Sex-dependent membranopathy in stored human red blood cells

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SUPPLEMENTARY INFORMATION

Title: Sex-dependent membranopathy in stored human red blood cells

Running title: Sex-dependent membranopathy in stored human RBCs

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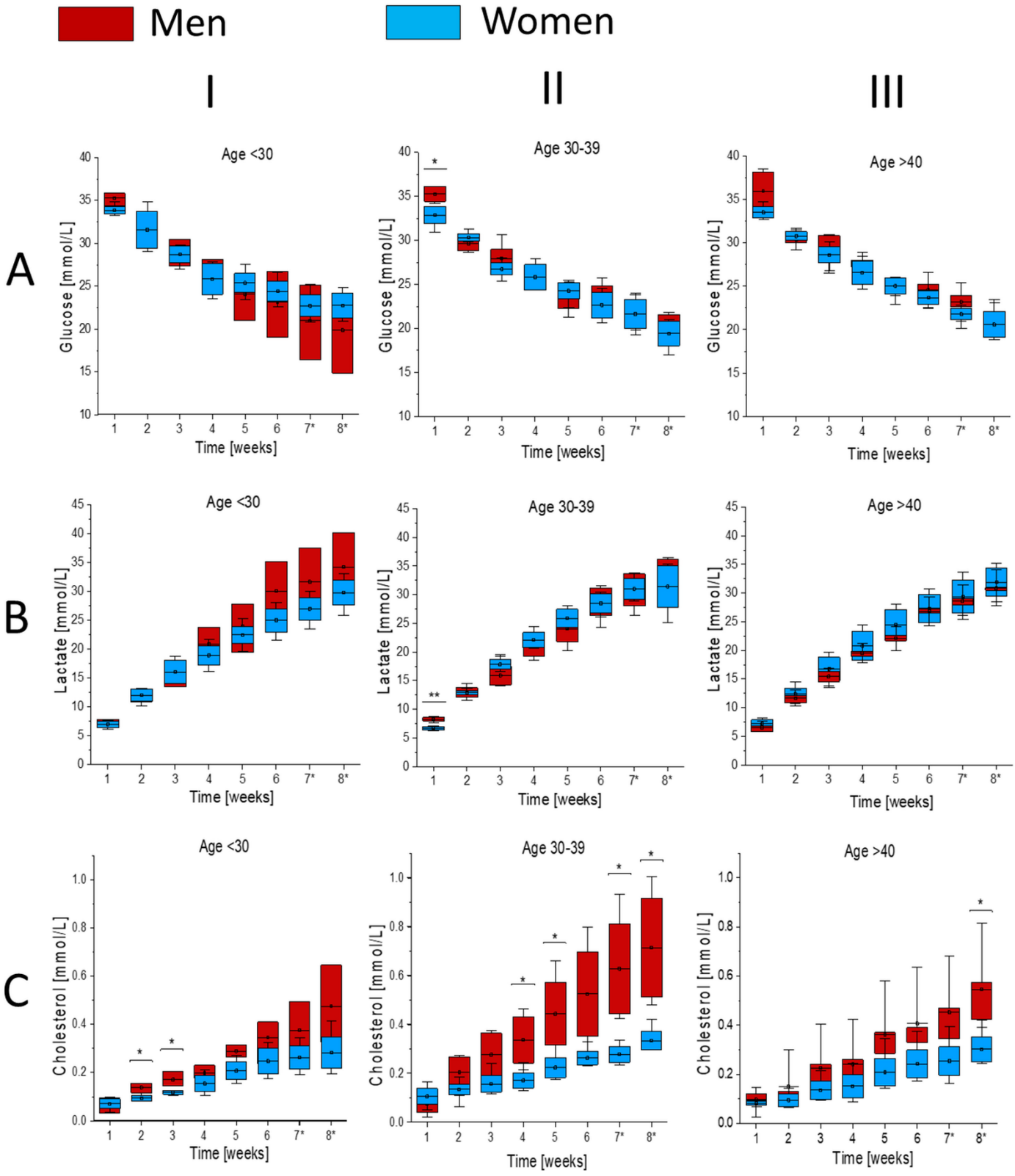
