



UvA



DONOR-PROTECT:

Redefining Standards for Sustainable Blood and Plasma Collections through Personalized Donor Health Protection Strategies

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Sanquin Research, Amsterdam UMC Public & Occupational Health

February 11, 2026

For Life.



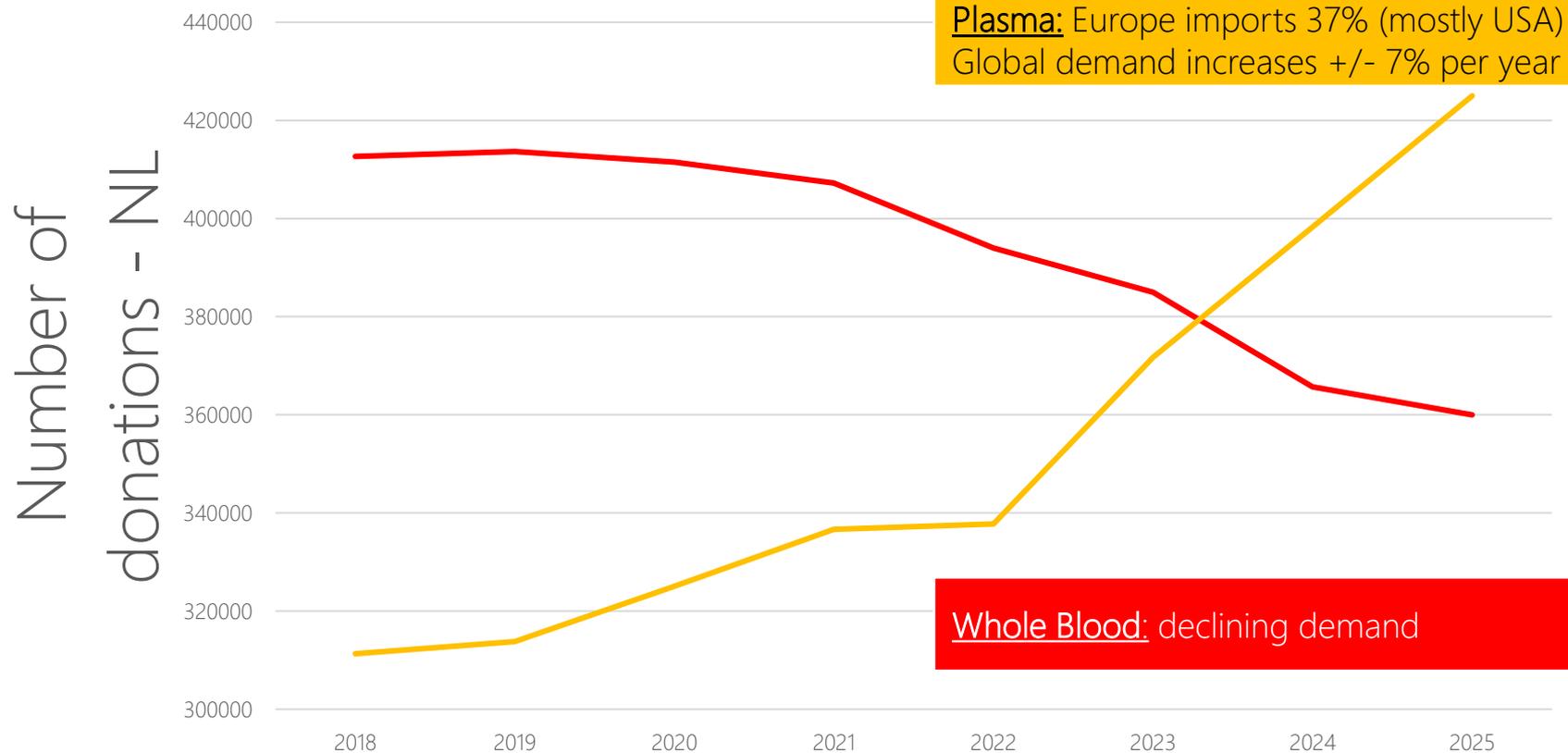
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Whole Blood and Plasma Collections





Health effects of high-frequency plasma donation



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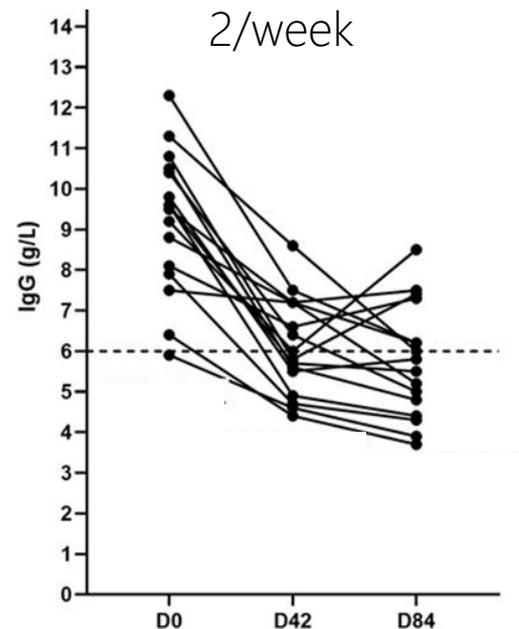
Transfusion Medicine Reviews

journal homepage: <https://www.journals.elsevier.com/transfusion-medicine-reviews>

