Table 1: New York State Molecular Oncology Proficiency Test -Summary of Results

Sample: NYS# L/L 1 (June 2009)

Interpretation: CML with the presence of p210 transcript

Assay	SB				PCR				RT-PCR				FISH				All methods			Method used					
	R	G	ind	Cons	R	G	ind	Cons	R	G	ind	Cons	R	G	ind	Cons	R	G	Cons	SB	PCR (qualitative)	PCR (quantitative)	RT-PCR (qualitative)	RT-PCR (quantitative)	FISH
IGH		3		G		28	1	G				I		2		G	0	33	G	Dako (2), home brew (1)	Biomed (9), home brew (16), IVS (6)				Vysis (2)
IGK		2		G	1	10		G				I				I	1	12	G	home brew (1), Dako (1)	Biomed (9), home brew (3)				
IGL		1		I		1		I				I				I	0	2	I	home brew (1)	Biomed (1)				
TRB		4		G		9		G				I				I	0	13	G	home brew (2), Dako (2)	Biomed (6), home brew (3)				
TRG				I		29		G				I				I	0	29	G		Biomed (6), home brew (18), IVS (5),				
TRD		1		I		1		I				I				I	0	2	I	home brew (1)	Biomed (1)				
IGH/BCL2 MBR		1		I		14		G				I				I	0	15	G	home brew (1)	Biomed (2), IVS (2), home brew (8)	home brew (2)			
mcr				I		11		G				I				I	0	11	G		Biomed (2), IVS (1), home brew (6)	home brew (2)			
MBR 3'				I		3		G				I				I	0	3	G		Biomed (2) IVS(1)				
MBR/mcr				I				I				I		3		G	0	3	G						Vysis (3)
IGH/CCND1 (Bcl-1)				I		8		G				I		3		G	0	11	G		home brew (4), Biomed (1), IVS (1)	home brew (2)			Vysis (3)
BCR/ABL1 p210	1			I				I	28			R				I	29	0	R	home brew (1)			home brew (7), Ipsogen(1), IVS(1)	home brew (19), Ipsogen(3), Cepheid(1),	
p190				I				I	12	12		I				I	12	12	I				home brew (6), Ipsogen(1), IVS(1) , other(1)	home brew (13), Ipsogen(3), Roche(1)	
p210/190				I				I	6	1		R	3			R	9	1	R				home brew (3), Roche(1)	home brew (1), Roche(3)	Vysis (3)
Abl kinase domain mutation				I				I		5		G				I	0	5	G				home brew (5)		
PML/RARA Long				I				I		14		G				I	0	14	G				home brew (6), IVS(1)	home brew (7)	
Short				I				I		13		G				I	0	13	G				home brew (5), IVS(1)	home brew (7)	
Variable				I				I		4		G				I	0	4	G				home brew (3), IVS(1)		
Long/Short/Variable				I				I		1		I		3		G	0	4	G				home brew (1)		Vysis (3)
MYC t(8;14)				I				I				I		3		G	0	3	G						Vysis (3)
AML1/ETO t(8;21)				I				I		7		G		3		G	0	10	G				home brew (5)	home brew (2)	Vysis (3)
NPM/ALK t(2;5)				I				I		1		I		1		I	0	2	I				home brew (1)		Vysis (1)
IGH/BCL-6				I				I				I		2		G	0	2	G						Vysis (2)
ETV6/RUNX1 (Tel-AML1)				I				I		1		I		2		G	0	3	I/G				home brew (1)		Vysis (2)
EBV				I		3		G				I				I	0	3	G		home brew (2)	Roche (1),			
KSHV/HHV8				I		3		G				I				I	0	3	G		home brew (3)				
HTLV1				I		1		I				I				I	0	1	I		home brew (1)				
CBFB INV(16)/MYH11				I				I		4		G		3		G	0	7	G				home brew (3)	home brew (1)	Vysis (3)
E2A-PBX t(1;19) (4;11)				I				I		1		I				I	0	1	I				home brew (1)		
MLL(11q23)/ AF4 (4;11)				I				I		3		G		3		G	0	6	G				home brew (3)		Vysis (3)
JAK 2 (V617F)				I		27		G		2		G				I	0	29	G		home brew (18), IVS(2), Ipsogen(3)	home brew(2), Ipsogen(2), Eragen(1)	home brew (2)	home brew (1)	
JAK 2 (Exon 12)				I		2		G		2		G				I	0	4	G		home brew (2)		home brew (2)	home brew (1)	
MPL W 515				I		2		G		1		I				I	0	3	G/I		home brew (2)		home brew (1)		
MPL S 505				I				I		1		I				I	0	1	I				home brew (1)		
FLT 3 ITD				I		14		G				I				I	0	14	G		home brew (10), IVS(3), Seegene(1)				
FLT 3 D835				I		12		G				I				I	0	12	G		home brew (8), IVS(3), Seegene(1)				
NPM1 mutation				I		12		G				I				I	0	12	G		home brew (12)				
P53				I		2		G				I		3		G	0	5	G		home brew(2)				Vysis (3)
IgVH mutation				I		4		N*		5		N*				I	0	9	N*		home brew(2), IVS(1)	IVS(1)	home brew (4), IVS (1)		
c-kit				I		3		G				I				I	0	3	G		home brew (3)				
Other:(MYC,RARA,ALK, Bcl-6), (HFE, RB1, etc)				I	1	1		I		1		I	1	1		I	1	1	I						

