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Hematology Proficiency Test Program

Statistical Summary – February 2015 (Event 15-1)

This statistical report summarizes participant data for the Hematology proficiency survey shipped 2 February 2015.

Five test samples were distributed to participants for each test category:
Routine Blood Counts (B06, B07, B08, B09, B10)
Routine Coagulation (C06, C07, C08, C09, C10)
Cell Identification (406, 407, 408, 409, 410)

Results for individual instrument and reagent systems where the number of laboratories using those systems is three or greater are provided. Mean and Standard Deviation (± 1 SD) values are calculated by a robust statistical technique that does not assume a Gaussian distribution.

Disclaimer:
Note: The use of brand and/or trade names in this report does not constitute an endorsement of the products on the part of the Wadsworth Center or the New York State Department of Health.

Should you have any questions regarding this report, please contact the Hematology Section at (518) 474-9878.

Summary of Participant Responses
Mean ± One Standard Deviation

White Cell Count (x10^9/L)

Specimen: B06	Specimen: B07	Specimen: B08	Specimen: B09	Specimen: B10	Number	[Code] Instrument or Reagent System
26.51 ± 1.06	9.21 ± 0.43	4.21 ± 0.20	2.39 ± 0.12	18.56 ± 0.73	n = 415	[---] All Methods & Instruments
						<Instruments>
26.38 ± 0.37	9.16 ± 0.21	4.17 ± 0.11	2.50 ± 0.00	18.52 ± 0.44	n = 5	[ABG] Abbott Cell Dyn 1700
25.80 ± 0.73	8.95 ± 0.19	3.99 ± 0.20	2.30 ± 0.09	18.27 ± 0.42	n = 3	[ABJ] Abbott Cell Dyn 1800
26.78 ± 1.32	9.00 ± 0.20	4.18 ± 0.10	2.38 ± 0.06	18.90 ± 0.18	n = 3	[ABK] Abbott Cell Dyn 3200
26.54 ± 0.66	9.29 ± 0.13	4.19 ± 0.10	2.38 ± 0.08	18.27 ± 0.38	n = 10	[ABM] Abbott Cell Dyn 3700
26.20 ± 0.47	9.12 ± 0.16	4.18 ± 0.05	2.42 ± 0.08	18.35 ± 0.36	n = 11	[ABS] Abbott Cell Dyn Sapphire
26.52 ± 0.62	9.21 ± 0.16	4.19 ± 0.12	2.43 ± 0.07	18.75 ± 0.38	n = 20	[ABT] Abbott Cell Dyn Ruby
26.09 ± 0.76	8.87 ± 0.33	4.21 ± 0.13	2.29 ± 0.09	17.74 ± 0.38	n = 11	[BTD] Siemens Advia 120
25.97 ± 0.98	8.78 ± 0.32	4.11 ± 0.14	2.23 ± 0.11	17.55 ± 0.67	n = 31	[BTE] Siemens Advia 2120
26.92 ± 0.56	9.49 ± 0.24	4.28 ± 0.09	2.41 ± 0.06	19.20 ± 0.39	n = 57	[CUL] Coulter UniCel DxH 600,800
26.16 ± 1.12	8.99 ± 0.18	4.08 ± 0.07	2.28 ± 0.07	18.08 ± 0.27	n = 6	[CUS] Coulter ACT 5 diff
27.19 ± 0.52	9.54 ± 0.19	4.43 ± 0.12	2.61 ± 0.08	19.07 ± 0.49	n = 18	[CUT] Coulter ACT series,not ACT5 diff
27.65 ± 0.55	9.50 ± 0.00	4.38 ± 0.15	2.59 ± 0.11	19.68 ± 0.52	n = 7	[CUW] Coulter HMX
27.20 ± 0.45	9.64 ± 0.23	4.37 ± 0.08	2.47 ± 0.08	18.86 ± 0.35	n = 31	[CUX] Coulter LH750,755
27.16 ± 0.42	9.66 ± 0.20	4.36 ± 0.06	2.42 ± 0.05	18.84 ± 0.31	n = 16	[CUY] Coulter LH 780
27.32 ± 0.77	9.54 ± 0.19	4.37 ± 0.14	2.60 ± 0.11	19.58 ± 0.42	n = 15	[CUZ] Coulter LH500
26.21 ± 0.54	9.03 ± 0.09	4.05 ± 0.06	2.37 ± 0.09	18.16 ± 0.19	n = 4	[ROB] ABX Pentra series
27.07 ± 0.14	9.20 ± 0.18	4.13 ± 0.14	2.37 ± 0.05	18.84 ± 0.10	n = 3	[ROC] ABX Micro
25.17 ± 0.86	8.82 ± 0.30	4.03 ± 0.18	2.35 ± 0.10	18.31 ± 0.58	n = 28	[SYA] Sysmex XE 5000
24.93 ± 1.02	8.58 ± 0.50	3.68 ± 0.38	2.35 ± 0.07	17.96 ± 0.39	n = 17	[SYC] Sysmex XN-series
24.47 ± 0.41	8.55 ± 0.27	3.97 ± 0.14	2.20 ± 0.09	17.42 ± 0.41	n = 3	[SYG] Sysmex POCHi
26.27 ± 0.57	9.07 ± 0.25	4.16 ± 0.14	2.31 ± 0.09	18.19 ± 0.33	n = 21	[SYI] Sysmex XT-2000i,XT-1800i
26.13 ± 1.36	9.14 ± 0.39	4.11 ± 0.24	2.38 ± 0.09	18.45 ± 0.56	n = 6	[SYL] Sysmex XE 2100C
25.03 ± 0.91	8.67 ± 0.29	3.97 ± 0.20	2.33 ± 0.07	18.05 ± 0.45	n = 19	[SYO] Sysmex XE2100
27.13 ± 0.51	9.38 ± 0.25	4.32 ± 0.13	2.41 ± 0.08	18.89 ± 0.44	n = 33	[SYP] Sysmex XS-1000i,XS-1000iAL
24.73 ± 0.61	8.67 ± 0.15	3.94 ± 0.13	2.31 ± 0.07	17.99 ± 0.34	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
26.60 ± 0.63	9.02 ± 0.23	4.11 ± 0.14	2.29 ± 0.06	18.18 ± 0.51	n = 18	[SYV] Sysmex XT 4000i

Summary of Participant Responses
Mean ± One Standard Deviation

Red Cell Count (x10^{12}/L)

