CELL EXCHANGE #410
MAY 8, 2019

Cells 1637-1640

The results for Cell Exchange #410 are summarized in Table 7 and Table 8. Molecular typing results for individual laboratories are listed in Tables 9 -12 for each sample and individual serological results for each sample are listed in Table 13. The haplotype frequencies used in this report are from the NMDP Bioinformatics website, https://bioinformatics.bethematchclinical.org/.

Cell 1637. The reported consensus type for this cell from a Japanese donor is A*02:06(A2)-B*51:01(B51)-B*59:01(B59)-C*01:02-C*14:02. Family data from previous Exchange studies revealed the class I haplotypes in this cell to be A*02:06-B*59:01-C*01:02 and A*02:06-B*51:01-C*14:02. Each is observed exclusively in Asian populations, with respective HF = 0.00392 and 0.00747.

This cell is AT, one of the reference cells for B*59:01. It has been examined in the Exchange as extract 444 (2009), and as cells 458 (1983) and 908 (1997). In this present study, A*02:06, B*51:01, B*59:01, C*01:02, and C*14:02 were each reported in complete consensus by labs reporting at high resolution. A*02:06:01:01, B*51:01:01, and C*14:02:01 were each reported by 4 labs, while B*59:01:01 was reported by 5 labs. Good agreement was also observed for the serological assignments, with labs reporting A2 (100%), B51 (100%), and B59 (90%).

Cell 1638. The reported consensus type for this cell from a Chinese donor is A*02:07(A2)-A*11:01(A11)-B*13:01(B13)-B*46:01(B46)-C*01:02-C*03:04. Likely associations present in this cell are A*02:07-B*46:01-C*01:02 and A*11:01-B*13:01-C*03:04, with respective HF = 0.03251 and 0.00929, in Asians. A*02:07, A*11:01, B*13:01, B*46:01, C*01:02, and C*03:04 were each assigned in complete consensus, with 5 labs assigning B*46:01:01; A*02:07:01, A*11:01:01:01, B*13:01:01, C*01:02:01, and C*03:04:01 were each assigned by 4 labs. A2 (100%), A11 (100%), B13 (100%), and B46 (90%) were well assigned by serology.

Cell 1639. The reported consensus type for this cell from a Filipino donor is A*24:02(A24)-A*26:01(A26)-B*15:13(B15)-B*39:01(B39)-C*07:02-C*08:01. Likely associations present are B*39:01-C*07:02 and B*15:13-C*08:01, observed in Asian populations, with respective HF = 0.01194 and 0.00171. The association of B*15:13-C*08:01 was also observed in previous exchange cells, cell 1590 and cell 1131. A*24:02, A*26:01, B*15:13, B*39:01, C*07:02, and C*08:01 were each assigned in complete consensus, with 3 labs assigning A*24:02:01, A*26:01:01:01, B*15:13:01, B*39:01:01, C*07:02:01, and C*08:01:01:01. Good agreement was also achieved among serology labs, as A24, A26, and B39 were assigned in complete consensus. B15 was also reported in complete consensus, with 5 labs reporting B77.

Cell 1640. The reported consensus type for this cell from a Chinese donor is A*02:01(A2)-A*30(A30)-B*13:02(B13)-B*15:02(B15)-C*06:02-C*08:01. One likely association present is A*02:01-B*15:02-C*08:01, observed in Asians, with HF = 0.00081. The other likely association present is A*30-B*13:02-C*06:02. This cell was previously examined in the Exchange as cell 1589 (2017). In the 2017 study, Arnold, Askar, Fischer, Latham, Loewenthal, and Rees noted a new A*30 allele was present. The new allele, now assigned as A*30:109, differs from A*30:01 by a single nucleotide substitution in exon 3 at codon 139 (GCG→ GTG), which results in an amino acid change form alanine to valine. In this present retyping, A*30:109 was reported by 65% (7 labs) of labs reporting at high resolution. As consensus for A*30:109 was < 90%, the subtype for A*30 was not graded. A2 (100%), A30 (75%), B13 (100%), and B75 (B63%) were assigned by serology.

