

New York State Tumor Marker Proficiency Test May 2005  
Summary of Results

	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>CA125 all lab mean:</b>							<b>CA125 Immulite or Immulite 1000 (DPB/DP5) mean:</b>						
mean	60.2	118.7	57.4	113.6	156.8		mean	55.6	107.8	51.9	103.0	142.2	
SD	12.0	22.1	12.1	23.7	31.0		SD	5.0	6.3	4.0	6.5	8.6	
%CV	20.0%	18.6%	21.0%	20.9%	19.8%		%CV	9.0%	5.9%	7.8%	6.3%	6.0%	
N	119	119	119	119	119		mean+3SD	70.6	126.8	63.9	122.4	167.9	
mean+3SD	96.3	185.0	93.7	184.7	249.8		mean-3SD	40.6	88.8	39.8	83.6	116.5	
mean-3SD	24.2	52.4	21.2	42.5	63.7		N	6	6	6	6	6	
mean/all kit median	1.12	1.10	1.11	1.15	1.10	1.11	kit median	57.0	109.0	53.0	105.5	145.0	
							mean/all kit median	1.03	1.00	1.00	1.04	1.00	1.01
<b>CA125 Abbott Asxym or Imx (ABB or ABM/AB1) mean:</b>							<b>CA125 Immulite 2000 (DPD/DP5) mean:</b>						
mean	79.0	151.2	76.8	148.5	202.8		mean	51.9	103.2	48.7	99.1	136.3	
SD	7.4	15.1	7.3	16.3	23.6		SD	2.2	5.1	2.5	4.2	6.0	
%CV	9.4%	10.0%	9.5%	11.0%	11.6%		%CV	4.3%	4.9%	5.2%	4.2%	4.4%	
mean+3SD	101.2	196.5	98.6	197.5	273.4		mean+3SD	58.6	118.4	56.2	111.6	154.2	
mean-3SD	56.8	106.0	55.0	99.6	132.1		mean-3SD	45.3	87.9	41.1	86.6	118.4	
N	26	26	26	26	26		N	21	21	21	21	21	
kit median	80.3	151.3	76.6	148.9	200.4		kit median	52.7	101.0	49.0	99.4	136.0	
mean/all kit median	1.46	1.40	1.48	1.50	1.43	1.45	mean/all kit median	0.96	0.96	0.94	1.00	0.96	0.96
<b>CA125 TOSOH AIA (TOM/TO1) mean:</b>							<b>CA125 Johnson &amp; Johnson Vitros (JJC/JJ1) mean:</b>						
mean	71.7	142.9	67.5	134.6	187.6		mean	51.3	104.0	48.4	98.4	141.8	
SD	4.9	9.9	4.1	6.3	13.3		SD	2.3	7.1	2.1	4.5	8.2	
%CV	6.8%	6.9%	6.0%	4.7%	7.1%		%CV	4.5%	6.9%	4.3%	4.6%	5.8%	
mean+3SD	86.4	172.6	79.6	153.6	227.4		mean+3SD	58.2	125.4	54.6	111.9	166.4	
mean-3SD	56.9	113.2	55.3	115.5	147.7		mean-3SD	44.3	82.6	42.2	84.9	117.3	
N	6	6	6	6	6		N	6	6	6	6	6	
kit median	71.8	140.6	67.0	135.7	186.2		kit median	51.8	105.0	48.3	99.3	143.5	
mean/all kit median	1.33	1.33	1.30	1.36	1.32	1.33	mean/all kit median	0.95	0.96	0.93	0.99	1.00	0.97
<b>CA125 Bayer ADVIDA Centaur or ACS 180 (COB or COS/BA1) mean:</b>							<b>CA125 Elecsys 1010/2010 or E170 (BME or BMR/BM1) mean:</b>						
mean	57.6	115.5	54.5	109.4	151.3		mean	49.8	97.8	47.2	93.2	128.8	
SD	2.7	7.4	2.1	5.5	9.1		SD	4.3	8.2	3.6	7.8	9.3	
%CV	4.7%	6.4%	3.9%	5.0%	6.0%		%CV	8.6%	8.3%	7.5%	8.3%	7.3%	
mean+3SD	65.7	137.6	61.0	125.9	178.7		mean+3SD	62.6	122.2	57.9	116.5	156.8	
mean-3SD	49.4	93.4	48.1	93.0	123.8		mean-3SD	37.0	73.3	36.6	69.9	100.8	
N	30	30	30	29	29		N	11	11	11	11	11	
kit median	57.3	116.1	54.1	110.1	153.5		kit median	50.0	98.7	46.9	91.3	129.6	
mean/all kit median	1.07	1.07	1.05	1.10	1.06	1.07	mean/all kit median	0.92	0.91	0.91	0.94	0.91	0.92

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias	
<b>CA125 Beckman Unicel Dxl or Access (BCU or BCX/BC1) mean:</b>								<b>CA125 Fujirebio/Centocor (GAA/CE1) mean:</b>						
mean	53.9	108.4	51.9	96.5	143.1		mean	38.0	76.6	36.4	66.5	95.2		
SD	3.8	6.3	2.9	16.9	7.9		N	2	2	2	2	2		
%CV	7.1%	5.8%	5.6%	17.5%	5.5%		mean/all kit median	0.70	0.71	0.70	0.67	0.67	0.69	
mean+3SD	65.4	127.2	60.5	147.1	166.8									
mean-3SD	42.4	89.6	43.2	45.9	119.3									
N	10	10	10	10	10		<b>CA125 kit average:</b>							
kit median	54.3	109.1	52.4	103.0	144.6		mean	56.5	111.9	53.7	105.5	147.6		
mean/all kit median	1.00	1.01	1.00	0.97	1.01	1.00	SD	12.1	22.7	11.9	23.9	31.6		
							all kit median	53.9	107.8	51.9	99.1	142.2		

