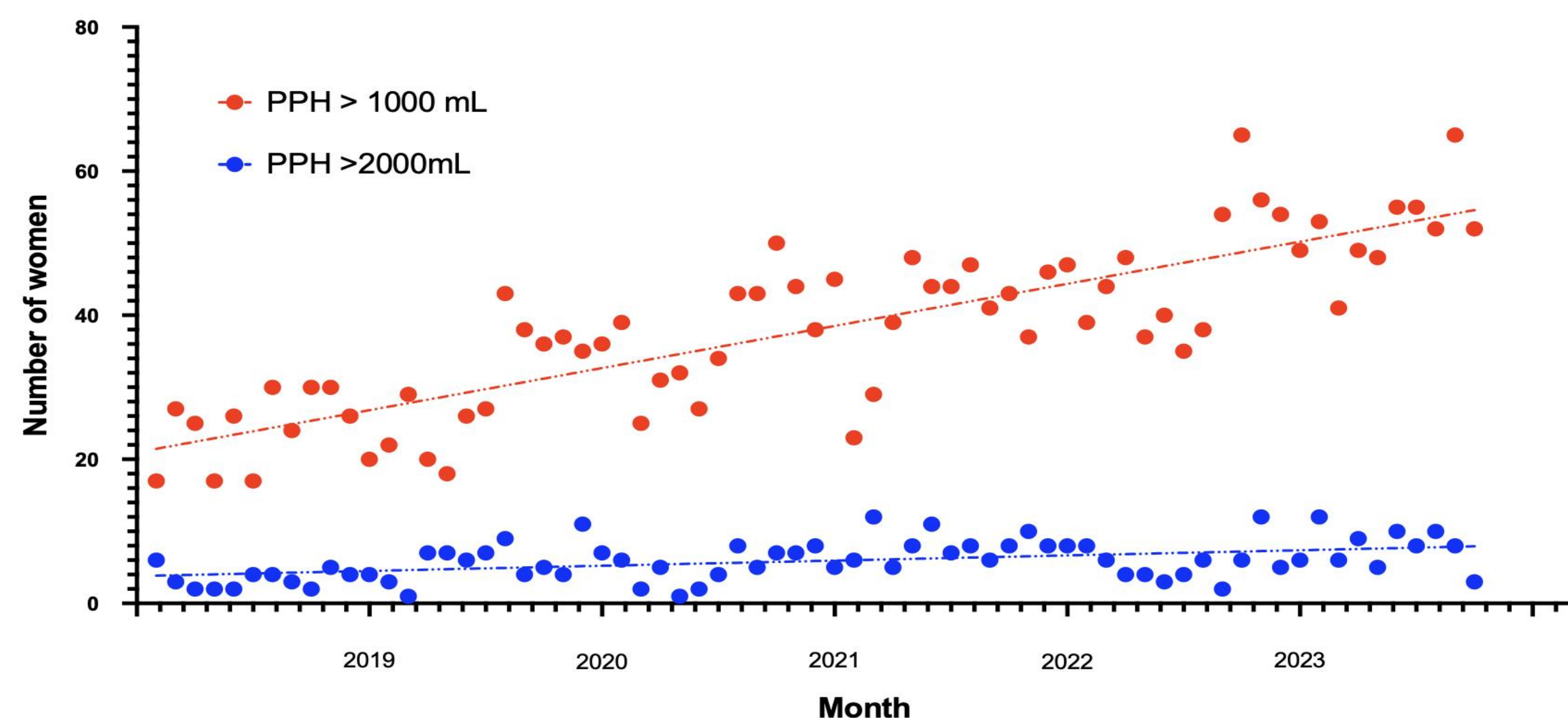


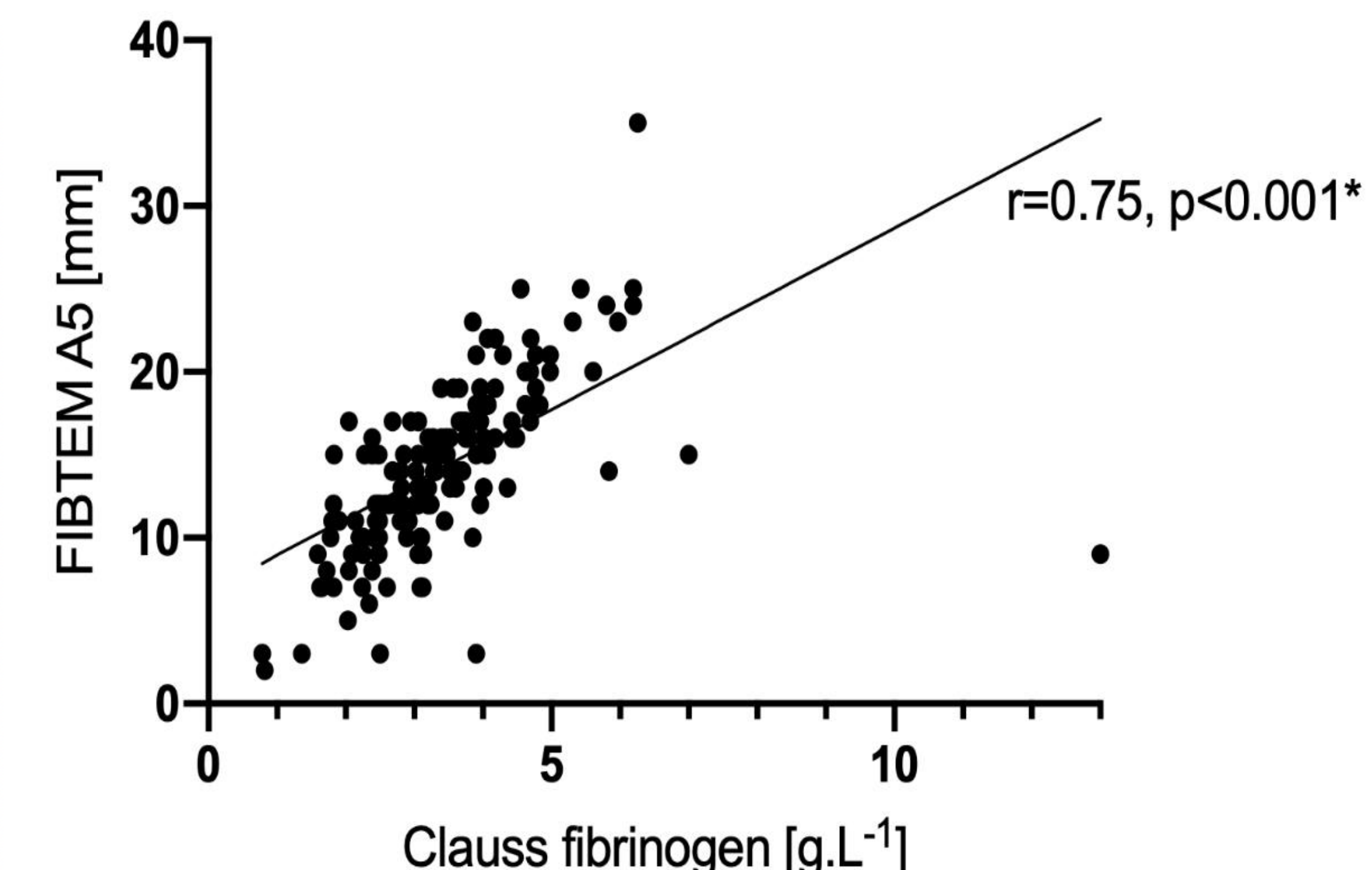
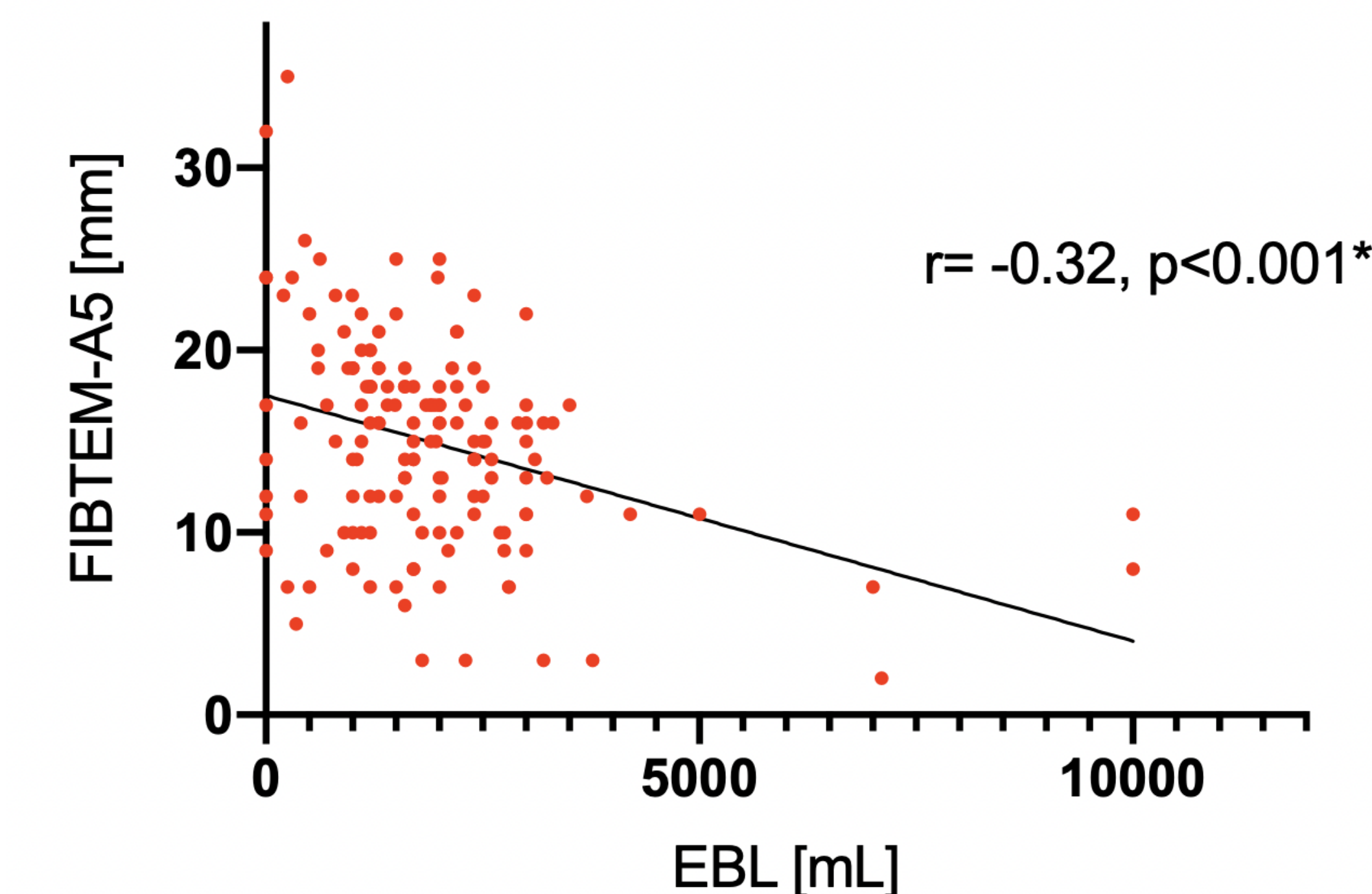


•Introduction:

- Empiric use of coagulation products is not proven to improve the outcomes in obstetric haemorrhage.
- A ROTEM device is a point of care test for coagulation which allows rapid testing of blood coagulation during haemorrhage.
- PPH rates are increasing in the Rotunda, consistent with national and international trends. This raises concerns regarding blood product exposure and cost due to the increasing empiric use of fibrinogen and Octaplas (plasma) during major obstetric haemorrhage.

