

## PREPARATION FOR MULTIPARAMETRIC PROSTATE MRI

### PREPARATION FOR THE EXAMINATION:

1. Arrive having **fasted at least for the past 6 hours**
2. Two hours before the examination, perform a cleansing FLEET enema (purchased at the pharmacy)
1. Bring the following test result to the examination
  - **Creatinine**

The above test is **valid for three months**.

### Note

- **At the time of the examination the patient must bring along all the documents regarding the prostate disease (transrectal ultrasound scan, PSA values, biopsy results, urological tests).**
- On the day of the examination, take your habitual therapy at home as instructed by your GP.
- In case of allergies to the contrast medium or of severe allergies to medicines or substances, contact your attending physician and show him or her the enclosed premedication protocol.
- In case of chronic kidney failure (creatinine > 1.2 mg/dL and GFR >30 mL/min/1.73 m<sup>2</sup>), contact your general practitioner and show the annexed pre-medication protocol. In case of GFR <30 mL/min/1.73 m<sup>2</sup>, the use of a contrast medium is contraindicated.

When booking by telephone, please let the staff of the MRI site know if the patient will arrive on a stretcher and the estimated time of arrival at the facility (tel. 02 2393 4215-2999)

**PHARMACOLOGICAL PRETREATMENT PLAN FOR PATIENTS WHO ARE  
ALLERGIC TO THE CONTRAST MEDIUM  
(iodinated and paramagnetic)**

**24 HOURS BEFORE THE EXAMINATION TAKE:**

- DELTACORTENE - 1 tablet, 25 mg
- CETIRIZINE - 1 tablet, 10 mg
- OMEPRAZOLO - 1 tablet, 20 mg

**13 HOURS BEFORE THE EXAMINATION TAKE:**

- DELTACORTENE - 1 tablet, 25 mg
- CETIRIZINE - 1 tablet, 10 mg
- OMEPRAZOLO - 1 tablet, 20 mg

**7 HOURS BEFORE THE EXAMINATION TAKE:**

- DELTACORTENE - 1 tablet, 25 mg
- CETIRIZINE - 1 tablet, 10 mg
- OMEPRAZOLO - 1 tablet, 20 mg

**1 HOUR BEFORE THE EXAMINATION TAKE:**

- CETIRIZINE - 1 tablet, 10 mg

**QUESTIONNAIRE BEFORE PERFORMING AN MRI**

Mr/Mrs.....born on.....

Weight Kg.....Send by Dr.....

- - are you claustrophobic ? Si  No
- - Did you work as welder, lathe turner or mechanic? Si  No
- - Did you have any car or hunting accident? Si  No
- - Did you have explosion wounds? Si  No
- - Are you pregnant ? Si  No
- Have you been operated at:
  - Brain Si  No
  - Neck Si  No
  - Thorax Si  No
  - Abdomen Si  No
  - Arms or legs Si  No
  - Elsewhere Si  No
- **Do you have:**
  - Metallic fragments? Si  No
  - Vessels Clips (aorta, brain)? Si  No
  - Cardiac valve? Si  No
  - Vertebral devices? Si  No
  - Infusion pump? Si  No
  - Cardiac Pace-maker or other stimulators? Si  No
  - Hearing-aid devices? Si  No
  - Neurostimulator or brain electrode? Si  No
  - IUD? Si  No
  - Spinal or ventricular drainage? Si  No
  - Metallic prosthesis, screw, nails? Si  No
  - Where.....
  - Dental prosthesis? Si  No
  - Ocular lens? Si  No
  - Do you suffer for mediterranean anemia? Si  No

**You must remove::**

- Contact lenses, hearing-aid devices, mobile dental-plate
- Remove glasses, jewelry, watch, keys, credit cards and every metallic device
- Remove cosmetics
- The exposure to magnetic fields and to radiofrequency waves can reduce the contraceptive efficacy of IUD (intrauterine device): if you bear one, the signature of this consent is of acceptance account to undergo the examination.

Milano, ..... Signature of the Radiologist MD

You must inform the MD if you use medicated strips, tattoo or piercing, mobile dental prosthesis

I hereby declare to be enough informed about the examination's technique and the importance of the responses obtained.

Milano,..... Patient's signature.....



## **BRIEFING NOTE – NUCLEAR MAGNETIC RESONANCE (MR) AND INFORMED CONSENT FOR I.V. CONTRAST MEDIUM**

### **What is MR?**

Magnetic Resonance (MR) is a diagnostic technique which allows to obtain images of the whole body using the interaction between a high intensity magnetic field and radiofrequency waves. The core of the machine is the magnet and during the exam the patient is placed at its center. Nervous system diseases and articular affections are the main indications for MR examination.

