

Hematology Proficiency Test Program
Statistical Summary – February 2014 (Event 14-1)

This statistical report summarizes participant data for the Hematology proficiency survey shipped 3 February 2014.

Five test samples were distributed to participants for each test category:

Routine Blood Counts (B86, B87, B88, B89, B90)

Routine Coagulation (C86, C87, C88, C89, C90)

Cell Identification (386, 387, 388, 389, 390)

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 (x10⁹/L)

Specimen: B86	Specimen: B87	Specimen: B88	Specimen: B89	Specimen: B90	Number	[Code] Instrument
24.98 ± 1.21	2.12 ± 0.14	9.55 ± 0.48	3.09 ± 0.16	12.33 ± 0.52	n = 408	[---] All Methods & Instruments
<Instruments>						
24.36 ± 0.62	2.16 ± 0.10	9.43 ± 0.34	2.96 ± 0.10	11.97 ± 0.14	n = 3	[ABJ] Abbott Cell Dyn 1800
24.80 ± 0.40	2.10 ± 0.03	9.50 ± 0.12	3.10 ± 0.05	12.33 ± 0.14	n = 5	[ABK] Abbott Cell Dyn 3200
25.42 ± 0.89	2.15 ± 0.05	9.49 ± 0.24	3.15 ± 0.06	12.34 ± 0.42	n = 9	[ABM] Abbott Cell Dyn 3700
24.46 ± 0.24	2.02 ± 0.04	9.28 ± 0.12	3.06 ± 0.09	12.29 ± 0.19	n = 11	[ABS] Abbott Cell Dyn Sapphire
24.77 ± 0.41	2.08 ± 0.08	9.41 ± 0.25	3.13 ± 0.10	12.17 ± 0.25	n = 21	[ABT] Abbott Cell Dyn Ruby
23.03 ± 1.09	2.23 ± 0.09	9.13 ± 0.43	3.05 ± 0.12	11.64 ± 0.62	n = 4	[ABU] Abbott Cell Dyn Emerald
24.42 ± 1.05	1.98 ± 0.12	9.24 ± 0.39	2.90 ± 0.13	11.93 ± 0.60	n = 15	[BTD] Siemens Advia 120
24.08 ± 0.71	1.98 ± 0.10	9.03 ± 0.45	2.88 ± 0.12	12.04 ± 0.43	n = 32	[BTE] Siemens Advia 2120
25.38 ± 0.61	2.18 ± 0.08	9.79 ± 0.26	3.13 ± 0.10	12.44 ± 0.34	n = 47	[CUL] Coulter UniCel DxH 800
24.79 ± 1.17	2.02 ± 0.08	9.28 ± 0.32	2.94 ± 0.13	12.11 ± 0.52	n = 5	[CUS] Coulter ACT 5 diff
26.31 ± 0.63	2.46 ± 0.13	9.99 ± 0.27	3.32 ± 0.18	12.71 ± 0.37	n = 18	[CUT] Coulter ACT series,not ACT5 diff
26.73 ± 0.46	2.44 ± 0.09	9.85 ± 0.27	3.35 ± 0.17	12.76 ± 0.26	n = 10	[CUW] Coulter HMX
25.44 ± 0.85	2.20 ± 0.09	9.89 ± 0.20	3.17 ± 0.08	12.60 ± 0.26	n = 36	[CUX] Coulter LH750,755
25.40 ± 0.79	2.18 ± 0.11	9.85 ± 0.23	3.17 ± 0.09	12.51 ± 0.29	n = 22	[CUY] Coulter LH 780
27.34 ± 0.37	2.44 ± 0.09	10.11 ± 0.18	3.36 ± 0.11	12.98 ± 0.15	n = 15	[CUZ] Coulter LH500
24.13 ± 0.79	2.00 ± 0.00	9.15 ± 0.31	2.94 ± 0.06	12.06 ± 0.19	n = 5	[ROB] ABX Pentra series
24.83 ± 0.56	2.20 ± 0.06	9.44 ± 0.31	3.01 ± 0.06	12.03 ± 0.27	n = 6	[ROC] ABX Micro
23.54 ± 0.69	2.07 ± 0.07	9.07 ± 0.35	3.06 ± 0.14	11.72 ± 0.37	n = 29	[SYA] Sysmex XE 5000
23.82 ± 0.32	1.97 ± 0.05	8.90 ± 0.09	2.93 ± 0.05	11.87 ± 0.14	n = 3	[SYB] Sysmex KX-21N
23.68 ± 1.23	2.11 ± 0.07	9.14 ± 0.53	3.13 ± 0.14	12.06 ± 0.57	n = 6	[SYC] Sysmex XN-series
25.15 ± 0.63	2.08 ± 0.06	9.42 ± 0.21	3.04 ± 0.11	12.26 ± 0.35	n = 21	[SYI] Sysmex XT-1800i,XT-2000i
25.04 ± 0.61	2.10 ± 0.04	9.53 ± 0.54	3.13 ± 0.15	12.63 ± 0.51	n = 5	[SYL] Sysmex XE 2100C
24.38 ± 0.88	2.09 ± 0.07	9.39 ± 0.29	3.08 ± 0.06	12.10 ± 0.29	n = 3	[SYN] Sysmex XE 2100DC
23.65 ± 0.93	2.06 ± 0.10	9.09 ± 0.45	3.07 ± 0.10	11.83 ± 0.59	n = 20	[SYO] Sysmex XE2100
25.63 ± 0.67	2.10 ± 0.09	9.78 ± 0.30	3.10 ± 0.10	12.75 ± 0.34	n = 23	[SYP] Sysmex XS-1000i,XS-1000iAL
24.02 ± 1.27	2.10 ± 0.10	9.30 ± 0.72	3.06 ± 0.11	11.97 ± 1.02	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
25.25 ± 0.87	2.05 ± 0.07	9.47 ± 0.32	3.00 ± 0.10	12.35 ± 0.40	n = 17	[SYV] Sysmex XT 4000i

