NEW YORK
state department of
HEALTH

Nirav R. Shah, M.D., M.P.H.
Commissioner

Sue Kelly
Executive Deputy Commissioner

To: Laboratory Directors and Laboratory Staff

From: Robert Rej, Ph.D.

Date: November 9, 2012

Subject: Results of the October 15, 2012 Hematology Proficiency Test

Enclosed are results from the hematology proficiency testing survey shipped October 15, 2012. Five samples were distributed for each test category:

Routine Blood Counts	(B66, B67, B68, B69, B70)
Routine Coagulation	(C66, C67, C68, C69, C70 - APTT, PT/INR and Fibrinogen assays)
Cell Identification	(366, 367, 368, 369, 370)

Evaluation of Proficiency Test Results:

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

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

White Cell Count (x 10^9/L)

Specimen: B66	Specimen: B67	Specimen: B68	Specimen: B69	Specimen: B70	Number	[Code] Instrument
4.13 ± 0.20	18.26 ± 0.69	9.42 ± 0.43	3.07 ± 0.13	3.09 ± 0.16	n = 416	[---] All Methods & Instruments
						<Instruments>
4.26 ± 0.10	18.39 ± 0.37	9.37 ± 0.05	3.17 ± 0.05	3.03 ± 0.14	n = 3	[ABF] Abbott Cell Dyn 3500
4.23 ± 0.05	18.57 ± 0.42	9.97 ± 0.23	3.17 ± 0.05	3.23 ± 0.14	n = 3	[ABG] Abbott Cell Dyn 1700
4.01 ± 0.44	17.73 ± 1.56	9.40 ± 0.64	2.89 ± 0.29	3.13 ± 0.31	n = 3	[ABJ] Abbott Cell Dyn 1800
4.21 ± 0.11	18.69 ± 0.42	9.69 ± 0.19	3.15 ± 0.06	3.12 ± 0.04	n = 4	[ABK] Abbott Cell Dyn 3200
4.29 ± 0.14	18.32 ± 0.41	9.35 ± 0.23	3.12 ± 0.09	3.07 ± 0.08	n = 13	[ABM] Abbott Cell Dyn 3700
4.22 ± 0.16	18.25 ± 0.38	9.66 ± 0.21	3.10 ± 0.10	3.10 ± 0.12	n = 13	[ABS] Abbott Cell Dyn Sapphire
4.19 ± 0.12	18.50 ± 0.31	9.35 ± 0.12	3.12 ± 0.09	3.13 ± 0.09	n = 19	[ABT] Abbott Cell Dyn Ruby
4.17 ± 0.14	17.28 ± 0.42	9.57 ± 0.31	3.10 ± 0.00	3.32 ± 0.04	n = 5	[ABU] Abbott Cell Dyn Emerald
3.91 ± 0.17	16.62 ± 0.40	9.08 ± 0.37	2.79 ± 0.10	2.86 ± 0.09	n = 19	[BTD] Siemens Advia 120
3.87 ± 0.15	16.98 ± 0.60	9.12 ± 0.35	2.87 ± 0.13	2.89 ± 0.14	n = 28	[BTE] Siemens Advia 2120
4.22 ± 0.10	18.76 ± 0.28	9.32 ± 0.27	3.04 ± 0.06	3.19 ± 0.05	n = 28	[CUL] Coulter UniCel DxH 800
4.01 ± 0.13	18.09 ± 0.31	9.34 ± 0.16	2.98 ± 0.09	3.03 ± 0.10	n = 6	[CUS] Coulter ACT 5 diff
4.19 ± 0.13	18.52 ± 0.36	9.85 ± 0.29	3.19 ± 0.09	3.23 ± 0.08	n = 24	[CUT] Coulter ACT series,not ACT5 diff
4.18 ± 0.09	19.08 ± 0.18	10.35 ± 0.18	3.15 ± 0.07	3.33 ± 0.07	n = 10	[CUW] Coulter HMX
4.22 ± 0.08	18.29 ± 0.35	9.39 ± 0.18	3.06 ± 0.07	3.07 ± 0.11	n = 62	[CUX] Coulter LH750,755
4.23 ± 0.11	18.36 ± 0.31	9.35 ± 0.22	3.11 ± 0.09	3.11 ± 0.09	n = 18	[CUY] Coulter LH 780
4.28 ± 0.10	19.26 ± 0.28	10.30 ± 0.28	3.24 ± 0.10	3.33 ± 0.10	n = 17	[CUZ] Coulter LH500
4.00 ± 0.00	17.96 ± 0.50	9.36 ± 0.21	2.94 ± 0.11	3.01 ± 0.12	n = 7	[ROB] ABX Pentra series
4.17 ± 0.09	18.22 ± 0.31	9.85 ± 0.12	3.03 ± 0.09	3.10 ± 0.08	n = 4	[ROC] ABX Micro
4.04 ± 0.14	17.43 ± 0.61	9.24 ± 0.34	2.95 ± 0.11	2.97 ± 0.14	n = 5	[SYB] Sysmex KX-21N
3.97 ± 0.05	17.41 ± 0.52	8.90 ± 0.27	2.93 ± 0.14	2.83 ± 0.05	n = 3	[SYG] Sysmex POCHi
3.83 ± 0.16	17.83 ± 0.59	8.96 ± 0.34	3.02 ± 0.11	2.99 ± 0.13	n = 24	[SYO] Sysmex XE2100
4.02 ± 0.21	18.15 ± 0.58	9.38 ± 0.46	3.03 ± 0.08	3.07 ± 0.09	n = 4	[SYL] Sysmex XE 2100C
3.86 ± 0.06	17.84 ± 0.20	8.88 ± 0.21	3.04 ± 0.09	3.00 ± 0.10	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
3.87 ± 0.05	17.96 ± 0.61	8.97 ± 0.23	3.04 ± 0.10	3.00 ± 0.09	n = 3	[SYN] Sysmex XE 2100DC
3.90 ± 0.18	17.85 ± 0.65	9.09 ± 0.42	3.03 ± 0.12	3.03 ± 0.11	n = 28	[SYA] Sysmex XE 5000
4.09 ± 0.05	18.35 ± 0.30	9.63 ± 0.29	3.08 ± 0.10	3.07 ± 0.09	n = 22	[SYI] Sysmex XT-1800i,XT-2000i
4.16 ± 0.10	18.22 ± 0.39	9.48 ± 0.27	3.03 ± 0.09	2.98 ± 0.11	n = 9	[SYV] Sysmex XT 4000i
4.21 ± 0.11	18.78 ± 0.42	9.73 ± 0.20	3.16 ± 0.10	3.17 ± 0.07	n = 20	[SYP] Sysmex XS-1000i,XS-1000iAL
4.18 ± 0.15	18.09 ± 0.80	9.75 ± 0.54	3.42 ± 0.32	3.20 ± 0.27	n = 3	[OOO] Other

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Red Cell Count (x 10^{12}/L)

