.7.1.1.2 A recent "**Creatinine**" result

3.7.1.2 **Strict Precaution in Case of:**

3.7.1.2.1 Previous Contrast Reaction

3.7.1.2.2 Asthmatics

3.7.1.2.3 Renal Impairment

3.7.2 In these cases, IV contrast should be avoided by changing to another modality and if necessary general precautions, high risk consent from the patient must be taken, the referral physician must attend the exam and in case of renal impairment or diabetes an internal medicine physician or nephrologist must be consulted to take specific precautions.

3.7.3 Immediate reactions take place within an hour after injection of the contrast medium, These reactions can be:

3.7.3.1 **Mild Reaction:** (Nausea, Vomiting, Mild Urticaria)

3.7.3.1.1 It will stop the procedure and it require monitoring the patient.

3.7.3.2 **Moderate Reaction:** (Severe Vomiting, Extensive Urticaria, Dyspnea, Rigor, Laryngeal Edema).

3.7.3.2.1 The first aid will be given to the patient by Radiologist.

3.7.3.2.2 The patient will be sent to ER immediately.

3.7.3.3 **Severe Reaction:** (Pulmonary Edema, Cardiac Arrhythmias or arrest, Circulatory Collapse).

3.7.3.3.1 Call for "Code Blue" (by calling **Emergency Number: 2222**) after giving the patient the first aid by the Radiologist.

3.8 **Preventing Thermal Burns:**

3.8.1 Physicians and MRI technologists need to be aware of the bio-effects of radiofrequency fields because RF-fields can cause tissue heating in the human body.

3.8.2 A proper preparation of each patient before an MRI exam is necessary to avoid burns even for patients without implants.

3.8.3 Remove metallic objects contacting the patient's skin (e.g., jewelry, drug delivery patches with metallic components).

3.8.4 Use insulation material of 1 cm or thicker to prevent skin-to-skin contact and the formation of closed-loops from touching body parts.

3.8.5 Tattoos should be discussed. In certain circumstances RF heating may cause a burn around the tattooed area. Patients will be instructed to contact the technologist during the exam if any sensations are felt. A cold compress/ice pack may be placed over the area to minimize RF heating at the patient's request.

3.8.6 All unconscious/unresponsive patients should have attached leads insulated from their skin during scanning. It is important to follow established product MR conditional labelling and safety guidelines carefully and precisely

3.8.7 **NOTE:** MRI scanning at either stronger and/or weaker magnetic field strengths than those tested may result in significant heating where none had been observed at the tested field strength(s).

3.9 **Hearing Protection:**

3.9.1 The MRI scanner can produce very high acoustic noise levels, which may cause discomfort in some patients. Earplugs / headphones can reduce the noise level by at least 25 decibels.

3.9.2 Provide an earplugs or headphones for the patient and family members who accompany them into the scan room.

3.9.3 Patients always need to have ear plugs or MRI headset cover as well as. Hearing loss can occur in those that don't wear the earplugs during the scan.

3.9.4 Patients, sometimes the earplugs are not a perfect fit but in addition, MRI staff will place towels by their ears and tape the earplugs in place.

3.10 **Cryogen Safety:**

3.10.1 MRI systems use cryogens (usually helium) to cool the magnet in the MR scanner.

3.10.2 During a quench, the cryogen gases evaporate quickly, causing a loss of superconductivity in the magnet. Emergency venting systems direct the escaping cryogens through a quench pipe out of the building.

3.10.3 It will be monitored and recorded daily the level of helium and the room temperature

3.10.4 In case of any abnormal reading, the MRI staff should immediately recorded it and communicate the Bio – Medical Department.

3.11 **MRI Emergency:**

3.11.1 One of the cryogenic gas hazard is the magnet quench. Quench is the (normally unexpected) loss of superconductivity in an NMR magnet, resulting in rapid heating through increased

resistance to the high current. The superconducting magnet contains both liquid helium and liquid nitrogen. A substantial volume of liquid helium will be converted to gas if the magnet quenches. In a magnet quench, the superconducting magnet loses the ability to super conduct and the stored energy is released as heat, which boils off the liquid helium. The helium gas is vented out of the magnet dewar and fills the room from the top down (helium is lighter than air), and forms a cloud near the ceiling. A quench is obvious: a big cloud of helium vapor will form above the magnet, accompanied by a loud whooshing sound that can create an oxygen deficient atmosphere. The quench can violently damage the magnet, and ferrous objects are drawn into the magnet bore.

