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**The results of the ECAT  
pilot study on Factor  
XIII testing**



## Pilot study targets

Is there a need to include factor XIII testing into the ECAT external quality assessment programme ?



## Pilot study setup

With the description form for 2008 ECAT participants were invited to sign up for the factor XIII pilot study

4 samples (1 normal, 2 borderline and 1 abnormal) were sent out

Factor XIII activity and/or antigen was determined and reported to ECAT

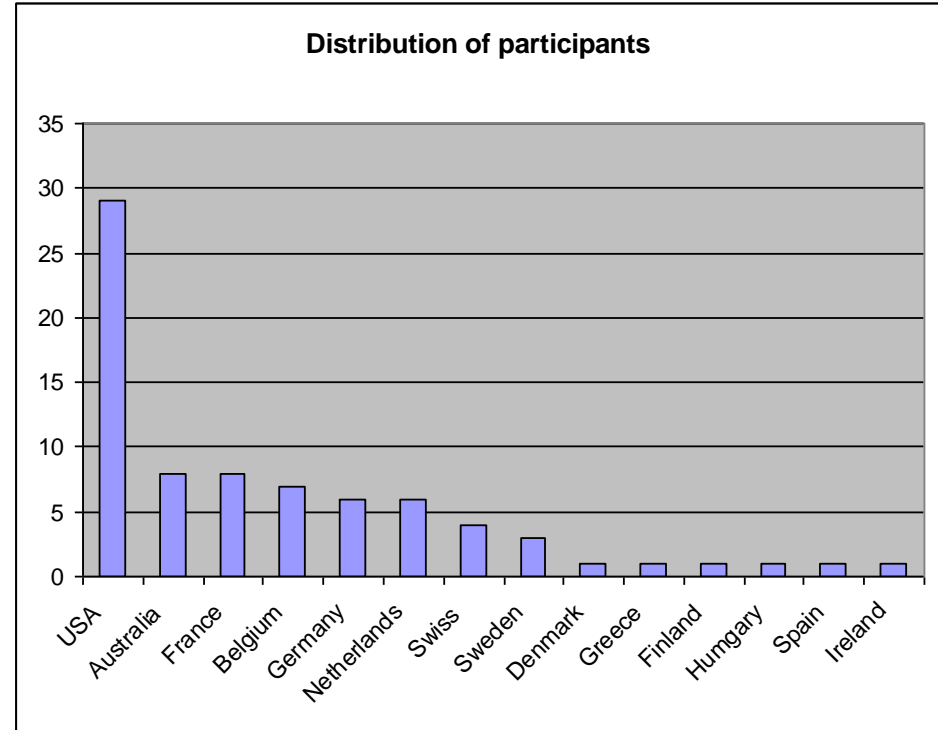
Results were evaluated by ECAT



## Pilot study results

95 participants signed up for FXIII pilot

79 participants (83%) reported their results to the ECAT foundation



## Factor XIII activity results

69 participants reported FXIII activity

Chromogenic (39) and clot lysis assay (28)



## Factor XIII activity: Clot lysis assays

		Functional - activator			
		Thrombin	Calciumchl oride	Glass	IL-APTT-SP
		Count	Count	Count	Count
Functional - Lysis agent	Acetic acid	1	1	0	0
	Urea	2	18	1	1
	Chloro-acetic acid	0	3	0	0



## Factor XIII activity: Clot lysis assays

		Functional - temperature		
		20	22	37
		Count	Count	Count
Functional	15	0	0	1
-	30	0	0	2
Incubation	60	0	0	1
time	120	2	0	0
	360	1	0	0
	1080	0	0	1
	1440	10	2	8



## **Factor XIII activity: Clot lysis results**

Clot lysis generates kwantitative result

All, except one, reported presence of FXIII in all four samples





## Factor XIII activity: Other functional assays

		Functional - Assay			
		Chromogenic	Turbidimetirc	Clot lysis	Ammonia release
		Count	Count	Count	Count
Functional - method	Berichrom (DB)	39	0	0	0
	Hexamate (Roche)	0	1	0	0
	REA-chrom	0	0	0	1

