UW Health
University of Wisconsin Hospital and Clinics

Division of Nuclear Medicine
University Hospital and The American Center

Standard Operating Procedure: Immediate Use of Radiopharmaceuticals: *Ultratag* RBC kit CPT CODE: N/A
UPDATED: December2020

Purpose

Preparation of labelled Red Blood Cells using *Ultratag* RBC labelling kit.

Scope

Usage of the *Ultratag* RBC kit for cell labeling has been classified as Immediate Use per USP <825>

Responsibilities

Dose must be injected within 1 hour of the first vial puncture
Personnel must follow aseptic hand hygiene and garbing procedures
RBC labelling is done according to package insert
Procedure will adhere to policy "Preventing Bloodborne Pathogens"

Procedure

Obtain supplies needed for procedure
Sanitize cart, working area, and supplies
Done garb per SOP 4, Personal Qualifications, training, and hygiene
Exception: option to use sterile gloves or sanitized gloves

The patient's RBCs are labeled with Ultratag® RBC kit as follows. Collect 1.0 to 3.0 ml of the patient's blood using heparin as an anticoagulant. Use 10-15 units of heparin currently stocked in 1000:1 dilution; to get 10-15 units only fill the needle hub as the required volume is 0.015 ml. For patients who are allergic to heparin use 0.15 ml ACD instead of heparin.

Transfer the patient's blood to the reaction vial and gently mix to dissolve the lyophilized material. Allow to react for 5 minutes. Add contents of Syringe I, mix by inverting 4-5 times. Add the contents of Syringe II, mix by inverting 4-5 times. Place the vial in a lead shield and add the TcO4 - . Mix the vial by gently inverting 4-5 times and allow to react for 20 minutes with occasional mixing. Re-inject the Tc-99m-labeled red blood cells.

The same technologist will do the entire labeling procedure, i.e. the same technologist draws the blood, labels the product and re-injects the labeled product. The only exception to this is end of shift when it is in the patient's best interest to start now, even though that technologist cannot complete the labeling, then a direct hand-off will be allowed. The syringe must be labeled with the patient's name and DOB or MRN for the handoff along with the pharmacy label with the radioactive compound and quantity.

All leftover material must be disposed of at the completion of the study.
Any items returned to the Nuclear Pharmacy must be wiped down before returning.

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