ADVISORY COUNCIL ON

BLOOD STEM CELL TRANSPLANATION (ACBSCT)

US Department of Health and Human Services (HHS)

October 24, 2024

2:00–6:00 p.m.

MEETING MINUTES

Voting Members Present: Navneet Majhail, MD, MS, MBBS, Chair; Juliet Barker, MBBS; Filippo Milano, MD, PhD; Ann Richardson Berkey

Nonvoting Members Present: *Nancy L. DiFronzo, PhD*, Division of Blood Diseases and Resources, National Heart, Lung, and Blood Institute (NHLBI), National Institutes of Health (NIH), HHS; *Max Grogl, BSc, MSc, PhD,* Naval Medical Research Center, United States Navy, Department of Defense (DOD); *Hanh M. Khuu, MD*, Office of Tissues and Advanced Therapies, FDA, HHS

Presenters: *Aurelia Chaudhury, JD*, CMMI Model Lead, Cell and Gene Therapy Access Model Division of Health Plan Innovation, Centers for Medicare and Medicaid Services Baltimore, MD; *Steven Devine, MD*, Chief Medical Officer, NMDP, Senior Scientific Director, Center for International Blood and Marrow Transplant Research (CIBMTR), Minneapolis, MN; *Mona Elmacken, MD*, Lead Physician, Malignant Hematology Branch Center for Biologics Evaluation and Research, U.S. Food and Drug Administration White Oak, MD; *Lewis Hsu, MD, PhD*, Professor of Pediatric Hematology, Director of Pediatric Sickle Cell, University of Illinois at Chicago, Chicago, IL; *Megha Kaushal, MD*, MSc, Branch Chief, Benign Hematology Branch, Division of Clinical Evaluation/Office of Therapeutic Products Center for Biologics Evaluation and Research, U.S. Food and Drug Administration White Oak, MD; *Kelly Lazration*, Manager, Clinical HLA Services NMDP Minneapolis, MN; *Andromachi (Machi) Scaradavou, MD*, Pediatric Hematologist-Oncologist and Bone Marrow Transplant Specialist Memorial Sloan Kettering Cancer Center New York, NY

Designated Federal Officer (DFO): Shelley Tims Grant, Executive Secretary, ACBSCT

WELCOME AND OPENING REMARKS

Shelley Tims Grant, ACBSCT, Executive Secretary

Navneet Majhail, MD, MS, FASTCT, Chair, ACBSCT

Ms. Grant called the meeting to order at 2:00 p.m. The meeting was held virtually and open to the public.

Dr. Majhail welcomed the participants and reminded them that the ACBSCT provides advice and recommendations to the Secretary of the Department of Health and Human Services via the HRSA Administrator on the activities of the C.W. Bill Young Cell Transplantation Program (CWBYCTP) and

the National Cord Blood Inventory (NCBI). The main focus of the ACBSCT is to advise HRSA on improving access and outcomes for people who need blood stem cell transplants and cellular therapies, particularly for the medically underserved.

Dr. Majhail began his welcome address by acknowledging the participants and emphasizing the significant role of the Advisory Council on Blood Stem Cell Transplantation. He outlined the council's mission of advising the Secretary of Health and Human Services (HHS) on blood and stem cell transplantation programs. This includes providing guidance on the C.W. Bill Young Transplantation Program and the National Cord Blood Inventory Program, as well as fostering improvements in transplant outcomes and increasing access, particularly for medically underserved communities. Dr. Majhail reiterated that the council also serves as a platform to share advancements in blood stem cell transplantation.

Reflecting on the previous meeting in August 2024, Dr. Majhail highlighted several key discussions and recommendations. The council's subcommittee on cord blood provided insights on cord blood advancements. Experts contributed to these discussions, resulting in three recommendations to HHS: defining high-quality cord blood units according to FDA guidance, encouraging NIH and other agencies to fund research on cord blood transplantation, and supporting demonstration projects to increase cord blood utilization, particularly for minority groups.