Summary of Participant Responses
 Mean ± One Standard Deviation

Red Cell Count	(x10 ¹² /L)					
Specimen: B86	Specimen: B87	Specimen: B88	Specimen: B89	Specimen: B90	Number	[Code] Instrument
5.049 ± 0.080	2.079 ± 0.046	4.712 ± 0.075	2.118 ± 0.049	5.679 ± 0.089	n = 409	[---] All Methods & Instruments
<Instruments>						
5.064 ± 0.136	2.133 ± 0.051	4.750 ± 0.072	2.195 ± 0.036	5.578 ± 0.041	n = 3	[ABJ] Abbott Cell Dyn 1800
5.052 ± 0.088	2.106 ± 0.025	4.744 ± 0.025	2.142 ± 0.030	5.705 ± 0.058	n = 5	[ABK] Abbott Cell Dyn 3200
5.066 ± 0.069	2.128 ± 0.019	4.710 ± 0.080	2.161 ± 0.032	5.711 ± 0.067	n = 8	[ABM] Abbott Cell Dyn 3700
5.194 ± 0.096	2.125 ± 0.027	4.819 ± 0.084	2.162 ± 0.028	5.879 ± 0.128	n = 11	[ABS] Abbott Cell Dyn Sapphire
5.203 ± 0.102	2.093 ± 0.035	4.816 ± 0.071	2.154 ± 0.044	5.871 ± 0.123	n = 21	[ABT] Abbott Cell Dyn Ruby
4.780 ± 0.153	1.997 ± 0.047	4.477 ± 0.054	2.035 ± 0.062	5.462 ± 0.114	n = 4	[ABU] Abbott Cell Dyn Emerald
5.049 ± 0.089	2.109 ± 0.029	4.707 ± 0.059	2.160 ± 0.038	5.638 ± 0.067	n = 15	[BTD] Siemens Advia 120
5.057 ± 0.085	2.136 ± 0.037	4.713 ± 0.102	2.179 ± 0.038	5.682 ± 0.128	n = 33	[BTE] Siemens Advia 2120
5.004 ± 0.075	2.040 ± 0.029	4.663 ± 0.063	2.087 ± 0.032	5.653 ± 0.069	n = 47	[CUL] Coulter UniCel DxH 800
5.073 ± 0.063	2.085 ± 0.018	4.712 ± 0.079	2.130 ± 0.008	5.713 ± 0.088	n = 5	[CUS] Coulter ACT 5 diff
5.068 ± 0.083	2.063 ± 0.039	4.665 ± 0.104	2.116 ± 0.050	5.650 ± 0.114	n = 18	[CUT] Coulter ACT series,not ACT5 diff
5.110 ± 0.021	2.080 ± 0.046	4.712 ± 0.028	2.111 ± 0.048	5.693 ± 0.046	n = 10	[CUW] Coulter HMX
5.066 ± 0.031	2.055 ± 0.020	4.700 ± 0.042	2.087 ± 0.020	5.678 ± 0.041	n = 36	[CUX] Coulter LH750,755
5.054 ± 0.049	2.055 ± 0.020	4.696 ± 0.040	2.087 ± 0.022	5.676 ± 0.047	n = 22	[CUY] Coulter LH 780
5.082 ± 0.065	2.083 ± 0.036	4.694 ± 0.074	2.113 ± 0.040	5.673 ± 0.079	n = 15	[CUZ] Coulter LH500
5.084 ± 0.041	2.045 ± 0.023	4.714 ± 0.049	2.061 ± 0.045	5.695 ± 0.065	n = 5	[ROB] ABX Pentra series
5.076 ± 0.115	2.026 ± 0.032	4.692 ± 0.117	2.057 ± 0.059	5.675 ± 0.107	n = 6	[ROC] ABX Micro
5.023 ± 0.063	2.103 ± 0.024	4.740 ± 0.053	2.140 ± 0.025	5.663 ± 0.076	n = 29	[SYA] Sysmex XE 5000
4.930 ± 0.045	2.067 ± 0.005	4.617 ± 0.041	2.098 ± 0.015	5.597 ± 0.051	n = 3	[SYB] Sysmex KX-21N
5.072 ± 0.053	2.030 ± 0.029	4.735 ± 0.050	2.061 ± 0.022	5.757 ± 0.050	n = 6	[SYC] Sysmex XN-series
5.028 ± 0.050	2.072 ± 0.027	4.715 ± 0.044	2.105 ± 0.024	5.657 ± 0.069	n = 21	[SYI] Sysmex XT-1800i,XT-2000i
5.075 ± 0.042	2.115 ± 0.023	4.785 ± 0.044	2.134 ± 0.011	5.717 ± 0.039	n = 5	[SYL] Sysmex XE 2100C
5.033 ± 0.014	2.103 ± 0.014	4.733 ± 0.034	2.140 ± 0.009	5.707 ± 0.067	n = 3	[SYN] Sysmex XE 2100DC
5.015 ± 0.060	2.107 ± 0.021	4.730 ± 0.044	2.150 ± 0.025	5.653 ± 0.060	n = 20	[SYO] Sysmex XE2100
5.009 ± 0.055	2.029 ± 0.031	4.670 ± 0.050	2.060 ± 0.033	5.678 ± 0.062	n = 24	[SYP] Sysmex XS-1000i,XS-1000iAL
5.041 ± 0.030	2.110 ± 0.027	4.723 ± 0.036	2.155 ± 0.033	5.674 ± 0.029	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
5.045 ± 0.068	2.087 ± 0.018	4.734 ± 0.058	2.115 ± 0.023	5.710 ± 0.095	n = 17	[SYV] Sysmex XT 4000i

Summary of Participant Responses
Mean ± One Standard Deviation

Hemoglobin (g/dL)

Specimen: B86	Specimen: B87	Specimen: B88	Specimen: B89	Specimen: B90	Number	[Code] Instrument
14.61 ± 0.36	6.10 ± 0.15	13.66 ± 0.22	5.30 ± 0.14	14.18 ± 0.26	n = 419	[---] All Methods & Instruments
<Instruments>						
14.88 ± 0.15	6.13 ± 0.05	13.95 ± 0.19	5.37 ± 0.14	14.44 ± 0.10	n = 3	[ABJ] Abbott Cell Dyn 1800
15.36 ± 0.21	6.31 ± 0.10	14.08 ± 0.08	5.47 ± 0.07	14.55 ± 0.16	n = 5	[ABK] Abbott Cell Dyn 3200
15.09 ± 0.14	6.40 ± 0.07	13.94 ± 0.18	5.54 ± 0.10	14.60 ± 0.17	n = 9	[ABM] Abbott Cell Dyn 3700
15.32 ± 0.16	6.40 ± 0.09	14.10 ± 0.21	5.61 ± 0.12	14.63 ± 0.24	n = 11	[ABS] Abbott Cell Dyn Sapphire
15.12 ± 0.21	6.19 ± 0.11	13.87 ± 0.19	5.37 ± 0.11	14.45 ± 0.25	n = 21	[ABT] Abbott Cell Dyn Ruby
14.98 ± 0.53	6.13 ± 0.09	13.99 ± 0.27	5.30 ± 0.08	14.81 ± 0.34	n = 4	[ABU] Abbott Cell Dyn Emerald
14.94 ± 0.26	6.26 ± 0.08	13.79 ± 0.25	5.46 ± 0.06	14.25 ± 0.20	n = 15	[BTD] Siemens Advia 120
14.84 ± 0.24	6.30 ± 0.11	13.75 ± 0.21	5.50 ± 0.11	14.25 ± 0.23	n = 33	[BTE] Siemens Advia 2120
14.25 ± 0.27	6.06 ± 0.09	13.57 ± 0.19	5.26 ± 0.07	13.92 ± 0.19	n = 47	[CUL] Coulter UniCel DxH 800
14.68 ± 0.08	6.10 ± 0.00	13.66 ± 0.11	5.34 ± 0.06	14.20 ± 0.15	n = 5	[CUS] Coulter ACT 5 diff
14.54 ± 0.17	6.07 ± 0.11	13.58 ± 0.26	5.27 ± 0.13	14.06 ± 0.19	n = 18	[CUT] Coulter ACT series,not ACT5 diff
14.79 ± 0.15	6.13 ± 0.13	13.62 ± 0.13	5.28 ± 0.06	14.21 ± 0.14	n = 10	[CUW] Coulter HMX
14.56 ± 0.15	6.11 ± 0.08	13.62 ± 0.13	5.32 ± 0.09	14.14 ± 0.12	n = 36	[CUX] Coulter LH750,755
14.53 ± 0.16	6.12 ± 0.08	13.60 ± 0.13	5.34 ± 0.07	14.11 ± 0.13	n = 22	[CUY] Coulter LH 780
14.82 ± 0.28	6.14 ± 0.15	13.62 ± 0.18	5.36 ± 0.12	14.31 ± 0.25	n = 15	[CUZ] Coulter LH500
17.12 ± 0.24	< 10.50	15.70 ± 0.27	< 10.50	16.70 ± 0.18	n = 3	[HQB] HemoCue Donor Hb Checker
14.31 ± 0.46	6.21 ± 0.13	13.34 ± 0.67	5.35 ± 0.11	14.18 ± 0.29	n = 5	[HQC] HemoCue Hb201+/B-Hb
14.99 ± 0.18	6.04 ± 0.06	13.90 ± 0.09	5.22 ± 0.08	14.55 ± 0.08	n = 5	[ROB] ABX Pentra series
14.68 ± 0.26	6.10 ± 0.09	13.63 ± 0.24	5.36 ± 0.12	14.27 ± 0.12	n = 6	[ROC] ABX Micro
14.36 ± 0.17	6.04 ± 0.09	13.57 ± 0.16	5.24 ± 0.10	14.07 ± 0.16	n = 29	[SYA] Sysmex XE 5000
14.50 ± 0.09	6.10 ± 0.09	13.70 ± 0.09	5.27 ± 0.05	14.20 ± 0.18	n = 3	[SYB] Sysmex KX-21N
14.51 ± 0.23	5.93 ± 0.12	13.56 ± 0.19	5.12 ± 0.07	14.15 ± 0.19	n = 6	[SYC] Sysmex XN-series
14.37 ± 0.22	5.96 ± 0.08	13.56 ± 0.16	5.19 ± 0.07	14.00 ± 0.20	n = 21	[SYI] Sysmex XT-1800i,XT-2000i
14.70 ± 0.00	6.03 ± 0.05	13.70 ± 0.06	5.25 ± 0.06	14.30 ± 0.00	n = 6	[SYL] Sysmex XE 2100C
14.53 ± 0.05	6.03 ± 0.05	13.70 ± 0.00	5.23 ± 0.05	14.30 ± 0.00	n = 3	[SYN] Sysmex XE 2100DC
14.39 ± 0.13	6.04 ± 0.08	13.56 ± 0.13	5.26 ± 0.06	14.11 ± 0.14	n = 20	[SYO] Sysmex XE2100
14.59 ± 0.19	5.97 ± 0.07	13.67 ± 0.12	5.18 ± 0.07	14.28 ± 0.14	n = 24	[SYP] Sysmex XS-1000i,XS-1000iAL
14.52 ± 0.14	6.02 ± 0.07	13.65 ± 0.14	5.25 ± 0.10	14.17 ± 0.16	n = 6	[SYQ] Sysmex XE 2100D(Blood Center)
14.34 ± 0.16	5.99 ± 0.08	13.56 ± 0.17	5.20 ± 0.00	14.02 ± 0.18	n = 17	[SYV] Sysmex XT 4000i