Specimen: B06	Specimen: B07	Specimen: B08	Specimen: B09	Specimen: B10	Number	[Code] Instrument or Reagent System
4.790 ± 0.074	4.615 ± 0.065	5.058 ± 0.069	2.048 ± 0.047	3.104 ± 0.063	n = 416	[---] All Methods & Instruments
						<Instruments>
4.708 ± 0.027	4.561 ± 0.091	5.021 ± 0.107	2.094 ± 0.068	3.145 ± 0.081	n = 5	[ABG] Abbott Cell Dyn 1700
4.802 ± 0.078	4.632 ± 0.094	5.045 ± 0.054	2.187 ± 0.042	3.192 ± 0.015	n = 3	[ABJ] Abbott Cell Dyn 1800
4.786 ± 0.093	4.620 ± 0.018	4.976 ± 0.056	1.978 ± 0.113	3.133 ± 0.106	n = 3	[ABK] Abbott Cell Dyn 3200
4.771 ± 0.072	4.579 ± 0.107	5.081 ± 0.076	2.079 ± 0.033	3.071 ± 0.076	n = 9	[ABM] Abbott Cell Dyn 3700
4.892 ± 0.067	4.704 ± 0.068	5.159 ± 0.084	2.086 ± 0.023	3.150 ± 0.047	n = 11	[ABS] Abbott Cell Dyn Sapphire
4.894 ± 0.115	4.666 ± 0.101	5.198 ± 0.116	2.087 ± 0.037	3.163 ± 0.060	n = 20	[ABT] Abbott Cell Dyn Ruby
4.804 ± 0.046	4.617 ± 0.086	5.054 ± 0.092	2.097 ± 0.033	3.163 ± 0.056	n = 11	[BTD] Siemens Advia 120
4.789 ± 0.089	4.611 ± 0.085	5.044 ± 0.059	2.091 ± 0.034	3.164 ± 0.056	n = 32	[BTE] Siemens Advia 2120
4.785 ± 0.059	4.615 ± 0.051	5.041 ± 0.055	2.025 ± 0.030	3.096 ± 0.045	n = 57	[CUL] Coulter UniCel DxH 600,800
4.854 ± 0.116	4.689 ± 0.054	5.087 ± 0.061	2.079 ± 0.029	3.180 ± 0.042	n = 6	[CUS] Coulter ACT 5 diff
4.753 ± 0.110	4.560 ± 0.109	5.042 ± 0.128	2.039 ± 0.064	3.052 ± 0.042	n = 18	[CUT] Coulter ACT series,not ACT5 diff
4.878 ± 0.051	4.664 ± 0.031	5.131 ± 0.037	2.084 ± 0.035	3.171 ± 0.039	n = 7	[CUW] Coulter HMX
4.823 ± 0.043	4.619 ± 0.041	5.078 ± 0.045	2.036 ± 0.023	3.103 ± 0.025	n = 31	[CUX] Coulter LH750,755
4.820 ± 0.026	4.620 ± 0.029	5.070 ± 0.025	2.026 ± 0.015	3.096 ± 0.018	n = 16	[CUY] Coulter LH 780
4.835 ± 0.087	4.607 ± 0.052	5.072 ± 0.081	2.068 ± 0.031	3.123 ± 0.032	n = 15	[CUZ] Coulter LH500
4.737 ± 0.094	4.510 ± 0.089	4.944 ± 0.078	1.939 ± 0.040	3.002 ± 0.066	n = 4	[ROB] ABX Pentra series
4.802 ± 0.024	4.569 ± 0.020	5.054 ± 0.065	1.967 ± 0.059	3.077 ± 0.041	n = 3	[ROC] ABX Micro
4.792 ± 0.046	4.653 ± 0.039	5.050 ± 0.057	2.072 ± 0.018	3.139 ± 0.029	n = 28	[SYA] Sysmex XE 5000
4.767 ± 0.039	4.588 ± 0.038	5.078 ± 0.053	1.996 ± 0.018	3.026 ± 0.035	n = 17	[SYC] Sysmex XN-series
4.830 ± 0.000	4.612 ± 0.041	5.105 ± 0.019	2.073 ± 0.032	3.090 ± 0.009	n = 3	[SYG] Sysmex POCHi
4.737 ± 0.081	4.580 ± 0.050	5.021 ± 0.072	2.023 ± 0.024	3.072 ± 0.035	n = 21	[SYI] Sysmex XT-2000i,XT-1800i
4.786 ± 0.037	4.605 ± 0.019	5.016 ± 0.006	2.060 ± 0.014	3.118 ± 0.008	n = 6	[SYL] Sysmex XE 2100C
4.760 ± 0.049	4.627 ± 0.033	5.040 ± 0.052	2.068 ± 0.024	3.123 ± 0.034	n = 19	[SYO] Sysmex XE2100
4.736 ± 0.047	4.561 ± 0.057	5.033 ± 0.046	1.992 ± 0.018	3.007 ± 0.035	n = 33	[SYP] Sysmex XS-1000i,XS-1000iAL
4.800 ± 0.045	4.668 ± 0.009	5.093 ± 0.041	2.094 ± 0.009	3.162 ± 0.007	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
4.799 ± 0.047	4.635 ± 0.042	5.085 ± 0.045	2.042 ± 0.027	3.098 ± 0.032	n = 18	[SYV] Sysmex XT 4000i

Summary of Participant Responses
Mean ± One Standard Deviation

Hemoglobin (g/dL)

Specimen: B06	Specimen: B07	Specimen: B08	Specimen: B09	Specimen: B10	Number	[Code] Instrument or Reagent System
13.03 ± 0.28	12.44 ± 0.19	14.47 ± 0.21	6.29 ± 0.15	7.86 ± 0.23	n = 421	[---] All Methods & Instruments
						<Instruments>
13.52 ± 0.04	12.64 ± 0.20	14.59 ± 0.19	6.59 ± 0.13	8.30 ± 0.00	n = 5	[ABG] Abbott Cell Dyn 1700
13.47 ± 0.23	12.75 ± 0.19	14.50 ± 0.00	6.40 ± 0.00	8.10 ± 0.09	n = 3	[ABJ] Abbott Cell Dyn 1800
13.41 ± 0.44	12.59 ± 0.20	14.37 ± 0.34	6.32 ± 0.13	8.30 ± 0.18	n = 3	[ABK] Abbott Cell Dyn 3200
13.46 ± 0.15	12.68 ± 0.23	14.69 ± 0.26	6.54 ± 0.15	8.29 ± 0.15	n = 10	[ABM] Abbott Cell Dyn 3700
13.47 ± 0.18	12.84 ± 0.13	14.87 ± 0.14	6.58 ± 0.10	8.13 ± 0.09	n = 11	[ABS] Abbott Cell Dyn Sapphire
13.38 ± 0.26	12.47 ± 0.19	14.60 ± 0.24	6.33 ± 0.10	8.18 ± 0.18	n = 20	[ABT] Abbott Cell Dyn Ruby
13.19 ± 0.23	12.49 ± 0.27	14.53 ± 0.22	6.42 ± 0.12	8.05 ± 0.16	n = 11	[BTD] Siemens Advia 120
13.31 ± 0.30	12.58 ± 0.25	14.56 ± 0.26	6.49 ± 0.12	8.18 ± 0.17	n = 32	[BTE] Siemens Advia 2120
12.85 ± 0.19	12.42 ± 0.16	14.29 ± 0.19	6.23 ± 0.10	7.80 ± 0.13	n = 57	[CUL] Coulter UniCel DxH 600,800
13.07 ± 0.35	12.49 ± 0.15	14.45 ± 0.08	6.31 ± 0.13	7.95 ± 0.15	n = 6	[CUS] Coulter ACT 5 diff
12.97 ± 0.21	12.36 ± 0.23	14.33 ± 0.22	6.24 ± 0.12	7.83 ± 0.11	n = 18	[CUT] Coulter ACT series,not ACT5 diff
13.33 ± 0.13	12.50 ± 0.16	14.49 ± 0.16	6.34 ± 0.09	8.11 ± 0.10	n = 7	[CUW] Coulter HMX
12.99 ± 0.16	12.41 ± 0.14	14.48 ± 0.17	6.32 ± 0.08	7.80 ± 0.10	n = 31	[CUX] Coulter LH750,755
13.06 ± 0.18	12.47 ± 0.12	14.49 ± 0.13	6.30 ± 0.10	7.84 ± 0.11	n = 16	[CUY] Coulter LH 780
13.19 ± 0.21	12.46 ± 0.15	14.46 ± 0.23	6.36 ± 0.10	8.04 ± 0.11	n = 15	[CUZ] Coulter LH500
12.78 ± 0.15	12.33 ± 0.16	14.33 ± 0.16	6.40 ± 0.08	7.77 ± 0.08	n = 4	[HQC] HemoCue Hb201+/B-Hb
13.07 ± 0.20	12.33 ± 0.20	14.43 ± 0.20	6.10 ± 0.08	7.73 ± 0.09	n = 4	[ROB] ABX Pentra series
13.38 ± 0.15	12.64 ± 0.10	14.67 ± 0.05	6.43 ± 0.05	8.10 ± 0.09	n = 3	[ROC] ABX Micro
12.89 ± 0.14	12.36 ± 0.13	14.41 ± 0.14	6.27 ± 0.06	7.75 ± 0.07	n = 28	[SYA] Sysmex XE 5000
12.99 ± 0.13	12.39 ± 0.14	14.50 ± 0.12	6.19 ± 0.08	7.71 ± 0.10	n = 17	[SYC] Sysmex XN-series
12.96 ± 0.10	12.40 ± 0.09	14.43 ± 0.14	6.30 ± 0.09	7.77 ± 0.05	n = 3	[SYG] Sysmex POCHi
12.83 ± 0.19	12.35 ± 0.14	14.41 ± 0.18	6.17 ± 0.07	7.65 ± 0.09	n = 21	[SYI] Sysmex XT-2000i,XT-1800i
12.93 ± 0.23	12.38 ± 0.17	14.47 ± 0.19	6.21 ± 0.10	7.72 ± 0.15	n = 7	[SYL] Sysmex XE 2100C
12.87 ± 0.16	12.32 ± 0.17	14.42 ± 0.18	6.26 ± 0.10	7.75 ± 0.11	n = 19	[SYO] Sysmex XE2100
13.00 ± 0.14	12.42 ± 0.12	14.52 ± 0.15	6.17 ± 0.07	7.70 ± 0.10	n = 33	[SYP] Sysmex XS-1000i,XS-1000iAL
12.92 ± 0.11	12.39 ± 0.12	14.48 ± 0.09	6.30 ± 0.08	7.82 ± 0.08	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
12.91 ± 0.12	12.38 ± 0.11	14.44 ± 0.16	6.12 ± 0.07	7.63 ± 0.09	n = 18	[SYV] Sysmex XT 4000i