Specimen: B66	Specimen: B67	Specimen: B68	Specimen: B69	Specimen: B70	Number	[Code] Instrument
5.087 ± 0.095	3.070 ± 0.070	4.653 ± 0.089	2.043 ± 0.058	2.568 ± 0.068	n = 416	[---] All Methods & Instruments
						<Instruments>
5.128 ± 0.041	3.085 ± 0.036	4.722 ± 0.041	2.113 ± 0.034	2.645 ± 0.036	n = 3	[ABF] Abbott Cell Dyn 3500
5.174 ± 0.120	3.131 ± 0.037	4.759 ± 0.052	2.120 ± 0.027	2.645 ± 0.019	n = 3	[ABG] Abbott Cell Dyn 1700
5.182 ± 0.024	3.214 ± 0.026	4.777 ± 0.132	2.156 ± 0.062	2.708 ± 0.024	n = 3	[ABJ] Abbott Cell Dyn 1800
5.185 ± 0.049	3.116 ± 0.073	4.746 ± 0.082	2.096 ± 0.028	2.635 ± 0.028	n = 4	[ABK] Abbott Cell Dyn 3200
5.176 ± 0.058	3.145 ± 0.041	4.747 ± 0.081	2.125 ± 0.020	2.653 ± 0.042	n = 13	[ABM] Abbott Cell Dyn 3700
5.202 ± 0.103	3.105 ± 0.061	4.772 ± 0.090	2.091 ± 0.047	2.645 ± 0.079	n = 13	[ABS] Abbott Cell Dyn Sapphire
5.228 ± 0.103	3.098 ± 0.024	4.768 ± 0.121	2.076 ± 0.030	2.603 ± 0.032	n = 19	[ABT] Abbott Cell Dyn Ruby
4.839 ± 0.043	2.932 ± 0.070	4.487 ± 0.093	1.996 ± 0.053	2.507 ± 0.009	n = 5	[ABU] Abbott Cell Dyn Emerald
5.071 ± 0.105	3.106 ± 0.055	4.654 ± 0.082	2.079 ± 0.037	2.605 ± 0.052	n = 19	[BTD] Siemens Advia 120
5.059 ± 0.096	3.109 ± 0.064	4.692 ± 0.084	2.095 ± 0.044	2.614 ± 0.046	n = 29	[BTE] Siemens Advia 2120
5.002 ± 0.049	3.002 ± 0.040	4.546 ± 0.045	1.987 ± 0.029	2.516 ± 0.033	n = 28	[CUL] Coulter UniCel DxH 800
5.084 ± 0.062	3.039 ± 0.061	4.639 ± 0.051	1.996 ± 0.042	2.513 ± 0.039	n = 6	[CUS] Coulter ACT 5 diff
4.989 ± 0.104	3.002 ± 0.081	4.559 ± 0.096	1.992 ± 0.043	2.495 ± 0.039	n = 23	[CUT] Coulter ACT series,not ACT5 diff
5.025 ± 0.048	3.043 ± 0.057	4.608 ± 0.068	2.002 ± 0.036	2.543 ± 0.060	n = 10	[CUW] Coulter HMX
5.035 ± 0.044	3.020 ± 0.026	4.606 ± 0.034	1.996 ± 0.020	2.510 ± 0.023	n = 62	[CUX] Coulter LH750,755
5.041 ± 0.043	3.031 ± 0.031	4.611 ± 0.038	1.998 ± 0.014	2.516 ± 0.022	n = 18	[CUY] Coulter LH 780
5.076 ± 0.056	3.086 ± 0.039	4.631 ± 0.057	2.031 ± 0.031	2.568 ± 0.038	n = 17	[CUZ] Coulter LH500
5.142 ± 0.083	3.051 ± 0.054	4.681 ± 0.065	1.988 ± 0.036	2.517 ± 0.041	n = 7	[ROB] ABX Pentra series
5.223 ± 0.114	3.087 ± 0.043	4.773 ± 0.102	1.999 ± 0.068	2.564 ± 0.098	n = 4	[ROC] ABX Micro
5.074 ± 0.061	3.028 ± 0.031	4.631 ± 0.077	2.063 ± 0.039	2.594 ± 0.021	n = 5	[SYB] Sysmex KX-21N
5.187 ± 0.032	3.107 ± 0.014	4.723 ± 0.041	2.090 ± 0.027	2.617 ± 0.014	n = 3	[SYG] Sysmex POCHi
5.151 ± 0.044	3.131 ± 0.046	4.695 ± 0.055	2.092 ± 0.023	2.627 ± 0.033	n = 24	[SYO] Sysmex XE2100
5.150 ± 0.042	3.139 ± 0.027	4.702 ± 0.031	2.079 ± 0.011	2.620 ± 0.017	n = 4	[SYL] Sysmex XE 2100C
5.138 ± 0.040	3.149 ± 0.014	4.712 ± 0.056	2.104 ± 0.018	2.631 ± 0.018	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
5.140 ± 0.000	3.135 ± 0.019	4.695 ± 0.045	2.122 ± 0.032	2.643 ± 0.014	n = 3	[SYN] Sysmex XE 2100DC
5.112 ± 0.049	3.118 ± 0.041	4.689 ± 0.042	2.075 ± 0.021	2.611 ± 0.027	n = 28	[SYA] Sysmex XE 5000
5.124 ± 0.066	3.091 ± 0.037	4.672 ± 0.045	2.059 ± 0.028	2.589 ± 0.033	n = 22	[SYI] Sysmex XT-1800i,XT-2000i
5.175 ± 0.041	3.104 ± 0.038	4.722 ± 0.057	2.063 ± 0.027	2.607 ± 0.030	n = 9	[SYV] Sysmex XT 4000i
5.090 ± 0.040	3.005 ± 0.021	4.648 ± 0.028	2.005 ± 0.019	2.526 ± 0.021	n = 20	[SYP] Sysmex XS-1000i,XS-1000iAL
5.125 ± 0.091	3.028 ± 0.032	4.640 ± 0.101	2.025 ± 0.091	2.518 ± 0.024	n = 3	[OOO] Other

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Hemoglobin (g/dL)

Specimen: B66	Specimen: B67	Specimen: B68	Specimen: B69	Specimen: B70	Number	[Code] Instrument
13.51 ± 0.19	9.04 ± 0.24	13.73 ± 0.19	6.05 ± 0.13	7.58 ± 0.14	n = 426	[---] All Methods & Instruments
						<Instruments>
16.00 ± 0.18	10.60 ± 0.09	18.45 ± 0.36	<10.50	<10.50	n = 3	[HQB] HemoCue Donor Hb Checker
13.65 ± 0.38	9.02 ± 0.17	13.64 ± 0.28	6.16 ± 0.06	7.64 ± 0.11	n = 5	[HQC] HemoCue Hb201+/B-Hb
13.82 ± 0.32	9.50 ± 0.18	14.19 ± 0.29	6.33 ± 0.14	7.87 ± 0.23	n = 3	[ABF] Abbott Cell Dyn 3500
13.17 ± 0.41	9.22 ± 0.15	13.63 ± 0.14	6.00 ± 0.09	7.57 ± 0.05	n = 3	[ABG] Abbott Cell Dyn 1700
13.47 ± 0.14	9.37 ± 0.05	13.93 ± 0.05	6.10 ± 0.18	7.70 ± 0.18	n = 3	[ABJ] Abbott Cell Dyn 1800
13.83 ± 0.09	9.60 ± 0.11	14.11 ± 0.20	6.23 ± 0.09	7.80 ± 0.08	n = 4	[ABK] Abbott Cell Dyn 3200
13.62 ± 0.14	9.48 ± 0.16	13.93 ± 0.21	6.24 ± 0.13	7.81 ± 0.13	n = 13	[ABM] Abbott Cell Dyn 3700
13.91 ± 0.19	9.28 ± 0.09	14.01 ± 0.19	6.28 ± 0.07	7.80 ± 0.11	n = 13	[ABS] Abbott Cell Dyn Sapphire
13.50 ± 0.19	9.26 ± 0.21	13.78 ± 0.15	6.05 ± 0.15	7.59 ± 0.15	n = 19	[ABT] Abbott Cell Dyn Ruby
13.42 ± 0.30	8.90 ± 0.26	13.66 ± 0.23	5.94 ± 0.20	7.47 ± 0.11	n = 5	[ABU] Abbott Cell Dyn Emerald
13.56 ± 0.16	9.30 ± 0.15	13.75 ± 0.16	6.19 ± 0.10	7.73 ± 0.10	n = 19	[BTD] Siemens Advia 120
13.44 ± 0.24	9.34 ± 0.15	13.75 ± 0.22	6.20 ± 0.08	7.72 ± 0.10	n = 29	[BTE] Siemens Advia 2120
13.34 ± 0.19	8.86 ± 0.14	13.58 ± 0.20	6.00 ± 0.11	7.55 ± 0.09	n = 28	[CUL] Coulter UniCel DxH 800
13.39 ± 0.11	8.92 ± 0.07	13.63 ± 0.10	5.97 ± 0.05	7.48 ± 0.10	n = 6	[CUS] Coulter ACT 5 diff
13.35 ± 0.21	9.02 ± 0.22	13.63 ± 0.26	6.00 ± 0.12	7.52 ± 0.14	n = 23	[CUT] Coulter ACT series,not ACT5 diff
13.45 ± 0.11	9.30 ± 0.12	13.82 ± 0.14	6.02 ± 0.08	7.65 ± 0.08	n = 10	[CUW] Coulter HMX
13.54 ± 0.13	8.99 ± 0.12	13.74 ± 0.13	6.05 ± 0.07	7.56 ± 0.09	n = 62	[CUX] Coulter LH750,755
13.55 ± 0.11	9.00 ± 0.10	13.74 ± 0.15	6.08 ± 0.07	7.57 ± 0.10	n = 18	[CUY] Coulter LH 780
13.47 ± 0.13	9.18 ± 0.16	13.81 ± 0.19	6.14 ± 0.09	7.67 ± 0.12	n = 17	[CUZ] Coulter LH500
13.43 ± 0.15	8.87 ± 0.11	13.70 ± 0.18	5.87 ± 0.07	7.41 ± 0.10	n = 7	[ROB] ABX Pentra series
13.62 ± 0.15	9.03 ± 0.16	13.80 ± 0.18	6.09 ± 0.11	7.62 ± 0.13	n = 4	[ROC] ABX Micro
13.45 ± 0.11	9.11 ± 0.13	13.85 ± 0.08	6.15 ± 0.08	7.66 ± 0.11	n = 5	[SYB] Sysmex KX-21N
13.60 ± 0.18	8.96 ± 0.10	13.75 ± 0.19	6.07 ± 0.05	7.53 ± 0.05	n = 3	[SYG] Sysmex POCHi
13.48 ± 0.15	8.89 ± 0.11	13.63 ± 0.16	5.99 ± 0.07	7.53 ± 0.07	n = 24	[SYO] Sysmex XE2100
13.52 ± 0.16	8.92 ± 0.08	13.70 ± 0.13	6.00 ± 0.09	7.55 ± 0.08	n = 5	[SYL] Sysmex XE 2100C
13.52 ± 0.14	8.93 ± 0.11	13.65 ± 0.06	6.03 ± 0.05	7.60 ± 0.09	n = 6	[SYQ] Sysmex XE 2100D(Blood Center Only)
13.47 ± 0.05	8.90 ± 0.09	13.60 ± 0.09	6.06 ± 0.10	7.56 ± 0.10	n = 3	[SYN] Sysmex XE 2100DC
13.49 ± 0.17	8.88 ± 0.12	13.61 ± 0.19	5.98 ± 0.06	7.51 ± 0.07	n = 28	[SYA] Sysmex XE 5000
13.52 ± 0.14	8.88 ± 0.11	13.70 ± 0.10	5.95 ± 0.08	7.48 ± 0.08	n = 22	[SYI] Sysmex XT-1800i,XT-2000i
13.63 ± 0.15	8.95 ± 0.10	13.73 ± 0.10	5.96 ± 0.09	7.53 ± 0.08	n = 9	[SYV] Sysmex XT 4000i
13.55 ± 0.08	8.87 ± 0.09	13.75 ± 0.09	5.94 ± 0.07	7.44 ± 0.08	n = 20	[SYP] Sysmex XS-1000i,XS-1000iAL
13.63 ± 0.05	9.14 ± 0.10	13.90 ± 0.09	6.33 ± 0.23	7.73 ± 0.05	n = 3	[OOO] Other

