

## SHORT COMMUNICATION

# The application of multiparameter reference intervals for pre-donation capillary blood counts: the experience of a single institution

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## SUMMARY

**Objectives:** To evaluate a set of reference counts applied to multiparameter pre-counts in blood donors.

**Aim:** Analyse the impact of pre-donation counts and specific reference intervals on donors' management.

**Background:** Multiparameter blood counts allow an improved enrolment process of blood donors due to a prompt identification of abnormalities involving haemoglobin (Hb), white blood cells (WBC) and platelets (PLT).

**Methods/Materials:** Multiple pre-donation capillary counts were applied in the enrolment process of 13 347 consecutive donors. The rate of specific alterations of permanent exclusion and donor readmittance to donations for temporary exclusion had been evaluated, applying a set of multiparameter reference intervals.

**Results:** Alterations involved Hb in 72.55% of cases, mean corpuscular volume (MCV) in 20.99%, total WBC in 9.39%, lymphocytes in 7.55% and PLT in 6.07%. Among donors with initial alterations (543; 4.06%), 12.70% were readmitted to donations within 15 days, 14.36% had permanent exclusion, 36.83% underwent prompt supplementation treatment and 36.09% were lost at follow-up or refused treatments.

**Discussion:** The systematic use of blood count reference intervals and pre-donation multiparameter blood counts allowed prompt identification of WBC, PLT and MCV alterations, readmittance within 15 days of 12.70% of initially excluded donors and contributed to prompt management of supplement deficiency.

**Key words:** blood donation testing, donors, transfusion medicine.