

Cord Blood Transplant Immersion Program Recipients

Alejandra Escobar Vasco, MD



Dr. Escobar is third year pediatric Hematology Oncology fellow at the Medical College of Wisconsin. She will complete the two-week hands-on immersion program for pediatric transplant at Duke University under the mentorship of Dr. Joanne Kurtzberg, MD.

Gabriela Sanchez-Petitto, MD



Dr. Sanchez-Petitto is a hematologist in the Department of Bone and Marrow Transplant and Cellular Therapy at the OSUCCC – James. She will complete the two-week hands-on immersion program for adult transplant at the University of Colorado under the mentorship of Dr. Jonathan Gutman, MD.

The Cord Blood Immersion Program has been made possible through the support of the Health Resources Services Administration (HRSA) and NMDP.

Lectures that are available on our website



- Cord Blood Unit Quality and Testing
- Cord Blood Unit Release and Thaw
- MatchSource and CBU Selection
- Opportunities to expand tx to ED populations
- Infectious Disease
- Post-CBT best practices
- CBT for sickle cell
- Selecting optimal patients for CBT
- CBT for Non-Malignant Conditions (Pediatrics)
- CBT Survivorship / Complications (Pediatrics)
- GVL in CBT
- Omisirge
- Expanded CB T-regs
- Optimal CBT Practices
- Cord Blood Collections and Consent

NMDP Cord Blood Consultation

As part of the CB Consultation program we also offer:

- Search Strategy Advice
- Optimal unit selection
- Practice unit facilitation
- Real-time webinar that is facilitated between a bank and TC to walk them through the thaw/prep process

Expanded CB program

Omidubice

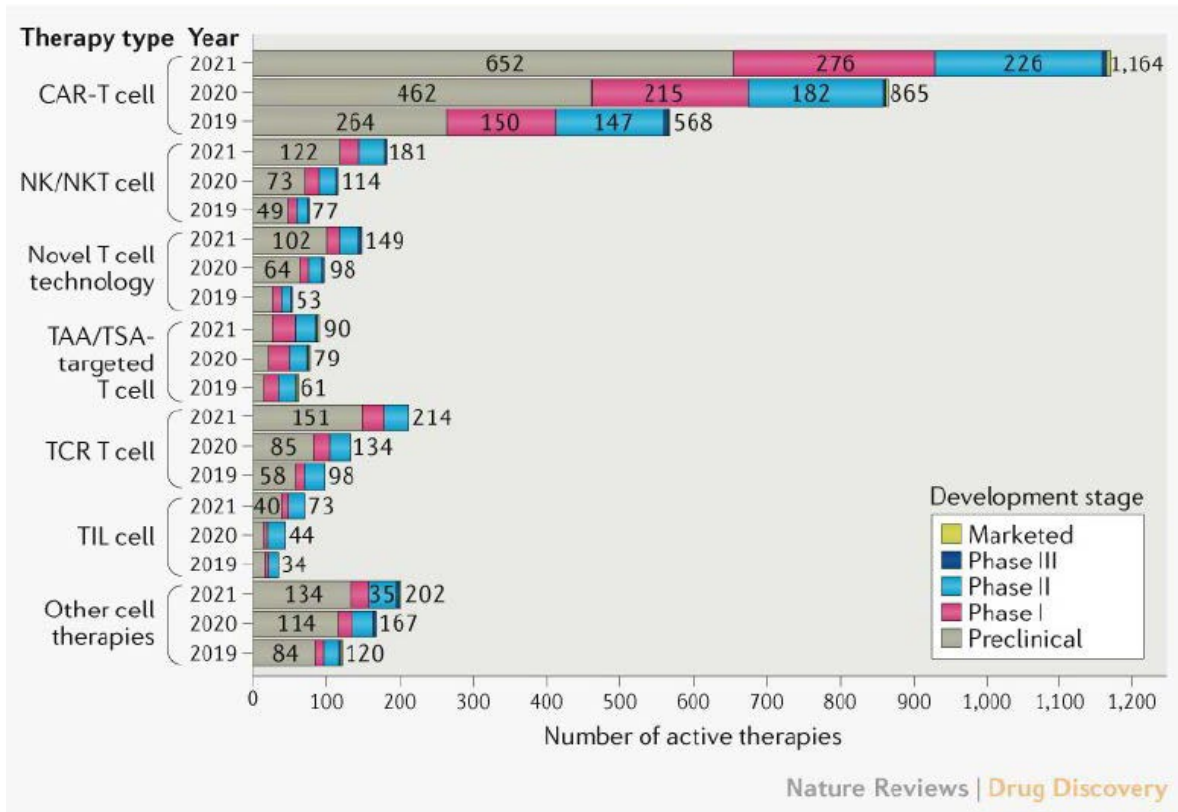
NMDP assists TC's when requested to help determine available CBU that best meet Gamida defined criteria for CBU attributes.

