

The Need for Speed: Strategies for Managing the Urgent Search

Presenter(s) –

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Disclosures

The following faculty and planning committee staff have no financial disclosures:

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Learning objectives

At the conclusion of this session, attendees will be able to:

- Explain the importance of expediting the timeline to transplant for urgent patients
- Identify strategies that can reduce the donor search time for urgent patients
- Examine how people in different roles at a transplant center can contribute to an urgent search timeline



Memorial Sloan Kettering
Cancer Center

The Need for Speed: MSKCC Perspective

Juliet Barker, MBBS

Attending Physician & Director,

Cord Blood Transplant Program

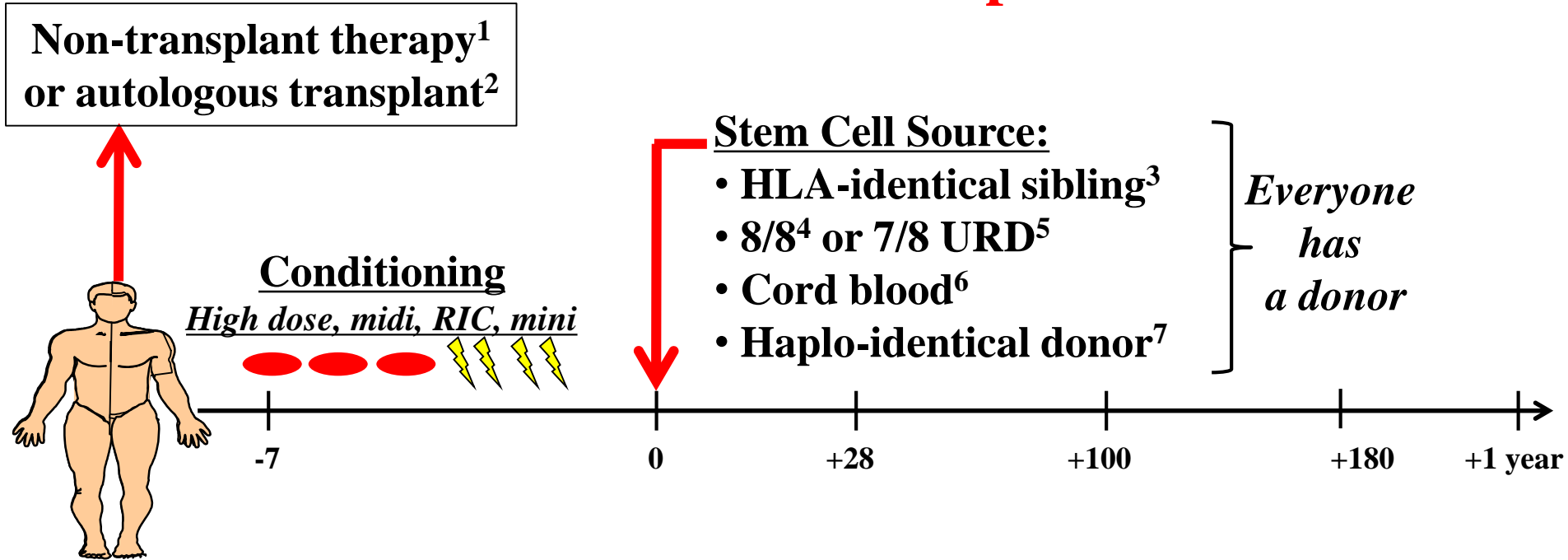
Adult Bone Marrow Transplant Service

Memorial Sloan Kettering Cancer Center

Professor of Medicine

Weill Cornell Medical College

Current Landscape



Patient Factors: Older (up to ~75 years) & more co-morbidities.

New therapies to get to transplant *or* be combined with transplant.

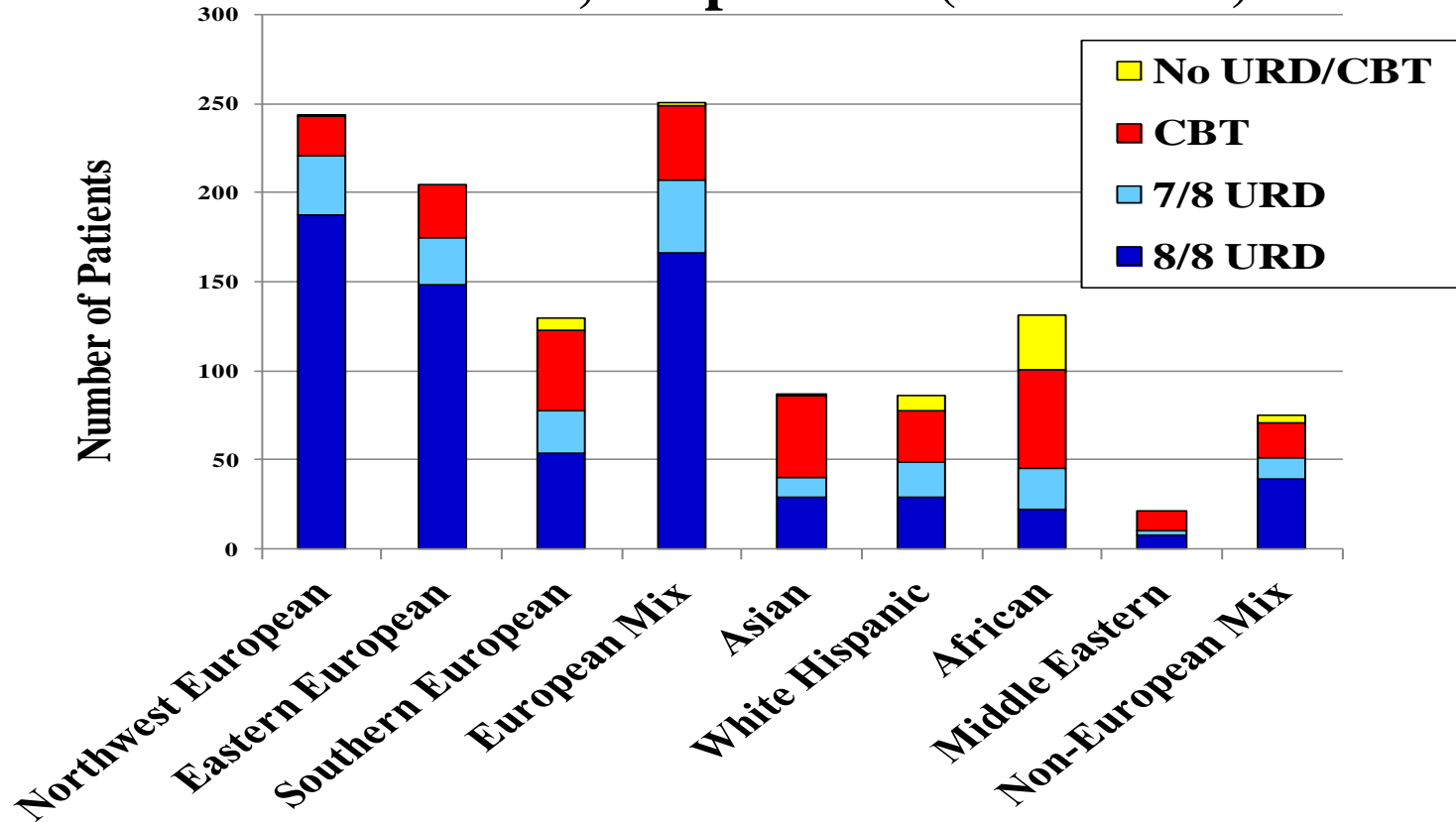
Increasingly complicated: 7 treatment alternatives. These factors can impact patient triage & urgency. Further exacerbated by late referrals.

*Q: Is there persistent racial disparity
in access
to adult unrelated donors?*

A: Yes.

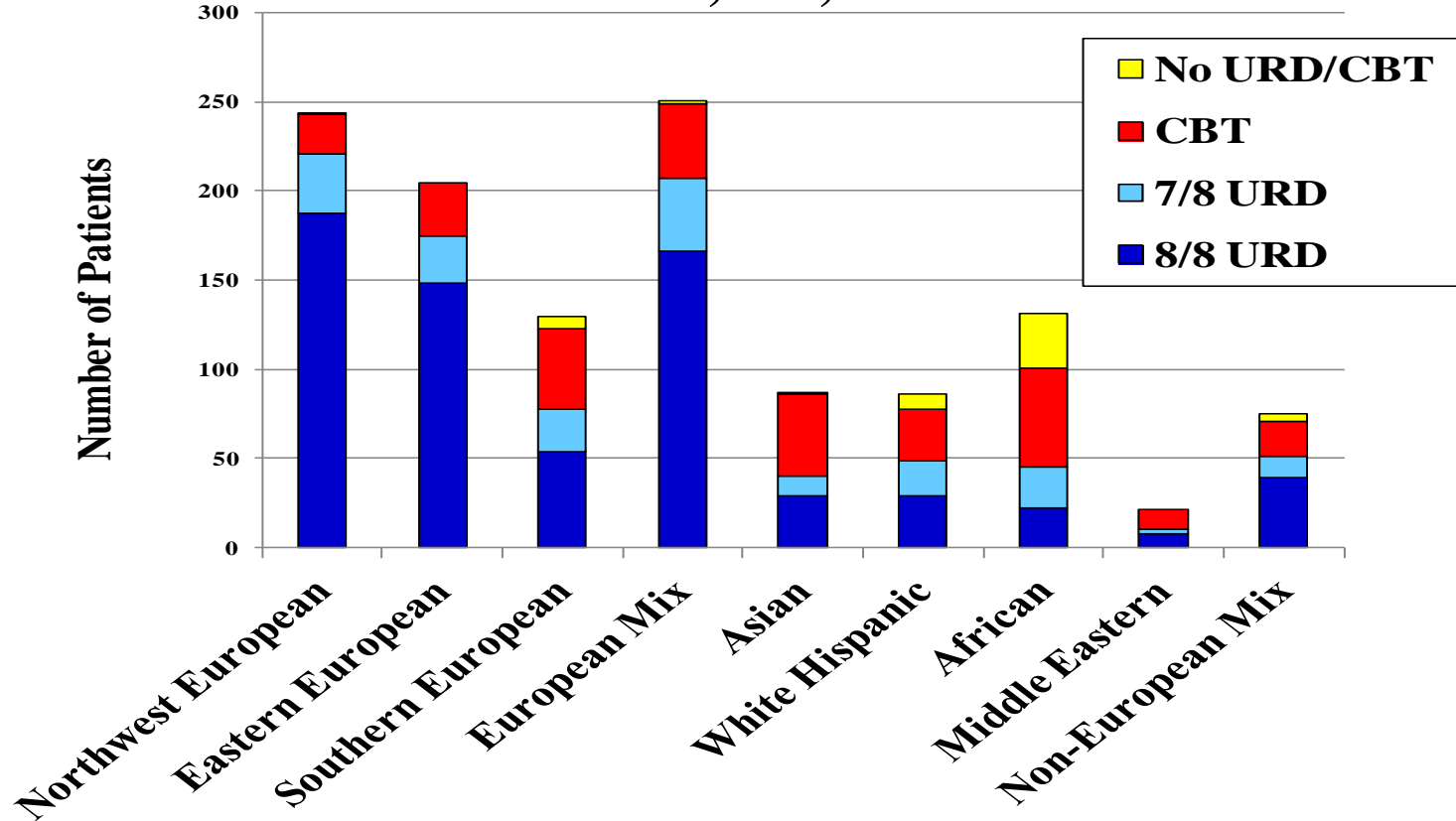
MSK: 7-8/8 URD-T *or* CBT *or* No URD/ CB