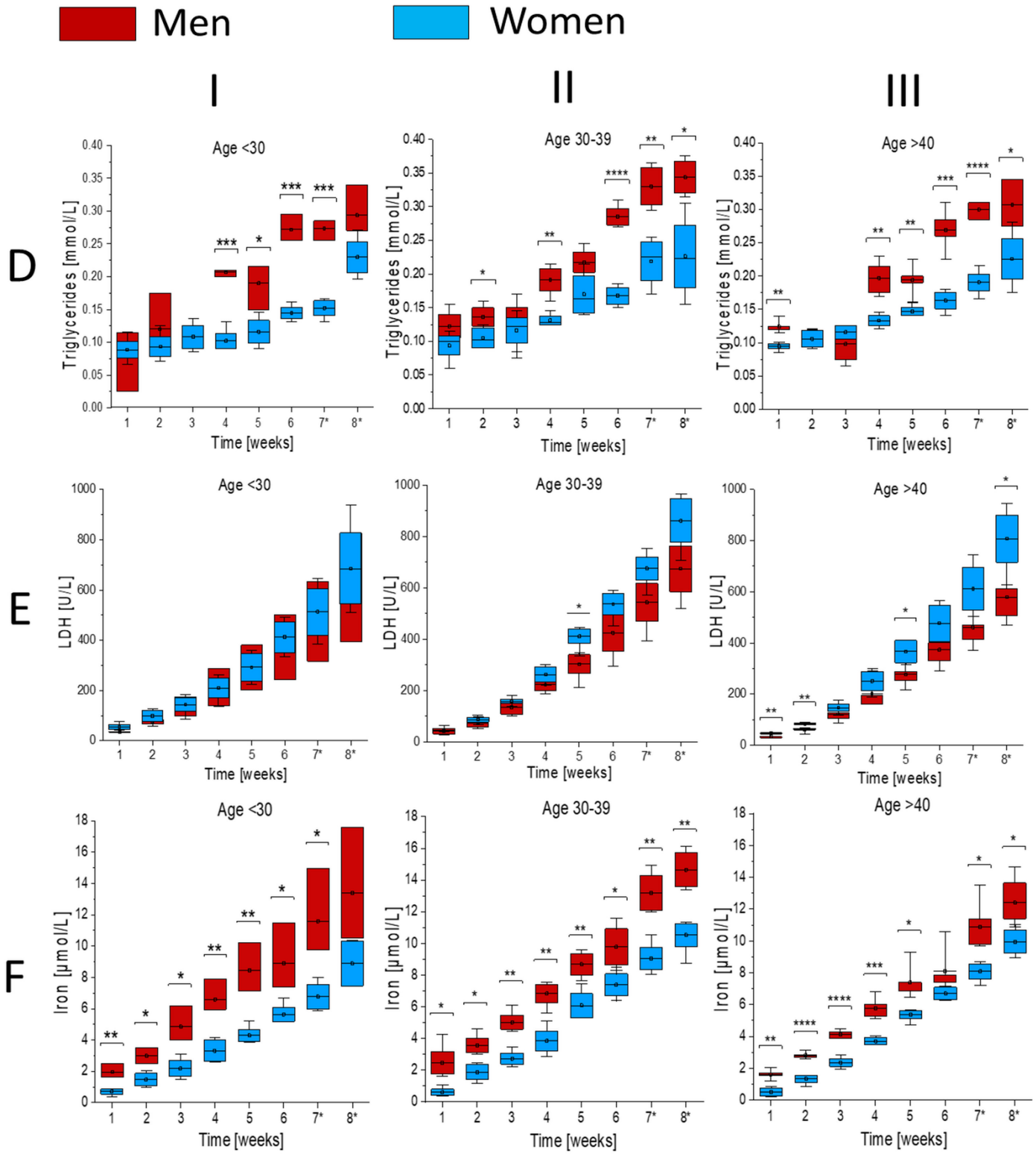
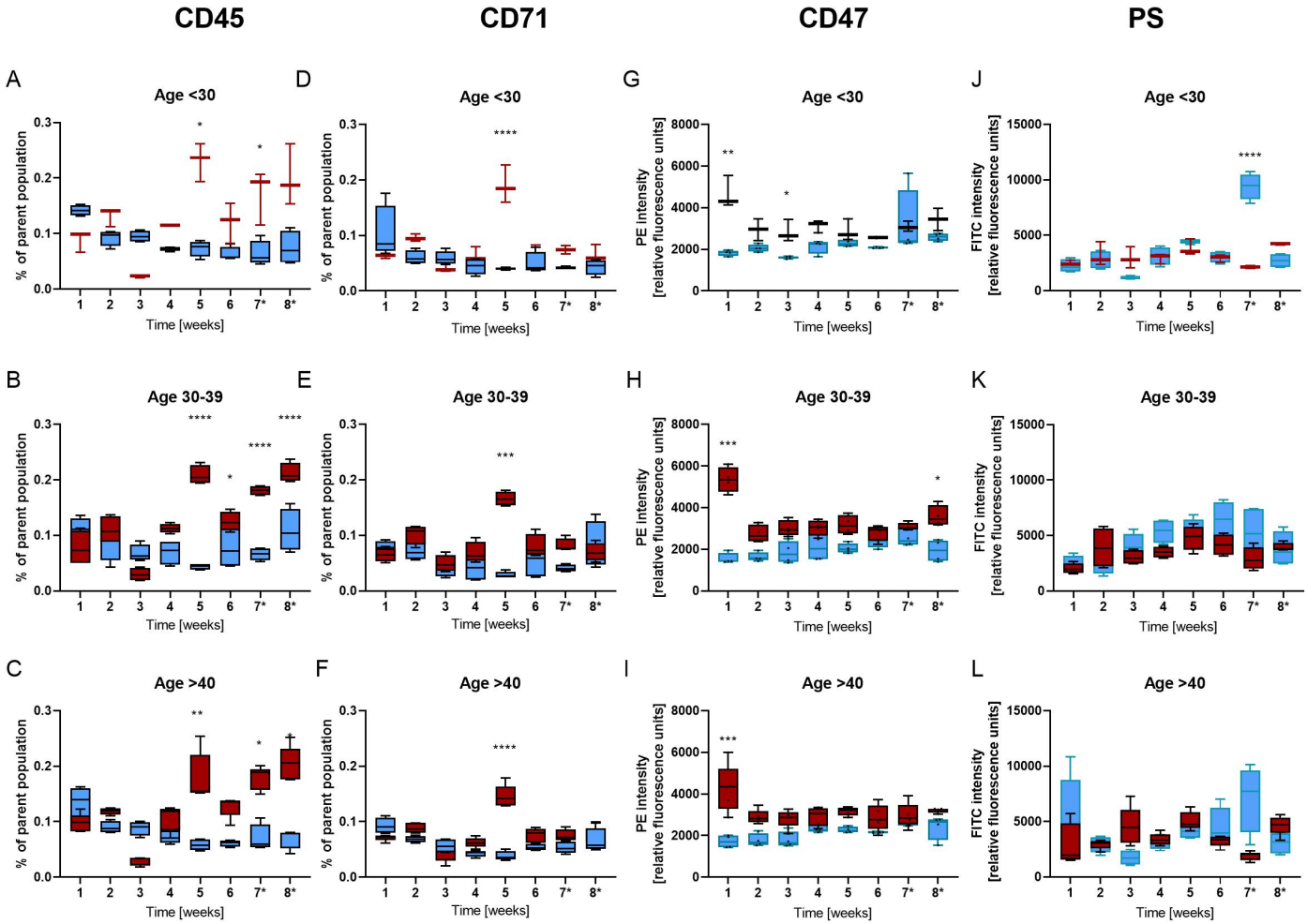
Data sharing statement
For original data please visit http://dx.doi.org/10.17632/dwxw2wwjtm.1