	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias	
<b>CEA all lab mean:</b>								<b>CEA Bayer ADVIDA Centaur (COB/BA1) mean:</b>						
mean	14.6	22.3	12.9	18.7	24.8		mean	16.7	25.6	15.0	21.4	28.1		
SD	2.4	3.7	2.3	3.3	3.9		SD	0.9	1.1	0.8	1.1	1.4		
%CV	16.8%	16.7%	17.5%	17.8%	15.7%		%CV	5.4%	4.1%	5.0%	5.2%	5.1%		
mean+3SD	21.9	33.5	19.7	28.6	36.4		mean+3SD	19.5	28.7	17.3	24.8	32.3		
mean-3SD	7.2	11.1	6.1	8.7	13.1		mean-3SD	14.0	22.4	12.8	18.0	23.8		
N	188	188	188	187	187		N	62	59	62	60	60		
mean/all kit median	1.08	1.09	1.07	1.08	1.01	1.07	kit median	16.6	25.6	15.1	21.6	28.0		
							mean/all kit median	1.24	1.25	1.24	1.24	1.15	1.22	
<b>CEA Bayer ACS 180 (COS/BA1) mean:</b>								<b>CEA TOSOH AIA (TOM/TO1) mean:</b>						
mean	16.9	25.9	15.4	22.1	27.8		mean	15.2	23.3	14.7	21.9	27.4		
SD	1.3	1.7	0.6	0.9	2.0		SD	0.9	1.6	0.9	1.0	1.4		
%CV	7.4%	6.7%	3.7%	4.3%	7.3%		%CV	6.2%	6.7%	6.2%	4.6%	5.2%		
mean+3SD	20.7	31.1	17.1	25.0	33.9		mean+3SD	18.0	28.0	17.4	24.8	31.7		
mean-3SD	13.2	20.7	13.7	19.3	21.7		mean-3SD	12.4	18.6	12.0	18.9	23.1		
N	7	7	6	6	7		N	6	6	6	6	6		
kit median	17.0	26.4	15.4	22.3	27.9		kit median	15.0	22.5	14.6	21.5	26.8		
mean/all kit median	1.26	1.27	1.27	1.29	1.14	1.24	mean/all kit median	1.13	1.14	1.21	1.27	1.12	1.17	

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>CEA Immulite or Immulite 1000 (DPB/DP5) mean:</b>							<b>CEA Elecsys 1010/2010 or E170 (BME or BMR/BM1) mean:</b>						
mean	16.3	24.5	13.7	20.1	26.7		mean	12.3	18.4	10.9	15.3	21.2	
SD	2.5	3.4	2.4	3.2	3.3		SD	0.5	0.8	0.5	0.5	0.9	
%CV	15.5%	13.7%	17.7%	15.9%	12.3%		%CV	4.0%	4.4%	4.4%	3.2%	4.3%	
mean+3SD	23.9	34.6	20.9	29.7	36.5		mean+3SD	13.8	20.8	12.3	16.8	23.9	
mean-3SD	8.7	14.4	6.4	10.5	16.9		mean-3SD	10.9	16.0	9.4	13.9	18.4	
N	6	6	6	6	6		N	16	16	16	16	16	
kit median	15.7	23.1	13.1	19.0	25.5		kit median	12.4	18.4	10.9	15.4	21.3	
mean/all kit median	1.21	1.20	1.13	1.17	1.09	1.16	mean/all kit median	0.92	0.90	0.90	0.89	0.86	0.89
<b>CEA Immulite 2000 (DPD/DP5) mean:</b>							<b>CEA Beckman Access (BCX/BC1) mean:</b>						
mean	15.6	23.8	13.4	19.5	26.3		mean	12.4	18.7	10.9	15.2	20.2	
SD	0.8	1.6	0.6	1.1	1.6		SD	0.8	1.0	0.5	1.5	1.0	
%CV	5.4%	6.8%	4.8%	5.4%	6.1%		%CV	6.3%	5.4%	4.8%	9.6%	5.0%	
mean+3SD	18.1	28.6	15.3	22.7	31.0		mean+3SD	14.7	21.7	12.4	19.6	23.2	
mean-3SD	13.1	19.0	11.5	16.3	21.5		mean-3SD	10.0	15.6	9.3	10.8	17.1	
N	17	17	17	17	17		N	19	19	19	19	19	
kit median	15.5	23.7	13.3	19.3	25.7		kit median	12.4	18.8	10.7	15.5	20.3	
mean/all kit median	1.16	1.16	1.10	1.13	1.07	1.13	mean/all kit median	0.92	0.91	0.90	0.88	0.82	0.89
<b>CEA Abbott Imx (ABM/AB1) mean:</b>							<b>CEA Beckman Unicel (BCU/BC1) mean:</b>						
mean	13.5	20.1	12.1	17.0	24.5		mean	10.4	16.7	9.2	13.7	18.0	
SD	0.7	0.8	0.4	0.5	0.9		SD	0.4	2.1	0.5	1.1	0.8	
%CV	5.0%	3.9%	3.4%	2.8%	3.7%		%CV	3.6%	12.5%	5.8%	8.0%	4.3%	
mean+3SD	15.5	22.4	13.4	18.4	27.2		mean+3SD	11.6	23.0	10.8	17.0	20.4	
mean-3SD	11.4	17.7	10.9	15.6	21.8		mean-3SD	9.3	10.4	7.6	10.4	15.7	
N	6	6	6	6	6		N	6	6	6	6	6	
kit median	13.3	20.3	12.3	17.0	24.8		kit median	10.4	16.3	9.1	13.6	18.1	
mean/all kit median	1.00	0.98	1.00	0.99	1.00	0.99	mean/all kit median	0.77	0.82	0.76	0.80	0.74	0.78
<b>CEA Abbott Asxym (ABB/AB1) mean:</b>							<b>CEA Johnson &amp; Johnson Vitros Eci (JJC/JJ1) mean:</b>						
mean	13.3	20.5	11.7	17.2	23.4		mean	10.2	16.3	8.8	13.1	18.6	
SD	0.9	1.5	0.7	1.1	1.6		SD	0.6	0.7	0.6	0.7	0.8	
%CV	6.7%	7.3%	5.8%	6.6%	6.8%		%CV	5.6%	4.4%	6.3%	5.5%	4.1%	
mean+3SD	16.0	25.0	13.8	20.6	28.2		mean+3SD	12.0	18.5	10.4	15.2	20.8	
mean-3SD	10.6	16.0	9.7	13.8	18.6		mean-3SD	8.5	14.2	7.1	10.9	16.3	
N	29	29	29	28	28		N	10	10	10	10	10	
kit median	13.5	20.6	11.8	17.4	23.7		kit median	10.3	16.5	8.9	13.2	18.8	
mean/all kit median	0.99	1.00	0.97	1.00	0.95	0.98	mean/all kit median	0.76	0.80	0.72	0.76	0.76	0.76
							<b>CEA kit average:</b>						
							mean	13.9	21.3	12.3	17.9	23.8	
							SD	2.4	3.5	2.3	3.3	3.8	
							all kit median	13.5	20.5	12.1	17.2	24.5	