Summary of Participant Responses
Mean ± One Standard Deviation

Hematocrit (%)

Specimen: B06	Specimen: B07	Specimen: B08	Specimen: B09	Specimen: B10	Number	[Code] Instrument or Reagent System
37.89 ± 1.86	36.87 ± 1.77	42.31 ± 1.98	18.84 ± 1.03	23.00 ± 1.17	n = 420	[---] All Methods & Instruments
						<Instruments>
37.73 ± 0.99	36.35 ± 0.68	41.57 ± 1.09	19.16 ± 0.53	23.00 ± 0.62	n = 5	[ABG] Abbott Cell Dyn 1700
39.50 ± 1.09	38.20 ± 1.00	43.83 ± 1.86	20.43 ± 0.51	24.03 ± 0.95	n = 3	[ABJ] Abbott Cell Dyn 1800
32.68 ± 0.96	31.75 ± 0.27	35.64 ± 0.71	15.10 ± 1.01	20.54 ± 1.25	n = 3	[ABK] Abbott Cell Dyn 3200
39.52 ± 0.80	38.26 ± 0.75	44.47 ± 0.53	19.86 ± 0.34	23.78 ± 0.48	n = 10	[ABM] Abbott Cell Dyn 3700
35.91 ± 0.56	34.81 ± 0.58	40.11 ± 0.70	17.63 ± 0.30	21.48 ± 0.30	n = 11	[ABS] Abbott Cell Dyn Sapphire
33.85 ± 0.91	32.53 ± 0.71	37.74 ± 0.82	16.13 ± 0.33	20.63 ± 0.48	n = 20	[ABT] Abbott Cell Dyn Ruby
33.84 ± 1.04	32.70 ± 0.85	37.98 ± 1.46	16.85 ± 0.57	20.48 ± 0.58	n = 11	[BTD] Siemens Advia 120
33.74 ± 0.85	32.60 ± 0.72	37.79 ± 0.64	16.78 ± 0.38	20.50 ± 0.47	n = 32	[BTE] Siemens Advia 2120
39.31 ± 0.50	38.13 ± 0.44	43.63 ± 0.46	19.35 ± 0.32	23.97 ± 0.36	n = 57	[CUL] Coulter UniCel DxH 600,800
36.39 ± 1.34	35.18 ± 0.92	39.90 ± 0.87	17.51 ± 0.46	22.02 ± 0.48	n = 6	[CUS] Coulter ACT 5 diff
38.09 ± 0.88	36.85 ± 1.00	42.55 ± 1.28	18.88 ± 0.60	22.93 ± 0.38	n = 18	[CUT] Coulter ACT series,not ACT5 diff
39.31 ± 0.72	37.71 ± 0.56	43.44 ± 0.69	19.14 ± 0.49	23.83 ± 0.34	n = 7	[CUW] Coulter HMX
39.10 ± 0.43	37.71 ± 0.47	43.39 ± 0.50	18.92 ± 0.26	23.34 ± 0.30	n = 31	[CUX] Coulter LH750,755
39.18 ± 0.43	37.76 ± 0.36	43.51 ± 0.35	18.87 ± 0.24	23.38 ± 0.28	n = 16	[CUY] Coulter LH 780
38.86 ± 0.63	37.39 ± 0.53	42.88 ± 0.48	19.09 ± 0.28	23.47 ± 0.30	n = 15	[CUZ] Coulter LH500
35.98 ± 1.65	34.27 ± 1.51	39.50 ± 1.22	16.85 ± 0.41	20.59 ± 1.90	n = 4	[MHC] Microhematocrit
35.97 ± 0.49	34.30 ± 0.42	38.98 ± 0.46	17.18 ± 0.31	21.57 ± 0.40	n = 4	[ROB] ABX Pentra series
38.20 ± 0.36	36.67 ± 0.23	42.39 ± 0.37	17.85 ± 0.46	22.67 ± 0.34	n = 3	[ROC] ABX Micro
38.27 ± 0.26	37.62 ± 0.39	42.66 ± 0.55	19.38 ± 0.30	23.54 ± 0.28	n = 28	[SYA] Sysmex XE 5000
37.59 ± 0.32	36.53 ± 0.43	42.62 ± 0.50	18.18 ± 0.29	22.41 ± 0.23	n = 17	[SYC] Sysmex XN-series
37.95 ± 0.45	36.80 ± 0.45	42.42 ± 0.41	19.43 ± 0.60	22.92 ± 0.24	n = 3	[SYG] Sysmex POCHi
37.44 ± 0.74	36.70 ± 0.49	42.02 ± 0.62	19.39 ± 0.30	23.25 ± 0.36	n = 21	[SYI] Sysmex XT-2000i,XT-1800i
35.79 ± 0.43	35.10 ± 0.58	40.47 ± 0.46	18.19 ± 0.31	22.10 ± 0.34	n = 6	[SYL] Sysmex XE 2100C
37.95 ± 0.51	37.31 ± 0.47	42.53 ± 0.61	19.31 ± 0.30	23.45 ± 0.35	n = 19	[SYO] Sysmex XE2100
37.78 ± 0.55	36.91 ± 0.52	42.49 ± 0.60	19.24 ± 0.33	23.00 ± 0.38	n = 33	[SYP] Sysmex XS-1000i,XS-1000iAL
38.42 ± 0.54	37.73 ± 0.41	43.25 ± 0.65	19.63 ± 0.39	23.80 ± 0.44	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
37.75 ± 0.44	37.21 ± 0.49	42.47 ± 0.47	19.51 ± 0.27	23.38 ± 0.28	n = 18	[SYV] Sysmex XT 4000i