3.11.1.1 There are two emergency buttons located on every magnet:

3.11.1.1.1 Emergency Stop/Shutoff:

3.11.1.1.1.1 Turns off all incoming electrical power to the magnet Power Distribution Unit (PDU). It is used when there is a fire, sparks, loud noises, flooding, or catastrophic equipment failure.

3.11.1.1.2 Quench or Emergency Run Down:

3.11.1.1.2.1 Causes immediate collapse of the superconductive magnetic field. It is used only when a large magnetic object pins a person against the magnet, and no other method can prevent further injury or free the person. Know the location and function of the two emergency buttons located on every magnet.

3.11.2 Emergency Procedures Follow these steps if a magnet quench occurs or if the oxygen monitor alarm turns on:

3.11.2.1 Evacuate the room immediately, leave the doors open during egress, activate the fire alarm to evacuate the building.

3.11.2.2 Call 2222.

3.11.2.3 No one should be allowed to enter the room until helium has completely boiled off. The emergency responders will assess the oxygen concentration and provide the all-clear when oxygen levels return to normal.

3.11.2.4 Assist other individual(s) with getting to safety or call 2222.

3.11.2.5 Contact the designated personnel in charge of the area.

3.11.2.6 Ensure that personnel are posted at all direct entries to the magnet room to greet emergency response personnel, and remind them of the existing hazards.

3.11.2.7 Available personnel must be ready to direct and assist responders, and ensure that only MR compatible equipment is brought into magnet rooms.

3.11.3 Follow these steps if someone is pinned against the magnet by a ferromagnetic object:

3.11.3.1 Emergency responders planning to enter the magnet room must remove ALL metal without exception. Access to the room is prohibited for anyone with non-removable metal such as a pacemaker or implanted device. Limit entry to necessary personnel only.

3.11.3.2 Determine whether the object pinning the victim can be removed without causing further injury. If removal is successful, immediately evacuate the victim to an area outside the magnet room and restrict others from entering the room. Resuscitation aided by ferromagnetic devices can be administered once the victim is outside the magnet room.

3.11.3.3 If a life – threatening emergency exists and there is no other way to free the victim without eliminating the magnetic field, then it will be necessary to initiate a magnet quench by pressing the Quench or Emergency Run Down button.

3.11.3.4 The magnet quench procedure will create a dangerous environment. Expect a loud noise from the escape of cryogens and a release of dense white fog. There is a high risk of asphyxiation and potential for frostbite. As the magnetic field decreases, the object pinning the victim may fall and could cause further damage. Also, any liquid dripping from surfaces should be presumed to be enriched oxygen and treated as a fire hazard.

3.11.3.5 Do not perform this procedure unless you are prepared to immediately evacuate yourself and the victim if oxygen is displaced from the room.

3.11.4 Follow these remaining steps only if a quench is required:

3.11.4.1 Prop open the magnet room door, as the pressure generated by the quench may prevent doors from opening. Do not allow others to enter the room through the open door.

3.11.4.2 All personnel must know to leave the room and not return until the helium has dissipated and the room is safe to reoccupy.

3.11.4.3 Under no circumstances should ferromagnetic objects be brought into the magnet room unless MR-trained personnel verify that the magnetic field is no longer detectable.

3.11.5 MRI Compatibility Environment:

3.11.5.1 All equipment's should be tested and labelled as "Safe for MRI" or "MRI Compatible":

3.11.5.1.1 Anesthesia Equipment
3.11.5.1.2 Ventilators/ Monitoring Vital Signs
3.11.5.1.3 Crash Cart
3.11.5.1.4 Stretchers/ Wheelchairs/ IV Stand
3.11.5.1.5 Medical Waste
3.11.5.1.6 Fire Extinguisher
3.11.5.1.7 Stairs/ Chairs

3.12 **MRI Incidents:**

3.12.1 Examples of items that must not enter the magnetic field or room are: regular fire extinguishers, air tanks, axes (fire fighters), guns, radios, flashlights, wheelchairs, stretchers, and defibrillators.

3.12.2 Smaller metallic items like badges, jewellery, watches, keys, dentures, glasses, hearing aids, and hair accessories must also be removed before a person wearing them enters the magnet room or magnetic field.