The August meeting also featured updates on efforts by the National Marrow Donor Program (NMDP) and the American Society for Transplantation and Cellular Therapy to achieve equal outcomes for all transplant recipients. Strategies were discussed to improve adult donor retention, noting lower donation rates among ethnically diverse donors. Presentations on transplant outcomes and cord blood support programs also covered initiatives aimed at training new faculty and fellows at transplant centers.

Dr. Majhail then outlined the agenda for the current meeting, which included updates on mismatched unrelated donor transplant trials, FDA guidelines for graft-versus-host disease, treatment options for sickle cell disease, and innovations from CMS in gene therapy access. Additional presentations from the FDA and NMDP would cover new drug approvals, long-term data collection, and perspectives on cord blood transplantation.

REGULATORY PERSPECTIVE ON CLINICAL TRIALS FOR GRAFT-VERSUS-HOST DISEASE

Mona Elmacken, MD, Lead Physician, Malignant Hematology Branch Center for Biologics Evaluation and Research, U.S. Food and Drug Administration White Oak, MD

Dr. Elmacken presented an overview of the FDA's draft guidance on clinical trial considerations for preventing and treating graft-versus-host disease (GVHD), covering key recommendations for designing trials to support marketing applications. She explained that the guidance is currently a draft and aims to clarify FDA expectations regarding clinical trial design elements, focusing on endpoints, patient selection, and treatment strategies for acute and chronic GVHD. Dr. Elmacken

emphasized endpoints like GVHD-free survival, overall survival, and relapse reduction, with primary analyses including all randomized patients. She highlighted the importance of safety monitoring, especially in dose escalation trials, recommending a 28-day period for observing dose-limiting toxicities, and noted that adaptive study designs could be useful in exploratory trials.

For patient and transplant factors, Dr. Elmacken advised detailed stratification based on variables like donor type, age, and transplant source, as these factors significantly impact responses to GVHD treatments. She outlined the FDA's preferred trial design options, recommending randomized controlled trials (RCTs) whenever feasible, especially for pivotal studies. In trials treating active GVHD, she highlighted a four-week response assessment period with extended follow-up to assess durability and discussed the importance of documenting concurrent immunosuppressive therapies. For chronic GVHD, response evaluations span six months, with one-year follow-ups to verify outcomes, and trials may involve RCTs or single-arm studies, especially when no approved treatments are available.

Dr. Elmacken concluded by discussing the guidance's implications for marketing applications, specifying that efficacy and safety data must be rigorously documented. The draft guidance details the types of datasets required for submission, ensuring that sponsors demonstrate clinical benefit and patient safety in a structured manner. With a focus on thorough documentation and trial design flexibility, Dr. Elmacken emphasized the guidance's comprehensive approach to supporting reliable and safe treatment pathways for GVHD, concluding by inviting audience questions and acknowledging the detailed nature of the guidance presented.

Discussion

- Dr. Majhail asked whether patient-reported outcomes (PROs) were considered for acute GVHD and if there were any thoughts. Dr. Elmacken responded that while PROs can be included in protocols, they are challenging to use for regulatory decisions in acute GVHD due to their short treatment timeline and life-threatening nature. She noted that PROs might be more valuable for chronic GVHD or preventive measures rather than in acute cases.
- Dr. Majhail commented that it is an exciting time for GVHD treatment, with several approved products and more in development, expressing appreciation for the FDA's guidance in advancing the field. Dr. Elmacken responded that the current guidance is still in draft form, and they expect to receive comments before finalizing it.

