STATE OF NEW YORK
DEPARTMENT OF HEALTH

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Richard F. Daines, M.D.
Commissioner

James W. Clyne, Jr.
Executive Deputy Commissioner

To: Laboratory Directors and Laboratory Staff

From: Robert Rej, Ph.D.

Date: March 8, 2010

Subject: Results of February 8, 2010 Hematology Proficiency Test

Enclosed are results from the hematology proficiency testing survey shipped February 8, 2010. Five samples were distributed for each test category:

Routine Blood Counts (B26, B27, B28, B29, B30)

Routine Coagulation (C26, C27, C28, C29, C30- APTT, PT and Fibrinogen assays)

Cell Identification (326, 327, 328, 329, 330- Images)

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

Summary of Participant Responses
Mean ± One Standard Deviation

White Cell Count (x 10^9/L)

Specimen: B26	Specimen: B27	Specimen: B28	Specimen: B29	Specimen: B30	Number	[Code] Instrument
15.07 ± 0.48	3.03 ± 0.13	2.99 ± 0.12	9.86 ± 0.30	25.54 ± 0.74	n = 412	[---] All Methods & Instruments
						<Instruments>
15.10 ± 0.34	2.90 ± 0.00	3.02 ± 0.28	9.59 ± 0.51	25.05 ± 1.56	n = 5	[ABF] Abbott Cell Dyn 3500
14.70 ± 0.93	3.13 ± 0.15	3.09 ± 0.21	9.64 ± 0.57	25.37 ± 1.23	n = 6	[ABG] Abbott Cell Dyn 1700
15.10 ± 0.08	3.02 ± 0.04	2.85 ± 0.06	9.77 ± 0.16	25.41 ± 0.27	n = 4	[ABH] Abbott Cell Dyn 4000
15.05 ± 0.63	3.04 ± 0.10	3.07 ± 0.14	10.05 ± 0.36	25.84 ± 0.56	n = 3	[ABJ] Abbott Cell Dyn 1800
15.26 ± 0.48	3.01 ± 0.08	3.02 ± 0.12	9.96 ± 0.34	25.77 ± 0.56	n = 14	[ABK] Abbott Cell Dyn 3200
15.15 ± 0.43	3.07 ± 0.14	2.99 ± 0.12	9.82 ± 0.26	25.14 ± 0.73	n = 15	[ABM] Abbott Cell Dyn 3700
14.92 ± 0.24	3.00 ± 0.09	2.94 ± 0.08	9.84 ± 0.21	25.30 ± 0.55	n = 12	[ABS] Abbott Cell Dyn Sapphire
15.24 ± 0.31	3.03 ± 0.11	3.01 ± 0.09	9.87 ± 0.24	25.57 ± 0.58	n = 19	[ABT] Abbott Cell Dyn Ruby
14.80 ± 0.51	2.89 ± 0.09	2.86 ± 0.12	9.69 ± 0.39	25.23 ± 0.98	n = 28	[BTD] Siemens (Bayer)Advia 120
14.83 ± 0.78	2.88 ± 0.18	2.90 ± 0.16	9.86 ± 0.37	25.81 ± 1.07	n = 18	[BTE] Siemens (Bayer)Advia 2120
14.56 ± 0.39	3.03 ± 0.14	3.06 ± 0.10	9.60 ± 0.09	24.51 ± 0.20	n = 3	[BTF] Siemens (Bayer)Advia 70/Dan
15.60 ± 0.09	3.17 ± 0.05	3.17 ± 0.05	9.91 ± 0.20	26.13 ± 0.42	n = 3	[CUB] Coulter Maxm
15.04 ± 0.24	3.07 ± 0.07	3.01 ± 0.09	10.00 ± 0.24	26.00 ± 0.51	n = 8	[CUP] Coulter Gen-S
15.14 ± 0.31	2.98 ± 0.15	2.95 ± 0.07	9.78 ± 0.31	26.16 ± 0.22	n = 7	[CUS] Coulter ACT 5 diff
14.85 ± 0.50	3.10 ± 0.10	3.08 ± 0.10	9.84 ± 0.28	25.46 ± 0.65	n = 32	[CUT] Coulter ACT series,not ACT5
15.66 ± 0.19	3.10 ± 0.12	3.11 ± 0.13	9.94 ± 0.27	26.06 ± 0.58	n = 14	[CUW] Coulter HMX
15.09 ± 0.27	3.05 ± 0.07	2.98 ± 0.07	9.93 ± 0.17	25.51 ± 0.36	n = 85	[CUX] Coulter LH750,755
15.04 ± 0.34	3.03 ± 0.07	2.94 ± 0.06	9.93 ± 0.17	25.43 ± 0.36	n = 20	[CUY] Coulter LH 780
15.36 ± 0.35	3.16 ± 0.11	3.07 ± 0.10	9.98 ± 0.26	25.93 ± 0.64	n = 21	[CUZ] Coulter LH500
14.98 ± 0.36	2.96 ± 0.09	2.96 ± 0.07	9.70 ± 0.14	25.83 ± 0.27	n = 9	[ROB] ABX Pentra series
14.60 ± 0.61	2.97 ± 0.11	3.00 ± 0.10	9.48 ± 0.32	24.72 ± 0.78	n = 26	[SYO] Sysmex XE2100
14.49 ± 0.43	2.91 ± 0.11	2.90 ± 0.09	9.45 ± 0.12	24.30 ± 0.42	n = 6	[SYQ] Sysmex XE2100D
14.57 ± 0.37	2.99 ± 0.06	2.97 ± 0.07	9.58 ± 0.17	24.65 ± 0.46	n = 8	[SYA] Sysmex XE 5000
15.11 ± 0.39	2.93 ± 0.06	2.94 ± 0.09	9.90 ± 0.25	25.78 ± 0.61	n = 25	[SYI] Sysmex XT-series
15.78 ± 0.43	3.10 ± 0.09	3.04 ± 0.08	10.38 ± 0.26	26.75 ± 0.73	n = 11	[SYP] Sysmex XS-series

Summary of Participant Responses
Mean ± One Standard Deviation

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

Specimen: B26	Specimen: B27	Specimen: B28	Specimen: B29	Specimen: B30	Number	[Code] Instrument
4.019 ± 0.101	1.995 ± 0.066	1.993 ± 0.065	4.528 ± 0.103	4.698 ± 0.100	n = 410	[---] All Methods & Instruments
						<Instruments>
4.101 ± 0.093	2.040 ± 0.031	2.061 ± 0.043	4.605 ± 0.127	4.815 ± 0.087	n = 5	[ABF] Abbott Cell Dyn 3500
4.152 ± 0.087	2.096 ± 0.039	2.061 ± 0.033	4.574 ± 0.151	4.782 ± 0.136	n = 6	[ABG] Abbott Cell Dyn 1700
4.160 ± 0.068	2.074 ± 0.023	2.066 ± 0.034	4.674 ± 0.106	4.756 ± 0.043	n = 4	[ABH] Abbott Cell Dyn 4000
4.141 ± 0.130	2.143 ± 0.014	2.160 ± 0.018	4.672 ± 0.051	4.798 ± 0.096	n = 3	[ABJ] Abbott Cell Dyn 1800
4.131 ± 0.082	2.065 ± 0.028	2.067 ± 0.032	4.639 ± 0.096	4.779 ± 0.139	n = 14	[ABK] Abbott Cell Dyn 3200
4.074 ± 0.105	2.053 ± 0.041	2.048 ± 0.038	4.555 ± 0.095	4.721 ± 0.070	n = 15	[ABM] Abbott Cell Dyn 3700
4.046 ± 0.051	2.032 ± 0.017	2.036 ± 0.043	4.624 ± 0.067	4.777 ± 0.054	n = 12	[ABS] Abbott Cell Dyn Sapphire
4.097 ± 0.084	2.044 ± 0.035	2.033 ± 0.040	4.666 ± 0.092	4.843 ± 0.083	n = 19	[ABT] Abbott Cell Dyn Ruby
4.076 ± 0.081	2.047 ± 0.030	2.047 ± 0.025	4.539 ± 0.077	4.682 ± 0.082	n = 28	[BTD] Siemens (Bayer)Advia 120
4.058 ± 0.118	2.051 ± 0.048	2.055 ± 0.041	4.549 ± 0.085	4.746 ± 0.130	n = 18	[BTE] Siemens (Bayer)Advia 2120
4.093 ± 0.076	2.032 ± 0.041	2.029 ± 0.020	4.603 ± 0.077	4.809 ± 0.037	n = 3	[BTF] Siemens (Bayer)Advia 70/Dan
3.972 ± 0.078	1.969 ± 0.044	1.956 ± 0.047	4.506 ± 0.079	4.685 ± 0.063	n = 3	[CUB] Coulter Maxm
3.951 ± 0.047	1.940 ± 0.025	1.946 ± 0.034	4.476 ± 0.077	4.665 ± 0.074	n = 8	[CUP] Coulter Gen-S
4.042 ± 0.072	1.954 ± 0.071	1.961 ± 0.049	4.562 ± 0.046	4.726 ± 0.061	n = 7	[CUS] Coulter ACT 5 diff
3.932 ± 0.114	1.955 ± 0.063	1.958 ± 0.054	4.425 ± 0.105	4.634 ± 0.127	n = 30	[CUT] Coulter ACT series,not ACT5
3.951 ± 0.096	1.952 ± 0.037	1.956 ± 0.035	4.464 ± 0.060	4.654 ± 0.053	n = 14	[CUW] Coulter HMX
3.955 ± 0.042	1.938 ± 0.020	1.935 ± 0.022	4.458 ± 0.046	4.638 ± 0.040	n = 85	[CUX] Coulter LH750,755
3.934 ± 0.027	1.930 ± 0.011	1.926 ± 0.013	4.438 ± 0.039	4.615 ± 0.037	n = 20	[CUY] Coulter LH 780
3.971 ± 0.057	1.971 ± 0.041	1.979 ± 0.042	4.480 ± 0.082	4.663 ± 0.074	n = 21	[CUZ] Coulter LH500
4.000 ± 0.081	1.972 ± 0.053	1.962 ± 0.045	4.563 ± 0.058	4.694 ± 0.055	n = 9	[ROB] ABX Pentra series
4.108 ± 0.048	2.053 ± 0.031	2.052 ± 0.023	4.605 ± 0.061	4.767 ± 0.075	n = 26	[SYO] Sysmex XE2100
4.152 ± 0.032	2.057 ± 0.018	2.055 ± 0.018	4.592 ± 0.028	4.782 ± 0.048	n = 6	[SYQ] Sysmex XE2100D
4.117 ± 0.040	2.042 ± 0.011	2.056 ± 0.021	4.622 ± 0.027	4.768 ± 0.042	n = 8	[SYA] Sysmex XE 5000
4.016 ± 0.048	1.986 ± 0.023	1.985 ± 0.021	4.542 ± 0.043	4.700 ± 0.048	n = 25	[SYI] Sysmex XT-series
4.000 ± 0.038	1.954 ± 0.014	1.966 ± 0.028	4.549 ± 0.051	4.727 ± 0.070	n = 11	[SYP] Sysmex XS-series

