

Breakthroughs in Blood Expert panel Q&A highlights: AABB/ICTMG clinical practice guideline for platelet transfusion

Authors in alphabetical order by last name: Neill Adhikari, M.Sc, MDCM; Kaylee Brooks, PhD; Jeannie Callum, MD, FRCPC; Ryan Metcalf, MD, CQA; Susan Nahirniak, MD, FRCPC; Katerina Pavenski, MD, FRCPC

This resource was created in October 2026 for the Breakthroughs in blood: Advancements into action webinar series using artificial intelligence (AI). The information was reviewed by subject matter experts to ensure accuracy of the summary. It is available on Canadian Blood Services' professional education website, [Profedu.ca](https://profedu.ca), and is intended for educational or informational purposes supporting implementation of the 2025 AABB and ICTMG clinical practices guidelines for platelet transfusion.

For additional resources and implementation tools, visit [ICTMG.org](https://ictmg.org).

Guideline:

Metcalf RA, Nahirniak S, Guyatt G, et al. Platelet Transfusion: 2025 AABB and ICTMG International Clinical Practice Guidelines. JAMA. 2025;334(7):606–617.
doi:10.1001/jama.2025.7529

Webinar details

Webinar Date: September 29, 2026

Presented by: Ryan Metcalf, MD, CQA

Moderated by: Jeannie Callum, MD, FRCPC

Panelists: Neill Adhikari, M.Sc, MDCM; Susan Nahirniak, MD, FRCPC; Katerina Pavenski, MD, FRCPC

Q&A session timing in the recording: 34:32–59:44

Link to recording: <https://youtu.be/U8ZL3lsH1qU?si=nCmEQRuvma8tjKAi>

1a. Regarding recommendation 2.1, does this essentially mean you recommend only transfusing these patients once they start to bleed?

Time in recording: 35:53

Reminder of recommendation 2.1:

Population: Nonbleeding adult patients with hypoproliferative thrombocytopenia undergoing autologous SCT or with aplastic anemia.

Recommendation or guidance: No-prophylaxis strategy.

Certainty of evidence: Conditional, low to very low*

*See the full guideline publications for further details on the use of GRADE to assess evidence supporting the recommendations.

The panel confirmed that Recommendation 2.1 supports a therapeutic-only platelet transfusion strategy for selected patient populations. Transfusions should generally be reserved for treatment of clinically significant bleeding rather than routine prophylactic administration based solely on a laboratory threshold.

Clinical pearl

A low platelet count alone does not necessarily indicate the need for prophylactic platelet transfusion.

1b. Follow up question. Does the presence of fever, mucositis, or coagulopathy justify increasing the prophylactic platelet transfusion threshold from $10 \times 10^9/L$ to $20 \times 10^9/L$ or can we just use $10 \times 10^9/L$ threshold consistently?

Time in recording: 36:42

The panel discussed the lack of evidence that patients with fever or coagulopathy should be transfused at higher platelet counts. However, it is important to consider good clinical practices and an individual assessment of the patient to consider their specific circumstances on a case-by-case basis. For example, there may be differences in the way you may treat someone who is an outpatient vs an inpatient. Additionally, it is important to discuss this with the patient as well and include their preferences in the development of the management plan.

Clinical pearl

Avoid automatic threshold escalation; assess the whole patient and consider patient preferences, as they may value different outcomes from clinicians.

2. What kind of absolute platelet counts would you recommend in cardiac surgery?

Time in recording: 42:05

The panel discussion suggests that no evidence-based platelet count threshold can be recommended. Decisions should be made based on good clinical practices and an individual assessment of the patient, which may incorporate variables such as bleeding severity, surgical field assessment, chest tube output, hemodynamic stability, viscoelastic testing, antiplatelet exposure, and overall operative context.

Clinical pearl

Platelet count is only one component of decision-making.

3. What defines severe bleeding in the guideline?

Time in recording: 46:35

The panel noted there is no universally accepted definition that applies to all patient populations, which creates challenges in developing guidelines. Severe bleeding is better understood as bleeding with clinically important consequences, including transfusion requirements, hemodynamic instability, persistent visible bleeding, or substantial changes in management.