NMDP also provides designated Case Managers to assist in the end-to-end management of CBU requests and cases.

NMDP assists with ordering and logistics of CBUs from cord blood banks to Gamida's manufacturing facility.

CBB Alliance

Continuous Growth and Investment in Emerging Cell and Gene Therapy Development



Cord blood is being explored as a starting material for a variety of cell therapy types:

- NK and CAR-NK cell-based therapies
- T-cell based therapies
- Induced pluripotent stem cell generation as a starting cell type for a variety of downstream therapies
- Expanded stem cell therapies
- T regulatory cell therapies

Continuous growth in clinical trials and investment in emerging cell and gene therapies

- Development of allogeneic therapies has seen growth over the last year

NMDP BioTherapies Cord Blood Bank Alliance

Single point of access to cross-bank inventory of fully characterized cord blood units

Supply chain and logistics coordination

Streamlined cord blood bank qualification and audit activities

Bioinformatics for cord blood unit registry attributes and usage

Cord Blood Bank Alliance Partners





Future Studies: Implementing BMT CTN 1702:

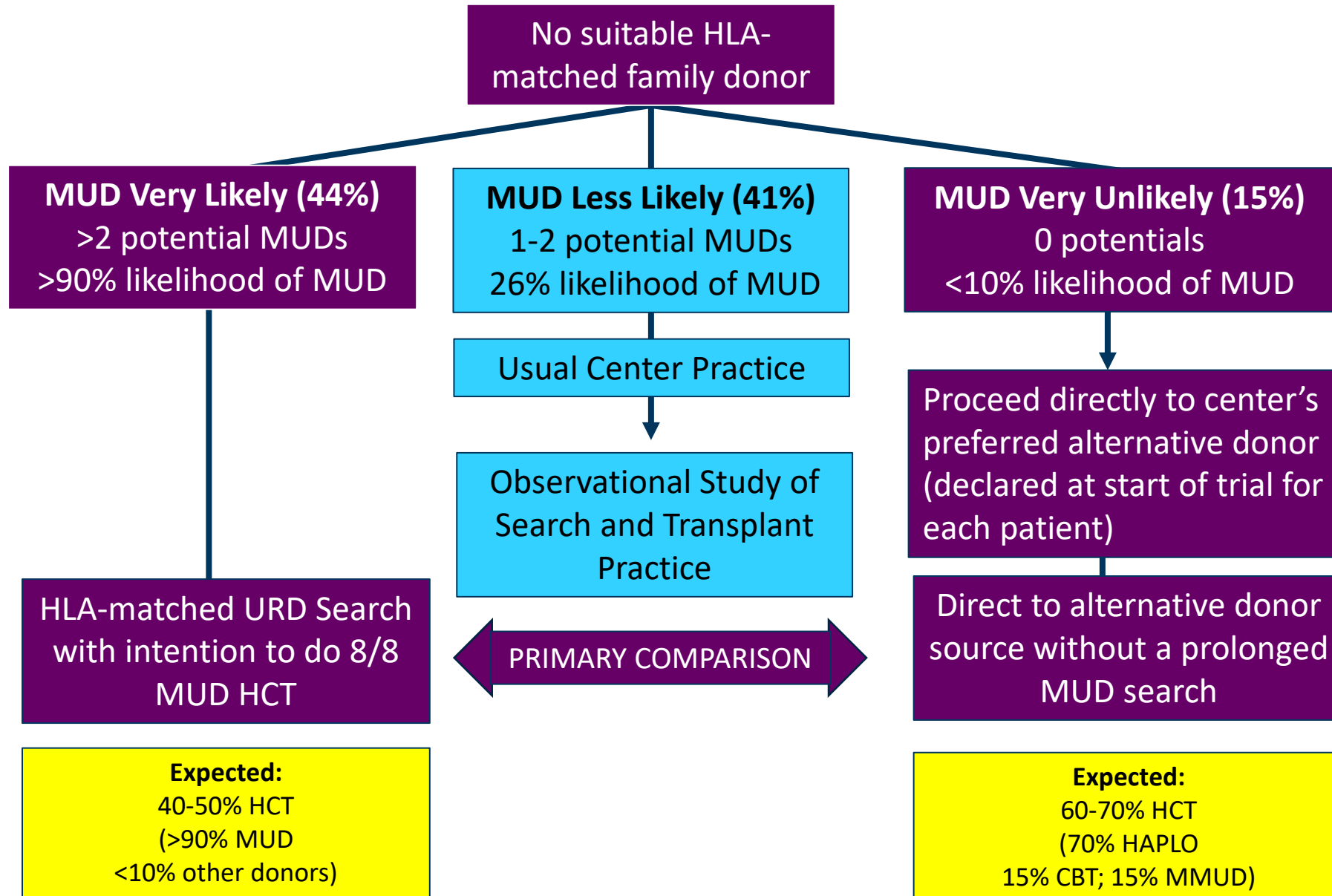
Using an Alternative Donor



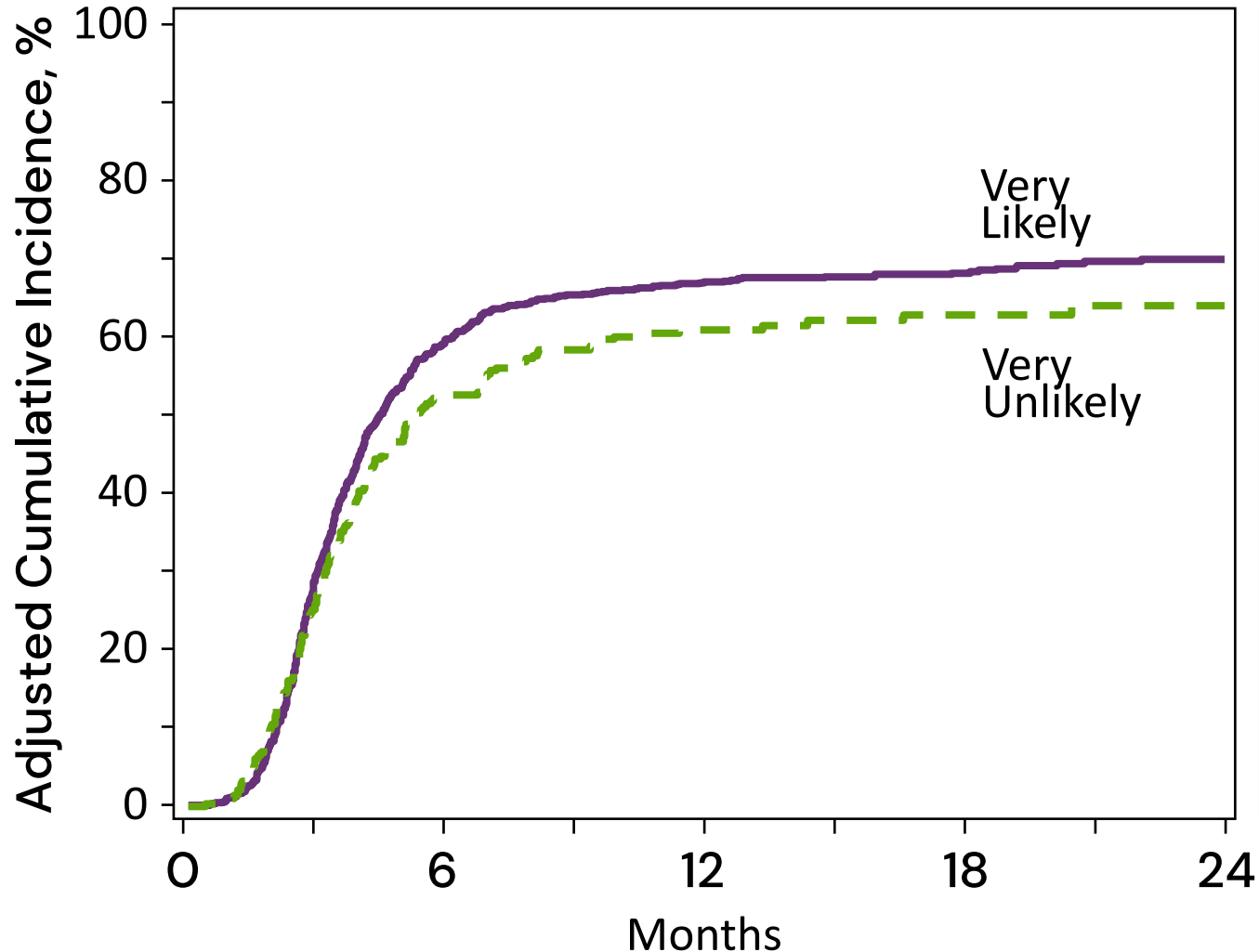
CTN 1702 trial background

- Variable likelihood of 8/8 MUD per race/ethnicity
- Multiple donor types currently available, yet uncertain best search/selection strategy
- Search prognosis (SP)
 - >90% 8/8 MUD likelihood (very likely)
 - ~26% 8/8 MUD likelihood (less likely)
 - < 10% 8/8 MUD likelihood (unlikely)
- Large national trial testing SP-guided search/selection strategy
- Primary endpoint: Compare OS between very likely and very unlikely groups from time of evaluability
- **Secondary:** CI reaching HCT per SP-group, actual search/selection practices