CIBMTR/NMDP UPDATE ON CLINICAL TRIALS USING MISMATCHED UNRELATED DONORS

Steven Devine, MD, Chief Medical Officer, NMDP, Senior Scientific Director, Center for International Blood and Marrow Transplant Research (CIBMTR), Minneapolis, MN

Dr. Steven Devine delivered a talk focused on increasing access to transplantation for patients, particularly those from diverse racial and ethnic backgrounds, by exploring the potential of mismatched unrelated donor (MMUD) transplants. The motivation for this research stemmed from

the observation that many racially diverse patients struggle to find well-matched donors. Although alternative options, such as haploidentical and cord blood transplants, exist, gaps remain, highlighting a need for broader transplant access. To address this, Dr. Devine's team examined the effectiveness of mismatched donors, leveraging post-transplant cyclophosphamide (PTCy), traditionally used in haploidentical transplants, to mitigate complications and improve outcomes.

Dr. Devine recapped findings from previous studies, including the 15 MMUD trial, which showed promising one-year survival rates of 76% with a diverse patient cohort. Building on these results, they launched the Access study to investigate the feasibility of using peripheral blood stem cells instead of bone marrow, as peripheral blood is easier to obtain and safer for donors. Data from the Access study's reduced-intensity cohort showed a consistent one-year survival rate of 79%, particularly encouraging in older patients and those with high-risk malignancies. The study further revealed no survival difference between patients receiving better-matched (seven of eight) and less-matched donors, demonstrating the viability of using less-matched donors.

The team also studied the infection risk associated with PTCy. While GVHD rates were reduced, infection rates within the first 100 days remained high, likely due to myelosuppression. To address this, Dr. Devine discussed the ongoing Optimize study, which aims to reduce PTCy dosing to decrease infection risk, with results so far showing favorable outcomes. This success has led to planning for the Accelerate trial, which is expected to begin in 2025 and will use randomized, controlled phases to explore further interventions to reduce graft failure, infection, and GVHD.

Dr. Devine concluded by affirming that their findings offer hope for those who cannot secure fully matched donors, as even five to six of eight matches demonstrated comparable outcomes to fully matched donors. With a continuing commitment to inclusivity and safer transplantation practices, these trials mark significant progress toward equitable access to transplantation.

Discussion

- Dr. Barker asked if mismatched unrelated donors might surpass haploidentical donors in the United States, noting a trend where mismatched donors are increasingly preferred at many centers. Dr. Devine confirmed this trend, stating that while haploidentical donors remain more common, mismatched unrelated donors have grown by 25-30% annually for the past two and a half years, similar to the growth rate of haploidentical donors a decade ago.
- Dr. Barker asked if any trends were observed between cryopreserved and fresh unrelated donor grafts. Dr. Devine responded that 75-80% of grafts in the ACCESS study during the pandemic were cryopreserved, and the results were unexpectedly similar to fresh grafts. He noted that the high CD34 cell dose in the grafts likely minimized any negative impact of cryopreservation.
- Dr. Barker asked about the approach to donor matching in transplants, specifically questioning if centers should quickly move to lower match grades, such as six or eight, to expedite the process when a fully matched donor is unavailable. Dr. Devine confirmed that current guidance advises against prolonged searches if a full match is unlikely, instead recommending an

alternative donor strategy. He noted that most delays or cancellations are due to patient issues rather than donor availability, supporting the idea of moving to alternative donors like haploidentical or mismatched unrelated options.

CURATIVE TREATMENT OPTIONS FOR SCD: A (QUICK) CLINICAL REVIEW

Lewis Hsu, MD, PhD, Professor of Pediatric Hematology, Director of Pediatric Sickle Cell, University of Illinois at Chicago, Chicago, IL

Dr. Hsu delivered an informative presentation on advancements in treating sickle cell disease, focusing on the limitations and potential of current therapies and the promise of emerging gene therapies. He began by emphasizing that, as a pediatrician, his approach would be geared toward providing a straightforward overview accessible to families. Dr. Hsu explained that while traditional treatments—such as anti-sickling medications and blood transfusions—can alleviate some symptoms of sickle cell disease, they fall short of providing a cure. Though effective in temporarily boosting non-sickling cells, blood transfusions require ongoing treatment as the transfused cells are gradually replaced by the patient's sickling cells.

