IOMRI (Intraoperative Magnetic Resonance Imaging) Safety Checklist

MRI Technologist Signature: _____   **Date:** _____

Circulating RN Signature: _____ **Date:** _____

<u>Intraoperative MRI Pre-Procedure Checklist:</u>

- ❑ All staff participants must complete an employee MRI screening form via the Occupational Health online portal. This is a mandatory, annual requirement for anyone entering a UCSF MRI Site.

- ❑ Pagers, phones, ID badges, watches, wallets, pens, hair clips and any other metal objects must be removed before scrubbing-in, starting the case and before entering Zone IV.

- ❑ All essential room equipment must be present, cleaned and in working order. This includes MRI compatible IV Poles, full O_2 tanks with Jackson Rees available, monitoring equipment (InVivo or iRADIMED), and MRI tables.

- ❑ Manually verify that the metal OR22 sliding doors work properly at 0700 am daily.

- ❑ Verify that the OR22 Maquet table is at docking height, the MRI table docks to OR22 table properly, and the sled transfers to the MRI bore.

- ❑ The patient must be checked in by Radiology and the MRI screening form must be completed prior to moving the patient to Zone 2. Verify that any paper screening form is propagated to the electronic screening form in the patient's chart.

- ❑ After the patient has been pinned, check that the patient's position can be accommodated by the MRI gantry. Use plastic clearance arc if in doubt.

- ❑ Application of fiducials if needed, by the neurosurgeon.

- ❑ Check that the neuro-monitoring needles and electrodes are appropriately labeled for MRI use.

- ❑ Be aware that, even though you are using EKG electrodes and cables that are approved for use during an MRI, a severe burn can still develop if the electrodes are not in complete contact with the skin surface (that is, if excess hair has not been removed or there is an air gap between the electrode and the skin). When there is an air gap, the electrical pathway is broken and heat can build up at the center of the electrode as well as letting the current arc from the electrode to the skin, which can cause burns. Do not let the cables form a loop.

- ❑ Verify the MRI protocol with the MD neurosurgeon performing the case and that the protocol is ready for use.

Patient Name Label

Checklist Prior to Patient Transfer into MRI Zone IV

- ❑ **OR Team notifies MRI Technologist 45 minutes before the estimated scan start time.**
- ❑ **OR Circulator (RN) and OR Scrub – verifies that sponge and instrument count are correct. __N/A**
- ❑ **OR Circulator (RN)**:
    1. Verify that urinary catheter is secured for transfer, the metal clamp removed and replaced with plastic clamp. ____N/A
    2. Verify that the bed is free of **all** non-essential items and all MRI Unsafe supplies, such as neuromonitoring needles, electrodes, stylets, pumps, laryngoscope handles, and the laryngoscope blade.
    3. Skin assessment performed and documented by a Registered Nurse.
    4. Invivo monitoring devices appropriately labeled for MRI use in place on patient and functioning properly; grounding pad removed.
    5. Verify that the patient is free of non-MR compatible temperature probes, EKG pads, patches, or other non-MRI compliant devices.
    6. Supplies and equipment must be moved outside of the 5 Gauss safety line prior to OR 22 door or the Zone IV MRI magnet door being opened.
    7. Verify with the MRI technologist that all is ready to open the OR22/Magnet Room door.

- ❑ **MRI Technologist:**
    1. Insertion of earplugs into patient's ears before pinning and coil placement. Verify properly secured before starting MRI scan sequences.
    2. Perform a patient bed check to ensure there are no metal sharps, scissors, or other metal items present.
    3. All staff entering Zone IV and the patient must be screened with Ferromagnetic Detection Wand.
    4. Verify with Circulator RN that the EKG electrodes that are on the patient are for MRI use.
    5. Check that all tubes, lines, and wires have minimal skin contact and are straight with no loops.
    6. Padding and bolsters placed on and around patient skin and bony prominences to:
        - Prevent skin-to-skin, wire-to-wire, and wire-to-skin contact
        - Ensure that the patient skin does not come into contact with the scanner bore
        - Ensure that the patient's arms and legs are not touching each other and are not crossed
        - Prevent the indwelling urinary catheter from touching the patient's skin
        - Protect the patient's skin folds (e.g., placing padding in the skin folds of a patient's pannus

- ❑ MD, RN, Anesthesia and Level II MRI personnel all verify MRI Safety readiness prior to patient entry into Zone IV with a Verbal MRI Safety Time Out.

***All staff entering magnet suite (Zone IV) must remove pagers, phones, ID badges, watches, wallets, pens, hair clips and any/all other metal objects. ***

*** MRI Safety Time out just before entering Zone IV is performed when Surgeon, Anesthesia, Registered Nurses, and MRI staff are all present***

Patient Name Label