

To: Laboratory Directors and Laboratory Staff
From: Robert Rej, Ph.D.
Date: March 6, 2012
Subject: Results of the February 6, 2012 Hematology Proficiency Test

Enclosed are results from the hematology proficiency testing survey shipped February 6, 2012. Five samples were distributed for each test category:

Routine Blood Counts (B56, B57, B58, B59, B60)

Routine Coagulation (C56, C57, C58, C59, C60 - APTT, PT/INR and Fibrinogen assays)

Cell Identification (356, 357, 358, 359, 360)

Evaluation of Proficiency Test Results:

Note: This report includes evaluation of the International Normalized Ratio (INR).

Outlined below is a description of the process used to evaluate your laboratory's proficiency test results. A summary of your laboratory's performance for the three most recent surveys is also included with this report.

Target Value: When possible, targets utilized are derived from all-participant mean values calculated by a robust statistical technique. In some cases, however, it is recognized that reagent, and/or instrument specific targets may be required and "peer group" specific targets are used where appropriate. An asterisk placed adjacent to the manufacturer name or instrument name indicates that a peer group was used in establishing targets and acceptable ranges.

Not Gradable: Results for graded analytes for a few laboratories using unique instrument, reagent, or instrument/reagent combinations were considered "not gradable". For these laboratories pass credit (100%) has been issued. Since the laboratory is unable to participate in the NYS hematology proficiency test event as a graded participant, it is the responsibility of the laboratory to establish alternate means to verify the accuracy and precision of the test system for any ungraded analyte(s).

Acceptable Range: Represents limits established using criteria specified by CLIA '88 regulations, allowing for rounding to appropriate significant digits. Results falling within this range are scored as 100%. Any result exceeding these limits is considered unsatisfactory and receives a score of 0%.

Range Plots: The range plots graphically represent the relative distance of all results reported by your laboratory from the target value. Any result exceeding the high or low limit by >20% of the acceptable range is indicated by an asterisk (*).

Analyte Score: Scores for both individual samples and overall analyte performance are provided. Laboratories must achieve an overall analyte score >80% in order to meet performance criteria for that analyte.

Statistical Summary: Also enclosed is a statistical summary of participant data for the survey specimens. Mean and standard deviation (1 SD) values shown on the attached sheets are calculated by a robust statistical technique that does not assume a Gaussian distribution. Please note that standard deviation values are not used to determine acceptable ranges; CLIA '88 regulations established percentage limits for cellular and coagulation analytes.

Cellular Hematology (CBC): Results for individual instruments, where the number of laboratories using those systems is three or greater, are provided.

Coagulation: Results for individual instrument and reagent systems as well as instrument/reagent combinations, where the number of laboratories using those systems is three or greater, are provided.

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.

So that this analysis can be as complete as possible, please review all future testings carefully and properly identify reagent and instrument systems used.

If you have any questions regarding these reports or wish to obtain an additional copy, please contact the Hematology Laboratory at (518) 474-9878. You may also contact us by E-mail: heme@wadsworth.org

World Wide Web: Results from this proficiency test event and selected previous proficiency test events are available on the Hematology and Clinical Chemistry web page at: <http://www.wadsworth.org/chemheme>

Summary of Participant Responses

Mean ± One Standard Deviation

White Cell Count (x 10⁹/L)

Specimen: B56	Specimen: B57	Specimen: B58	Specimen: B59	Specimen: B60	Number	[Code] Instrument
4.84 ± 0.19	16.24 ± 0.78	9.10 ± 0.33	24.09 ± 1.08	4.04 ± 0.22	n = 411	[---] All Methods & Instruments
<Instruments>						
5.02 ± 0.21	16.36 ± 0.30	9.06 ± 0.18	24.39 ± 0.65	4.18 ± 0.20	n = 4	[ABF] Abbott Cell Dyn 3500
4.82 ± 0.24	16.00 ± 0.55	9.02 ± 0.51	23.17 ± 1.06	4.18 ± 0.15	n = 3	[ABG] Abbott Cell Dyn 1700
5.02 ± 0.04	17.38 ± 0.38	9.51 ± 0.23	25.41 ± 0.35	4.27 ± 0.09	n = 4	[ABJ] Abbott Cell Dyn 1800
5.03 ± 0.05	16.34 ± 0.51	9.24 ± 0.23	24.54 ± 0.56	4.05 ± 0.13	n = 7	[ABK] Abbott Cell Dyn 3200
4.94 ± 0.17	16.52 ± 0.55	9.18 ± 0.14	24.61 ± 0.36	4.08 ± 0.13	n = 12	[ABM] Abbott Cell Dyn 3700
4.91 ± 0.15	16.62 ± 0.40	9.29 ± 0.28	24.38 ± 0.62	4.12 ± 0.11	n = 15	[ABS] Abbott Cell Dyn Sapphire
5.00 ± 0.18	16.40 ± 0.47	9.23 ± 0.24	24.55 ± 0.68	4.12 ± 0.14	n = 17	[ABT] Abbott Cell Dyn Ruby
4.64 ± 0.10	15.97 ± 0.14	8.63 ± 0.05	22.61 ± 0.44	4.07 ± 0.05	n = 3	[ABU] Abbott Cell Dyn Emerald
4.56 ± 0.18	15.86 ± 0.79	8.73 ± 0.39	22.78 ± 0.82	3.74 ± 0.18	n = 21	[BTD] Siemens (Bayer)Advia 120
4.60 ± 0.21	16.15 ± 0.74	8.73 ± 0.35	23.08 ± 0.87	3.69 ± 0.21	n = 27	[BTE] Siemens (Bayer)Advia 2120
4.87 ± 0.08	16.10 ± 0.28	9.06 ± 0.09	24.27 ± 0.49	4.06 ± 0.07	n = 14	[CUL] Coulter UniCel DxH 800
4.72 ± 0.13	16.31 ± 0.49	8.93 ± 0.24	23.99 ± 0.50	3.85 ± 0.12	n = 8	[CUS] Coulter ACT 5 diff
4.87 ± 0.16	16.47 ± 0.35	9.15 ± 0.23	24.50 ± 0.61	4.23 ± 0.15	n = 28	[CUT] Coulter ACT series,not ACT5 diff
4.97 ± 0.14	17.41 ± 0.54	9.28 ± 0.35	25.48 ± 0.58	4.23 ± 0.12	n = 13	[CUW] Coulter HMX
4.81 ± 0.11	15.73 ± 0.46	9.12 ± 0.18	23.66 ± 0.77	4.12 ± 0.10	n = 72	[CUX] Coulter LH750,755
4.77 ± 0.10	15.46 ± 0.34	9.15 ± 0.14	23.39 ± 0.60	4.13 ± 0.09	n = 21	[CUY] Coulter LH 780
5.02 ± 0.09	17.29 ± 0.36	9.25 ± 0.19	25.57 ± 0.41	4.28 ± 0.11	n = 23	[CUZ] Coulter LH500
4.77 ± 0.17	16.60 ± 0.63	9.08 ± 0.39	24.75 ± 0.94	3.85 ± 0.17	n = 8	[ROB] ABX Pentra series
4.60 ± 0.09	15.51 ± 0.20	8.66 ± 0.10	22.31 ± 0.20	3.80 ± 0.09	n = 3	[SYB] Sysmex KX-21N
4.73 ± 0.14	15.63 ± 0.53	8.76 ± 0.28	23.38 ± 0.65	3.83 ± 0.14	n = 23	[SYO] Sysmex XE2100
4.89 ± 0.10	15.36 ± 0.22	8.73 ± 0.10	23.18 ± 0.37	3.83 ± 0.13	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
4.83 ± 0.19	15.95 ± 0.70	8.92 ± 0.43	23.86 ± 0.92	3.86 ± 0.19	n = 21	[SYA] Sysmex XE 5000
4.89 ± 0.13	16.46 ± 0.52	9.18 ± 0.25	24.42 ± 0.51	3.88 ± 0.12	n = 24	[SYI] Sysmex XT-1800i,XT-2000i
4.83 ± 0.16	16.64 ± 0.30	9.19 ± 0.18	24.60 ± 0.52	3.86 ± 0.11	n = 5	[SYV] Sysmex XT 4000i
5.08 ± 0.10	17.28 ± 0.36	9.52 ± 0.18	25.24 ± 0.64	4.07 ± 0.12	n = 16	[SYP] Sysmex XS-1000i,XS-1000iAL

Summary of Participant Responses
 Mean ± One Standard Deviation

Red Cell Count (x 10¹²/L)