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Hematocrit (%)

Specimen: B66	Specimen: B67	Specimen: B68	Specimen: B69	Specimen: B70	Number	[Code] Instrument
39.43 ± 1.81	26.19 ± 1.37	38.68 ± 1.81	17.98 ± 1.10	22.42 ± 1.30	n = 421	[---] All Methods & Instruments
						<Instruments>
37.73 ± 1.93	24.24 ± 0.80	36.11 ± 1.38	16.63 ± 0.55	20.00 ± 0.00	n = 5	[MHC] Microhematocrit
41.67 ± 0.69	27.40 ± 0.63	41.67 ± 0.77	19.25 ± 0.54	24.02 ± 0.59	n = 3	[ABF] Abbott Cell Dyn 3500
40.49 ± 1.24	26.81 ± 0.57	40.37 ± 0.86	18.72 ± 0.51	23.18 ± 0.50	n = 3	[ABG] Abbott Cell Dyn 1700
41.29 ± 0.56	27.96 ± 0.47	40.59 ± 1.27	19.21 ± 0.61	23.92 ± 0.24	n = 3	[ABJ] Abbott Cell Dyn 1800
35.48 ± 0.64	22.96 ± 0.56	34.55 ± 0.82	15.78 ± 0.31	19.85 ± 0.27	n = 4	[ABK] Abbott Cell Dyn 3200
41.81 ± 0.57	27.77 ± 0.49	41.48 ± 0.75	19.33 ± 0.37	23.89 ± 0.53	n = 13	[ABM] Abbott Cell Dyn 3700
37.26 ± 0.87	24.25 ± 0.51	36.73 ± 0.76	16.84 ± 0.39	21.20 ± 0.65	n = 13	[ABS] Abbott Cell Dyn Sapphire
35.84 ± 0.86	22.82 ± 0.38	34.79 ± 0.89	15.63 ± 0.22	19.57 ± 0.37	n = 19	[ABT] Abbott Cell Dyn Ruby
39.09 ± 0.71	26.41 ± 0.85	39.43 ± 1.14	18.50 ± 0.73	22.92 ± 0.50	n = 5	[ABU] Abbott Cell Dyn Emerald
35.20 ± 0.76	23.52 ± 0.53	35.43 ± 0.82	16.13 ± 0.42	20.13 ± 0.46	n = 19	[BTD] Siemens Advia 120
35.16 ± 0.99	23.56 ± 0.76	35.74 ± 0.97	16.22 ± 0.51	20.28 ± 0.67	n = 29	[BTE] Siemens Advia 2120
40.30 ± 0.45	26.78 ± 0.36	39.96 ± 0.47	18.17 ± 0.27	22.91 ± 0.28	n = 28	[CUL] Coulter UniCel DxH 800
37.70 ± 0.76	24.89 ± 0.39	37.57 ± 0.45	16.74 ± 0.45	20.90 ± 0.52	n = 6	[CUS] Coulter ACT 5 diff
39.66 ± 0.93	26.15 ± 0.85	38.95 ± 1.01	17.85 ± 0.49	22.15 ± 0.49	n = 23	[CUT] Coulter ACT series,not ACT5 diff
39.72 ± 0.62	26.32 ± 0.46	39.27 ± 0.55	17.84 ± 0.32	22.40 ± 0.46	n = 10	[CUW] Coulter HMX
40.32 ± 0.51	26.42 ± 0.32	39.88 ± 0.42	17.91 ± 0.27	22.41 ± 0.25	n = 61	[CUX] Coulter LH750,755
40.31 ± 0.62	26.40 ± 0.40	39.82 ± 0.52	17.87 ± 0.27	22.36 ± 0.32	n = 19	[CUY] Coulter LH 780
40.12 ± 0.71	26.75 ± 0.48	39.75 ± 0.49	18.05 ± 0.29	22.66 ± 0.27	n = 17	[CUZ] Coulter LH500
38.71 ± 0.81	25.43 ± 0.43	38.28 ± 0.44	17.18 ± 0.37	21.44 ± 0.54	n = 7	[ROB] ABX Pentra series
41.04 ± 1.13	26.08 ± 0.49	39.78 ± 1.24	17.49 ± 0.58	22.36 ± 0.94	n = 4	[ROC] ABX Micro
38.31 ± 1.06	25.13 ± 0.57	36.62 ± 1.02	18.03 ± 0.53	22.17 ± 0.54	n = 5	[SYB] Sysmex KX-21N
40.65 ± 0.36	27.07 ± 0.32	38.87 ± 0.77	19.28 ± 0.41	23.71 ± 0.20	n = 3	[SYG] Sysmex POCHi
40.06 ± 0.37	27.02 ± 0.37	38.79 ± 0.43	18.86 ± 0.21	23.45 ± 0.35	n = 24	[SYO] Sysmex XE2100
38.87 ± 0.38	26.51 ± 0.40	37.61 ± 0.48	17.98 ± 0.36	22.54 ± 0.46	n = 4	[SYL] Sysmex XE 2100C
40.15 ± 0.40	27.40 ± 0.29	39.17 ± 0.58	19.17 ± 0.20	23.72 ± 0.34	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
38.40 ± 1.09	26.03 ± 0.76	37.34 ± 1.11	18.23 ± 0.67	22.43 ± 0.67	n = 3	[SYN] Sysmex XE 2100DC
39.75 ± 0.49	26.89 ± 0.45	38.77 ± 0.57	18.69 ± 0.27	23.27 ± 0.39	n = 28	[SYA] Sysmex XE 5000
39.46 ± 0.55	27.04 ± 0.44	38.27 ± 0.45	19.13 ± 0.32	23.56 ± 0.42	n = 22	[SYI] Sysmex XT-1800i,XT-2000i
39.76 ± 0.37	27.18 ± 0.20	38.83 ± 0.50	19.20 ± 0.31	23.82 ± 0.24	n = 9	[SYV] Sysmex XT 4000i
39.19 ± 0.49	26.28 ± 0.39	38.18 ± 0.54	18.64 ± 0.23	22.98 ± 0.31	n = 20	[SYP] Sysmex XS-1000i,XS-1000iAL
39.83 ± 1.30	25.83 ± 0.67	38.85 ± 1.54	17.82 ± 0.77	21.93 ± 0.67	n = 3	[OOO] Other

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Platelet Count (x 10^9/L)

Specimen: B66	Specimen: B67	Specimen: B68	Specimen: B69	Specimen: B70	Number	[Code] Instrument
74.7 ± 10.48	398.8 ± 34.84	234.8 ± 21.46	43.6 ± 5.07	135.0 ± 12.77	n = 417	[---] All Methods & Instruments
						<Instruments>
86.0 ± 10.00	427.3 ± 20.28	262.2 ± 23.71	50.9 ± 7.95	149.0 ± 5.48	n = 3	[ABF] Abbott Cell Dyn 3500
75.3 ± 10.42	414.7 ± 40.13	257.0 ± 28.87	43.3 ± 4.96	134.4 ± 19.95	n = 3	[ABG] Abbott Cell Dyn 1700
88.8 ± 1.54	447.5 ± 16.25	267.5 ± 5.40	43.1 ± 2.05	146.5 ± 8.26	n = 3	[ABJ] Abbott Cell Dyn 1800
101.6 ± 6.79	432.2 ± 20.63	256.3 ± 11.01	62.5 ± 3.77	159.2 ± 13.75	n = 4	[ABK] Abbott Cell Dyn 3200
82.0 ± 4.86	437.0 ± 14.23	255.5 ± 11.64	48.5 ± 2.61	148.9 ± 7.61	n = 13	[ABM] Abbott Cell Dyn 3700
77.9 ± 3.73	394.6 ± 9.84	234.2 ± 7.83	49.3 ± 2.77	145.7 ± 3.42	n = 13	[ABS] Abbott Cell Dyn Sapphire
102.6 ± 8.67	427.0 ± 21.26	264.7 ± 14.37	62.2 ± 5.37	156.0 ± 6.42	n = 19	[ABT] Abbott Cell Dyn Ruby
88.7 ± 9.14	426.2 ± 10.48	252.2 ± 5.67	37.5 ± 5.27	150.0 ± 5.81	n = 5	[ABU] Abbott Cell Dyn Emerald
77.6 ± 4.29	446.4 ± 21.25	259.0 ± 15.82	48.1 ± 2.85	146.9 ± 7.29	n = 19	[BTD] Siemens Advia 120
76.4 ± 7.11	446.0 ± 25.51	262.5 ± 16.27	48.2 ± 3.82	149.2 ± 11.07	n = 28	[BTE] Siemens Advia 2120
70.0 ± 3.86	379.5 ± 7.45	222.7 ± 5.31	40.8 ± 1.14	128.8 ± 3.77	n = 28	[CUL] Coulter UniCel DxH 800
80.9 ± 7.56	436.2 ± 23.90	249.2 ± 12.93	45.8 ± 3.69	145.0 ± 4.67	n = 6	[CUS] Coulter ACT 5 diff
71.1 ± 7.22	399.5 ± 19.84	236.0 ± 11.52	42.1 ± 3.17	133.4 ± 8.53	n = 24	[CUT] Coulter ACT series,not ACT5 diff
72.9 ± 4.71	383.0 ± 9.49	217.5 ± 9.39	41.5 ± 1.97	125.9 ± 3.92	n = 10	[CUW] Coulter HMX
78.3 ± 4.25	385.7 ± 11.27	228.8 ± 6.65	43.6 ± 1.60	131.8 ± 3.54	n = 62	[CUX] Coulter LH750,755
79.4 ± 4.52	387.6 ± 11.39	231.6 ± 5.23	45.7 ± 1.76	133.6 ± 3.44	n = 18	[CUY] Coulter LH 780
71.5 ± 4.71	395.6 ± 12.19	223.7 ± 9.23	42.5 ± 1.76	129.5 ± 3.95	n = 17	[CUZ] Coulter LH500
87.2 ± 6.62	440.2 ± 13.46	260.2 ± 13.81	46.7 ± 1.62	151.8 ± 3.18	n = 7	[ROB] ABX Pentra series
82.9 ± 8.28	441.5 ± 13.75	254.8 ± 8.05	46.8 ± 1.96	150.1 ± 9.05	n = 5	[ROC] ABX Micro
74.2 ± 3.55	412.6 ± 13.08	241.2 ± 9.55	37.6 ± 2.05	129.8 ± 4.30	n = 5	[SYB] Sysmex KX-21N
71.7 ± 2.26	392.3 ± 3.16	238.0 ± 8.16	40.2 ± 2.36	132.0 ± 2.70	n = 3	[SYG] Sysmex POCHi
57.1 ± 3.31	342.2 ± 10.72	202.4 ± 6.69	37.3 ± 1.42	116.6 ± 4.19	n = 24	[SYO] Sysmex XE2100
65.0 ± 2.45	380.2 ± 14.50	221.7 ± 10.74	40.1 ± 2.72	129.0 ± 3.36	n = 4	[SYL] Sysmex XE 2100C
74.2 ± 1.94	443.3 ± 4.54	253.5 ± 4.25	46.9 ± 1.11	145.0 ± 2.62	n = 7	[SYQ] Sysmex XE 2100D(Blood Center Only)
62.6 ± 1.02	369.3 ± 17.61	214.6 ± 7.08	38.3 ± 2.26	130.1 ± 4.38	n = 3	[SYN] Sysmex XE 2100DC
57.4 ± 2.97	341.8 ± 12.79	202.5 ± 7.66	37.1 ± 2.06	115.4 ± 4.66	n = 28	[SYA] Sysmex XE 5000
75.2 ± 4.14	409.2 ± 14.27	241.8 ± 7.76	44.5 ± 2.83	137.0 ± 4.66	n = 22	[SYI] Sysmex XT-1800i,XT-2000i
75.7 ± 4.54	410.2 ± 9.20	247.5 ± 8.85	43.4 ± 2.03	137.0 ± 5.14	n = 9	[SYV] Sysmex XT 4000i
66.8 ± 3.64	392.9 ± 12.17	228.9 ± 6.72	39.4 ± 2.19	130.7 ± 5.57	n = 20	[SYP] Sysmex XS-1000i,XS-1000iAL
81.8 ± 4.89	379.3 ± 18.49	234.2 ± 11.16	42.2 ± 1.54	136.8 ± 12.27	n = 3	[OOO] Other