N = 1,230 patients (2005-2017)



MSK: 7-8/8 URD-T *or* CBT *or* No URD/ CB

N = 1,230, 2005-2017

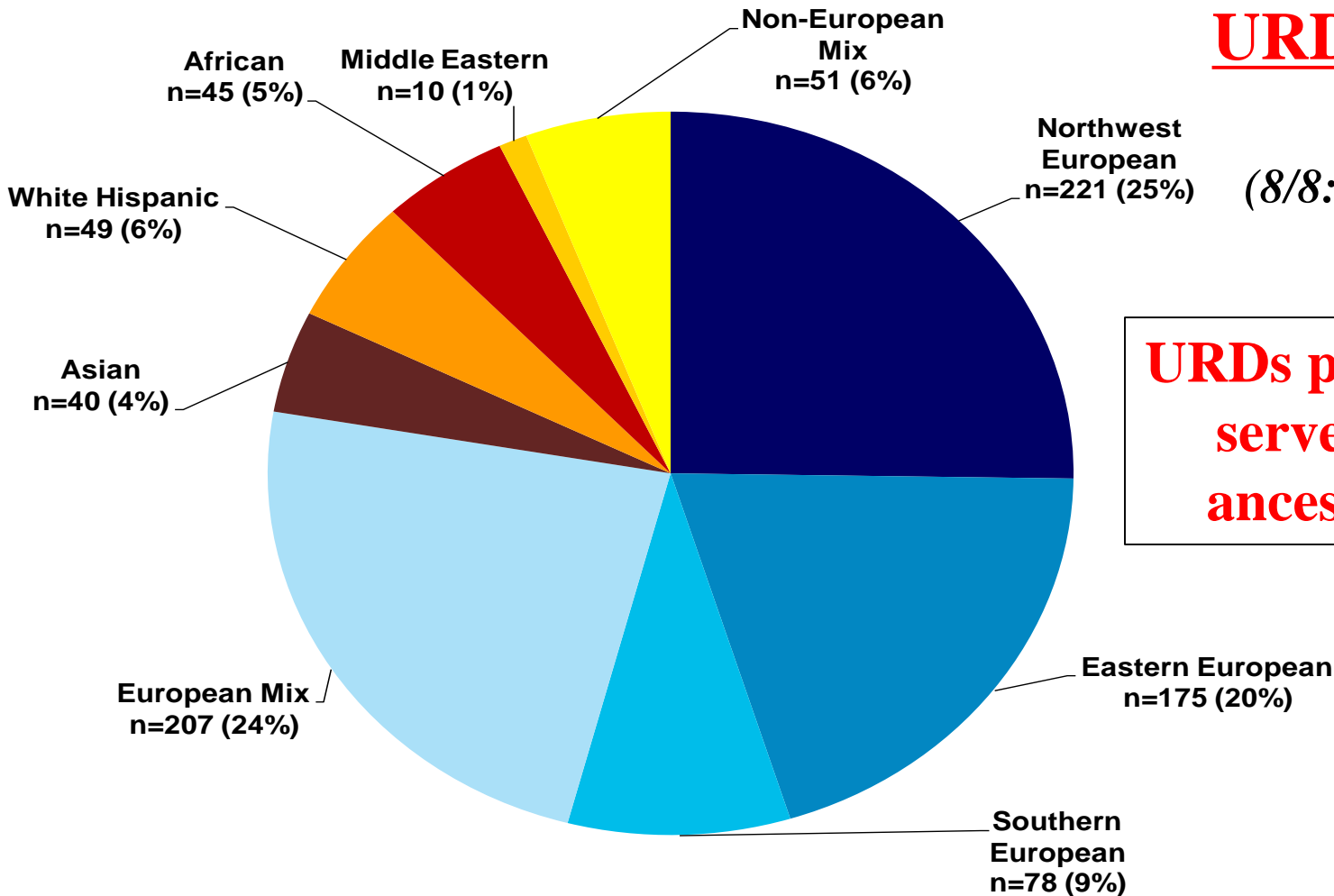


Tip: make sure you take detailed ancestry history

URD Transplants

(n = 876)

(8/8: 683 & 7/8: 193)