Specimen: B56	Specimen: B57	Specimen: B58	Specimen: B59	Specimen: B60	Number	[Code] Instrument
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3.034 ± 0.089	4.947 ± 0.111	4.517 ± 0.110	4.268 ± 0.100	4.010 ± 0.106	n = 410	[---] All Methods & Instruments
						<Instruments>
3.122 ± 0.055	5.066 ± 0.119	4.629 ± 0.038	4.378 ± 0.043	4.125 ± 0.072	n = 4	[ABF] Abbott Cell Dyn 3500
3.010 ± 0.072	5.033 ± 0.050	4.534 ± 0.103	4.312 ± 0.123	4.056 ± 0.088	n = 3	[ABG] Abbott Cell Dyn 1700
3.157 ± 0.068	5.018 ± 0.084	4.541 ± 0.072	4.391 ± 0.079	4.050 ± 0.058	n = 4	[ABJ] Abbott Cell Dyn 1800
3.192 ± 0.041	5.064 ± 0.056	4.688 ± 0.034	4.375 ± 0.030	4.175 ± 0.072	n = 7	[ABK] Abbott Cell Dyn 3200
3.099 ± 0.054	5.012 ± 0.088	4.599 ± 0.079	4.296 ± 0.079	4.068 ± 0.080	n = 12	[ABM] Abbott Cell Dyn 3700
3.111 ± 0.038	5.106 ± 0.102	4.643 ± 0.070	4.374 ± 0.090	4.094 ± 0.070	n = 15	[ABS] Abbott Cell Dyn Sapphire
3.070 ± 0.073	5.067 ± 0.114	4.603 ± 0.099	4.288 ± 0.090	4.039 ± 0.074	n = 17	[ABT] Abbott Cell Dyn Ruby
2.973 ± 0.023	4.944 ± 0.182	4.447 ± 0.185	4.249 ± 0.163	4.013 ± 0.123	n = 3	[ABU] Abbott Cell Dyn Emerald
3.077 ± 0.067	4.979 ± 0.104	4.583 ± 0.086	4.302 ± 0.093	4.034 ± 0.089	n = 21	[BTD] Siemens (Bayer)Advia 120
3.099 ± 0.053	5.026 ± 0.071	4.584 ± 0.066	4.353 ± 0.061	4.064 ± 0.072	n = 27	[BTE] Siemens (Bayer)Advia 2120
2.977 ± 0.051	4.809 ± 0.069	4.401 ± 0.041	4.180 ± 0.055	3.960 ± 0.056	n = 14	[CUL] Coulter UniCel DxH 800
3.073 ± 0.040	5.056 ± 0.052	4.590 ± 0.050	4.347 ± 0.048	4.047 ± 0.056	n = 8	[CUS] Coulter ACT 5 diff
2.925 ± 0.068	4.871 ± 0.097	4.414 ± 0.083	4.167 ± 0.082	3.914 ± 0.064	n = 27	[CUT] Coulter ACT series,not ACT5 diff
3.016 ± 0.077	4.929 ± 0.095	4.425 ± 0.082	4.209 ± 0.073	3.988 ± 0.114	n = 13	[CUW] Coulter HMX
2.953 ± 0.034	4.853 ± 0.048	4.428 ± 0.041	4.192 ± 0.041	3.907 ± 0.036	n = 72	[CUX] Coulter LH750,755
2.948 ± 0.029	4.851 ± 0.046	4.427 ± 0.046	4.195 ± 0.049	3.916 ± 0.043	n = 21	[CUY] Coulter LH 780
3.033 ± 0.064	4.914 ± 0.066	4.437 ± 0.058	4.210 ± 0.050	3.985 ± 0.078	n = 23	[CUZ] Coulter LH500
3.039 ± 0.068	5.065 ± 0.091	4.568 ± 0.088	4.379 ± 0.105	4.079 ± 0.057	n = 8	[ROB] ABX Pentra series
3.053 ± 0.023	4.943 ± 0.051	4.513 ± 0.034	4.220 ± 0.009	4.055 ± 0.036	n = 3	[SYB] Sysmex KX-21N
3.116 ± 0.036	4.966 ± 0.060	4.601 ± 0.045	4.365 ± 0.033	4.131 ± 0.044	n = 23	[SYO] Sysmex XE2100
3.121 ± 0.021	4.988 ± 0.052	4.599 ± 0.033	4.378 ± 0.031	4.138 ± 0.026	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
3.098 ± 0.027	4.964 ± 0.044	4.588 ± 0.040	4.347 ± 0.044	4.105 ± 0.038	n = 21	[SYA] Sysmex XE 5000
3.056 ± 0.032	4.974 ± 0.039	4.561 ± 0.039	4.282 ± 0.046	4.054 ± 0.039	n = 24	[SYI] Sysmex XT-1800i,XT-2000i
3.102 ± 0.042	5.006 ± 0.065	4.606 ± 0.086	4.333 ± 0.077	4.106 ± 0.051	n = 5	[SYV] Sysmex XT 4000i
3.003 ± 0.024	5.030 ± 0.039	4.558 ± 0.031	4.255 ± 0.036	3.988 ± 0.031	n = 16	[SYP] Sysmex XS-1000i,XS-1000iAL

Summary of Participant Responses
 Mean ± One Standard Deviation

Hemoglobin (g/dL)

Specimen: B56	Specimen: B57	Specimen: B58	Specimen: B59	Specimen: B60	Number	[Code] Instrument
9.06 ± 0.19	14.95 ± 0.29	13.52 ± 0.20	11.59 ± 0.28	10.19 ± 0.17	n = 421	[---] All Methods & Instruments
<Instruments>						
11.17 ± 0.05	>19.00	15.97 ± 0.31	16.23 ± 0.14	12.51 ± 0.20	n = 3	[HQB] HemoCue Donor Hb Checker
9.15 ± 0.12	14.74 ± 0.22	13.53 ± 0.29	11.40 ± 0.22	10.20 ± 0.07	n = 6	[HQC] HemoCue Hb201+/B-Hb
9.14 ± 0.23	15.42 ± 0.31	13.75 ± 0.28	12.26 ± 0.19	10.33 ± 0.16	n = 4	[ABF] Abbott Cell Dyn 3500
8.89 ± 0.20	15.22 ± 0.15	13.39 ± 0.37	11.77 ± 0.32	10.26 ± 0.26	n = 3	[ABG] Abbott Cell Dyn 1700
9.20 ± 0.23	15.59 ± 0.23	13.85 ± 0.12	12.26 ± 0.23	10.41 ± 0.11	n = 4	[ABJ] Abbott Cell Dyn 1800
9.42 ± 0.28	15.40 ± 0.20	13.97 ± 0.20	12.24 ± 0.34	10.54 ± 0.28	n = 7	[ABK] Abbott Cell Dyn 3200
9.21 ± 0.16	15.28 ± 0.22	13.68 ± 0.20	12.10 ± 0.16	10.36 ± 0.19	n = 12	[ABM] Abbott Cell Dyn 3700
9.40 ± 0.10	15.35 ± 0.19	13.88 ± 0.14	11.92 ± 0.12	10.49 ± 0.10	n = 15	[ABS] Abbott Cell Dyn Sapphire
9.16 ± 0.17	15.21 ± 0.22	13.66 ± 0.21	11.88 ± 0.15	10.15 ± 0.13	n = 17	[ABT] Abbott Cell Dyn Ruby
8.93 ± 0.14	15.30 ± 0.18	13.48 ± 0.15	11.76 ± 0.10	10.26 ± 0.10	n = 3	[ABU] Abbott Cell Dyn Emerald
9.22 ± 0.15	15.03 ± 0.27	13.62 ± 0.19	11.67 ± 0.12	10.35 ± 0.16	n = 20	[BTD] Siemens (Bayer)Advia 120
9.26 ± 0.12	15.03 ± 0.27	13.64 ± 0.19	11.80 ± 0.20	10.31 ± 0.17	n = 28	[BTE] Siemens (Bayer)Advia 2120
8.99 ± 0.12	14.65 ± 0.23	13.40 ± 0.19	11.34 ± 0.16	10.08 ± 0.13	n = 14	[CUL] Coulter UniCel DxH 800
9.06 ± 0.24	14.93 ± 0.33	13.47 ± 0.28	11.61 ± 0.22	10.13 ± 0.19	n = 8	[CUS] Coulter ACT 5 diff
8.88 ± 0.18	14.93 ± 0.29	13.47 ± 0.20	11.59 ± 0.15	10.15 ± 0.13	n = 27	[CUT] Coulter ACT series,not ACT5 diff
9.10 ± 0.12	15.13 ± 0.16	13.47 ± 0.16	11.84 ± 0.11	10.25 ± 0.12	n = 13	[CUW] Coulter HMX
8.96 ± 0.09	14.81 ± 0.15	13.41 ± 0.11	11.44 ± 0.15	10.10 ± 0.09	n = 72	[CUX] Coulter LH750,755
8.95 ± 0.09	14.82 ± 0.12	13.43 ± 0.09	11.43 ± 0.14	10.12 ± 0.09	n = 21	[CUY] Coulter LH 780
9.14 ± 0.10	15.17 ± 0.18	13.52 ± 0.16	11.92 ± 0.10	10.32 ± 0.10	n = 23	[CUZ] Coulter LH500
8.92 ± 0.12	15.03 ± 0.18	13.50 ± 0.18	11.61 ± 0.17	10.10 ± 0.18	n = 8	[ROB] ABX Pentra series
9.07 ± 0.05	15.00 ± 0.09	13.52 ± 0.15	11.60 ± 0.09	10.27 ± 0.05	n = 3	[SYB] Sysmex KX-21N
9.07 ± 0.14	14.79 ± 0.17	13.47 ± 0.13	11.36 ± 0.10	10.16 ± 0.12	n = 23	[SYO] Sysmex XE2100
9.04 ± 0.16	14.85 ± 0.12	13.46 ± 0.08	11.40 ± 0.11	10.20 ± 0.16	n = 6	[SYQ] Sysmex XE 2100D(Blood Center Only)
9.04 ± 0.12	14.81 ± 0.18	13.46 ± 0.14	11.36 ± 0.10	10.13 ± 0.09	n = 21	[SYA] Sysmex XE 5000
9.03 ± 0.09	14.75 ± 0.21	13.53 ± 0.12	11.46 ± 0.09	10.19 ± 0.10	n = 24	[SYI] Sysmex XT-1800i,XT-2000i
9.12 ± 0.11	14.78 ± 0.08	13.58 ± 0.08	11.50 ± 0.06	10.30 ± 0.00	n = 5	[SYV] Sysmex XT 4000i
8.97 ± 0.11	15.07 ± 0.15	13.55 ± 0.10	11.52 ± 0.12	10.12 ± 0.09	n = 16	[SYP] Sysmex XS-1000i,XS-1000iAL