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>AFP all lab mean:</b>							<b>AFP Roche Elecsys (BME/BM1) mean:</b>						
mean	54.8	11.0	16.5	21.8	5.5		mean	60.0	11.3	17.3	23.4	5.2	
SD	6.8	1.3	1.9	2.6	0.8		SD	4.8	0.4	0.7	1.2	0.2	
%CV	12.5%	12.2%	11.8%	12.0%	13.7%		%CV	8.0%	3.2%	3.9%	5.0%	3.5%	
mean+3SD	75.3	15.0	22.4	29.6	7.8		mean+3SD	74.4	12.4	19.3	26.9	5.8	
mean-3SD	34.2	7.0	10.7	13.9	3.3		mean-3SD	45.5	10.2	15.2	19.9	4.7	
N	98	97	97	96	96		N	5	5	5	5	5	
mean/target	0.95	0.99	0.97	0.97	1.09	0.99	kit median	61.0	11.5	17.4	23.4	5.3	
							mean/target	1.04	1.02	1.02	1.04	1.03	1.03
<b>AFP Beckman Unicel (BCU/BC1) mean:</b>							<b>AFP Bayer ACS 180 (COS/BA1) mean:</b>						
mean	61.0	12.9	18.9	24.9	6.3		mean	60.0	11.7	17.5	22.9	5.9	
SD	3.1	0.3	0.9	2.1	0.2		SD	4.9	2.7	2.9	4.2	1.7	
%CV	5.1%	1.9%	4.6%	8.3%	3.4%		%CV	8.1%	23.2%	16.6%	18.3%	28.5%	
mean+3SD	70.2	13.7	21.5	31.1	6.9		mean+3SD	74.6	19.9	26.2	35.5	11.0	
mean-3SD	51.7	12.2	16.3	18.8	5.7		mean-3SD	45.4	3.6	8.8	10.3	0.9	
N	4	4	4	4	4		N	3	3	3	3	3	
kit median	62.0	13.0	18.8	24.6	6.4		kit median	58.2	10.8	17.4	21.9	5.5	
mean/target	1.06	1.16	1.11	1.11	1.24	1.14	mean/target	1.04	1.06	1.03	1.02	1.16	1.06
<b>AFP Beckman Access (BCX/BC1) mean:</b>							<b>AFP Bayer ADVIDA Centaur (COB/BA1) mean:</b>						
mean	62.0	11.9	18.4	24.2	5.9		mean	56.4	11.7	17.6	22.2	6.1	
SD	3.3	1.0	1.6	1.6	1.0		SD	2.5	0.7	0.9	0.9	0.5	
%CV	5.3%	8.0%	8.7%	6.5%	16.6%		%CV	4.5%	6.0%	4.9%	4.2%	8.3%	
mean+3SD	71.9	14.8	23.2	28.8	8.8		mean+3SD	63.9	13.8	20.2	25.0	7.6	
mean-3SD	52.0	9.1	13.6	19.5	2.9		mean-3SD	48.8	9.6	15.0	19.4	4.6	
N	9	9	9	9	9		N	25	25	25	24	25	
kit median	62.1	11.9	18.3	23.8	5.9		kit median	56.3	11.7	17.6	22.4	6.1	
mean/target	1.08	1.07	1.08	1.08	1.15	1.09	mean/target	0.98	1.05	1.03	0.99	1.20	1.05
<b>AFP Roche E170 (BMR/BM1) mean:</b>							<b>AFP Abbott Asxym (ABB/AB1) mean:</b>						
mean	63.3	12.1	18.8	25.0	6.1		mean	55.3	11.1	16.4	22.5	5.5	
SD	5.4	1.0	1.9	2.7	0.5		SD	4.9	0.5	0.7	1.5	0.3	
%CV	8.5%	7.9%	10.0%	10.7%	8.0%		%CV	8.8%	4.5%	4.5%	6.5%	5.4%	
mean+3SD	79.5	15.0	24.4	33.0	7.5		mean+3SD	69.9	12.6	18.6	26.9	6.4	
mean-3SD	47.1	9.2	13.2	16.9	4.6		mean-3SD	40.7	9.6	14.2	18.1	4.6	
N	4	4	4	4	4		N	16	16	16	15	15	
kit median	63.1	11.8	18.3	24.3	6.0		kit median	55.0	11.1	16.4	22.3	5.5	
mean/target	1.10	1.09	1.10	1.11	1.19	1.12	mean/target	0.96	1.00	0.96	1.00	1.08	1.00