Summary of Participant Responses
 Mean ± One Standard Deviation

Hematocrit (%)

Specimen: B86	Specimen: B87	Specimen: B88	Specimen: B89	Specimen: B90	Number	[Code] Instrument
41.30 ± 1.96	18.10 ± 1.10	39.09 ± 1.78	15.80 ± 0.88	40.92 ± 1.85	n = 414	[---] All Methods & Instruments
<Instruments>						
43.01 ± 1.56	18.96 ± 1.02	40.76 ± 0.82	16.43 ± 0.05	41.68 ± 0.87	n = 3	[ABJ] Abbott Cell Dyn 1800
37.27 ± 1.47	16.05 ± 0.12	35.45 ± 0.78	14.60 ± 0.40	37.90 ± 0.18	n = 5	[ABK] Abbott Cell Dyn 3200
44.20 ± 1.11	19.40 ± 0.42	41.80 ± 1.37	16.95 ± 0.40	44.10 ± 0.95	n = 9	[ABM] Abbott Cell Dyn 3700
39.75 ± 0.82	17.05 ± 0.33	37.42 ± 0.75	15.01 ± 0.31	39.71 ± 0.94	n = 11	[ABS] Abbott Cell Dyn Sapphire
37.63 ± 0.82	15.78 ± 0.37	35.36 ± 0.85	14.44 ± 0.37	38.56 ± 1.00	n = 21	[ABT] Abbott Cell Dyn Ruby
42.79 ± 1.52	18.80 ± 0.35	40.34 ± 0.89	16.46 ± 0.68	42.51 ± 1.04	n = 4	[ABU] Abbott Cell Dyn Emerald
37.52 ± 1.28	16.18 ± 0.46	35.43 ± 0.90	14.13 ± 0.37	36.46 ± 0.78	n = 15	[BTD] Siemens Advia 120
37.52 ± 0.76	16.28 ± 0.30	35.47 ± 0.77	14.20 ± 0.25	36.68 ± 0.83	n = 33	[BTE] Siemens Advia 2120
42.60 ± 0.62	18.33 ± 0.27	40.24 ± 0.53	16.09 ± 0.25	42.21 ± 0.52	n = 47	[CUL] Coulter UniCel DxH 800
40.60 ± 0.74	16.89 ± 0.24	37.93 ± 0.79	14.77 ± 0.27	40.39 ± 0.78	n = 5	[CUS] Coulter ACT 5 diff
42.39 ± 0.81	18.14 ± 0.53	39.56 ± 1.00	15.98 ± 0.45	41.70 ± 0.88	n = 18	[CUT] Coulter ACT series,not ACT5 diff
42.92 ± 0.68	18.34 ± 0.35	40.06 ± 0.57	15.96 ± 0.36	41.87 ± 0.69	n = 10	[CUW] Coulter HMX
42.69 ± 0.39	18.05 ± 0.23	40.11 ± 0.49	15.75 ± 0.18	42.17 ± 0.45	n = 36	[CUX] Coulter LH750,755
42.58 ± 0.50	18.00 ± 0.24	39.99 ± 0.47	15.70 ± 0.19	42.08 ± 0.43	n = 22	[CUY] Coulter LH 780
42.34 ± 0.94	18.17 ± 0.42	39.66 ± 0.69	15.85 ± 0.45	41.68 ± 0.91	n = 15	[CUZ] Coulter LH500
38.63 ± 0.55	16.37 ± 0.55	36.77 ± 1.55	15.37 ± 0.55	39.00 ± 0.64	n = 5	[MHC] Microhematocrit
40.91 ± 0.68	17.40 ± 0.26	38.48 ± 0.62	15.10 ± 0.15	40.49 ± 0.59	n = 5	[ROB] ABX Pentra series
42.43 ± 0.99	17.78 ± 0.28	39.71 ± 1.06	15.46 ± 0.51	42.13 ± 0.79	n = 6	[ROC] ABX Micro
41.49 ± 0.64	18.96 ± 0.31	39.74 ± 0.51	16.49 ± 0.36	41.24 ± 0.66	n = 29	[SYA] Sysmex XE 5000
38.29 ± 0.37	17.48 ± 0.24	36.68 ± 0.50	15.30 ± 0.18	39.05 ± 0.27	n = 3	[SYB] Sysmex KX-21N
41.34 ± 0.25	17.75 ± 0.26	39.02 ± 0.33	15.39 ± 0.14	41.48 ± 0.44	n = 6	[SYC] Sysmex XN-series
40.99 ± 0.50	19.12 ± 0.27	39.05 ± 0.37	16.55 ± 0.27	40.31 ± 0.58	n = 21	[SYI] Sysmex XT-1800i,XT-2000i
39.94 ± 0.64	17.60 ± 0.00	37.36 ± 0.32	15.14 ± 0.14	38.84 ± 0.49	n = 5	[SYL] Sysmex XE 2100C
39.40 ± 1.18	17.70 ± 0.72	37.38 ± 1.15	15.14 ± 0.62	39.02 ± 1.77	n = 3	[SYN] Sysmex XE 2100DC
41.59 ± 0.54	19.03 ± 0.21	39.72 ± 0.39	16.60 ± 0.27	41.26 ± 0.46	n = 20	[SYO] Sysmex XE2100
40.85 ± 0.60	18.83 ± 0.30	38.77 ± 0.47	16.11 ± 0.28	40.30 ± 0.62	n = 24	[SYP] Sysmex XS-1000i,XS-1000iAL
41.39 ± 0.51	18.86 ± 0.31	39.33 ± 0.54	16.54 ± 0.32	41.18 ± 0.57	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
41.04 ± 0.64	19.26 ± 0.36	39.19 ± 0.60	16.68 ± 0.34	40.49 ± 0.64	n = 17	[SYV] Sysmex XT 4000i