Original Articles

Balancing Donor Health and Plasma Collection: A Systematic Review of the Impact of Plasmapheresis Frequency

- Decreasing **ferritin** and **IgG** levels
- Evidence of (very) low certainty, hindered by the **healthy donor effect** and **methodological limitations**

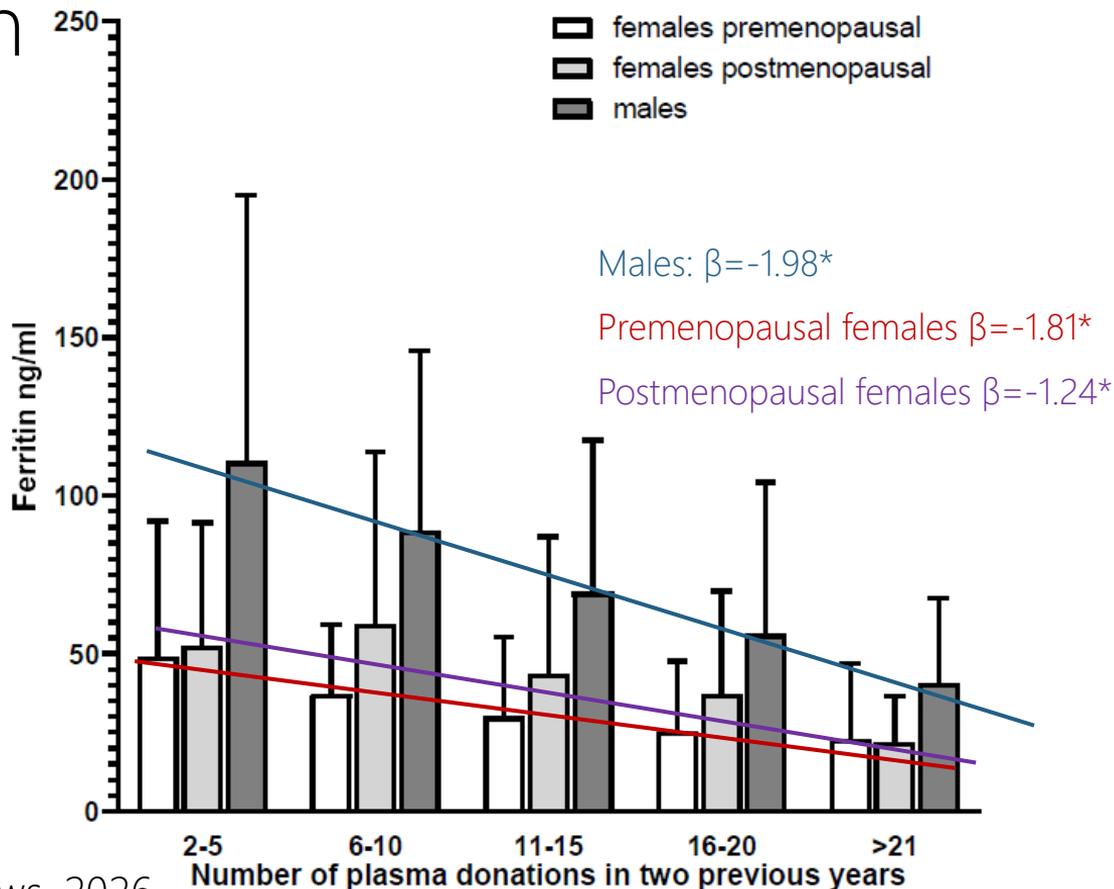


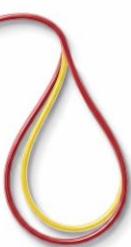
Mortier et al., Vox Sanguinis, 2024



Ferritin levels with repeated plasma donations

- no rinse-back
- whole blood sampling
- high frequency





DONOR
PROTECT



Objectives



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DONOR-PROTECT: personalized strategies
optimizing donations from resilient donors while protecting vulnerable donors
> sustainable supply

Objective 1: Assessing
health effects, WPs 2 and 3



Objective 2: Design and
test algorithm, WPs 4 and 5



Objective 3: Set up EU
framework, WPs 5 and 6





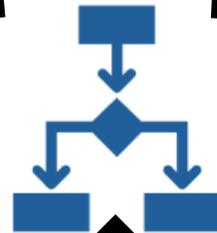
WP2: run
PLASMA RCT,
 $n \approx 10,000$