### **Which are the advantages?**

The main advantage of MR is that it offers the possibility to explore the body without the use of X-rays; more over it is possible to investigate large districts of the body at one time with minimal invasiveness.

### **How long is the exam?**

The modern MR scans can perform exams in a short time; usually the examination lasts about 30-45 minutes.

### **How to prepare yourself for the exam?**

The exposure to magnetic fields and to radio waves can be contraindicated in some cases. Therefore, it is necessary to fill, mostly with your Doctor, the Questionnaire received at the booking desk and remember to bring the form with you the day of the exam.

If you realize to have any contraindication please contact Radiologic Department in advance to avoid the risk to be refused on the programmed date.

### **Which are the possible contraindications?**

Pace-maker, vascular surgical clips (abdominal, cerebral vessels,...), neurostimulator devices, infusion port-cath, pregnancy are absolute contraindications. Further specific situations are listed in the Questionnaire.

### **How is the exam performed?**

Before the exam ocular lens, mobile dental prosthesis, acoustic devices, watch and every metallic object must be removed.

During the exam the patient must lay on a special stretcher placed at the center of the magnet. The patient's cooperation in standing still is essential for proper examination success. The equipment produces electronic images, that are then processed and sent to a monitor for visualization. The images are supplied on a CD.

### **When is contrast medium used?**

In case of particular diagnostic issues, injection of a particular contrast medium containing gadolinium can be performed, which enhances the signal's quality of many organs and particular tissues. The administration of the contrast medium is performed through an injection in the forearm's vein.

There are no absolute contradictions to its use, except for known allergic reactions to contrast medium (which have to be notified to the Radiologist in advance), or in case of severe renal or liver impairment, or other severe clinical

conditions. Therefore, before the exam, the collection of a blood sample is needed to test the creatinine level. The result has to be shown to the Radiologist.

As any other drug the CT contrast medium can rarely cause allergic reactions, in very few occasions these can be severe; in any case every reaction can be successfully treated.

The patient should be fasting the morning of the exam.

## INFORMED CONSENSUS

Mr/Mrs \_\_\_\_\_

Born on \_\_\_\_\_

Informed on the risks linked with the use of iv. contrast medium for MR, having read and understood the briefing note

I agree

I don't agree

to undergo the diagnostic procedure.

Milan, \_\_\_\_\_

Patient's signature \_\_\_\_\_

Signature of the Radiologist MD \_\_\_\_\_

## PATIENTS' HYDRATION PROTOCOL FOR THE PREVENTION OF CONTRAST-INDUCED NEPHROPATHY

In view of examinations involving intravenous administration of an iodinated contrast medium to patients:

1. with moderate to severe **Chronic Renal Failure** (blood creatinine >2 mg/dL);
2. with **blood creatinine > 1.2 mg/dL and clearance <50 mL/min (\*)**, particularly in diabetic patients aged over 70 years.

The following **hydration protocol** is recommended:

1. **n-acetyl cysteine** 600 mg x 2/day on the day before and after the examination;
2. **hydration**: for mild CRI (creatinine <2 mg/dL): 500 cc of water the evening before and 500 cc on the morning of the examination; maintain increased water intake for 24 hours after the examination. In case of creatinine >2 mg/dL, IV administration of *physiological solution* 1 mL/kg/h six hours before and after the examination (based on the patient's cardiocirculatory conditions).

**NB: the examination is CONTRAINDICATED in patients with acute kidney failure, and should be reconsidered following a consultation with a Nephrologist.**

(\*) to calculate clearance using the Cockcroft-Gault equation:

$$\frac{(140 - \text{age}) \times \text{lean body mass}}{\text{Plasma creatinine} \times 72 \text{ ♂}} \quad \times 0.85 \text{ (only for ♀)}$$



### For patients taking Metformin

- |   |   |
|---|---|
| a. eGFR ≥ 45 mL/min/1.73 m <sup>2</sup> | suspension of Metformin <u>not required</u> ;   |
| b. eGFR < 45 mL/min/1.73                | suspend Metformin 48 hours before the MDC, and recommence 48 hours after MDC, only if renal function has not been aggravated. |

1. European Society of Urogenital Radiology GUIDELINES ON CONTRAST MEDIA 2018 (<http://www.esur.org/esur-guidelines/contrast-media-70/>)
2. Stacul, F., van der Molen, A.J., Reimer, P. *et al.* Contrast induced nephropathy: updated ESUR Contrast Media Safety Committee guidelines. *Eur Radiol* **21**, 2527–2541 (2011). <https://doi.org/10.1007/s00330-011-2225-0> (<http://rd.springer.com/article/10.1007/s00330-011-2225-0/fulltext.html>)