Summary of Participant Responses
 Mean ± One Standard Deviation

Platelet Count (x10⁹/L)

Specimen: B86	Specimen: B87	Specimen: B88	Specimen: B89	Specimen: B90	Number	[Code] Instrument
474.0 ± 32.00	147.7 ± 11.38	232.2 ± 15.28	44.9 ± 4.53	139.0 ± 12.15	n = 409	[---] All Methods & Instruments
<Instruments>						
534.6 ± 33.02	152.6 ± 7.94	248.9 ± 2.86	45.7 ± 1.37	159.2 ± 11.26	n = 3	[ABJ] Abbott Cell Dyn 1800
525.1 ± 21.52	170.0 ± 3.37	251.7 ± 14.82	50.8 ± 4.72	165.3 ± 15.29	n = 5	[ABK] Abbott Cell Dyn 3200
498.0 ± 24.69	159.2 ± 6.53	245.8 ± 7.12	45.8 ± 2.23	149.0 ± 5.31	n = 9	[ABM] Abbott Cell Dyn 3700
469.3 ± 18.24	153.6 ± 5.32	238.0 ± 13.95	47.2 ± 3.84	143.4 ± 6.28	n = 11	[ABS] Abbott Cell Dyn Sapphire
504.1 ± 17.93	157.6 ± 8.33	246.2 ± 13.05	51.4 ± 3.48	159.3 ± 9.49	n = 21	[ABT] Abbott Cell Dyn Ruby
516.4 ± 24.95	182.1 ± 14.74	260.5 ± 7.04	51.6 ± 8.95	165.3 ± 5.55	n = 5	[ABU] Abbott Cell Dyn Emerald
507.1 ± 19.04	158.9 ± 7.47	242.1 ± 8.36	46.7 ± 2.19	141.4 ± 6.94	n = 15	[BTD] Siemens Advia 120
511.7 ± 25.09	161.8 ± 8.15	245.1 ± 13.34	48.4 ± 3.85	142.3 ± 8.04	n = 32	[BTE] Siemens Advia 2120
458.4 ± 13.17	140.9 ± 3.65	225.5 ± 5.54	42.5 ± 1.44	131.8 ± 3.11	n = 47	[CUL] Coulter UniCel DxH 800
487.5 ± 9.74	162.9 ± 9.38	244.2 ± 9.41	51.1 ± 4.35	155.0 ± 5.27	n = 5	[CUS] Coulter ACT 5 diff
464.2 ± 16.28	140.6 ± 6.43	224.0 ± 9.49	44.2 ± 3.48	137.8 ± 8.10	n = 18	[CUT] Coulter ACT series,not ACT5 diff
456.9 ± 11.65	141.2 ± 6.93	223.2 ± 7.98	43.1 ± 2.15	134.1 ± 5.49	n = 10	[CUW] Coulter HMX
467.7 ± 16.34	146.6 ± 4.22	230.1 ± 7.09	46.4 ± 1.86	140.4 ± 4.40	n = 36	[CUX] Coulter LH750,755
468.3 ± 13.43	146.9 ± 4.96	231.4 ± 6.32	46.6 ± 1.88	142.5 ± 3.62	n = 22	[CUY] Coulter LH 780
467.1 ± 22.70	141.5 ± 6.37	224.3 ± 7.65	42.8 ± 2.99	135.6 ± 6.08	n = 15	[CUZ] Coulter LH500
495.8 ± 4.56	154.0 ± 5.90	244.2 ± 4.89	43.9 ± 5.61	149.9 ± 6.78	n = 5	[ROB] ABX Pentra series
478.5 ± 14.74	164.2 ± 5.85	242.3 ± 14.30	48.7 ± 4.65	147.6 ± 7.47	n = 6	[ROC] ABX Micro
412.8 ± 14.08	131.7 ± 5.43	207.6 ± 7.89	39.3 ± 2.97	117.2 ± 5.84	n = 29	[SYA] Sysmex XE 5000
504.0 ± 7.21	142.3 ± 5.86	238.7 ± 10.44	41.3 ± 0.51	151.6 ± 7.94	n = 3	[SYB] Sysmex KX-21N
470.3 ± 11.97	131.2 ± 4.19	227.2 ± 6.43	39.2 ± 2.75	136.7 ± 5.97	n = 6	[SYC] Sysmex XN-series
490.0 ± 10.93	150.8 ± 4.99	242.0 ± 9.22	47.5 ± 3.28	143.7 ± 3.22	n = 21	[SYI] Sysmex XT-1800i,XT-2000i
462.2 ± 18.21	142.1 ± 6.32	222.2 ± 10.25	41.3 ± 1.48	141.6 ± 19.36	n = 6	[SYL] Sysmex XE 2100C
454.1 ± 14.19	143.1 ± 5.72	219.6 ± 9.68	46.2 ± 4.11	123.1 ± 5.63	n = 3	[SYN] Sysmex XE 2100DC
420.2 ± 18.61	134.7 ± 5.60	209.9 ± 10.58	38.9 ± 1.72	119.4 ± 5.91	n = 19	[SYO] Sysmex XE2100
472.5 ± 11.96	148.2 ± 4.46	229.0 ± 5.58	42.7 ± 2.85	135.9 ± 4.95	n = 24	[SYP] Sysmex XS-1000i,XS-1000iAL
495.5 ± 8.27	161.7 ± 2.38	246.3 ± 4.94	47.4 ± 1.45	139.8 ± 3.98	n = 7	[SYQ] Sysmex XE 2100D(Blood Center)
487.1 ± 11.33	150.2 ± 4.05	241.0 ± 9.27	46.0 ± 2.78	145.7 ± 4.72	n = 17	[SYV] Sysmex XT 4000i

Summary of Participant Responses

Mean ± One Standard Deviation

Prothrombin Time (seconds)

