Supplement 1. Questionnaire on activated partial thromboplastin time (aPTT) reporting practice

Questionnaire
1. Reference interval for aPTT reported in seconds used by your laboratory is:_____
2. The source of the reference interval for aPTT(s) used by your laboratory is: a) reference interval specified by the manufacturer b) reference interval determined within the laboratory c) reference interval taken from literature (specify reference):_____
3. Manufacturer of the aPTT reagent provided information on population used to obtain reference interval: a) yes b) no
4. If your answer on question 3 is yes, please circle information that is provided: a) number of subjects b) mean of measured aPTT(s) value c) median of measured aPTT(s) value d) none of the above e) other, specify_____
5. The aPTT(s) value used by laboratory to calculate aPTT ratio is:_____
6. The aPTT value in seconds used by laboratory to calculate aPTT(r) represent: a) mean aPTT(s) value of the population used to obtain reference interval b) median aPTT(s) value of the population used to obtain reference interval c) mean aPTT(s) value of the reference interval that laboratory use d) other, specify_____
7. Reference interval for aPTT reported as ratio used by your laboratory is: _____
8. Origin of reference interval used by your laboratory for aPTT(r) is: a) Harmonization of reporting laboratory results, document published by CCMB b) It is calculated by dividing limits of aPTT(s) reference interval with value given under the answer number 6 as denominator c) other, specify_____
9. Analytical Coefficient of Variation (CV) of internal, daily control samples obtained in the last month at: a) pathological level _____ b) normal level _____

aPTT - activated partial thromboplastin time. aPTT(s) - aPTT reported in seconds. aPTT (r) - aPTT reported as ratio. CCMB - Croatian Chamber of Medical Biochemists.

Supplement 2

Table I. Comparability of aPTT results obtained in laboratory operating on three different locations. All locations use the same reagents, whereas locations A and B have the same and location C a different coagulometer. The comparison is conducted every two weeks with the same patient sample at all three locations.

	Location A*		Location B		Location C		Bias (%)			
Reagent in use	**Actin FS**		**Actin FS**		**Actin FS**		**aPTT(s)†**		**aPTT(r)†**	
Coagulometer	**BCSXP‡**		**BCSXP‡**		**Sysmex CS2100§**					
Results:	**aPTT(s)**	**aPTT(r)**	**aPTT(s)**	**aPTT(r)**	**aPTT(s)**	**aPTT(r)**	**A *vs* B**	**A *vs* C**	**A *vs* B**	**A *vs* C**
1.	27.00	0.94	25.09	0.94	26.40	1.07	- 7.1	- 2.2	0.0	13.8
2.	35.00	1.27	34.73	1.30	34.80	1.41	- 0.8	- 0.6	2.4	11.0
3.	42.00	1.50	40.06	1.49	38.20	1.60	- 4.6	- 9.1	- 0.7	6.7
4.	24.70	0.86	22.98	0.86	22.60	0.90	- 7.0	- 8.5	0.0	4.7
5.	31.30	1.08	28.78	1.07	28.70	1.16	- 8.0	- 8.3	- 0.9	7.4
6.	25.00	0.90	23.10	0.86	22.10	0.90	- 7.6	- 11.6	- 4.4	0.0
7.	35.00	1.20	33.94	1.27	32.50	1.32	- 3.0	- 7.1	5.8	10.0
8.	23.00	0.80	20.88	0.78	21.30	0.90	- 9.2	- 7.4	- 2.5	12.5
9.	30.10	1.04	NP	NP	26.90	1.10	NA	- 10.6	NA	5.8
10.	30.70	1.06	31.55	1.18	29.80	1.20	2.8	- 2.9	11.3	13.2
11.	29.30	1.01	28.15	1.05	27.30	1.10	- 3.9	- 6.8	- 3.96	8.9
12.	37.00	1.30	38.42	1.43	35.30	1.40	3.8	- 4.6	10.0	7.7
13.	25.80	0.89	22.53	0.84	22.80	0.90	- 12.6	- 11.6	- 5.60	1.1
14.	27.47	0.95	24.49	0.91	24.80	1.00	- 10.8	- 9.7	- 4.30	5.2
15.	29.50	1.02	27.85	1.04	26.50	1.10	- 5.6	- 10.2	2.0	7.8
16.	32.00	1.10	27.40	1.02	28.30	1.20	- 14.4	- 11.5	- 7.3	9.1
17.	33.00	1.20	32.40	1.21	31.40	1.30	- 1.7	- 4.8	- 0.8	8.3
18.	25.50	0.90	22.28	0.83	22.06	0.90	- 12.6	- 11.4	- 7.8	0.0
19.	41.50	1.52	41.29	1.54	40.80	1.70	- 0.5	- 1.7	1.3	11.8
20.	30.00	1.05	28.60	1.05	28.60	1.20	- 6.1	- 4.7	0.0	14.3
21.	3.00	1.18	32.59	1.22	33.20	1.30	- 4.2	- 2.35	3.4	10.2