Biologic Assignment with ITT



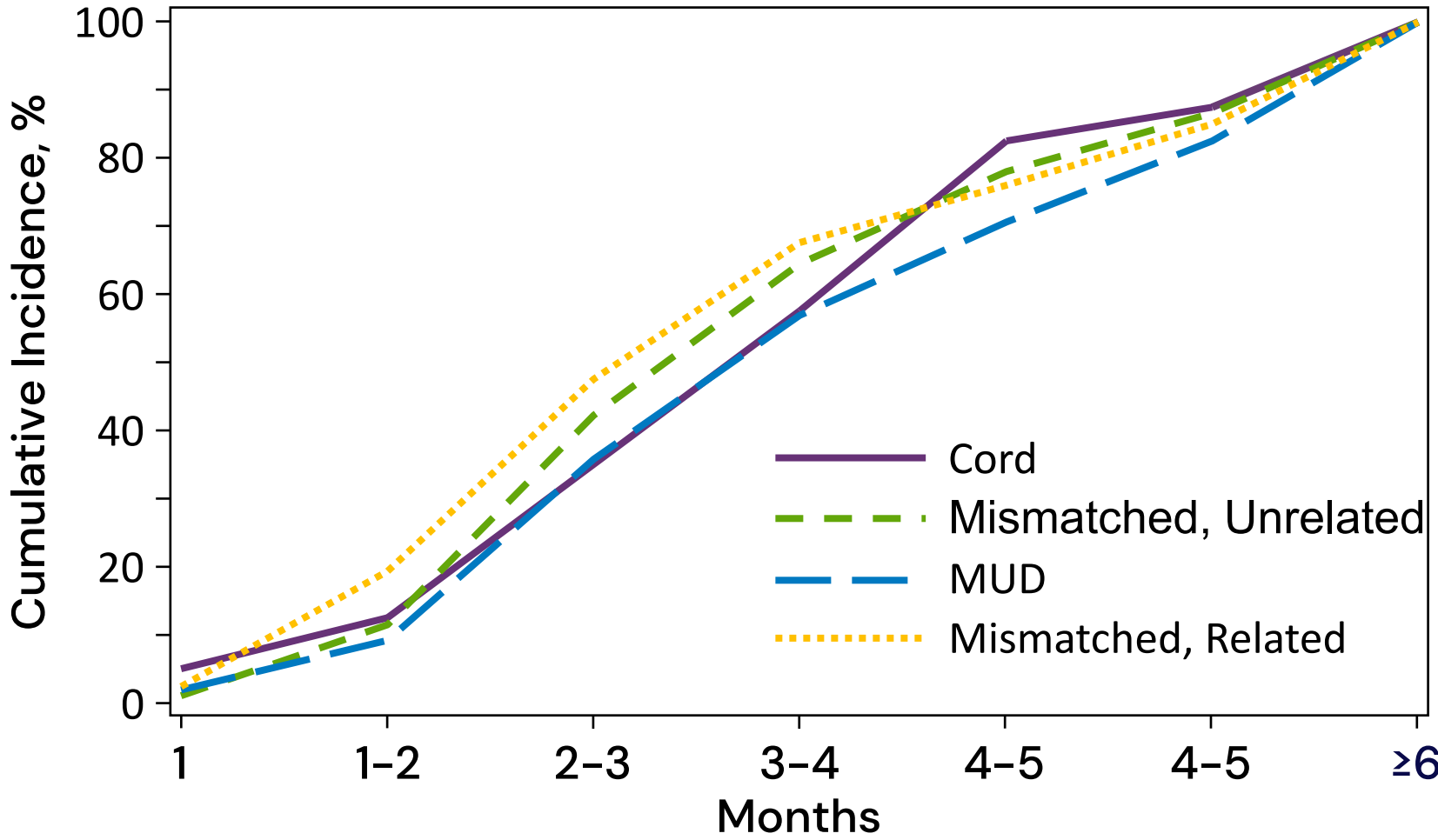
Adjusted cumulative incidence of HCT



Comparison between 2 types of patient			
	Very likely	Very unlikely	
Outcomes	Prob (95% CI)	Prob (95% CI)	P Value
Transplant	N = 959	N = 279	0.113
6-months	59.7% (56.6-62.8)	52.3% (46.2-58.5)	
1-year	67.2% (64.2-70.2)	61.1% (55.1-67.2)	
2-year	70.1% (67.0-73.2)	64.2% (57.9-70.6)	

*covariates adjusted: age, gender, KPS, race/ethnicity, disease, disease status, interval from consent to evaluability

Time from Evaluability to Transplant Among Transplanted Patients, by Donor Type Actually Transplanted



Conclusions



First prospective, multicenter evaluation of donor search and selection practice