Summary of Participant Responses
 Mean ± One Standard Deviation

Hematocrit (%)

Specimen: B56	Specimen: B57	Specimen: B58	Specimen: B59	Specimen: B60	Number	[Code] Instrument
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26.16 ± 1.39	41.78 ± 1.75	38.28 ± 1.51	32.62 ± 1.45	29.55 ± 1.50	n = 415	[---] All Methods & Instruments
<Instruments>						
24.00 ± 0.00	39.30 ± 2.35	35.73 ± 1.93	30.46 ± 1.07	27.77 ± 1.55	n = 5	[MHC] Microhematocrit
27.35 ± 0.81	43.80 ± 1.65	40.19 ± 0.94	33.90 ± 0.61	30.83 ± 0.72	n = 4	[ABF] Abbott Cell Dyn 3500
25.82 ± 0.32	42.69 ± 1.08	38.82 ± 0.41	32.78 ± 0.24	29.85 ± 0.19	n = 3	[ABG] Abbott Cell Dyn 1700
28.16 ± 0.28	43.74 ± 0.64	39.74 ± 0.58	33.85 ± 0.51	30.27 ± 0.25	n = 4	[ABJ] Abbott Cell Dyn 1800
23.95 ± 0.42	37.76 ± 0.75	35.18 ± 0.78	29.83 ± 0.51	27.54 ± 0.69	n = 7	[ABK] Abbott Cell Dyn 3200
27.84 ± 0.61	44.54 ± 1.03	40.92 ± 0.79	34.26 ± 0.62	31.32 ± 0.53	n = 12	[ABM] Abbott Cell Dyn 3700
25.02 ± 0.35	40.23 ± 0.74	36.77 ± 0.54	30.91 ± 0.65	27.81 ± 0.53	n = 15	[ABS] Abbott Cell Dyn Sapphire
22.98 ± 0.66	37.57 ± 0.79	34.44 ± 0.88	29.05 ± 0.75	26.48 ± 0.71	n = 17	[ABT] Abbott Cell Dyn Ruby
26.68 ± 0.50	43.46 ± 2.24	39.18 ± 2.12	33.52 ± 1.58	30.37 ± 1.23	n = 3	[ABU] Abbott Cell Dyn Emerald
23.74 ± 0.60	38.72 ± 0.88	35.62 ± 0.88	29.44 ± 0.65	26.27 ± 0.59	n = 20	[BTD] Siemens (Bayer)Advia 120
23.76 ± 0.57	38.95 ± 0.91	35.62 ± 0.80	29.65 ± 0.76	26.38 ± 0.64	n = 28	[BTE] Siemens (Bayer)Advia 2120
26.92 ± 0.53	42.92 ± 0.65	39.20 ± 0.41	33.65 ± 0.46	30.63 ± 0.44	n = 14	[CUL] Coulter UniCel DxH 800
25.54 ± 0.37	41.62 ± 0.53	37.50 ± 0.29	32.44 ± 0.41	28.65 ± 0.41	n = 8	[CUS] Coulter ACT 5 diff
25.94 ± 0.71	42.35 ± 1.07	38.35 ± 0.79	32.71 ± 0.73	29.54 ± 0.64	n = 27	[CUT] Coulter ACT series,not ACT5 diff
26.60 ± 0.60	42.75 ± 0.76	38.48 ± 0.76	32.97 ± 0.49	29.97 ± 0.82	n = 13	[CUW] Coulter HMX
26.22 ± 0.41	42.57 ± 0.61	38.83 ± 0.51	33.12 ± 0.48	29.73 ± 0.40	n = 72	[CUX] Coulter LH750,755
26.09 ± 0.29	42.46 ± 0.52	38.71 ± 0.49	33.01 ± 0.43	29.65 ± 0.32	n = 21	[CUY] Coulter LH 780
26.71 ± 0.73	42.78 ± 0.70	38.51 ± 0.64	32.98 ± 0.53	29.99 ± 0.69	n = 23	[CUZ] Coulter LH500
25.43 ± 0.52	42.05 ± 0.92	37.43 ± 0.89	32.56 ± 0.68	28.68 ± 0.65	n = 8	[ROB] ABX Pentra series
25.41 ± 0.29	39.54 ± 0.39	36.35 ± 0.19	30.80 ± 0.27	28.71 ± 0.29	n = 3	[SYB] Sysmex KX-21N
27.30 ± 0.43	41.86 ± 0.69	39.14 ± 0.59	33.49 ± 0.39	30.88 ± 0.50	n = 23	[SYO] Sysmex XE2100
27.58 ± 0.32	42.21 ± 0.53	39.26 ± 0.44	33.70 ± 0.38	31.00 ± 0.24	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
27.26 ± 0.41	41.87 ± 0.44	39.13 ± 0.42	33.44 ± 0.49	30.73 ± 0.40	n = 21	[SYA] Sysmex XE 5000
27.18 ± 0.42	41.16 ± 0.60	38.45 ± 0.54	32.52 ± 0.34	30.17 ± 0.41	n = 24	[SYI] Sysmex XT-1800i,XT-2000i
27.57 ± 0.56	41.48 ± 0.35	38.80 ± 0.40	33.01 ± 0.36	30.59 ± 0.18	n = 5	[SYV] Sysmex XT 4000i
26.69 ± 0.39	41.72 ± 0.42	38.51 ± 0.33	32.35 ± 0.34	29.74 ± 0.30	n = 16	[SYP] Sysmex XS-1000i,XS-1000iAL

Summary of Participant Responses
 Mean ± One Standard Deviation

Platelet Count (x 10⁹/L)

Specimen: B56	Specimen: B57	Specimen: B58	Specimen: B59	Specimen: B60	Number	[Code] Instrument
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97.3 ± 9.47	541.3 ± 45.75	232.3 ± 19.99	743.2 ± 60.37	178.6 ± 17.82	n = 412	[---] All Methods & Instruments
<Instruments>						
104.4 ± 6.06	591.6 ± 13.67	249.8 ± 1.96	824.3 ± 33.41	198.2 ± 4.33	n = 4	[ABF] Abbott Cell Dyn 3500
90.1 ± 3.72	580.5 ± 35.58	236.9 ± 11.86	754.3 ± 23.96	192.0 ± 4.60	n = 3	[ABG] Abbott Cell Dyn 1700
104.5 ± 4.60	594.3 ± 19.11	252.1 ± 8.73	802.3 ± 37.56	193.6 ± 6.45	n = 4	[ABJ] Abbott Cell Dyn 1800
126.9 ± 9.80	610.3 ± 17.58	264.6 ± 8.10	832.1 ± 22.45	223.0 ± 12.07	n = 7	[ABK] Abbott Cell Dyn 3200
111.6 ± 4.85	606.9 ± 28.12	259.5 ± 11.69	834.9 ± 37.23	201.6 ± 9.14	n = 12	[ABM] Abbott Cell Dyn 3700
109.0 ± 5.25	547.1 ± 15.49	237.1 ± 10.56	743.7 ± 21.96	199.1 ± 7.80	n = 15	[ABS] Abbott Cell Dyn Sapphire
120.3 ± 7.46	596.6 ± 29.24	255.0 ± 11.58	783.0 ± 31.60	213.6 ± 11.13	n = 17	[ABT] Abbott Cell Dyn Ruby
107.2 ± 9.60	565.9 ± 15.57	254.7 ± 5.91	798.3 ± 13.07	201.6 ± 9.11	n = 3	[ABU] Abbott Cell Dyn Emerald
108.7 ± 4.78	605.6 ± 23.34	265.5 ± 10.26	829.1 ± 27.56	201.3 ± 11.54	n = 21	[BTD] Siemens (Bayer)Advia 120
107.4 ± 5.93	604.5 ± 27.21	260.2 ± 14.84	820.4 ± 38.43	197.7 ± 11.72	n = 27	[BTE] Siemens (Bayer)Advia 2120
92.2 ± 1.97	508.8 ± 15.96	217.0 ± 3.20	699.7 ± 18.08	164.9 ± 5.38	n = 14	[CUL] Coulter UniCel DxH 800
107.1 ± 7.18	560.9 ± 16.17	244.0 ± 13.00	769.4 ± 24.33	187.9 ± 8.57	n = 8	[CUS] Coulter ACT 5 diff
92.0 ± 5.36	525.9 ± 17.58	227.3 ± 10.22	716.0 ± 25.15	171.8 ± 8.03	n = 28	[CUT] Coulter ACT series,not ACT5 diff
90.8 ± 4.06	508.2 ± 15.69	218.5 ± 4.98	688.0 ± 19.13	167.9 ± 4.51	n = 13	[CUW] Coulter HMX
92.7 ± 2.67	512.6 ± 13.40	224.8 ± 5.75	702.1 ± 15.83	170.8 ± 4.62	n = 72	[CUX] Coulter LH750,755
92.5 ± 2.62	511.5 ± 9.35	224.7 ± 4.80	693.8 ± 11.47	171.2 ± 4.73	n = 21	[CUY] Coulter LH 780
92.9 ± 4.56	522.5 ± 17.32	220.1 ± 7.04	716.8 ± 22.06	168.6 ± 7.84	n = 23	[CUZ] Coulter LH500
102.6 ± 6.15	567.9 ± 11.15	243.6 ± 6.93	776.4 ± 20.41	193.7 ± 9.76	n = 8	[ROB] ABX Pentra series
94.9 ± 5.22	583.2 ± 15.19	237.1 ± 7.17	776.3 ± 29.63	177.1 ± 8.08	n = 3	[SYB] Sysmex KX-21N
89.6 ± 2.66	493.9 ± 17.82	205.5 ± 6.93	692.9 ± 18.11	158.5 ± 6.89	n = 23	[SYO] Sysmex XE2100
102.1 ± 4.18	587.7 ± 11.67	250.7 ± 6.83	836.9 ± 9.84	186.9 ± 6.40	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
88.3 ± 3.66	488.0 ± 22.25	204.2 ± 7.31	677.8 ± 21.67	157.4 ± 5.08	n = 21	[SYA] Sysmex XE 5000
99.3 ± 4.60	563.1 ± 20.33	237.9 ± 6.63	788.4 ± 22.67	183.7 ± 6.04	n = 24	[SYI] Sysmex XT-1800i,XT-2000i
99.8 ± 5.97	560.6 ± 4.88	241.2 ± 11.47	798.9 ± 28.65	186.4 ± 9.08	n = 5	[SYV] Sysmex XT 4000i
95.4 ± 3.90	546.2 ± 10.57	227.8 ± 5.34	765.9 ± 15.85	173.1 ± 3.32	n = 16	[SYP] Sysmex XS-1000i,XS-1000iAL