Dr. Hsu then outlined two curative strategies: stem cell transplants from donors and gene therapy. In particular, he described gene therapy as a promising, though complex, long-term process involving genetic modifications to eliminate the sickling characteristics in red blood cells. He illustrated this process with examples from his clinic, where children have successfully donated stem cells to siblings with sickle cell, leading to significant improvements in their quality of life. Gene therapy, though still new, holds similar potential but involves extensive preparation and follow-up. Dr. Hsu dispelled misconceptions by stressing that gene therapy is not an instant cure and often requires ongoing care, highlighting that the long-term risks and benefits are not yet fully understood.

The presentation also addressed disparities in access to these advanced therapies. Currently, the availability of gene therapy is limited to select centers, and there are geographical and financial obstacles, particularly for under-resourced patients in the United States and globally. Dr. Hsu warned that the high costs of gene therapies, exceeding $2 million, could exacerbate health inequities and leave low-income communities underserved. Additionally, he voiced ethical concerns about access to gene therapy for regions like Sub-Saharan Africa and South Asia, where the prevalence of sickle cell disease is high, but healthcare resources are scarce.

Dr. Hsu closed by acknowledging the range of patient perspectives on gene therapy, from enthusiastic support to cautious skepticism, due to potential side effects, chemotherapy requirements, and the high cost. He shared that the Sickle Cell Disease Association of America has been working to provide clear, accessible information to guide patients and families in making informed decisions about these therapies. Ultimately, he concluded that while gene therapy represents a hopeful frontier, it must be accompanied by education, equitable access, and ethical considerations to truly serve the needs of the sickle cell community.

Discussion

- Dr. Milano noted that the presentation addressed critical complexities in gene therapy. He explained that his center in Seattle is activating its first treatments for sickle cell patients but faces significant challenges, such as patient selection, ethical considerations, and financial constraints, particularly given high treatment costs. He emphasized the need for broader community engagement and political support to navigate these issues effectively, especially as his center competes with another institution to become a leading treatment provider on the West Coast.
- Dr. Majhail asked about the future role of stem cell transplants, gene therapies, and haploidentical transplants in treating blood stem cell patients. Dr. Hsu noted that matched sibling transplants are highly effective but limited by the scarcity of eligible matches, leading to discussions on using haploidentical transplants versus gene therapy. He expressed hope for advances in technology and cost reduction to make gene therapy viable in more settings. Dr. Milano added that patients are increasingly informed and currently favor gene therapy over transplants despite doctors sometimes recommending transplantation.

CELL & GENE THERAPY (CGT) ACCESS MODEL OVERVIEW WEBINAR

Aurelia Chaudhury, JD, CMMI Model Lead, Cell and Gene Therapy Access Model Division of Health Plan Innovation, Centers for Medicare and Medicaid Services Baltimore, MD

Ms. Chaudhury discussed the ongoing efforts by the Centers for Medicare and Medicaid Services (CMS) to address the high costs of prescription drugs, particularly cell and gene therapies, through a new outcomes-based payment model. In response to a 2022 executive order by President Biden aimed at lowering drug costs, CMS proposed the "Cell and Gene Therapy Access Model," designed to improve the accessibility and affordability of these transformative therapies for Medicaid beneficiaries. The model specifically targets patients with sickle cell disease—a condition with high-cost treatments—and facilitates a framework where CMS would negotiate with manufacturers on behalf of state Medicaid programs. This negotiation focuses on outcomes-based agreements, where payment to the manufacturers is linked to patient treatment outcomes, intending to improve health results, reduce long-term healthcare costs, and streamline patient access to innovative therapies.