Summary of Participant Responses
Mean ± One Standard Deviation

Platelet Count (x10⁹/L)

Specimen: B06	Specimen: B07	Specimen: B08	Specimen: B09	Specimen: B10	Number	[Code] Instrument or Reagent System
453.7 ± 26.21	232.8 ± 14.57	74.6 ± 6.99	64.1 ± 4.97	410.9 ± 25.66	n = 416	[---] All Methods & Instruments
						<Instruments>
466.2 ± 13.64	246.4 ± 10.56	74.6 ± 2.30	63.2 ± 6.38	423.3 ± 11.38	n = 5	[ABG] Abbott Cell Dyn 1700
477.1 ± 15.70	239.1 ± 7.95	82.5 ± 3.63	63.8 ± 1.54	418.6 ± 16.38	n = 3	[ABJ] Abbott Cell Dyn 1800
456.4 ± 10.17	247.0 ± 4.60	94.6 ± 9.15	66.8 ± 3.16	404.6 ± 6.45	n = 3	[ABK] Abbott Cell Dyn 3200
472.9 ± 31.77	244.0 ± 16.80	78.7 ± 4.41	68.9 ± 5.10	435.9 ± 18.89	n = 10	[ABM] Abbott Cell Dyn 3700
444.8 ± 13.67	232.7 ± 4.65	87.5 ± 3.78	70.9 ± 1.17	404.3 ± 14.77	n = 11	[ABS] Abbott Cell Dyn Sapphire
471.4 ± 17.97	250.5 ± 11.20	95.0 ± 5.29	72.8 ± 4.28	412.4 ± 15.61	n = 20	[ABT] Abbott Cell Dyn Ruby
464.8 ± 4.11	249.9 ± 5.72	91.2 ± 12.13	82.2 ± 6.95	434.5 ± 13.65	n = 3	[ABU] Abbott Cell Dyn Emerald
458.7 ± 16.16	237.3 ± 15.40	75.5 ± 6.80	66.7 ± 6.15	426.7 ± 22.02	n = 11	[BTD] Siemens Advia 120
464.4 ± 24.50	236.9 ± 14.32	77.1 ± 5.32	67.4 ± 5.78	429.0 ± 25.39	n = 31	[BTE] Siemens Advia 2120
447.3 ± 11.76	231.5 ± 6.42	73.7 ± 2.17	63.3 ± 1.81	407.1 ± 10.96	n = 57	[CUL] Coulter UniCel DxH 600,800
478.8 ± 21.78	255.8 ± 7.56	76.8 ± 4.04	72.3 ± 7.07	456.2 ± 17.29	n = 6	[CUS] Coulter ACT 5 diff
452.0 ± 23.53	230.7 ± 13.61	73.8 ± 4.66	62.7 ± 4.83	402.8 ± 18.17	n = 18	[CUT] Coulter ACT series,not ACT5 diff
456.0 ± 7.32	229.7 ± 3.94	74.8 ± 3.31	65.1 ± 4.83	414.0 ± 15.60	n = 7	[CUW] Coulter HMX
458.0 ± 14.00	234.2 ± 7.78	77.6 ± 2.47	65.5 ± 2.17	405.4 ± 13.35	n = 31	[CUX] Coulter LH750,755
455.7 ± 11.36	235.6 ± 4.06	79.1 ± 2.40	65.7 ± 1.54	407.5 ± 7.93	n = 16	[CUY] Coulter LH 780
451.3 ± 21.46	228.1 ± 8.48	73.6 ± 3.22	63.1 ± 2.22	409.3 ± 13.92	n = 15	[CUZ] Coulter LH500
450.3 ± 33.98	237.9 ± 12.01	73.1 ± 4.10	58.3 ± 3.01	418.6 ± 27.56	n = 4	[ROB] ABX Pentra series
473.9 ± 15.26	240.1 ± 10.81	80.6 ± 6.23	71.7 ± 4.96	454.8 ± 20.35	n = 3	[ROC] ABX Micro
401.9 ± 14.31	208.4 ± 6.74	63.5 ± 3.36	57.9 ± 1.87	367.3 ± 13.66	n = 28	[SYA] Sysmex XE 5000
440.9 ± 9.94	227.6 ± 9.36	72.3 ± 3.19	58.7 ± 3.17	381.5 ± 11.78	n = 17	[SYC] Sysmex XN-series
464.7 ± 3.07	231.1 ± 10.08	70.3 ± 1.37	60.5 ± 1.86	417.4 ± 9.11	n = 3	[SYG] Sysmex POCHi
475.0 ± 14.98	243.7 ± 7.16	77.9 ± 3.77	65.4 ± 2.56	435.5 ± 13.28	n = 21	[SYI] Sysmex XT-2000i,XT-1800i
425.9 ± 14.02	218.4 ± 8.28	69.0 ± 1.01	61.8 ± 2.54	387.8 ± 11.84	n = 6	[SYL] Sysmex XE 2100C
407.1 ± 15.27	210.7 ± 9.90	65.0 ± 3.15	58.6 ± 2.90	374.1 ± 15.19	n = 19	[SYO] Sysmex XE2100
453.5 ± 10.58	228.6 ± 7.13	70.2 ± 2.78	62.7 ± 2.22	422.1 ± 9.76	n = 33	[SYP] Sysmex XS-1000i,XS-1000iAL
485.9 ± 13.14	246.7 ± 5.92	76.4 ± 2.91	69.6 ± 2.59	449.2 ± 10.57	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
478.1 ± 11.15	244.1 ± 8.90	78.2 ± 3.89	65.8 ± 1.82	432.0 ± 13.87	n = 18	[SYV] Sysmex XT 4000i

Summary of Participant Responses
Mean ± One Standard Deviation

Prothrombin Time (seconds)