WP3: analyze FORTE,
INTERVAL and PLASMA RCTs,
and Donor InSight cohort
 $n \approx 60,000$ (existing data)



WP4: develop algorithms
dynamic (Markov Decision
Process models)



WP5: run ADAPT RCT,
 $n \approx 21,000$

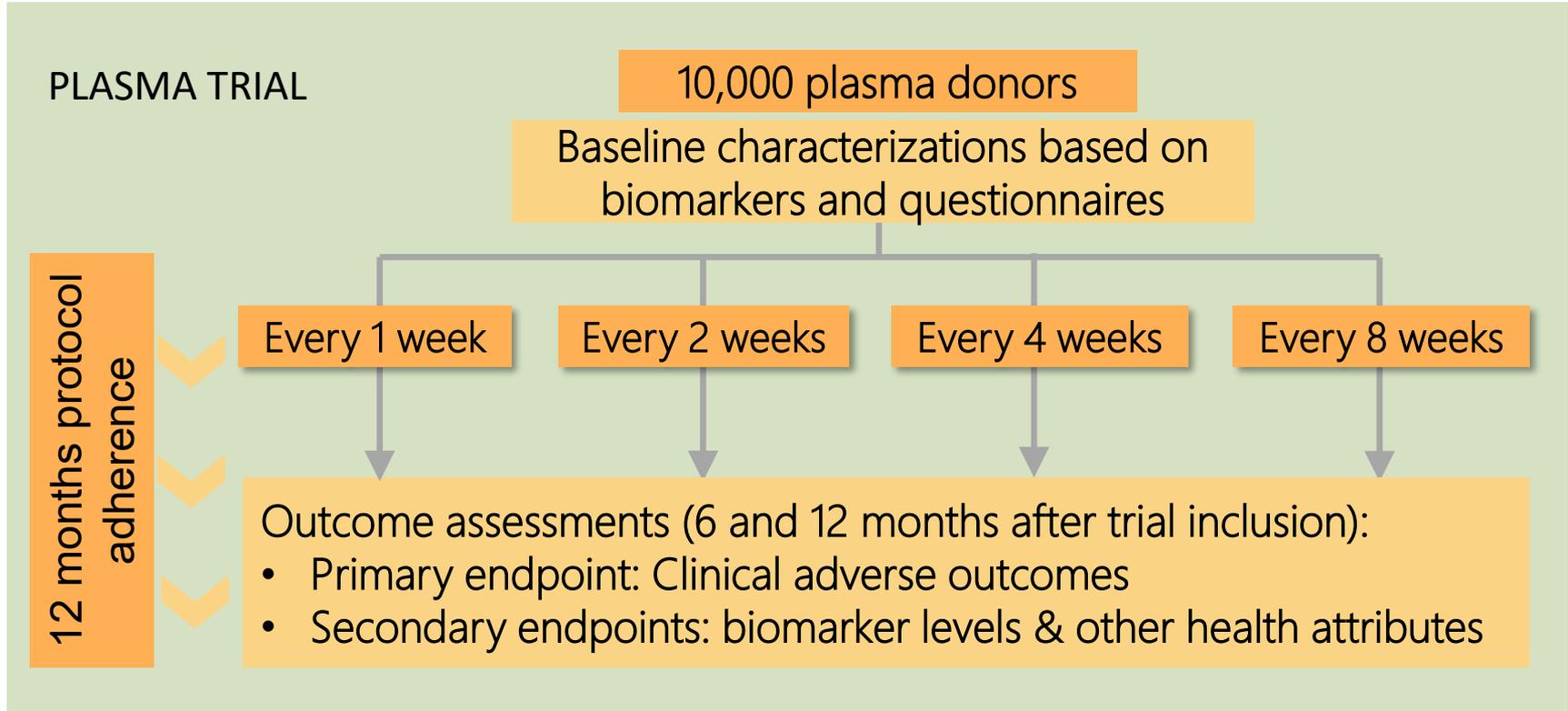


WP6: ethics,
guideline
development
(literature reviews,
cross-cultural
analyses, qualitative
studies)