3.12.3 Credit cards and magnetic storage media can be destroyed by the field.

3.12.4 Metallic implants and prostheses and foreign metallic bodies (even those that are not ferromagnetic) can move or get dislodged, causing severe injury. Examples include aneurysm clips, implanted pins, shrapnel, insulin pumps, prosthetic limbs, cochlear implants, pacemakers, and cardiac or neural defibrillators.

3.12.5 In case of incident happened, the staff should report it to supervisor immediately and document it.

3.13 **Outpatient and Inpatient**

3.13.1 MRI Scan procedures are available by an appointment, it will be given to the patient during the regular (morning) duty only, which is from:

3.13.1.1 Sunday to Thursday – (07:30am to 03:30pm), however the last case will be at 02:30pm considering exam time.

3.13.2 For Gynecological and Obstetrical appointments it will be scheduled on: Sunday, Monday and Tuesday.

3.13.3 For Pediatric appointments it will be scheduled on two days determined by radiology department.

3.13.4 The appointment time may be postponed due to priority of the emergency cases, longer time than expected taken by the previous case or due to unprepared patient upon radiologist opinion.

3.13.5 For the pediatric patients and uncooperative patients anesthesia will be required done under policy of anesthesia department.

3.13.6 Concerning MRI requests from the neonatology department, the examination must be done in the presence of a neonatologist.

3.13.7 Concerning MRI requests from the ICU department, the examination must be done in the presence of an ICU specialized physician.

3.13.8 **Note:** For (In-patient), it is mentioned to appointment because the proper preparation will be given to the patient after informing the radiology department about the requested examination, and the closest appointment will be scheduled.

3.14 **Patient preparation for MRI:**

3.14.1 Consent assigned by the patient or the responsible person in case of pediatric patient. that include

3.14.1.1 MRI and MRI contrast hazards signed by the patient or the responsible person in case of pediatric patient.
3.14.1.2 The decision of contrast injection that will be taken by the radiologist during exam.
3.14.1.3 Additional complementary imaging modalities that may be performed post – exam.

3.14.2 Consent about MRI safety precautions and exclusions policy introduce (by referring physician) to be signed by the patient or the responsible person in case of pediatric patient and also by the referring physician with complete description of the procedure and the stamp.

3.14.3 Fasting "**empty stomach**" for 6 – 8 hours for all patients to be ready in case of contrast administration decision.

3.14.4 Recent Creatinine result.

3.14.5 In case of sedation/anesthesia, patient scheduling and pre – exam preparation should consider anesthesia preparation admitted by the anesthesia department policy.

3.15 **MRI exams available in Maternity and Children Hospital includes:**

3.15.1 Female, Gynecological and Obstetrical Examinations:
3.15.1.1 Female pelvic lesions characterization.
3.15.1.2 Female genital tract congenital anomalies.
3.15.1.3 Unexplained pelvic pain and symptoms.
3.15.1.4 Placental abnormalities.
3.15.1.5 Fetal congenital anomalies that diagnosed by ultrasound & need to be confirmed.
3.15.1.6 Neuro – radiological examination for inpatient cases that requested by the neurologist.

3.15.2 Pediatric Age Group:
3.15.2.1 Different MR examination for paediatric age group.

3.16 **Take – Away Safety Tips:**

3.16.1 Always remove metallic objects before entering the magnet room.

3.16.2 Ensure that ferromagnetic objects are kept outside the magnet room.

3.16.3 Provide earplugs to patients before they undergo an MRI procedure.

3.16.4 Know the location and function of the two emergency buttons located on every magnet.

3.16.5 Wear safety glasses or goggles, cryogenic gloves, and body protection when handling cryogenic liquids, namely, the liquid helium and/or nitrogen in superconducting magnets. Prolonged exposure to helium vapour can cause frostbite.

3.16.6 Use cryogen level sensors to avoid a "quench"; always refill or de-energize the magnet if low cryogen levels are indicated on the sensors, oxygen displacement during quench is a serious concern.

3.16.7 Do not operate equipment with protective panels opened or removed.

3.16.8 Secure Zone IV from inadvertent entry.

3.16.9 Develop and use serious warning signs.

3.16.10 Label all devices near or in the MRI suite; Safe or unsafe.

4. PROCEDURE:

4.1 MRI scan procedures will be performed after receiving radiology request through PACS with complete and correct patient identification which is:

4.1.1 Patient Name (Four names for Saudi/ Complete Name for the Non – Saudi).

4.1.2 Medical Record Number or National ID Number/ Iqamah Number.

4.1.3 Requested Examination.

4.1.4 Complete and benefit clinical indications for the requested exam.

4.1.5 Name of Referring Physician.

4.1.6 **Note: in addition to all complete "mandatory" forms.**

4.2 Preparation of the patient to the exam as discussed above.

4.3 The MRI technologist will re – check the MRI checklist with possible contraindication (detailed above) for the patient and for the patient relative in MRI room if present and remove all metallic objects before entering MRI room.