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Prothrombin Time (seconds)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
29.46 ± 3.50	50.90 ± 8.37	11.05 ± 0.54	10.69 ± 0.74	29.28 ± 3.47	n = 317	[---] All Methods & Instruments
						<Instruments>
28.11 ± 0.99	46.73 ± 1.90	10.98 ± 0.24	10.00 ± 0.20	27.89 ± 1.10	n = 19	[BEB] Siemens BCS,BCSXP
31.93 ± 1.16	57.69 ± 2.61	12.86 ± 0.32	12.58 ± 0.32	31.74 ± 1.00	n = 30	[DGC] Diagnostica Stago STA Compact
31.59 ± 1.39	56.30 ± 3.14	13.10 ± 0.72	12.91 ± 0.70	31.74 ± 1.35	n = 15	[DGD] Diagnostica Stago STA-R, STA-R Ev
22.02 ± 1.19	32.94 ± 2.13	11.61 ± 0.44	11.04 ± 0.46	21.75 ± 1.05	n = 16	[ILA] IL ACL(All models except 810,ELIT
31.14 ± 5.70	54.62 ± 13.28	11.15 ± 0.24	10.94 ± 0.28	31.42 ± 5.79	n = 29	[ILC] IL ACL Futura/Advance
29.04 ± 4.26	49.93 ± 10.05	10.93 ± 0.37	10.73 ± 0.28	28.84 ± 4.38	n = 35	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
31.84 ± 1.72	56.81 ± 3.55	10.84 ± 0.38	10.71 ± 0.42	31.34 ± 1.75	n = 60	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP
28.21 ± 1.50	47.32 ± 2.72	10.73 ± 0.29	10.07 ± 0.23	27.81 ± 1.52	n = 34	[SYW] Sysmex CA500/CA600 series
27.47 ± 0.81	46.58 ± 1.52	10.95 ± 0.25	10.33 ± 0.20	27.62 ± 0.82	n = 52	[SYX] Sysmex CA 1500
27.54 ± 0.49	46.08 ± 1.49	11.19 ± 0.19	10.56 ± 0.24	27.57 ± 0.58	n = 17	[SYY] Sysmex CA 7000
						<Reagents>
31.91 ± 1.11	57.50 ± 2.49	12.94 ± 0.41	12.68 ± 0.42	31.84 ± 0.96	n = 45	[TA3] STA Neoplastine CL+
27.77 ± 1.01	46.79 ± 2.00	10.92 ± 0.29	10.23 ± 0.30	27.73 ± 1.02	n = 120	[TD2] Siemens Innovin
21.82 ± 0.80	32.81 ± 1.56	11.40 ± 0.36	10.91 ± 0.35	21.70 ± 0.82	n = 35	[TJ2] HemosIL PT-Fibrinogen
31.81 ± 1.97	56.54 ± 4.29	10.89 ± 0.36	10.77 ± 0.38	31.55 ± 2.10	n = 103	[TJ8] HemosIL RecombiPlasTin 2G
26.93 ± 0.51	44.95 ± 1.44	11.09 ± 0.20	10.47 ± 0.14	26.66 ± 0.47	n = 3	[OOO] Other Reagent
						<Reagents & Instruments>
31.93 ± 1.16	57.69 ± 2.61	12.86 ± 0.32	12.58 ± 0.32	31.74 ± 1.00	n = 30	[TA3]&[DGC] STA Neoplastin & Diagnostica St
31.93 ± 1.05	57.05 ± 2.25	13.26 ± 0.48	12.99 ± 0.55	32.11 ± 0.84	n = 13	[TA3]&[DGD] STA Neoplastin & Diagnostica St
28.11 ± 0.99	46.73 ± 1.90	10.98 ± 0.24	10.00 ± 0.20	27.89 ± 1.10	n = 19	[TD2]&[BEB] Siemens Innovi & Siemens BCS,BC
28.21 ± 1.50	47.32 ± 2.72	10.73 ± 0.29	10.07 ± 0.23	27.81 ± 1.52	n = 34	[TD2]&[SYW] Siemens Innovi & Sysmex CA500/C
27.49 ± 0.81	46.62 ± 1.50	10.94 ± 0.24	10.33 ± 0.20	27.65 ± 0.81	n = 50	[TD2]&[SYX] Siemens Innovi & Sysmex CA 1500
27.59 ± 0.46	46.20 ± 1.40	11.21 ± 0.18	10.58 ± 0.25	27.64 ± 0.54	n = 15	[TD2]&[SYY] Siemens Innovi & Sysmex CA 7000
22.02 ± 1.19	32.94 ± 2.13	11.61 ± 0.44	11.04 ± 0.46	21.75 ± 1.05	n = 16	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
21.79 ± 0.39	33.20 ± 0.87	11.17 ± 0.29	10.77 ± 0.20	21.85 ± 0.58	n = 8	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
21.80 ± 0.68	32.54 ± 1.40	11.38 ± 0.20	10.92 ± 0.24	21.64 ± 0.56	n = 9	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
33.71 ± 1.48	60.69 ± 3.86	11.14 ± 0.21	11.02 ± 0.25	34.03 ± 1.52	n = 19	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
30.73 ± 1.60	54.11 ± 3.47	10.79 ± 0.26	10.67 ± 0.25	30.57 ± 1.70	n = 26	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
31.79 ± 1.76	56.73 ± 3.63	10.82 ± 0.38	10.71 ± 0.43	31.34 ± 1.75	n = 57	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Activated Partial Thromboplastin Time (seconds)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
55.87 ± 5.94	80.51 ± 10.44	28.29 ± 2.12	29.11 ± 1.85	55.67 ± 5.78	n = 310	[---] All Methods & Instruments
						<Instruments>
50.05 ± 0.89	70.24 ± 1.30	25.93 ± 0.91	25.89 ± 0.71	49.57 ± 0.85	n = 20	[BEB] Siemens BCS,BCSXP
54.20 ± 2.92	74.66 ± 7.29	28.68 ± 0.86	28.00 ± 5.02	53.34 ± 2.54	n = 3	[DGB] Diagnostica Stago STA