Summary of Participant Responses
 Mean ± One Standard Deviation

Prothrombin Time (seconds)

Specimen: C56 -----	Specimen: C57 -----	Specimen: C58 -----	Specimen: C59 -----	Specimen: C60 -----	Number -----	[Code] Instrument or Reagent -----
27.87 ± 4.02	42.79 ± 7.11	42.87 ± 7.15	11.48 ± 0.65	11.95 ± 0.74	n = 326	[---] All Methods & Instruments
<Instruments>						
23.16 ± 2.74	35.15 ± 7.36	35.83 ± 6.90	11.47 ± 0.77	11.51 ± 0.80	n = 3	[BBA] BBL Fibrometer
25.70 ± 0.92	38.94 ± 1.63	39.20 ± 1.83	11.40 ± 0.30	11.34 ± 0.25	n = 20	[BEB] Dade-Behring BCS,BCSXP
31.21 ± 2.17	46.96 ± 3.99	46.42 ± 3.16	13.00 ± 0.73	13.88 ± 0.77	n = 3	[BXE] Trinity Biotech MDA
31.13 ± 1.27	47.91 ± 2.67	47.77 ± 2.63	12.85 ± 0.48	13.37 ± 0.48	n = 31	[DGC] Diagnostica Stago STA Compact
31.43 ± 0.84	47.55 ± 1.69	47.96 ± 1.87	13.27 ± 0.36	13.80 ± 0.32	n = 13	[DGD] Diagnostica Stago STA-R, STA-R Ev
21.39 ± 1.44	29.67 ± 1.64	29.63 ± 1.69	12.00 ± 0.64	12.10 ± 0.60	n = 15	[ILA] IL ACL(All models except 810,ELIT
30.35 ± 6.50	47.44 ± 12.25	47.34 ± 12.32	11.31 ± 0.41	12.08 ± 0.41	n = 31	[ILC] IL ACL Futura/Advance
27.19 ± 4.24	42.08 ± 8.37	41.80 ± 7.98	11.26 ± 0.37	12.07 ± 0.31	n = 36	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
31.23 ± 2.01	48.69 ± 2.96	49.14 ± 3.41	11.41 ± 0.46	12.11 ± 0.50	n = 54	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
26.08 ± 1.35	39.23 ± 2.13	39.68 ± 1.81	11.02 ± 0.35	11.32 ± 0.33	n = 37	[SYW] Sysmex CA500,540,560
25.90 ± 0.93	39.92 ± 1.60	39.61 ± 1.83	11.36 ± 0.25	11.57 ± 0.23	n = 55	[SYX] Sysmex CA 1500
25.82 ± 0.61	39.41 ± 1.14	39.32 ± 0.86	11.60 ± 0.22	11.85 ± 0.19	n = 17	[SYY] Sysmex CA 7000
32.07 ± 1.13	50.05 ± 0.63	49.70 ± 1.56	14.70 ± 0.18	15.05 ± 0.36	n = 3	[TRE] Trinity Biotech AMAX Destiny/Dest
<Reagents>						
31.25 ± 1.11	47.77 ± 2.20	47.82 ± 2.23	13.00 ± 0.48	13.54 ± 0.49	n = 44	[TA3] STA Neoplastine CL+
25.94 ± 0.98	39.59 ± 1.73	39.58 ± 1.74	11.30 ± 0.36	11.50 ± 0.33	n = 131	[TD2] Dade Innovin
21.05 ± 1.05	29.56 ± 1.50	29.47 ± 1.48	11.69 ± 0.66	12.09 ± 0.57	n = 35	[TJ2] HemosIL PT-Fibrinogen
30.97 ± 2.56	48.41 ± 4.11	48.58 ± 4.50	11.33 ± 0.42	12.10 ± 0.41	n = 99	[TJ8] HemosIL RecombiPlasTin 2G
32.07 ± 1.13	50.05 ± 0.63	49.70 ± 1.56	14.70 ± 0.18	15.05 ± 0.36	n = 3	[TK3] Trin Bio TriniCLOT PT Excels (Sim
29.89 ± 1.77	45.72 ± 3.66	45.17 ± 2.67	12.42 ± 0.49	13.34 ± 0.71	n = 3	[TK6] Trinity Biotech TriniCLOT PT HTF
20.93 ± 0.81	29.70 ± 1.54	30.12 ± 2.22	11.63 ± 0.54	11.75 ± 0.39	n = 4	[TP2] Fisher/PH Thromboplastin D

Summary of Participant Responses

Mean ± One Standard Deviation

Prothrombin Time (seconds) - continued

Specimen: C56	Specimen: C57	Specimen: C58	Specimen: C59	Specimen: C60	Number	[Code] Reagent & Instrument
31.13 ± 1.27	47.91 ± 2.67	47.77 ± 2.63	12.85 ± 0.48	13.37 ± 0.48	n = 31	[TA3]&[DGC] STA Neoplastin & Diagnostica St
31.47 ± 0.71	47.78 ± 1.16	48.18 ± 1.27	13.30 ± 0.31	13.83 ± 0.26	n = 11	[TA3]&[DGD] STA Neoplastin & Diagnostica St
25.70 ± 0.92	38.94 ± 1.63	39.20 ± 1.83	11.40 ± 0.30	11.34 ± 0.25	n = 20	[TD2]&[BEB] Dade Innovin & Dade-Behring B
26.08 ± 1.35	39.23 ± 2.13	39.68 ± 1.81	11.02 ± 0.35	11.32 ± 0.33	n = 37	[TD2]&[SYW] Dade Innovin & Sysmex CA500,5
25.91 ± 0.94	39.96 ± 1.60	39.64 ± 1.85	11.36 ± 0.25	11.57 ± 0.23	n = 54	[TD2]&[SYX] Dade Innovin & Sysmex CA 1500
25.82 ± 0.61	39.41 ± 1.14	39.32 ± 0.86	11.60 ± 0.22	11.85 ± 0.19	n = 17	[TD2]&[SYY] Dade Innovin & Sysmex CA 7000
21.50 ± 1.45	29.78 ± 1.67	29.78 ± 1.67	12.07 ± 0.55	12.15 ± 0.53	n = 14	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
20.84 ± 0.64	29.66 ± 1.09	29.39 ± 1.05	10.96 ± 0.20	11.64 ± 0.36	n = 9	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
20.92 ± 0.89	29.19 ± 1.54	29.28 ± 1.58	11.68 ± 0.41	12.27 ± 0.52	n = 10	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
33.51 ± 2.54	53.23 ± 5.13	53.39 ± 4.94	11.42 ± 0.38	12.21 ± 0.30	n = 20	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
29.09 ± 2.08	45.86 ± 3.49	45.41 ± 3.09	11.15 ± 0.27	12.03 ± 0.27	n = 26	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
31.12 ± 1.96	48.57 ± 2.96	48.97 ± 3.42	11.38 ± 0.45	12.08 ± 0.49	n = 52	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
32.07 ± 1.13	50.05 ± 0.63	49.70 ± 1.56	14.70 ± 0.18	15.05 ± 0.36	n = 3	[TK3]&[TRE] Trin Bio Trini & Trinity Biotec

Summary of Participant Responses
 Mean ± One Standard Deviation

Act Partial Thromboplastin Time (seconds)