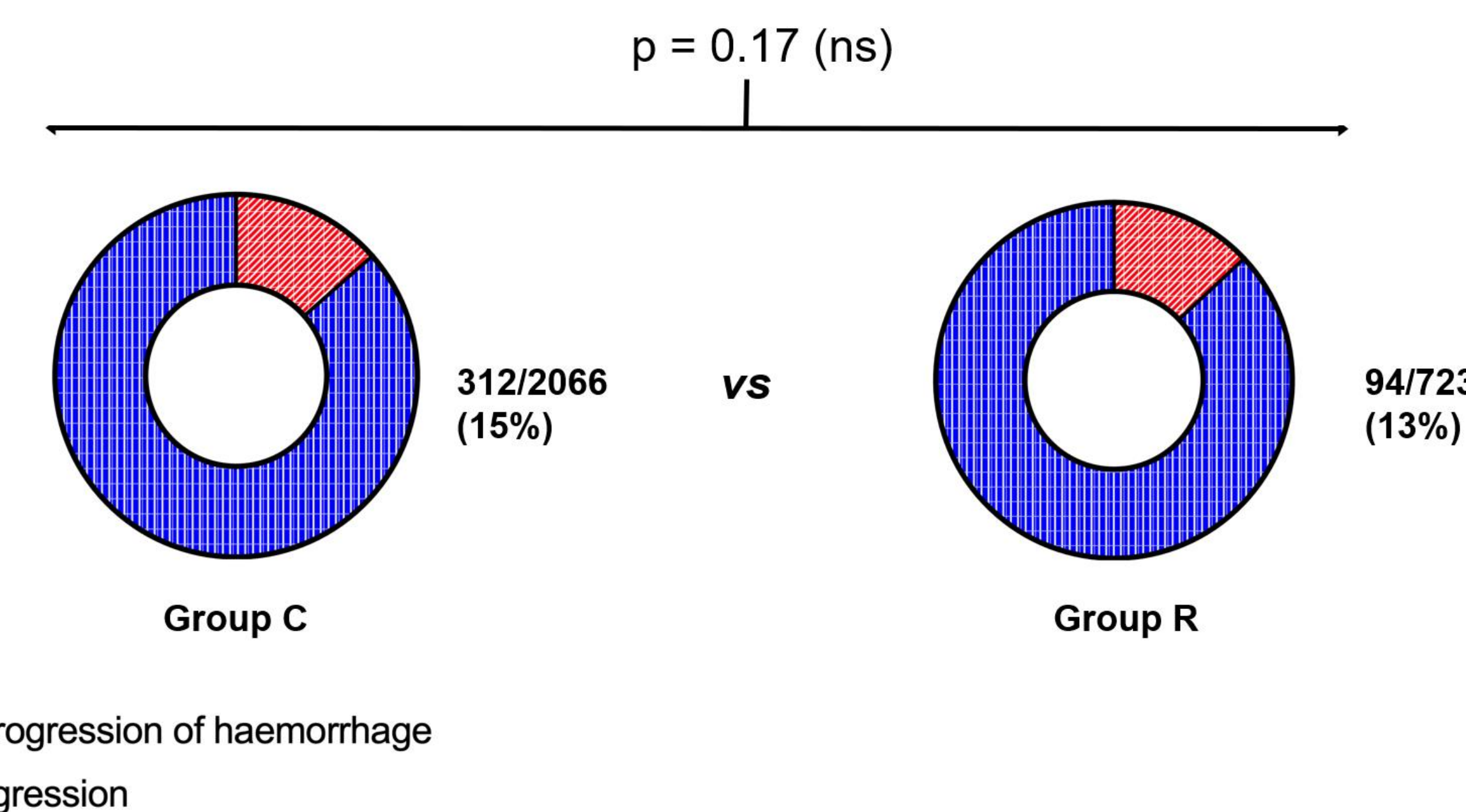
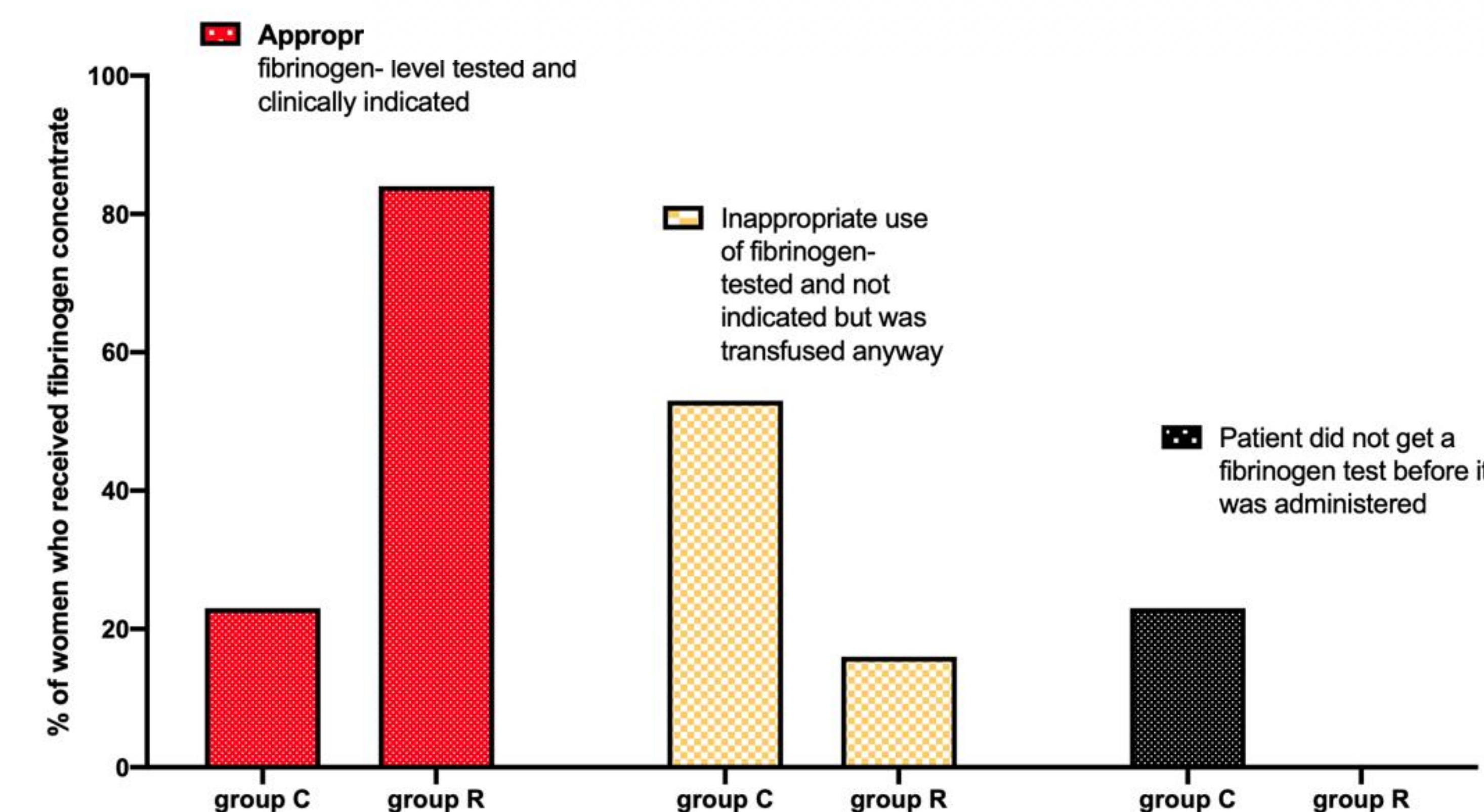
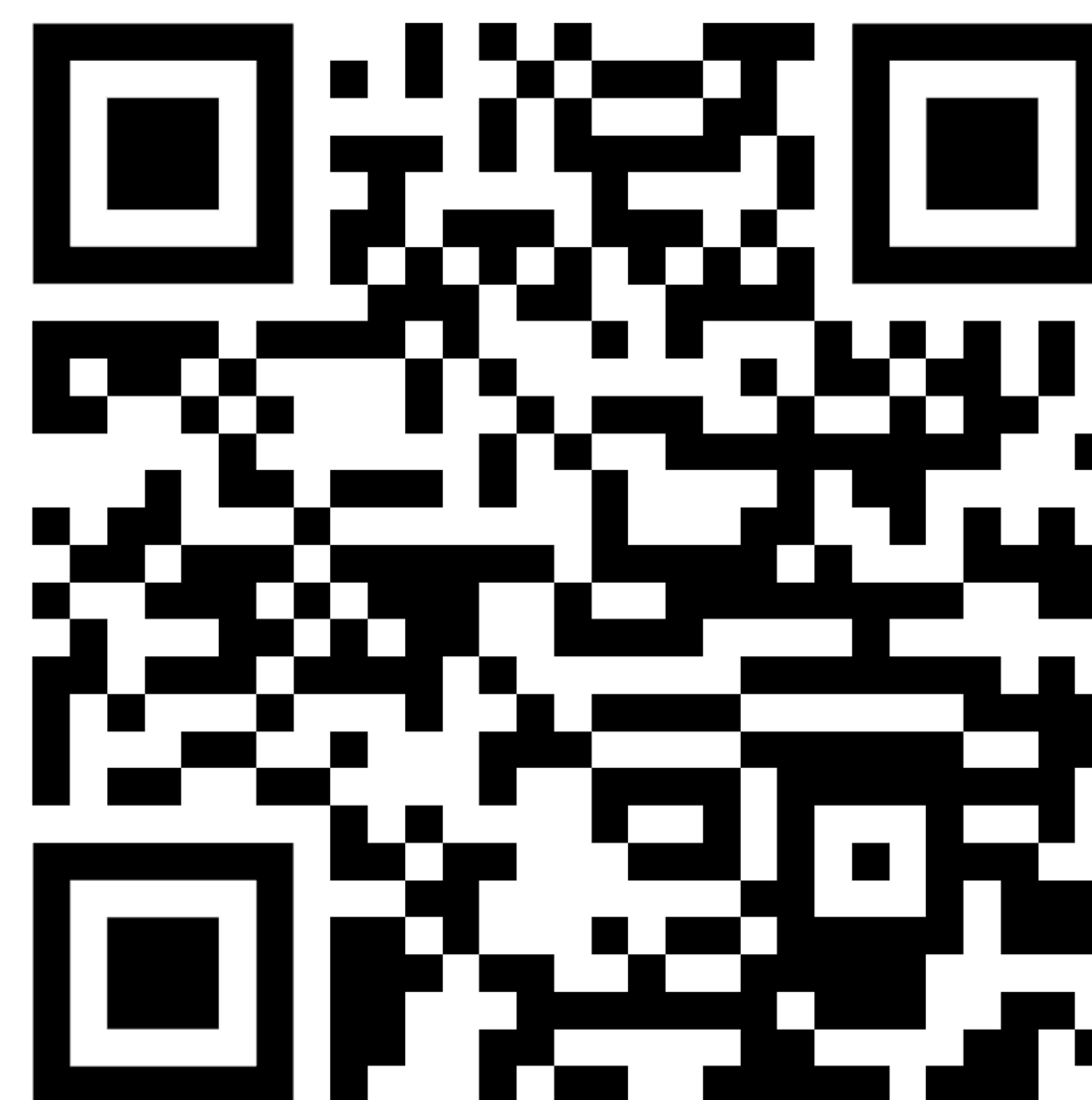


- FIBTEM-A5 demonstrated a stronger correlation with EBL ($r = -0.32$) than Clauss fibrinogen ($r = -0.27$).



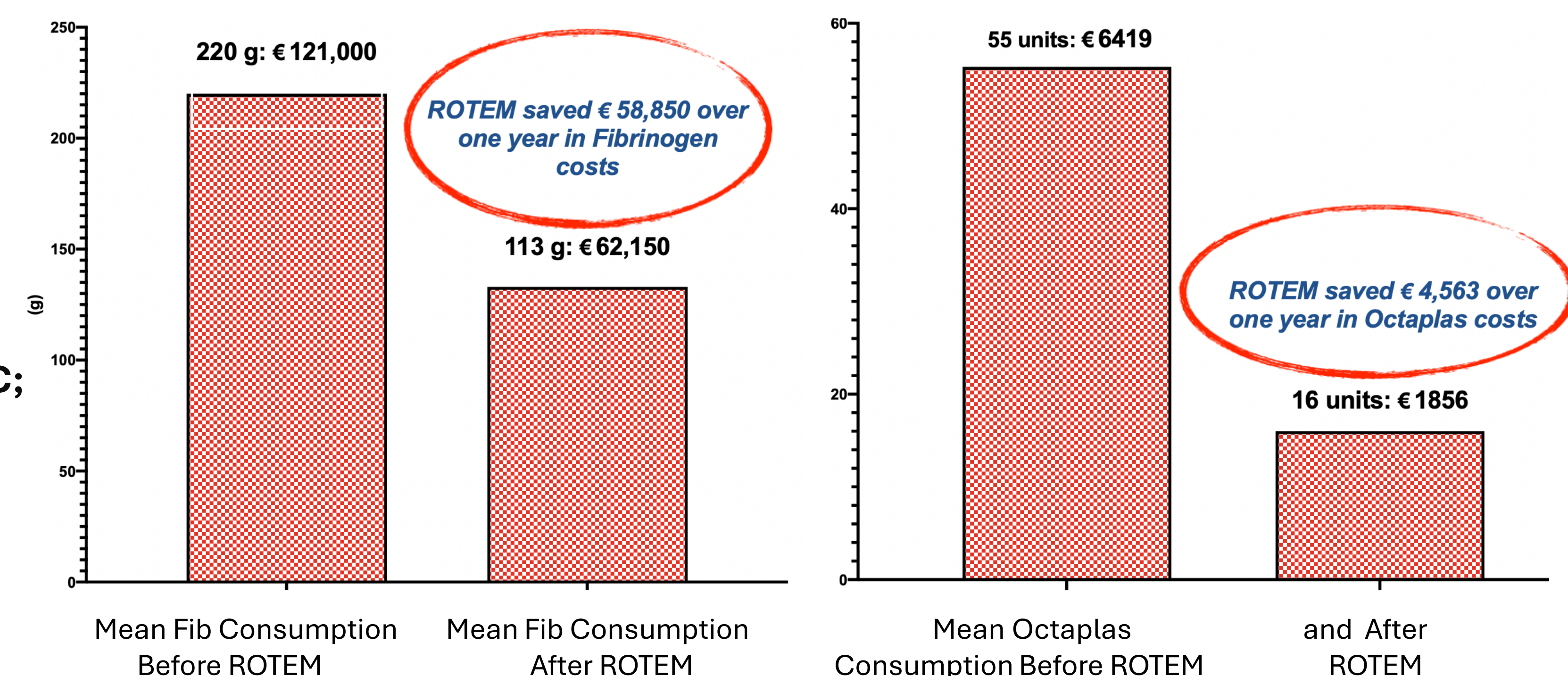
•Methods:

- The ROTEM device was purchased by the Rotunda in September 2022 to improve targeted administration of coagulation products.
- We designed a decision tool, integrated into the Rotunda Anaesthesia app to aid compliance with best practice use of the ROTEM device and coagulation product administration.