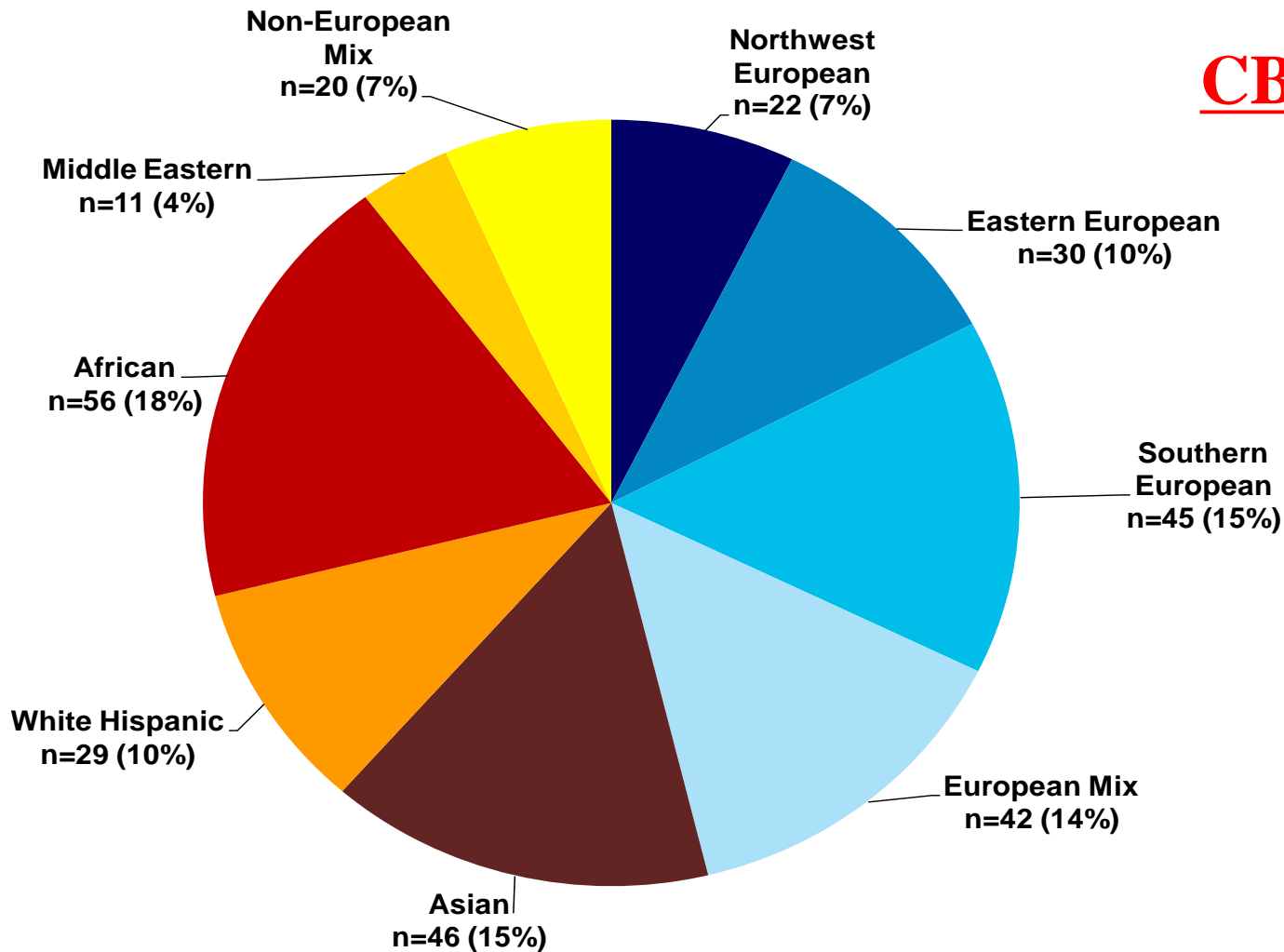


**URDs predominantly
serve European
ancestry patients**

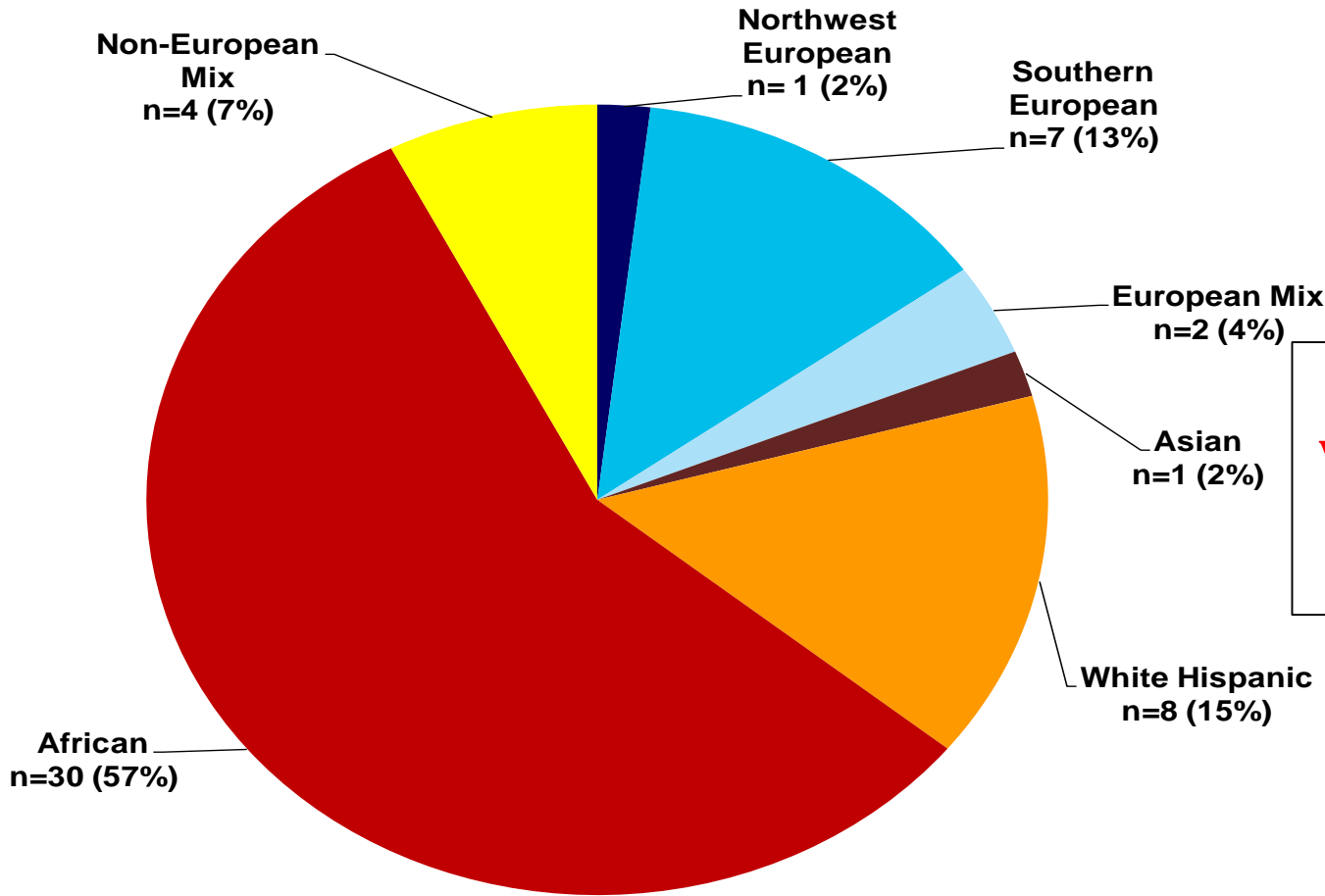
CB Transplants

(n = 301)

**CB extends
transplant
access to all**



No 7-8/8 URD
or CB graft
(n = 53)



**Majority of patients
without 7-8/8 URD or
CB grafts are non-
European**

Recent Access to 8/8 URD Transplants by Patient Ancestry

(N = 531, 4/2013-3/2017)

<u>Ancestry Group</u>	<u>N (%)</u> <u>8/8 URD</u>
Europeans (not Southern) N = 302	245/ 302 (81%)
Southern Europeans N = 62	27/ 62 (44%)
Non-European (non-African) N = 116	57/ 116 (49%)
African N = 51	10/ 51 (20%)

As compared to earlier time period (10/2005 – 3/2013, N = 699) racial disparity has not improved.

Of African patients, 47% received CBT & 20% had no graft.

*Q: If 8/8 URD remains the priority
(if no HLA-identical sibling),
&
many pts will not have an 8/8 URD,
can a matched URD be predicted
at search initiation (i.e. very rapidly)?*

A: Yes

Validation of an algorithm to predict the likelihood of an 8/8 HLA-matched URD at search initiation

AIM: validate accuracy of:

- 1) NMDP HapLogic™ match predictions,
- 2) a resultant MSK Search Prognosis (SP) pt categorization that can predict 8/8 HLA-matched URD(s) likelihood at search initiation.

METHOD:

- 1) Upfront NMDP search results were saved (donor match predictions & pt SP category).
- 2) Haplogic predictions & pt SP group were then correlated with donor CT results & search outcome.

RESULTS: 1,530 donors tested for 830 patients.

*Davis et al,
2017 submitted*

Validation of Search Prognosis of Obtaining 8/8 URD (n = 830 Pts)

<u>Prediction Category for 8/8 URD</u>	<u>N Pts</u>	<u>N (%) with Identified 8/8 URD</u>	<u>SPC Category p-value</u>	<u>Pt Ancestry p-value</u>	<u>Median # 8/8 URDs Identified</u>	<u>N who Underwent Allograft</u>	<u>N (%) BMT with 8/8 URD</u>	<u>SPC Category p-value</u>	<u>Pt Ancestry p-value</u>
Total:	830	499 (60%)							
<u>Very Good</u>	217								
European	188								
Non-European	28								
<u>Good</u>	104								
European	86								
Non-European	18								
<u>Fair</u>	178								
European	119								
Non-European	58								
<u>Poor</u>	33								
European	19								
Non-European	14								
<u>Very Poor</u>	153								
European	89								
Non-European	63								
<u>Futile</u>	145								
European	57								
Non-European	87								

Overall, 60% of pts had one or more 8/8 URD(s) identified.

Validation of Search Prognosis for 8/8 URD (n = 830)

<u>Prediction Category For 8/8 URD</u>	<u>N Pts</u>	<u>N (%) with Identified 8/8 URD</u>	<u>SPC Category p-value</u>	<u>Pt Ancestry p-value</u>	<u>Median # 8/8 URDs Identified</u>	<u>N who Underwent Allograft</u>	<u>N (%) BMT with 8/8 URD</u>	<u>SPC Category p-value</u>	<u>Pt Ancestry p-value</u>
Total:	830	499 (60%)	--	--	2	443	286 (65%)	--	--
<u>Very Good</u>	217	217 (100%)	< 0.001	--	4	137	135 (99%)	< 0.001	--
European	188	188 (100%)	--	N/A	4	119	118 (99%)	--	0.235
Non-European	28	28 (100%)	--		3	17	16 (94%)	--	
<u>Good</u>	104	104 (100%)	< 0.001	--	4	67	64 (96%)	< 0.001	--
European	86	86 (100%)	--	N/A	4	55	53 (96%)	--	0.452
Non-European	18	18 (100%)	--		3	12	11 (92%)	---	
<u>Fair</u>	178	136 (76%)	< 0.001	--	2	87	69 (79%)	< 0.001	--
European	119	97 (82%)	--	0.024	2	60	53 (88%)	--	0.018
Non-European	58	38 (66%)	--		1	26	11 (42%)	--	
<u>Poor</u>	33	16 (48%)	< 0.001	--	0	17	10 (59%)	< 0.001	--
European	19	14 (74%)	--	0.001	1	12	10 (83%)	--	0.003
Non-European	14	2 (14%)	--		0	5	0 (0%)	--	
<u>Very Poor</u>	153	18 (12%)	< 0.001	--	0	71	7 (10%)	< 0.001	--
European	89	15 (17%)	--	0.024	0	50	7 (14%)	--	0.180
Non-European	63	3 (5%)	--		0	20	0 (0%)	--	
<u>Futile</u>	145	8 (6%)	< 0.001	--	0	64	1 (2%)	< 0.001	--
European	57	6 (11%)	--	0.058	0	30	1 (3%)	--	0.476
Non-European	87	2 (2%)	--		0	33	0 (0%)	--	

All pts in Very Good & Good categories (n = 321) had an 8/8 URD identified, & of those transplanted almost all received an 8/8 URD.

Validation of Search Prognosis for 8/8 (n = 830)

<u>Prediction Category For 8/8 URD</u>	<u>N Pts</u>	<u>N (%) with Identified 8/8 URD</u>	<u>SPC Category p-value</u>	<u>Pt Ancestry p-value</u>	<u>Median # 8/8 URDs Identified</u>	<u>N who Underwent Allograft</u>	<u>N (%) BMT with 8/8 URD</u>	<u>SPC Category p-value</u>	<u>Pt Ancestry p-value</u>
Total:	830	499 (60%)	--	--	2	443	286 (65%)	--	--
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European	57	6 (11%)	--	0.058	0	30	1 (3%)	--	0.476
Non-European	87	2 (2%)	--		0	33	0 (0%)	--	

76% Fair & 48% Poor pts (n = 221) had 8/8 URD but much worse in non-European pts. Very Poor & Futile (n = 298): highly predictive of no 8/8 URD.

***Q: Is haplo-identical transplants
always the answer for pts with
hematologic malignancies if no URD?
(Consider access to donors, TRM & relapse risks).***

A. No.

*Q: Does everyone have a
haplo-identical donor?*

A: No.



ELSEVIER

Biology of Blood and Marrow Transplantation

journal homepage: www.bbmt.org

ASBMT
American Society for Blood and Marrow Transplantation

Clinical Research: Alternative Donors

Prospective Evaluation of Unrelated Donor Cord Blood and Haploidentical Donor Access Reveals Graft Availability Varies by Patient Ancestry: Practical Implications for Donor Selection



CrossMark

Satyajit Kosuri¹, Tara Wolff², Sean M. Devlin³, Courtney Byam⁴, Christopher M. Mazis¹, Kristine Naputo¹, Eric Davis³, Jennifer Paulson³, Melissa Nhaissi³, Deborah S. Wells³, Parastoo Dahi^{1,5}, Sergio A. Giralt^{1,5}, Ann Jakubowski^{1,5}, Miguel-Angel Perales^{1,5}, Brian C. Shaffer^{1,5}, Andromachi Scaradavou⁴, Doris M. Ponce^{1,5}, Juliet N. Barker^{1,5,*}

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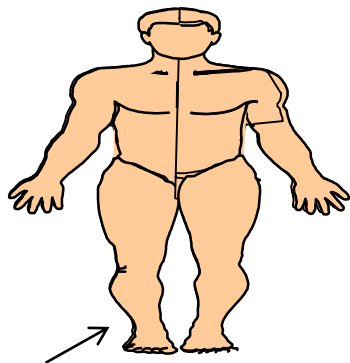
⁴ Bone Marrow Transplantation Service, Department of Pediatrics, Memorial Sloan Kettering Cancer Center, New York, New York

⁵ Department of Medicine, Weill Cornell Medical College, New York, New York

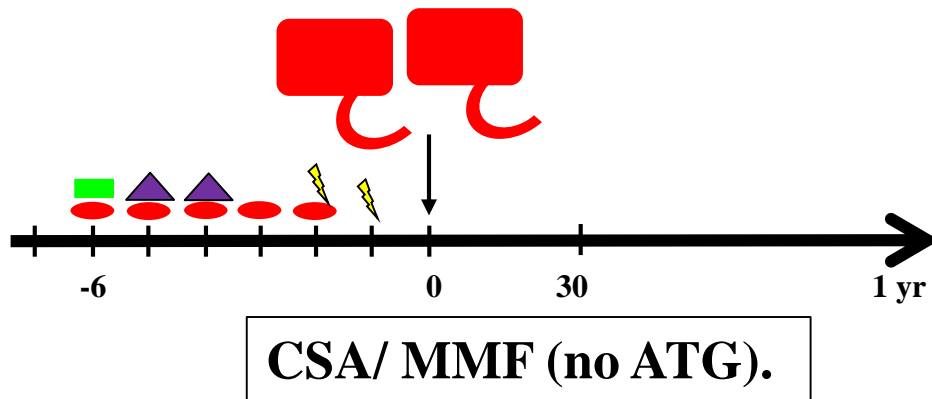
*Q: Are the outcomes of CBT improving,
&
in some patients could
CBT be the best type of transplant
in hematologic malignancies?*

A: Yes

MSKCC Midi Prep:
Cy 50/ Flu 150/ Thio 10/ TBI 400
+ Double Unit CBT



- Adults ≤ 65 years.
- High risk heme malignancies.



