Risk Assessment Form

Use this form for any detailed risk assessment unless a specific form is provided. Refer to your Summary of Hazards/Risks and complete forms as required, including those that are adequately controlled but could be serious in the absence of active management. The Action Plan and reply section is to help you pursue those requiring action.

Name of Initial Assessor/Reviewer:	John Foster, (John McLean)	**Post Held:**	Lead MR Safety Expert
Department:	**Imaging**	**Date (Initial Review):**	**08/09/2020 (10/8/2018)**

Subject of Assessment: E.g.: hazard, task, equipment, location, people

To assess the risk to patients with intrauterine contraceptive devices (IUDs) when exposed to the static magnetic field and the RF power of the MRI scanner.
Note this risk assessment only applies to 1.5T and 3T MRI of patients with IUDs.

Hazards (Describe the harmful agent(s) and the adverse consequences they could cause)

The strong static magnetic field of the MRI scanner has the potential to exert force on ferromagnetic objects. Furthermore, there is a risk of heating to all metal objects within the volume of the MRI transmission coil as a result of the RF power being transmitted. This is typically the length of the body coil, though it could be another, more focal, volume if a local transmit and receive coil is being used).

Description of Risk
Describe the work that causes exposure to the hazard, and the relevant circumstances. Who is at risk? Highlight significant factors: what makes the risk more or less serious – e.g.: the time taken, how often the work is done, who does it, the work environment, anything else relevant.

Intrauterine contraceptive devices are usually made from plastic with an active copper element. To date there have been no adverse events as a result of a patient with an IUD being scanned with MRI when made of these components. In this situation 1.5T and 3T MRI may safely proceed. However, in Asia, and in particular China, a stainless steel “Chinese Ring” type was extensively used which is MR Unsafe. Patients with this type may not even know they are fitted, and their removal is not guaranteed to be fragment free. Although production stopped in 2000, there is evidence to suggest that the practice continues in China. Confirmation that a stainless-steel type is not present must be obtained.

Existing Precautions	**Describe how they might fail to prevent adverse outcomes.**
Patients who receive a letter regarding the details of their MRI investigation will be further asked if they have any implant/device. On attending their MRI examination, patients are taken through an extensive MRI safety checklist to identify any implants that they may have. If an IUD was fitted outside the UK, confirmation that it is not a “Chinese Ring” type will be obtained.	The patient may not be aware or fail to declare that they have a “Chinese ring type”. These are MRI Unsafe. Scanning with these in situ may lead to reduced contraceptive benefit due to displacement or localised heating. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6177157/ https://pubmed.ncbi.nlm.nih.gov/16439794/ (Radiological appearance with US)

Level of Risk - Is the control of this risk adequate?

Give more than one risk level if the assessment covers a range of circumstances. You can use the 'matrix' to show how 'likelihood' and 'consequences' combine to give a conclusion. Also, be critical of existing measures: if you can think how they might fail, or how they could be improved, these are indications of a red or orange risk.

Risk Matrix

Likelihood	Impact/Consequences				
	Negligible	Minor	Moderate	Major	Extreme
Almost Certain	Medium	High	High	V High	V High
Likely	Medium	Medium	High	High	V High
Possible	Low	Medium	Medium	High	High
Unlikely	Low	Medium	Medium	Medium	High
Rare	Low	Low	**Low**	Medium	Medium

Very High High Medium Low

Current risk level

Given the current precautions, and how effective and reliable they are, what is the current level of risk? **Green** is the target – you have thought it through critically and you have no serious worries. Devise ways of making the risk green wherever you can. **Yellow** is acceptable but with some reservations. You can achieve these levels by reducing the inherent risk and or by effective and reliable precautions.
High (Orange) or Very High (Red) risks are unacceptable and must be acted on: use the Action Plan section to summarise and communicate the problems and actions required.

Action Plan (if risk level is **High (Orange) or Very High (Red)**

Use this part of the form for risks that require action. Use it to communicate, with your Line Manager or Risk Coordinator or others if required. If using a copy of this form to notify others, they should reply on the form and return to you. Check that you do receive replies.

Describe the measures required to make the work safe. Include hardware – engineering controls, and procedures. Say what you intend to change. If proposed actions are out with your remit, identify them on the plan below but do not say who or by when; leave this to the manager with the authority to decide this and allocate the resources required.

Proposed actions to control the problem List the actions required. If action by others is required, you must send them a copy	**By Whom**	**Start date**	**Action due date**

Action by Others Required - Complete as appropriate: (please tick or enter YES, name and date where appropriate)

Report up management chain for action	
Report to Estates for action	
Contact advisers/specialists	
Alert your staff to problem, new working practice, interim solutions, etc	

Reply

If you receive this form as a manager from someone in your department, you must decide how the risk is to be managed. Update the action plan and reply with a copy to others who need to know. If appropriate, you should note additions to the Directorate / Service Risk Register.

If you receive this as an adviser or other specialist, reply to the sender and investigate further as required.

Date of last review	As per Qpulse record	**Next review date**	As per Qpulse record