Search prognosis-informed strategy: Feasible and rationally guides approach



Early alternative donor-focused strategy for those with poor likelihood of 8/8 MUD

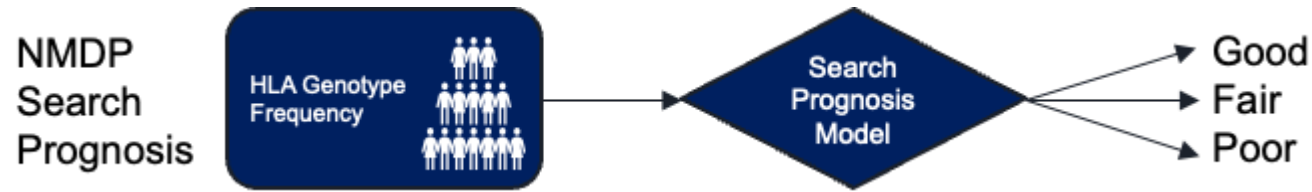
Successfully reach HCT with similar effort (time spent typing, number of donors typed)



Projected time to HCT commonly not reached and disrupted by disease/patient health delays

Search Summary Score

Search Productivity Measures Background

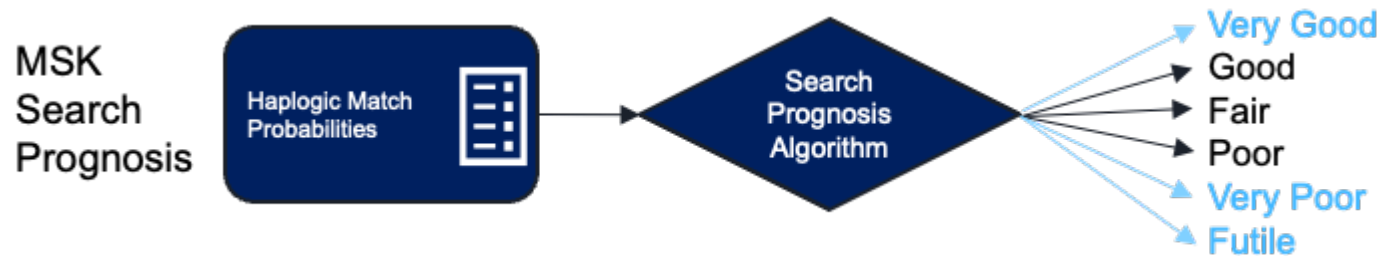


Unrelated donor search prognostic score to support early HLA consultation and clinical decisions

K Wadsworth¹, M Albrecht², R Fonstad³, S Spellman³, M Maiers², J Dehn¹

Affiliations + expand

PMID: 27272451 DOI: [10.1038/bmt.2016.162](https://doi.org/10.1038/bmt.2016.162)