Politikos, ASH 2017

Cy/ Flu/ Thio/ TBI 400 Midi dCBT (n = 139)

Characteristic	Value
Median Age (range)	51 years (23-65)
Median Weight (range)	83 kg (range 49-136)
Ancestry (%)	
European	65 (45%)
Non-European	74 (53%)
CMV seropositive (%)	84 (60%)
N (%) Diagnosis	
Acute leukemia*	102 (73%)
MDS/ MPD*	22 (16%)
Lymphoma (B-cell & HL)	15 (11%)
Median (range) HLA-match	5/8 (2-8)
Median (range) CD34+ cell dose (infused $10^5/\text{kg/unit}$)	1.0 (0.2-8.0)
Supplement with haplo-CD34+ cells	54 (39%)

Intermediate Intensity dCBT (n = 139)

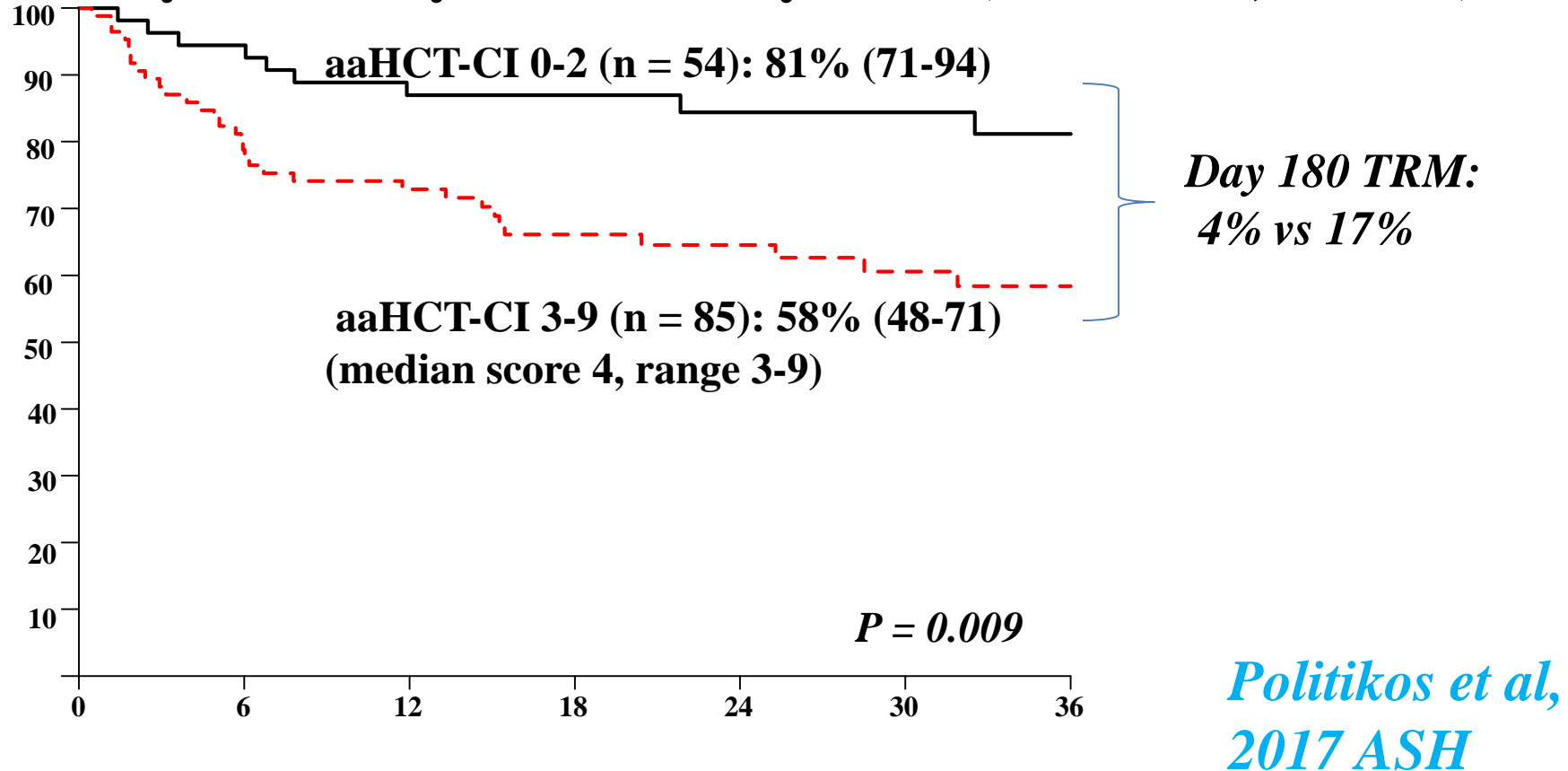
(median survivor follow-up of 2.7 years)

<u>Outcome</u>	<u>Value</u>
Day 45 neutrophil engraftment	96%
Day 180 grade III-IV acute GVHD	21%
1 yr chronic GVHD	8%
Day 180 TRM	12%
3 yr relapse	11%
3-yr OS	71%
3-yr PFS	67%

Politikos et al, ASH 2017

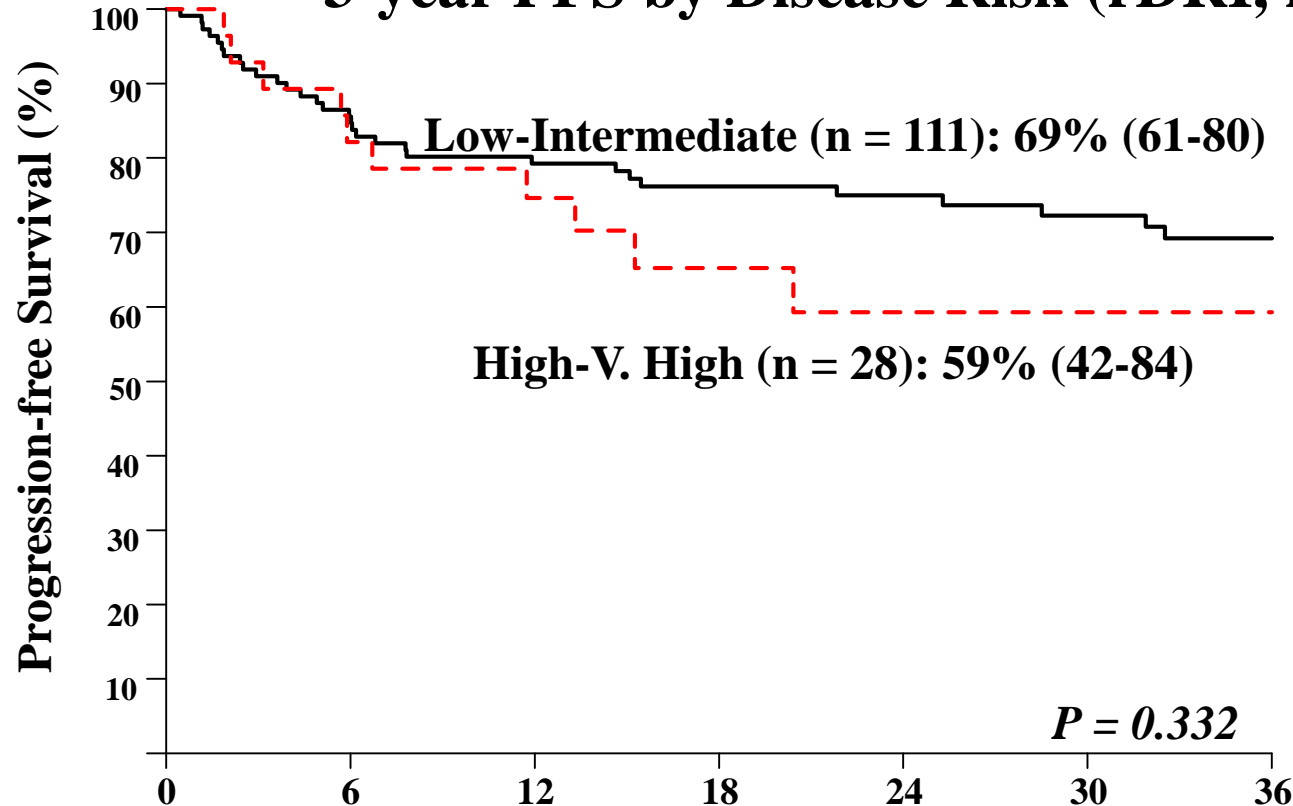
MSKCC Adults Intermediate Intensity dCBT:

3-year PFS by Co-morbidity Score (aaHCT-CI, n = 139)



MSKCC Adults Intermediate Intensity dCBT:

3-year PFS by Disease Risk (rDRI, n = 139)



*Politikos et al,
2017 ASH*

MSKCC Adult dCBT for Hematologic Malignancies

Variable	3-yr PFS
<u>rDisease Risk Index:</u>	
Low - Intermediate, N = 111	69%
High - Very High, N = 28	59%
<u>aaHCT-CI:</u>	
0-2, N = 54	81% (p = 0.009)
3-9, N = 85	58%
<u>Patient age:</u>	
< 51 yrs, N = 69	70%
>= 51 yrs, N = 70	65%
<u>Period of CBT:</u>	
Recent: 2014-2016, N = 75	74%
Earlier yrs, N = 64	63%

**Recent 3-year
progression-free
survival: 74%.**

***Q: Relevant to all –
including urgent transplants?***

A: Yes - as CB rapidly available.

Optimal Practices in Unrelated Donor Cord Blood Transplantation for Hematologic Malignancies

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On behalf of NMDP & ASBMT CB SIG

Conclusions

- Transplant landscape is getting more complicated & urgent patients are frequent or a previously non-urgent patient can become urgent: rapid assessment of patient status & ongoing coordinators-MDs communication is critical.
- Racial disparity in access to 8/8 URD will not be resolved by increased registry size.
- Searches that will not result in an 8/8 URD can be immediately recognized -this information should be acted upon at search initiation: no prolonged searches or drives.
- CB extends access, outcomes are good, & CB is rapidly available.

The Need for Speed: Strategies for Managing the Urgent Search from a Transplant Center Coordinator Perspective

**Eric Davis, MPH, CHTC
Program Manager
Unrelated Donor Search Program
Bone Marrow Transplant Service
Memorial Sloan Kettering Cancer Center**



Memorial Sloan Kettering
Cancer Center



Memorial Sloan Kettering
Cancer Center

Mechanism to Facilitate Efficiency & Speed

Structured workflow as follows:

- 1) Preliminary Search Results Template**
 - Including Unrelated Donor (URD) Search Prognosis Category**
- 2) Formal Search Order**
- 3) Formal Search Strategy Confirmation**

1. Preliminary Search Results Template

Patient Name / MRN		
Age		
Diagnosis		
Ancestry*		
URD Search Prognosis Category**		
Prediction of Search Result – URD	8/8	
	7/8	
	≤ 6/8	
	International	
Prediction of Search Result – Cords		
Additional Comments		

*Ancestry details may impact match predictions **URD Search Category reflects likelihood of identifying an 8/8 URD.

