

# Cell processing in Kaunas

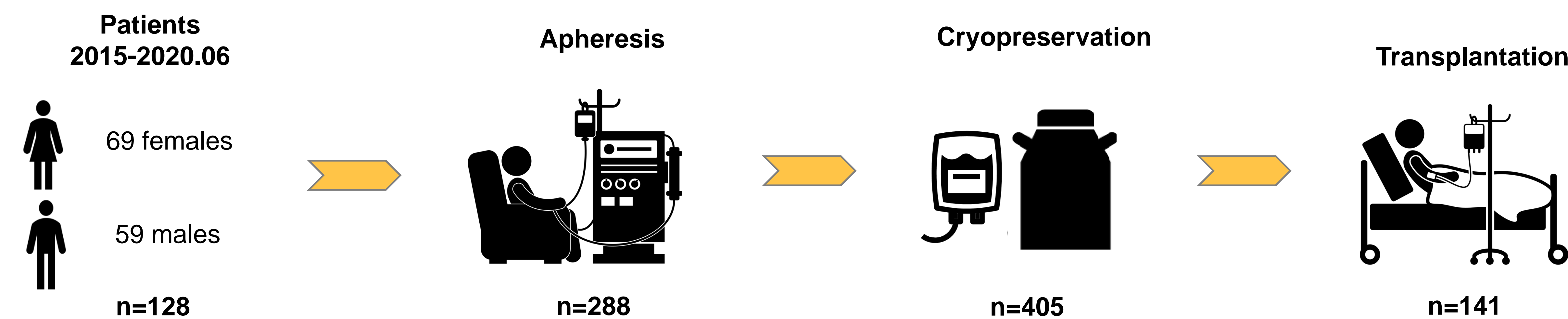
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## Introduction

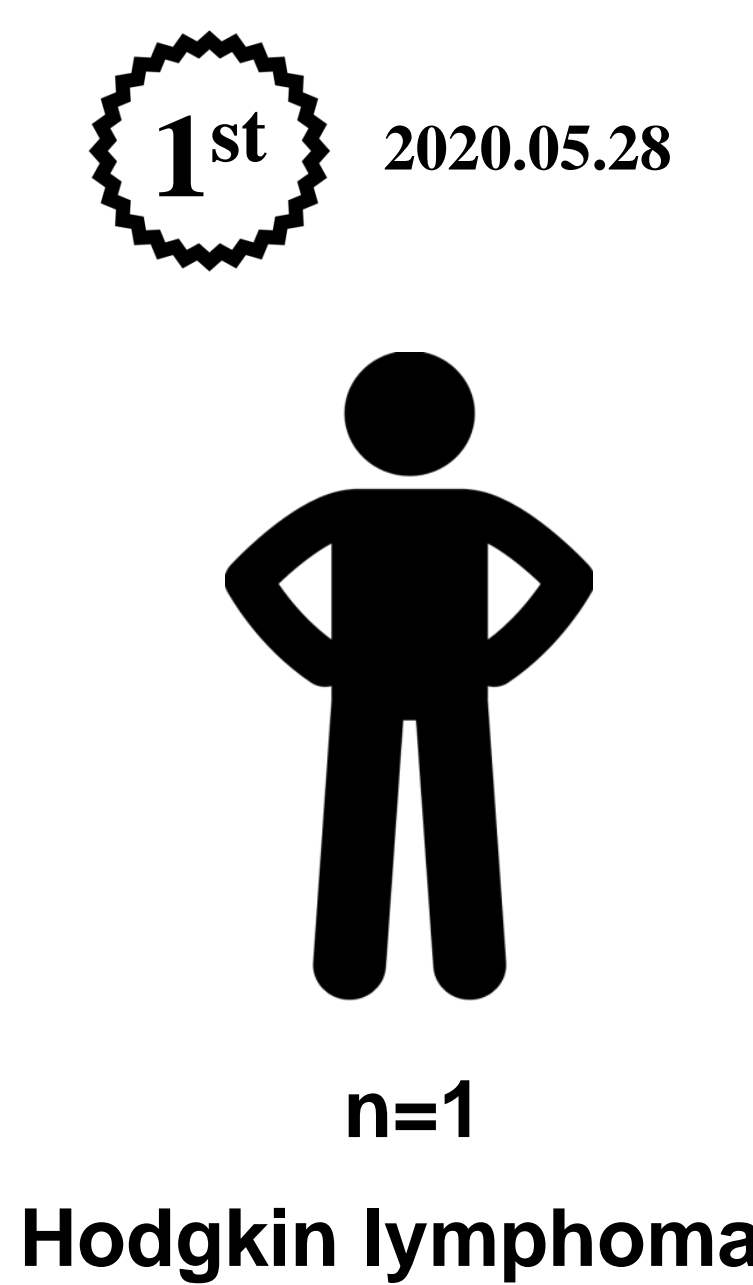
- Peripheral blood stem cells (PBSCs) are widely used for blood stem cell transplantation around the world.
- Post-thaw viable CD34+ cell count is the important parameter for quality assurance of the cryopreserved cells.
- The CD34+ cell post-thaw viability was analyzed and its relationship with other parameters was evaluated in this study.
- The cell processing results from the Hospital of Lithuanian University of Health Sciences, Kauno Klinikos are presented in this study.