Summary of Participant Responses
Mean ± One Standard Deviation

Hemoglobin (g/dL)

Specimen: B26	Specimen: B27	Specimen: B28	Specimen: B29	Specimen: B30	Number	[Code] Instrument
11.99 ± 0.19	5.88 ± 0.12	5.87 ± 0.11	13.63 ± 0.20	13.90 ± 0.23	n = 428	[---] All Methods & Instruments
						<Instruments>
14.57 ± 0.33	10.50 ± 0.00	10.50 ± 0.00	17.28 ± 0.70	18.10 ± 0.92	n = 4	[HQB] HemoCue Donor Hb Checker
12.02 ± 0.19	5.99 ± 0.08	6.00 ± 0.00	13.70 ± 0.22	13.80 ± 0.17	n = 10	[HQC] HemoCue Hb201+/B-Hb
15.89 ± 0.20	7.23 ± 0.16	7.27 ± 0.25	18.35 ± 0.17	18.75 ± 0.12	n = 4	[HQD] HemoCue Hb 301
12.13 ± 0.11	5.96 ± 0.06	5.96 ± 0.11	13.65 ± 0.23	14.27 ± 0.08	n = 5	[ABF] Abbott Cell Dyn 3500
12.26 ± 0.18	6.00 ± 0.18	5.95 ± 0.12	13.87 ± 0.26	14.33 ± 0.28	n = 6	[ABG] Abbott Cell Dyn 1700
12.15 ± 0.06	6.08 ± 0.04	6.05 ± 0.06	13.60 ± 0.08	14.07 ± 0.16	n = 4	[ABH] Abbott Cell Dyn 4000
12.23 ± 0.51	6.10 ± 0.09	6.10 ± 0.09	14.17 ± 0.32	14.40 ± 0.36	n = 3	[ABJ] Abbott Cell Dyn 1800
12.32 ± 0.24	5.88 ± 0.15	5.91 ± 0.11	13.77 ± 0.26	14.19 ± 0.40	n = 14	[ABK] Abbott Cell Dyn 3200
12.09 ± 0.19	5.97 ± 0.12	6.00 ± 0.12	13.55 ± 0.18	13.89 ± 0.15	n = 15	[ABM] Abbott Cell Dyn 3700
12.20 ± 0.13	6.08 ± 0.10	6.04 ± 0.06	13.84 ± 0.11	14.14 ± 0.13	n = 12	[ABS] Abbott Cell Dyn Sapphire
12.06 ± 0.20	5.84 ± 0.11	5.84 ± 0.11	13.63 ± 0.20	14.03 ± 0.24	n = 19	[ABT] Abbott Cell Dyn Ruby
11.95 ± 0.20	5.90 ± 0.10	5.87 ± 0.09	13.43 ± 0.13	13.78 ± 0.14	n = 27	[BTD] Siemens (Bayer)Advia 120
11.94 ± 0.19	5.97 ± 0.08	5.95 ± 0.08	13.42 ± 0.18	13.89 ± 0.22	n = 19	[BTE] Siemens (Bayer)Advia 2120
12.17 ± 0.14	5.93 ± 0.14	5.93 ± 0.23	13.75 ± 0.19	14.36 ± 0.26	n = 3	[BTF] Siemens (Bayer)Advia 70/Dan
12.17 ± 0.14	5.86 ± 0.10	5.93 ± 0.05	13.66 ± 0.10	14.02 ± 0.15	n = 3	[CUB] Coulter Maxm
11.93 ± 0.14	5.81 ± 0.09	5.80 ± 0.00	13.61 ± 0.10	13.84 ± 0.18	n = 8	[CUP] Coulter Gen-S
11.92 ± 0.09	5.83 ± 0.07	5.84 ± 0.06	13.56 ± 0.08	13.88 ± 0.15	n = 7	[CUS] Coulter ACT 5 diff
11.86 ± 0.24	5.84 ± 0.12	5.86 ± 0.08	13.66 ± 0.21	13.91 ± 0.23	n = 30	[CUT] Coulter ACT series,not ACT5
12.14 ± 0.19	5.90 ± 0.09	5.92 ± 0.10	13.64 ± 0.28	14.05 ± 0.20	n = 14	[CUW] Coulter HMX
11.98 ± 0.13	5.89 ± 0.07	5.87 ± 0.08	13.66 ± 0.15	13.90 ± 0.15	n = 85	[CUX] Coulter LH750,755
11.93 ± 0.11	5.89 ± 0.09	5.87 ± 0.08	13.67 ± 0.13	13.84 ± 0.11	n = 20	[CUY] Coulter LH 780
12.11 ± 0.18	5.86 ± 0.10	5.88 ± 0.11	13.58 ± 0.17	14.03 ± 0.23	n = 21	[CUZ] Coulter LH500
11.90 ± 0.08	5.73 ± 0.05	5.72 ± 0.07	13.67 ± 0.12	13.92 ± 0.16	n = 9	[ROB] ABX Pentra series
11.87 ± 0.11	5.80 ± 0.05	5.81 ± 0.07	13.56 ± 0.12	13.68 ± 0.14	n = 26	[SYO] Sysmex XE2100
11.86 ± 0.13	5.80 ± 0.00	5.82 ± 0.08	13.59 ± 0.16	13.78 ± 0.16	n = 5	[SYQ] Sysmex XE2100D
11.81 ± 0.11	5.75 ± 0.06	5.77 ± 0.05	13.40 ± 0.09	13.67 ± 0.14	n = 8	[SYA] Sysmex XE 5000
11.95 ± 0.14	5.77 ± 0.05	5.79 ± 0.07	13.58 ± 0.15	13.77 ± 0.15	n = 25	[SYI] Sysmex XT-series
11.95 ± 0.09	5.70 ± 0.00	5.73 ± 0.10	13.68 ± 0.08	13.95 ± 0.09	n = 11	[SYP] Sysmex XS-series

Summary of Participant Responses
Mean ± One Standard Deviation

Hematocrit (%)