Clinical pearl

Severe bleeding is bleeding that requires immediate intervention to mitigate adverse patient outcomes.

4. How do you change your management strategy if there is platelet refractoriness and/or HLA alloimmunization?

Time in recording: 48:44

The panel discussed a focus on individualized treatment and suggested not withholding treatment for clinically significant bleeding solely because the patient had previously shown to be refractory. The levels of refractoriness can also be quite variable depending on your patient population. Therapeutic-only strategies are reasonable for highly alloimmunized patients with limited compatible products.

Currently, work is underway by ICTMG to develop a separate guideline to update the 2015 recommendations, which will address patients with platelet transfusion refractoriness.

Clinical pearl

There is no benefit to continuing to provide prophylactic platelet transfusion to a patient who is highly sensitized / platelet refractory if suitable HLA selected platelets are not available.

5. What about special patient populations such as an aplastic anemia patient on ATG?

Time in recording: 51:00

For situations such as aplastic anemia patients receiving ATG, evidence is limited. Clinical judgment, bleeding history, patient values (need for outpatient transfusion visits several times per week and or repeated infusion reactions), and consultation with transfusion medicine specialists remain important.

Clinical pearl

Guidelines complement but do not replace individualized care.

6. How do we manage different recommendations about thresholds for a central line?

Time in recording: 52:24

The panel noted that recommendations for platelet thresholds before central venous catheter insertion can differ between guidelines, partly because of variations in how the evidence was evaluated and the rigor of guideline development. Advances in ultrasound-guided line placement have also improved procedural safety and may account for some differences between older and more recent recommendations.

When ultrasound guidance is used and a compressible insertion site is selected, the risk of bleeding complications is reduced, even in patients with thrombocytopenia. The panel emphasized that newer ultrasound-guided approaches to subclavian vein cannulation, using a more lateral axillary vein approach, effectively create a compressible access site that can be visualized and compressed if needed. As a result, many clinicians are comfortable using relatively low platelet transfusion thresholds for central line insertion in these settings.

Clinical pearl

Modern ultrasound-guided techniques reduce bleeding risk and may support lower platelet transfusion thresholds for central line placement.

7. Do the guidelines assume equivalent platelet doses across products or should there be differences between buffy coat platelets, apheresis platelets, cold-stored platelets, etc.?

Time in recording: 55:26

The guideline addresses transfusion indications rather than product selection. Recommendations do not distinguish between various platelet products and do not include dose-specific recommendations. As new evidence arises, it will be important to review the research rigorously and consider it in future guidelines.

Clinical pearl

The current guidelines focus on when to transfuse rather than which platelet product to use.

8. What will be the most challenging recommendation to implement?

Time in recording: 58:10

The panel identified the lumbar puncture recommendation as the most difficult to implement because of concern regarding spinal hematoma. However, the panel emphasized that such events are rare and evidence does not support important benefits using liberal transfusion strategies (i.e., that would outweigh the risks of adverse events that accompany liberal strategies). Pre-procedure transfusions before lumbar puncture can cause procedural delays and have never been shown in large observational studies to reduce the incidence of bleeding in children or adults.¹

Reference

¹Harper, K., Hurrell, C., Gupta, A., Parab, R., Boucher, L.-M., Pai, M., Selby, R., Callum, J., & Menard, A. (2026). CAR/CAIR practice guidelines: Periprocedural management of patient bleeding risk. Canadian Association of Radiologists Journal. Advance online publication. <https://doi.org/10.1177/08465371261433905>

Clinical pearl

Patient benefit should guide decisions more than fear of rare complications.

Implications for Practice

Platelet transfusion decisions should be guided by the clinical situation, patient values, and available evidence rather than platelet count alone. Clinicians should seek opportunities to balance unnecessary risks of transfusion against benefits of platelet support to optimize patient care.

Developed 2026-10-07; Educational / informational purposes only. Available on Canadian Blood Services' professional education website, Profedu.ca, Breakthroughs in blood webinar series.