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<b>AFP TOSOH AIA (TOM/TO1) mean:</b>							<b>AFP Immulite or Immulite 1000 (DPB/DP5) mean:</b>						
mean	53.2	10.8	16.0	21.1	5.4		mean	45.6	9.3	14.2	18.4	4.7	
SD	1.5	0.7	1.0	1.0	0.2		SD	4.4	1.0	1.7	1.9	0.7	
%CV	2.8%	6.1%	6.0%	4.8%	3.2%		%CV	9.7%	11.3%	11.6%	10.1%	14.0%	
mean+3SD	57.7	12.8	18.9	24.1	5.9		mean+3SD	59.0	12.4	19.2	24.0	6.6	
mean-3SD	48.8	8.8	13.1	18.0	4.9		mean-3SD	32.3	6.1	9.3	12.8	2.7	
N	3	3	3	3	3		N	5	5	5	5	5	
kit median	53.6	10.9	16.5	21.2	5.3		kit median	48.1	9.9	15.1	19.5	5.0	
mean/target	0.92	0.97	0.94	0.94	1.06	0.97	mean/target	0.79	0.84	0.84	0.82	0.91	0.84
<b>AFP Immulite 2000 (DPD/DP5) mean:</b>							<b>AFP Johnson &amp; Johnson Vitros Eci (JJC/JJ1) mean:</b>						
mean	46.7	9.4	14.3	18.9	4.8		mean	45.6	9.2	13.6	17.6	4.8	
SD	3.4	0.8	0.9	1.1	0.3		SD	0.7	0.4	0.4	0.4	0.3	
%CV	7.4%	8.3%	6.2%	6.1%	5.5%		%CV	1.5%	4.7%	2.7%	2.4%	6.3%	
mean+3SD	57.1	11.8	16.9	22.3	5.6		mean+3SD	47.7	10.5	14.7	18.8	5.7	
mean-3SD	36.4	7.1	11.6	15.5	4.0		mean-3SD	43.5	7.9	12.5	16.3	3.9	
N	19	19	19	19	19		N	3	3	3	3	3	
kit median	47.0	9.6	14.3	19.0	4.8		kit median	46.0	9.4	13.7	17.7	4.9	
mean/target	0.81	0.85	0.84	0.84	0.94	0.86	mean/target	0.79	0.83	0.80	0.78	0.95	0.83
<b>AFP kit average:</b>							<b>AFP</b>						
mean	55.4	11.0	16.6	21.9	5.5			<b>TM136</b>	<b>TM137</b>	<b>TM138</b>	<b>TM139</b>	<b>TM140</b>	
SD	6.7	1.2	1.9	2.6	0.6		<b>*IS target</b>	<b>57.6</b>	<b>11.1</b>	<b>17.0</b>	<b>22.4</b>	<b>5.1</b>	
all kit median	56.4	11.3	17.3	22.5	5.5		<b>SD ( +/- )</b>	5.5	1.7	2.4	3.1	0.9	
							<b>% CV</b>	9.4%	14.9%	13.9%	13.7%	17.4%	
							<b>high (30%)</b>	74.9	14.5	22.0	29.1	6.6	
							<b>low (30%)</b>	40.3	7.8	11.9	15.6	3.5	
							* target value from a traceable AFP standard						