**Preliminary Search Results consistently communicated to MD,
including an URD Search Prognosis Category**

1a. Search Prognosis Categorization

- N of potential 8/8 (HLA-A,B,C,DRB1) URDs* on preliminary upfront NMDP search & *the corresponding % chance of each URD being an 8/8 match* based on NMDP HapLogic™ predictions.

Very Good	≥ 20 8/8 potential donors with a ≥85% chance likelihood of matching at 8 alleles
Good	5 – 19 8/8 potential donors with a ≥85% chance likelihood of matching at 8 alleles
	≥ 20 8/8 potential donors with a ≥70% chance likelihood of matching at 8 alleles
Fair	1-4 8/8 potential donors with ≥85% chance likelihood of matching at 8 alleles
	1-19 8/8 potential donors with ≥70% chance likelihood of matching at 8 alleles
	≥ 5 8/8 potential donors with a 40 – 69% chance likelihood of matching at 8 alleles
Poor	1-4 8/8 potential donors with 40 – 69% chance likelihood of matching at 8 alleles
	≥ 1 8/8 potential donor with 25 - 39% chance likelihood of matching at 8 alleles
Very Poor	≥ 1 8/8 potential donor with ≤ 24% chance likelihood of matching at 8 alleles
Futile	0 8/8 potential donors

2. Formal Search Order

Diagnosis: <input type="text"/>			Disease Status: <input type="text"/>		
Height/Weight: Height (cm): <input type="text" value="150"/> Weight (kg): <input type="text" value="100"/> BSA: <input type="text" value="1.92"/> 11/09/2015 10:00 11/09/2015 10:00			Weight (kg) <input type="text"/>		
			Weight Note The patient was not physically weighed at MSKCC. This weight was provided to MSKCC at the time of the patient's referral.		
Relevant Results: <input type="text"/>					
Patient High Resolution HLA Typing: <input type="text"/>		Transplant Urgency: <input type="text"/>		CMV Status: <input type="text"/>	
Consented to BMT/Leukemia Protocol: <input type="text"/>		Ancestry (Broad Race Category): <input type="text"/>		ABO/RH: <input type="text"/>	
Sibling HLA Typing Complete: <input type="text"/>		History of Previous Transplant <input type="text"/>		Aware of Formal Search Request: <input type="text"/>	
Candidate for Cord Transplant: <input type="text"/>	Candidate for 7/8 URD: <input type="text"/>	Candidate for Haplo: <input type="text"/>	Candidate for Auto: <input type="text"/>		
Priority HSC Source if No 8/8 URD: <input type="text"/>					
Significant Comorbidities: <input type="text"/>					
Likely transplant protocol(s): <input type="text"/>					
Time/Priority: Routine		Requested For: 02/12/2016			

**MD enters Formal Search Order,
including transplant urgency and graft source candidacy**

3. Formal Search Strategy Confirmation

Patient Name / MRN		
Age		
Diagnosis		
BMT Admission Timeframe		
Candidate for 7/8 URD transplant (yes/no)		
Candidate for Cord transplant (yes/no)		
Candidate for Haplo (yes/no)		
Candidate for Auto (yes/no)		
Priority HSC if no 8/8 URD in required timeframe		
Preliminary Search Result – URD	8/8	
	7/8	
	≤ 6/8	
	International	
Preliminary Search Results – Cords		
Search Strategy		
Coordinator Concern		
Clinical Team Follow-up		

**Formal Search Strategy communicated to MD at search onset,
based on prelim results and Formal Search Order**

Patient Examples

Patient #1:

Prelim Search Results – Very Good search

Patient Name / MRN	Patient #1	
Age	53	
Diagnosis	AML	
Ancestry*	Eastern European	
URD Search Prognosis Category**	Very Good	
Prediction of Search Result – URD	8/8	21 likely 8/8s and ~50 additional donors with a 10% chance of typing out as 8/8 matched.
	7/8	Multiple likely 7/8 donor options.
	≤ 6/8	N/A
	International	61 additional potential 8/8 donors can be screened.
Prediction of Search Result – Cords	Multiple cord options of suitable match and size.	
Additional Comments	N/A	

*Ancestry details may impact match predictions **URD Search Category reflects likelihood of identifying an 8/8 URD.

Patient #1: Formal Search Order

Diagnosis: AML

Disease Status: Relapse

Patient High Resolution HLA Typing: Completed via MSK lab (ARC)

Transplant Urgency: Very Urgent: Admission < 4 weeks

CMV Status: Negative

ABO/RH: A Pos

Sibling HLA Typing Complete: Yes

Aware of Formal Search Request: Yes

Candidate for Cord Transplant: No

Candidate for 7/8 URD: No

Candidate for Haplo: No

Candidate for Auto: No

Priority HSC Source if No 8/8 URD: To Be Determined

Very Urgent (<4 weeks) – Candidate for only 8/8 URD

Patient #1: Formal Search Strategy Confirmation

Patient Name / MRN	Patient #1	
Age	53	
Diagnosis	AML	
BMT Admission Timeframe	<4 weeks	
Candidate for 7/8 URD transplant	No	
Candidate for Cord transplant	No	
Candidate for Haplo	No	
Candidate for Auto	No	
Priority HSC if no 8/8 URD in required timeframe	TBD	
Preliminary Search Result – URD	8/8	21 likely 8/8s and ~50 additional donors with a 10% chance of typing out as 8/8 matched.
	7/8	Multiple likely 7/8 donor options.
	≤ 6/8	N/A
	International	61 additional potential 8/8 donors can be screened.
Preliminary Search Results – Cords	Multiple cord options of suitable match and size.	
Search Strategy	Will pursue 8/8 donor options only.	
Coordinator Concern	Timing and finding a KIR advantageous donor.	
Clinical Team Follow-up	N/A	

Patient #1: Immediate 8/8 URD Workups

URDs with high resolution typing at HLA-A,B,C,DRB1,DQB1 in the NMDP system – 2 activated directly off the registry for workup

Donor #1: Likely 11/12 (DP), DP permissive, 20M, international

Donor #2: Likely 11/12 (DP), DP permissive, 39M, international

Admit: 9/28 (Th)

Collect PBSC: 10/2 (M) & 10/3 (T)

BMT: 10/4 (W)

Simultaneously pursuit of multiple likely 8/8 donor options

Patient #1: End Result

- **2 weeks after Formal Search Order, both 8/8 URDs confirmed for collection dates**
- **During workup:**
 - Donor #1 = KIR advantageous**
 - Donor #2 = KIR disadvantageous**
- **5 weeks after Formal Search Order, patient transplanted with Donor #1**

Patient #2:

Prelim Search Results – Fair search

Patient Name / MRN	Patient #2	
Age	39	
Diagnosis	MDS	
Ancestry*	Unknown	
URD Search Prognosis Category**	Fair	
Prediction of Search Result – URD	8/8	3 likely 8/8 donor options.
	7/8	>50 likely 7/8 donor options.
	≤ 6/8	N/A
	International	5 additional potential 8/8 donor options at low resolution that are likely to be 7/8 or less upon further typing.
Prediction of Search Result – Cords	Multiple cord options of suitable match and size.	
Additional Comments	N/A	

*Ancestry details may impact match predictions **URD Search Category reflects likelihood of identifying an 8/8 URD.

Patient #2: Formal Search Order

Diagnosis: MDS

Disease Status: Complete Remission

Patient High Resolution HLA Typing: Completed via MSK lab (ARC)

Transplant Urgency: Very Urgent: Admission < 4 weeks

CMV Status: Not Drawn Yet

ABO/RH: O neg

Sibling HLA Typing Complete: No siblings

Aware of Formal Search Request: Yes

Candidate for Cord Transplant: Yes

Candidate for 7/8 URD: No

Candidate for Haplo: No

Candidate for Auto: No

Priority HSC Source if No 8/8 URD: Cords

Very Urgent (<4 weeks) – Cords preferred if no 8/8 URD

Patient #2: Formal Search Strategy Confirmation

Patient Name / MRN	Patient #2	
Age	39	
Diagnosis	MDS	
BMT Admission Timeframe	<4 weeks	
Candidate for 7/8 URD transplant	No	
Candidate for Cord transplant	Yes	
Candidate for Haplo	No	
Candidate for Auto	No	
Priority HSC if no 8/8 URD in required timeframe	Cords	
Preliminary Search Result – URD	8/8	3 likely 8/8 donor options.
	7/8	Multiple likely 7/8 donor options.
	≤ 6/8	N/A
	International	5 additional potential 8/8 donor options can be screened.
Preliminary Search Results – Cords	Multiple cord options of suitable match and size.	
Search Strategy	Will pursue 8/8 donor options and <u>cords as a backup plan.</u>	
Coordinator Concern	N/A	
Clinical Team Follow-up	N/A	

Patient #2: Cord Search to CB MDs

CBU ID	Cord Blood Bank	~ match / 6	~ match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	International #1 FACT2005	4/6	5/8-A,B-homoz,C-homoz	3.93	233	25	06/23/10	Fully typed – could HOLD
2	International #2 Non-FACT	4/6	~6/8-A,DR	4.00	217	25	10/07/14	
3	International #3 FACT2005	5/6	7/8-DR,DQ	2.37	203	25	09/09/15	Fully typed – could HOLD
4	International #4 FACT2014	5/6	~6/8-B,C	1.59	176	20	05/01/13	
5	Domestic #1 FACT2009	4/6	~6/8-A,DR	2.30	167	51.7	09/01/11	
6	International #2 Non-FACT	5/6	7/8-A-homoz	1.82	113	25	08/08/13	Fully typed – could HOLD
7	International #5 Non-FACT	5/6	6/8-B,C	2.14	107	25mL	07/14/14	

Patient #2: Cord Selections by CB MDs

CBU ID	Cord Blood Bank	~ match / 6	~ match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	International #1 FACT2005	4/6	5/8-A,B-homoz,C-homoz	3.93	233	25	06/23/10	Fully typed – HOLD
2	International #2 Non-FACT	4/6	~6/8-A,DR	4.00	217	25	10/07/14	Type
3	International #3 FACT2005	5/6	7/8-DR,DQ	2.37	203	25	09/09/15	Fully typed – HOLD
4	International #4 FACT2014	5/6	~6/8-B,C	1.59	176	20	05/01/13	Get More Info
5	Domestic #1 FACT2009	4/6	~6/8-A,DR	2.30	167	51.7	09/01/11	Type
6	International #2 Non-FACT	5/6	7/8-A-homoz	1.82	113	25	08/08/13	Fully typed – HOLD
7	International #5 Non-FACT	5/6	6/8-B,C	2.14	107	25mL	07/14/14	

Patient #2: Graft Selection by CB MDs

CBU ID	Cord Blood Bank	Final match / 6	Final match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	International #1 FACT2005	4/6	5/8-A,B-homoz,C-homoz	3.93	233	25	06/23/10	Unit 1A
2	International #2 Non-FACT	4/6	6/8-A,DR	4.00	217	25	10/07/14	Unit 1B
5	Domestic #1 FACT2009	4/6	6/8-A,DR	2.30	167	51.7	09/01/11	BACKUP

Patient #2: End Result

- **Cords pursued as backup**
- **2 8/8 URDs identified & activated for urgent workup**
 - **Primary donor NOT cleared, backup donor cleared**
- **5 weeks after Formal Search Order, transplanted with 8/8 URD**

Patient #3:

Prelim Search Results – Fair search

Patient Name / MRN	Patient #3	
Age	68	
Diagnosis	ALL	
Ancestry*	Unknown	
URD Search Prognosis Category**	Fair	
Prediction of Search Result – URD	8/8	1 likely 8/8 donor option
	7/8	~20 likely 7/8 (9/10 or 8/10) matches
	≤ 6/8	N/A
	International	~3 potential 8/8s and could be typed, but very likely mismatched.
Prediction of Search Result – Cords	Multiple cord options of suitable match and size.	
Additional Comments	N/A	

*Ancestry details may impact match predictions **URD Search Category reflects likelihood of identifying an 8/8 URD.