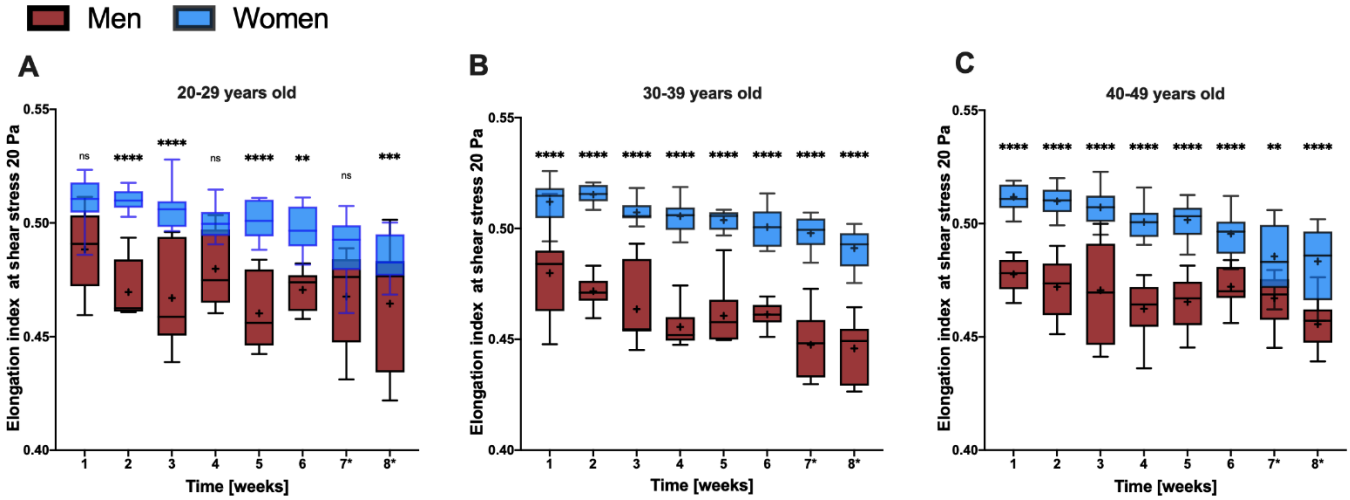

Men
Women
I
II
III
A
B
C
Age <30
Age 30-39
Age >40
Glucose [mmol/L]
Lactate [mmol/L]
Cholesterol [mmol/L]
Time [weeks]
1
2
3
4
5
6
7*
8*



Supplementary Figure 1. **Storage time-dependent changes in biochemical parameters: (A) Glucose, (B) Lactate, (C) Cholesterol, (D) Triglycerides, (E) LDH and (F) Iron in human pRBCs.** The blood was withdrawn from both men (N=12) and women (N=12) aged (I) <30, (II) 30-39 and (III) >40. Data distribution is presented as box plots (mean, Q1, Q3, interquartile range, min-max whiskers). Q1, Q3 indicate 25th and 75th percentiles, respectively. Data normality was assessed using Shapiro-Wilk test. The significance of the differences between the means was evaluated either by one-way ANOVA with Tukey's post-hoc test or by Kruskal-Wallis test if appropriate; *p<0.05, **p<0.01, ***p<0.001, ****p<0.0001 indicates significant difference between men and women in each week. * weeks 7 and 8 are additional measurements exceeding expiration date.



Supplementary Figure 2. Storage time-dependent changes in CD45 (A-C), CD71 (D-F), CD47 (G-I) and phosphatidylserine-PS (J-L) expression in human pRBCs. The blood was withdrawn from men (N=12) and women (N=12) aged (**A,D,G,J**) <30, (**B,E,H,K**) 30-39 and (**C,F,I,L**) >40. Fluorescence was measured weekly with use of flow cytometry throughout 8 weeks of storage, * weeks 7 and 8 are additional measurements exceeding expiration date. Data are presented as a percent of parent population. Data distribution is presented as box plots (median, Q1, Q3, interquartile range, min-max whiskers). Q1, Q3 indicate 25th and 75th percentiles, respectively. Data normality was assessed using Shapiro-Wilk test. The significance of the differences between the medians was evaluated either by one-way ANOVA with Sidak's post-hoc test or by Kruskal-Wallis test with Dunn's post-hoc test if appropriate; *p<0.05, **p<0.01, ***p<0.001, ****p<0.0001, indicates significant difference between men and women in each week.



Supplementary Figure 3. **Storage time-dependent changes in pRBCs deformability in men and women according to their age: A) 20-29 years old B) 30-39 years old C) 40-49 years old.** Elongation index was measured weekly with use of ektacytometry throughout 8 weeks of storage, * weeks 7 and 8 are additional measurements exceeding expiration date. Data distribution is presented as box plots (median, Q1, Q3, interquartile range, min-max whiskers). Q1, Q3 indicate 25th and 75th percentiles, respectively. Normality was assessed using Shapiro-Wilk test. The significance of the differences between the medians was evaluated by Kruskal-Wallis test with the Dunn's post-hoc test if appropriate; ****p<0.0001 indicates significant difference between men and women in each week.