22.	33.50	1.23	34.43	1.28	33.60	1.40	2.8	0.3	4.1	13.8
23.	23.00	0.82	21.44	0.80	21.80	0.90	- 6.8	- 5.2	- 2.4	9.8
24.	40.00	1.37	38.47	1.44	37.90	1.50	- 3.8	- 5.3	5.1	9.5
25.	26.00	0.94	25.17	0.94	25.60	1.00	- 3.2	- 1.5	0.0	6.4
26.	24.70	0.86	24.12	0.90	24.00	1.00	- 2.4	- 2.8	4.7	16.3
27.	29.50	1.06	30.16	1.13	30.70	1.20	- 2.2	4.1	6.6	13.2
28.	34.30	1.26	NP	NP	32.30	1.30	NA	- 11.0	NA	3.2
29.	24.00	0.80	23.60	0.90	NP	NP	- 1.7	NA	12.5	NA
30.	28.40	0.98	27.92	1.04	27.10	1.08	- 1.7	- 4.6	6.1	10.2
31.	25.90	0.92	24.77	0.92	23.50	0.90	- 4.4	- 9.3	0.0	- 2.2
32.	37.50	1.30	39.32	1.47	35.20	1.40	4.9	6.1	13.0	7.7
33.	24.90	0.86	NP	NP	23.30	0.90	NA	- 6.4	NA	4.7
34.	24.20	0.84	25.16	0.94	23.00	0.90	3.9	- 2.5	11.9	7.1
35.	26.00	0.90	25.24	0.94	25.50	1.01	- 2.9	- 1.9	4.4	12.2
36.	35.70	1.24	39.65	1.48	35.80	1.40	11.1	0.3	15.0	12.9
37.	27.40	1.00	25.82	0.96	26.00	1.00	- 5.8	- 5.1	- 4.0	0.0
38.	24.00	0.90	27.25	1.02	26.20	1.00	3.5	9.2	13.3	11.1
39.	26.00	0.90	27.55	1.03	25.20	1.00	5.9	- 3.1	14.4	11.1
40.	36.00	1.30	35.54	1.33	35.00	1.40	- 1.3	2.8	2.3	7.7
41.	23.90	0.90	22.78	0.85	23.40	0.90	- 4.7	2.1	- 5.6	0
42.	39.60	1.40	37.60	1.40	34.60	1.40	- 5.1	- 12.6	0	0
43.	21.50	0.80	21.03	0.78	20.40	0.80	- 2.2	- 5.1	- 2.5	0
44.	27.70	1.00	27.30	1.02	25.80	1.00	- 1.4	- 6.9	2	0
TOTAL BIAS(%):							- 3.19	- 4.79	2.41	7.54

Results were obtained during the period of 1.1.2018. to 31.12.2019. *Location A is reference location. [†]Calculated bias for the aPTT results was compared to CROQALM allowed bias of 7% to assess comparability of the results. [‡]Reference interval for reporting aPTT(s): 23.0-32.0**.** [§]Reference interval for reporting aPTT(s): 21.6-28.7. aPTT(s) - activated partial thromboplastin time reported in seconds. aPTT(r) - activated partial thromboplastin time reported as ratio. NP - not participated in comparison. NA - not applicable.

Table II. An example of calculating acceptable limit of performance between aPTT (r) results when different number of decimal places is assigned for reporting aPTT(r)

A. Scenario with use of one decimal place to report aPTT(r):
aPTT ratio 0.95 … shall be issued in one decimal place means rounded to 1.0 aPTT ratio 0.93 … shall be issued in one decimal place means rounded to 0.9 Calculation: 1.0-0.9/1.0 = 10.0% (results exceeding acceptable limit of 7%). Deviation is not clinically significant.
B. Scenario with use of two decimal place to report aPTT(r):
aPTT ratio 0.95 …when leave it to two decimal places 0.95 aPTT ratio 0.93 … when leave it to two decimal places 0.93 Calculation: 0.95-0.93/0.95 = 2.1% (result is within acceptable limit of 7%).
aPTT(r) - activated partial thromboplastin time reported as ratio.