Patient #3: Formal Search Order

Diagnosis: ALL

Disease Status: Relapse

Patient High Resolution HLA Typing: Completed via MSK lab (ARC)

Transplant Urgency: Urgent: Admission 4 - 6 weeks

CMV Status: Drawn - results pending

ABO/RH: B Pos

Sibling HLA Typing Complete: Yes

Aware of Formal Search Request: Yes

Candidate for Cord Transplant: No

Candidate for 7/8 URD: No

Candidate for Haplo: Yes

Candidate for Auto: Yes

Priority HSC Source if No 8/8 URD: Haplo

Urgent (4 - 6 weeks) – Haplo preferred if no 8/8 URD

Patient #3: Formal Search Strategy Confirmation

Patient Name / MRN	Patient #3	
Age	68	
Diagnosis	ALL	
BMT Admission Timeframe	4-6 weeks	
Candidate for 7/8 URD transplant	No	
Candidate for Cord transplant	No	
Candidate for Haplo	Yes	
Candidate for Auto	Yes	
Priority HSC if no 8/8 URD in required timeframe	Haplo	
Preliminary Search Result – URD	8/8	1 likely 8/8 donor option
	7/8	Multiple likely 7/8 donor options
	≤ 6/8	N/A
	International	~3 potential 8/8s and could be typed, but very likely mismatched
Preliminary Search Results – Cords	Multiple cord options of suitable match and size.	
Search Strategy	Will pursue 8/8 donor options only.	
Coordinator Concern	Only 1 likely 8/8 donor option.	
Clinical Team Follow-up	N/A	

Patient #3: End Result

- **One 8/8 URD identified:
9/10 (DQ), 46M, CMVneg, 62kg, A+**
- **Pursued 8/8 URD for workup and related haplo as backup plan**
- **8/8 URD unavailable in timeframe needed –
transplanted with haplo 7 weeks after Formal
Search Order**

Patient #4:

Prelim Search Results – Very Poor search

Patient Name / MRN	Patient #4	
Age	52	
Diagnosis	ALL	
Ancestry*	White Hispanic	
URD Search Prognosis Category**	Very Poor	
Prediction of Search Result – URD	8/8	~72 potential 8/8s with a 1% chance likelihood of matching at 8 alleles. Much more likely to type out as 6/8s or less.
	7/8	~130 likely 7/8 donor options.
	≤ 6/8	N/A
	International	Several potential 10/10s that have limited typing in the NMDP system.
Prediction of Search Result – Cords	Multiple cord options of suitable match and size.	
Additional Comments	N/A	

*Ancestry details may impact match predictions **URD Search Category reflects likelihood of identifying an 8/8 URD.

Patient #4: Formal Search Order

Diagnosis: ALL

Disease Status: Complete Remission

Patient High Resolution HLA Typing: Completed via MSK lab (ARC)

Transplant Urgency: Very Urgent: Admission < 4 weeks

CMV Status: Negative

ABO/RH: O pos

Sibling HLA Typing Complete: No siblings

Aware of Formal Search Request: Yes

Candidate for Cord Transplant: Yes

Candidate for 7/8 URD: Yes

Candidate for Haplo: No

Candidate for Auto: No

Priority HSC Source if No 8/8 URD: Cords

Very Urgent (<4 weeks) – Cords preferred if no 8/8 URD

Patient #4: Formal Search Strategy Confirmation

Patient Name / MRN	Patient #4	
Age	52	
Diagnosis	ALL	
BMT Admission Timeframe	<4 weeks	
Candidate for 7/8 URD transplant	Yes	
Candidate for Cord transplant	Yes	
Candidate for Haplo	No	
Candidate for Auto	No	
Priority HSC if no 8/8 URD in required timeframe	Cords	
Preliminary Search Result – URD	8/8	~72 potential 8/8s with a 1% chance likelihood of matching at 8 alleles. Much more likely to type out as 6/8s or less.
	7/8	~130 likely 7/8 donor options.
	≤ 6/8	N/A
	International	Several potential 8/8s that have limited typing in the NMDP system.
Preliminary Search Results – Cords	Multiple cord options of suitable match and size.	
Search Strategy	Will pursue cord options only.	
Coordinator Concern	N/A	
Clinical Team Follow-up	N/A	

Patient #4: Potential 8/8 URD Options – BMDW list

ic as the matching algorithm. The donors are listed using an alternate algorithm. BMDW data are updated once a . Refer to the NMDP's HapLogic search report to view additional potential donors.

MCat	A	B	C	DRB1	DQB1	A	B	C	DRB1	DQB1
10/10	P P	P P		P P	P P	s2	s61 s44		04:XX	03:XX
10/10	P P	P P		P P	P P	02:XX	40:XX 44:XX		04:XX	03:XX
10/10	P P	P P		P P		02:XX	40:XX 44:XX		04:XX	
10/10	P P	P P		P P		s2	s61 s44		s4	
10/10	P P	P P		P P		02:XX	40:XX 44:XX		04:XX	
10/10	P P	P P		P P		02:XX	40:XX 44:XX		04:XX	
10/10	P P	P P		P P		s2	s61 s44		04:XX	
10/10	P P	P P		P P		02:XX	40:XX 44:XX		04:EBBP 04:XX	
10/10	P P	P P		P P		02:XX	40:BS PX 44:AGWY		04:XX	
10/10	P P	P P		P P		02:KBGH	40:XX 44:XX		04:EAPU 04:HTWY	
10/10	P P	P P		P P		02:BXCE	40:XX 44:AGWY		04:XX 04:WB	04:07 04:92
10/10	P P	P P		P P		02:XX	40:XX 44:AGWY		04:XX	
10/10	P P	P P		P P		s2	s61 s44		04:XX	
10/10	P P	P P		P P		s2	s40 s44		04:XX	
10/10	P P	P P		P P		s2	s40 s44		s4	

DISCLAIMER: The data available here are intended for research purposes only.

HLA Dataset

NMDP full 2011

Populations

☒ AFA - African American

☐ AAFA - African American

☐ AFB - African

☐ CARB - Caribbean Black

☒ API - Asian or Pacific Islander

☐ AINDI - South Asian Indian

☐ FILII - Filipino

☐ HAWI - Hawaiian or other
Pacific Islander

☐ JAPI - Japanese

☐ KORI - Korean

☐ NCHI - Chinese

☐ SCSEAI - Southeast Asian

☐ VIET - Vietnamese

☒ CAU - Caucasian

☐ MENAFC - Middle Eastern or
North Coast of Africa

☐ EURCAU - European Caucasian

☒ HIS - Hispanic

☐ CARHIS - Caribbean Hispanic

☐ MSWHIS - Mexican or Chicano

☐ SCAHIS - South or Central American Hispanic

☒ NAM - Native American

☐ AMIND - North American Indian

☐ CARIBI - Caribbean Indian

Select All

Clear Populations

Haplotype Loci

A~C~B~DRB1~DQB1

HLA type

Enter an HLA type:	HLA-A	HLA-B	HLA-C	HLA-DRB1	HLA-DQB1	HLA-DRB3	HLA-DRB4	HLA-DRB5
Type 1	02:KBGH	40:XX		04:EAPU				
Type 2		44:XX		04:HTWY				

SUBMIT QUERY

Patient #4: Potential 8/8 URD Options

▼ (A-C-B-DRB1-DQB1) Unphased Genotypes (HLA type)

Population HLA type frequencies	AFA	API	CAU	HIS	NAM
HLA typing resolution score	0.20	0.10	0.27	0.16	0.43
HLA Type	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:02+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:01	A*02:01+A*02:01 C*03:04+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02
HLA type freq	1.488E-7	1.343E-9	2.737E-8	2.807E-8	1.335E-5
Likelihood	35.2%	14.9%	40.4%	28.8%	63.5%
HLA Type	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:01	A*02:01+A*02:01 C*03:04+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:05+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02
HLA type freq	9.343E-8	1.322E-9	1.982E-8	2.327E-8	2.610E-8
Likelihood	22.1%	14.7%	29.2%	23.9%	12.4%
HLA Type	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:02+DQB1*03:02	A*02:01+A*02:01 C*05:01+C*15:02 B*40:06+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*02:02+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:01	A*02:01+A*02:01 C*03:04+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:02+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:02+DQB1*03:02
HLA type freq	4.707E-8	1.208E-9	7.783E-7	8.647E-7	1.587E-8
Likelihood	11.1%	13.4%	11.5%	8.9%	7.5%
HLA Type	A*02:01+A*02:01 C*02:02+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*02:02+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:05+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:02+DQB1*03:02	A*02:01+A*02:01 C*03:05+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02
HLA type freq	3.578E-8	1.069E-9	3.048E-7	7.174E-7	1.074E-8
Likelihood	8.5%	11.8%	4.5%	7.4%	5.1%
HLA Type	A*02:01+A*02:01 C*02:02+C*05:01 B*40:02+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:01	A*02:01+A*02:01 C*05:01+C*08:01 B*40:06+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*07:04 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:05+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:02	A*02:01+A*02:01 C*03:04+C*05:01 B*40:01+B*44:02 DRB1*04:01+DRB1*04:07 DQB1*03:01+DQB1*03:01
HLA type freq	2.391E-8	7.995E-10	2.872E-7	6.387E-7	1.048E-8
Likelihood	5.7%	8.9%	3.9%	6.5%	5.0%