A primary focus of the model is sickle cell disease, chosen for its high treatment costs and the substantial patient benefits gene therapy may provide. The initiative outlines a structured process where CMS will first negotiate with manufacturers on key terms, which manufacturers would then offer to states. States can apply to participate in the model, creating a three-way collaboration between state Medicaid agencies, CMS, and manufacturers. Through this partnership, manufacturers would provide state programs with negotiated rebates while CMS offers technical support to the states. CMS would also help states with data collection to monitor and assess

outcomes, aiming to facilitate patient access to gene therapies while minimizing administrative burdens.

Ms. Chaudhury emphasized that Medicaid and expanded CHIP program patients would be eligible for the model, with potential expansion to standalone CHIP programs. The model is on an accelerated timeline, with states expected to start participation as early as January 2025. Ms. Chaudhury noted that CMS has been collaborating with various stakeholders, including other government agencies, advocacy groups, and manufacturers, to refine the model, and they anticipate having a finalized version for states to consider by late 2024.

In addition, the model includes requirements for participating manufacturers to cover fertility preservation services for patients, addressing an access barrier linked to chemotherapy's side effects in gene therapy. The model also seeks to enhance patient care by encouraging partnerships with treatment centers that offer multidisciplinary support to address the varied needs of patients undergoing gene therapy. Lastly, Ms. Chaudhury encouraged interested parties to consult CMS resources, including the state Request for Application, which details participating states' responsibilities and support options, such as funding opportunities to aid implementation and partnerships with community organizations.

Discussion

- Dr. Majhail highlighted the American Society of Transplantation and Cellular Therapy's upcoming Gene Therapy Summit on November 5-6 in Boston, where access and payment models will be discussed. Ms. Chaudhury responded by emphasizing the importance of treatment centers in the reimbursement process, noting that capacity limits in these centers could slow patient access to gene therapies. She explained that state Medicaid agencies involved in the model would be required to unbundle payments, offering separate reimbursements for the gene therapy drug and inpatient stay, aiming to reduce financial barriers for hospitals. Additionally, Ms. Chaudhury mentioned initiatives to streamline out-of-state patient approvals and establish pre-existing provider relationships to improve access and reduce delays in treatment.
- Dr. Majhail raised a question about the source and adjudication of data for outcome-based agreements in gene therapy, emphasizing that excluding drug acquisition costs could ease implementation challenges. Ms. Chaudhury responded that CMS has partnered with the National Center for International Blood and Marrow Transplant Research, which will work with treatment centers to collect and track patient data, similar to NIH programs for stem cell transplants. Ms. Chaudhury explained that clinical data from patient registries and claims data from Medicaid and Medicare would help monitor patient outcomes, with measures under negotiation with manufacturers, including crisis occurrences, transfusions, hemoglobin levels, and pain or quality of life assessments. Dr. Majhail, a transplant physician, supported using the CIBMTR infrastructure for data capture in transplant centers, recognizing the alignment with gene therapy practices.

- Dr. DiFronzo inquired about expected patient treatment numbers in the first year and beyond. Ms. Aurelia responded that while they are optimistic about meeting timelines with manufacturers, patient uptake remains uncertain, with only around 30 patients starting treatment. She noted that state engagement has been high, covering 80% of Medicaid beneficiaries, but adoption has been gradual as patients, hospitals, and providers familiarize themselves with gene therapy, projecting a slow increase rather than rapid expansion in the near term.

SICKLE CELL DISEASE GENE THERAPY APPROVALS: LYFGENIA AND CASGEVY

Megha Kaushal, MD, MSc, Branch Chief, Benign Hematology Branch, Division of Clinical Evaluation/Office of Therapeutic Products Center for Biologics Evaluation and Research, U.S. Food and Drug Administration White Oak, MD

Dr. Kaushal provided a detailed presentation on two recently approved gene therapies, Lyfgenia (lovo-cel) and Casgevy (exa-cel), intended to treat sickle cell disease in patients aged 12 and older. She began by outlining the approval of these therapies in December 2023 and the regulatory criteria for their use. Both therapies, designed to treat recurrent vaso-occlusive crises (VOCs), employ distinct mechanisms: lovo-cel utilizes a lentiviral vector to introduce a modified beta-globin gene, while exa-cel is a CRISPR-based therapy targeting BCL11A to increase fetal hemoglobin levels, which is therapeutic in sickle cell disease.