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Table 7. Summary of the 410th Cell Exchange (Cell #1637-1640)

DNA typing

Cell 1637	
17 low/14 high labs - A	%(n)
A*02:06:01:01	29(4)
A*02:06:01G	14(2)
A*02:06	57(8)
A*02	100(17)
17 low/13 high labs - B	%(n)
B*51:01:01:01	15(2)
B*51:01:01	15(2)
B*51:01:01G	8 (1)
B*51:01P	8 (1)
B*51:01	54(7)
B*51	100(17)
17 low/13 high labs - B	%(n)
B*59:01:01:01	8 (1)
B*59:01:01	31(4)
B*59:01	61(8)
B*59	100(17)
16 low/13 high Labs - C	%(n)
C*01:02:01:01	8 (1)
C*01:02:01	15(2)
C*01:02:01G	8 (1)
C*01:02	69(9)
C*01	100(16)
16 low/13 high Labs - C	%(n)
C*14:02:01:01	15(2)
C*14:02:01	15(2)
C*14:02	69(9)
C*14	100(16)

Cell 1638	
17 low/14 high labs - A	%(n)
A*02:07:01	29(4)
A*02:07:01G	7 (1)
A*02:07	64(9)
A*02	100(17)
17 low/13 high labs - A	%(n)
A*11:01:01:01	31(4)
A*11:01:01G	15(2)
A*11:01	54(7)
A*11	100(17)
17 low/13 high labs - B	%(n)
B*13:01:01:01	15(2)
B*13:01:01	15(2)
B*13:01:01G	8 (1)
B*13:01	62(8)
B*13	100(17)
17 low/13 high labs - B	%(n)
B*46:01:01	38(5)
B*46:01	62(8)
B*46	100(17)
16 low/13 high Labs - C	%(n)
C*01:02:01:01	8 (1)
C*01:02:01	23(3)
C*01:02:01G	8 (1)
C*01:02	61(8)
C*01	100(16)
16 low/14 high Labs - C	%(n)
C*03:04:01:02	14(2)
C*03:04:01	14(2)
C*03:04:01G	14(2)
C*03:04	57(8)
C*03(Cw10)	12(2)
C*03	88(14)

Cell 1639	
15 low/11 high labs - A	%(n)
A*24:02:01:01	18(2)
A*24:02:01	9 (1)
A*24:02:01G	9 (1)
A*24:02P	9 (1)
A*24:02	55(6)
A*24	100(15)
15 low/11 high labs - A	%(n)
A*26:01:01:01	21(3)
A*26:01:01G	18(2)
A*26:01	55(6)
A*26	100(15)
15 low/13 high labs - B	%(n)
B*15:13:01	23(3)
B*15:13	77(10)
B*15(B77)	13(2)
B*15	87(13)
15 low/11 high labs - B	%(n)
B*39:01:01:03	18(2)
B*39:01:01	9 (1)
B*39:01	72(8)
B*39	100(15)
14 low/12 high Labs - C	%(n)
C*07:02:01:15	8 (1)
C*07:02:01	17(2)
C*07:02:01G	8 (1)
C*07:04:01G	8 (1)
C*07:02	58(7)
C*07	100(14)
14 low/11 high Labs - C	%(n)
C*08:01:01:01	27(3)
C*08:01:01G	9 (1)
C*08:01	64(7)
C*08	100(14)

Cell 1640	
15 low/11 high labs - A	%(n)
A*02:01:01:01	18(2)
A*02:01:01	9 (1)
A*02:01:01G	18(2)
A*02:01	55(6)
A*02	100(15)
15 low/11 high labs - A	%(n)
A*30:109	64(7)
A*30:01	36(4)
A*30	100(15)
15 low/11 high labs - B	%(n)
B*13:02:01:01	18(2)
B*13:02:01	18(2)
B*13:02	64(7)
B*13	100(15)
15 low/13 high labs - B	%(n)
B*15:02:01:01	15(2)
B*15:02:01	15(2)
B*15:02:01G	8 (1)
B*15:02	62(8)
B*15(B75)	13(2)
B*15	87(13)
14 low/11 high labs - C	%(n)
C*06:02:01:01	18(2)
C*06:02:01	9 (1)
C*06:02:01G	18(2)
C*06:02	55(6)
C*06	100(14)
14 low/11 high labs - C	%(n)
C*08:01:01:01	18(2)
C*08:01:01	9 (1)
C*08:01:01G	18(2)
C*08:01	55(6)
C*08	100(14)

Table 8. Summary of the 410th Cell Exchange (Cell #1637 - 1640)

Serological typing

(Japanese)	
Cell 1637	
(10 Samples Typed)	
A2	100.0%
B51	100.0%
B59	90.0%
Cw1	50.0%
Bw4	100.0%
Others Found	
Bw6	20.0%
Cw14	10.0%
Cw3	10.0%
B8	10.0%
A28	10.0%