Collapse

Potential 8/8 URDs very likely to be mismatched at HLA-C

Patient #4: Cord Search to CB MDs

CBU ID	Cord Blood Bank	~ match / 6	~ match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	Domestic #1 FACT2006	4/6	~5/8 (B,C,DR,DQ)	3.52	245	25	9/3/16	
2	Domestic #1 FACT2006	4/6	~5/8 (B,C,DR,DQ)	1.52	195	25	11/30/13	
3	Domestic #2 FACT2003	5/6	~3/8 (A,b,C,C,DR,DQ)	2.35	190	25	10/15/10	NCBI funded
4	International #1 FACT2005	5/6	~5/8 (B,C,DR,DQ)	2.10	184	25	10/22/12	
5	International #2 FACT2003	4/6	~5/8 (B,C,DR)	2.05	173	53.2	11/19/16	
6	Domestic #3 FACT2005	5/6	~5/8 (C,DR,DR,DQ, ,DQ)	2.68	160	25	1/16/16	Licensed

Patient #4: Cord Selections by CB MDs

CBU ID	Cord Blood Bank	~ match / 6	~ match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	Domestic #1 FACT2006	4/6	~5/8 (B,C,DR,DQ)	3.52	245	25	9/3/16	Type
2	Domestic #1 FACT2006	4/6	~5/8 (B,C,DR,DQ)	1.52	195	25	11/30/13	Type
3	Domestic #2 FACT2003	5/6	~3/8 (A,b,C,C,DR, DQ)	2.35	190	25	10/15/10	NCBI funded Type
4	International #1 FACT2005	5/6	~5/8 (B,C,DR,DQ)	2.10	184	25	10/22/12	Type
5	International #2 FACT2003	4/6	~5/8 (B,C,DR)	2.05	173	53.2	11/19/16	
6	Domestic #3 FACT2005	5/6	~5/8 (C,DR,DR,DQ, ,DQ)	2.68	160	25	1/16/16	Licensed

Patient #4: Graft Selection by CB MDs

CBU ID	Cord Blood Bank	Final match / 6	Final match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	Domestic #1 FACT2006	4/6	5/8 (B,C,DR,DQ)	3.52	245	25	9/3/16	Unit 1A
2	Domestic #1 FACT2006	4/6	5/8 (B,C,DR,DQ)	1.52	195	25	11/30/13	BACKUP
3	Domestic #2 FACT2003	5/6	3/8 (A,b,C,C,DR, DQ)	2.35	190	25	10/15/10	NCBI funded BACKUP
4	International #1 FACT2005	5/6	5/8 (B,C,DR,DQ)	2.10	184	25	10/22/12	Unit 1B

Patient #4: End Result

- **4 weeks after Formal Search Order, proceeded to cord transplant**

Patient #5:

Prelim Search Results – Futile search

Patient Name / MRN	Patient #5	
Age	41	
Diagnosis	MDS	
Ancestry*	African American	
URD Search Prognosis Category**	Futile	
Prediction of Search Result – URD	8/8	No potential 8/8 donor options worldwide.
	7/8	~5 likely 7/8's and ~15 additional donors with a 5-50% chance of typing out as 7/8 matched.
	≤ 6/8	N/A
	International	~90 potential 7/8 international donors can be screened.
Prediction of Search Result – Cords	Multiple cord options of suitable match and size.	
Additional Comments	N/A	

*Ancestry details may impact match predictions **URD Search Category reflects likelihood of identifying an 8/8 URD.

Patient #5: Formal Search Order

Diagnosis: MDS

Disease Status: Induction therapy in progress

Patient High Resolution HLA Typing: Completed via MSK lab (ARC)

Transplant Urgency: Very Urgent: Admission < 4 weeks

CMV Status: Positive

ABO/RH: A neg

Sibling HLA Typing Complete: Yes

Aware of Formal Search Request: Yes

Candidate for Cord Transplant: Yes

Candidate for 7/8 URD: Yes

Candidate for Haplo: Yes

Candidate for Auto: No

Priority HSC Source if No 8/8 URD: Cords

Very Urgent (<4 weeks) – Cords preferred if no 8/8 URD

Patient #5: Formal Search Strategy Confirmation

Patient Name / MRN	Patient #5	
Age	41	
Diagnosis	MDS	
BMT Admission Timeframe	<4 weeks	
Candidate for 7/8 URD transplant	Yes	
Candidate for Cord transplant	Yes	
Candidate for Haplo	Yes	
Candidate for Auto	No	
Priority HSC if no 8/8 URD in required timeframe	Cords	
Preliminary Search Result – URD	8/8	No potential 8/8 donor options worldwide
	7/8	~5 likely 7/8s and ~15 additional donors with a 5-50% chance of typing out as 7/8 matched
	≤ 6/8	Multiple likely 6/8 donor options
	International	~90 potential 7/8 donors can be screened.
Preliminary Search Results – Cords	Multiple cord options of suitable match and size.	
Search Strategy	Will pursue cord options only	
Coordinator Concern	N/A	
Clinical Team Follow-up	N/A	

Patient #5: Cord Search to CB MDs

CBU ID	Cord Blood Bank	~ match / 6	~ match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	International #1 FACT 2010	4/6	~6/8 (A,DR)	2.40	266	26	05/03/12	
2	International #2 FACT2003	4/6	5/8- B,C,DR,DQ	2.76	216	53.2	08/16/12	Fully typed – could HOLD
3	International #3 Non-FACT	4/6	~5/8-A,C,DR	2.46	158	25	08/02/15	
4	International #4 Non-FACT	4/6	~5/8-A,b,DR	1.75	136	25	06/09/14	
5	International #5 FACT2005	4/6	~5/8-B,C,DR	2.28	134	25	12/16/11	
6	Domestic #1 FACT2009	4/6	~5/8-A,B,C	2.84	102	24.97	04/29/14	

Patient #5: Cord Selections to CB MDs

CBU ID	Cord Blood Bank	~ match / 6	~ match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	International #1 FACT 2010	4/6	~6/8 (A,DR)	2.40	266	26	05/03/12	Type
2	International #2 FACT2003	4/6	5/8- B,C,DR,DQ	2.76	216	53.2	08/16/12	Fully typed – HOLD
3	International #3 Non-FACT	4/6	~5/8-A,C,DR	2.46	158	25	08/02/15	
4	International #4 Non-FACT	4/6	~5/8-A,b,DR	1.75	136	25	06/09/14	
5	International #5 FACT2005	4/6	~5/8-B,C,DR	2.28	134	25	12/16/11	
6	Domestic #1 FACT2009	4/6	~5/8-A,B,C	2.84	102	24.97	04/29/14	Type

Patient #5: Graft Selection by CB MDs

CBU ID	Cord Blood Bank	Final match / 6	Final match / 8	TNC/kg x 10 ⁷	CD34/kg x 10 ³	Final Cryo Volume (mL)	Collection Date	Comments
1	International #1 FACT 2010	4/6	6/8 (A,DR)	2.40	266	26	05/03/12	Unit 1A
2	International #2 FACT2003	4/6	5/8- B,C,DR,DQ	2.76	216	53.2	08/16/12	Unit 1B
6	Domestic #1 FACT2009	4/6	5/8-A,B,C	2.84	102	24.97	04/29/14	BACKUP

Patient #5: End Result

- **5 weeks after Formal Search Order, proceeded to cord transplant**

Conclusions

- 1) **Clear communication with MD is critical**
 - Prelim Search Results Template
 - Formal Search Order to help determine Formal Search Strategy
 - Formal Search Strategy Confirmation
- 2) **Use NMDP's HapLogic™, Search Prognosis Categorization, and patient ancestry to guide search**
- 3) **Simultaneous workup of multiple 8/8 URDs when possible**
- 4) **Simultaneous pursuit of preferred alternative stem cell source**

Acknowledgements

Courtney Byam, MPH, CHTC

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Memorial Sloan Kettering
Cancer Center



Memorial Sloan Kettering
Cancer Center



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BLOOD & MARROW TRANSPLANT PROGRAM

Jennifer McAtee- search
coordinator

THE NEED FOR SPEED

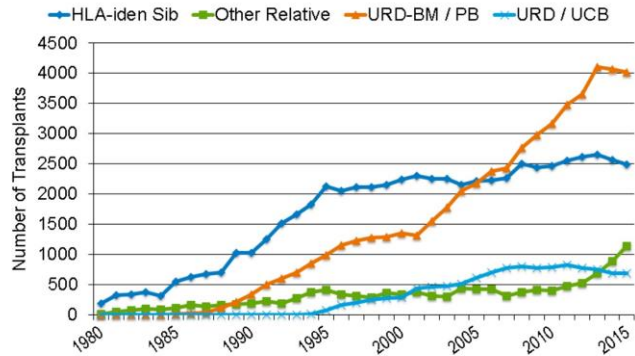
JENNIFER MCATEE

Presentation Goals:

- To share with you the processes and improvements we made as a Transplant Center, specifically unrelated allogeneic transplants; that helped us grow by 27.7% this past year.
- To share how fast we work at identifying a donor urgently and how fast we move with a BMT plan.

CIBMTR

Allogeneic HCT Recipients in the US, by Donor Type

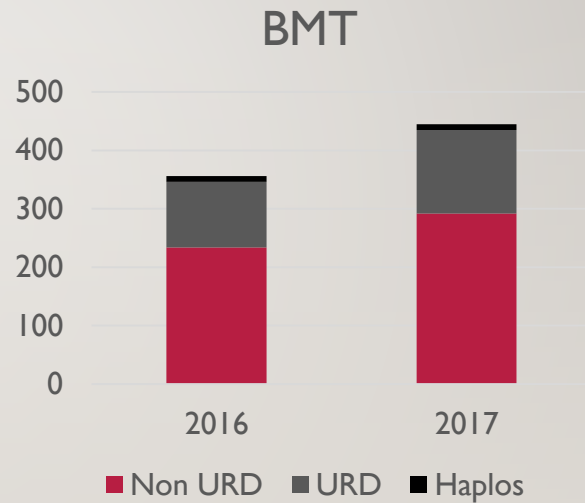


- CIBMTR reporting an increase toward Haplos.
- Why?
- Trend not borne out of Stanford; why?

URD GROWTH

<u>Fiscal Year</u>	<u>Total BMT</u>	<u>Haplo</u>	<u>URD</u>	<u>URD Growth</u>
2016	356	10	112	17.9%
2017	445	10	143	27.7%

25% Overall BMT
growth



TOPICS

- The Big Picture
- Effective Communication
- Preliminary searches/BMT Plan prior to NPV and Alternative Options
- HLA Turn Around Time
- NMDP

THE BIG PICTURE



SEARCH COORDINATOR – VANTAGE POINT

- We see the big picture and work with nearly every area within the BMT program.
 - Empowered to identify and make changes.
- Created Standard Processes
 - SOP's are essential so that we're all on the same page and everyone understands their role.
 - This helped reduce time, miscommunication and eliminated unnecessary outdated tasks.
- Identified the needs of MDs, NCs, CTF/HLA Labs, Inpatient/Outpatient units, Research Coordinators, the Patient, the Donor and NMDP/DCs.
 - Empathize, proactive and cognizant of their needs in order for them to make the best decision possible in a timely manner.