Specimen: B26	Specimen: B27	Specimen: B28	Specimen: B29	Specimen: B30	Number	[Code] Instrument
33.65 ± 1.82	17.09 ± 1.07	17.05 ± 1.06	38.27 ± 2.00	38.97 ± 2.12	n = 417	[---] All Methods & Instruments
						<Instruments>
30.80 ± 1.96	15.84 ± 1.15	15.77 ± 1.58	36.24 ± 3.80	36.39 ± 2.95	n = 7	[MHC] Microhematocrit
35.55 ± 0.71	17.91 ± 0.27	18.19 ± 0.37	40.61 ± 0.84	41.52 ± 0.61	n = 5	[ABF] Abbott Cell Dyn 3500
34.94 ± 1.09	18.06 ± 0.51	17.68 ± 0.44	39.75 ± 1.09	40.50 ± 1.62	n = 5	[ABG] Abbott Cell Dyn 1700
32.35 ± 0.27	16.59 ± 0.23	16.39 ± 0.38	36.31 ± 1.66	36.67 ± 0.42	n = 4	[ABH] Abbott Cell Dyn 4000
35.73 ± 0.68	18.80 ± 0.36	19.00 ± 0.36	40.46 ± 0.56	41.00 ± 0.54	n = 3	[ABJ] Abbott Cell Dyn 1800
30.45 ± 0.80	15.48 ± 0.36	15.48 ± 0.42	34.70 ± 0.99	35.12 ± 1.27	n = 15	[ABK] Abbott Cell Dyn 3200
35.54 ± 0.78	18.19 ± 0.33	18.17 ± 0.29	40.27 ± 0.76	40.95 ± 0.69	n = 15	[ABM] Abbott Cell Dyn 3700
31.37 ± 0.45	16.07 ± 0.15	16.11 ± 0.46	36.23 ± 0.42	36.58 ± 0.51	n = 12	[ABS] Abbott Cell Dyn Sapphire
29.91 ± 0.77	15.28 ± 0.39	15.09 ± 0.39	34.41 ± 0.83	34.98 ± 0.87	n = 19	[ABT] Abbott Cell Dyn Ruby
30.40 ± 0.76	15.34 ± 0.38	15.34 ± 0.36	34.50 ± 0.78	34.75 ± 0.69	n = 28	[BTD] Siemens (Bayer)Advia 120
30.24 ± 1.10	15.44 ± 0.47	15.44 ± 0.42	34.59 ± 0.90	35.19 ± 1.13	n = 18	[BTE] Siemens (Bayer)Advia 2120
34.90 ± 0.82	17.95 ± 0.54	17.80 ± 0.36	39.77 ± 0.67	40.70 ± 0.91	n = 3	[BTF] Siemens (Bayer)Advia 70/Dan
34.40 ± 0.82	17.41 ± 0.57	17.26 ± 0.56	39.32 ± 0.86	40.14 ± 0.65	n = 3	[CUB] Coulter Maxm
34.40 ± 0.72	17.21 ± 0.53	17.20 ± 0.43	39.35 ± 0.91	40.10 ± 1.09	n = 9	[CUP] Coulter Gen-S
32.17 ± 0.40	15.98 ± 0.35	15.99 ± 0.34	37.05 ± 0.84	37.68 ± 0.80	n = 7	[CUS] Coulter ACT 5 diff
34.00 ± 1.04	17.27 ± 0.53	17.25 ± 0.47	38.64 ± 0.97	39.69 ± 1.07	n = 30	[CUT] Coulter ACT series,not ACT5
33.97 ± 0.78	17.18 ± 0.29	17.20 ± 0.35	38.92 ± 0.70	39.69 ± 0.68	n = 14	[CUW] Coulter HMX
34.43 ± 0.40	17.15 ± 0.21	17.10 ± 0.24	39.23 ± 0.49	40.08 ± 0.48	n = 84	[CUX] Coulter LH750,755
34.22 ± 0.29	17.05 ± 0.21	17.03 ± 0.18	39.06 ± 0.38	39.87 ± 0.35	n = 21	[CUY] Coulter LH 780
34.19 ± 0.51	17.31 ± 0.32	17.27 ± 0.37	39.06 ± 0.69	39.70 ± 0.65	n = 21	[CUZ] Coulter LH500
32.52 ± 0.34	16.33 ± 0.38	16.15 ± 0.44	37.47 ± 0.51	37.82 ± 0.57	n = 8	[ROB] ABX Pentra series
34.52 ± 0.50	18.13 ± 0.26	18.02 ± 0.27	38.76 ± 0.61	39.40 ± 0.67	n = 26	[SYO] Sysmex XE2100
34.81 ± 0.41	18.29 ± 0.36	18.12 ± 0.32	38.75 ± 0.23	39.67 ± 0.42	n = 6	[SYQ] Sysmex XE2100D
34.48 ± 0.52	18.10 ± 0.26	18.03 ± 0.30	38.91 ± 0.49	39.41 ± 0.38	n = 8	[SYA] Sysmex XE 5000
33.75 ± 0.43	18.13 ± 0.27	18.03 ± 0.19	38.04 ± 0.49	38.61 ± 0.50	n = 25	[SYI] Sysmex XT-series
33.99 ± 0.40	18.06 ± 0.27	18.12 ± 0.20	38.53 ± 0.39	39.35 ± 0.35	n = 11	[SYP] Sysmex XS-series

Summary of Participant Responses
Mean ± One Standard Deviation

Platelet Count (x 10^9/L)

Specimen: B26	Specimen: B27	Specimen: B28	Specimen: B29	Specimen: B30	Number	[Code] Instrument
310.7 ± 25.15	48.3 ± 6.10	47.8 ± 6.32	227.4 ± 19.11	187.5 ± 18.70	n = 411	[---] All Methods & Instruments
						<Instruments>
331.4 ± 4.30	58.3 ± 5.94	59.5 ± 6.30	257.7 ± 12.62	208.8 ± 12.14	n = 5	[ABF] Abbott Cell Dyn 3500
326.4 ± 17.80	49.9 ± 7.30	51.4 ± 6.87	244.1 ± 13.71	203.6 ± 15.39	n = 6	[ABG] Abbott Cell Dyn 1700
277.6 ± 28.10	45.7 ± 2.69	45.0 ± 3.53	227.2 ± 15.04	182.5 ± 11.60	n = 4	[ABH] Abbott Cell Dyn 4000
336.8 ± 11.32	54.1 ± 2.05	52.4 ± 1.02	243.4 ± 8.97	205.3 ± 10.44	n = 3	[ABJ] Abbott Cell Dyn 1800
320.9 ± 11.53	50.2 ± 3.71	48.8 ± 2.77	248.3 ± 8.46	212.2 ± 10.15	n = 14	[ABK] Abbott Cell Dyn 3200
334.2 ± 10.98	56.5 ± 5.12	57.9 ± 5.22	248.2 ± 12.00	199.5 ± 9.12	n = 15	[ABM] Abbott Cell Dyn 3700
291.7 ± 18.80	44.0 ± 5.72	41.1 ± 1.64	237.8 ± 13.96	195.7 ± 6.98	n = 12	[ABS] Abbott Cell Dyn Sapphire
324.7 ± 12.17	56.1 ± 4.36	53.0 ± 3.94	253.0 ± 8.55	217.7 ± 12.08	n = 19	[ABT] Abbott Cell Dyn Ruby
345.0 ± 21.71	49.1 ± 4.66	47.8 ± 3.54	251.9 ± 17.07	216.0 ± 12.96	n = 28	[BTD] Siemens (Bayer)Advia 120
333.5 ± 22.59	46.8 ± 2.71	46.3 ± 4.65	247.6 ± 15.44	213.7 ± 12.96	n = 18	[BTE] Siemens (Bayer)Advia 2120
312.5 ± 26.31	52.2 ± 5.12	52.2 ± 5.00	226.0 ± 14.42	187.9 ± 12.42	n = 3	[BTF] Siemens (Bayer)Advia 70/Dan
303.9 ± 10.08	52.1 ± 5.22	46.5 ± 2.74	211.5 ± 1.86	175.2 ± 7.69	n = 3	[CUB] Coulter Maxm
294.7 ± 7.42	44.4 ± 2.86	43.9 ± 3.09	213.0 ± 6.78	174.0 ± 5.07	n = 8	[CUP] Coulter Gen-S
327.5 ± 14.83	48.0 ± 4.47	49.7 ± 3.69	233.6 ± 11.66	194.2 ± 9.92	n = 7	[CUS] Coulter ACT 5 diff
317.4 ± 16.62	47.6 ± 4.10	47.8 ± 4.97	220.2 ± 10.88	183.8 ± 12.33	n = 31	[CUT] Coulter ACT series,not ACT5
300.1 ± 15.34	49.9 ± 5.81	49.5 ± 6.75	217.4 ± 11.85	176.3 ± 12.40	n = 14	[CUW] Coulter HMX
304.1 ± 7.58	48.0 ± 5.32	45.4 ± 5.92	217.3 ± 6.43	177.4 ± 4.87	n = 85	[CUX] Coulter LH750,755
304.3 ± 10.06	49.6 ± 5.24	50.7 ± 6.01	216.7 ± 6.08	178.5 ± 5.53	n = 20	[CUY] Coulter LH 780
299.7 ± 13.69	44.6 ± 3.14	45.9 ± 3.53	214.4 ± 10.95	176.4 ± 9.26	n = 21	[CUZ] Coulter LH500
335.9 ± 1.82	48.9 ± 2.83	49.4 ± 3.28	237.8 ± 3.49	200.9 ± 6.42	n = 9	[ROB] ABX Pentra series
256.7 ± 10.37	41.0 ± 6.96	41.8 ± 7.27	206.1 ± 8.22	165.6 ± 6.24	n = 26	[SYO] Sysmex XE2100
333.9 ± 5.15	52.9 ± 2.39	54.3 ± 0.97	242.5 ± 7.54	195.3 ± 2.31	n = 6	[SYQ] Sysmex XE2100D
248.8 ± 7.13	36.9 ± 1.13	38.7 ± 1.53	205.9 ± 4.93	160.9 ± 5.29	n = 8	[SYA] Sysmex XE 5000
304.0 ± 11.63	48.1 ± 3.04	50.1 ± 2.60	231.1 ± 8.58	188.2 ± 5.07	n = 25	[SYI] Sysmex XT-series
296.8 ± 4.27	44.5 ± 2.39	45.7 ± 2.38	226.7 ± 10.80	182.2 ± 7.51	n = 11	[SYP] Sysmex XS-series

Summary of Participant Responses
Mean ± One Standard Deviation

Prothrombin Time (seconds)

Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Instrument or Reagent
27.31 ± 5.04	40.05 ± 8.61	11.56 ± 0.72	11.37 ± 0.83	11.53 ± 0.69	n = 324	[---] All Methods & Instruments
						<Instruments>
21.22 ± 2.67	29.80 ± 7.32	11.15 ± 0.63	11.14 ± 0.82	11.23 ± 0.32	n = 3	[BBA] BBL Fibrometer
25.63 ± 0.74	37.22 ± 1.38	11.63 ± 0.19	10.86 ± 0.27	11.60 ± 0.19	n = 20	[BEB] Dade-Behring BCS,BCSXP
29.38 ± 0.24	42.36 ± 1.03	12.49 ± 0.66	12.25 ± 0.54	12.44 ± 0.56	n = 3	[BXE] Trinity Biotech MDA
33.58 ± 1.84	50.31 ± 2.41	13.33 ± 0.26	13.05 ± 0.22	13.23 ± 0.32	n = 35	[DGC] Diagnostica Stago STA Compa
32.26 ± 3.49	47.74 ± 5.19	13.20 ± 1.02	12.98 ± 1.13	13.20 ± 1.07	n = 13	[DGD] Diagnostica Stago STA-R, ST
20.46 ± 0.56	27.32 ± 1.07	11.99 ± 0.34	11.49 ± 0.45	11.82 ± 0.27	n = 18	[ILA] IL ACL(All models except 81
28.22 ± 6.47	41.69 ± 10.90	11.28 ± 0.31	11.32 ± 0.43	11.21 ± 0.30	n = 51	[ILC] IL ACL Futura/Advance
26.22 ± 4.10	37.71 ± 7.56	11.16 ± 0.55	11.22 ± 0.40	11.30 ± 0.57	n = 40	[ILD] IL ACL(ELITE,ELITE PRO,8/9/
30.27 ± 1.34	46.27 ± 3.28	11.48 ± 0.31	11.71 ± 0.38	11.42 ± 0.41	n = 28	[ILE] IL ACL TOP Series (ACLTOP,A
30.01 ± 8.35	40.58 ± 12.32	12.13 ± 0.31	11.69 ± 0.37	12.08 ± 0.49	n = 3	[MLG] IL Electra 1400C,1600C,1800
26.13 ± 1.53	38.28 ± 2.13	11.28 ± 0.31	10.78 ± 0.36	11.18 ± 0.34	n = 36	[SYW] Sysmex CA500,540,560
25.02 ± 0.91	36.60 ± 1.66	11.33 ± 0.23	10.81 ± 0.21	11.32 ± 0.21	n = 51	[SYX] Sysmex CA 1500
25.80 ± 1.12	37.79 ± 1.56	11.80 ± 0.21	11.31 ± 0.18	11.87 ± 0.15	n = 11	[SYY] Sysmex CA 7000
32.81 ± 1.40	46.85 ± 5.34	15.20 ± 0.89	14.03 ± 0.47	15.17 ± 0.54	n = 4	[TRE] Trinity Biotech AMAX Destin
						<Reagents>
33.57 ± 1.70	50.17 ± 2.34	13.36 ± 0.29	13.09 ± 0.26	13.29 ± 0.35	n = 46	[TA3] STA Neoplastine CL+
25.49 ± 1.10	37.32 ± 1.87	11.41 ± 0.33	10.82 ± 0.32	11.37 ± 0.34	n = 112	[TD2] Dade Innovin
18.98 ± 0.46	25.20 ± 0.75	11.30 ± 0.31	11.15 ± 0.31	11.27 ± 0.32	n = 11	[TD4] Dade Thromboplastin C+
20.30 ± 0.66	27.46 ± 0.96	11.61 ± 0.49	11.25 ± 0.39	11.54 ± 0.52	n = 44	[TJ2] HemosIL PT-Fibrinogen
32.87 ± 5.77	48.95 ± 10.99	13.23 ± 0.77	12.73 ± 0.69	14.67 ± 1.74	n = 3	[TJ4] HemosIL PT-Fibrinogen HS+
30.04 ± 2.37	45.15 ± 4.15	11.26 ± 0.40	11.44 ± 0.44	11.27 ± 0.39	n = 87	[TJ8] HemosIL RecombiPlasTin 2G
32.40 ± 1.46	46.16 ± 4.89	14.98 ± 0.83	13.97 ± 0.43	14.97 ± 0.64	n = 5	[TK3] Trin Bio TriniCLOT PT Excel
28.30 ± 0.81	41.46 ± 0.62	12.62 ± 0.24	12.33 ± 0.05	12.47 ± 0.14	n = 3	[TK6] Trinity Biotech TriniCLOT P
33.65 ± 1.22	48.30 ± 2.29	11.90 ± 0.46	11.80 ± 0.15	11.93 ± 0.49	n = 4	[TO3] Hemoliance RecombiPlasTin
19.68 ± 1.58	26.30 ± 2.18	11.17 ± 0.59	11.12 ± 0.87	11.12 ± 0.50	n = 3	[TP2] Fisher/PH Thromboplastin D

Summary of Participant Responses
Mean ± One Standard Deviation

Prothrombin Time (seconds) – continued

Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Reagent & Instrument
33.58 ± 1.84	50.31 ± 2.41	13.33 ± 0.26	13.05 ± 0.22	13.23 ± 0.32	n = 35	[TA3]&[DGC] STA Neoplastin & Diagnostica St
33.39 ± 1.29	49.51 ± 1.99	13.56 ± 0.24	13.33 ± 0.26	13.55 ± 0.34	n = 10	[TA3]&[DGD] STA Neoplastin & Diagnostica St
25.63 ± 0.74	37.22 ± 1.38	11.64 ± 0.20	10.81 ± 0.22	11.61 ± 0.20	n = 18	[TD2]&[BEB] Dade Innovin & Dade-Behring B
25.71 ± 0.44	37.89 ± 1.19	10.96 ± 0.10	10.27 ± 0.32	11.00 ± 0.09	n = 3	[TD2]&[DGD] Dade Innovin & Diagnostica St
26.18 ± 1.31	38.30 ± 2.07	11.29 ± 0.33	10.71 ± 0.32	11.17 ± 0.33	n = 30	[TD2]&[SYW] Dade Innovin & Sysmex CA500,5
25.02 ± 0.91	36.60 ± 1.65	11.33 ± 0.21	10.81 ± 0.20	11.32 ± 0.19	n = 48	[TD2]&[SYX] Dade Innovin & Sysmex CA 1500
25.80 ± 1.12	37.79 ± 1.56	11.80 ± 0.21	11.31 ± 0.18	11.87 ± 0.15	n = 11	[TD2]&[SYY] Dade Innovin & Sysmex CA 7000
18.91 ± 1.18	25.29 ± 0.68	11.23 ± 0.24	11.18 ± 0.38	11.24 ± 0.36	n = 6	[TD4]&[SYW] Dade Thrombopl & Sysmex CA500,5
20.51 ± 0.52	27.38 ± 1.13	11.95 ± 0.25	11.43 ± 0.30	11.82 ± 0.24	n = 15	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
19.96 ± 0.53	27.57 ± 0.75	11.11 ± 0.31	10.96 ± 0.24	11.06 ± 0.22	n = 17	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
20.54 ± 0.78	27.41 ± 1.07	11.85 ± 0.14	11.49 ± 0.33	11.93 ± 0.39	n = 12	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
31.52 ± 2.44	47.32 ± 3.61	11.34 ± 0.29	11.50 ± 0.37	11.29 ± 0.30	n = 31	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
28.17 ± 1.78	41.55 ± 2.81	10.90 ± 0.33	11.11 ± 0.37	11.07 ± 0.40	n = 28	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
30.27 ± 1.34	46.27 ± 3.28	11.48 ± 0.31	11.71 ± 0.38	11.42 ± 0.41	n = 28	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
32.81 ± 1.40	46.85 ± 5.34	15.20 ± 0.89	14.03 ± 0.47	15.17 ± 0.54	n = 4	[TK3]&[TRE] Trin Bio Trini & Trinity Biotec

Summary of Participant Responses
Mean ± One Standard Deviation

Act Partial Thromboplastin Time (seconds)

Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Instrument or Reagent
52.44 ± 5.50	70.50 ± 6.28	31.56 ± 3.55	32.14 ± 2.64	31.50 ± 3.60	n = 316	[---] All Methods & Instruments
						<Instruments>
48.53 ± 1.26	63.65 ± 1.77	28.64 ± 0.59	29.40 ± 0.67	28.74 ± 0.49	n = 20	[BEB] Dade-Behring BCS,BCSXP
47.37 ± 3.41	67.60 ± 5.12	27.88 ± 1.79	29.08 ± 2.68	28.19 ± 1.72	n = 3	[BXE] Trinity Biotech MDA
52.07 ± 1.70	70.61 ± 2.59	32.28 ± 0.69	34.38 ± 1.25	32.06 ± 0.87	n = 33	[DGC] Diagnostica Stago STA Compa
48.99 ± 1.67	66.16 ± 2.37	30.72 ± 1.96	32.94 ± 2.27	31.00 ± 1.95	n = 13	[DGD] Diagnostica Stago STA-R, ST
49.96 ± 6.95	68.73 ± 9.32	30.48 ± 2.26	31.03 ± 1.47	30.24 ± 2.40	n = 19	[ILA] IL ACL(All models except 81
56.36 ± 6.93	75.54 ± 7.85	34.66 ± 4.34	33.33 ± 3.25	34.44 ± 4.50	n = 50	[ILC] IL ACL Futura/Advance
55.02 ± 5.06	73.32 ± 5.61	33.64 ± 2.86	32.83 ± 1.44	33.79 ± 2.93	n = 38	[ILD] IL ACL(ELITE,ELITE PRO,8/9/
57.65 ± 2.12	75.16 ± 2.36	36.83 ± 1.29	35.43 ± 1.15	36.90 ± 1.22	n = 26	[ILE] IL ACL TOP Series (ACLTOP,A
56.14 ± 3.97	75.65 ± 2.21	32.70 ± 5.10	31.38 ± 4.69	32.67 ± 4.77	n = 4	[MLG] IL Electra 1400C,1600C,1800
49.98 ± 1.57	67.82 ± 2.78	29.04 ± 0.92	30.28 ± 0.74	28.93 ± 0.77	n = 33	[SYW] Sysmex CA500,540,560
50.97 ± 1.30	68.96 ± 2.28	30.01 ± 0.65	31.26 ± 0.66	30.05 ± 0.62	n = 51	[SYX] Sysmex CA 1500
50.07 ± 1.32	67.41 ± 1.56	29.97 ± 0.49	31.23 ± 0.64	30.07 ± 0.68	n = 11	[SYY] Sysmex CA 7000
49.67 ± 6.03	67.76 ± 8.85	30.90 ± 2.89	33.22 ± 2.20	31.55 ± 1.84	n = 4	[TRE] Trinity Biotech AMAX Destin
						<Reagents>
51.28 ± 2.08	69.50 ± 3.02	32.02 ± 0.86	34.12 ± 1.19	31.92 ± 0.87	n = 45	[AA2] Diagnostica Stago STA PTT-A
66.03 ± 6.48	102.35 ± 10.48	27.60 ± 1.75	30.47 ± 0.21	27.89 ± 1.73	n = 7	[AD2] Dade Actin
83.28 ± 3.80	122.79 ± 3.68	29.02 ± 0.88	29.84 ± 1.04	28.91 ± 0.75	n = 9	[AD3] Dade Actin FS
50.27 ± 1.64	67.84 ± 3.11	29.62 ± 0.93	30.70 ± 1.08	29.59 ± 0.93	n = 104	[AD4] Dade Actin FSL
45.89 ± 1.88	63.67 ± 1.81	28.46 ± 1.54	29.93 ± 1.74	28.36 ± 1.59	n = 37	[AJ3] HemosIL Test APTT-SP
49.10 ± 4.63	68.66 ± 4.03	29.11 ± 3.84	30.81 ± 3.83	29.39 ± 3.86	n = 8	[AK3] Trin Bio TriniCLOT aPTTS (P
45.63 ± 1.60	63.39 ± 3.01	27.50 ± 0.95	28.22 ± 0.69	27.63 ± 0.91	n = 5	[AK5] Trinity Biotech MDA Plateli
58.10 ± 2.04	76.82 ± 3.08	35.86 ± 1.62	34.32 ± 1.52	35.93 ± 1.59	n = 89	[AO4] HemosIL SynthASil
60.41 ± 2.40	79.66 ± 2.89	36.44 ± 1.49	35.35 ± 0.96	36.55 ± 1.30	n = 8	[AO5] HemosIL SynP4.6