Dr. Kaushal reviewed each therapy's efficacy and safety outcomes.

In clinical trials, lovo-cel demonstrated a significant reduction in VOCs, achieving an 88% resolution rate in participants. However, some patients did experience delayed-onset VOCs, indicating potential variability in long-term outcomes. She highlighted neurological outcomes as a key area, noting that subjects with a history of stroke remained transfusion-independent and free of recurrence over several years. Safety concerns included delayed platelet and neutrophil engraftment, hypersensitivity reactions, and cases of hematologic malignancy, leading to a boxed warning on the label.

Exa-cel, the CRISPR-based therapy, showed similar efficacy, with 93.5% of patients achieving VOC-free periods post-treatment. While the safety profile resembled that of lovo-cel, there were additional concerns about off-target genome editing, though no cases were observed within the short follow-up duration. Both therapies required post-marketing studies to monitor potential long-term safety risks.

Dr. Kaushal concluded by discussing regulatory considerations for gene therapies, emphasizing the importance of long-term follow-up due to limited data on durability and potential late adverse effects. She highlighted the FDA's guidance recommending 15 years of patient monitoring to capture delayed adverse events and assess gene therapy persistence. This monitoring, including periodic patient visits, blood and bone marrow tests, and detailed case histories, is crucial for

understanding the therapies' long-term safety. Post-market surveillance strategies, combining passive and active surveillance and mandatory post-marketing studies, aim to ensure these novel therapies remain safe and effective for the U.S. population.

Discussion

- Dr. Milano asked about the FDA's approach to new products in the market, particularly regarding approvals and competition in areas like CAR T-cell and sickle cell therapies. Dr. Kaushal responded that the FDA strives to align endpoints and monitoring for products in development to ensure durability and meaningful clinical outcomes. Dr. Milano then expressed concerns about market accessibility if only a few companies remain, emphasizing the need for diverse options. Dr. Kaushal acknowledged this, explaining that the FDA considers preliminary safety and efficacy data in discussions with companies before moving forward with approvals.
- Dr. Majhail asked Dr. Kaushal about the responsibilities and mechanisms for reporting long-term safety concerns, such as AML or MDS, to the FDA when collecting data over 15 years. Dr. Kaushal responded that post-marketing requirement studies are in place for approved products, differing from clinical trial follow-up, to monitor specific safety risks seen in the patient population. She explained that these studies focus on capturing events related to hematologic malignancy and genome-targeting issues. Additionally, they gather data on long-term outcomes to assess improvements in sickle cell disease and related morbidities.

OVERVIEW OF CORD BLOOD SEARCHES FROM THE REGISTRY PERSPECTIVE

Kelly Lazration, Manager, Clinical HLA Services NMDP Minneapolis, MN

Ms. Lazration delivered an overview of cord blood searches from a registry perspective, emphasizing key aspects of the process and available resources. She began by outlining current guidelines used to inform recommendations provided to transplant centers, specifically highlighting matching criteria for cord blood units, including HLA matching and cell dose thresholds. Ms. Lazration described the requirements for unit selection, which includes a minimum of four out of six antigen matches at HLA A and B loci and allele-level matching at DRB1, with additional considerations for cell doses (TNC and CD34) and quality characteristics like RBC reduction, cryopreservation year, and the presence of an attached segment for identity testing.

Ms. Lazration then described the default search preferences and the matching algorithm within the Match Source system, which assists transplant center staff in selecting appropriate patient cord blood units. Using the Heplogic matching algorithm, the system determines which units to list based on a four out of six antigen match at specific loci, displaying units that may vary slightly from traditional matching to ensure inclusivity. She explained that Match Source users could customize sorting preferences, either following default criteria based on HLA matching and cell dose or by toggling filters to simplify the selection process.