(Chinese)	
Cell 1638	
(10 Samples Typed)	
A2	100.0%
A11	90.0%
A11.1	10.0%
	[100.0%]
B13	100.0%
B46	90.0%
Cw1	50.0%
Cw3	40.0%
Cw10	10.0%
	[50.0%]
Bw4	100.0%
Bw6	70.0%
Others Found	

(Filipino)	
Cell 1639	
(8 Samples Typed)	
A24	100.0%
A26	100.0%
B77	62.5%
B15	37.5%
	[100.0%]
B39	100.0%
Cw7	50.0%
Cw8	37.5%
Bw4	100.0%
Bw6	100.0%
Others Found	

(Chinese)	
Cell 1640	
(8 Samples Typed)	
A2	100.0%
A30	75.0%
B13	100.0%
B75	62.5%
B62	12.5%
B15	25.0%
	[100.0%]
Cw6	37.5%
Cw8	37.5%
Bw4	100.0%
Bw6	100.0%
Others Found	
Cw3	12.5%

Table 9. Individual laboratory results for Cell #1637														
	Low Resolution						High Resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		Method	Other Alleles
278	*02	*02	*51	*59	*01	*14	*02:06	*02:01	*51:01	*59:01	*01:02	*14:02		A*02:06
725	*02		*51	*59	*01	*14							SSO	
731	*02		*51	*59	*01	*14	*02:06:01G		*51:01:01G	*59:01:01	*01:02	*14:02	SSP SSO SBT	
745							*02:06:01:01	*02:06:01:04	*51:01:01	*59:01:01	*01:02:01	*14:02:01	SSP SBT NGS	
747	*02	*02	*51	*59	*01	*14	*02:06:01:01	*02:06:01:01	*51:01:01	*59:01:01:01	*01:02:01	*14:02:01:01	SSP SSO NGS	
762							*02:06:01:01	*02:06:01:04	*51:01:01:01	*59:01:01	*01:02	*14:02:01	NGS	
771	*02		*51	*59	*01	*14	*02:06		*51:01	*59:01	*01:02	*14:02	SSO SBT	
774	*02	*02	*51	*59	*01	*14	*02:06						SSP SSO	
3186	*02		*51	*59	*01	*14							SSO	
3545	*02		*51	*59	*01	*14	*02:06		*51:01	*59:01	*01:02	*14:02	SSO SBT	A*02:718 A*02:737 B*51:230 B*51:232 C*01:150 C*01:151 C*01:85 C*01:127 C*01:142 B*51:193 B*51:224
3632	*02		*51	*59	*01	*14	*02:06		*51:01	*59:01	*01:02	*14:02	SSP SSO	
3808	*02		*51	*59	*01	*14							SSP	
4079	*02		*51	*59	*01	*14	*02:06		*51:01	*59:01	*01:02	*14:02	SSP SSO	
4251	*02	*02	*51	*59	*01	*14	*02:06:01G	*02:06:01G	*51:01P	*59:01	*01:02:01G	*14:02	SSO SBT	
5133							*02:06:01:01	*02:06:01:04	*51:01:01:01	*59:01:01	*01:02:01:01	*14:02:01:01	NGS	
5214	*02		*51	*59	*01	*14							SSO	
5462	*02	*02	*51	*59	*01	*14	*02:06	*02:06	*51:01	*59:01	*01:02	*14:02	SSO NGS	
6649	*02		*51	*59									SSO	
8001	*02		*51	*59	*01	*14							SSO	
8043	*02		*51	*59	*01	*14	*02:06		*51:01	*59:01	*01:02	*14:02	SSP SSO	