Summary of Participant Responses
Mean ± One Standard Deviation

Act Partial Thromboplastin Time (seconds) - continued

Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Reagent & Instrument
52.07 ± 1.70	70.61 ± 2.59	32.28 ± 0.69	34.38 ± 1.25	32.06 ± 0.87	n = 33	[AA2]&[DGC] Diagnostica St & Diagnostica St
49.31 ± 1.14	66.60 ± 1.71	31.20 ± 0.43	33.64 ± 0.72	31.68 ± 0.83	n = 10	[AA2]&[DGD] Diagnostica St & Diagnostica St
82.60 ± 4.80	121.32 ± 7.35	29.46 ± 0.47	30.23 ± 0.59	29.31 ± 0.20	n = 3	[AD3]&[BEB] Dade Actin FS & Dade-Behring B
84.80 ± 3.61	122.00 ± 1.50	29.13 ± 0.66	30.03 ± 1.12	28.92 ± 0.66	n = 4	[AD3]&[SYX] Dade Actin FS & Sysmex CA 1500
48.52 ± 1.25	63.64 ± 1.77	28.56 ± 0.43	29.22 ± 0.53	28.67 ± 0.43	n = 15	[AD4]&[BEB] Dade Actin FSL & Dade-Behring B
49.98 ± 1.57	67.81 ± 2.76	29.14 ± 0.83	30.28 ± 0.77	29.02 ± 0.61	n = 30	[AD4]&[SYW] Dade Actin FSL & Sysmex CA500,5
50.97 ± 1.30	68.96 ± 2.28	30.08 ± 0.54	31.31 ± 0.59	30.14 ± 0.49	n = 45	[AD4]&[SYX] Dade Actin FSL & Sysmex CA 1500
50.07 ± 1.32	67.41 ± 1.56	29.97 ± 0.49	31.23 ± 0.64	30.07 ± 0.68	n = 11	[AD4]&[SYY] Dade Actin FSL & Sysmex CA 7000
46.53 ± 1.17	64.12 ± 1.57	29.29 ± 1.00	30.52 ± 1.37	29.02 ± 0.96	n = 13	[AJ3]&[ILA] HemosIL Test A & IL ACL(All mod
44.43 ± 1.10	63.01 ± 1.43	26.95 ± 1.08	28.51 ± 1.18	26.77 ± 0.88	n = 14	[AJ3]&[ILC] HemosIL Test A & IL ACL Futura/
46.78 ± 1.80	64.07 ± 2.23	29.22 ± 0.72	31.12 ± 1.35	29.36 ± 0.68	n = 10	[AJ3]&[ILD] HemosIL Test A & IL ACL(ELITE,E
49.67 ± 6.03	67.76 ± 8.85	30.90 ± 2.89	33.22 ± 2.20	31.55 ± 1.84	n = 4	[AK3]&[TRE] Trin Bio Trini & Trinity Biotec
60.15 ± 2.23	80.99 ± 2.19	33.33 ± 0.55	31.73 ± 0.51	33.42 ± 1.18	n = 5	[AO4]&[ILA] HemosIL SynthA & IL ACL(All mod
59.03 ± 1.46	78.92 ± 2.35	36.52 ± 1.16	34.76 ± 0.83	36.33 ± 1.29	n = 28	[AO4]&[ILC] HemosIL SynthA & IL ACL Futura/
57.23 ± 1.59	75.59 ± 2.16	34.88 ± 1.06	33.34 ± 0.99	35.09 ± 1.16	n = 28	[AO4]&[ILD] HemosIL SynthA & IL ACL(ELITE,E
57.65 ± 2.12	75.16 ± 2.36	36.83 ± 1.29	35.43 ± 1.15	36.90 ± 1.22	n = 26	[AO4]&[ILE] HemosIL SynthA & IL ACL TOP Ser
60.41 ± 2.40	79.66 ± 2.89	36.44 ± 1.49	35.35 ± 0.96	36.55 ± 1.30	n = 8	[AO5]&[ILC] HemosIL SynP4. & IL ACL Futura/

Summary of Participant Responses
Mean ± One Standard Deviation

Fibrinogen (mg/dL)

Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Instrument or Reagent
295.1 ± 52.06	308.4 ± 61.43	304.5 ± 36.23	406.0 ± 50.81	305.8 ± 37.50	n = 219	[---] All Methods & Instruments
						<Instruments>
331.7 ± 21.56	350.8 ± 6.27	344.6 ± 13.72	464.2 ± 27.74	351.1 ± 5.83	n = 18	[BEB] Dade-Behring BCS,BCSXP
284.7 ± 10.61	300.1 ± 8.46	330.8 ± 12.27	443.0 ± 10.10	318.2 ± 13.99	n = 3	[DGB] Diagnostica Stago STA
281.6 ± 17.71	294.8 ± 17.45	323.3 ± 18.83	430.4 ± 24.03	325.6 ± 19.09	n = 28	[DGC] Diagnostica Stago STA Compa
273.0 ± 13.67	283.1 ± 14.79	312.9 ± 14.56	413.5 ± 17.38	311.2 ± 16.07	n = 11	[DGD] Diagnostica Stago STA-R, ST
389.6 ± 12.34	392.5 ± 21.86	319.5 ± 12.03	428.0 ± 6.79	337.6 ± 6.90	n = 4	[ILA] IL ACL(All models except 81
363.4 ± 36.45	402.9 ± 28.86	270.0 ± 37.91	367.9 ± 56.21	267.6 ± 34.02	n = 41	[ILC] IL ACL Futura/Advance
377.1 ± 79.40	425.5 ±104.81	347.8 ± 17.30	479.7 ± 45.00	349.9 ± 18.09	n = 16	[ILD] IL ACL(ELITE,ELITE PRO,8/9/
291.9 ± 27.51	295.8 ± 22.76	312.4 ± 16.34	421.0 ± 22.36	318.2 ± 17.40	n = 26	[ILE] IL ACL TOP Series (ACLTOP,A
258.7 ± 9.31	262.4 ± 14.60	292.7 ± 21.65	391.2 ± 25.95	292.3 ± 23.18	n = 9	[SYW] Sysmex CA500,540,560
252.7 ± 13.29	260.9 ± 18.08	278.4 ± 16.24	370.8 ± 24.80	279.1 ± 14.85	n = 43	[SYX] Sysmex CA 1500
249.2 ± 18.23	260.7 ± 17.42	285.9 ± 24.82	369.5 ± 17.49	280.8 ± 19.44	n = 10	[SYY] Sysmex CA 7000
						<Reagents>
389.7 ± 22.53	411.3 ± 24.11	315.3 ± 29.08	423.8 ± 25.87	315.6 ± 30.45	n = 23	[TJ2] HemosIL PT-Fibrinogen
342.8 ± 33.00	381.1 ± 65.60	274.3 ± 41.46	365.0 ± 53.95	273.6 ± 42.43	n = 38	[TJ8] HemosIL RecombiPlasTin 2G
279.2 ± 16.69	292.3 ± 17.17	321.1 ± 18.04	426.9 ± 23.53	320.9 ± 19.21	n = 42	[FA4] Stago STA-Fibrinogen 5
339.4 ± 17.35	350.8 ± 6.33	346.3 ± 13.31	473.2 ± 21.17	351.7 ± 6.44	n = 16	[FB2] Behring Multifibren U
254.2 ± 15.14	262.5 ± 18.19	282.0 ± 20.20	374.7 ± 26.26	281.6 ± 18.29	n = 65	[FD2] Dade Fib (thrombin)
280.3 ± 22.79	292.9 ± 27.56	325.2 ± 27.78	448.9 ± 42.28	330.6 ± 24.97	n = 22	[FJ2] HemosIL Fibrinogen C,XL
277.1 ± 2.86	277.1 ± 8.93	304.7 ± 24.94	374.6 ± 16.21	326.2 ± 12.27	n = 3	[FM1] Kamiya K-Assay Fibrinogen