- The primary outcome was gross expenditure on blood coagulation products. As secondary outcomes, we evaluated compliance with transfusion triggers as well as two clinical outcome measures to demonstrate non-inferiority of the ROTEM strategy; progression of haemorrhage from >1000 mL to >2000 mL and the proportion of women with MOH admitted to the high dependency unit (HDU). We also ran correlation analysis between FIBTEM A5, laboratory Clauss fibrinogen and estimated blood loss (EBL).



•Results:

- The mean annual consumption of fibrinogen concentrate (group R; 113g [€62,150] vs group C; 220g [€121,000]), Octaplas (group R; 16 units [€1856] vs group C; 55 units [€6419]) and pooled platelets (group R; 2 units [€1,280] vs group C; 10.75 units [€6,880]) was lower in the ROTEM group.



•Conclusion:

- ROTEM targeted fibrinogen and plasma administration resulted in savings approximate to €65,000 over one year when both fibrinogen and Octaplas were considered.
- The ROTEM machine and electronic decision tool improved compliance with best practice, with more than 85% of fibrinogen administered targeted to an appropriate laboratory threshold value compared to less than 20% in 2019. No women got fibrinogen without a ROTEM or lab fibrinogen test after introduction of the ROTEM device.
- Future studies will look at clinical outcomes for women who suffer PPH and receive blood coagulation products.

- There was no significant difference in progression of MOH from >1000mL to >2000 mL (group R; 94/723 [13%] vs group C 312/2066 [15%], $p = 0.17$) however, less women with MOH were admitted to HDU in group R (group R; 131/723 [18%] vs group C 472/2066 [23%], $p = 0.007$).