Specimen: C86	Specimen: C87	Specimen: C88	Specimen: C89	Specimen: C90	Number	[Code] Instrument or Reagent
11.01 ± 0.48	28.94 ± 3.35	48.51 ± 6.84	48.58 ± 7.06	12.04 ± 0.87	n = 314	[---] All Methods & Instruments
<Instruments>						
10.88 ± 0.20	26.90 ± 0.80	43.80 ± 1.58	44.03 ± 1.67	11.15 ± 0.22	n = 19	[BEB] Siemens BCS,BCSXP
12.56 ± 0.32	31.39 ± 1.04	53.28 ± 2.02	53.11 ± 2.00	13.71 ± 0.33	n = 28	[DGC] Diagnostica Stago STA Compact
12.75 ± 0.43	31.77 ± 1.23	52.91 ± 1.84	53.04 ± 2.62	14.02 ± 0.35	n = 16	[DGD] Diagnostica Stago STA-R, STA-R Ev
11.25 ± 0.20	19.87 ± 0.55	28.97 ± 1.06	28.91 ± 1.04	11.59 ± 0.13	n = 12	[ILA] IL ACL(All models except 810,ELIT
11.02 ± 0.50	29.78 ± 6.91	49.50 ± 15.32	48.89 ± 13.76	12.38 ± 0.78	n = 16	[ILC] IL ACL Futura/Advance
10.98 ± 0.30	28.78 ± 4.34	47.94 ± 9.17	47.97 ± 9.20	12.36 ± 0.38	n = 33	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
11.05 ± 0.33	31.10 ± 1.52	53.44 ± 3.26	53.80 ± 3.44	12.28 ± 0.39	n = 76	[ILE] IL ACL TOP Series(ACLTOP,ACLTOP C
10.65 ± 0.24	26.77 ± 1.29	44.21 ± 2.01	44.31 ± 2.58	11.34 ± 0.31	n = 39	[SYW] Sysmex CA500/CA600 series
10.87 ± 0.18	27.24 ± 1.02	44.81 ± 2.37	44.80 ± 2.55	11.57 ± 0.25	n = 50	[SYX] Sysmex CA 1500
11.11 ± 0.21	27.13 ± 0.73	44.20 ± 1.65	44.46 ± 1.78	11.76 ± 0.26	n = 18	[SYY] Sysmex CA 7000
<Reagents>						
12.64 ± 0.36	31.58 ± 1.09	53.24 ± 1.89	53.22 ± 2.05	13.81 ± 0.36	n = 43	[TA3] STA Neoplastine CL+
10.84 ± 0.25	27.03 ± 1.06	44.41 ± 2.08	44.46 ± 2.33	11.46 ± 0.34	n = 128	[TD2] Siemens Innovin
11.00 ± 0.40	20.05 ± 0.65	29.16 ± 1.21	29.12 ± 1.20	11.59 ± 0.33	n = 24	[TJ2] HemosIL PT-Fibrinogen
11.06 ± 0.34	31.05 ± 1.60	53.14 ± 3.49	53.36 ± 3.58	12.38 ± 0.40	n = 111	[TJ8] HemosIL RecombiPlasTin 2G
<Reagent & Instrument>						
12.56 ± 0.32	31.39 ± 1.04	53.28 ± 2.02	53.11 ± 2.00	13.71 ± 0.33	n = 28	[TA3]&[DGC] STA Neoplastin & Diagnostic
12.80 ± 0.38	31.92 ± 1.06	53.14 ± 1.55	53.32 ± 2.28	14.06 ± 0.29	n = 14	[TA3]&[DGD] STA Neoplastin & Diagnostic
10.88 ± 0.20	26.90 ± 0.80	43.80 ± 1.58	44.03 ± 1.67	11.15 ± 0.22	n = 19	[TD2]&[BEB] Siemens Innovi & Siemens BC
10.65 ± 0.24	26.77 ± 1.29	44.21 ± 2.01	44.31 ± 2.58	11.34 ± 0.31	n = 39	[TD2]&[SYW] Siemens Innovi & Sysmex CA5
10.87 ± 0.18	27.24 ± 1.02	44.81 ± 2.37	44.80 ± 2.55	11.57 ± 0.25	n = 50	[TD2]&[SYX] Siemens Innovi & Sysmex CA1
11.11 ± 0.21	27.13 ± 0.73	44.20 ± 1.65	44.46 ± 1.78	11.76 ± 0.26	n = 18	[TD2]&[SYY] Siemens Innovi & Sysmex CA7
11.25 ± 0.19	19.87 ± 0.55	28.97 ± 1.06	28.91 ± 1.04	11.59 ± 0.13	n = 11	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All
10.34 ± 0.18	19.96 ± 0.77	28.82 ± 1.99	29.51 ± 1.95	11.26 ± 0.21	n = 5	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Fut
10.95 ± 0.22	20.38 ± 0.55	29.52 ± 0.82	29.17 ± 0.60	11.86 ± 0.43	n = 8	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELI
11.27 ± 0.25	33.33 ± 2.20	57.19 ± 3.97	56.38 ± 4.40	12.78 ± 0.28	n = 10	[TJ8]&[ILC] HemosIL Recomb & IL ACL Fut
10.98 ± 0.33	30.37 ± 1.26	51.11 ± 2.18	51.32 ± 2.29	12.46 ± 0.29	n = 25	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELI
11.05 ± 0.34	31.10 ± 1.53	53.49 ± 3.27	53.83 ± 3.47	12.28 ± 0.39	n = 75	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP

Summary of Participant Responses

Mean ± One Standard Deviation

INR (International Normalized Ratio)

Specimen: C86	Specimen: C87	Specimen: C88	Specimen: C89	Specimen: C90	Number	[Code] Instrument or Reagent
1.000 ± 0.049	2.720 ± 0.257	4.660 ± 0.765	4.684 ± 0.765	1.093 ± 0.054	n = 317	[---] All Methods & Instruments
<Instruments>						
1.015 ± 0.042	2.675 ± 0.105	4.265 ± 0.159	4.288 ± 0.174	1.059 ± 0.053	n = 18	[BEB] Siemens BCS,BCSXP
0.960 ± 0.049	3.144 ± 0.155	6.237 ± 0.301	6.202 ± 0.346	1.075 ± 0.043	n = 28	[DGC] Diagnostica Stago STA Compact
0.979 ± 0.044	3.124 ± 0.226	6.020 ± 0.437	6.043 ± 0.486	1.107 ± 0.020	n = 16	[DGD] Diagnostica Stago STA-R, STA-R Ev
0.940 ± 0.066	2.810 ± 0.228	5.861 ± 0.624	5.790 ± 0.594	1.020 ± 0.070	n = 12	[ILA] IL ACL(All models except 810,ELIT
0.980 ± 0.074	2.860 ± 0.127	5.055 ± 0.491	5.051 ± 0.604	1.117 ± 0.077	n = 16	[ILC] IL ACL Futura/Advance
0.983 ± 0.078	2.804 ± 0.165	4.915 ± 0.532	4.910 ± 0.509	1.126 ± 0.064	n = 33	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
0.999 ± 0.028	2.782 ± 0.149	4.765 ± 0.267	4.801 ± 0.274	1.105 ± 0.053	n = 77	[ILE] IL ACL TOP Series (ACLTOP,ACLTOPC
1.024 ± 0.051	2.534 ± 0.142	4.136 ± 0.263	4.143 ± 0.272	1.100 ± 0.045	n = 41	[SYW] Sysmex CA500/CA600 series
1.018 ± 0.038	2.524 ± 0.130	4.094 ± 0.215	4.100 ± 0.237	1.093 ± 0.029	n = 51	[SYX] Sysmex CA 1500
1.031 ± 0.050	2.543 ± 0.096	4.181 ± 0.186	4.192 ± 0.171	1.100 ± 0.000	n = 18	[SYY] Sysmex CA 7000
<Reagents>						
0.965 ± 0.049	3.149 ± 0.158	6.186 ± 0.303	6.173 ± 0.345	1.085 ± 0.043	n = 43	[TA3] STA Neoplastine CL+
1.020 ± 0.045	2.549 ± 0.133	4.141 ± 0.230	4.153 ± 0.244	1.088 ± 0.041	n = 129	[TD2] Siemens Innovin
0.902 ± 0.081	2.845 ± 0.230	5.827 ± 0.568	5.805 ± 0.504	1.017 ± 0.093	n = 24	[TJ2] HemosIL PT-Fibrinogen
1.000 ± 0.026	2.794 ± 0.151	4.777 ± 0.291	4.794 ± 0.286	1.116 ± 0.053	n = 112	[TJ8] HemosIL RecombiPlasTin 2G
<Reagent & Instrument>						
0.960 ± 0.049	3.144 ± 0.155	6.237 ± 0.301	6.202 ± 0.346	1.075 ± 0.043	n = 28	[TA3]&[DGC] STA Neoplastin & Diagnostic
0.976 ± 0.048	3.173 ± 0.156	6.101 ± 0.311	6.139 ± 0.360	1.108 ± 0.021	n = 14	[TA3]&[DGD] STA Neoplastin & Diagnostic
1.015 ± 0.042	2.675 ± 0.105	4.265 ± 0.159	4.288 ± 0.174	1.059 ± 0.053	n = 18	[TD2]&[BEB] Siemens Innovi & Siemens BC
1.021 ± 0.049	2.528 ± 0.135	4.124 ± 0.255	4.133 ± 0.268	1.098 ± 0.043	n = 40	[TD2]&[SYW] Siemens Innovi & Sysmex CA5
1.018 ± 0.038	2.524 ± 0.130	4.094 ± 0.215	4.100 ± 0.237	1.093 ± 0.029	n = 51	[TD2]&[SYX] Siemens Innovi & Sysmex CA1
1.031 ± 0.050	2.543 ± 0.096	4.181 ± 0.186	4.192 ± 0.171	1.100 ± 0.000	n = 18	[TD2]&[SYY] Siemens Innovi & Sysmex CA7
0.934 ± 0.054	2.807 ± 0.243	5.828 ± 0.655	5.789 ± 0.637	1.015 ± 0.051	n = 11	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All
0.890 ± 0.094	2.913 ± 0.249	5.817 ± 0.678	5.964 ± 0.616	1.032 ± 0.122	n = 5	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Fut
0.860 ± 0.081	2.862 ± 0.206	5.856 ± 0.428	5.779 ± 0.341	1.022 ± 0.111	n = 8	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELI
1.002 ± 0.043	2.878 ± 0.140	4.915 ± 0.318	4.857 ± 0.272	1.135 ± 0.047	n = 10	[TJ8]&[ILC] HemosIL Recomb & IL ACL Fut
0.999 ± 0.009	2.788 ± 0.150	4.732 ± 0.294	4.724 ± 0.273	1.139 ± 0.053	n = 25	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELI
1.000 ± 0.026	2.783 ± 0.151	4.769 ± 0.268	4.803 ± 0.277	1.106 ± 0.052	n = 76	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP

Summary of Participant Responses

Mean ± One Standard Deviation

Act Partial Thromboplastin Time (seconds)

Specimen: C86	Specimen: C87	Specimen: C88	Specimen: C89	Specimen: C90	Number	[Code] Instrument or Reagent
28.60 ± 2.84	54.06 ± 7.24	81.11 ± 10.52	81.04 ± 10.51	31.62 ± 2.14	n = 307	[---] All Methods & Instruments
<Instruments>						
25.47 ± 0.84	47.97 ± 2.09	71.66 ± 4.18	71.57 ± 4.09	27.27 ± 1.34	n = 20	[BEB] Siemens BCS,BCSXP
29.70 ± 1.10	51.34 ± 2.17	76.05 ± 3.04	76.05 ± 2.75	33.90 ± 1.42	n = 26	[DGC] Diagnostica Stago STA Compact
29.70 ± 0.70	50.25 ± 1.57	74.72 ± 2.60	74.30 ± 2.77	33.85 ± 0.89	n = 16	[DGD] Diagnostica Stago STA-R, STA-R Ev
27.57 ± 0.98	51.11 ± 8.43	78.26 ± 12.11	77.69 ± 11.76	29.75 ± 0.88	n = 13	[ILA] IL ACL(All models except 810,ELIT
30.45 ± 0.87	62.76 ± 1.34	94.64 ± 4.84	94.17 ± 3.89	31.98 ± 1.01	n = 17	[ILC] IL ACL Futura/Advance
28.58 ± 1.01	59.10 ± 7.46	88.08 ± 10.98	88.07 ± 11.58	30.73 ± 1.26	n = 31	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
31.81 ± 1.04	60.93 ± 1.62	90.89 ± 2.79	90.70 ± 2.74	32.94 ± 0.78	n = 76	[ILE] IL ACL TOP Series (ACLTOP,ACLTOPC
25.37 ± 0.98	47.48 ± 2.44	72.27 ± 3.88	72.51 ± 3.48	29.33 ± 1.02	n = 37	[SYW] Sysmex CA500/CA600 series
26.92 ± 0.82	50.80 ± 1.89	77.45 ± 3.60	77.24 ± 3.23	31.37 ± 1.18	n = 50	[SYX] Sysmex CA 1500
26.94 ± 0.60	49.61 ± 1.87	74.35 ± 2.64	74.08 ± 3.00	31.40 ± 0.81	n = 16	[SYY] Sysmex CA 7000
<Reagents>						
29.66 ± 0.91	50.75 ± 1.93	75.33 ± 2.84	75.25 ± 2.86	33.81 ± 1.03	n = 37	[AA2] Diagnostica Stago STA PTT-Auto
32.56 ± 2.78	54.24 ± 2.30	80.28 ± 2.96	80.21 ± 3.83	36.71 ± 2.78	n = 5	[AA3] Diagnostica Stago PTT-LA
26.32 ± 1.44	89.38 ± 1.82	124.87 ± 9.25	124.47 ± 8.15	29.55 ± 1.95	n = 4	[AD3] Siemens Actin FS
26.18 ± 1.20	49.16 ± 2.61	74.43 ± 4.43	74.37 ± 4.17	30.22 ± 1.91	n = 117	[AD4] Siemens Actin FSL
27.71 ± 0.90	47.70 ± 1.93	72.70 ± 2.33	72.48 ± 2.49	30.91 ± 1.39	n = 21	[AJ3] HemosIL Test APTT-SP
31.09 ± 1.69	61.66 ± 2.00	91.98 ± 3.78	91.89 ± 3.88	32.41 ± 1.40	n = 114	[AO4] HemosIL SynthASil
<Reagent & Instrument>						
29.57 ± 0.98	50.96 ± 2.02	75.54 ± 2.75	75.66 ± 2.58	33.73 ± 1.30	n = 22	[AA2]&[DGC] Diagnostica St & Diagnostic
29.70 ± 0.70	50.25 ± 1.56	74.72 ± 2.60	74.29 ± 2.77	33.74 ± 0.73	n = 14	[AA2]&[DGD] Diagnostica St & Diagnostic
31.60 ± 2.16	53.40 ± 1.76	79.35 ± 2.65	78.89 ± 3.18	35.71 ± 2.07	n = 4	[AA3]&[DGC] Diagnostica St & Diagnostic
26.89 ± 0.29	90.21 ± 1.08	127.96 ± 10.84	127.19 ± 9.43	30.25 ± 0.46	n = 3	[AD3]&[SYX] Siemens Actin & Sysmex CA1
25.39 ± 0.78	47.94 ± 1.98	71.37 ± 3.72	71.40 ± 3.65	27.18 ± 1.20	n = 17	[AD4]&[BEB] Siemens Actin & Siemens BC
25.34 ± 0.93	47.48 ± 2.44	72.27 ± 3.87	72.51 ± 3.47	29.32 ± 0.99	n = 36	[AD4]&[SYW] Siemens Actin & Sysmex CA5
26.91 ± 0.86	50.80 ± 1.88	77.45 ± 3.60	77.25 ± 3.22	31.46 ± 1.17	n = 47	[AD4]&[SYX] Siemens Actin & Sysmex CA1
26.94 ± 0.60	49.61 ± 1.87	74.35 ± 2.64	74.08 ± 3.00	31.40 ± 0.81	n = 16	[AD4]&[SYY] Siemens Actin & Sysmex CA7
27.21 ± 0.58	46.05 ± 1.62	71.27 ± 1.79	71.22 ± 1.71	29.66 ± 0.78	n = 8	[AJ3]&[ILA] HemosIL Test A & IL ACL(All
28.26 ± 0.62	48.88 ± 1.17	74.24 ± 1.55	74.08 ± 2.20	31.73 ± 0.81	n = 10	[AJ3]&[ILD] HemosIL Test A & IL ACL(ELI
28.86 ± 0.63	62.91 ± 1.65	95.33 ± 3.72	94.82 ± 5.03	30.25 ± 0.62	n = 4	[AO4]&[ILA] HemosIL SynthA & IL ACL(All
30.42 ± 0.87	62.78 ± 1.23	95.09 ± 3.69	94.64 ± 2.82	32.16 ± 0.79	n = 15	[AO4]&[ILC] HemosIL SynthA & IL ACL Fut
28.80 ± 1.23	63.09 ± 1.94	94.04 ± 4.58	94.87 ± 4.04	30.21 ± 1.11	n = 21	[AO4]&[ILD] HemosIL SynthA & IL ACL(ELI
31.82 ± 1.05	60.93 ± 1.64	90.81 ± 2.72	90.65 ± 2.72	32.96 ± 0.78	n = 73	[AO4]&[ILE] HemosIL SynthA & IL ACL TOP