Summary of Participant Responses
Mean ± One Standard Deviation

Fibrinogen (mg/dL) - continued

Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Reagent & Instrument
389.6 ± 12.34	392.5 ± 21.86	319.5 ± 12.03	428.0 ± 6.79	337.6 ± 6.90	n = 4	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
393.0 ± 19.86	410.8 ± 20.46	298.6 ± 17.99	413.2 ± 22.15	294.0 ± 13.26	n = 13	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
382.4 ± 48.05	457.6 ± 59.56	353.3 ± 21.51	445.8 ± 32.62	348.2 ± 21.97	n = 6	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
351.8 ± 22.06	399.6 ± 25.84	246.2 ± 14.16	333.5 ± 22.76	246.3 ± 16.43	n = 23	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
468.1 ± 21.10	524.3 ± 29.09	342.0 ± 14.31	471.2 ± 15.67	347.1 ± 5.36	n = 4	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
314.8 ± 20.66	305.8 ± 15.40	311.2 ± 8.88	410.5 ± 13.96	310.0 ± 8.24	n = 11	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
284.7 ± 10.61	300.1 ± 8.46	330.8 ± 12.27	443.0 ± 10.10	318.2 ± 13.99	n = 3	[FA4]&[DGB] Stago STA-Fibr & Diagnostica St
281.6 ± 17.71	294.8 ± 17.45	323.3 ± 18.83	430.4 ± 24.03	325.6 ± 19.09	n = 28	[FA4]&[DGC] Stago STA-Fibr & Diagnostica St
273.0 ± 13.67	283.1 ± 14.79	312.9 ± 14.56	413.5 ± 17.38	311.2 ± 16.07	n = 11	[FA4]&[DGD] Stago STA-Fibr & Diagnostica St
337.6 ± 15.46	350.8 ± 6.26	346.5 ± 13.84	470.9 ± 18.91	351.6 ± 5.54	n = 15	[FB2]&[BEB] Behring Multif & Dade-Behring B
294.1 ± 5.72	291.0 ± 6.42	337.1 ± 8.93	411.9 ± 10.75	344.0 ± 10.94	n = 3	[FD2]&[BEB] Dade Fib (thro & Dade-Behring B
258.7 ± 9.31	262.4 ± 14.60	292.7 ± 21.65	391.2 ± 25.95	292.3 ± 23.18	n = 9	[FD2]&[SYW] Dade Fib (thro & Sysmex CA500,5
252.7 ± 13.29	260.9 ± 18.08	278.4 ± 16.24	370.8 ± 24.80	279.1 ± 14.85	n = 43	[FD2]&[SYX] Dade Fib (thro & Sysmex CA 1500
249.2 ± 18.17	260.7 ± 17.38	282.4 ± 19.80	369.6 ± 17.46	280.4 ± 18.24	n = 9	[FD2]&[SYY] Dade Fib (thro & Sysmex CA 7000
306.4 ± 26.54	319.9 ± 22.46	360.1 ± 28.36	538.8 ± 52.23	363.2 ± 32.70	n = 5	[FJ2]&[ILD] HemosIL Fibrin & IL ACL(ELITE,E
276.4 ± 18.14	286.3 ± 24.21	314.2 ± 21.59	432.4 ± 24.56	326.4 ± 19.62	n = 15	[FJ2]&[ILE] HemosIL Fibrin & IL ACL TOP Ser

Summary of Participant Responses
Mean ± One Standard Deviation

INR (International Normalized Ratio)

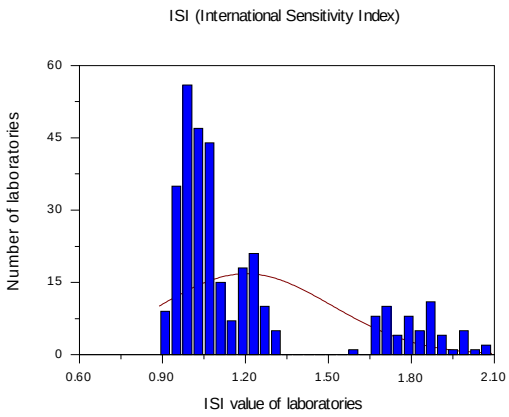
Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Instrument or Reagent
2.660 ± 0.257	4.104 ± 0.563	1.030 ± 0.080	1.006 ± 0.067	1.030 ± 0.081	n = 324	[---] All Methods & Instruments
						<Instruments>
2.569 ± 0.380	4.293 ± 0.580	1.016 ± 0.056	1.019 ± 0.052	1.031 ± 0.120	n = 3	[BBA] BBL Fibrometer
2.702 ± 0.135	3.944 ± 0.250	1.130 ± 0.065	1.036 ± 0.073	1.134 ± 0.057	n = 20	[BEB] Dade-Behring BCS,BCSXP
2.851 ± 0.221	4.420 ± 0.420	1.027 ± 0.014	1.017 ± 0.034	1.029 ± 0.020	n = 3	[BXE] Trinity Biotech MDA
3.203 ± 0.185	5.265 ± 0.298	1.008 ± 0.030	0.985 ± 0.028	1.002 ± 0.037	n = 35	[DGC] Diagnostica Stago STA Compa
3.019 ± 0.271	4.887 ± 0.578	1.038 ± 0.066	1.010 ± 0.050	1.040 ± 0.070	n = 14	[DGD] Diagnostica Stago STA-R, ST
2.623 ± 0.369	4.406 ± 0.747	0.994 ± 0.070	0.930 ± 0.071	0.971 ± 0.072	n = 19	[ILA] IL ACL(All models except 81
2.665 ± 0.165	4.163 ± 0.285	0.976 ± 0.055	0.979 ± 0.073	0.972 ± 0.057	n = 51	[ILC] IL ACL Futura/Advance
2.668 ± 0.183	4.136 ± 0.368	0.983 ± 0.049	0.984 ± 0.065	1.001 ± 0.048	n = 38	[ILD] IL ACL(ELITE,ELITE PRO,8/9/
2.578 ± 0.141	3.902 ± 0.317	0.995 ± 0.050	1.012 ± 0.049	0.991 ± 0.052	n = 28	[ILE] IL ACL TOP Series (ACLTOP,A
2.750 ± 0.283	3.899 ± 0.098	1.022 ± 0.059	0.977 ± 0.077	1.014 ± 0.084	n = 3	[MLG] IL Electra 1400C,1600C,1800
2.648 ± 0.123	3.937 ± 0.312	1.103 ± 0.060	1.041 ± 0.065	1.101 ± 0.039	n = 36	[SYW] Sysmex CA500,540,560
2.476 ± 0.105	3.702 ± 0.172	1.094 ± 0.020	1.039 ± 0.041	1.095 ± 0.017	n = 51	[SYX] Sysmex CA 1500
2.518 ± 0.110	3.725 ± 0.123	1.101 ± 0.005	1.085 ± 0.026	1.104 ± 0.010	n = 11	[SYY] Sysmex CA 7000
2.510 ± 0.154	3.763 ± 0.501	1.032 ± 0.090	0.950 ± 0.046	1.035 ± 0.051	n = 4	[TRE] Trinity Biotech AMAX Destin
						<Reagents>
3.180 ± 0.185	5.219 ± 0.303	1.008 ± 0.032	0.988 ± 0.027	1.004 ± 0.040	n = 47	[TA3] STA Neoplastine CL+
2.561 ± 0.145	3.774 ± 0.208	1.099 ± 0.020	1.050 ± 0.048	1.100 ± 0.009	n = 112	[TD2] Dade Innovin
2.550 ± 0.289	4.477 ± 0.492	0.899 ± 0.079	0.860 ± 0.077	0.886 ± 0.093	n = 11	[TD4] Dade Thromboplastin C+
2.590 ± 0.165	4.425 ± 0.295	0.949 ± 0.071	0.905 ± 0.051	0.943 ± 0.068	n = 44	[TJ2] HemosIL PT-Fibrinogen
2.770 ± 0.483	4.299 ± 0.989	1.027 ± 0.023	1.003 ± 0.014	1.130 ± 0.201	n = 3	[TJ4] HemosIL PT-Fibrinogen HS+
2.667 ± 0.170	4.002 ± 0.271	0.995 ± 0.038	1.012 ± 0.046	0.998 ± 0.041	n = 84	[TJ8] HemosIL RecombiPlasTin 2G
2.480 ± 0.143	3.726 ± 0.445	0.995 ± 0.022	0.962 ± 0.047	1.025 ± 0.047	n = 5	[TK3] Trin Bio TriniCLOT PT Excel
2.659 ± 0.101	4.146 ± 0.119	1.006 ± 0.023	0.993 ± 0.025	1.003 ± 0.023	n = 4	[TK6] Trinity Biotech TriniCLOT P
2.831 ± 0.133	3.908 ± 0.088	1.022 ± 0.059	1.005 ± 0.027	1.024 ± 0.065	n = 3	[TO3] Hemoliance RecombiPlasTin
3.030 ± 0.575	5.188 ± 1.111	1.019 ± 0.061	1.021 ± 0.057	1.008 ± 0.077	n = 3	[TP2] Fisher/PH Thromboplastin D