Table 10. Individual laboratory results for Cell #1638														
	Low Resolution						High Resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		Method	Other Alleles
278	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04		
725	*02	*11	*13	*46	*01	*03							SSO	
731	*02	*11	*13	*46	*01	*03	*02:07:01G	*11:01:01G	*13:01:01G	*46:01:01	*01:02	*03:04	SSP SSO SBT	
745							*02:07:01	*11:01:01:01	*13:01:01	*46:01:01	*01:02:01	*03:04:01	SSP SBT NGS	
747	*02	*11	*13	*46	*01	*03	*02:07:01	*11:01:01:01	*13:01:01	*46:01:01	*01:02:01	*03:04:01:02	SSP SSO NGS	
762							*02:07:01	*11:01:01:01	*13:01:01:01	*46:01:01	*01:02:01	*03:04:01:02	NGS	
771	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04	SSO SBT	
774	*02	*11	*13	*46	*01	*03	*02:07						SSP SSO	A*02:219 A*02:335 A*02:426 A*02:429 A*02:432 A*02:437 A*02:449 A*02:450 A*02:452 A*02:477
3186	*02	*11	*13	*46	*01	*03							SSO	
3545	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04	SSO SBT	C*01:150 C*01:151 C*03:376 C*03:387 A*11:263 A*11:270 A*11:278 A*11:280 C*01:85 C*01:127 C*01:142 C*03:358 C*03:359 B*46:16 B*46:22 B*46:35 B*46:37 B*46:49 B*46:50 B*46:52
3632	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04	SSP SSO	
3808	*02	*11	*13	*46	*01	*03						*03:04:01G	SSP	
4079	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04	SSP SSO	
4251	*02	*11	*13	*46	*01	*03	*02:07	*11:01:01G	*13:01	*46:01	*01:02:01G	*03:04:01G	SSO SBT	
5133							*02:07:01	*11:01:01:01	*13:01:01:01	*46:01:01	*01:02:01:01	*03:04:01	NGS	
5214	*02	*11	*13	*46	*01	*03 (Cw10)							SSO	
5462	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04	SSO NGS	
6649	*02	*11	*13	*46									SSO	
8001	*02	*11	*13	*46	*01	*03 (Cw10)							SSO	
8043	*02	*11	*13	*46	*01	*03	*02:07	*11:01	*13:01	*46:01	*01:02	*03:04	SSP SSO	

Table 11. Individual laboratory results for Cell #1639														
	Low Resolution						High Resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		Method	Other Alleles
278	*24	*26	*15	*39	*07	*08	*24:02	*26:01	*15:13	*39:01	*07:02	*08:01		
725	*24	*26	*15	*39	*07	*08							SSO	
731	*24	*26	*15	*39	*07	*08	*24:02:01G	*26:01:01G	*15:13	*39:01	*07:02	*08:01	SSP SSO SBT	
745							*24:02:01:01	*26:01:01:01	*15:13:01	*39:01:01	*07:02:01	*08:01:01:01	SSP SBT NGS	
747	NT												SSP SSO NGS	
762							*24:02:01:01	*26:01:01:01	*15:13:01	*39:01:01:03	*07:02:01	*08:01:01:01	NGS	
771	*24	*26	*15	*39	*07	*08	*24:02	*26:01	*15:13	*39:01	*07:02	*08:01	SSO SBT	
774	*24	*26	*15	*39	*07	*08			*15:13				SSP SSO	
3186	*24	*26	*15	*39	*07	*08							SSO	
3545	*24	*26	*15	*39	*07	*08	*24:02	*26:01	*15:13	*39:01	*07:02	*08:01	SSO SBT	A*24:402 C*07:612 A*24:352 A*24:353 A*26:117 C*07:50 C*07:349 C*07:566 C*07:592 C*07:594 C*07:595 C*07:596 C*08:22 C*08:99 C*08:102
3632	*24	*26	*15	*39	*07	*08	*24:02	*26:01	*15:13	*39:01	*07:02	*08:01	SSP SSO	
3808	*24	*26	*15	*39	*07	*08			*15:13		*07:04:01G		SSP	
4079	NT												SSP SSO	
4251	*24	*26	*15	*39	*07	*08	*24:02P	*26:01:01G	*15:13	*39:01	*07:02:01G	*08:01:01G	SSO SBT	
5133							*24:02:01	*26:01:01:01	*15:13:01	*39:01:01:03	*07:02:01:15	*08:01:01:01	NGS	
5214	*24	*26	*15 (B77)	*39	*07	*08							SSO	
5462	*24	*26	*15	*39	*07	*08	*24:02	*26:01	*15:13	*39:01	*07:02	*08:01	SSO NGS	
6649	*24	*26	*15	*39									SSO	
8001	*24	*26	*15 (B77)	*39	*07	*08							SSO	
8043	*24	*26	*15	*39	*07	*08	*24:02	*26:01	*15:13	*39:01	*07:02	*08:01	SSP SSO	

