

# Clinical Pathology Abstracts, 2/16

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## Link between a liberal transfusion strategy and patient survival

Guidelines support using a restrictive strategy for blood transfusion management in various clinical settings. However, randomized controlled trials in cardiac surgery, oncology, and hip fracture surgery suggest that a more liberal transfusion strategy may benefit survival. The authors conducted a study in which they performed a meta-analysis of randomized trials involving perioperative or critically ill adult patients who were subjected to either a restrictive or liberal transfusion strategy. The authors' primary outcome was all-cause mortality within a 90-day follow-up. If this was not reported, the authors chose the closest mortality data available. They searched PubMed/Medline, Embase, Cochrane Central Register of Controlled Trials, Transfusion Evidence Library, and Google Scholar for relevant studies up until March 27, 2015. They found that patients in the perioperative period who were subjected to a liberal transfusion strategy had lower all-cause mortality when compared with patients subjected to a restrictive transfusion strategy. This finding was true for 7,552 patients in 17 randomized trials. In contrast, the meta-analysis demonstrated no difference in mortality among critically ill patients subjected to a liberal transfusion strategy when compared with a restrictive strategy for 3,469 patients in 10 randomized trials. These conclusions suggest the need to examine practices carefully when deciding on a liberal or restrictive transfusion strategy and indicate that there may be important differences in the development of anemia in surgical patients versus critically ill patients.

Fominskiy E, Putzu A, Monaco F, et al. Liberal transfusion strategy improves survival in perioperative but not in critically ill patients. A meta-analysis of randomised trials. *Br J Anaesth.* 2015;115:511-519.

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## Evaluation of convalescent plasma for Ebola virus disease in Guinea

y Sept. 9, 2015, 28,183 Ebola virus disease cases and 11,306 deaths had been reported. The high fatality has resulted in the World Health Organization prioritizing the evaluation of treatment with convalescent whole blood or plasma derived from patients who have recovered from the disease. Data on convalescent plasma use for Ebola virus disease (EVD) is very limited. The authors conducted the Ebola-Tx trial in Conakry, Guinea, to assess the safety and efficacy of convalescent plasma for treating EVD. They performed a nonrandomized comparative study of 99 patients of various ages who had confirmed EVD. The patients received two consecutive transfusions of ABO-compatible convalescent plasma, with each unit obtained from a separate convalescent donor. The control group comprised 418 patients who were treated at the same center during the previous five months. The primary outcome of the study was risk of death from three to 16 days after diagnosis with adjustments for age and baseline polymerase chain reaction cycle threshold. The authors included in the primary analysis 84 patients who were treated with plasma. At baseline, the convalescent-plasma group had slightly higher cycle-threshold values and a shorter duration of symptoms than did the control group. The risk of death was 31 percent in the convalescent plasma group and 38 percent in the control group. The difference was reduced after adjusting for age and cycle

threshold value. No serious adverse reactions due to the use of convalescent plasma were reported. The authors concluded that transfusion of up to 500 mL of convalescent plasma, with unknown levels of neutralizing antibodies, was not associated with a significant improvement in survival for patients with confirmed EVD.

van Griensven J, Edwards T, de Lamballerie X, et al. Evaluation of convalescent plasma for Ebola virus disease in Guinea. *N Engl J Med*. 2016;374(1):33-42.

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