Specimen: C56 -----	Specimen: C57 -----	Specimen: C58 -----	Specimen: C59 -----	Specimen: C60 -----	Number	[Code] Instrument or Reagent -----
57.75 ± 5.96	75.97 ± 7.24	76.21 ± 7.32	28.02 ± 1.90	31.45 ± 2.08	n = 318	[---] All Methods & Instruments
<Instruments>						
53.71 ± 3.42	68.65 ± 3.67	69.08 ± 3.33	26.37 ± 1.88	28.40 ± 1.70	n = 21	[BEB] Dade-Behring BCS,BCSXP
53.27 ± 4.19	71.74 ± 3.99	71.86 ± 3.98	26.47 ± 1.04	28.39 ± 1.24	n = 3	[BXE] Trinity Biotech MDA
55.09 ± 2.53	71.83 ± 2.66	73.88 ± 3.39	30.08 ± 0.41	32.75 ± 0.81	n = 3	[DGB] Diagnostica Stago STA
54.51 ± 2.72	72.49 ± 3.05	72.66 ± 2.93	30.12 ± 1.00	33.22 ± 1.04	n = 29	[DGC] Diagnostica Stago STA Compact
52.21 ± 1.56	69.72 ± 2.04	70.36 ± 1.86	29.68 ± 1.06	31.83 ± 1.25	n = 12	[DGD] Diagnostica Stago STA-R, STA-R Ev
56.17 ± 5.97	73.81 ± 8.05	74.08 ± 7.95	27.86 ± 0.79	30.68 ± 1.64	n = 16	[ILA] IL ACL(All models except 810,ELIT
65.76 ± 1.63	86.01 ± 2.47	85.65 ± 2.41	27.81 ± 1.45	31.69 ± 1.74	n = 32	[ILC] IL ACL Futura/Advance
60.62 ± 6.66	79.05 ± 8.25	79.88 ± 8.33	28.26 ± 1.12	31.29 ± 1.64	n = 34	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
63.23 ± 1.67	81.88 ± 2.05	82.52 ± 2.45	29.51 ± 0.92	33.44 ± 1.16	n = 51	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
54.13 ± 2.75	72.85 ± 3.51	72.45 ± 3.61	26.01 ± 1.47	29.93 ± 1.57	n = 36	[SYW] Sysmex CA500,540,560
55.43 ± 2.08	73.16 ± 2.56	73.17 ± 2.69	27.07 ± 1.34	30.79 ± 1.30	n = 55	[SYX] Sysmex CA 1500
55.19 ± 2.05	72.40 ± 3.06	72.47 ± 2.81	27.83 ± 1.10	31.27 ± 1.44	n = 15	[SYY] Sysmex CA 7000
55.98 ± 4.77	78.72 ± 5.63	81.33 ± 5.61	29.27 ± 0.59	32.13 ± 0.42	n = 3	[TRE] Trinity Biotech AMAX Destiny/Dest
<Reagents>						
53.93 ± 2.68	71.71 ± 3.07	72.10 ± 2.96	30.00 ± 0.87	32.85 ± 1.13	n = 42	[AA2] Diagnostica Stago STA PTT-Auto
76.92 ± 3.37	105.31 ± 8.66	104.19 ± 6.38	25.98 ± 1.36	30.22 ± 0.92	n = 5	[AD2] Dade Actin
94.68 ± 1.72	123.50 ± 3.52	123.71 ± 3.63	29.91 ± 5.74	30.09 ± 1.20	n = 7	[AD3] Dade Actin FS
54.87 ± 2.58	72.48 ± 3.44	72.39 ± 3.42	26.73 ± 1.57	30.33 ± 1.75	n = 117	[AD4] Dade Actin FSL
52.74 ± 1.46	69.65 ± 1.53	69.87 ± 1.62	27.20 ± 1.57	29.74 ± 1.66	n = 29	[AJ3] HemosIL Test APTT-SP
58.23 ± 0.91	79.55 ± 3.82	79.72 ± 4.41	27.50 ± 2.84	29.88 ± 3.47	n = 5	[AK3] Trin Bio TriniCLOT aPTTS (Plateli
51.05 ± 2.70	69.85 ± 0.54	69.77 ± 1.31	25.90 ± 0.18	27.22 ± 0.86	n = 3	[AK5] Trinity Biotech MDA Platelin L
64.30 ± 2.30	83.48 ± 3.24	83.84 ± 2.96	28.92 ± 1.11	32.73 ± 1.42	n = 103	[AO4] HemosIL SynthASil

Summary of Participant Responses

Mean ± One Standard Deviation

Act Partial Thromboplastin Time (seconds) - continued

Specimen: C56	Specimen: C57	Specimen: C58	Specimen: C59	Specimen: C60	Number	[Code] Reagent & Instrument
55.09 ± 2.53	71.83 ± 2.66	73.88 ± 3.39	30.08 ± 0.41	32.75 ± 0.81	n = 3	[AA2]&[DGB] Diagnostica St & Diagnostica St
54.51 ± 2.72	72.49 ± 3.05	72.66 ± 2.93	30.12 ± 1.00	33.22 ± 1.04	n = 29	[AA2]&[DGC] Diagnostica St & Diagnostica St
52.19 ± 1.55	69.71 ± 2.03	70.35 ± 1.85	29.73 ± 0.66	31.91 ± 0.79	n = 10	[AA2]&[DGD] Diagnostica St & Diagnostica St
93.65 ± 5.84	122.41 ± 2.88	122.56 ± 3.18	33.64 ± 7.24	30.93 ± 0.91	n = 4	[AD3]&[SYX] Dade Actin FS & Sysmex CA 1500
53.44 ± 2.89	68.52 ± 3.36	68.99 ± 3.12	25.95 ± 1.66	28.28 ± 1.77	n = 17	[AD4]&[BEB] Dade Actin FSL & Dade-Behring B
54.13 ± 2.75	72.85 ± 3.51	72.45 ± 3.61	26.03 ± 1.50	29.94 ± 1.64	n = 33	[AD4]&[SYW] Dade Actin FSL & Sysmex CA500,5
55.43 ± 2.08	73.16 ± 2.55	73.17 ± 2.69	27.04 ± 1.38	30.79 ± 1.33	n = 50	[AD4]&[SYX] Dade Actin FSL & Sysmex CA 1500
55.19 ± 2.05	72.40 ± 3.06	72.47 ± 2.81	27.83 ± 1.10	31.27 ± 1.44	n = 15	[AD4]&[SYY] Dade Actin FSL & Sysmex CA 7000
53.28 ± 1.49	69.98 ± 1.39	70.16 ± 1.23	27.72 ± 0.97	30.38 ± 1.96	n = 12	[AJ3]&[ILA] HemosIL Test A & IL ACL(All mod
51.56 ± 1.29	67.45 ± 1.43	67.39 ± 1.29	24.98 ± 0.36	28.31 ± 0.78	n = 5	[AJ3]&[ILC] HemosIL Test A & IL ACL Futura/
52.73 ± 1.19	69.92 ± 1.15	70.40 ± 1.26	27.52 ± 1.21	29.86 ± 1.34	n = 12	[AJ3]&[ILD] HemosIL Test A & IL ACL(ELITE,E
55.98 ± 4.77	78.72 ± 5.63	81.33 ± 5.61	29.27 ± 0.59	32.13 ± 0.42	n = 3	[AK3]&[TRE] Trin Bio Trini & Trinity Biotec
66.43 ± 2.18	87.84 ± 2.93	86.88 ± 2.56	28.06 ± 0.39	31.31 ± 0.24	n = 4	[AO4]&[ILA] HemosIL SynthA & IL ACL(All mod
65.88 ± 1.68	86.18 ± 2.50	85.69 ± 2.52	28.16 ± 0.95	32.09 ± 1.26	n = 25	[AO4]&[ILC] HemosIL SynthA & IL ACL Futura/
64.55 ± 2.87	83.76 ± 3.51	84.54 ± 3.17	28.59 ± 0.92	32.01 ± 1.20	n = 22	[AO4]&[ILD] HemosIL SynthA & IL ACL(ELITE,E
63.23 ± 1.67	81.88 ± 2.05	82.52 ± 2.45	29.51 ± 0.92	33.44 ± 1.16	n = 51	[AO4]&[ILE] HemosIL SynthA & IL ACL TOP Ser

Summary of Participant Responses
 Mean ± One Standard Deviation

Fibrinogen (mg/dL)

Specimen: C56 -----	Specimen: C57 -----	Specimen: C58 -----	Specimen: C59 -----	Specimen: C60 -----	Number -----	[Code] Instrument or Reagent -----
273.2 ± 32.99	272.3 ± 35.59	272.5 ± 36.65	278.1 ± 29.29	456.8 ± 59.54	n = 217	[---] All Methods & Instruments
<Instruments>						
290.1 ± 19.43	292.4 ± 20.13	291.3 ± 21.95	288.4 ± 16.48	521.2 ± 32.64	n = 20	[BEB] Dade-Behring BCS,BCSXP
278.5 ± 16.10	276.8 ± 10.79	279.3 ± 13.11	286.7 ± 11.53	502.7 ± 21.82	n = 26	[DGC] Diagnostica Stago STA Compact
268.3 ± 8.30	268.6 ± 9.13	269.1 ± 6.95	282.0 ± 10.71	493.0 ± 17.46	n = 13	[DGD] Diagnostica Stago STA-R, STA-R Ev
360.6 ± 26.07	356.3 ± 41.98	355.3 ± 27.56	289.6 ± 39.06	439.0 ± 31.67	n = 4	[ILA] IL ACL(All models except 810,ELIT
321.6 ± 37.04	353.0 ± 44.14	354.4 ± 42.15	260.9 ± 38.06	395.8 ± 68.05	n = 25	[ILC] IL ACL Futura/Advance
322.3 ± 61.28	350.6 ± 88.05	352.3 ± 88.39	312.8 ± 24.28	554.1 ± 87.34	n = 11	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
279.3 ± 33.18	278.5 ± 34.60	276.8 ± 32.79	297.4 ± 25.03	464.6 ± 39.78	n = 47	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
258.7 ± 13.06	250.0 ± 11.12	238.8 ± 15.01	264.2 ± 7.88	427.6 ± 20.79	n = 6	[SYW] Sysmex CA500,540,560
246.9 ± 15.25	244.3 ± 14.18	246.4 ± 14.52	254.2 ± 17.72	416.9 ± 24.10	n = 44	[SYX] Sysmex CA 1500
244.9 ± 15.71	248.7 ± 15.96	245.3 ± 13.33	250.9 ± 18.14	414.7 ± 16.89	n = 13	[SYY] Sysmex CA 7000
<Reagents>						
359.6 ± 44.48	377.1 ± 45.03	378.9 ± 45.47	300.0 ± 34.02	448.6 ± 43.79	n = 13	[TJ2] HemosIL PT-Fibrinogen
314.6 ± 19.82	328.6 ± 36.95	327.2 ± 37.88	288.2 ± 43.53	421.5 ± 61.61	n = 37	[TJ8] HemosIL RecombiPlasTin 2G
274.7 ± 14.13	274.4 ± 11.27	275.7 ± 12.65	285.5 ± 11.57	499.7 ± 20.58	n = 40	[FA4] Stago STA-Fibrinogen 5
293.8 ± 17.75	297.8 ± 17.58	296.6 ± 20.08	289.3 ± 17.46	525.5 ± 25.46	n = 16	[FB2] Behring Multifibren U
248.8 ± 16.38	246.9 ± 15.36	246.5 ± 15.41	256.3 ± 18.61	418.7 ± 23.83	n = 67	[FD2] Dade Fib (thrombin)
265.0 ± 19.05	270.8 ± 17.71	270.6 ± 21.76	293.5 ± 24.64	505.0 ± 69.29	n = 25	[FJ2] HemosIL Fibrinogen C,XL
253.0 ± 12.80	262.7 ± 12.22	267.4 ± 11.79	271.6 ± 12.53	407.3 ± 27.01	n = 3	[FM1] Kamiya K-Assay Fibrinogen
259.3 ± 15.81	246.7 ± 13.94	250.0 ± 18.13	280.9 ± 18.89	478.3 ± 69.55	n = 11	[FO3] HemosIL QFA(bovine)

