

**Department of Pathology
Division of Laboratory Medicine**

**Transfusion Manual
March 2009**

**Appendix 7: IN VIVO CROSSMATCH PROCEDURE
(EXTREME RISK TRANSFUSION)**

RESPONSIBILITY	ACTION
Patient's Attending Physician and Transfusion Service Medical Director	1. Jointly determine that a patient is at high risk for intravascular hemolysis with transfusion of red cells.
Patient's Attending Physician	2. Determine that transfusion is mandatory.
Transfusion Service Director or Designee	3. Assess risk and advise primary care physician of the probability of intravascular hemolysis. 4. Instruct Transfusion Service technologist to prepare appropriate red cell product for transfusion.
Transfusion Service Technologist	5. Prepare one or more products, as requested.
Patient's Attending Physician or Designee	6. Write transfusion order, including the indication for transfusion and documentation of informed consent discussion with patient. 7. Designate and instruct an appropriate health care professional to monitor the transfusion.
Individual Monitoring Transfusion	<p><u>For each unit red cells transfused (non-traumatic draw)</u></p> <p>8. Collect a baseline sample (2 mL LAVENDER top(EDTA) tube before the blood is started.</p> <p>9. Send with downtime lab slip marked "in vivo crossmatch"</p> <p>10. Send sample to Transfusion Service via pneumatic</p>

RESPONSIBILITY	ACTION
	tube.
Responsible Physician/Nurse	<p>11. Follow standard procedures for the identification of the blood product with the recipient and starting the transfusion.</p> <p>12. Begin the transfusion at the rate of 12 mL per minute (10 drops = ~1 mL).</p> <p>13. Stay with the patient. If any reaction occurs, discontinue the transfusion, but do not disconnect the IV, and contact the House Officer.</p> <p><u>Signs/symptoms of immediate reaction</u></p> <ul style="list-style-type: none"> - Hemoglobinuria - Shaking chill - Lumbar pain - Chest pain with substernal constriction - Facial flushing - Feeling of heat at infusion site and along the vein - Temperature elevated 1°C over baseline - Shock - Diffuse bleeding
Responsible Physician/Nurse	<p>14. After 15 minutes, stop the infusion, keep the line open with normal saline.</p> <p>15. Draw 2cc LAVENDER top (EDTA) tube sample. Send STAT to Transfusion Service. DO NOT RESTART TRANSFUSION UNTIL RESULT IS CALLED.</p>
Responsible Physician/Nurse	<p>16. If no hemolysis, restart the blood at 12 mL per minute.</p> <p>17. If there is hemolysis, do not restart blood. Contact House Officer. Document in chart.</p>
Physician	18. Determine how to proceed and give instructions to responsible nurse.
Responsible Physician/Nurse	<p>19. Continue to monitor the patient closely for signs/symptoms of reaction.</p> <p>20. After 15 minutes from the time that the unit was restarted, again stop blood, collect a 2 mL LAVENDER top (EDTA) tube of blood, send STAT to</p>

RESPONSIBILITY	ACTION
	Transfusion Service.
Responsible Physician/Nurse	21. If there is hemolysis, do <u>NOT restart transfusion</u> . Contact House officer. Document in chart.
Attending Physician	22. Determine how to proceed and give instructions to responsible nurse.
Responsible Physician/Nurse	<p>23. If no hemolysis, restart transfusion at the rate of <u>34cc per minute</u>.</p> <p>24. When the unit has been completely infused, discontinue as per standard procedure.</p> <p>25. Collect a 2 cc LAVENDER stoppered tube of blood and send to the Transfusion Service.</p>