Summary of Thresholds for Blood Component Transfusion

Overview:

Tables below summarize conditions and thresholds for blood component transfusions based on laboratory values established as safe in clinical trials or from expert opinion (see respective section in Guidelines). These thresholds are not a substitute for direct assessment of the patient and clinical judgment. Clinical assessment may not support the need for transfusion in all patients.

RED BLOOD CELLS

Condition	Hgb Threshold
Hospitalized Patient	
Active bleeding (acute blood loss ≥30%)	>7-8 g/dL
Critically ill (ICU, sepsis, major burns)	≤7g/dL
Upper gastrointestinal bleeding (no shock)	≤7g/dL
Post-op surgery (including cardiac and non-cardiac)	≤7-8g/dL
Hemodynamically stable with pre-existing cardiac disease	≤7-8g/dL
Acute MI, unstable, on-going angina (unstable patient)	>8g/dL
Undergoing hematopoietic stem cell transplant (HSCT)	≤7 g/dL
Outpatient hematology/oncology patient	>7g/dL

PLATELETS

Condition	Platelet Threshold
Therapeutic: Active bleeding	<50,000/μL
Prophylaxis:	
Hematology/oncology patients	<10,000/μL(stable); <20,000/μL (w/risk factors)
Surgery/Invasive procedure	<50,000/μL
CNS, eye, or airway surgical procedure	<100,000/μL
IR procedures – Low risk of bleeding[1]	<20,000/μL
IR procedures – High risk of bleeding[1]	<50,000/μL
Platelet function defect with bleeding or prior to procedure	Any platelet count

[1]Refer to **Apheresis Platelet** section

PLASMA

Condition	INR or aPTT Threshold
Active bleeding	INR ≥1.8 or aPTT >1.5x upper limit of normal
Prophylaxis prior to surgery/invasive procedure	INR ≥1.8 or aPTT >1.5x upper limit of normal
Urgent reversal of warfarin (bleeding or prior to procedure)[2]	INR ≥1.8
IR procedures – Low risk of bleeding[3]	<2.0-3.0
IR procedures – High risk of bleeding[3]	≤1.5-1.8
Treatment of TTP	N/A; INR not needed
Replacement fluid for TPE when bleeding risks	N/A; INR not needed

[2] If insufficient time for vitamin K to take effect (i.e. 6 hr IV, 24 hrs PO) or life-threatening bleeding when PCC unavailable
[3] Refer to **Plasma** section

CRYOPRECIPITATE

Condition	Fibrinogen Threshold
Hypofibrinogenemia *with* bleeding or undergoing invasive procedure	<150 mg/dL
Post-partum massive bleeding	<200 mg/dL
Dysfibrinogenemia *with* bleeding[4]	Any fibrinogen level

[4]Consider fibrinogen concentrates for dysfibrinogenemia. See **Factor Concentrate** section.