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| **Blood Component Requests for Patients at Risk for TACO**  |
| **Purpose** | The purpose of this policy is to provide instructions for responding to requests for patients that have been identified as at risk for TACO.  |
| **Definitions** | **Transfusion Associated Circulatory Overload (TACO):** Adverse signs and symptoms (e.g. acute respiratory distress, elevated brain natriuretic peptide (BNP), left heart failure, positive fluid balance, and/or radiographic evidence of pulmonary edema) related to an infusion volume that cannot be effectively processed due to high infusion rate and/or volume |
| **Indications** | The following are patients who may be identified by providers as at risk for TACO:* Pediatric Patients
* Patients with severe anemia
* Patients with congestive heart failure
* Patients with pre-existing cardiac and/or renal dysfunction
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| **Process** |  |
|  | **Step** | Action |
|  | 1 | The following are measures that are available to prevent TACO:* Administer blood components slowly. Rates of infusion most frequently used are 2-4 mL/minute and 1 mL/kg of body weight per hour up to a maximum time of 4 hours.
* Volume reduced platelets.
* Premedication with IV diuretic (e.g. lasix) between transfusions.
* Using Patient Blood Management strategies of transfusing a single unit at a time and reassessing the patient, and using more restrictive hemoglobin thresholds.
* Split blood components.
* Use of factor concentrates and/or vitamin K instead of plasma for reversal of anticoagulation.
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|  | 2 | Provide appropriate products as determined by patient’s provider/Transfusion Service Medical Director. |
|  | 3 | Add a comment in the patient’s BAD file that patient has been identified as at risk for TACO and if applicable specific recommendation for prevention. |
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| **Notes** | 1. Volume reduced blood components modification takes a minimum of 2 hours. In an emergency situation, the technologist and/or Transfusion Service Medical Director contacts the patient care staff to alert them of the time required. The patient’s physician makes the decision whether to wait for the components.
2. Rapid or excessive transfusion should be avoided. A slower rate of infusion is particularly important in patients with impaired cardiac/renal function.
3. Volume reduction and split products should be considered for patients considered at highest risk.
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| **References** | 1. Standards for Blood Banks and Transfusion Services, Current Edition AABB: Bethesda, MD.
2. Technical Manual, Current Edition. AABB: Bethesda, MD.
3. “A Retrospective Review of Patient Factors, Transfusion Practices, and Outcomes in Patients with Transfusion-Associated Circulatory Overload.” Transfusion Medicine Reviews: vol. 27(4), 206-212, October 2013.
4. National Healthcare Safety Network (NHSN) Biovigilance Component Hemovigilance Module Surveillance Protocol, CDC, June 2016, page 10
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| **Approval****Workflow** | Transfusion Service/Laboratory Director |
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| **Historical Record** | **Version** | **Written/Revised by:** | **Effective Date:** | **Summary of Revisions** |
| 1 | S. Cassidy | 05/17/2019 | Initial Version |