EFFECTIVE COMMUNICATION



3 C'S

- CLEAR
- CONCISE
- COMPLETE

COMMUNICATION

Clear lines of communication between the search coordinator and other individuals/departments are essential in order for the team to make clear, fast, concise decisions.

- Search Strategy/Meeting
- URD Search Update, Meeting with MD team
- Email and phone communication with the Nurse Coordinators, HLA lab and others
- Communication with Case Mangers at NMDP
- Email with all pertinent info and include all necessary personnel to avoid multiple emails and miscommunication.
- Everyone has clear expectations in order to take appropriate action.

EXAMPLE: URGENT EMAIL

Last name, First name

31yo F/HL/46kg/B pos/CMV pos

DID 1234-5678-0

A pos/CMV pos

Good afternoon,

I spoke with On call NMDP last night regarding eligibility paperwork and IDMs. They confirmed they have it completed and was supposed to send it to me last night. NMDP is getting a hold of someone there to respond and immediately send the paperwork. As Prep is scheduled 10/16 am.

I should have more news for you tomorrow. I would imagine we will have it on Monday early am, however I just want to inform everyone in the event we do not have eligibility. If so, I would suggest this plan below with MD approval.

#1 Receive incomplete eligibility if MD approves, receive re-determined eligibility prior to collection, so pt may start prep and avoid delaying tx.

Sincerely,

Jenn

EXAMPLE: SEARCH STRATEGY MEETING

Last Name, First Name
56yo M/61kg/NHL/AB pos/CMV pos

Hi Dr. Negrin and Inna,

Marcelo and I discussed her case. She has a very difficult search, we only see a few potential 9/10 donors, worth typing, may take a while, and probabilities are low.

1. I've requested donors for urgent CT. Will request more with B*15:11. No donors in the int'l registries. Good cord options.
2. Haplo options- Per Marcelo [REDACTED] (brother) and [REDACTED] (sister) are the same.
3. We also need to check pt's antibodies, please request.

Recipient Name: [REDACTED]

```
* [REDACTED]
1 [REDACTED] M 3/6 HVG MM 2 GVH MM 3 Final
2 [REDACTED] M 3/6 HVG MM 2 GVH MM 3 Final
3 [REDACTED] M 1/6 HVG MM 5 GVH MM 5 Final
*
```

Recipient: [REDACTED]

Draw Date:08/28/17

A	B	C	DRB1	DRB345	DQB1	DQA1	DPB1	DPA1
02:01	56:04	07:02	15:02	S*01:08N	05:01	01:01	05:01	02:02
02:06	15:11	03:03	15:01	S*01:01	06:02	01:02	02:01	X

BMT PLAN
PRIOR TO NEW
PATIENT VISIT
AND
ALTERNATIVE
OPTIONS

- Patient and Family HLA
- Patient HLA Antibody and tests prior to NPV
- Preliminary Search
- Weekly URD meeting to discuss Difficult Searches

BMT PLAN PRIOR TO NPV

- Patient and Family typing ordered by Hem/Onc or Ref MD
- Type and screen, CMV and HLA antibodies ordered and drawn by Hem/Onc or Ref MD
- Preliminary Search
 - Difficult search – Weekly URD meeting with Marcelo Vino Fernandez and Dr. Andrew Rezvani and other BMT MDs and NCs needing to discuss a plan of action.
 - Identify haplo associations, run difficult URD/Cord prioritized search lists.
 - Discuss disease, protocols, clinical trials, 9/10s vs haplo vs cords. Is the pt eligible? Does the patient have any significant HLA antibodies.
 - Discuss matched family members and choose the best option.
 - Discuss NMDP Related options.
 - Running concurrent sibling, URD, NMDP Related typing for high risk patients needing to transplant ASAP. (3-6 weeks)
 - Notifying MDs with an action plan, A, B or C.

HLA TURNAROUND TIME

- NGS
- STAT/Expedited typing
- Communicate and anticipate samples for urgent cases

HLA

- NGS
 - 3 day turnaround time for urgent cases.
 - Standards are set for standard & high –priority typing turnaround.
 - 18 loci high resolution results.
- Worked closely with HLA and Clinical Lab
 - To anticipate arrival of urgent samples or cases
 - STAT/Expedited samples
 - Educated Clinical Lab of our needs, expectations and importance of logistics, time and viability.

NMDP

- Case Managers
- Search Advocate and Global Ops
- Transplant Medical Services
- Urgent Need for Donors
- Challenges
- Adaptability

CASE MANAGERS

- Addressing the needs of our Transplant Center to case managers.
 - What is relevant and significant to us. Cause and Effect.
- Excellent partnership and rapport
- The importance of timely Clearance, Eligibility, WU plans and Early Flight Itineraries.
 - Patients move here for BMT or travel a great distance, timing is crucial.
 - Strategic planning for clinical trials and studies.
 - Careful planning with delayed and urgent cases.
- Frequent updates for CTs and WUs.
- Daily notification of released, UN, TU and DE donors

CASE MANAGERS

- Collaboration with Search Advocate and International Global Ops.
 - These services are facilitated through our case managers
 - Working closely with these departments has significantly helped reduced our BMT timeline with potential international donors.
 - Early preliminary reports. Accountability and accurate reporting. Daily communication and frequent updates on donor contact and typing.

SEARCH ADVOCATE

RID 123-456-7













Hi Wendy,

Can you please ask Steph to make these Brazilian donors available?

Go to... ▾

BMDW Donor List: 621

The BMDW donor list does not use HapLogic as the matching algorithm. The donors are listed using an alternate algorithm. BMDW data are updated once a month. HapLogic Potential Donor List are no longer shown on this list. Refer to the NMDP's HapLogic search report to view additional potential donors.

	Ref	Demographics Add/Remove Data	MCat	A	B	C	DRB1	DQB1	A	B	C	DRB1	DQB1
<input type="checkbox"/>	1	Brazil Donor Count: 1	10/10	 	 		 		02:FKXX 31:FKYW	35:GKZM 35:02		12:EKFZ 03:GRBG	
<input type="checkbox"/>	2	Brazil Donor Count: 1	10/10	 	 		 		02:XX 31:XX	35:XX		12:XX 03:XX	

TMS

- Worked closely with Transplant Medical Services team for emergency cases.
- Expressed our needs - MD, patient, donor and lab concerns.
- Strategized and created an attainable action plan.
- Prepared contingency plans.
- Keys to success: transparency, follow through, frequent updates, and support.

URGENT NEED FOR DONORS

- Open dialogue with MDs, NCs, HLA, CTF Labs and NMDP.
 - How can we find a donor urgently?
 - High risk patients
 - How can we shorten our window to transplant?
 - What steps do we need to take?
 - Create a new action plan?
 - Effective processes between TC and NMDP to ensure we have URD options early that would work with a more aggressive timeline.
 - Is this achievable?

CHALLENGES

- Challenges we encountered
 - Having urgent Insurance authorization
 - Having organized communication with NMDP to TC or Vice Versa to accommodate our needs
 - Recognizing and communicating High Priority patient/donor samples
 - HLA turn around times
 - HLA antibody screening
 - Having all required IDMs readily available for specific protocols and clinical trials
 - Having donor's weight, parity, risks, availabilities, stem cell exclusions available right away
 - Identifying donor's who are willing to participate in clinical trials even with an aggressive timeline
 - MD's response time to donor selection

ADAPTABILITY

- Obtaining insurance authorization
- Formatting delivery of information from case managers to TC
- Creating a standard HLA request form and distribution list
- NGS and STAT HLA Typing turnaround times
 - Patient and Donor samples
 - STAT HLA antibody screening results
- EBV IgG/IgM and Toxo IgG/IgM on IDM panel
- Donor/DC having clear expectations and estimated Transplant dates prior to CT
 - Participation in Studies and Clinical trials
- Faster MD response time



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STAY POSITIVE

“HEALING HUMANITY THROUGH SCIENCE AND
COMPASSION, ONE PATIENT AT A TIME”

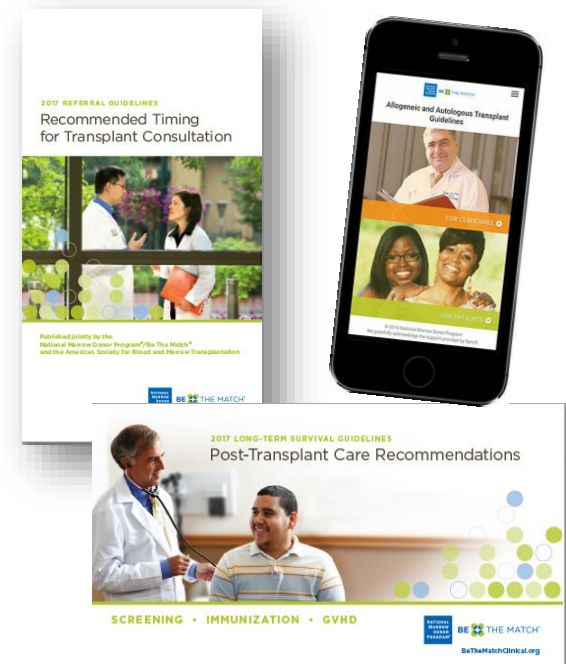
NMDP Resources to Improve Time to Transplant

It starts with timely referrals

Resources across diseases

- Guidelines on Referral Timing and Post-transplant Care for distribution – mobile app, online and print
- Outcomes data and trend slides on BeTheMatchClinical.org
- AML & Sickle Cell Decision Aids - guide care planning

Order, view or download free materials
Network.BeTheMatchClinical.org



Unrelated Donor Search Resources



Early Prelim Search Entry

Proactive donor contact
visible through Last Donor
Contact Date



Search Strategy Advice

Request an early second
opinion including typing
recommendations



Search Prognosis Tool

Quick glance at the
likelihood of a well-matched
donor

[http://search-
prognosis.b12x.org](http://search-prognosis.b12x.org)



Customized Typing Program

Cost effective, rapid way to
screen donors



New! Services

Related Donor Services

- Assistance with related donor travel, financial, or logistical concerns

Histocompatibility Testing Service

- Offering 3 business day or less HLA testing



What's on the horizon?

Look for opportunities to get involved with NMDP
Time to Transplant initiatives and share your ideas



Evaluation Reminder

Please complete the Council Meeting 2017 evaluation in order to receive continuing education credits and to provide suggestions for future topics.

We appreciate your feedback!