Specimen: C06	Specimen: C07	Specimen: C08	Specimen: C09	Specimen: C10	Number	[Code] Instrument or Reagent System
28.64 ± 3.71	28.56 ± 3.64	12.03 ± 0.92	48.60 ± 7.41	11.29 ± 0.71	n = 313	[---] All Methods & Instruments
						<Instruments>
25.25 ± 1.52	25.15 ± 1.58	10.90 ± 0.36	42.45 ± 3.47	10.83 ± 0.37	n = 19	[BEB] Siemens BCS,BCSXP
30.86 ± 1.11	30.52 ± 0.92	13.47 ± 0.45	52.26 ± 2.33	12.91 ± 0.38	n = 30	[DGC] Diagnostica Stago STA Compact
30.82 ± 0.98	30.76 ± 0.90	14.05 ± 0.53	51.70 ± 1.32	13.42 ± 0.48	n = 16	[DGD] Diagnostica Stago STA-R, STA-R Ev
21.03 ± 0.86	20.96 ± 0.85	12.19 ± 0.40	30.12 ± 1.75	11.95 ± 0.32	n = 11	[ILA] IL ACL(All except810,ELITE,EPRO,8
28.03 ± 7.12	28.19 ± 7.16	12.20 ± 0.45	46.47 ± 14.65	11.35 ± 0.44	n = 12	[ILC] IL ACL Futura/Advance
28.93 ± 3.87	28.99 ± 3.59	12.16 ± 0.34	49.47 ± 7.93	11.47 ± 0.47	n = 27	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
31.41 ± 1.49	31.21 ± 1.33	12.36 ± 0.40	54.57 ± 2.65	11.25 ± 0.34	n = 90	[ILE] IL ACL TOP Series(ACLTOP,ACLTOP C
26.30 ± 1.27	25.94 ± 1.61	11.12 ± 0.34	43.46 ± 2.90	10.69 ± 0.30	n = 36	[SYW] Sysmex CA500/CA600 series
25.85 ± 1.43	25.99 ± 1.42	11.41 ± 0.29	43.49 ± 3.05	11.05 ± 0.29	n = 48	[SYX] Sysmex CA 1500
26.60 ± 1.80	26.61 ± 1.78	11.58 ± 0.35	44.59 ± 3.65	11.20 ± 0.30	n = 19	[SYY] Sysmex CA 7000
						<Reagents>
30.93 ± 1.02	30.68 ± 0.91	13.70 ± 0.55	52.12 ± 2.08	13.12 ± 0.49	n = 46	[TA3] STA Neoplastine CL+
25.99 ± 1.54	25.93 ± 1.62	11.28 ± 0.40	43.41 ± 3.24	10.93 ± 0.37	n = 124	[TD2] Siemens Innovin
20.94 ± 0.78	20.97 ± 0.81	12.02 ± 0.36	30.42 ± 1.43	11.79 ± 0.58	n = 20	[TJ2] HemosIL PT-Fibrinogen
31.26 ± 1.60	31.11 ± 1.46	12.34 ± 0.39	54.14 ± 2.88	11.29 ± 0.35	n = 118	[TJ8] HemosIL RecombiPlasTin 2G
						<Reagent & Instrument>
30.86 ± 1.11	30.52 ± 0.92	13.47 ± 0.45	52.26 ± 2.33	12.91 ± 0.38	n = 30	[TA3]&[DGC] STA Neoplastin & Diagnostic
30.93 ± 0.88	30.85 ± 0.83	14.11 ± 0.49	51.61 ± 1.35	13.46 ± 0.41	n = 14	[TA3]&[DGD] STA Neoplastin & Diagnostic
25.25 ± 1.52	25.15 ± 1.58	10.90 ± 0.36	42.45 ± 3.47	10.83 ± 0.37	n = 19	[TD2]&[BEB] Siemens Innovi & Siemens BC
26.30 ± 1.27	25.94 ± 1.61	11.12 ± 0.34	43.46 ± 2.90	10.69 ± 0.30	n = 36	[TD2]&[SYW] Siemens Innovi & Sysmex CA5
25.85 ± 1.43	25.99 ± 1.42	11.41 ± 0.29	43.49 ± 3.05	11.05 ± 0.29	n = 48	[TD2]&[SYX] Siemens Innovi & Sysmex CA
26.60 ± 1.80	26.61 ± 1.78	11.58 ± 0.35	44.59 ± 3.65	11.20 ± 0.30	n = 19	[TD2]&[SYY] Siemens Innovi & Sysmex CA
21.03 ± 0.86	20.96 ± 0.85	12.13 ± 0.31	30.13 ± 1.75	11.89 ± 0.27	n = 9	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All
20.53 ± 0.43	20.62 ± 0.62	11.80 ± 0.28	30.66 ± 1.65	11.03 ± 0.33	n = 5	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Fut
21.21 ± 0.72	21.33 ± 0.78	12.06 ± 0.40	30.46 ± 0.83	12.21 ± 0.53	n = 6	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELI
32.92 ± 1.91	33.10 ± 1.79	12.48 ± 0.28	55.85 ± 1.29	11.57 ± 0.36	n = 7	[TJ8]&[ILC] HemosIL Recomb & IL ACL Fut
30.25 ± 1.42	30.15 ± 1.27	12.18 ± 0.32	51.65 ± 2.10	11.35 ± 0.34	n = 21	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELI
31.40 ± 1.51	31.23 ± 1.33	12.36 ± 0.39	54.56 ± 2.67	11.25 ± 0.33	n = 89	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP

Summary of Participant Responses
Mean ± One Standard Deviation

INR (International Normalized Ratio)

Specimen: C06	Specimen: C07	Specimen: C08	Specimen: C09	Specimen: C10	Number	[Code] Instrument or Reagent System
2.687 ± 0.291	2.679 ± 0.280	1.088 ± 0.055	4.634 ± 0.796	1.027 ± 0.054	n = 317	[---] All Methods & Instruments
						<Instruments>
2.560 ± 0.149	2.546 ± 0.156	1.052 ± 0.056	4.187 ± 0.279	1.051 ± 0.066	n = 19	[BEB] Siemens BCS,BCSXP
3.094 ± 0.158	3.040 ± 0.123	1.056 ± 0.050	6.110 ± 0.344	1.004 ± 0.038	n = 30	[DGC] Diagnostica Stago STA Compact
3.019 ± 0.101	3.003 ± 0.106	1.083 ± 0.051	5.884 ± 0.248	1.015 ± 0.040	n = 16	[DGD] Diagnostica Stago STA-R, STA-R Ev
2.869 ± 0.222	2.851 ± 0.204	1.057 ± 0.084	5.421 ± 0.404	1.012 ± 0.063	n = 11	[ILA] IL ACL(All except810,ELITE,EPRO,8
2.849 ± 0.172	2.874 ± 0.167	1.090 ± 0.058	5.151 ± 0.666	0.994 ± 0.073	n = 12	[ILC] IL ACL Futura/Advance
2.792 ± 0.216	2.759 ± 0.169	1.080 ± 0.068	4.833 ± 0.278	1.022 ± 0.067	n = 27	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
2.778 ± 0.141	2.767 ± 0.130	1.117 ± 0.050	4.794 ± 0.257	1.021 ± 0.047	n = 92	[ILE] IL ACLTOP Series (ACLTOP,ACLTOP C
2.459 ± 0.137	2.432 ± 0.152	1.079 ± 0.042	3.997 ± 0.265	1.034 ± 0.042	n = 36	[SYW] Sysmex CA500/CA600 series
2.363 ± 0.143	2.372 ± 0.132	1.089 ± 0.035	3.852 ± 0.276	1.042 ± 0.046	n = 49	[SYX] Sysmex CA 1500
2.450 ± 0.144	2.473 ± 0.137	1.097 ± 0.040	4.060 ± 0.252	1.078 ± 0.042	n = 19	[SYY] Sysmex CA 7000
						<Reagents>
3.060 ± 0.139	3.023 ± 0.114	1.064 ± 0.052	6.027 ± 0.316	1.010 ± 0.038	n = 45	[TA3] STA Neoplastine CL+
2.433 ± 0.164	2.428 ± 0.160	1.081 ± 0.045	3.974 ± 0.312	1.046 ± 0.052	n = 125	[TD2] Siemens Innovin
2.826 ± 0.207	2.817 ± 0.201	1.038 ± 0.079	5.500 ± 0.557	0.995 ± 0.075	n = 20	[TJ2] HemosIL PT-Fibrinogen
2.785 ± 0.148	2.772 ± 0.133	1.113 ± 0.050	4.802 ± 0.255	1.022 ± 0.050	n = 120	[TJ8] HemosIL RecombiPlasTin 2G
						<Reagent & Instrument>
3.090 ± 0.162	3.038 ± 0.125	1.054 ± 0.050	6.119 ± 0.349	1.005 ± 0.038	n = 29	[TA3]&[DGC] STA Neoplastin & Diagnostic
3.030 ± 0.089	3.013 ± 0.095	1.088 ± 0.048	5.906 ± 0.210	1.019 ± 0.036	n = 14	[TA3]&[DGD] STA Neoplastin & Diagnostic
2.560 ± 0.149	2.546 ± 0.156	1.052 ± 0.056	4.187 ± 0.279	1.051 ± 0.066	n = 19	[TD2]&[BEB] Siemens Innovi & Siemens BC
2.458 ± 0.140	2.431 ± 0.155	1.078 ± 0.042	3.998 ± 0.270	1.033 ± 0.043	n = 35	[TD2]&[SYW] Siemens Innovi & Sysmex CA5
2.363 ± 0.143	2.372 ± 0.132	1.089 ± 0.035	3.852 ± 0.276	1.042 ± 0.046	n = 49	[TD2]&[SYX] Siemens Innovi & Sysmex CA
2.450 ± 0.144	2.473 ± 0.137	1.097 ± 0.040	4.060 ± 0.252	1.078 ± 0.042	n = 19	[TD2]&[SYY] Siemens Innovi & Sysmex CA
2.816 ± 0.126	2.782 ± 0.116	1.038 ± 0.081	5.338 ± 0.380	1.003 ± 0.062	n = 9	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All
2.886 ± 0.176	2.910 ± 0.142	1.082 ± 0.061	5.846 ± 0.376	0.953 ± 0.054	n = 5	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Fut
2.811 ± 0.331	2.827 ± 0.344	0.999 ± 0.071	5.454 ± 0.802	1.014 ± 0.090	n = 6	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELI
2.824 ± 0.167	2.840 ± 0.185	1.097 ± 0.053	4.736 ± 0.279	1.017 ± 0.066	n = 7	[TJ8]&[ILC] HemosIL Recomb & IL ACL Fut
2.791 ± 0.179	2.759 ± 0.129	1.098 ± 0.054	4.815 ± 0.243	1.025 ± 0.060	n = 21	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELI
2.780 ± 0.140	2.769 ± 0.127	1.118 ± 0.049	4.798 ± 0.253	1.021 ± 0.046	n = 91	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP

Summary of Participant Responses
Mean ± One Standard Deviation

Act Partial Thromboplastin Time (seconds)

Specimen: C06	Specimen: C07	Specimen: C08	Specimen: C09	Specimen: C10	Number	[Code] Instrument or Reagent System
53.97 ± 7.13	54.13 ± 6.99	32.36 ± 2.78	79.24 ± 10.97	29.19 ± 3.75	n = 310	[---] All Methods & Instruments
						<Instruments>
46.48 ± 0.88	46.66 ± 1.15	27.21 ± 0.85	66.75 ± 2.25	24.76 ± 0.68	n = 20	[BEB] Siemens BCS,BCSXP
53.34 ± 1.95	53.02 ± 1.98	35.12 ± 1.51	76.39 ± 2.67	30.47 ± 1.21	n = 29	[DGC] Diagnostica Stago STA Compact
49.26 ± 1.24	49.55 ± 1.32	34.04 ± 1.20	71.25 ± 1.58	29.18 ± 0.57	n = 16	[DGD] Diagnostica Stago STA-R, STA-R Ev
52.53 ± 6.95	52.10 ± 6.01	31.51 ± 1.35	74.24 ± 9.56	28.44 ± 2.03	n = 11	[ILA] IL ACL(All except810,ELITE,EPRO,8
62.62 ± 3.62	62.72 ± 1.92	33.75 ± 0.89	92.97 ± 5.25	32.15 ± 1.04	n = 11	[ILC] IL ACL Futura/Advance
58.45 ± 7.02	59.22 ± 7.06	31.54 ± 0.99	87.40 ± 12.71	30.09 ± 1.90	n = 26	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
60.43 ± 1.91	60.48 ± 1.82	34.28 ± 1.05	89.41 ± 3.04	32.93 ± 1.13	n = 93	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
47.40 ± 1.15	47.59 ± 1.11	29.27 ± 0.81	69.78 ± 2.53	24.83 ± 0.73	n = 34	[SYW] Sysmex CA500/CA600 series
49.19 ± 1.48	49.43 ± 1.39	30.60 ± 0.95	72.94 ± 2.42	26.09 ± 0.68	n = 49	[SYX] Sysmex CA 1500
48.85 ± 0.65	48.96 ± 1.03	30.44 ± 0.65	72.30 ± 1.64	25.96 ± 0.56	n = 17	[SYY] Sysmex CA 7000
						<Reagents>
51.60 ± 2.66	51.52 ± 2.37	34.56 ± 1.35	74.24 ± 3.53	29.87 ± 1.12	n = 39	[AA2] Diagnostica Stago STA PTT-Auto
54.73 ± 1.62	54.72 ± 1.73	36.52 ± 2.23	78.13 ± 1.38	31.33 ± 1.29	n = 6	[AA3] Diagnostica Stago PTT-LA
59.17 ± 8.27	59.77 ± 8.96	33.87 ± 3.74	90.71 ± 14.31	27.14 ± 2.24	n = 3	[AD2] Siemens Actin
78.68 ± 2.41	78.52 ± 2.45	28.76 ± 0.91	127.53 ± 9.73	25.11 ± 0.58	n = 4	[AD3] Siemens Actin FS
48.15 ± 1.66	48.39 ± 1.67	29.85 ± 1.60	71.07 ± 3.32	25.53 ± 0.99	n = 113	[AD4] Siemens Actin FSL
49.48 ± 1.65	49.88 ± 1.28	32.27 ± 1.37	71.57 ± 3.28	27.77 ± 1.24	n = 19	[AJ3] HemosIL Test APTT-SP
60.94 ± 2.31	61.02 ± 2.27	33.86 ± 1.55	90.31 ± 4.03	32.60 ± 1.37	n = 120	[AO4] HemosIL SynthASil
						<Reagent & Instrument>
53.05 ± 2.08	52.71 ± 1.97	34.99 ± 1.41	75.97 ± 2.87	30.35 ± 1.23	n = 24	[AA2]&[DGC] Diagnostica St & Diagnostic
49.26 ± 1.24	49.55 ± 1.32	33.92 ± 1.03	71.25 ± 1.57	29.18 ± 0.56	n = 14	[AA2]&[DGD] Diagnostica St & Diagnostic
54.33 ± 1.06	54.28 ± 1.29	35.89 ± 1.84	77.76 ± 0.92	31.01 ± 0.88	n = 5	[AA3]&[DGC] Diagnostica St & Diagnostic
79.60 ± 1.72	79.44 ± 2.18	29.10 ± 0.09	130.89 ± 9.65	25.33 ± 0.14	n = 3	[AD3]&[SYX] Siemens Actin & Sysmex CA
46.47 ± 0.88	46.66 ± 1.14	27.21 ± 0.85	66.74 ± 2.23	24.75 ± 0.68	n = 18	[AD4]&[BEB] Siemens Actin & Siemens BC
47.39 ± 1.18	47.58 ± 1.14	29.26 ± 0.82	69.74 ± 2.59	24.78 ± 0.69	n = 32	[AD4]&[SYW] Siemens Actin & Sysmex CA5
49.19 ± 1.48	49.43 ± 1.39	30.68 ± 0.85	72.93 ± 2.42	26.14 ± 0.65	n = 46	[AD4]&[SYX] Siemens Actin & Sysmex CA
48.85 ± 0.65	48.96 ± 1.03	30.44 ± 0.65	72.30 ± 1.64	25.96 ± 0.56	n = 17	[AD4]&[SYY] Siemens Actin & Sysmex CA
48.72 ± 1.85	48.87 ± 1.21	31.55 ± 1.29	69.64 ± 3.53	27.12 ± 1.05	n = 7	[AJ3]&[ILA] HemosIL Test A & IL ACL(All
49.73 ± 1.13	50.31 ± 0.74	32.19 ± 0.86	72.48 ± 1.65	28.25 ± 0.91	n = 9	[AJ3]&[ILD] HemosIL Test A & IL ACL(ELI
63.25 ± 0.72	61.41 ± 2.24	30.93 ± 0.59	90.39 ± 7.19	30.35 ± 0.54	n = 3	[AO4]&[ILA] HemosIL SynthA & IL ACL(All
63.17 ± 3.01	63.00 ± 1.73	33.66 ± 0.99	93.55 ± 4.39	32.17 ± 1.10	n = 9	[AO4]&[ILC] HemosIL SynthA & IL ACL Fut
62.52 ± 2.34	63.47 ± 2.14	31.20 ± 0.94	94.99 ± 4.88	31.14 ± 1.30	n = 17	[AO4]&[ILD] HemosIL SynthA & IL ACL(ELI
60.42 ± 1.93	60.45 ± 1.83	34.26 ± 1.05	89.38 ± 3.05	32.93 ± 1.13	n = 90	[AO4]&[ILE] HemosIL SynthA & IL ACL TOP