To further enhance user experience, Ms. Lazration highlighted recent updates in Match Source, including an in-app guidance feature with filter and sort options aligned with cord selection guidelines. These updates allow users to filter for units meeting recommended criteria, including the ability to distinguish "cure-ready" units, which are HLA-confirmed, high-resolution typed, and have completed release testing, which is beneficial for patients with urgent transplant needs.

Finally, Ms. Lazration outlined resources provided by the National Marrow Donor Program (NMDP) for transplant centers, such as search strategy reports, a cord blood consultation program led by Dr. Heather Stefanski, and access to cord blood practice units. These resources aim to support transplant centers in navigating cord blood transplants, maintaining updated practices, and addressing specific pre- and post-transplant care needs. She concluded with a list of additional resources available to NMDP network partners.

OVERVIEW OF CORD BLOOD SEARCHES: THE CLINICIAN'S PERSPECTIVE

Andromachi (Machi) Scaradavou, MD, Pediatric Hematologist-Oncologist and Bone Marrow Transplant Specialist Memorial Sloan Kettering Cancer Center New York, NY

Dr. Scaradavou emphasized the importance of improving graft selection processes in cord blood transplants to enhance clinical outcomes, particularly for patients with diverse backgrounds and complex cases. She noted that transplant outcomes are closely tied to graft quality, which makes the selection process critical. Addressing a range of clinical scenarios, Dr. Scaradavou highlighted that different patient needs often require unique approaches to graft selection. For example, patients with specific conditions, such as urgent cases of acute leukemia, may require swift access to grafts, while others, like infants with metabolic diseases, may benefit from early transplantation to avoid irreversible damage.

Despite available tools and guidelines, such as the National Marrow Donor Program (NMDP) and matched search software, Dr. Scaradavou identified a gap in the proficiency of some transplant centers in navigating these resources. This often leads to hesitancy in selecting cord blood grafts, which could adversely affect patients, especially those from underserved populations who might not have readily available matched donors. To address this, the launch of the National Cord Blood Network aims to enhance training and increase cord blood transplants by developing a consortium of transplant centers focused on training and proficiency in cord blood procedures.

Dr. Scaradavou's team transformed existing guidelines into a user-friendly training tool to standardize and simplify the graft selection process. This tool incorporates specific steps and resources available in the matched search software, such as sorting units based on quality indicators and additional filters (e.g., urgency of transplant, accreditation, and cell dose). The guidelines are organized by patient type, prioritizing criteria based on disease urgency, matching requirements, and patient-specific needs.

The network's training initiative extends to webinars and creating a national consortium of search coordinators to disseminate this tool and monitor proficiency. Ultimately, this initiative seeks to enhance patient access to high-quality grafts, improve outcomes, and promote equitable access to transplantation across patient demographics.

Discussion

- Dr. Barker praised the presentation for addressing a critical gap in transplant guidelines, highlighting that many transplant centers remain unaware of the existing 2020 STC guidelines for cord blood selection. She emphasized the need for a network connecting search coordinators to share expertise and support each other directly. Dr. Majhail agreed, suggesting that organizations like ASTCT, CBA, and NMDP could help raise awareness of these resources among professionals. Both underscored the importance of search coordinators in facilitating effective donor selection across transplant centers.

PUBLIC COMMENTS

Brandon Nuechterlein, a 26-year survivor of a cord blood transplant for biphenotypic leukemia, discussed the exciting advancements in blood transplants, particularly in improving survival rates for diverse patient populations through post-transplant cyclophosphamide (PTCy). He emphasized the need to study long-term effects, especially in pediatric cases, where significant doses of alkylating agents could yield different outcomes over time compared to older patients. He was encouraged by the renewed focus on cord blood, which remains a vital resource for underrepresented groups. He shared his experience as a Thai-German recipient who had a rare match. Mr. Nuechterlein highlighted that cord blood stem cells, unlike those from older donors, have normal telomere lengths, potentially reducing aging-related issues for younger recipients. He expressed hope for further data and technological advancements to address these concerns and enhance outcomes for future transplant patients.