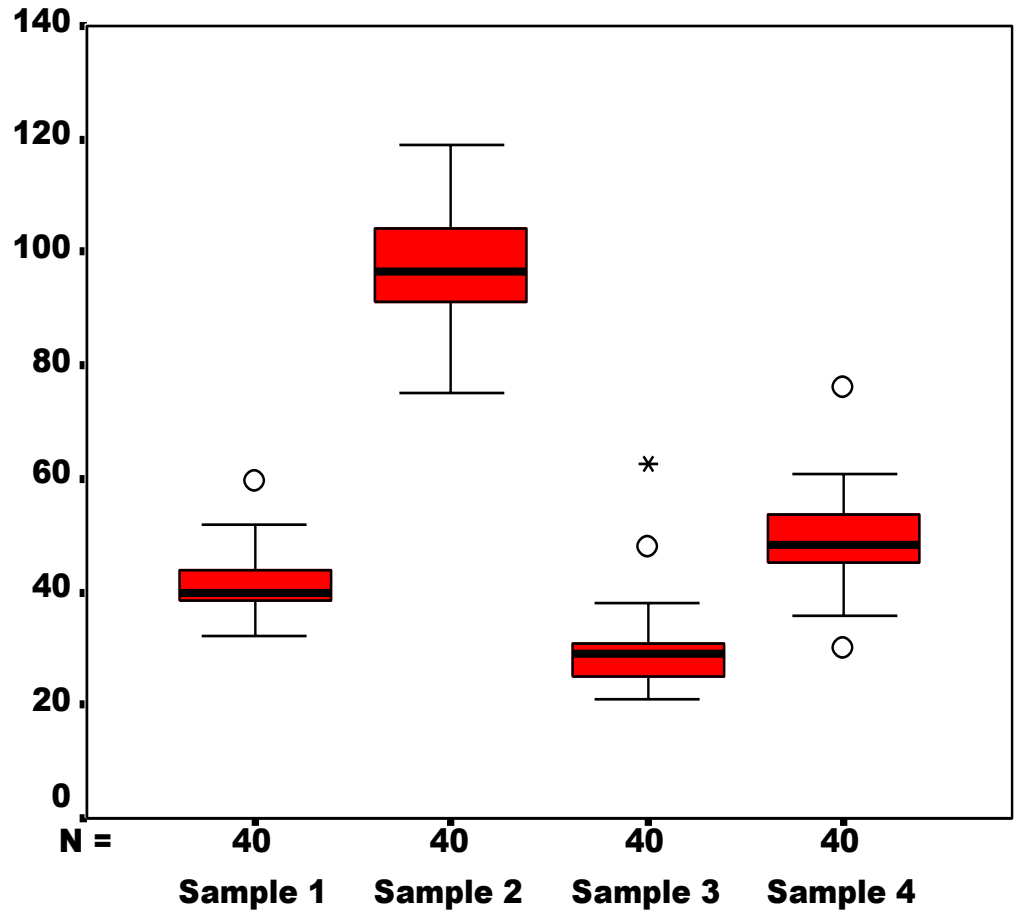


## Factor XIII activity results

41 other functional assays evaluated by boxplot analysis

CV of 10-16% for samples 1, 3 and 4 (abnormal and borderline)

CV of 25% for sample 2 (normal)



## Factor XIII antigen results

15 participants reported FXIII antigen

Latex based immunoturbidimetric (9) and homemade laurell (3)

Antigen method	Participants
Latex based immunoturbidimetric	9
Affinity biologicals	1
Binding site	1
Homemade Laurell	3
Reanal-Ker	1

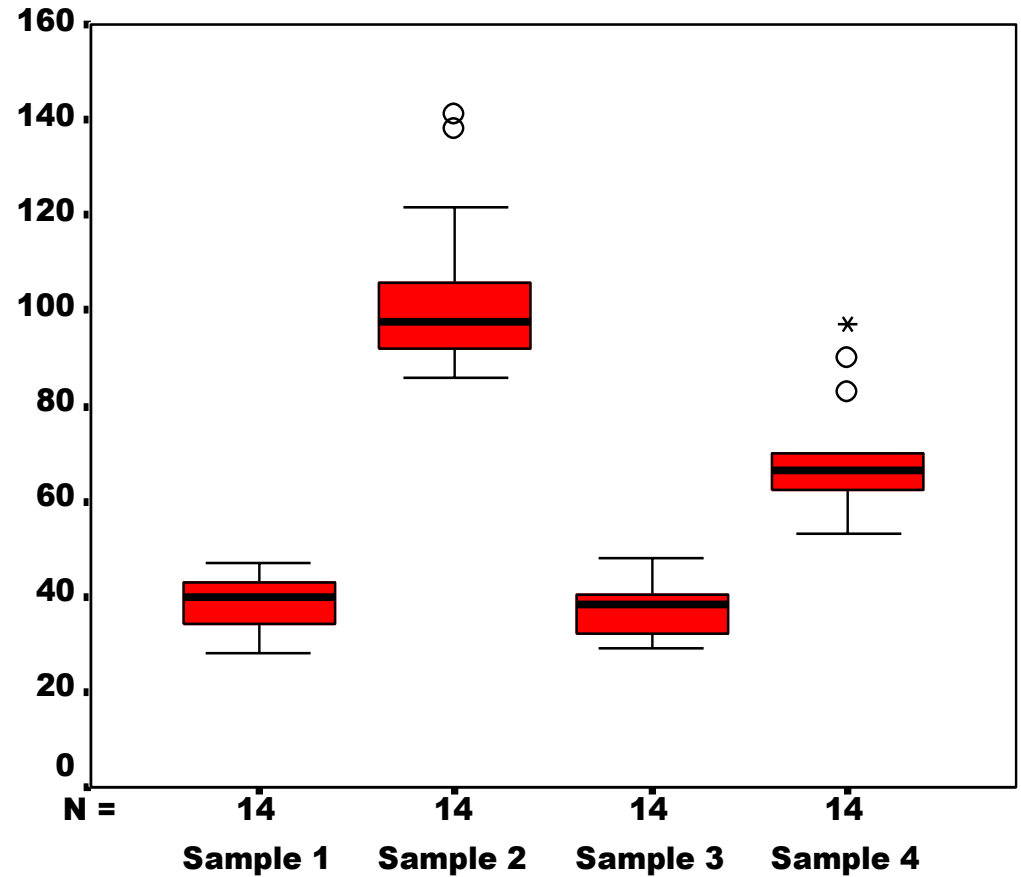


## Factor XIII antigen results

14 results evaluated

CV of 15-18% for samples 1, 3 and 4 (abnormal and borderline)

CV of 17% for sample 2 (normal)



## Factor XIII pilot study conclusion

With number of participants a fairly good interlaboratory comparison can be made

By performing this survey more frequently a decrease in the interlaboratory CV may be achieved over time

The ECAT foundation decided to include the factor XIII testing in their EQA programme