Summary of Participant Responses
Mean ± One Standard Deviation

Fibrinogen (mg/dL)

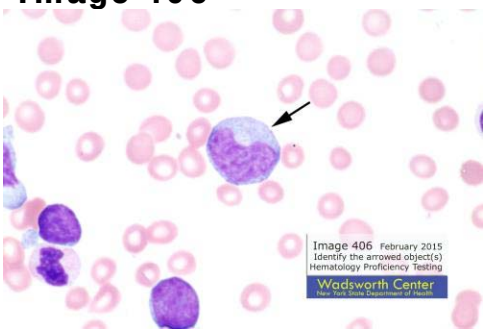
Specimen: C06	Specimen: C07	Specimen: C08	Specimen: C09	Specimen: C10	Number	[Code] Instrument or Reagent System
285.9 ± 28.04	284.1 ± 29.98	515.9 ± 79.61	279.9 ± 24.93	306.2 ± 29.33	n = 207	[---] All Methods & Instruments
						<Instruments>
319.2 ± 20.48	316.8 ± 21.48	529.3 ± 51.18	304.4 ± 18.85	319.4 ± 16.76	n = 20	[BEB] Siemens BCS,BCSXP
290.0 ± 23.69	290.4 ± 20.38	564.0 ± 39.92	289.5 ± 16.56	314.7 ± 18.00	n = 27	[DGC] Diagnostica Stago STA Compact
282.1 ± 8.17	276.3 ± 11.84	545.0 ± 23.62	276.6 ± 6.88	304.0 ± 14.62	n = 14	[DGD] Diagnostica Stago STA-R, STA-R Ev
420.1 ± 17.01	410.8 ± 10.49	537.9 ± 22.94	412.3 ± 12.17	336.7 ± 37.89	n = 3	[ILA] IL ACL(All except810,ELITE,EPRO,8
361.0 ± 17.95	356.5 ± 17.59	435.6 ± 41.34	380.8 ± 19.01	270.1 ± 27.62	n = 6	[ILC] IL ACL Futura/Advance
325.2 ± 51.85	329.2 ± 42.82	641.1 ±141.73	344.9 ± 61.39	350.5 ± 16.25	n = 8	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
290.0 ± 23.38	288.0 ± 24.85	544.7 ± 84.19	283.3 ± 21.55	316.0 ± 25.34	n = 74	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
273.4 ± 19.36	250.3 ± 13.53	475.9 ± 33.91	273.0 ± 12.91	292.7 ± 17.68	n = 4	[SYW] Sysmex CA500/CA600 series
259.4 ± 13.95	256.1 ± 15.58	432.1 ± 40.44	256.3 ± 14.78	272.2 ± 14.17	n = 34	[SYX] Sysmex CA 1500
272.9 ± 15.55	273.9 ± 15.09	461.7 ± 33.90	265.5 ± 18.19	291.1 ± 15.59	n = 14	[SYY] Sysmex CA 7000
						<Reagents>
392.5 ± 46.16	378.0 ± 43.04	512.3 ± 41.77	400.1 ± 27.41	340.1 ± 40.11	n = 8	[TJ2] HemosIL PT-Fibrinogen
306.0 ± 15.35	304.1 ± 15.75	484.0 ± 32.39	297.3 ± 16.78	327.2 ± 14.24	n = 40	[TJ8] HemosIL RecombiPlasTin 2G
286.3 ± 19.23	284.4 ± 19.17	555.7 ± 35.63	283.7 ± 15.64	310.9 ± 17.85	n = 41	[FA4] Stago STA-Fibrinogen 5
323.3 ± 18.90	320.4 ± 17.96	539.5 ± 44.96	308.4 ± 17.22	318.4 ± 17.94	n = 17	[FB2] Siemens Multifibren U
265.6 ± 17.56	261.7 ± 18.52	446.1 ± 42.68	261.0 ± 17.34	280.5 ± 19.83	n = 54	[FD2] Siemens Fibrinogen Determination
280.5 ± 17.17	278.9 ± 24.18	639.9 ± 84.24	277.5 ± 21.56	308.6 ± 28.41	n = 21	[FJ2] HemosIL Fibrinogen C,XL
276.9 ± 15.43	266.2 ± 14.09	462.1 ± 30.76	274.3 ± 13.07	299.9 ± 14.53	n = 3	[FM1] Kamiya K-Assay Fibrinogen
274.1 ± 24.79	269.7 ± 26.40	616.8 ± 64.64	270.1 ± 19.90	303.2 ± 32.40	n = 21	[FO3] HemosIL QFA(bovine)
						<Reagent & Instrument>
394.8 ± 36.48	382.2 ± 37.04	484.4 ± 60.45	418.1 ± 19.12	368.1 ± 27.17	n = 3	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELI
351.7 ± 19.52	349.0 ± 19.09	413.8 ± 26.51	389.0 ± 19.27	257.3 ± 15.80	n = 4	[TJ8]&[ILC] HemosIL Recomb & IL ACL Fut
304.6 ± 13.26	302.7 ± 13.38	489.1 ± 25.99	296.9 ± 15.76	327.5 ± 12.50	n = 36	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP
290.0 ± 23.69	290.4 ± 20.38	564.0 ± 39.92	289.5 ± 16.56	314.7 ± 18.00	n = 27	[FA4]&[DGC] Stago STA-Fibr & Diagnostic
282.1 ± 8.17	276.3 ± 11.84	545.0 ± 23.62	276.6 ± 6.88	304.0 ± 14.62	n = 14	[FA4]&[DGD] Stago STA-Fibr & Diagnostic
323.3 ± 18.90	320.4 ± 17.96	539.5 ± 44.96	308.4 ± 17.22	318.4 ± 17.94	n = 17	[FB2]&[BEB] Siemens Multif & Siemens BC
298.9 ± 10.05	289.6 ± 16.95	473.2 ± 31.52	286.2 ± 6.52	324.2 ± 9.60	n = 3	[FD2]&[BEB] Siemens Fibrin & Siemens BC
280.3 ± 18.37	245.6 ± 15.69	484.5 ± 37.55	272.5 ± 15.46	297.8 ± 18.20	n = 3	[FD2]&[SYW] Siemens Fibrin & Sysmex CA5
259.4 ± 13.95	256.1 ± 15.58	432.1 ± 40.44	256.3 ± 14.78	272.2 ± 14.17	n = 34	[FD2]&[SYX] Siemens Fibrin & Sysmex CA
272.9 ± 15.55	273.9 ± 15.09	461.7 ± 33.90	265.5 ± 18.19	291.1 ± 15.59	n = 14	[FD2]&[SYY] Siemens Fibrin & Sysmex CA
297.1 ± 5.56	307.0 ± 15.65	718.7 ± 56.59	306.4 ± 14.87	346.2 ± 10.40	n = 5	[FJ2]&[ILD] HemosIL Fibrin & IL ACL(ELI
274.6 ± 15.32	270.1 ± 17.68	614.4 ± 73.96	270.5 ± 15.16	297.1 ± 18.97	n = 16	[FJ2]&[ILE] HemosIL Fibrin & IL ACL TOP
274.1 ± 24.79	269.7 ± 26.40	616.8 ± 64.64	270.1 ± 19.90	303.2 ± 32.40	n = 21	[FO3]&[ILE] HemosIL QFA(bo & IL ACL TOP

NEW YORK STATE HEMATOLOGY PROFICIENCY TEST PROGRAM

February 2, 2015

Images on the Hematology and Clinical Chemistry web page: http://www.wadsworth.org/chemheme/cellPT were used to test all laboratories that perform manual white cell differentials. A summary of responses appear below, acceptable responses are shown in shaded areas.