54.70 ± 2.91	77.17 ± 3.24	29.65 ± 1.01	31.89 ± 1.19	54.97 ± 2.29	n = 28	[DGC] Diagnostica Stago STA Compact
52.44 ± 1.51	74.31 ± 4.33	28.97 ± 0.31	31.48 ± 0.59	52.94 ± 1.90	n = 13	[DGD] Diagnostica Stago STA-R, STA-R Evol
51.90 ± 5.28	76.31 ± 8.55	27.13 ± 0.96	27.71 ± 1.14	52.02 ± 5.94	n = 17	[ILA] IL ACL(All models except 810,ELITE,
64.77 ± 1.47	94.59 ± 9.26	29.72 ± 2.08	28.72 ± 1.57	63.28 ± 1.53	n = 28	[ILC] IL ACL Futura/Advance
58.27 ± 6.86	86.33 ± 11.14	27.90 ± 1.28	27.61 ± 0.96	58.48 ± 6.85	n = 33	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
61.85 ± 1.84	90.86 ± 2.94	30.78 ± 1.14	30.07 ± 1.17	61.47 ± 1.86	n = 59	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP CT
51.91 ± 1.66	74.52 ± 2.80	26.40 ± 0.82	28.36 ± 0.83	51.53 ± 1.77	n = 35	[SYW] Sysmex CA500/CA600 series
53.65 ± 1.44	75.76 ± 2.55	27.34 ± 0.65	29.31 ± 0.78	53.64 ± 1.63	n = 52	[SYX] Sysmex CA 1500
52.81 ± 1.07	74.34 ± 1.91	27.74 ± 0.45	29.28 ± 0.60	52.74 ± 1.04	n = 15	[SYY] Sysmex CA 7000
						<Reagents>
54.00 ± 2.96	76.33 ± 3.98	29.37 ± 1.00	31.67 ± 1.10	54.25 ± 2.52	n = 41	[AA2] Diagnostica Stago STA PTT-Auto
70.27 ± 13.89	106.99 ± 23.24	27.01 ± 0.98	29.86 ± 1.29	70.31 ± 13.84	n = 6	[AD2] Siemens Actin
95.46 ± 1.39	127.49 ± 10.74	27.18 ± 0.68	28.23 ± 1.11	94.58 ± 2.24	n = 5	[AD3] Siemens Actin FS
52.54 ± 1.97	74.49 ± 3.16	26.91 ± 0.99	28.69 ± 1.30	52.37 ± 2.16	n = 107	[AD4] Siemens Actin FSL
50.01 ± 1.26	72.96 ± 2.05	26.44 ± 1.02	27.84 ± 1.34	49.81 ± 1.43	n = 31	[AJ3] HemosIL Test APTT-SP
54.55 ± 4.24	74.91 ± 5.92	27.77 ± 3.07	28.48 ± 3.85	53.64 ± 3.55	n = 3	[AK3] Trin Bio TriniCLOT aPTTS PlatelinL
62.53 ± 2.31	92.49 ± 4.42	30.20 ± 1.44	29.26 ± 1.66	62.11 ± 2.04	n = 105	[AO4] HemosIL SynthASil
53.90 ± 0.09	75.94 ± 1.54	27.52 ± 0.50	29.25 ± 0.99	52.90 ± 0.73	n = 3	[OOO] Other Reagent
						<Reagents & Instruments>
54.20 ± 2.92	74.66 ± 7.29	28.68 ± 0.86	28.00 ± 5.02	53.34 ± 2.54	n = 3	[AA2]&[DGB] Diagnostica St & Diagnostica St
54.61 ± 2.96	77.08 ± 3.37	29.61 ± 1.05	31.90 ± 1.22	54.89 ± 2.32	n = 27	[AA2]&[DGC] Diagnostica St & Diagnostica St
52.44 ± 1.51	74.30 ± 4.26	28.97 ± 0.31	31.41 ± 0.59	52.94 ± 1.85	n = 11	[AA2]&[DGD] Diagnostica St & Diagnostica St
70.66 ± 13.41	106.89 ± 23.19	27.15 ± 0.19	30.18 ± 0.86	70.47 ± 13.35	n = 3	[AD2]&[SYX] Siemens Actin & Sysmex CA 1500
96.08 ± 1.50	129.34 ± 13.37	27.40 ± 0.36	28.78 ± 0.24	95.96 ± 1.63	n = 3	[AD3]&[SYX] Siemens Actin & Sysmex CA 1500
50.04 ± 0.88	70.23 ± 1.28	25.81 ± 0.76	25.83 ± 0.63	49.56 ± 0.84	n = 16	[AD4]&[BEB] Siemens Actin & Siemens BCS,BC
51.94 ± 1.70	74.53 ± 2.89	26.42 ± 0.85	28.35 ± 0.79	51.55 ± 1.80	n = 33	[AD4]&[SYW] Siemens Actin & Sysmex CA500/C
53.68 ± 1.47	75.79 ± 2.62	27.37 ± 0.70	29.34 ± 0.73	53.71 ± 1.65	n = 45	[AD4]&[SYX] Siemens Actin & Sysmex CA 1500
52.61 ± 1.00	74.04 ± 1.76	27.72 ± 0.49	29.19 ± 0.59	52.63 ± 1.07	n = 13	[AD4]&[SYY] Siemens Actin & Sysmex CA 7000
50.09 ± 1.44	73.49 ± 2.21	26.81 ± 0.68	28.07 ± 1.12	49.54 ± 1.85	n = 13	[AJ3]&[ILA] HemosIL Test A & IL ACL(All mod
48.86 ± 0.97	70.62 ± 0.86	24.62 ± 0.57	25.87 ± 0.56	48.92 ± 0.71	n = 5	[AJ3]&[ILC] HemosIL Test A & IL ACL Futura/
50.35 ± 0.90	73.58 ± 1.45	26.65 ± 0.76	28.21 ± 1.04	50.36 ± 0.90	n = 12	[AJ3]&[ILD] HemosIL Test A & IL ACL(ELITE,E
63.60 ± 1.96	96.20 ± 3.39	28.37 ± 0.43	26.85 ± 0.30	63.66 ± 1.61	n = 4	[AO4]&[ILA] HemosIL SynthA & IL ACL(All mod
64.79 ± 1.23	97.64 ± 2.92	30.35 ± 1.05	29.17 ± 1.07	63.37 ± 1.57	n = 21	[AO4]&[ILC] HemosIL SynthA & IL ACL Futura/
62.33 ± 2.36	92.83 ± 4.69	28.57 ± 0.88	27.34 ± 0.78	62.30 ± 2.08	n = 21	[AO4]&[ILD] HemosIL SynthA & IL ACL(ELITE,E
61.85 ± 1.83	90.86 ± 2.93	30.79 ± 1.11	30.10 ± 1.17	61.48 ± 1.84	n = 58	[AO4]&[ILE] HemosIL SynthA & IL ACL TOP Ser