Summary of Participant Responses

Mean ± One Standard Deviation

Fibrinogen (mg/dL) - continued

Specimen: C56	Specimen: C57	Specimen: C58	Specimen: C59	Specimen: C60	Number	[Code] Reagent & Instrument
360.6 ± 26.07	356.3 ± 41.98	355.3 ± 27.56	289.6 ± 39.06	439.0 ± 31.67	n = 4	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
360.0 ± 47.78	368.4 ± 38.33	372.3 ± 44.40	295.9 ± 27.18	452.4 ± 38.81	n = 6	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
362.3 ± 61.80	419.7 ± 30.16	425.5 ± 31.75	326.9 ± 39.34	471.9 ± 73.50	n = 3	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
321.0 ± 14.67	359.4 ± 26.76	359.3 ± 22.68	235.5 ± 13.90	352.4 ± 21.49	n = 14	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
309.0 ± 18.99	310.4 ± 17.50	306.2 ± 18.19	315.5 ± 12.77	458.9 ± 24.79	n = 21	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
278.5 ± 16.10	276.8 ± 10.79	279.3 ± 13.11	286.7 ± 11.53	502.7 ± 21.82	n = 26	[FA4]&[DGC] Stago STA-Fibr & Diagnostica St
268.3 ± 8.30	268.6 ± 9.13	269.1 ± 6.95	282.0 ± 10.71	493.0 ± 17.46	n = 13	[FA4]&[DGD] Stago STA-Fibr & Diagnostica St
293.8 ± 17.75	297.8 ± 17.58	296.6 ± 20.08	289.3 ± 17.46	525.5 ± 25.46	n = 16	[FB2]&[BEB] Behring Multif & Dade-Behring B
274.5 ± 16.30	272.0 ± 10.89	270.9 ± 15.33	285.2 ± 12.46	482.6 ± 47.79	n = 4	[FD2]&[BEB] Dade Fib (thro & Dade-Behring B
258.7 ± 13.06	250.0 ± 11.12	238.8 ± 15.01	264.2 ± 7.88	427.6 ± 20.79	n = 6	[FD2]&[SYW] Dade Fib (thro & Sysmex CA500,5
246.9 ± 15.25	244.3 ± 14.18	246.4 ± 14.52	254.2 ± 17.72	416.9 ± 24.10	n = 44	[FD2]&[SYX] Dade Fib (thro & Sysmex CA 1500
244.9 ± 15.71	248.7 ± 15.96	245.3 ± 13.33	250.9 ± 18.14	414.7 ± 16.89	n = 13	[FD2]&[SYY] Dade Fib (thro & Sysmex CA 7000
269.8 ± 8.70	282.0 ± 16.24	290.7 ± 16.93	312.9 ± 14.68	504.8 ± 27.50	n = 3	[FJ2]&[ILC] HemosIL Fibrin & IL ACL Futura/
285.2 ± 13.48	284.6 ± 10.05	287.2 ± 14.28	312.5 ± 14.20	609.6 ± 30.27	n = 6	[FJ2]&[ILD] HemosIL Fibrin & IL ACL(ELITE,E
256.3 ± 15.46	263.0 ± 15.21	260.5 ± 17.56	281.6 ± 21.86	469.8 ± 35.72	n = 16	[FJ2]&[ILE] HemosIL Fibrin & IL ACL TOP Ser
258.1 ± 16.70	245.1 ± 13.90	247.0 ± 16.10	280.4 ± 20.03	476.7 ± 73.90	n = 10	[FO3]&[ILE] HemosIL QFA(bo & IL ACL TOP Ser

Summary of Participant Responses
 Mean ± One Standard Deviation

INR (International Normalized Ratio)

Specimen: C56 -----	Specimen: C57 -----	Specimen: C58 -----	Specimen: C59 -----	Specimen: C60 -----	Number	[Code] Instrument or Reagent -----
2.692 ± 0.261	4.282 ± 0.583	4.289 ± 0.585	1.036 ± 0.062	1.083 ± 0.050	n = 328	[---] All Methods & Instruments
<Instruments>						
2.711 ± 0.253	4.959 ± 1.005	5.230 ± 1.032	0.992 ± 0.015	0.997 ± 0.005	n = 3	[BBA] BBL Fibrometer
2.665 ± 0.131	4.041 ± 0.223	4.072 ± 0.239	1.077 ± 0.047	1.082 ± 0.042	n = 20	[BEB] Dade-Behring BCS,BCSXP
3.016 ± 0.126	4.925 ± 0.388	4.865 ± 0.252	1.040 ± 0.055	1.120 ± 0.036	n = 3	[BXE] Trinity Biotech MDA
3.084 ± 0.162	5.406 ± 0.391	5.387 ± 0.347	0.980 ± 0.056	1.039 ± 0.049	n = 31	[DGC] Diagnostica Stago STA Compact
3.000 ± 0.217	5.128 ± 0.445	5.202 ± 0.483	1.012 ± 0.042	1.086 ± 0.044	n = 13	[DGD] Diagnostica Stago STA-R, STA-R Ev
2.790 ± 0.292	4.893 ± 0.380	4.946 ± 0.387	1.014 ± 0.073	1.038 ± 0.089	n = 16	[ILA] IL ACL(All models except 810,ELIT
2.839 ± 0.200	4.623 ± 0.383	4.599 ± 0.379	1.007 ± 0.050	1.086 ± 0.053	n = 31	[ILC] IL ACL Futura/Advance
2.722 ± 0.216	4.511 ± 0.436	4.451 ± 0.393	1.004 ± 0.058	1.085 ± 0.070	n = 35	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
2.752 ± 0.155	4.239 ± 0.225	4.267 ± 0.224	1.020 ± 0.047	1.087 ± 0.044	n = 54	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
2.564 ± 0.149	3.882 ± 0.220	3.910 ± 0.196	1.072 ± 0.045	1.096 ± 0.042	n = 39	[SYW] Sysmex CA500,540,560
2.486 ± 0.119	3.868 ± 0.215	3.844 ± 0.209	1.077 ± 0.037	1.094 ± 0.025	n = 55	[SYX] Sysmex CA 1500
2.458 ± 0.081	3.829 ± 0.107	3.803 ± 0.104	1.100 ± 0.000	1.100 ± 0.000	n = 17	[SYY] Sysmex CA 7000
2.594 ± 0.155	4.428 ± 0.285	4.344 ± 0.198	1.006 ± 0.065	1.042 ± 0.068	n = 3	[TRE] Trinity Biotech AMAX Destiny/Dest
<Reagents>						
3.067 ± 0.159	5.330 ± 0.372	5.342 ± 0.340	0.987 ± 0.052	1.050 ± 0.052	n = 44	[TA3] STA Neoplastine CL+
2.529 ± 0.140	3.889 ± 0.211	3.888 ± 0.212	1.079 ± 0.039	1.096 ± 0.020	n = 133	[TD2] Dade Innovin
2.764 ± 0.245	4.859 ± 0.405	4.851 ± 0.398	0.995 ± 0.077	1.055 ± 0.089	n = 35	[TJ2] HemosIL PT-Fibrinogen
2.772 ± 0.178	4.331 ± 0.313	4.328 ± 0.293	1.017 ± 0.043	1.090 ± 0.044	n = 99	[TJ8] HemosIL RecombiPlasTin 2G
2.594 ± 0.155	4.428 ± 0.285	4.344 ± 0.198	1.006 ± 0.065	1.042 ± 0.068	n = 3	[TK3] Trin Bio TriniCLOT PT Excels (Sim
2.941 ± 0.171	4.815 ± 0.363	4.763 ± 0.272	1.019 ± 0.057	1.103 ± 0.045	n = 4	[TK6] Trinity Biotech TriniCLOT PT HTF
2.585 ± 0.300	4.882 ± 0.724	5.009 ± 0.932	0.930 ± 0.161	0.952 ± 0.122	n = 4	[TP2] Fisher/PH Thromboplastin D