4.4 Before performing the MRI procedure, it is important to inform the patient/ parents about the procedure, benefits, complication and answer any questions related to the examination.
4.6 Examination will be performed by a well-trained MRI technologist under supervision of a radiologist.
4.7 The MRI technologist together with the radiologist will prepare the MRI protocol before performing the exam according to suspected pathologies.
4.8 After performing the MRI procedure, all images will be delivered to PACS and reviewed by radiologist for reporting.
4.2 Preparation of the patient to the exam as discussed above.

5. MATERIAL AND EQUIPMENT:

5.1 MRI Machine
5.2 Radiofrequency Coils
5.3 Anesthetic Devices and materials (Anesthesia Department is responsible for their stuffs)
5.4 Contrast Injector
5.5 Contrast Media - Gadolinium Contrast Agent "Consent Is Required For All MRI Procedures Especially I.V Contrast"
5.6 Emergency Drugs For Anaphylactic Reaction Control

6. RESPONSIBILITIES:

6.1 Radiology Nurse/ MRI Nurse
6.2 For In-Patients: Responsible Physician and Nurse
6.3 Anaesthesiologist + Anesthesia Technician
6.4 Radiographers/ MRI Staff
6.5 Radiologist
6.6 MRI Maintenance

7. APPENDICES:

7.1 Patient Safety Screening Form For MRI (GDOH-INV-PSSF-281)
7.2 General Consent Form (GDOH-COR-GC-351)

8. REFERENCES:

8.1 American college of radiology https://www.acr.org/Clinical-Resources/Radiology-Safety/MR-Safety.
8.2 Department of radiology UCSF https://radiology.ucsf.edu/patient-care/patient-safety/mri.
8.3 Http://www.acr.org.

9. APPROVALS:

	Name	Title	Signature	Date
Prepared by:	Mrs. Ghadeer Rakad Aldhafeeri	Radiology Specialist		January 05, 2025
Reviewed by:	Mr. Abdullah Ganam Almuteri	Head of Radiology Specialist and Technician		January 06, 2025
Reviewed by:	Dr. Ahmad Al Nussairy	Head of Radiology Department		January 07, 2025
Reviewed by:	Engr. Mishari Fahad Al Mutairi	Facility Management and Safety Director		January 09, 2025
Reviewed by:	Dr. Tamer Mohamed Naguib	Medical Director		January 12, 2025
Reviewed by:	Mr. Abdulelah Ayed Almutairi	QM&PS Director		January 12, 2025
Approved by:	Mr. Fahad Hazam Alshammari	Hospital Director		January 19, 2025

KINGDOM OF SAUDI ARABIA

وزارة الصحة
Ministry of Health

Hospital: _____ مستشفى:

Region: _____ المنطقة/المحافظة:

Dept./Unit: _____ القسم/الوحدة:

MRN: _____ رقم الملف الطبي:

Name: _____ الاسم:

Nationality: _____ الجنسية:

Age: _____ ☐ سنة Years ☐ شهر Months ☐ يوم Days العمر:

Date of Birth: ___/___/14___ H ___/___/20___ تاريخ الميلاد:

Gender: ☐ Male ☐ Female الجنس:

PATIENT SAFETY SCREENING FORM FOR MRI

MRI Exam will NOT be booked unless the following sections are completed.

Certain implants, devices or objects may be hazardous to the patient and/or may interfere with MR procedure
The referring physician takes full responsibility for checking that patient has no hazardous items as listed below
***** Please review with your patient *****

Does the patient have any of the following?

Cardiac pacemaker & automatic defibrillators (Absolute Contraindication) ☐ Yes ☐ No

Cochlear, otologic, or other ear implant ..... (Absolute Contraindication) ☐ Yes ☐ No

Aneurysm clip _____ ☐ Yes ☐ No

If yes, specify the type of clip: _____

If type is unknown, MRI is contraindicated.