## Autologous transplantations



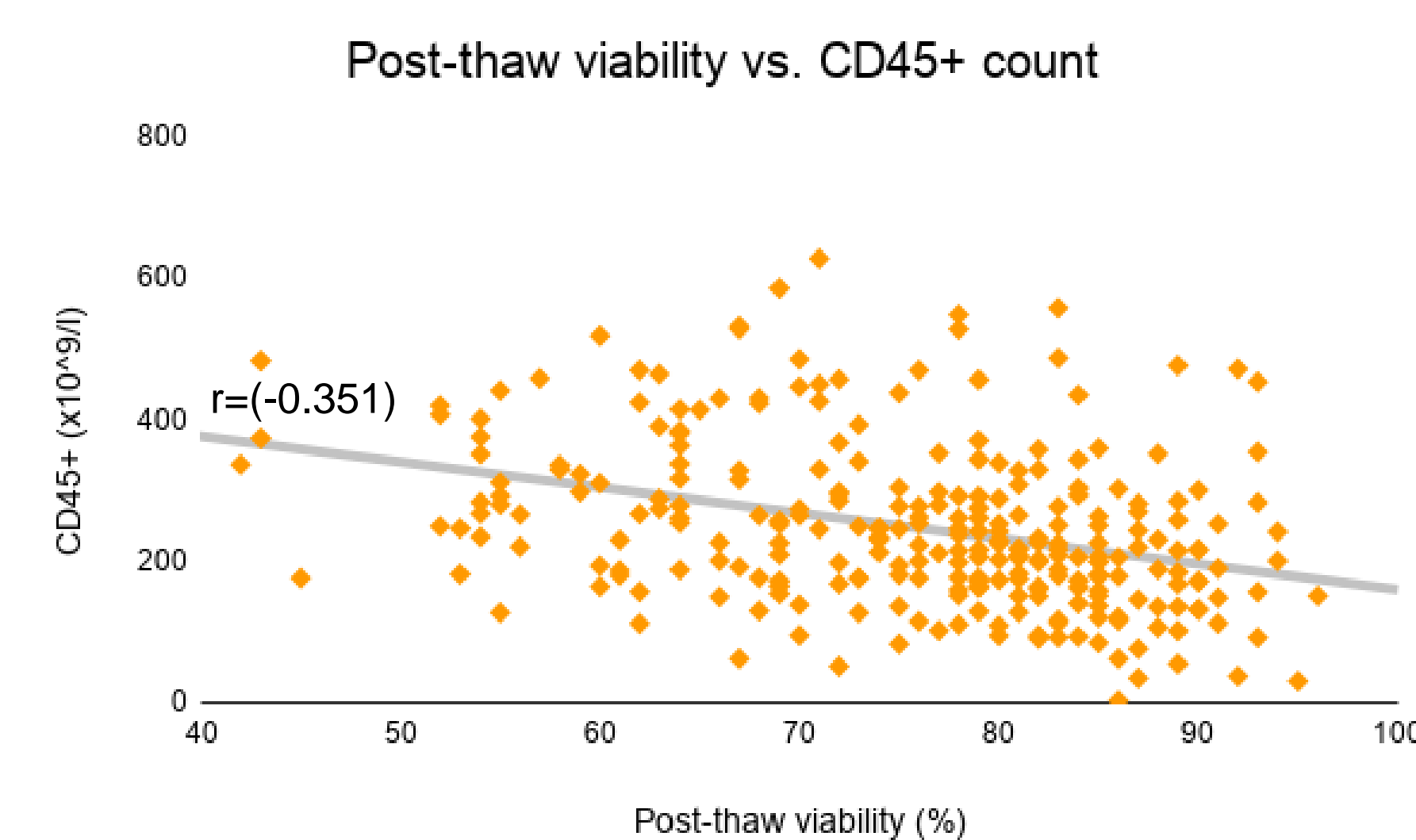
PBSC transplantations: 120 multiple myeloma, 14 non-Hodgkin lymphoma, 3 germ-cell testicular tumor, 1 CNS lymphoma, 1 Ewing's sarcoma, 1 Multiple sclerosis, 1 autoimmune encephalitis