Summary of Participant Responses

Mean ± One Standard Deviation

Fibrinogen (mg/dL)

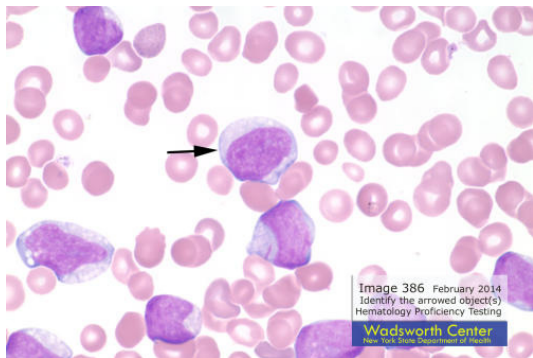
Specimen: C86	Specimen: C87	Specimen: C88	Specimen: C89	Specimen: C90	Number	[Code] Instrument or Reagent
296.3 ± 30.84	288.2 ± 37.74	274.2 ± 34.85	275.6 ± 34.72	609.1 ± 89.06	n = 208	[---] All Methods & Instruments
<Instruments>						
336.1 ± 24.61	342.5 ± 27.81	322.5 ± 24.42	328.1 ± 23.70	746.6 ± 21.33	n = 20	[BEB] Siemens BCS,BCSXP
307.4 ± 11.60	292.6 ± 17.74	284.0 ± 11.21	286.3 ± 13.90	649.9 ± 24.37	n = 25	[DGC] Diagnostica Stago STA Compact
299.7 ± 19.38	283.3 ± 11.91	273.1 ± 12.54	272.2 ± 16.67	627.2 ± 23.84	n = 14	[DGD] Diagnostica Stago STA-R, STA-R Ev
319.2 ± 26.80	381.7 ± 32.34	354.7 ± 31.10	349.8 ± 8.59	659.8 ± 13.16	n = 3	[ILA] IL ACL(All models except 810,ELIT
268.4 ± 34.44	331.6 ± 27.08	346.9 ± 37.05	349.9 ± 36.44	527.1 ± 60.44	n = 11	[ILC] IL ACL Futura/Advance
320.3 ± 20.68	334.7 ± 45.95	325.3 ± 58.40	326.8 ± 67.59	744.6 ± 36.46	n = 9	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
303.1 ± 25.37	292.2 ± 30.69	273.5 ± 26.25	275.9 ± 23.20	627.7 ± 43.10	n = 67	[ILE] IL ACL TOP Series (ACLTOP,ACLTOPC
309.2 ± 26.36	299.4 ± 19.85	286.2 ± 16.69	261.4 ± 5.77	554.0 ± 77.17	n = 5	[SYW] Sysmex CA500/CA600 series
267.7 ± 14.96	252.7 ± 14.20	243.9 ± 12.40	244.1 ± 16.99	523.0 ± 40.27	n = 37	[SYX] Sysmex CA 1500
270.4 ± 15.80	256.9 ± 16.01	247.6 ± 15.90	248.4 ± 14.34	519.3 ± 44.91	n = 14	[SYY] Sysmex CA 7000
<Reagents>						
332.6 ± 18.92	392.7 ± 23.56	382.3 ± 25.07	377.5 ± 29.52	638.5 ± 99.32	n = 6	[TJ2] HemosIL PT-Fibrinogen
321.7 ± 10.93	318.0 ± 11.91	292.3 ± 11.83	292.3 ± 13.09	614.6 ± 18.64	n = 39	[TJ8] HemosIL RecombiPlasTin 2G
305.1 ± 14.30	288.8 ± 16.79	280.4 ± 12.90	281.6 ± 16.56	642.0 ± 27.40	n = 39	[FA4] Stago STA-Fibrinogen 5
341.1 ± 20.74	348.7 ± 20.88	327.9 ± 20.82	332.4 ± 17.11	746.6 ± 21.29	n = 17	[FB2] Siemens Multifibren U
271.5 ± 18.68	256.7 ± 19.04	247.7 ± 19.63	248.2 ± 18.11	523.6 ± 44.29	n = 59	[FD2] Siemens Fibrinogen Determination
295.5 ± 21.35	285.4 ± 28.04	269.9 ± 26.50	273.1 ± 21.16	639.9 ± 103.80	n = 23	[FJ2] HemosIL Fibrinogen C,XL
281.2 ± 18.48	266.4 ± 21.07	252.3 ± 18.03	257.9 ± 19.32	667.2 ± 67.12	n = 21	[FO3] HemosIL QFA(bovine)
<Reagent & Instrument>						
245.8 ± 5.08	333.5 ± 4.04	360.9 ± 7.04	363.4 ± 10.96	499.5 ± 9.60	n = 6	[TJ8]&[ILC] HemosIL Recomb & IL ACL Fut
322.2 ± 10.20	315.0 ± 9.76	292.2 ± 11.32	292.0 ± 12.09	614.3 ± 17.23	n = 32	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP
307.4 ± 11.60	292.6 ± 17.74	284.0 ± 11.21	286.3 ± 13.90	649.9 ± 24.37	n = 25	[FA4]&[DGC] Stago STA-Fibr & Diagnostic
299.7 ± 19.38	283.3 ± 11.91	273.1 ± 12.54	272.2 ± 16.67	627.2 ± 23.84	n = 14	[FA4]&[DGD] Stago STA-Fibr & Diagnostic
341.1 ± 20.74	348.7 ± 20.88	327.9 ± 20.82	332.4 ± 17.11	746.6 ± 21.29	n = 17	[FB2]&[BEB] Siemens Multif & Siemens BC
301.8 ± 16.63	289.3 ± 18.52	288.8 ± 9.60	274.1 ± 20.79	529.5 ± 47.33	n = 3	[FD2]&[BEB] Siemens Fibrin & Siemens BC
309.2 ± 26.36	299.4 ± 19.85	286.2 ± 16.69	261.4 ± 5.77	554.0 ± 77.17	n = 5	[FD2]&[SYW] Siemens Fibrin & Sysmex CA5
267.7 ± 14.96	252.7 ± 14.20	243.9 ± 12.40	244.1 ± 16.99	523.0 ± 40.27	n = 37	[FD2]&[SYX] Siemens Fibrin & Sysmex CA1
270.4 ± 15.80	256.9 ± 16.01	247.6 ± 15.90	248.4 ± 14.34	519.3 ± 44.91	n = 14	[FD2]&[SYY] Siemens Fibrin & Sysmex CA7
321.9 ± 1.13	314.7 ± 14.57	294.5 ± 15.30	290.5 ± 14.40	750.4 ± 31.14	n = 6	[FJ2]&[ILD] HemosIL Fibrin & IL ACL(ELI
289.6 ± 16.05	271.5 ± 20.73	257.5 ± 24.97	264.1 ± 17.59	615.8 ± 77.22	n = 15	[FJ2]&[ILE] HemosIL Fibrin & IL ACL TOP
279.5 ± 17.01	264.4 ± 19.02	251.0 ± 16.62	256.4 ± 18.16	670.9 ± 67.31	n = 20	[FO3]&[ILE] HemosIL QFA(bo & IL ACL TOP

NEW YORK STATE HEMATOLOGY PROFICIENCY TESTING PROGRAM

February 3, 2014

Images on the Hematology and Clinical Chemistry web page: <http://www.wadsworth.org/chemheme/cellIPT> 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.