Table 12. Individual laboratory results for Cell #1640														
	Low Resolution						High Resolution							
Center	HLA-A		HLA-B		HLA-C		HLA-A		HLA-B		HLA-C		Method	Other Alleles
278	*02	*30	*13	*15	*06	*08	*02:01	*30:01	*13:02	*15:02	*06:02	*08:01		
725	*02	*30	*13	*15	*06	*08							SSO	
731	*02	*30	*13	*15	*06	*08	*02:01:01G	*30:109	*13:02:01	*15:02:01	*06:02:01G	*08:01:01G	SSP SSO SBT	
745							*02:01:01:01	*30:109	*13:02:01	*15:02:01:01	*06:02:01:01	*08:01:01:01	SSP SBT NGS	
747	NT												SSP SSO NGS	
762							*02:01:01:01	*30:109	*13:02:01:01	*15:02:01	*06:02:01:01	*08:01:01:01	NGS	
771	*02	*30	*13	*15	*06	*08	*02:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSO SBT	
774	*02	*30	*13	*15	*06	*08				*15:02			SSP SSO	B*15:214 B*15:302N
3186	*02	*30	*13	*15	*06	*08							SSO	
3545	*02	*30	*13	*15	*06	*08	*02:01	*30:109	*13:02	*15:02	*06:02	*08:01	SSO SBT	A*02:294 A*02:327 A*02:629 A*02:642 A*02:665 A*02:686 A*02:689 A*02:704 C*06:83 C*06:213 C*06:214 C*08:22 C*08:99 C*08:102 A*02:716 A*02:719 A*02:722 A*02:724 A*02:740
3632	*02	*30	*13	*15	*06	*08	*02:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSP SSO	
3808	*02	*30	*13	*15	*06	*08				*15:02:01G			SSP	
4079	NT												SSP SSO	
4251	*02	*30	*13	*15	*06	*08	*02:01:01G	*30:109	*13:02	*15:02	*06:02:01G	*08:01:01G	SSO SBT	
5133							*02:01:01	*30:109	*13:02:01:01	*15:02:01:01	*06:02:01	*08:01:01	NGS	
5214	*02	*30	*13	*15 (B75)	*06	*08							SSO	
5462	*02	*30	*13	*15	*06	*08	*02:01	*30:109	*13:02	*15:02	*06:02	*08:01	SSO NGS	
6649	*02	*30	*13	*15									SSO	
8001	*02	*30	*13	*15 (B75)	*06	*08							SSO	
8043	*02	*30	*13	*15	*06	*08	*02:01	*30:01	*13:02	*15:02	*06:02	*08:01	SSP SSO	

Table 13. Individual laboratory results for Cell #1637-1640 by serology

		Cell No 1637 (Japanese)							Cell No 1638 (Chinese)										Cell No 1639 (Filipino)										Cell No 1640 (Chinese)									
Investigator	Days Old	Viab %	A2	B51	B59	Cw1	Bw4	OTHERS	Viab %	A2	A11	B13	B46	Cw1	Cw3	Bw4	Bw6	OTHERS	Viab %	A24	A26	B15	B39	Cw7	Cw8	Bw4	Bw6	OTHERS	Viab %	A2	A30	B13	B15	Cw6	Cw8	Bw4	Bw6	OTHERS
Cecka, J. Mic	4	>95	+	+	+		+		>95	+	+	+	+			+	+		>95	+	+	B77	+			+	+		>95	+	+	+	B75			+	+	
D'Orsogna , L		80	+	+	+	+	+	Bw6	85	+	+	+	+	+	+	+			85	+	+	B77	+	+	+	+	+		85	+	+	+	B75	+	+	+	+	
Fort, Marylis	4	98	+	+	+		+		97	+	+	+	+			+	+		NT										NT									
Latham, Katy	4	100	+	+	+		+		100	+	+	+	+			+	+		100	+	+	B77	+			+	+		100	+	+	+	B75			+	+	
Loewenthal ,		80	+	+	+	+	+	Bw6	85	+	+	+	+	+	+	+	+		75	+	+	B77	+	+	+	+	+		80	+		+	B75	+	+	+	+	
Permpikul, Ve	7	90	+	+	+		+		90	+	A11.1	+	+			+	+		90	+	+	B77	+			+	+		90	+	+	+	B75			+	+	
Renac, Virgin	4	100	+	+	+		+		100	+	+	+	+			+	+		100	+	+	+	+			+	+		100	+		+	+			+	+	
Shai, Isaac	10	88%	+	+	B8	+	+	A28, Cw3	90%	+	+	+		+	+	+			92%	+	+	+	+	+	+	+	+		90%	+	+	+	B62	+	+	+	+	Cw3
Vidan-Jeras,	8	95	+	+	+	+	+		100	+	+	+	+	+	+	+			95	+	+	+	+	+		+	+		100	+	+	+	+			+	+	
Villard, Jean		95	+	+	+	+	+	Cw14	98	+	+	+	+	+	Cw10	+	+																					