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>PSA all lab mean:</b>							<b>PSA Bayer ACS180 (COS/BA2) mean:</b>						
mean	2.1	4.2	7.6	10.6	15.8		mean	2.2	4.2	7.7	10.4	15.4	
SD	0.2	0.4	0.8	1.1	1.5		SD	0.1	0.3	1.0	0.5	0.9	
%CV	8.9%	9.0%	10.0%	10.2%	9.8%		%CV	6.0%	6.1%	13.5%	5.0%	5.6%	
mean+3SD	2.7	5.3	9.8	13.9	20.5		mean+3SD	2.6	5.0	10.9	12.0	18.0	
mean-3SD	1.5	3.0	5.3	7.4	11.2		mean-3SD	1.8	3.4	4.6	8.9	12.8	
N	281	279	279	280	277		N	9	9	9	9	9	
mean/assigned target	1.32	1.26	1.28	1.28	1.28	1.28	kit median	2.2	4.2	7.6	10.5	15.4	
							mean/assigned target	1.36	1.28	1.31	1.26	1.24	1.29
<b>PSA Johnson &amp; Johnson Vitros Eci (JJC/JJ1) mean:</b>							<b>PSA Beckman Access (BCX/BC1) mean:</b>						
mean	2.3	4.4	7.7	10.6	15.6		mean	2.2	4.4	8.1	11.5	17.2	
SD	0.1	0.1	0.3	0.3	0.6		SD	0.1	0.2	0.3	0.7	0.6	
%CV	3.4%	2.8%	3.5%	3.1%	3.7%		%CV	5.2%	3.9%	3.7%	6.1%	3.4%	
mean+3SD	2.6	4.7	8.5	11.6	17.3		mean+3SD	2.5	4.9	9.0	13.6	18.9	
mean-3SD	2.1	4.0	6.8	9.6	13.8		mean-3SD	1.9	3.9	7.2	9.4	15.4	
N	10	10	10	10	10		N	52	51	51	52	51	
kit median	2.3	4.4	7.6	10.6	15.5		kit median	2.2	4.4	8.1	11.5	17.2	
mean/assigned target	1.45	1.33	1.30	1.27	1.26	1.32	mean/assigned target	1.38	1.34	1.37	1.38	1.38	1.37
<b>PSA DPC Immulite (DPB/DP5) mean:</b>							<b>PSA Beckman Unicel (BCU/BC1) mean:</b>						
mean	2.3	4.8	8.7	12.0	17.5		mean	2.2	4.3	7.9	11.2	16.7	
SD	0.2	0.3	0.6	0.8	1.1		SD	0.2	0.2	0.5	0.5	0.8	
%CV	8.7%	7.0%	6.9%	6.6%	6.5%		%CV	8.3%	4.1%	5.8%	4.6%	4.6%	
mean+3SD	2.9	5.8	10.5	14.4	20.9		mean+3SD	2.7	4.8	9.2	12.8	19.0	
mean-3SD	1.7	3.8	6.9	9.6	14.1		mean-3SD	1.6	3.8	6.5	9.6	14.4	
N	13	13	13	13	13		N	9	9	9	9	9	
kit median	2.3	4.7	8.3	12.1	17.3		kit median	2.1	4.4	7.9	11.3	16.5	
mean/assigned target	1.44	1.44	1.47	1.45	1.41	1.44	mean/assigned target	1.35	1.30	1.33	1.35	1.35	1.34
<b>PSA DPC Immulite 2000 (DPD/DP5) mean:</b>							<b>PSA Abbott IMX (ABM/AB1) mean:</b>						
mean	2.2	4.4	8.1	11.4	16.8		mean	2.2	4.4	7.9	11.1	16.6	
SD	0.1	0.2	0.5	0.6	0.9		SD	0.1	0.2	0.3	0.2	0.5	
%CV	6.6%	5.4%	6.2%	5.3%	5.5%		%CV	4.4%	3.7%	4.3%	2.1%	3.0%	
mean+3SD	2.7	5.1	9.6	13.2	19.6		mean+3SD	2.5	4.9	8.9	11.8	18.1	
mean-3SD	1.8	3.7	6.6	9.6	14.1		mean-3SD	1.9	3.9	6.9	10.4	15.1	
N	16	16	16	15	15		N	6	6	6	6	6	
kit median	2.2	4.5	8.0	11.4	16.8		kit median	2.2	4.4	7.8	11.2	16.5	
mean/assigned target	1.39	1.34	1.38	1.38	1.36	1.37	mean/assigned target	1.39	1.32	1.33	1.34	1.34	1.34
<b>PSA Dade Behring Dimension (DUD/DA1) mean:</b>							<b>PSA Abbott Asxym (ABB/AB1) mean:</b>						
mean	2.2	4.4	8.0	11.2	16.9		mean	2.2	4.2	7.8	11.0	16.2	
SD	0.1	0.3	0.5	0.6	0.8		SD	0.2	0.3	0.6	0.8	1.1	
%CV	6.0%	6.5%	5.9%	5.4%	4.6%		%CV	7.8%	8.0%	8.2%	7.6%	7.0%	
mean+3SD	2.6	5.3	9.4	13.0	19.2		mean+3SD	2.7	5.2	9.7	13.5	19.6	
mean-3SD	1.8	3.5	6.6	9.4	14.6		mean-3SD	1.7	3.2	5.9	8.5	12.8	
N	23	22	22	23	23		N	29	29	29	29	28	
kit median	2.2	4.4	8.1	11.4	16.8		kit median	2.2	4.2	7.8	10.7	16.0	
mean/assigned target	1.40	1.34	1.36	1.35	1.36	1.36	mean/assigned target	1.35	1.28	1.31	1.32	1.30	1.31