* No clonal band detected

Table 2: New York State Molecular Oncology Proficiency Test -Summary of Results

Sample: NYS# L/L 2 (June 2009)

Interpretation: B-cell clone with IGH and IGK rearrangements; T-cell clone with TRB rearrangement; IgVH mutation

Assay	SB				PCR				RT-PCR				FISH				All methods			Method used					
	R	G	ind	Cons	R	G	ind	Cons	R	G	ind	Cons	R	G	ind	Cons	R	G	Cons	SB	PCR (qualitative)	PCR (quantitative)	RT-PCR (qualitative)	RT-PCR (quantitative)	FISH
IGH	1	2		I	29			R				I	1	1		I	31	3	I/R/I	Dako (2), home brew (1)	Biomed (9), home brew (16), IVS (6)				Vysis (2)
IGK	1	1		I	10	1		R				I				I	11	2	I/R	home brew (1), Dako (1)	Biomed (9), home brew (3)				
IGL		1		I		1		I				I				I	0	2	I	home brew (1)	Biomed (1)				
TRB	2	2		I	8	1		R				I				I	10	3	I/R	home brew (2), Dako (1)	Biomed (6), home brew (3)				
TRG				I	19	10		R				I				I	19	10	I*		Biomed (6), home brew (18), IVS (5),				
TRD		1		I		1		I				I				I	0	2	I	home brew (1)	Biomed (1)				
IGH/BCL2 MBR		1		I	1	13		G				I				I	1	14	G	home brew (1)	Biomed (2), IVS (2), home	home brew (2)			
mcr				I		11		G				I				I	0	11	G		Biomed (2), IVS (1), home brew (6)	home brew (2)			
MBR 3'				I		3		G				I				I	0	3	G		Biomed (2), IVS(1)				
MBR/mcr				I				I				I		3		G	0	3	G						Vysis (3)
IGH/CCND1 (Bcl-1)		1		I	1	7		G				I		3		G	1	11	G	home brew (1)	home brew (4), Biomed (1), IVS(1)	home brew (2)			Vysis (3)
BCR/ABL1 p210		1		I				I	1	27		G				I	1	28	G	home brew (1)			home brew (7), Ipsogen(1), IVS (1)	home brew (19), Ipsogen(3), Cepheid(1),	
p190				I				I		25		G				I	0	25	G				home brew (8), Ipsogen(1), IVS (1), other(1)	home brew (18), Ipsogen (3), Roche(1)	
p210/190				I				I	1	8		G		3		G	1	11	G				home brew (3), Roche(2), IVS (1), Ipsogen(1)	home brew (2), Roche(3), Ipsogen (1)	Vysis (3)
Abl kinase domain mutation				I				I		2		G				I	0	2	G				home brew (2)		
PML/RARA Long				I				I		14		G				I	0	14	G				home brew (6), IVS (1)	home brew (7)	
Short				I				I		13		G				I	0	13	G				home brew (5), IVS(1)	home brew (7)	