Any metallic foreign body in the eye _____ ☐ Yes ☐ No

Implanted insulin pump _____ ☐ Yes ☐ No

Any type of Biostimulator or Neurostimulator _____ ☐ Yes ☐ No

Starr Edwards pre 6000 series heart valve _____ ☐ Yes ☐ No

"Omniphase" penile prosthesis _____ ☐ Yes ☐ No

Programmable hydrocephalus shunt _____ ☐ Yes ☐ No

Artificial or prosthetic limb _____ ☐ Yes ☐ No

Joint replacement or orthopedic pin, screw, nail, wire, plate, etc. ☐ Yes ☐ No

If yes, Specify: _____

When: _____

IUD, diaphragm, or pessary _____ ☐ Yes ☐ No

Any other metallic items or implants _____ ☐ Yes ☐ No

If yes, Specify: _____

When: _____

Claustrophobia _____ ☐ Yes ☐ No

N.B: Refer to the Radiologist for any "Yes" answered questions from the above

Allergic reaction or reaction to contrast media _____ ☐ Yes ☐ No

If yes, specify: _____

Pregnancy _____ ☐ Yes ☐ No

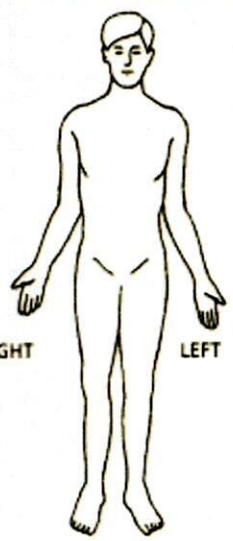
In general principles, caution should be employed in requesting studies during FIRST trimester of pregnancy even though no harmful effects have been demonstrated.

Comments: _____

_____

_____

Please mark on the figure below, the location of any implant or metal inside of or on the patient's body.



Patient's Weight: ..... Kg

Renal Function:

- Creatinine .....
- Urea .....
- GFR .....

Is the patient on dialysis?

☐ Yes ☐ No

Referring Consultant Physician: ..... Stamp&Signature: .....

KINGDOM OF SAUDI ARABIA وزارة الصحة Ministry of Health Hospital: _____ مستشفى: Region: _____ المنطقة/المحافظة: Dept./Unit: _____ القسم/الوحدة:	MRN: رقم الملف الطبي: Name: الاسم: Nationality: الجنسية: Age: العمر: ☐ Years سنة ☐ Months شهر ☐ Days يوم Date of Birth: تاريخ الميلاد: ___/___/20___ H ___/___/14___ Gender: ☐ Male ☐ Female الجنس:

GENERAL CONSENTS إقرارات عامـــة

I (for Named Patient) signed below, authorize and give consent to my attending physician and/or his/her assistant to provide medical, nursing care and other clinical diagnostic or therapeutic procedures with the exception of surgical and invasive procedures, induction of anesthetics, infusion of blood and blood products and other procedures that require special consent.	أنوض أنا (المريض) الموقع أدناه، وأعطي موافقتي للطبيب المعالج ولمن يختار لمساعدته وذلك لتقديم عناية طبية وتمريضية وأي تشخيصات سريرية أو أية طرق علاجية بإستثناء العمليات الجراحية والإجراءات التداخلية حقن الدم أو مشتقاته أو أي عمل آخر يتطلب موافقة خاصة.
I understand that Dr._____ _____ is attending physician and is the person responsible for the assessment of my medical condition & my care plan & he/she will have the responsibility according to my medical condition, to Discharge or Transfer.	لقد تم إعلامي أن الطبيب المعالج د. _____ _____ هو الشخص المسؤول عن تقييم حالتي الطبية وخطة علاجي وتقع عليه/ عليها مسؤولية أمر خروجي من المستشفى أو تحويلي الى أية جهة عناية صحية أخرى وذلك بناء على ما تستدعيه حالتي الصحية.
I understand that the hospital and its employees will respect my rights and privacy at all times and that the confidentiality of my medical information will be guarded carefully and released only to authorized person.	أفهم وأعي أن المستشفى وموظفيه سوف يحترمون خصوصياتي في كل الأوقات وأن سرية المعلومات الطبية الخاصة بي سوف يحافظ عليها بعناية وسوف تستخدم فقط وحصريا لأجل العلاج وأن تعطى فقط لهؤلاء الأشخاص الذين يقومون على رعايتي. ولن يتم إعطاء المعلومات لأي شخص أو جهة إلا في حالة موافقتي الشخصية أو موافقة الشخص المصرح كبديل عني.
I shall abide by the hospital rules and regulations.	سوف التزم واطيع كل القوانين والنظم الخاصة بالمستشفى.
I understand that the hospital is not responsible for the loss or damage of my money, valuables and other personal property and that in case of emergency or no alternative situations the items should be handed over to the security for safekeeping.	أفهم إن المستشفى لا تتحمل مسؤولية فقدان النقود، المقتنيات الثمينة أو أية ممتلكات خاصة بي الا في الحالة الطارئة أو في حالة عدم وجود بديل للحفاظ على ممتلكاتي حيث ان هذه الممتلكات يجب أن تعطى لمسؤولي الامن في المستشفى للحفاظ عليها.
If it is found that I am not eligible for free treatment, I am obligated to pay for all services rendered as per my healthcare needs, I agree that the authorities and Kingdom's courts will decide any dispute in connection with such costs.	إذا اتضح إني غير مؤهل للعلاج المجاني فإني أتفهم إني مطالب بدفع كل المصاريف المتعلقة بعلاجي وأوافق أن الجهات المختصة والمحاكم بالمملكة العربية السعودية هي التي تقرر مسؤولية الدفع في حالة وجود خلاف حول المصاريف الواجب دفعها.
In case of emergency, where I am not coherent or conscious and unable to make my healthcare decision, I hereby grant the following person (s) the right to take decision of my medical treatment on my behalf:	إذا كان هناك طارىء أو حالة غيبوبة أو عدم تركيز وكنت غير قادر على إتخاذ قرار بشأن حالتي الصحية فأني أمنح حق إتخاذ القرار بالنيابة عني بشأن حالتي الصحية إلى الاشخاص التالية أسمائهم.
1. Name: _____ Relation to the Patient _____ Date: ___/___/___ Time: _____	الإسم: _____ صلة القرابة: _____ تاريخ: ___/___/___ وقت: _____