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

Summary of Participant Responses

Mean ± One Standard Deviation

Fibrinogen (mg/dL)

Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
277.5 ± 29.19	288.7 ± 40.36	309.7 ± 33.11	570.9 ± 82.79	277.0 ± 28.90	n = 210	[---] All Methods & Instruments
						<Instruments>
297.2 ± 16.07	330.5 ± 27.85	337.9 ± 19.95	628.5 ± 57.94	293.7 ± 15.80	n = 20	[BEB] Siemens BCS,BCSXP
285.2 ± 15.18	289.0 ± 12.30	323.2 ± 18.98	615.7 ± 28.29	286.3 ± 13.94	n = 25	[DGC] Diagnostica Stago STA Compact
278.8 ± 12.50	284.9 ± 12.06	315.7 ± 12.13	598.5 ± 29.46	279.4 ± 11.91	n = 14	[DGD] Diagnostica Stago STA-R, STA-R Evol
376.8 ± 28.46	403.4 ± 29.51	378.3 ± 28.96	638.0 ± 38.50	409.7 ± 26.74	n = 4	[ILA] IL ACL(All models except 810,ELITE,
318.8 ± 29.57	375.4 ± 42.12	282.8 ± 39.70	495.8 ± 70.81	322.2 ± 34.63	n = 24	[ILC] IL ACL Futura/Advance
316.3 ± 52.36	345.4 ± 68.78	338.4 ± 25.16	691.0 ± 80.60	316.5 ± 47.07	n = 10	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
273.8 ± 26.67	283.3 ± 30.31	318.5 ± 34.56	607.5 ± 62.76	274.1 ± 26.72	n = 50	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP CT
254.4 ± 15.02	265.3 ± 11.27	269.9 ± 16.75	469.3 ± 31.74	249.7 ± 21.84	n = 5	[SYW] Sysmex CA500/CA600 series
254.3 ± 11.99	260.5 ± 14.59	290.0 ± 12.31	498.9 ± 43.84	253.0 ± 9.65	n = 39	[SYX] Sysmex CA 1500
255.3 ± 10.51	260.8 ± 13.52	286.1 ± 13.47	511.1 ± 48.31	256.8 ± 8.78	n = 13	[SYY] Sysmex CA 7000
						<Reagents>
365.5 ± 32.11	398.8 ± 30.73	355.9 ± 31.66	616.0 ± 36.34	377.9 ± 33.43	n = 12	[TJ2] HemosIL PT-Fibrinogen
305.7 ± 24.45	341.9 ± 47.26	319.2 ± 53.09	538.3 ± 80.67	307.9 ± 22.42	n = 35	[TJ8] HemosIL RecombiPlasTin 2G
283.1 ± 14.56	288.0 ± 12.80	320.7 ± 17.83	610.7 ± 30.37	284.3 ± 13.91	n = 40	[FA4] Stago STA-Fibrinogen 5
295.9 ± 17.38	337.8 ± 21.36	340.7 ± 20.65	640.3 ± 47.29	294.5 ± 17.11	n = 17	[FB2] Siemens Multifibren U
256.0 ± 12.19	263.9 ± 14.30	289.2 ± 15.19	496.1 ± 43.48	254.8 ± 11.75	n = 49	[FD2] Siemens Fibrinogen Determination
270.5 ± 18.32	277.8 ± 18.66	312.3 ± 19.04	637.8 ± 80.11	271.1 ± 17.92	n = 23	[FJ2] HemosIL Fibrinogen C,XL
279.3 ± 15.16	281.6 ± 16.65	315.5 ± 26.30	532.7 ± 11.45	274.8 ± 2.36	n = 3	[FM1] Kamiya K-Assay Fibrinogen
256.3 ± 21.84	264.1 ± 13.11	292.5 ± 20.80	628.9 ± 68.41	254.1 ± 18.82	n = 16	[FO3] HemosIL QFA(bovine)
249.9 ± 14.39	253.3 ± 16.09	288.2 ± 16.91	522.3 ± 56.37	253.9 ± 11.66	n = 11	[OOO] Other Reagent
						<Reagents & Instruments>
376.8 ± 28.46	403.4 ± 29.51	378.3 ± 28.96	638.0 ± 38.50	409.7 ± 26.74	n = 4	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
357.2 ± 36.79	387.8 ± 39.45	348.8 ± 23.93	610.8 ± 32.65	371.6 ± 24.51	n = 5	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
362.7 ± 26.11	402.9 ± 16.86	339.8 ± 32.99	538.5 ±103.30	351.3 ± 19.48	n = 3	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
321.5 ± 16.74	388.2 ± 22.29	260.6 ± 13.56	461.0 ± 25.17	320.7 ± 11.06	n = 13	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
294.7 ± 21.99	314.4 ± 23.90	350.8 ± 26.60	581.2 ± 51.55	297.2 ± 21.93	n = 21	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
285.2 ± 15.18	289.0 ± 12.30	323.2 ± 18.98	615.7 ± 28.29	286.3 ± 13.94	n = 25	[FA4]&[DGC] Stago STA-Fibr & Diagnostica St
278.8 ± 12.50	284.9 ± 12.06	315.7 ± 12.13	598.5 ± 29.46	279.4 ± 11.91	n = 14	[FA4]&[DGD] Stago STA-Fibr & Diagnostica St
295.9 ± 17.38	337.8 ± 21.36	340.7 ± 20.65	640.3 ± 47.29	294.5 ± 17.11	n = 17	[FB2]&[BEB] Siemens Multif & Siemens BCS,BC
302.8 ± 5.90	290.4 ± 7.34	326.0 ± 7.27	531.0 ± 54.64	290.3 ± 6.93	n = 3	[FD2]&[BEB] Siemens Fibrin & Siemens BCS,BC
254.4 ± 15.02	265.3 ± 11.27	269.9 ± 16.75	469.3 ± 31.74	249.7 ± 21.84	n = 5	[FD2]&[SYW] Siemens Fibrin & Sysmex CA500/C
254.4 ± 11.04	261.3 ± 14.04	289.2 ± 11.20	497.0 ± 43.54	252.4 ± 9.44	n = 32	[FD2]&[SYX] Siemens Fibrin & Sysmex CA 1500
258.8 ± 7.88	264.7 ± 10.05	289.8 ± 11.87	498.0 ± 34.21	259.2 ± 7.09	n = 9	[FD2]&[SYY] Siemens Fibrin & Sysmex CA 7000
281.5 ± 7.22	287.3 ± 20.59	311.0 ± 14.42	536.4 ± 68.20	273.6 ± 24.43	n = 3	[FJ2]&[ILC] HemosIL Fibrin & IL ACL Futura/
288.9 ± 20.97	302.9 ± 19.95	333.8 ± 17.51	726.7 ± 44.40	291.5 ± 23.27	n = 6	[FJ2]&[ILD] HemosIL Fibrin & IL ACL(ELITE,E
261.4 ± 12.72	269.4 ± 10.66	304.5 ± 13.14	622.6 ± 54.47	266.5 ± 9.99	n = 14	[FJ2]&[ILE] HemosIL Fibrin & IL ACL TOP Ser
256.3 ± 22.82	262.9 ± 12.53	291.1 ± 20.98	635.3 ± 65.92	253.8 ± 19.62	n = 15	[FO3]&[ILE] HemosIL QFA(bo & IL ACL TOP Ser
254.7 ± 16.51	257.5 ± 17.79	294.6 ± 17.55	509.1 ± 46.87	257.1 ± 12.17	n = 7	[OOO]&[SYX] Other Reagent & Sysmex CA 1500
244.5 ± 9.45	247.8 ± 14.91	279.3 ± 11.04	542.7 ± 56.99	249.0 ± 11.09	n = 4	[OOO]&[SYY] Other Reagent & Sysmex CA 7000

New York State Department of Health – Wadsworth Center Hematology Proficiency Test Event – October 15, 2012

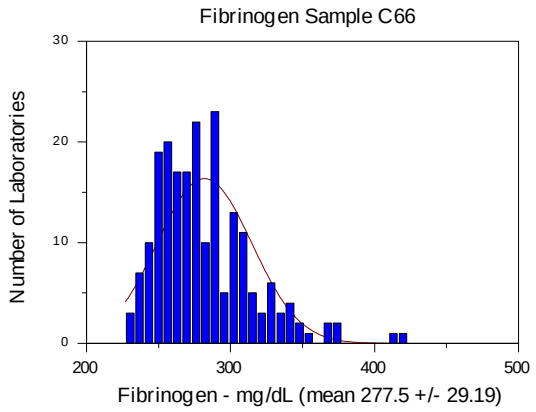
Summary of Participant Responses

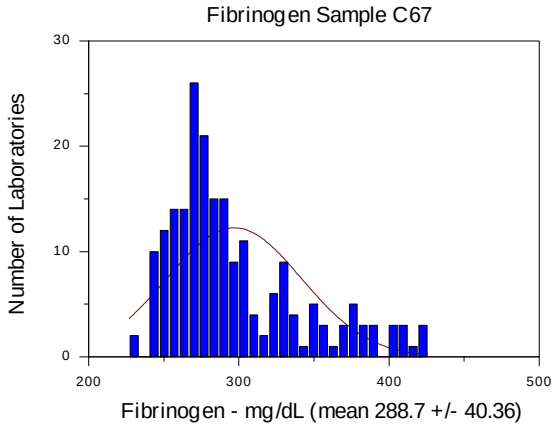
Mean ± One Standard Deviation

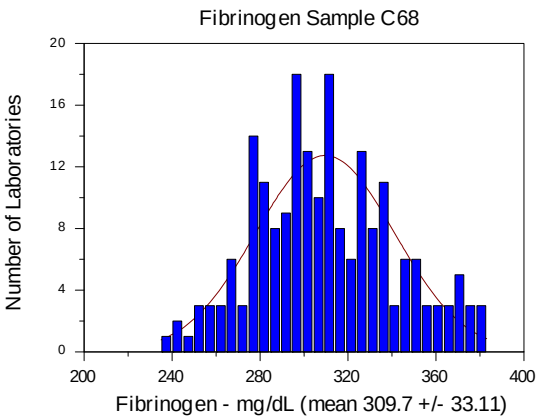
INR (International Normalized Ratio)