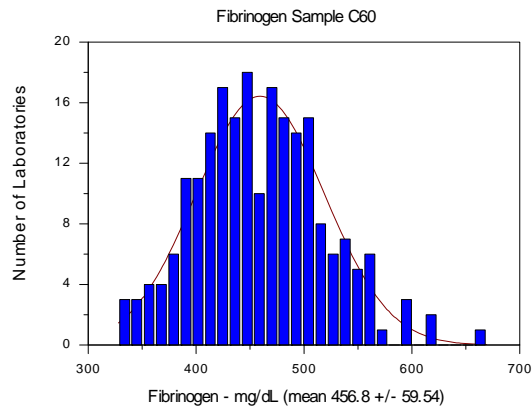
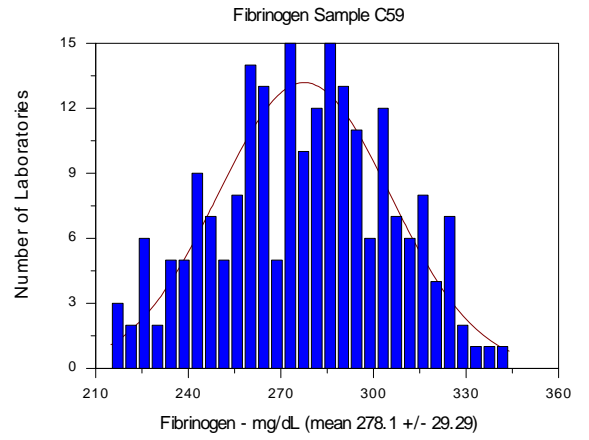
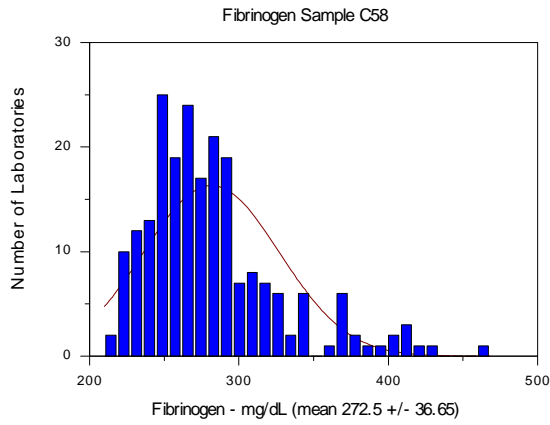
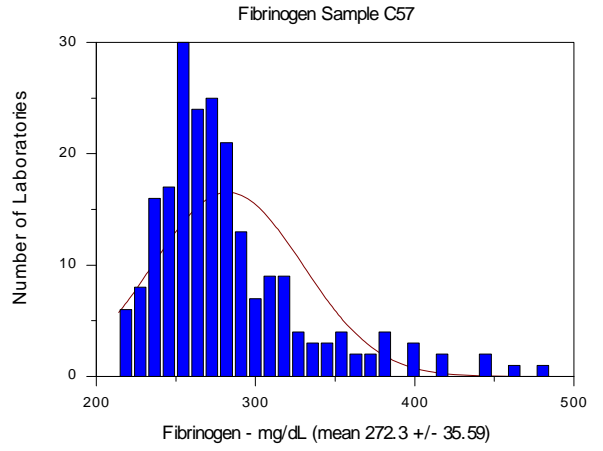
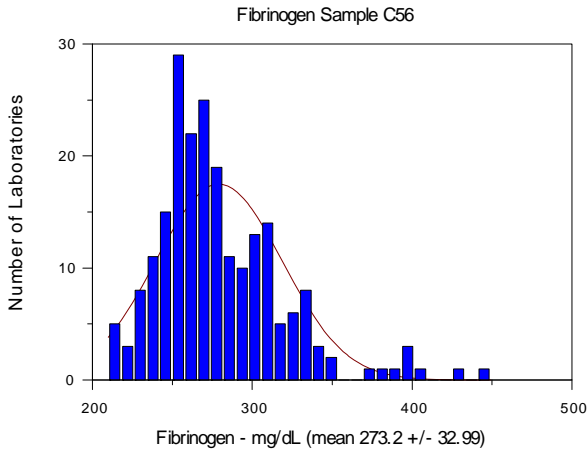
Summary of Participant Responses

Mean ± One Standard Deviation

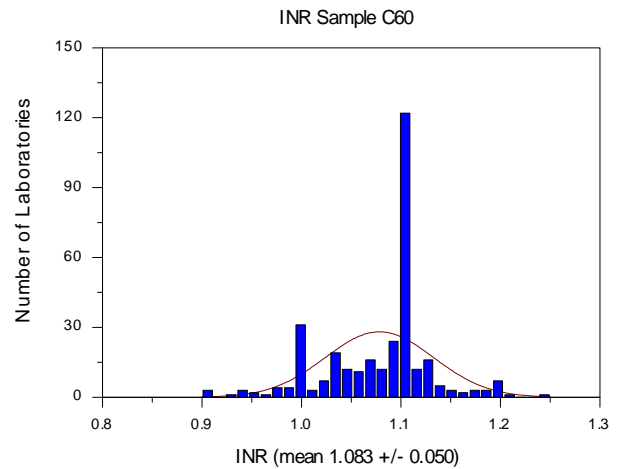
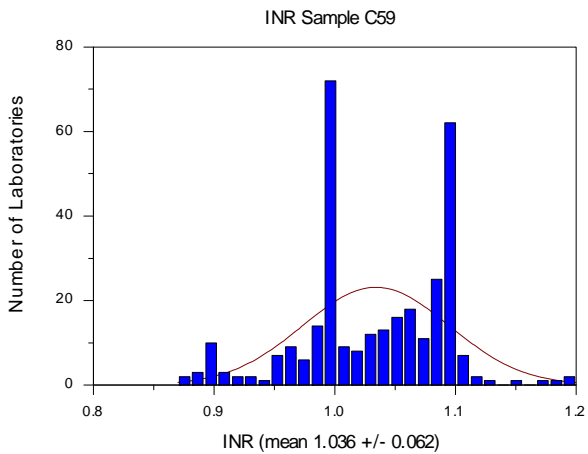
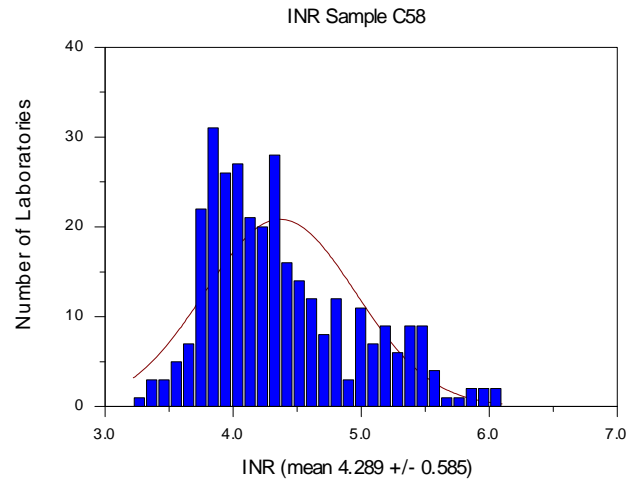
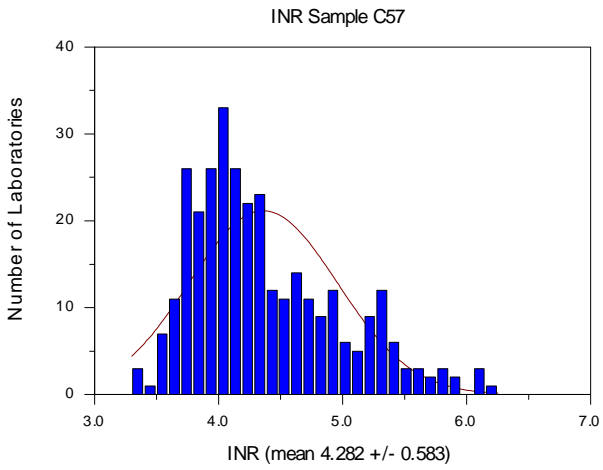
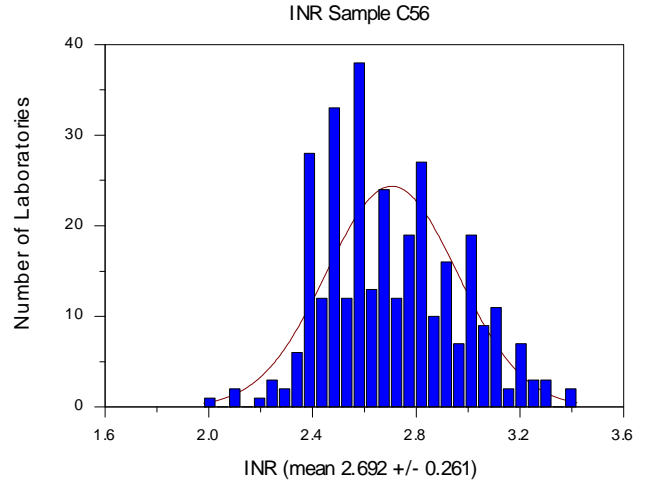
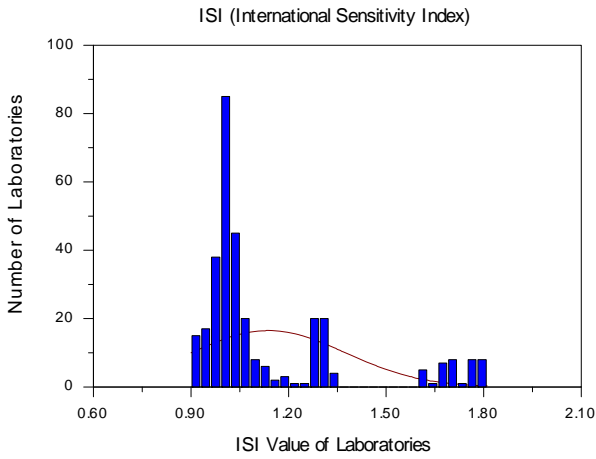
INR (International Normalized Ratio) - continued