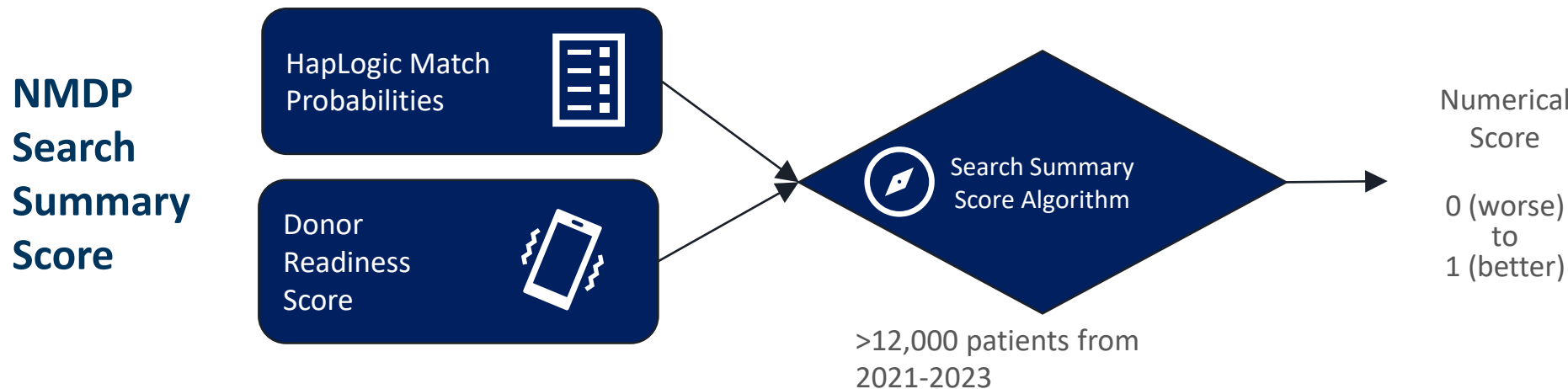


An Optimized Search Prognosis Tool to Predict 8/8 HLA Allele-Matched Unrelated Donor Procurement

Eric Davis¹, Anne Archer², Jessica Flynn³, Melissa Nhaiissi⁴, Candice Rapoport⁴, Beth Suri⁴, Deborah Wells⁴, Esperanza Papadopoulos⁵, Ioannis Politikos⁵, Warren B Fingrut⁴, Andromachi Scaradavou², Juliet N Barker⁶

Affiliations + expand

PMID: 36822475 PMID: [PMC10149615](https://pubmed.ncbi.nlm.nih.gov/36822475/) DOI: [10.1016/j.jtct.2023.02.016](https://doi.org/10.1016/j.jtct.2023.02.016)



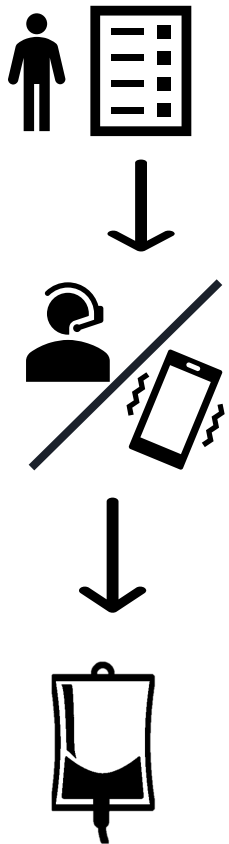
SSS is compared to what match level was *actually requested* for the patient to determine accuracy in prediction