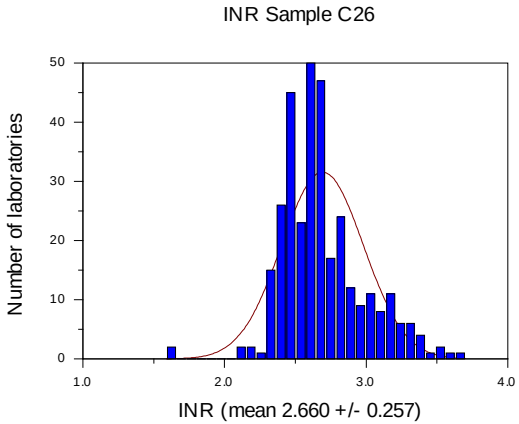
Summary of Participant Responses
Mean ± One Standard Deviation

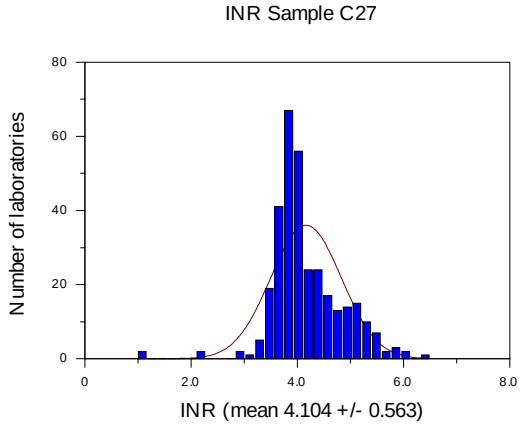
INR (International Normalized Ratio) - continued

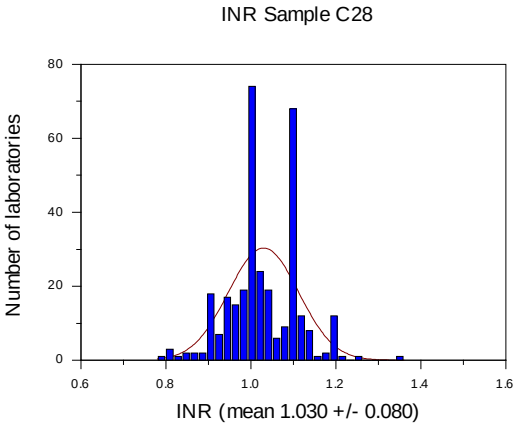
Specimen: C26	Specimen: C27	Specimen: C28	Specimen: C29	Specimen: C30	Number	[Code] Reagent & Instrument
3.203 ± 0.185	5.265 ± 0.298	1.008 ± 0.030	0.985 ± 0.028	1.002 ± 0.037	n = 35	[TA3]&[DGC] STA Neoplastin & Diagnostica St
3.102 ± 0.161	5.069 ± 0.292	1.015 ± 0.045	0.993 ± 0.028	1.016 ± 0.051	n = 11	[TA3]&[DGD] STA Neoplastin & Diagnostica St
2.701 ± 0.123	3.916 ± 0.216	1.136 ± 0.054	1.046 ± 0.062	1.138 ± 0.053	n = 18	[TD2]&[BEB] Dade Innovin & Dade-Behring B
2.597 ± 0.095	3.813 ± 0.158	1.132 ± 0.049	1.078 ± 0.041	1.136 ± 0.047	n = 3	[TD2]&[DGD] Dade Innovin & Diagnostica St
2.637 ± 0.112	3.886 ± 0.218	1.110 ± 0.041	1.050 ± 0.050	1.102 ± 0.034	n = 30	[TD2]&[SYW] Dade Innovin & Sysmex CA500,5
2.478 ± 0.101	3.688 ± 0.160	1.095 ± 0.020	1.040 ± 0.041	1.095 ± 0.017	n = 48	[TD2]&[SYX] Dade Innovin & Sysmex CA 1500
2.518 ± 0.110	3.725 ± 0.123	1.101 ± 0.005	1.085 ± 0.026	1.104 ± 0.010	n = 11	[TD2]&[SYY] Dade Innovin & Sysmex CA 7000
2.604 ± 0.346	4.737 ± 0.277	0.903 ± 0.062	0.891 ± 0.095	0.907 ± 0.080	n = 6	[TD4]&[SYW] Dade Thrombopl & Sysmex CA500,5
2.621 ± 0.243	4.436 ± 0.277	0.982 ± 0.069	0.913 ± 0.057	0.962 ± 0.068	n = 16	[TJ2]&[ILA] HemosIL PT-Fib & IL ACL(All mod
2.531 ± 0.125	4.397 ± 0.288	0.909 ± 0.057	0.895 ± 0.045	0.900 ± 0.045	n = 17	[TJ2]&[ILC] HemosIL PT-Fib & IL ACL Futura/
2.627 ± 0.133	4.462 ± 0.316	0.965 ± 0.060	0.913 ± 0.048	0.984 ± 0.052	n = 11	[TJ2]&[ILD] HemosIL PT-Fib & IL ACL(ELITE,E
2.723 ± 0.120	4.046 ± 0.180	0.997 ± 0.026	1.015 ± 0.044	0.997 ± 0.023	n = 29	[TJ8]&[ILC] HemosIL Recomb & IL ACL Futura/
2.682 ± 0.195	4.016 ± 0.308	0.989 ± 0.042	1.009 ± 0.046	1.007 ± 0.045	n = 27	[TJ8]&[ILD] HemosIL Recomb & IL ACL(ELITE,E
2.578 ± 0.141	3.902 ± 0.317	0.995 ± 0.050	1.012 ± 0.049	0.991 ± 0.052	n = 28	[TJ8]&[ILE] HemosIL Recomb & IL ACL TOP Ser
2.510 ± 0.154	3.763 ± 0.501	1.032 ± 0.090	0.950 ± 0.046	1.035 ± 0.051	n = 4	[TK3]&[TRE] Trin Bio Trini & Trinity Biotec

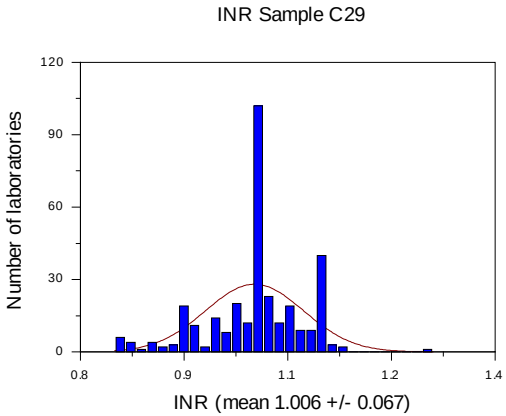
Hematology Proficiency Test Event
February 8, 2010
International Sensitivity Index (ISI) and International Normalized Ratio (INR)