Name:_____ الاسم:	MRN: رقم الملف الطبي:
I acknowledge that my signature on this form signifies that I am in agreement with all the statements. Signature of Patient:_____ Date: ____/____/____ Time: _____	أقر أن توقيعي على هذه الاستمارة يعني إنني موافق على كل بنودها وإنني قرأتها بالكامل قبيل توقيعي هذا. توقيع المريض: _____ تاريخ: ____/____/____ وقت: _____
Substitute Decision Maker	**من ينوب عن المريض (أو صانع القرار البديل)**
In case of emergency and the patient is unable to make decision and not granted any person to sign on his behalf. Substitute Decision Maker Name_____ Relation to the Patient _____ Signature: _____ Date: ____/____/____ Time: _____ Reason for Patient not signing to Consent: _____	في الحالة الطارئة وحين يكون المريض غير قادر على إتخاذ القرار ولم يمنح أحد حق التوقيع بالنيابة عنه. إسم من ينوب عن المريض:_____ صلة القرابة:_____ التوقيع: _____ تاريخ: ____/____/____ وقت: _____ سبب عدم توقيع المريض: _____
In case of emergency and no Substitute Decision Maker and patient not granted any person to sign on his behalf We certify that, we have examined the patient and it is our professional opinion that this patient lacks decision capacity to take health care decision and any delay providing medical treatment will endanger his life or lead to serious body harm. **1. Physician Name & ID No.:** _____ Position: _____ Signature: _____ Date: ____/____/____ Time: _____ **2. Physician Name & ID No.:** _____ Position: _____ Signature: _____ Date: ____/____/____ Time: _____	**في الحالة الطارئة وغياب من ينوب عن المريض** وكون المريض لم يمنح أحد حق التوقيع بالنيابة عنه. نحن نأكد ونوثق أنه عند فحص المريض وحسب رأينا المهني أن هذا المريض غير قادر على إتخاذ القرار بشأن حالته الصحية وأن أي تأخير في تقديم العناية الطبية اللازمة سوف يعرض حياته للخطر أو قد يؤدي الى عواقب وخيمة إسم الطبيب والرقم الوظيفي: _____ وظيفته: _____ التوقيع: _____ تاريخ: ____/____/____ وقت: _____ إسم الطبيب والرقم الوظيفي:_____ وظيفته: _____ التوقيع: _____ تاريخ: ____/____/____ وقت: _____

WITNESS شاهد

Name (الإسم)	Signature (التوقيع)	Date & Time (التاريخ والوقت)
1.)		
2.)		
3.)		