

**The University of Chicago Medical Center  
Therapeutic Apheresis - Scope of Services**

**OVERVIEW:**

The UCM therapeutic apheresis service is a direct patient care service under the medical leadership of the Transfusion medicine (TM) section of the Department of Pathology. Apheresis procedures performed under the direction of the TM team include red cell depletion/exchange (RCE), therapeutic plasma exchange (TPE), cytapheresis procedures such as leukodepletion and platelet depletion, therapeutic phlebotomy and pediatric stem cell collections (in close collaboration with the Pediatric Hematopoietic Cell Therapy team). Other adult apheresis procedures such as stem cell collection, MNC cell therapy collections, and Extracorporeal Photopheresis are performed under the medical supervision of the Hematopoietic Cellular Therapy team in the section of Adult Hematology/Oncology. Pediatric apheresis procedures such as stem cell collection and MNC cell therapy collections are performed under the dual medical supervision of TM and the Hematopoietic Cellular Therapy team in the section of Pediatric Hematology/Oncology. Pediatric ECP is under the medical supervision of the section of Pediatric Hematology/Oncology.

All outpatient adult apheresis procedures are performed in 6<sup>th</sup> floor DCAM and outpatient pediatric apheresis procedures are performed in the 2<sup>nd</sup> floor Pediatric Day Treatment area. Inpatient procedures are performed at the bedside. Hours of service for scheduled apheresis procedures are from 7am to 5 pm Monday – Friday. During night and weekend hours, an offsite on-call apheresis team is available for emergent medical indications.

**POLICY/REQUIREMENTS:**

1. **Consult order:** Patient's requiring therapeutic apheresis require a Blood bank consult order in Epic and a verbal request for apheresis consult by contacting the blood bank physician on-call, p30126 (8a-5p) & p3596 (5p-8a and weekends).
2. The clinical team is responsible for obtaining patient's height and weight and ordering appropriate pre-procedure lab work such as CBC, BMP, PT/INR, and any other pertinent labs.
3. The clinical team shall inform the TM service of patient medications that are relevant to apheresis (anticoagulants, ACE-I, IVIG, monoclonal antibody therapeutics)
4. **Vascular access:** To perform apheresis, the referring clinical team must arrange vascular access suitable for apheresis and confirm functionality/readiness post placement. The following table describes suitable access options (tunneled or non-tunneled).

Patient Size	Emergent	Scheduled non-emergent
< 10 kg	5 – 7 Fr power injectable dual lumen central line	5 – 7 Fr power injectable dual lumen central line
10 - 15 kg	7 – 8 Fr power injectable dual lumen central line or HD dual lumen catheter	7 – 8 Fr power injectable dual lumen central line or HD dual lumen catheter
15 – 50 kg	8 – 12.5 Fr HD dual lumen catheter	8 – 12.5 Fr HD dual lumen catheter
> 50 kg	> 12.5 Fr HD Dual lumen or Trialysis catheter	May request peripheral access check prior to line placement. Otherwise, > 12.5 Fr HD Dual lumen or Trialysis catheter. 11.4 Fr dual lumen vortex ports ok if planning long term apheresis. New patients should be discussed with the TM service prior to long-term apheresis access placement

5. **Appropriateness:** Appropriate clinical indications for therapeutic apheresis with strength of evidence can be found in the following published guideline:
  - a. Padmanabhan A, Connelly-Smith L, Aqui N, et al. Guidelines on the Use of Therapeutic Apheresis in Clinical Practice – Evidence-Based Approach from the Writing Committee of the American Society for Apheresis: The Eighth Special Issue. *J Clin Apher.* 2019;34: 171–354. <https://doi.org/10.1002/jca.21705>.
  - b. ASFA Category I and II indications for apheresis are considered acceptable first and second line therapies, respectively. ASFA Category III indications are classified for disorders where the optimum role of apheresis therapy has not been established. Apheresis may be indicated for category III disorders but require further discussion with the blood bank consult team. Disorders classified as category IV are disorders where published evidence suggests apheresis therapy may be ineffective or harmful and should not be pursued unless being performed under an IRB approved protocol.
  - c. The TM attending assesses appropriateness in concordance with the published guidelines and in consultation with the clinical service. The TM attending decides on a reasonable treatment plan and schedule.
  
6. **Timing of procedure (Non-emergent):** Non-emergent procedures can be scheduled one day in advance Monday through Friday. Same day non-emergent procedures can be scheduled when there is availability.
  
7. **Timing of procedure (Emergent, Off-hours, Weekends):** Emergent procedures approved by the blood bank physician can be scheduled and performed same day

Monday through Friday. Emergent procedures approved by the blood bank physician that fall during the off hours or weekend can reasonably be started within 3 hours from the time the blood bank physician on-call has been notified and adequate access is in place. Procedures that do not have adequate access in place by 12:00 am but expected to have adequate access placed and confirmed overnight between 12:00 am – 6:00 am will be placed on the schedule to start at approximately 6 am the following morning. Indications classified as requiring an emergent procedure include, but are not limited to, the following list:

- a.** TTP, CAPS, or TMA with reasonable likelihood of being TTP or CAPS
- b.** CVA/TIA symptoms related to SCD
- c.** Acute chest or multiorgan failure related to SCD
- d.** Symptoms of hyperviscosity (due to paraprotein)
- e.** Myasthenia Gravis, crisis, without prior intubation
- f.** Pre-transplant de-sensitization, with impending transplant in <24 hours
- g.** Antibody mediated solid organ rejection, with organ failure
- h.** Anti-GBM with diffuse alveolar hemorrhage (DAH)
- i.** ANCA-associated RPGN with DAH
- j.** Wilson's disease with fulminant liver failure
- k.** Symptomatic hyperleukocytosis, excluding acute promyelocytic leukemia
- l.** Symptomatic thrombocythemia with thrombosis or severe bleeding
- m.** Polycythemia with limb/life threatening ischemia