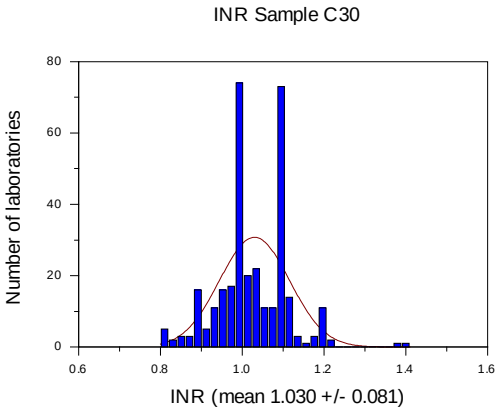






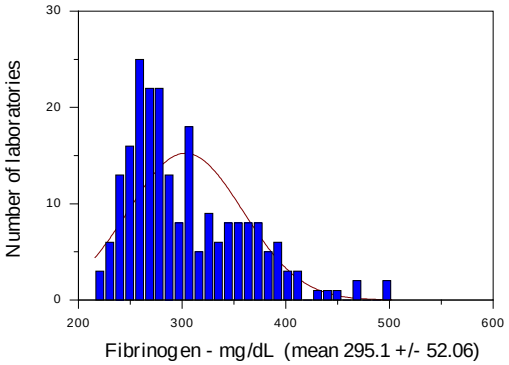




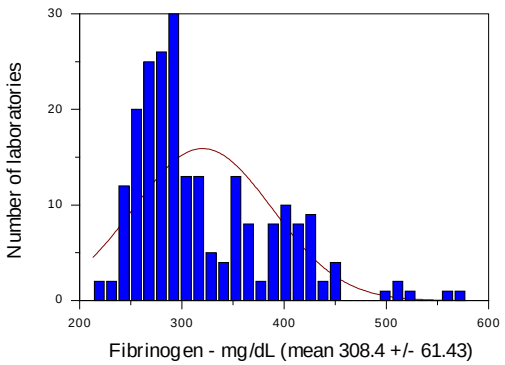


Hematology Proficiency Test Event
February 8, 2010
Fibrinogen Data

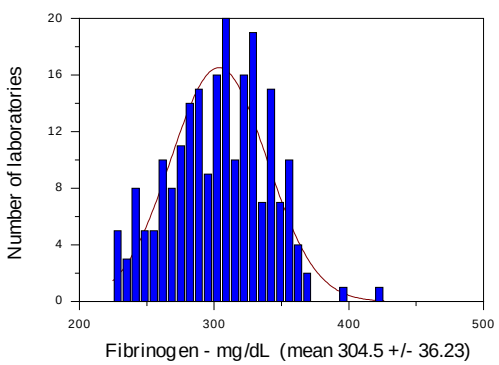
Fibrinogen Sample C26



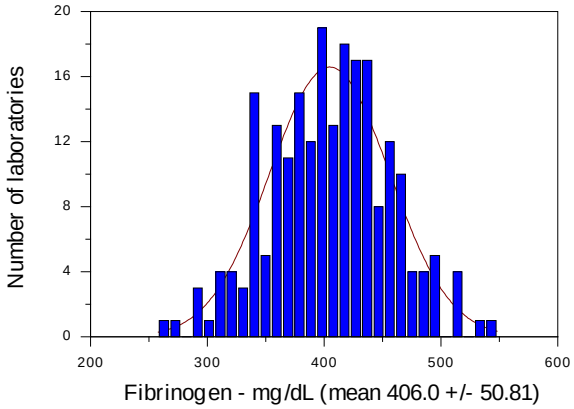
Fibrinogen Sample C27



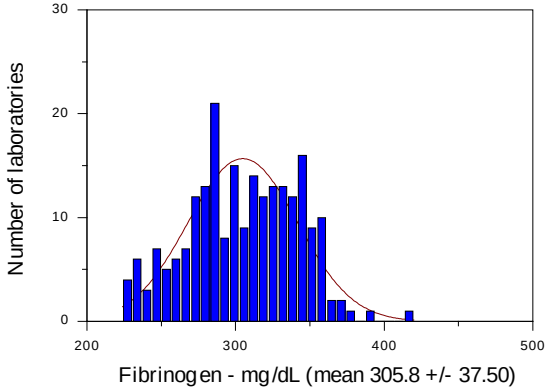
Fibrinogen Sample C28



Fibrinogen Sample C29



Fibrinogen Sample C30



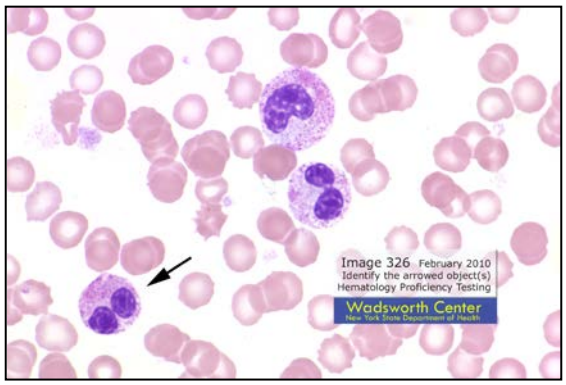
NEW YORK STATE HEMATOLOGY PROFICIENCY TESTING PROGRAM

February 8, 2010

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.

Images 326 – 330 were taken from an eleven month-old female born to a 41 year-old mother at 37 ½ weeks gestation. Pregnancy was uncomplicated until 28 ½ weeks gestation when an ultrasound revealed intestinal atresia. Parents were told that this could be secondary to cystic fibrosis and a subsequent screening was done on each parent and revealed negative results. Mother denied significant infections during the pregnancy. Earlier, amniocentesis was done, at 14 weeks gestation, for advanced maternal age and revealed normal chromosomes and normal AFP. No obvious etiology for the atresia was determined as there was no obvious syndrome or exposure that was significant. The patient was diagnosed with Atresia and Pelger- Huët Anomaly.

Image 326

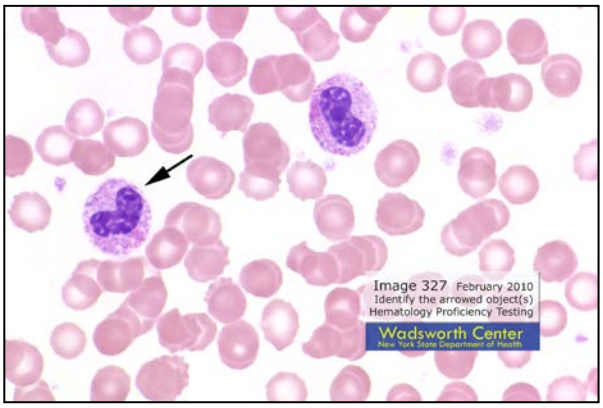


The arrowed cell is a neutrophil with Pelger - Huët nucleus, correctly identified by 97.0% of participants.

A segmented neutrophil can have 2 - 5 distinct nuclear lobes. At first glance, the arrowed bi-lobed cell could be identified as a segmented neutrophil. In good practice, the examiner should consider the company that cells keep. The nucleus of the white blood cell, approximate center, also appears bi-lobed. The presence of two neutrophils in one field with characteristic Pelgr-Huët nuclei, should lead the examiner to consider a diagnosis of Pelger- Huët Anomaly. The best choice for the arrowed cell in Image 326 is neutrophil with Pelger - Huët nucleus as was confirmed by 359 participants.

Number of Responses	Percent of Laboratories	Cell type or finding
359	**97.0%**	**Neutrophil with Pelger- Huët nucleus**
7	1.9%	Segmented neutrophil
4	1.1%	Eosinophil

Image 327



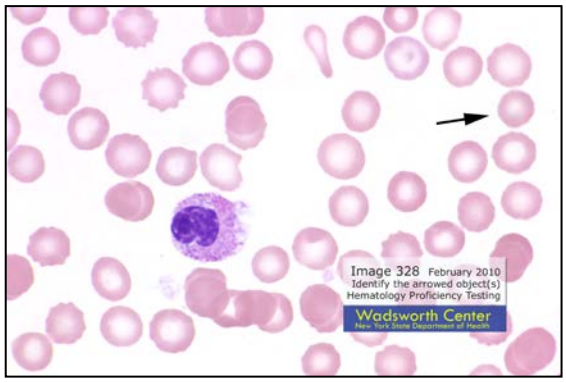
The arrowed cell was identified by most participants (73.5%) as a band neutrophil. Fifty-one participants (13.8%) chose to classify the arrowed cell as a metamyelocyte. The distinction between the two can, at times, be difficult.

How then to make the distinction between a metamyelocyte and a band neutrophil when the nucleus appears as it does in this case. Some would suggest that when the indentation of the nucleus is greater than half the diameter of the theoretically round nucleus it should be considered a band neutrophil. A close look at the nucleus of the arrowed cell in Image 327 reveals that the indentation is so close to the half way point of the theoretically round nucleus it is almost impossible to judge. In this instance it appears that participants chose, based on their protocol, to classify the arrowed image as the more mature form.

Band neutrophil and metamyelocyte were acceptable responses.

Number of Responses	Percent of Laboratories	Cell type or finding
272	**73.5%**	**Band neutrophil**
51	**13.8%**	**Metamyelocyte**
36	9.7%	Segmented/band neutrophil with toxic granulation
9	2.4%	Neutrophil with Pelger- Huët nucleus
1	0.3%	Segmented neutrophil
1	0.3%	Eosinophil

Image 328



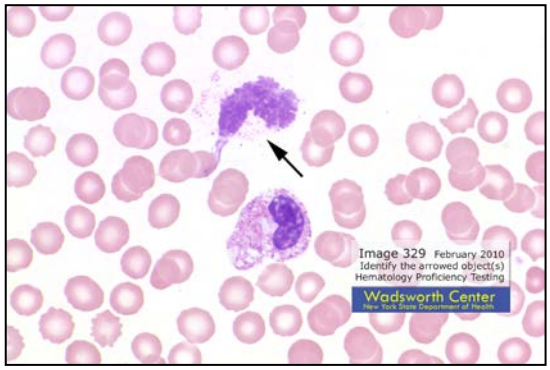
The arrowed image is an erythrocyte – normal, correctly identified by 362 participants.

A few participants identified the arrowed cell as erythrocyte - hypochromic. A hypochromic red blood cell displays an increased central pallor, the central pallor of the arrowed red blood cell in Image 328 is not increased.

A few participants identified the arrowed cell as a spherocyte. A spherocyte does not contain an area of central pallor, an area of central pallor is easily visible in the arrowed red blood cell of Image 328.

Number of Responses	Percent of Laboratories	Cell type or finding
362	**97.8%**	**Erythrocyte – normal**
5	1.4%	Erythrocyte - hypochromic
3	0.8%	Spherocyte

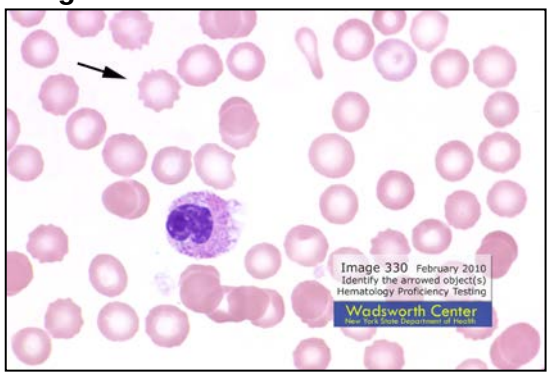
Image 329



The arrowed image is a smudge cell / basket cell, correctly identified by 359 participants. Smudge cells or basket cells are leukocytes that have been damaged during preparation of the peripheral blood smear. This usually occurs as the result of cell fragility and occurs most frequently at the “feathered edge” of the smear where stress forces are greater.

Number of Responses	Percent of Laboratories	Cell type or finding
359	**97.0%**	**Smudge cell / Basket cell**
5	1.4%	Segmented/band neutrophil with toxic granulation
2	0.5%	Band neutrophil
1	0.3%	Metamyelocyte
1	0.3%	Eosinophil
1	0.3%	Platelet clump(s)
1	0.3%	Stain precipitate

Image 330



The arrowed red blood cell displays regularly dispersed blunt spicules and a central pallor, characteristics of an echinocyte (crenated cell) or burr cell. The overwhelming majority of participants correctly identified the arrowed image as an echinocyte (crenated cell) or burr cell.

Echinocyte formation is usually the result of faulty drying of the blood smear. Pathological forms are associated with uremia.

Number of Responses	Percent of Laboratories	Cell type or finding
369	**99.7%**	**Echinocyte (crenated cell) or burr cell**
1	0.3%	Acanthocyte