determine both cellular composition and residual WBC/RBC count of a blood product with one method and one measurement. As mentioned in the Editorial by Mack and Vasallo,[3] this use of multifunctional instruments, already widely employed by blood banks, promises increased efficiency and cost reduction.

CONFLICT OF INTEREST

The authors have disclosed no conflicts of interest.

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Anti-SARS-CoV-2 spike antibodies are stable in convalescent plasma when stored at 4° Celsius for at least 6 weeks

To the Editor

As nations around the world continue to address the public health crisis of Coronavirus Disease 2019 (COVID19), the global medical and scientific communities continue to search for and develop therapeutic strategies for patients. To date, remdesivir presents one such option and can shorten the duration of hospitalization in patients with severe disease.[1] Convalescent plasma (CP) has presented another option, with its use and safety supported by numerous case series and retrospective studies.[2–4] While its degree of effectiveness has been variable, there is general agreement that it acts as a supportive adjunctive therapy in patients with moderate to severe disease.[2,4]
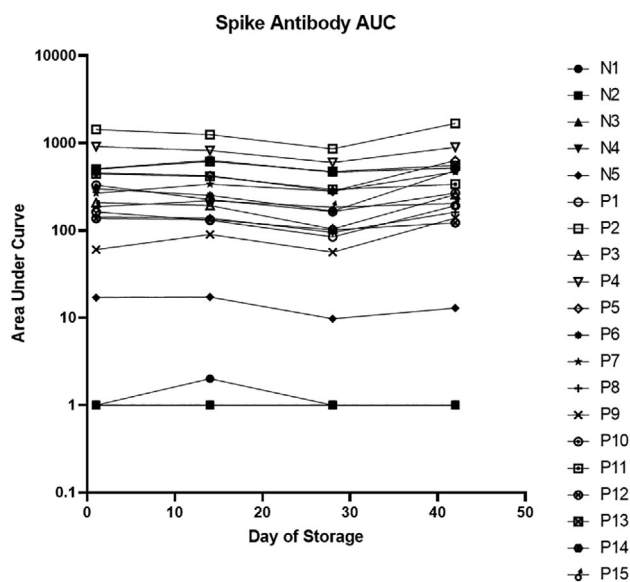
Current CP protocols such as the Mayo Clinic Early Access Program (EAP) specify that once thawed, CP may be stored for up to 5 days at 4°C. Presumably, this is intended to mimic current guidelines which apply to thawed plasma (TPL), which specify a similar shelf-life. However, the rationale for this guideline stems from the fact that under normal circumstances, donor plasma is transfused or exchanged therapeutically for the purposes of correcting or preventing a coagulation factor deficiency, to replace deficient factors necessary for hemostatic balance such as ADAMTS13, or to restore complement-regulatory factors in the setting of atypical hemolytic uremic syndrome. For these purposes, TPL is largely considered equivalent to fresh frozen plasma, with the exception of decreases in Factors V and VIII activity levels, and several

other components.[5,6] However, the therapeutic goal of CP transfusion is to deliver passive immunity to the patient via antibodies. Studies demonstrating antibody stability under refrigerated conditions have largely focused on peripheral blood samples stored for several days.[7,8] However, studies describing the stability of antibodies in refrigerated donor plasma over longer periods are lacking. Here, we demonstrate the long-term stability of anti-SARS-CoV-2 spike antibodies in donor CP samples collected at a local blood donor center for transfusion.

After thawing 15 CP units, segments were sampled and anti-spike antibody titers were determined via enzyme-linked immunosorbent assays (ELISAs).[9] Segments from five non-CP units were sampled as a negative control. All samples were then stored at 4°C, and plasma endpoint titers were re-evaluated at 14, 28, and 42 days. We detected no reduction in antibody titers for any of the samples (Table 1). The anti-spike ELISA assay demonstrates a between-run %CV ranging from 6.3% at an antibody concentration of 0.3 mcg/mL, to 23% at a concentration of 0.01875 mcg/mL. Therefore, the perceived decrease in titer for most samples between days 1 and 7, and the perceived increase between days 28 and 42 reflects the serial dilution cutoff values of the ELISA assay itself and run-to-run variation, and are not reflective of a true change. This is supported by the results obtained when the area under the curve (AUC) values for raw absorbance data are calculated, and show no significant

beyond 5 days post-thaw, as antibody levels are maintained. It should be noted that extension of the storage window to 42 days would require amendment to the current Emergency IND protocol established by the United States FDA or the Mayo Clinic EAP, but could be of significant value as it would prevent wastage of this precious resource in situations where planned CP transfusions are canceled after the product has been thawed. Additionally, it may allow for transport to more remote locations where monitored freezer facilities are limited or unavailable, potentially making this important treatment option available to patient populations with limited access to CP.

CONFLICT OF INTEREST

F.K., D.S. and F.A. are listed as inventors of the anti-SARS-CoV2 immunoassay used in this work, which Mount Sinai Hospital has licensed to commercial entities. I.B., K.L., K.J., J.S.J. and S.A.O. have declared no conflicts of interest.

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Impact of primary culture: A true positive culture rate mystery

We read with interest the article by Kundrapu and colleagues.[1] The major findings of the study were (a) there was no change in the culture positive rate or septic rate of apheresis platelets (PLTs) before or after the introduction of primary culture and (b) there was a decline both the culture-positive rate and the septic