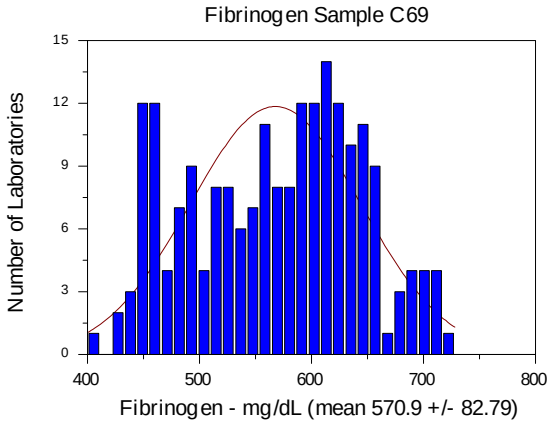
Specimen: C66	Specimen: C67	Specimen: C68	Specimen: C69	Specimen: C70	Number	[Code] Instrument or Reagent System
2.844 ± 0.251	5.118 ± 0.884	1.004 ± 0.051	0.967 ± 0.052	2.825 ± 0.250	n = 319	[---] All Methods & Instruments
						<Instruments>
2.863 ± 0.108	4.713 ± 0.173	1.011 ± 0.050	0.902 ± 0.042	2.832 ± 0.126	n = 19	[BEB] Siemens BCS,BCSXP
3.172 ± 0.162	6.822 ± 0.408	0.983 ± 0.032	0.946 ± 0.046	3.153 ± 0.158	n = 30	[DGC] Diagnostica Stago STA Compact
3.089 ± 0.204	6.479 ± 0.723	1.009 ± 0.063	0.976 ± 0.060	3.081 ± 0.228	n = 15	[DGD] Diagnostica Stago STA-R, STA-R Evol
3.054 ± 0.239	6.227 ± 0.511	0.974 ± 0.065	0.890 ± 0.063	2.980 ± 0.190	n = 17	[ILA] IL ACL(All models except 810,ELITE,
3.065 ± 0.154	5.690 ± 0.544	1.004 ± 0.023	0.975 ± 0.047	3.063 ± 0.127	n = 29	[ILC] IL ACL Futura/Advance
2.916 ± 0.204	5.339 ± 0.583	0.985 ± 0.063	0.973 ± 0.072	2.897 ± 0.228	n = 34	[ILD] IL ACL(ELITE,ELITE PRO,8/9/10000)
2.823 ± 0.148	4.987 ± 0.292	0.982 ± 0.050	0.971 ± 0.050	2.783 ± 0.160	n = 59	[ILE] IL ACL TOP Series (ACLTOP,ACLTOP CT
2.747 ± 0.144	4.627 ± 0.266	1.039 ± 0.048	0.975 ± 0.035	2.709 ± 0.141	n = 37	[SYW] Sysmex CA500/CA600 series
2.614 ± 0.110	4.436 ± 0.231	1.026 ± 0.040	0.980 ± 0.036	2.621 ± 0.109	n = 52	[SYX] Sysmex CA 1500
2.590 ± 0.079	4.401 ± 0.179	1.031 ± 0.041	1.000 ± 0.000	2.613 ± 0.083	n = 17	[SYY] Sysmex CA 7000
						<Reagents>
3.154 ± 0.163	6.739 ± 0.448	0.983 ± 0.040	0.956 ± 0.050	3.137 ± 0.164	n = 45	[TA3] STA Neoplastine CL+
2.682 ± 0.155	4.530 ± 0.262	1.030 ± 0.045	0.973 ± 0.043	2.673 ± 0.139	n = 122	[TD2] Siemens Innovin
3.036 ± 0.225	6.178 ± 0.624	0.975 ± 0.063	0.906 ± 0.071	2.989 ± 0.220	n = 35	[TJ2] HemosIL PT-Fibrinogen
2.879 ± 0.183	5.107 ± 0.392	0.991 ± 0.046	0.980 ± 0.049	2.862 ± 0.203	n = 102	[TJ8] HemosIL RecombiPlasTin 2G
2.541 ± 0.085	4.312 ± 0.248	1.005 ± 0.006	0.959 ± 0.023	2.532 ± 0.111	n = 4	[OOO] Other Reagent
						<Reagents & Instruments>
3.172 ± 0.162	6.822 ± 0.408	0.983 ± 0.032	0.946 ± 0.046	3.153 ± 0.158	n = 30	[TA3]&[DGC] STA Neoplastin & Diagnostica St
3.130 ± 0.152	6.582 ± 0.501	1.002 ± 0.062	0.980 ± 0.060	3.126 ± 0.179	n = 13	[TA3]&[DGD] STA Neoplastin & Diagnostica St
2.863 ± 0.108	4.713 ± 0.173	1.011 ± 0.050	0.902 ± 0.042	2.832 ± 0.126	n = 19	[TD2]&[BEB] Siemens Innovi & Siemens BCS,BC
2.750 ± 0.146	4.624 ± 0.272	1.040 ± 0.048	0.976 ± 0.035	2.709 ± 0.144	n = 36	[TD2]&[SYW] Siemens Innovi & Sysmex CA500/C
2.616 ± 0.110	4.437 ± 0.223	1.028 ± 0.040	0.981 ± 0.036	2.625 ± 0.107	n = 50	[TD2]&[SYX] Siemens Innovi & Sysmex CA 1500
2.601 ± 0.080	4.422 ± 0.173	1.036 ± 0.043	1.000 ± 0.000	2.627 ± 0.077	n = 15	[TD2]&[SYY] Siemens Innovi & Sysmex CA 7000
3.054 ± 0.239	6.227 ± 0.511	0.974 ± 0.065	0.890 ± 0.063	2.980 ± 0.190	n = 17	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
3.079 ± 0.168	6.334 ± 0.718	0.992 ± 0.042	0.927 ± 0.026	3.066 ± 0.165	n = 8	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
3.004 ± 0.228	6.183 ± 0.554	0.945 ± 0.088	0.882 ± 0.105	2.961 ± 0.281	n = 8	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
3.060 ± 0.160	5.527 ± 0.398	1.004 ± 0.019	0.995 ± 0.029	3.071 ± 0.127	n = 19	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
2.890 ± 0.186	5.149 ± 0.407	0.993 ± 0.055	0.990 ± 0.050	2.876 ± 0.205	n = 26	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
2.826 ± 0.152	4.995 ± 0.301	0.983 ± 0.051	0.972 ± 0.050	2.790 ± 0.160	n = 56	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser

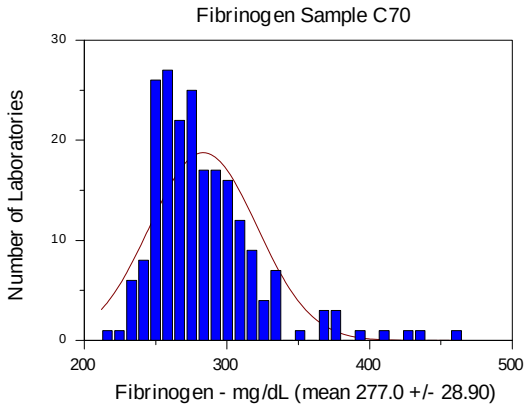
Hematology Proficiency Test Event
October 15, 2012
Fibrinogen Data



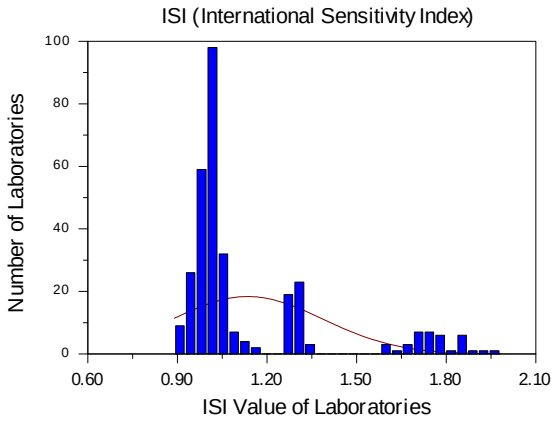


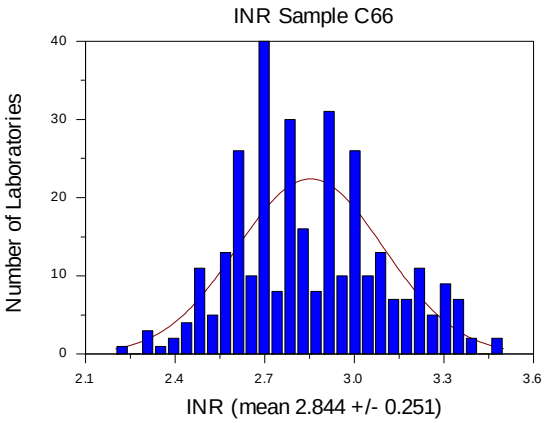


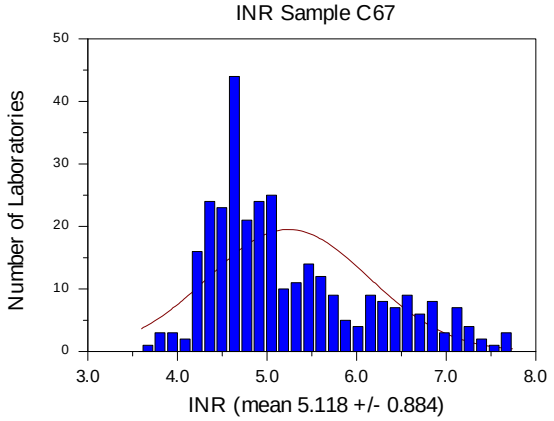


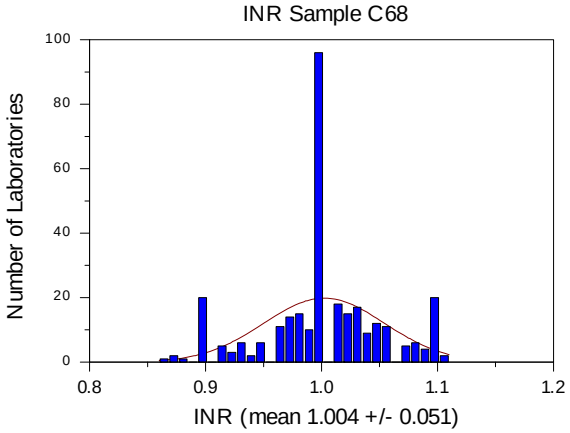


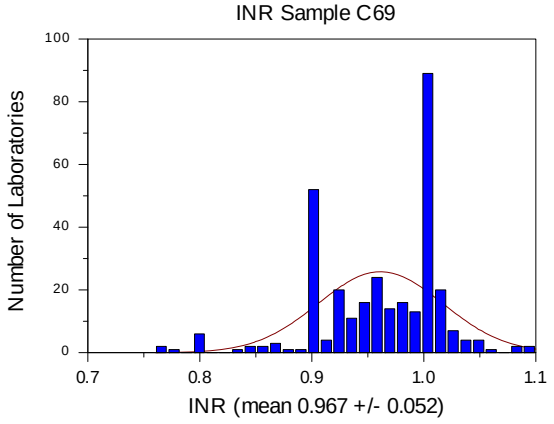
Hematology Proficiency Test Event
October 15, 2012
International Sensitivity Index (ISI) and International Normalized Ratio (INR)