Operationalizing Search Summary Score to pivot to an alternative donor

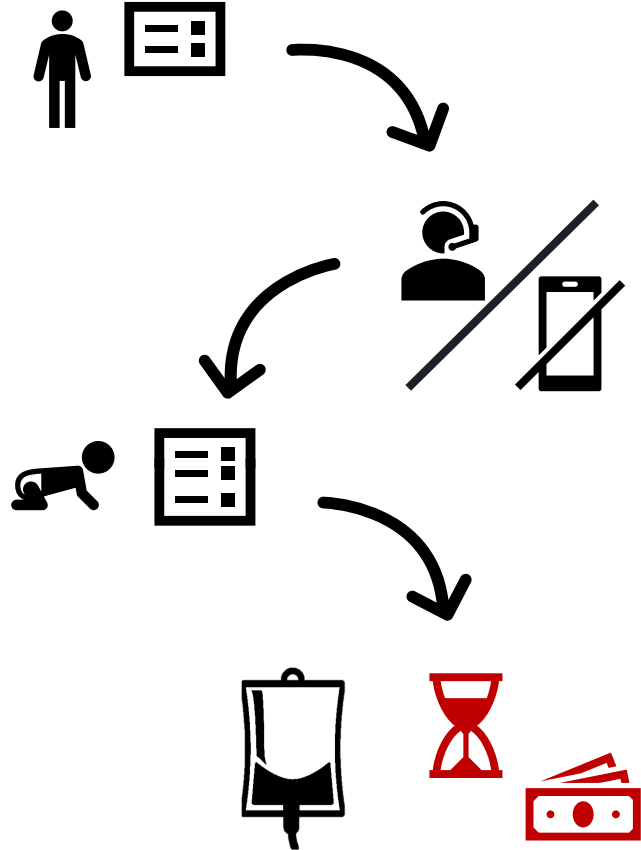
Why do we care about search productivity measures?



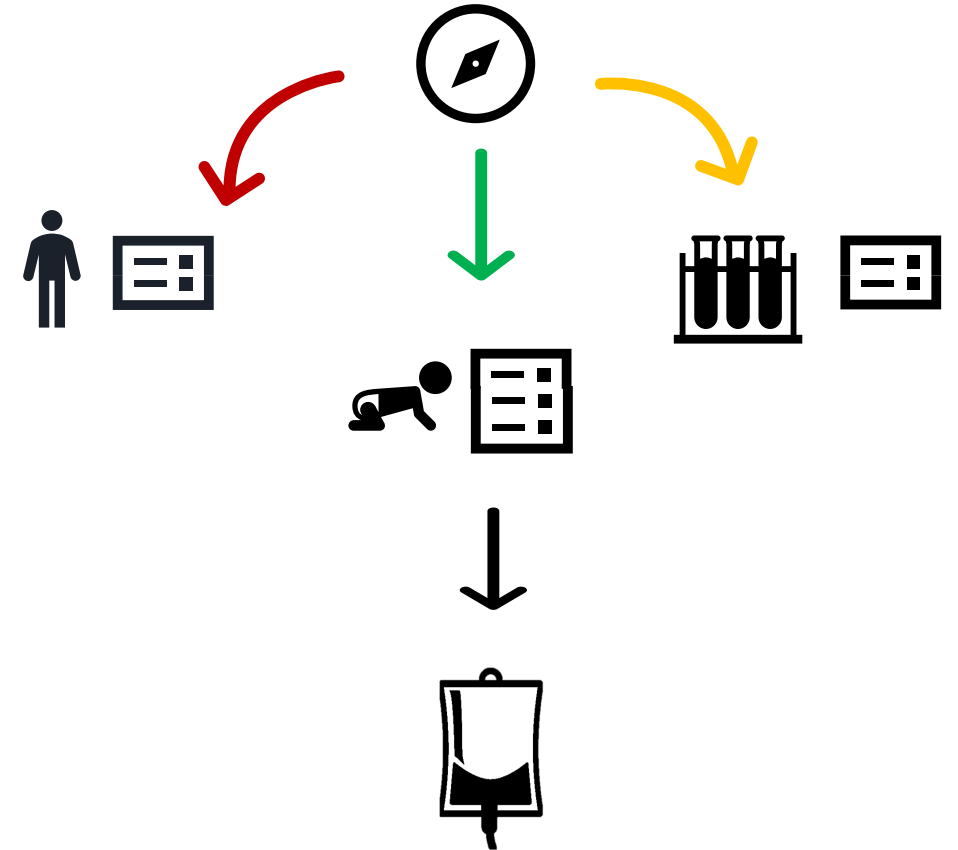
Case Progression 1



Case Progression 2



Case Progression 2 with intervention



6-month Research Project Goals

The goal of this research is to test a process in which an *alternative donor source* (cord, MMUD, or haplo) is identified quickly when it is unlikely an 8/8 match will be available.

Understand the correlation of the Search Summary Score and the choice of donors.

Currently onboarding TCs to be part of the Qualitative Research Project

Overall Conclusions



Research is key to CB success



Education is a crucial component to ensure optimal usage of CB



The future landscape for CB includes Cell and Gene Therapy



Implementing novel ways to include alternative donors upfront for patients will potentially expand the use of CB



Thank you!