- Dr. Majhail thanked Mr. Nuechterlein for sharing his experience as a transplant survivor and acknowledged the importance of understanding the long-term complications of transplant technologies, noting that many late effects emerge decades post-transplant. He explained that ongoing research, supported by the Center for International Blood and Marrow Transplant Research and NIH funding, continues to investigate these issues, with a dedicated group of investigators committed to advancing knowledge in this area.
- Dr. Milano expressed concern over the declining use of cord blood transplants, noting that over half of U.S. transplant centers no longer perform them, often due to a lack of expertise. He emphasized that while donor options have expanded, there remain patients for whom cord blood is crucial, but access is limited due to this decline in practice, impacting equity in transplant availability. Mr. Nuechterlein added that cord blood offers the benefit of tolerating more HLA mismatches without additional alkylator exposure, enhancing patient outcomes.

- Ms. Grant asked how his 1998 transplant influenced his career path. Mr. Nuechterlein responded that his experience led him to become a transplant physician assistant, a role he's held for 16 years, allowing him to work alongside the doctors who once saved his life.

Sosa Evbuomwan shared her journey as a cord blood transplant recipient, which cured her of sickle cell disease 12 years ago when she became the first pediatric patient to receive this treatment at Duke University. Reflecting on her gratitude and the impact of her transplant at age 12, she described how it inspired her lifelong passion for advocacy and shaped her career ambitions, currently motivating her pursuit of medical school. Since high school, Ms. Evbuomwan has engaged deeply in cord blood advocacy, working as a lab technician at a cord blood bank and giving speeches to raise awareness. She emphasized the advancements in sickle cell treatment, noting the significance of recent gene therapy successes, and underscored the importance of continued support for sickle cell patients, often overlooked in healthcare. Ms. Evbuomwan also shared her evolving interest in pediatric hematology-oncology, fueled by her personal experiences and her time shadowing in clinics, which allowed her to empathize with young patients in treatment. Expressing optimism for the future of sickle cell research and treatment, Ms. Evbuomwan thanked the community for its dedication and support.

- Dr. Milano expressed his appreciation for Ms. Evbuomwan's talk, noting the importance of continuing research in the field of cord blood, which has struggled with limited funding. He shared successful results from his recent study on cord blood transplants, emphasizing that further research funding is essential to ensure future advancements in this area.

NEW BUSINESS AND DISCUSSIONS

- Ms. Stefanski discussed two upcoming sessions at a conference focused on cord blood in cell and gene therapies. The first session, scheduled for Friday, would cover using cord blood as a starting material in innovative therapies. The second session, "The Art of Cord Blood Selection," aims to provide valuable insights for nurse and transplant center coordinators attending the conference.
- Ms. Grant invited advisory council members to discuss any new business and suggest topics for future meetings, emphasizing the council's importance to HHS's mission, particularly in enhancing the CW Bill Young program. She expressed gratitude to eight current members, especially five whose terms were nearing expiration, including Dr. Julia Barker, Marcie Finney, Dr. Eapen Jacob, and Dr. John Levine, for their valuable contributions. Additionally, she acknowledged three advisory council members—Dr. Filippo Milano, Dr. Richard Maziarz, and Ann Richardson Berkey—who agreed to extend their terms. Ms. Grant announced the next meeting on January 23, focusing on emerging applications of stem cells in regenerative medicine, including insights from NIH and FDA colleagues and advancements in non-genotoxic conditioning for sickle cell disease. She encouraged retiring members to stay involved by participating as speakers or advisors and thanked them for their ongoing commitment.

ADJOURNMENT

Ms. Grant thanked the participants for a robust and enlightening meeting. The meeting adjourned at 5:25 p.m.