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>PSA TOSOH AIA (TOM/TO1) mean:</b>							<b>PSA Roche Elecsys (BME/BM1) mean:</b>						
mean	2.0	4.0	7.3	10.2	15.1		mean	2.0	3.9	6.9	9.6	14.4	
SD	0.1	0.3	0.3	0.5	0.9		SD	0.1	0.1	0.4	0.5	0.5	
%CV	7.3%	6.7%	4.3%	4.6%	6.2%		%CV	5.6%	3.3%	5.3%	4.7%	3.7%	
mean+3SD	2.5	4.8	8.2	11.6	17.9		mean+3SD	2.3	4.2	8.0	10.9	16.0	
mean-3SD	1.6	3.2	6.3	8.8	12.3		mean-3SD	1.6	3.5	5.8	8.2	12.8	
N	17	17	17	17	17		N	16	16	16	16	16	
kit median	2.0	4.0	7.3	10.4	15.0		kit median	2.0	3.9	6.9	9.6	14.5	
mean/assigned target	1.26	1.22	1.23	1.23	1.22	1.23	mean/assigned target	1.22	1.17	1.17	1.15	1.16	1.17
<b>PSA DPC Immulite or 2000 3rd generation (DPB or D/DP6) mean:</b>							<b>PSA Abbott Asxym Mono/mono (ABB/AB2) mean:</b>						
mean	2.0	3.6	6.9	9.8	13.9		mean	2.0	3.8	6.9	10.0	15.2	
SD	0.2	0.2	0.6	0.7	1.4		SD	0.1	0.2	0.3	0.8	0.6	
%CV	8.6%	4.8%	8.5%	7.2%	9.8%		%CV	5.4%	4.7%	3.9%	7.8%	4.3%	
mean+3SD	2.5	4.1	8.6	11.9	18.0		mean+3SD	2.3	4.3	7.7	12.4	17.1	
mean-3SD	1.5	3.1	5.1	7.6	9.8		mean-3SD	1.6	3.3	6.1	7.6	13.2	
N	4	4	4	4	4		N	6	6	6	6	6	
kit median	2.0	3.6	6.8	9.7	13.9		kit median	2.0	3.8	6.9	10.0	15.3	
mean/assigned target	1.23	1.08	1.17	1.17	1.12	1.16	mean/assigned target	1.22	1.15	1.16	1.20	1.22	1.19
<b>PSA Bayer ADVIA-Centaur (COB/BA2) mean:</b>							<b>PSA</b>						
mean	1.9	3.8	6.7	9.4	14.0			<b>TM136</b>	<b>TM137</b>	<b>TM138</b>	<b>TM139</b>	<b>TM140</b>	
SD	0.1	0.2	0.3	0.5	0.8		<b>* Assigned IS target</b>	<b>1.6</b>	<b>3.3</b>	<b>5.9</b>	<b>8.3</b>	<b>12.4</b>	
%CV	4.7%	4.7%	5.0%	5.8%	5.8%		<b>SD ( +/- )</b>	<b>0.04</b>	<b>0.1</b>	<b>0.2</b>	<b>0.4</b>	<b>0.6</b>	
mean+3SD	2.2	4.3	7.7	11.0	16.5		<b>% CV</b>	<b>2.4%</b>	<b>3.3%</b>	<b>2.8%</b>	<b>4.8%</b>	<b>5.2%</b>	
mean-3SD	1.7	3.2	5.7	7.7	11.6		<b>high ( +25%)</b>			7.4	10.4	15.4	
N	54	54	54	54	54		<b>low ( -25%)</b>			4.4	6.2	9.3	
kit median	1.9	3.8	6.8	9.5	14.2		<b>high ( +30%)</b>	2.1	4.2				
mean/assigned target	1.21	1.15	1.14	1.13	1.13	1.15	<b>low ( -30%)</b>	1.1	2.3				
<b>PSA Roche E170 (BMR/BM1) mean:</b>							<b>* target value from a traceable PSA standard</b>						
mean	2.0	3.9	6.9	9.7	14.4								
SD	0.1	0.2	0.2	0.4	0.4								
%CV	2.7%	3.9%	3.3%	4.0%	3.1%		<b>PSA</b>	<b>mean</b>	<b>SD</b>				
mean+3SD	2.1	4.4	7.6	10.9	15.7		<b>Average Bias</b>	<b>1.282</b>	<b>0.093</b>				
mean-3SD	1.8	3.4	6.3	8.6	13.1		<b>Average Bias Low</b>		<b>1.181</b>	<b>0.030</b>			
N	8	8	8	8	7		<b>Average Bias High</b>		<b>1.350</b>	<b>0.044</b>			
kit median	2.0	3.9	7.0	9.8	14.4								
mean/assigned target	1.22	1.18	1.18	1.17	1.16	1.18							
<b>PSA kit average:</b>													
mean	2.1	4.2	7.6	10.6	15.7								
SD	0.1	0.3	0.6	0.8	1.2								
all kit median	2.2	4.2	7.7	10.6	15.6								