Specimen: C56	Specimen: C57	Specimen: C58	Specimen: C59	Specimen: C60	Number	[Code] Reagent & Instrument
3.084 ± 0.162	5.406 ± 0.391	5.387 ± 0.347	0.980 ± 0.056	1.039 ± 0.049	n = 31	[TA3]&[DGC] STA Neoplastin & Diagnostica St
3.051 ± 0.151	5.214 ± 0.292	5.299 ± 0.291	1.007 ± 0.038	1.080 ± 0.049	n = 11	[TA3]&[DGD] STA Neoplastin & Diagnostica St
2.665 ± 0.131	4.041 ± 0.223	4.072 ± 0.239	1.077 ± 0.047	1.082 ± 0.042	n = 20	[TD2]&[BEB] Dade Innovin & Dade-Behring B
2.564 ± 0.149	3.882 ± 0.220	3.910 ± 0.196	1.072 ± 0.045	1.096 ± 0.042	n = 39	[TD2]&[SYW] Dade Innovin & Sysmex CA500,5
2.489 ± 0.116	3.874 ± 0.209	3.849 ± 0.204	1.078 ± 0.036	1.095 ± 0.024	n = 54	[TD2]&[SYX] Dade Innovin & Sysmex CA 1500
2.458 ± 0.081	3.829 ± 0.107	3.803 ± 0.104	1.100 ± 0.000	1.100 ± 0.000	n = 17	[TD2]&[SYY] Dade Innovin & Sysmex CA 7000
2.825 ± 0.265	4.918 ± 0.383	4.984 ± 0.370	1.014 ± 0.071	1.042 ± 0.081	n = 15	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
2.710 ± 0.204	4.869 ± 0.392	4.785 ± 0.375	0.952 ± 0.060	1.039 ± 0.070	n = 9	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
2.670 ± 0.206	4.850 ± 0.443	4.788 ± 0.415	0.988 ± 0.080	1.073 ± 0.108	n = 9	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
2.899 ± 0.172	4.567 ± 0.337	4.567 ± 0.341	1.023 ± 0.037	1.103 ± 0.031	n = 20	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
2.739 ± 0.214	4.421 ± 0.376	4.360 ± 0.339	1.010 ± 0.047	1.091 ± 0.055	n = 26	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
2.745 ± 0.152	4.227 ± 0.222	4.255 ± 0.217	1.017 ± 0.045	1.084 ± 0.041	n = 52	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
2.594 ± 0.155	4.428 ± 0.285	4.344 ± 0.198	1.006 ± 0.065	1.042 ± 0.068	n = 3	[TK3]&[TRE] Trin Bio Trini & Trinity Biotec
3.016 ± 0.126	4.925 ± 0.388	4.865 ± 0.252	1.040 ± 0.055	1.120 ± 0.036	n = 3	[TK6]&[BXE] Trinity Biotec & Trinity Biotec

Hematology Proficiency Test Event
February 6, 2012
Fibrinogen Data



Hematology Proficiency Test Event
February 6, 2012
International Sensitivity Index (ISI) and International Normalized Ratio (INR)

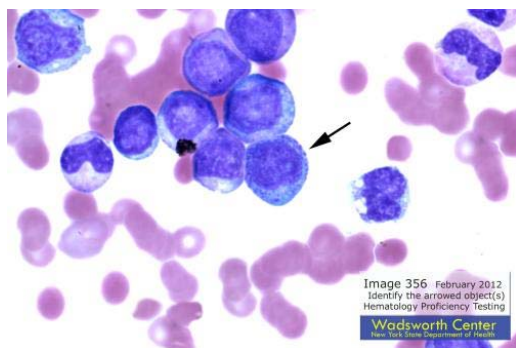


NEW YORK STATE HEMATOLOGY PROFICIENCY TESTING PROGRAM

February 6, 2012

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 356



The arrowed cell in Image 356 is large and the nuclear chromatin shows areas of slight clumping and faint nucleoli. Primary granules are present. These characteristics support the identification of this cell as a promyelocyte as 71.8% of participants reported.

Image 356 was taken from the case of Refractory Anemia that transformed to Acute Myelogenous Leukemia (AML) used in the November 2008 Cytohematology proficiency test challenge, Slide 073.

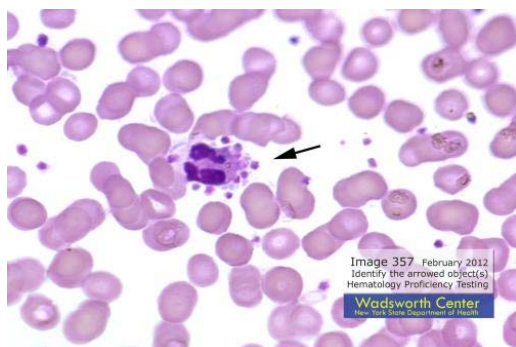
<http://www.wadsworth.org/chemheme/heme/glass/slide073.pdf>.

Blast cells and promyelocytes were reported present in this case; participant median for myeloblast/promyelocyte was five.

Due to lack of 80% participant consensus, pass credit was issued.

Number of Responses	Percent of Laboratories	Cell type or finding
265	71.8%	Promyelocyte
75	20.3%	Blast cell, not classified
12	3.3%	Myelocyte
8	2.2%	Myeloblast
3	0.8%	Metamyelocyte
3	0.8%	Reactive/Atypical lymphocyte
2	0.5%	Lymphoblast
1	0.3%	Lymphoma/Sézary cell

Image 357

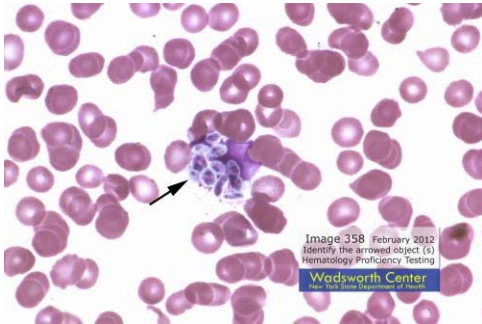


The arrowed segmented neutrophil is surrounded by platelets and was correctly reported by 369 participants as platelet satellitosis. The image was taken from a thirteen year-old female who presented with eosinophilia .

Platelet satellitosis or satellitism is a phenomenon that was first reported in 1963 as a possible cause of thrombocytopenia. It is observed most commonly in peripheral blood collected in ethylene diaminetetracetic acid (EDTA). In the presence of EDTA, IgG coats platelets and the antibody-coated platelets attach to, most commonly, neutrophils and very rarely to monocytes. The platelets that are adhered to the cell are not counted by automated cell counters causing a false low platelet count. When a low platelet count is verified by review of the peripheral smear the examiner should consider platelet satellitosis in addition to platelet clumping.

Number of Responses	Percent of Laboratories	Cell type or finding
369	100.0%	Platelet satellitosis

Image 358



The arrowed object in Image 358 might, at quick glance, appear to include multiple “lobes”. After closer examination, however, it is evident the “lobes” are delineated and possess a distinct lighter area (halo) around the periphery. A clear halo is formed around the yeast/fungi organism after it is engulfed by either a neutrophil or a monocyte. The arrowed object in Image 358 was correctly identified by 86.2% of participants as Yeast-Fungus.

Number of Responses	Percent of Laboratories	Cell type or finding
318	86.2%	Yeast-Fungus
36	9.8%	Parasite
11	3.0%	Platelet clump(s)
1	0.3%	Smudge cell/Basket cell
1	0.3%	Platelet
1	0.3%	Giant platelet
1	0.3%	Stain precipitate

Image 359

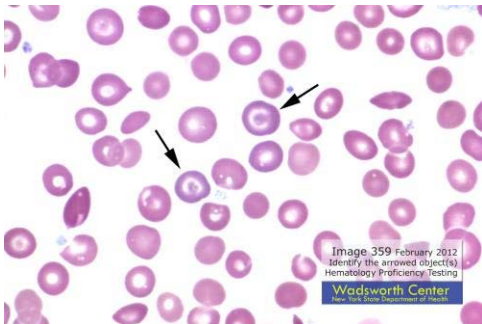
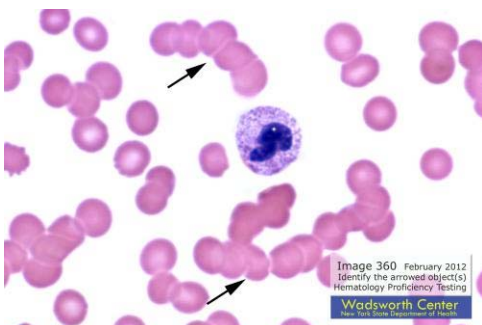


Image 359 was taken from the case of sickle cell anemia used in the November 2009 Cytohematology proficiency test challenge, Slide 076. <http://www.wadsworth.org/chemheme/heme/glass/slide076.pdf>. The arrowed cells in Image 359 were easily recognized by 368 participants as target cells. There was a high prevalence of target cells in this case. Ninety-five percent of participants reported their presence as a significant finding.

The most common causes of target cell formation include artifacts of air-drying (high humidity or slow drying), decreased cell volume (iron deficiency, thalassemia and hemoglobinopathies) and increased surface membranes (liver disease, asplenic).

Number of Responses	Percent of Laboratories	Cell type or finding
368	99.7%	Target cell (codocyte)
1	0.3%	Stomatocyte

Image 360



The arrowed objects are red blood cells in rouleaux formation as correctly identified by all participants. Rouleaux formation of red cells is due to increased amounts of plasma proteins and is observed in chronic liver disease, malignant lymphoma, chronic infections, inflammatory conditions and as in this case of multiple myeloma.

Number of Responses	Percent of Laboratories	Cell type or finding
369	100.0%	Rouleaux