Variable				I				I		4		G				I	0	4	G				home brew (3), IVS(1)		
Long/Short/Variable				I				I		1		I		3		G	0	4	G				home brew (1)		Vysis (3)
MYC t(8;14)				I				I				I		3		G	0	3	G						Vysis (3)
AML1/ETO t(8;21)				I				I		7		G		3		G	0	10	G				home brew (5)	home brew (2)	Vysis (3)
NPM/ALK t(2;5)				I				I		1		I		1		I	0	2	I				home brew (1)		Vysis (1)
IGH/BCL-6				I				I				I		2		G	0	2	G						Vysis (2)
ETV6/RUNX1 (Tel-AML1)				I				I		1		I		2		G	0	3	I/G				home brew (1)		Vysis (2)
EBV				I		3		G				I				I	0	3	G		home brew (2)	Roche (1)			
KSHV/HHV8				I		3		G				I				I	0	3	G		home brew (3)				
HTLV1				I		2		G				I				I	0	2	G		home brew (2)				
CBFB INV(16)/MYH11				I				I		4		G		3		G	0	7	G				home brew (3)	home brew (1)	Vysis (3)
E2A-PBX t(1;19) (4;11)				I				I		1		I				I	0	1	I				home brew (1)		
MLL(11q23)/ AF4 (4;11)				I				I		3		G		3		G	0	6	G				home brew (3)		Vysis (3)
JAK 2 (V617F)				I		27		G		2		G				I	0	29	G		home brew (18), IVS(2), Ipsogen(3)	home brew(2), Ipsogen(2), Eragen(1)	home brew (2)	home brew (1)	
JAK 2 (Exon 12)				I		2		G		2		G				I	0	4	G		home brew (2)		home brew (2)	home brew (1)	
MPL W 515				I		2		G		1		I				I	0	3	G/I		home brew (2)		home brew (1)		
MPL S 505				I				I		1		I				I	0	1	I				home brew (1)		
FLT 3 ITD				I		14		G				I				I	0	14	G		home brew (10), IVS(3), Seegene(1)				
FLT 3 D835				I		12		G				I				I	0	12	G		home brew (8), IVS(3), Seegene(1)				
NPM1 mutation				I		12		G				I				I	0	12	G		home brew (12)				
P53				I		2		G				I		3		G	0	5	G		home brew(2)				Vysis (3)
IgVH mutation				I	3	1		R	4	1		R				I	7	2	R		home brew(2), IVS(1)	IVS(1)	home brew (4), IVS (1)		
c-kit				I		3		G				I				I	0	3	G		home brew(3)				
Other:(MYC,RARA,ALK, Bcl-6), (HFE, RB1, etc)				I		1		I		1		I		1		I	0	1	I						

*See critique for explanation

Table 3: New York State Molecular Oncology Proficiency Test -Summary of Results

Sample: NYS# L/L 3 (June 2009)

Interpretation: B-cell clone with IGH and IGK rearrangements; IgHV mutation; MYC and EBV positive