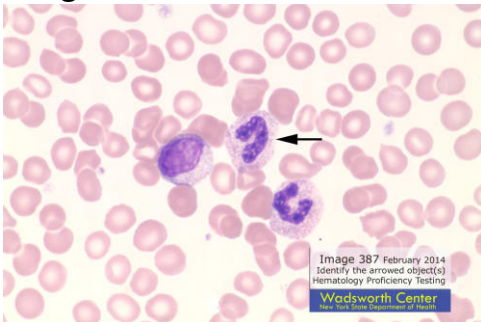
Image 386



Number of Responses	Percent of Laboratories	Cell type or finding
245	69.0%	Blast cell, not classified
65	18.3%	Myeloblast
12	3.4%	Monocyte
10	2.8%	Promyelocyte
7	2.0%	Myelocyte
6	1.7%	Reactive/Atypical lymphocyte
6	1.7%	Monoblast
2	0.6%	Normal lymphocyte
1	0.3%	Metamyelocyte
1	0.3%	Lymphoblast

The arrowed cell in Image 386 possesses a large nucleus composed of smooth chromatin and nucleoli. The nucleus to cytoplasm ratio is high and there are no visible cytoplasmic granules. The arrowed cell is best described as a blast cell. The image was obtained from the peripheral blood smear of a 64 year-old male diagnosed with acute myeloid leukemia where fifty-five percent of the cells were identified as blast cells. Given the diagnosis and the presence of an Auer rod in the blast cell beneath the arrowed cell the blast cells in this case are likely myeloblasts. Few participants classified the arrowed cell as a monoblast or lymphoblast. The characteristics of the cell, noted above, support the identification of the cell as a myeloblast. It can be difficult to classify a blast cell based solely on the peripheral blood smear, therefore, all blast types were acceptable responses.

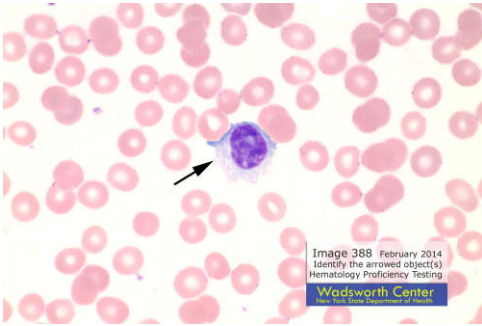
Image 387



Number of Responses	Percent of Laboratories	Cell type or finding
332	93.5%	Band neutrophil
19	5.4%	Segmented/band neutrophil with toxic granulation
4	1.1%	Segmented neutrophil

The nucleus of the arrowed cell in Image 387 is non-segmented and was correctly identified as a band neutrophil by 332 participants. The image was obtained from the peripheral blood smear of a case of chronic myeloid leukemia and, as might be expected in such a case, the cells represented the full range of the myeloid series maturation including promyelocytes, myelocytes and metamyelocytes. Approximately thirty-percent of the cells were classified as band forms.

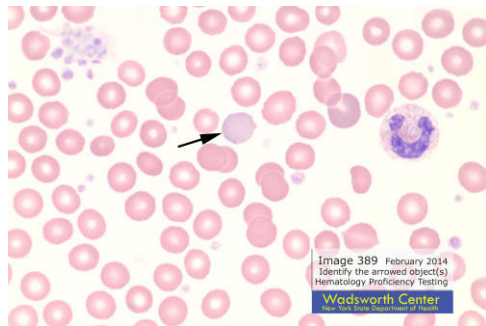
Image 388



Number of Responses	Percent of Laboratories	Cell type or finding
318	89.6%	Reactive/Atypical lymphocyte
20	5.6%	Normal lymphocyte
10	2.8%	Hairy cell
4	1.1%	Myelocyte
1	0.3%	Metamyelocyte
1	0.3%	Monocyte
1	0.3%	Lymphoma/Sézary cell

The distinctive finding of the arrowed cell in Image 388 is the reactive cytoplasm as it characteristically fringes the adjacent red blood cells. The nucleus is round and contains mature chromatin. The cell is best classified as a reactive/atypical lymphocyte as the majority of participants concur. The image was obtained from the peripheral smear of an individual with a parasitic infection where five percent of the white blood cells were classified as reactive/atypical lymphocytes.

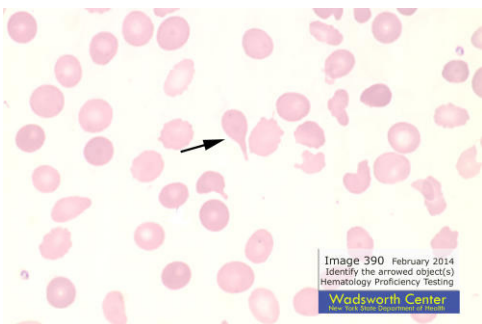
Image 389



Number of Responses	Percent of Laboratories	Cell type or finding
352	99.2%	Erythrocyte-polychromatophilic
2	0.6%	Erythrocyte- macrocytic
1	0.3%	Spherocyte

The bluish hue of the arrowed red blood cell in Image 389 was correctly distinguished by ninety-nine percent of participants as erythrocyte-polychromatophilic. Image 389 was obtained from the peripheral blood smear of a 48 year-old male diagnosed with aortic disease. At the time the specimen was collected the patient presented with a hemoglobin level of 10.0 g/dL and a hematocrit of 30.7%. Review of the peripheral blood smear revealed expected findings of such a case including polychromatophilic and hypochromic red blood cells, echinocytes, schistocytes and dacrocytes.

Image 390



Number of Responses	Percent of Laboratories	Cell type or finding
352	99.2%	Tear drop cell (dacrocyte)
3	0.8%	Target cell (codocyte)

The arrowed red blood cell in Image 390 is a tear drop cell (dacrocyte) as correctly reported by 352 participants. The image was obtained from the peripheral blood smear of a 74 year-old male who presented with a bloody stool. The laboratory data included decreased hemoglobin, hematocrit and platelet count. The red blood cell morphology showed significant poikilocytosis with schistocytes, elliptocytes, acanthocytes and tear drop cells as observed in Image 390. The marked anemia, presence of many schistocytes and the decreased platelet count indicates a microangiopathic hemolytic anemia (MAHA). Causes of MAHA include disseminated intravascular coagulation (DIC), thrombotic thrombocytopenic purpura (TTP), severe burns, and hemolytic uremic syndrome (HUS). In this case, the anemia was caused by HUS. Most cases of HUS occur after an acute gastrointestinal illness most commonly caused by a toxin produced by *Escherichia coli*. Toxins produced by *Shigella*, *Salmonella*, *Yersinia*, and *Campylobacter* species are also known to cause HUS.