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>free PSA all lab mean:</b>							<b>free PSA DPC Immulite 2000 (DPD/DP5) mean:</b>						
mean	0.25	0.48	0.91	1.21	1.76		mean	0.18	0.34	0.67	0.92	1.35	
SD	0.05	0.09	0.17	0.20	0.30		SD	0.01	0.02	0.04	0.07	0.10	
%CV	20.1%	19.1%	18.2%	16.7%	17.0%		%CV	6.0%	5.1%	5.3%	7.7%	7.5%	
mean+3SD	0.40	0.76	1.41	1.82	2.65		mean+3SD	0.21	0.40	0.78	1.13	1.65	
mean-3SD	0.10	0.21	0.41	0.61	0.86		mean-3SD	0.14	0.29	0.56	0.70	1.05	
N	59	66	68	64	62		N	6	6	6	5	5	
mean/assign.target	1.32	1.31	1.27	1.24	1.24	1.27	kit median	0.18	0.35	0.67	0.90	1.31	
							mean/assign.target	0.92	0.93	0.93	0.93	0.95	0.93
<b>free PSA Beckman Access (BCX/BC1) mean:</b>							<b>free PSA Roche Elecsys (BME/BM1) mean:</b>						
mean	0.29	0.56	1.05	1.37	1.99		mean	0.21	0.40	0.77	1.04	1.50	
SD	0.01	0.03	0.05	0.10	0.05		SD	0.02	0.03	0.06	0.08	0.12	
%CV	4.8%	5.7%	4.7%	7.1%	2.5%		%CV	8.5%	7.0%	7.2%	7.6%	8.0%	
mean+3SD	0.34	0.66	1.20	1.66	2.14		mean+3SD	0.26	0.48	0.94	1.27	1.86	
mean-3SD	0.25	0.47	0.91	1.08	1.84		mean-3SD	0.15	0.31	0.60	0.80	1.14	
N	25	29	29	26	24		N	6	6	6	6	6	
kit median	0.30	0.56	1.04	1.39	2.00		kit median	0.21	0.40	0.76	1.03	1.50	
mean/assign.target	1.55	1.52	1.46	1.40	1.40	1.47	mean/assign.target	1.09	1.08	1.07	1.06	1.06	1.07
<b>free PSA Beckman Unicel (BCU/BC1) mean:</b>							<b>free PSA Roche Elecsys new generation (BME/BM2) mean:</b>						
mean	0.27	0.52	1.01	1.34	1.95		mean	0.21	0.41	0.78	1.03	1.53	
SD	0.03	0.02	0.07	0.06	0.11		SD	0.01	0.03	0.02	0.03	0.04	
%CV	11.3%	4.7%	6.7%	4.3%	5.5%		%CV	3.4%	7.1%	2.7%	2.7%	2.8%	
mean+3SD	0.36	0.59	1.21	1.51	2.27		mean+3SD	0.23	0.49	0.85	1.11	1.66	
mean-3SD	0.18	0.45	0.81	1.17	1.63		mean-3SD	0.18	0.32	0.72	0.95	1.40	
N	8	8	8	8	8		N	2	3	3	2	2	
kit median	0.27	0.52	1.01	1.32	1.94		kit median	0.21	0.39	0.79	1.03	1.53	
mean/assign.target	1.40	1.41	1.40	1.37	1.38	1.39	mean/assign.target	1.08	1.10	1.09	1.05	1.08	1.08
<b>free PSA Dade Behring Dimension (DUD/DA1) mean:</b>							<b>free PSA Roche E170 new generation (BMR/BM2) mean:</b>						
mean	0.23	0.42	0.78	1.04	1.51		mean	0.21	0.40	0.79	1.06	1.53	
SD	0.02	0.02	0.05	0.07	0.10		SD	0.00	0.01	0.02	0.03	0.03	
%CV	6.9%	3.8%	6.1%	6.8%	6.9%		%CV	0.0%	2.9%	2.6%	2.7%	2.0%	
mean+3SD	0.28	0.47	0.92	1.25	1.82		mean+3SD	0.21	0.43	0.85	1.14	1.62	
mean-3SD	0.18	0.37	0.64	0.83	1.19		mean-3SD	0.21	0.36	0.72	0.97	1.44	
N	5	5	5	5	5		N	2	3	3	3	3	
kit median	0.23	0.42	0.79	1.06	1.55		kit median	0.21	0.39	0.78	1.04	1.53	
mean/assign.target	1.21	1.14	1.09	1.06	1.06	1.11	mean/assign.target	1.11	1.07	1.09	1.08	1.08	1.09
<b>free PSA ABB/AB2 mean:</b>							<b>free PSA Roche E170 (BMR/BM1) mean:</b>						
mean	0.18	0.36	0.68	0.97	1.45		mean	0.20	0.39	0.76	1.04	1.50	
SD	0.01	0.05	0.05	0.06	0.14		N	1	1	2	2	1	
%CV	4.0%	12.7%	6.9%	6.0%	9.9%		mean/assign.target	1.05	1.05	1.06	1.06	1.06	
mean+3SD	0.20	0.50	0.82	1.14	1.88								
mean-3SD	0.15	0.22	0.54	0.79	1.02		<b>free PSA</b>						
N	2	3	4	4	3		<b>* IS target</b>	<b>TM136</b>	<b>TM137</b>	<b>TM138</b>	<b>TM139</b>	<b>TM140</b>	
all median	0.18	0.35	0.66	0.97	1.48		<b>SD ( +/- )</b>	<b>0.19</b>	<b>0.37</b>	<b>0.72</b>	<b>0.98</b>	<b>1.42</b>	
mean/assign.target	0.92	0.97	0.94	0.98	1.02	0.97	<b>% CV</b>	<b>0.00</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.05</b>	
<b>free PSA kit average:</b>							<b>high (30%)</b>	<b>0.7%</b>	<b>0.9%</b>	<b>1.4%</b>	<b>2.0%</b>	<b>3.6%</b>	
mean	0.22	0.42	0.81	1.08	1.58		<b>low (30%)</b>	<b>0.25</b>	<b>0.48</b>	<b>0.94</b>	<b>1.27</b>	<b>1.85</b>	
SD	0.04	0.07	0.13	0.15	0.21		<b>low (30%)</b>	<b>0.13</b>	<b>0.26</b>	<b>0.50</b>	<b>0.69</b>	<b>0.99</b>	
all kit median	0.21	0.40	0.78	1.04	1.52								

\* target value from a traceable PSA standard. See text for explanation.