Assay	SB				PCR				RT-PCR				FISH				All methods			Method used					
	R	G	ind	Cons	R	G	ind	Cons	R	G	ind	Cons	R	G	ind	Cons	R	G	Cons	SB	PCR (qualitative)	PCR (quantitative)	RT-PCR (qualitative)	RT-PCR (quantitative)	FISH
IGH	3			R	29			R				I	2			R	34	0	R	Dako (2), home brew (1)	Biomed (8), home brew (16), IVS (6)				Vysis (3)
IGK	2			R	11			R				I				I	13	0	R	home brew (1), Dako (1)	Biomed (9), home brew (3)				
IGL	1			I	1			I				I				I	2	0	I	home brew (1)	Biomed (1)				
TRB		4		G		9		I				I				I	0	13	G	home brew (2), Dako (2)	Biomed (6), home brew (3),				
TRG				I		29		G				I				I	0	29	G		Biomed (6), home brew (18), IVS (5),				
TRD		1		I		1		I				I				I	0	2	I	home brew (1)	Biomed (1)				
IGH/BCL2 MBR		1		I	1	13		G				I				I	1	14	G	home brew (1)	Biomed (2), IVS (2), home brew (8)	home brew (2)			
mcr				I		11		G				I				I	0	11	G		Biomed (2), IVS (1), home brew (6)	home brew (2)			
MBR 3'				I		3		G				I				I	0	3	G		Biomed (2), IVS(1)				
MBR/mcr				I				I				I		3		G	0	3	G						Vysis (3)
IGH/CCND1 (Bcl-1)		1		I		8		G				I		3		G	0	12	G	home brew (1)	home brew (4), Biomed (1), IVS (1)	home brew (2)			Vysis (3)
BCR/ABL1 p210		1		I				I		27		G				I	0	28	G	home brew (1)			home brew (7), Ipsogen(1), IVS(1)	home brew (19), Ipsogen(2), Cepheid(1)	
p190				I				I		24		G				I	0	24	G				home brew (8), Ipsogen(1), IVS(1), other(1)	home brew (15), Ipsogen(1), Roche(1)	
p210/190				I				I		9		G		3		G	0	12	G				home brew (3), Roche(1), IVS (1)	home brew (2), Roche(3), Ipsogen(2)	Vysis (3)
Abl kinase domain mutation				I				I				I				I	0	0	I						
PML/RARA Long				I				I		14		G				I	0	14	G				home brew (6), IVS(1)	home brew (7)	
Short				I				I		13		G				I	0	13	G				home brew (5), IVS(1)	home brew (7)	
Variable				I				I		4		G				I	0	4	G				home brew (3), IVS(1)		
Long/Short/Variable				I				I		1		I		3		G	0	4	G				home brew (1)		Vysis (3)
MYC t(8;14)				I				I				I	3			R	3	0	R						Vysis (3)
AML1/ETO t(8;21)				I				I		7		G		3		G	0	10	G				home brew (5)	home brew (2)	Vysis (3)
NPM/ALK t(2;5)				I				I		1		I		1		I	0	2	I				home brew (1)		Vysis (1)
IGH/BCL-6				I				I				I		2		G	0	2	G						Vysis (2)
ETV6/RUNX1 (Tel-AML1)				I				I		1		I		2		G	0	3	G				home brew (1)		Vysis (2)
EBV				I	3			R				I				I	3	0	R		home brew (2)	Roche (1),			
KSHV/HHV8				I		3		G				I				I	0	3	G		home brew (3)				
HTLV1				I		2		G				I				I	0	2	G		home brew (2)				
CBFB INV(16)/MYH11				I				I		4		G		3		G	0	7	G				home brew (3)	home brew (1)	Vysis (3)
E2A-PBX t(1;19) (4;11)				I				I		1		I				I	0	1	I				home brew (1)		
MLL(11q23)/ AF4 (4;11)				I				I		3		G		3		G	0	6	G				home brew (3)		Vysis (3)
JAK 2 (V617F)				I		27		G		2		G				I	0	29	G		home brew (18), IVS(3), Ipsogen(2)	home brew(2), Ipsogen(2), Eragen(1)	home brew (2)	home brew (1)	
JAK 2 (Exon 12)				I		2		G		2		G				I	0	4	G		home brew (2)		home brew (2)	home brew (1)	
MPL W 515				I		2		G		1		I				I	0	3	G		home brew (2)		home brew (1)		
MPL S 505				I				I		1		I				I	0	1	I				home brew (1)		
FLT 3 ITD				I		14		G				I				I	0	14	G		home brew (10), IVS(3), Seegene(1)				
FLT 3 D835				I		12		G				I				I	0	12	G		home brew (8), IVS(3), Seegene(1)				
NPM1 mutation				I		12		G				I				I	0	12	G		home brew (12)				
P53				I	2			R				I		3		G	2	3	R/G		home brew(2)				Vysis (3)
IgVH mutation				I	3	1		R	5			R				I	8	1	R		home brew(2), IVS(1)	IVS(1)	home brew (4), IVS (1)		
c-kit				I		3		G				I				I	0	3	G		home brew(3)				
Other:(MYC,RARA,ALK, Bcl-6), (HFE, RB1, etc)				I		1		I		1		I	1	1		I	1	1	I						