WP1: Project Management



PLASMA trial: varying plasma donation frequencies



Similar UK SHAPE trial has started, NL pilot (n=100) in preparation



DONOR PROTECT



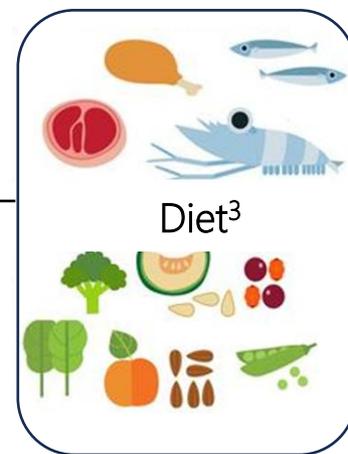
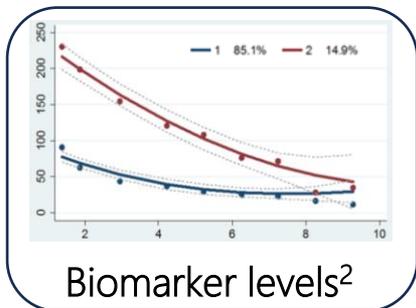
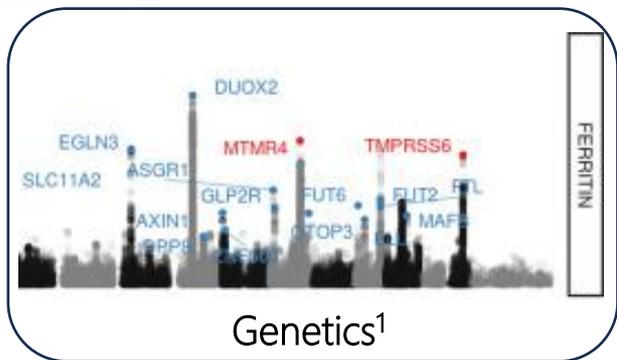
Personalized algorithm



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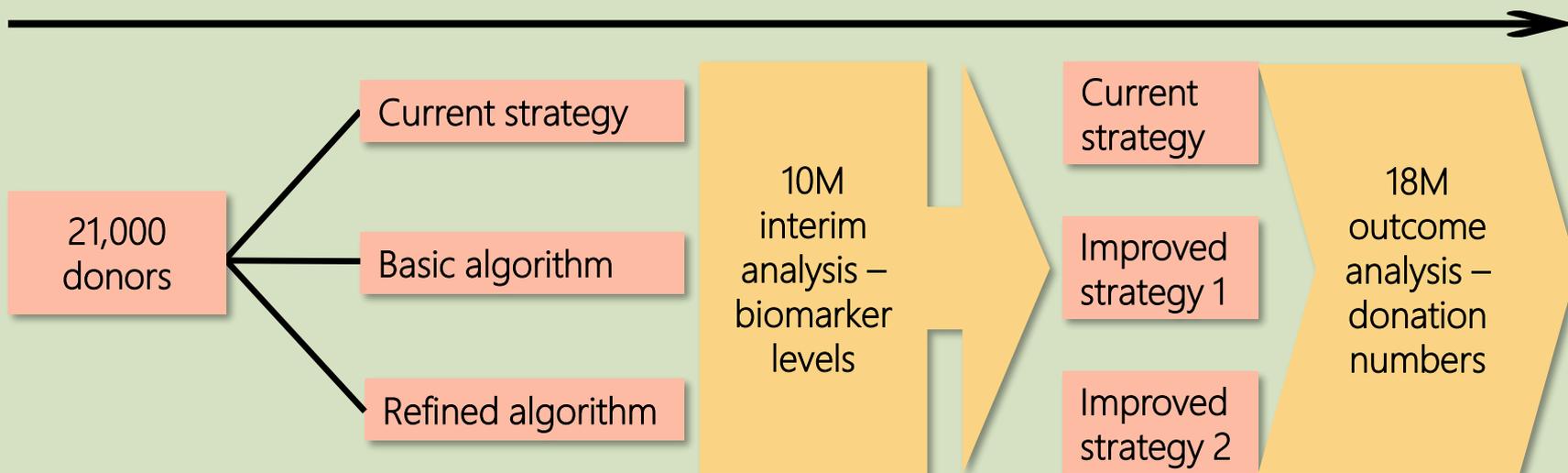
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1. Bell et al., Commun Biol 2021
2. Moazzen et al., J Clin Med 2022; Foy et al., Nature 2025
3. Timmer et al., Haematologica 2020
4. Ekroos et al., Acta Obstet Gynecol Scand 2024

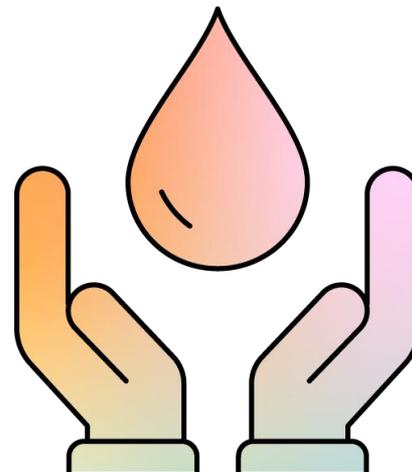


Adaptive Donation Algorithm Personalization Trial (ADAPT)





- Donor-specific health effects
- Personalized algorithms
- Ethical, legal and social guidelines





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Looking forward to making this a success with the help of many donors and collaborators 📌