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	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>% free PSA all lab mean:</b>							<b>% free PSA ABB/AB1 or AB2 mean:</b>						
mean	11.2%	11.4%	11.7%	10.8%	10.4%		mean	10.0%	10.0%	9.8%	10.1%	9.3%	
SD	1.9%	1.9%	1.7%	1.6%	1.4%		SD			0.3%	0.8%	1.1%	
%CV	17.4%	17.1%	14.5%	14.5%	13.3%		%CV			3.5%	8.0%	11.5%	
mean+3SD	17.0%	17.2%	16.8%	15.4%	14.5%		mean+3SD			10.8%	12.6%	12.4%	
mean-3SD	5.4%	5.5%	6.6%	6.1%	6.3%		mean-3SD			8.8%	7.7%	6.1%	
N	42	57	61	41	39		N	1	1	3	3	2	
mean/all kit median	1.09	1.13	1.12	1.04	1.06		kit median			10.0%	10.0%	9.3%	
mean/target	0.96	1.00	0.96	0.90	0.89	0.94	mean/all kit median	0.98	0.99	0.93	0.98	0.94	
							mean/target	0.85	0.88	0.80	0.85	0.79	0.84
<b>% free PSA BC1/BC1 mean:</b>							<b>% free PSA DA1/DA1 mean:</b>						
mean	12.7%	12.7%	12.9%	12.1%	11.6%		mean	10.1%	9.3%	9.7%	9.3%	8.9%	
SD	1.1%	0.8%	0.7%	0.8%	0.6%		SD	0.7%	0.7%	0.5%	0.9%	0.7%	
%CV	8.3%	6.6%	5.7%	6.2%	5.6%		%CV	7.3%	7.6%	5.1%	9.4%	8.3%	
mean+3SD	15.9%	15.2%	15.1%	14.4%	13.5%		mean+3SD	12.3%	11.4%	11.2%	11.9%	11.1%	
mean-3SD	9.5%	10.2%	10.7%	9.9%	9.6%		mean-3SD	7.9%	7.2%	8.2%	6.6%	6.7%	
N	21	34	34	16	16		N	4	4	4	4	4	
kit median	13.0%	12.9%	13.0%	12.0%	11.6%		kit median	10.4%	9.4%	9.9%	9.6%	9.1%	
mean/all kit median	1.24	1.26	1.23	1.17	1.18		mean/all kit median	0.98	0.92	0.93	0.89	0.91	
mean/target	1.09	1.11	1.06	1.02	0.99	1.05	mean/target	0.86	0.82	0.80	0.78	0.76	0.80
<b>% free PSA BM1/BM1 mean:</b>							<b>% free PSA DP5/DP5 mean:</b>						
mean	10.6%	10.3%	11.2%	10.7%	10.4%		mean	7.9%	7.6%	8.3%	8.1%	8.2%	
SD	0.7%	0.6%	0.5%	0.8%	0.7%		SD	0.5%	0.5%	0.6%	1.0%	0.8%	
%CV	6.7%	5.4%	4.6%	7.3%	6.6%		%CV	6.4%	6.3%	7.3%	12.7%	9.8%	
mean+3SD	12.7%	12.0%	12.8%	13.1%	12.4%		mean+3SD	9.4%	9.0%	10.1%	11.2%	10.7%	
mean-3SD	8.4%	8.6%	9.6%	8.4%	8.3%		mean-3SD	6.3%	6.1%	6.5%	5.0%	5.8%	
N	7	7	8	8	7		N	6	6	6	5	5	
kit median	10.5%	10.0%	11.2%	10.6%	10.1%		kit median	8.0%	7.8%	8.4%	8.5%	8.3%	
mean/all kit median	1.03	1.02	1.07	1.03	1.06		mean/all kit median	0.77	0.75	0.79	0.78	0.84	
mean/target	0.90	0.90	0.92	0.90	0.89	0.90	mean/target	0.67	0.66	0.68	0.68	0.70	0.68
<b>% free PSA BM2/BM1 mean:</b>							<b>% free PSA kit average:</b>						
mean	10.4%	10.2%	11.2%	10.6%	10.5%		mean	10.3%	10.0%	10.5%	10.2%	9.8%	
SD	0.4%	0.5%	0.5%	0.3%	0.4%		SD	1.5%	1.7%	1.6%	1.4%	1.2%	
%CV	3.9%	5.2%	4.4%	3.1%	3.7%		all kit median	10.3%	10.1%	10.5%	10.4%	9.8%	
mean+3SD	11.6%	11.8%	12.6%	11.6%	11.6%								
mean-3SD	9.2%	8.6%	9.7%	9.6%	9.3%								
N	3	5	6	5	5		<b>% free PSA</b>						
kit median	10.5%	10.0%	11.2%	10.5%	10.6%								
mean/all kit median	1.02	1.01	1.07	1.02	1.07		<b>IS target</b>	<b>TM136</b>	<b>TM137</b>	<b>TM138</b>	<b>TM139</b>	<b>TM140</b>	
mean/target	0.89	0.89	0.92	0.89	0.90	0.90		<b>11.7%</b>	<b>11.4%</b>	<b>12.2%</b>	<b>11.9%</b>	<b>11.7%</b>	

New York State Tumor Marker Proficiency Test May 2005  
Summary of Results

	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>Complexed PSA all lab mean:</b>							<b>Complexed PSA COB/BA1 mean:</b>						
mean	1.8	3.6	6.3	8.8	13.1		mean	1.8	3.6	6.3	8.8	13.0	
SD	0.1	0.2	0.3	0.4	0.7		SD	0.2	0.3	0.3	0.4	0.7	
%CV	8.2%	6.7%	5.5%	4.7%	5.3%		%CV	8.5%	7.0%	5.5%	4.6%	5.3%	
mean+3SD	2.3	4.4	7.4	10.0	15.2		mean+3SD	2.3	4.4	7.3	9.9	15.1	
mean-3SD	1.4	2.9	5.3	7.6	11.0		mean-3SD	1.4	2.9	5.3	7.6	11.0	
N	12	12	12	12	12		N	11	11	11	11	11	
all median	1.8	3.6	6.4	8.9	13.2		kit median	1.8	3.6	6.3	8.8	13.0	

	TM136	TM137	TM138	TM139	TM140	Average bias		TM136	TM137	TM138	TM139	TM140	Average bias
<b>% Complexed PSA all lab mean:</b>							<b>% Complexed PSA COB/BA1 or BA2 mean:</b>						
mean	89.1%	88.2%	86.5%	83.5%	85.2%		mean	91.4%	91.8%	89.7%	87.7%	88.1%	
SD	3.9%	6.0%	5.6%	7.0%	6.0%		SD	2.7%	1.9%	3.1%	4.3%	5.3%	
%CV	4.4%	6.8%	6.5%	8.4%	7.1%		%CV	3.0%	2.0%	3.4%	4.9%	6.0%	
mean+3SD	101.0%	106.1%	103.3%	104.6%	103.3%		mean+3SD	99.5%	97.4%	98.9%	100.5%	104.0%	
mean-3SD	77.3%	70.3%	69.8%	62.5%	67.1%		mean-3SD	83.2%	86.2%	80.5%	74.8%	72.2%	
N	11	11	11	11	11		N	7	7	7	7	7	
all median	89.5%	89.5%	87.2%	83.9%	85.0%		kit median	90.0%	92.3%	88.1%	86.5%	88.6%	

	TM136	TM137	TM138	TM139	TM140
<b>% Complexed PSA COB/BC1 mean:</b>					
mean	84.1%	77.5%	79.7%	74.0%	77.4%
N	2	2	2	2	2