Image 406



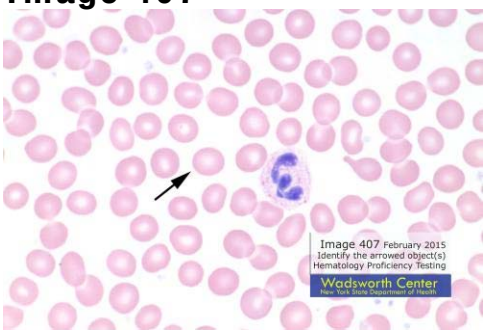
Number of Responses	Percent of Laboratories	Cell type or finding
222	62.5%	Monocyte
112	31.5%	Metamyelocyte
9	2.5%	Reactive / Atypical lymphocyte
4	1.1%	Promyelocyte
3	0.8%	Normal lymphocyte
2	0.6%	Plasma cell
1	0.3%	Blast cell, not classified
1	0.3%	Myelocyte

The arrowed white blood cell in Image 406 is large in comparison to the accompanying white blood cells in the image. The nucleus is indented, the nuclear chromatin is somewhat condensed and few fine, pink, azurophilic granules are present in the gray-blue cytoplasm; characteristics of a monocyte.

Thirty-one percent of participants identified the arrowed cell in Image 406 as a metamyelocyte. The indented shape of the nucleus and the clumped chromatin are characteristics of a metamyelocyte, however, the cytoplasm does not possess the attributes of a metamyelocyte, namely, pink to bluish-pink color with the presence of many, fine, specific granules and occasional coarse primary granules.

The preferred response for the arrowed cell in Image 406, given the cytoplasmic and nuclear characteristics of the cell, is monocyte as 222 participants reported. Due to lack of 80% consensus for both participant and referee laboratories, pass credit was issued.

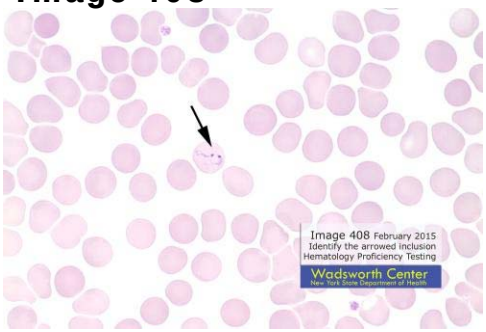
Image 407



Number of Responses	Percent of Laboratories	Cell type or finding
350	**98.6%**	**Erythrocyte - normal**
3	0.8%	Elliptocyte / Ovalocyte
1	0.3%	Erythrocyte - macrocytic

The arrowed cell in Image 407 is a normocytic, normochromic red blood cell as correctly identified by 98.6% of participants. The image was captured from the peripheral blood smear of a 59 year-old asymptomatic female.

Image 408

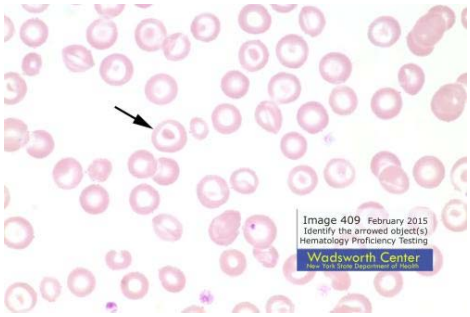


Number of Responses	Percent of Laboratories	Cell type or finding
349	**98.3%**	**Parasite**
4	1.1%	Cabot ring
1	0.3%	Schüffner's granule(s)

The arrowed red blood cell inclusion in Image 408 is a malarial parasite and was correctly identified as a parasite by 98.3% of participants. "These parasites are seen outside and/or within the red cells, primarily the latter, in the peripheral blood of patients suffering from malaria, which is caused by any of the following species of *Plasmodium*: *P vivax, P falciparum, P ovale, P malariae, and P knowlesi*. Infection occurs through a bite of the female *Anopheles* mosquito. Among the *Plasmodium* species, *P vivax* is the most widespread worldwide including temperate zones, *P falciparum* occurs primarily in the tropical countries, *P ovale* is prevalent mainly in the west coast of Africa, and *P knowlesi* has been reported in Malaysia and other southeast Asian countries."

Gulati, G. with Caro, J. Blood Cells Morphology & Clinical Relevance, 2nd Ed. American Society for Clinical Pathology Press 2014 p.102

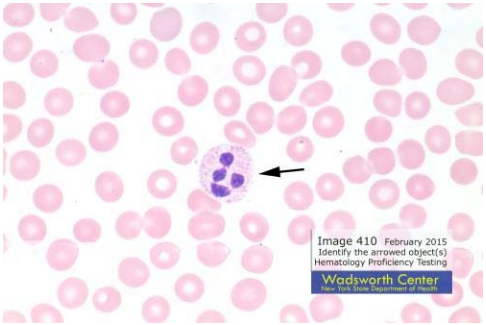
Image 409



Number of Responses	Percent of Laboratories	Cell type or finding
351	**98.9%**	**Target cell (codocyte)**
2	0.6%	Segmented neutrophil
1	0.3%	Stomatocyte

The arrowed red blood cell in Image 409 is a target cell (codocyte) as identified by 351 of the participants. Target cells have increased surface membrane caused by conditions that include excess lipid deposit (liver disease), loss of lipids during maturation (postsplenectomy) or decreased and/or abnormal hemoglobin content (hemoglobinopathy or thalassemia syndromes). During the preparation of a peripheral blood smear, the excess membrane folds on itself and forms a hemoglobin area within the central pallor giving rise to the "target" appearance. Depending upon the disease condition, target cells may be normocytic, microcytic or macrocytic. Normocytic target cells are common in different hemoglobinopathies (eg SS,CC,SC), lecithin-cholesterol acyl transferase (LCAT) deficiency and postsplenectomy. Microcytic target cells are associated with thalassemias and some hemoglobinopathies (eg hemoglobin Lepore) and macrocytic target cells are often observed with liver disease.

Image 410



Number of Responses	Percent of Laboratories	Cell type or finding
308	**86.8%**	**Segmented neutrophil**
40	11.3%	Segmented / band neutrophil with toxic granulation
3	0.8%	Hypersegmentation
2	0.6%	Target cell (codocyte)
1	0.3%	Neutrophil with Pelger-Huët nucleus

The arrowed white blood cell in Image 410 includes four distinct lobes and is best classified as a segmented neutrophil as the majority of participants reported. The image was captured from the peripheral blood smear of a 50 year-old asymptomatic female. The cytoplasmic granules are not toxic granules, toxic granules are larger, stain darker and can be compared to the primary azurophilic granules of a promyelocyte.