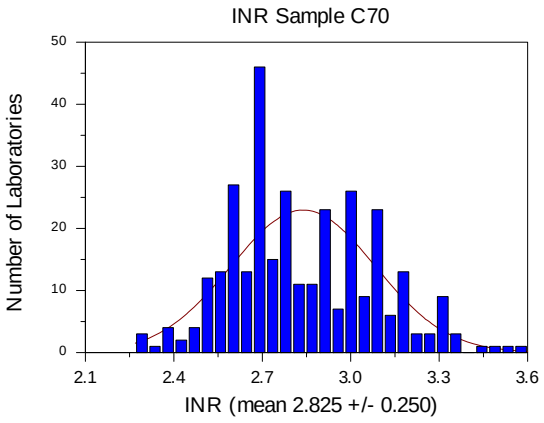










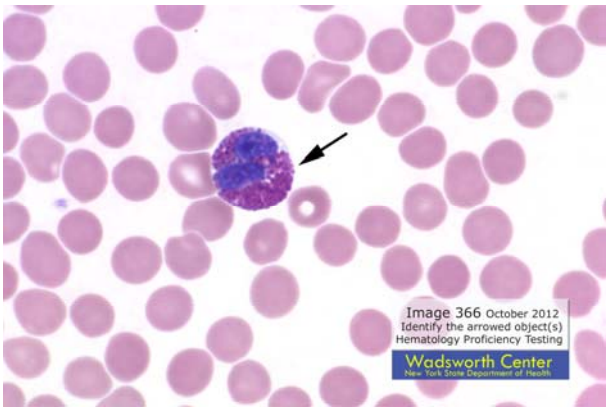


NEW YORK STATE HEMATOLOGY PROFICIENCY TEST PROGRAM

October 15, 2012

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 366

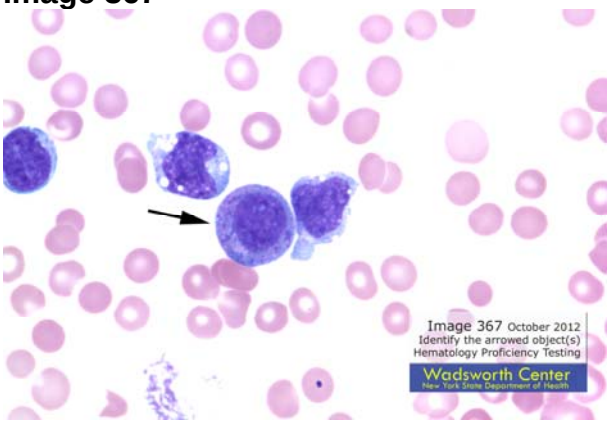


Number of Responses	Percent of Laboratories	Cell type or finding
360	**98.9%**	**Eosinophil**
4	1.1%	Basophil

The large bright orange-red refractile granules present in the cytoplasm of the arrowed cell in Image 366 are distinctly those of an eosinophil as correctly identified by 360 participants. In addition to their brilliant color, the granules of an eosinophil are uniform in size, evenly distributed throughout the cytoplasm of the cell and are larger than those of a neutrophil measuring approximately 16µm in diameter.

The granules of the eosinophil contain a crystalloid core composed largely of major basic protein (MBP) and a matrix that contains eosinophil cationic protein (ECP), eosinophil peroxidase (EPO), and eosinophil-derived neurotoxin (EDN). MBP is an arginine-rich peptide that gives the basic charge to the cell and an affinity for large acidic molecules such as heparin. The protein does not have enzymatic ability but is highly toxic to helminthic parasites, certain tumor cells and antibody-coated host cells. ECP and EDN have shown antiviral activity.

Image 367

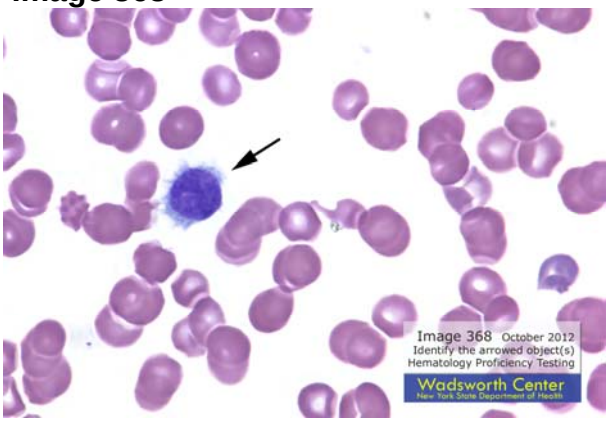


Number of Responses	Percent of Laboratories	Cell type or finding
243	**66.8%**	**Promyelocyte**
99	**27.2%**	**Myelocyte**
15	4.1%	Blast cell, not classified
3	0.8%	Monoblast
2	0.5%	Reactive/Atypical lymphocyte
1	0.3%	Myeloblast
1	0.3%	Lymphoblast

The nucleus of the arrowed cell is large and round, the chromatin is smooth and nucleoli are visible. The cytoplasm is basophilic and contains azurophilic (primary) granules. Most participants (66.8%) favored identification of this cell as a promyelocyte. Twenty-seven percent of participants identified the cell as a myeloycte. Since myelocytes can contain both azurophilic (primary) and lilac (specific) granules credit was given for myelocyte.

Twenty participants identified the arrowed cell in Image 367 as a blast cell. The cytoplasm of a blast cell is usually agranular and the chromatin is finely reticular, characteristics unlike those of the arrowed cell in Image 367.

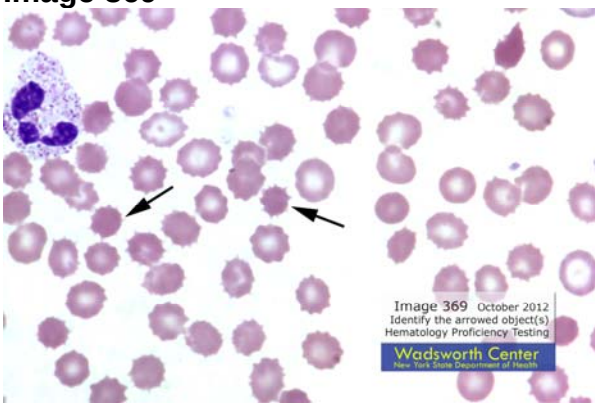
Image 368



Number of Responses	Percent of Laboratories	Cell type or finding
359	**98.6%**	**Hairy Cell**
3	0.8%	Normal lymphocyte
2	0.5%	Giant platelet

The hair-like cytoplasmic projections and the large round nucleus of the arrowed cell in Image 368 make the identification of this cell as a hairy cell easy. The image was obtained from a case of Hairy Cell Leukemia where seventy-five percent of the cells present were classified as hairy cells. Hairy Cell Leukemia is a chronic lymphoproliferative disease involving splenic B cells. The average age of onset is 54 years with a male to female ratio of almost 5:1. The survival for most is at least five years post diagnosis.

Image 369



Number of Responses	Percent of Laboratories	Cell type or finding
259	71.2%	Echinocyte (crenated cell) or burr cell
105	28.8%	Acanthocyte

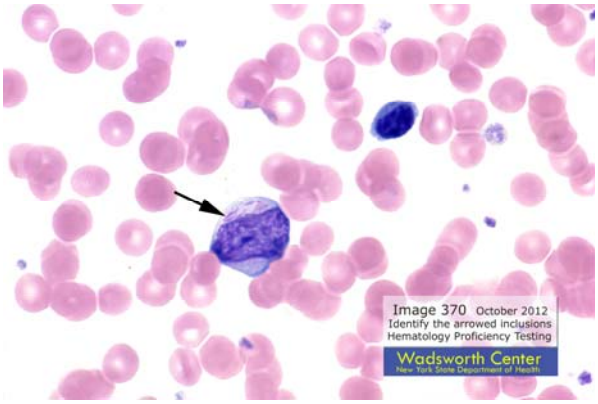
Image 369 was taken from a 79 year-old female with septicemia; WBC was 18.9 ($x10^9$/L), hemoglobin was 9.4 g/dL and platelet count was normal. The arrowed red blood cells in Image 369 possess characteristics of both acanthocytes and echinoctyes. The thorn-like cell membrane projections and no visible central pallor favor identification as an acanthocyte and the more uniform shape and distribution of the cell membrane projections favor identification as an echinocyte.

Past proficiency test challenges have shown identification of spiculated red cells to be problematic. Generally, the acanthocyte is smaller in size than a normal red blood cell, the membrane projections appear sharp-tipped and the cell does not have central pallor. In contrast, the echinocyte is usually the same size or slightly smaller than a normal red cell, the membrane projections are blunt and the cell retains central pallor.

Correct classification of a red cell as an acanthocyte or an echinocyte can be important since each portrays a different hematological condition. Acanthoctyes are most prevalent in abetalipoproteinemia and advanced liver disease and to a lesser extent in myeloproliferative disorders and post-splenectomy. The presence of many echinocytes is commonly caused by improperly prepared smears, rare causes include renal disease, vitamin E deficiency and pyruvate kinase deficiency.

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

Image 370



Number of Responses	Percent of Laboratories	Cell type or finding
353	**97.0%**	**Auer rod(s)**
3	0.8%	Döhle body
2	0.5%	Blast cell, not classified
2	0.5%	Myeloblast
2	0.5%	Reactive/Atypical lymphocyte
1	0.3%	Basophilic stippling
1	0.3%	Erythrocyte - normal

Image 370 was taken from a case of promyelocytic leukemia, participants were asked to identify the arrowed cell inclusion(s). The red-purple splinter shaped cytoplasmic inclusions are Auer rods or Auer bodies as correctly identified by 353 participants. “Auer bodies are cytoplasmic inclusions representing an agglomeration of azurophilic (primary) granules. They are similar in staining properties and content to normal azurophilic granules but are abnormally large, measuring 0.2 to 5 µm in length. Auer bodies contain peroxidase, lysosomal enzymes, and large crystalline inclusions. Cells with multiple Auer bodies lumped together are called *faggot cells.* The Chédiak-Higashi syndrome, a rare autosomal recessive condition characterized by albinism and increased susceptibility to infection, also manifests an abnormality of azurophilic granules. Early in the promyelocytic stage, normal azurophilic granules form, but they then fuse to form megagranules. This abnormal fusion of lysosomes is manifest in other cells and tissues.” Glassy, E.F. Color Atlas of Hematology, CAP, Northfield, 1998, p. 14