## Allogeneic transplantation

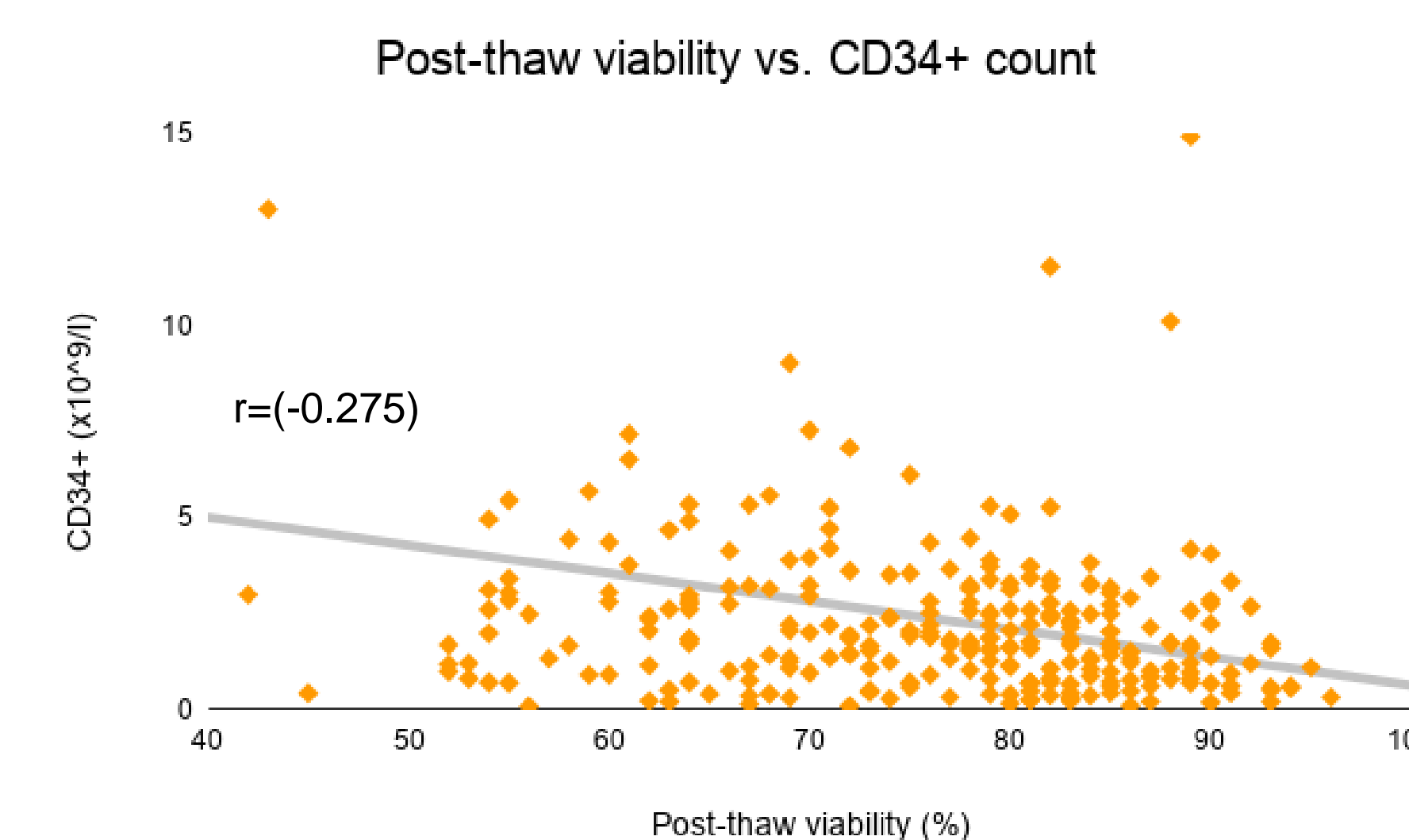


## Results

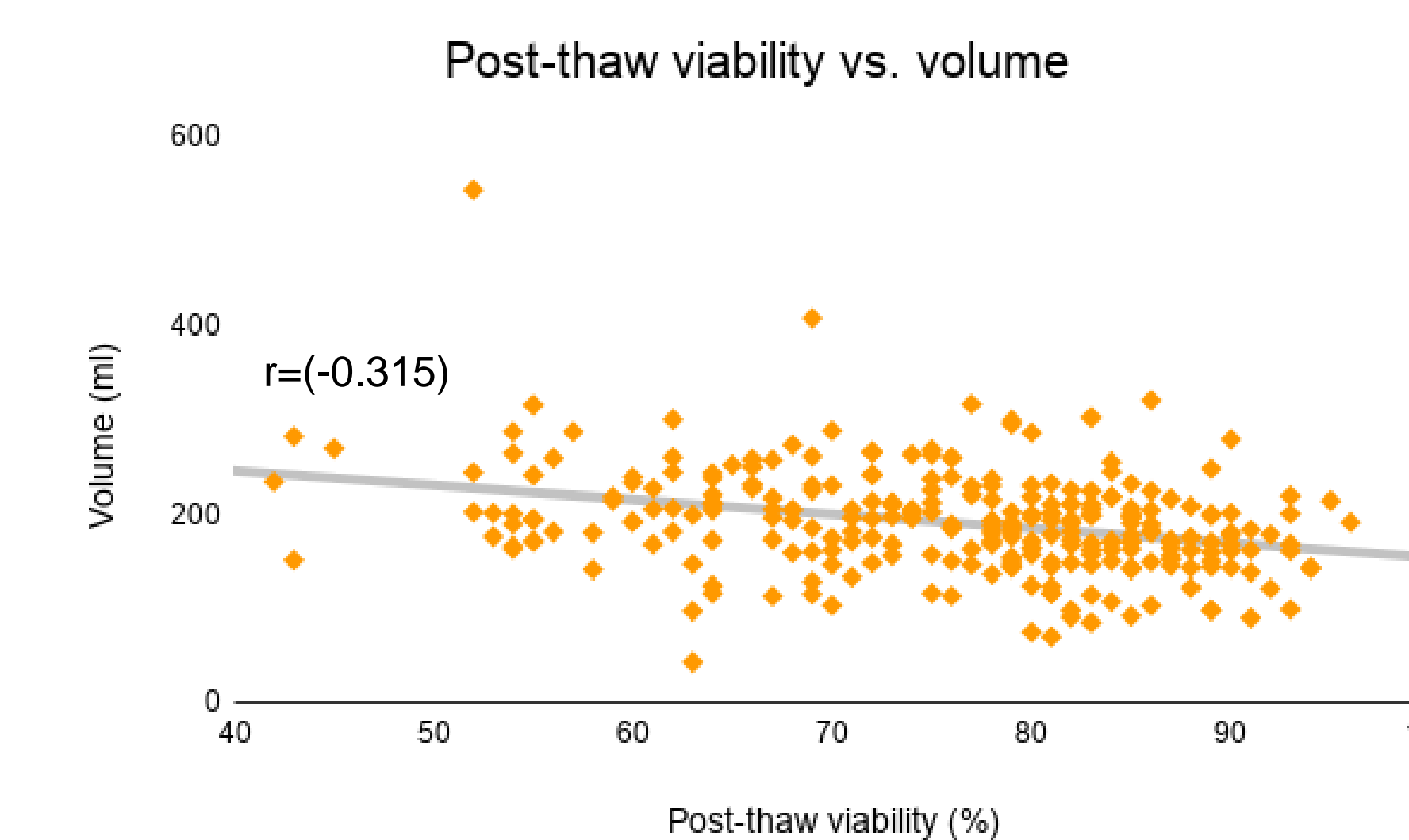
- The median post-thaw CD34+ viability - 78% (range from 42 to 96).
- The median CD34+ cells harvested per kilogram of body weight was 4.3.
- Statistically significant ( $p < 0.05$ ) negative correlations were observed between CD45+; CD34+ counts; volume of leukapheresis product and CD34+ cell post-thaw viability.



Statistically significant ( $p < 0.05$ ) negative correlations between CD45+ and CD34+ cell post-thaw viability



Statistically significant ( $p < 0.05$ ) negative correlations between CD34+ count and CD34+ cell post-thaw viability



Statistically significant ( $p < 0.05$ ) negative correlations between volume of leukapheresis product and CD34+ cell post-thaw viability.

## Conclusions

- Lower counts of CD45+ and CD34+ cells and leukapheresis volume had a better impact on post-thaw cell viability.
- Further studies will be needed to confirm these findings and to find a way how to increase post-thaw PBSCs viability.

## Key words

PBSC, allo-sct, auto-sct, cryopreservation, viability