DKMS Operational User Guide for Collection Centers

❯❯ To all collection centers partnering with DKMS Germany

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1 Preamble

Welcome to the Deutsche Knochenmarkspenderdatei (DKMS) Donor Center (DC) User Guide for Collection Centers (CC). This document has been carefully crafted to provide comprehensive guidelines to ensure the highest level of quality and safety in the stem cell donation process. At DKMS, we are committed to maintaining excellence in every aspect of our operations, from donor registration to post-donation procedures.

1.1 Introduction

The DKMS is dedicated to saving lives by providing high-quality stem cell donations for patients in need. As a globally recognized leader in the fight against blood cancer, we strive to ensure that every step of the donation process is conducted with the utmost care, precision, and adherence to the latest medical standards. This guide is designed to support our partner CCs in upholding these standards and achieving successful outcomes for every patient and to meet standards and expectations of DKMS that add to applying standards and national regulations.

1.2 Purpose of the User Guide

The purpose of this user guide is to outline the protocols, expectations and best practices for all parties involved in the collection of stem cells. It serves as a comprehensive reference for ensuring consistency, compliance, and collaboration across all processes related to donor Workup (WU), collection and post-donation activities. By following the guidelines provided, CCs can contribute to the continuous improvement of our shared mission to provide life-saving treatments to patients worldwide.

1.3 Scope and Audience

This user guide applies to all CCs partnering with DKMS. It includes detailed information on the procedures and requirements specific to DKMS Germany. The guide is intended for use by medical professionals, administrators and other relevant parties involved in the stem cell donation and transplantation process.

DKMS Donor Center gGmbH Germany (DKMS DC DE) is accredited through Zentrales Knochenmarkspender-Register Deutschland (ZKRD). This guide reflects our commitment to continuous improvement and will be updated periodically to incorporate changes in medical practices or operational procedures. To see the most up-to-date version, please refer to the DKMS Professionals' Platform (https://professional.dkms.org/).

2 Organization of the Medical Departments

2.1 Human Leukocyte Antigen (HLA) Services Department

The Human Leukocyte Antigen (HLA) Service at DKMS is responsible for coordinating HLA typing and infection marker testing to optimize donor-patient matching and improve donor profiles.

The department's work is divided into two main areas:

- Patient-Related Typing Requests: When registries or transplantation centers (TC) request additional HLA markers or infectious disease markers (IDM) (such as Cytomegalovirus (CMV), Epstein-Barr virus (EBV), Toxoplasmosis or a full IDM profile, the HLA Service coordinates immediate testing.
- Prospective Typing and Quality Projects: The department proactively determines new genetic and infection markers to improve typing standards and to enhance donor availability.

Key initiatives include:

- Kilo Projects: Identifying and retyping donors with a high likelihood of being selected.
- Fast Force Donor Project: Engaging young donors with common HLA characteristics for regular health updates.
- High-Risk Program: Supporting financially disadvantaged patients by offering complimentary extended HLA typing.
- Replacement Donor Program: Finding backup donors to minimize repeated donor requests.
- Ancestry Project: Recruiting family members of donors with rare HLA types to expand the registry.

Additionally, the HLA Service ensures quality control of all test results, working closely with bioinformatics specialists to maintain data accuracy and reliability. Through these efforts, the department helps maximize the chances of finding the best possible match for patients in need of a life-saving stem cell transplant. The HLA Services Department is also responsible for initiating a replacement donor search in cases of emergency such as poor mobilization or when a donor becomes unavailable due to adverse reactions to granulocyte colony-stimulating factor (G-CSF). This ensures that an alternative donor or an Adult Donor Cryopreserved Unit (ADCU) product can be identified promptly to prevent delays in the transplantation process – see also 4.13.7 Definition and Handling of Poor Mobilizers.

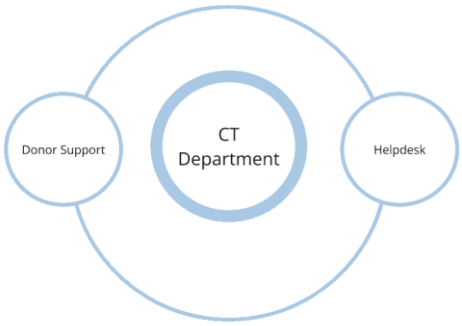
Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers.

2.2 Confirmatory Typing (CT) Department

The Confirmatory Typing (CT) department at DKMS is responsible for managing the process for potential Stem Cell donors identified as suitable matches based on tissue markers for specific patients. This team plays a critical role in facilitating the confirmation process required for verifying donor compatibility – see also 3.2 Confirmatory Typing. The operations are supported by two key teams: the Donor Support Team and the Helpdesk Team.

Structure:

Donor Support: The Donor Support teams are responsible for the initial contact with donors, managing the communication throughout the process, organizing blood sample collection, and coordinating Courier Services. The teams also oversee the reminder process for donors who do not respond within the specified timeframe. The teams review also any medical considerations that might affect the donation. The completed health questionnaire along with any medical reports are forwarded to the Physicians Team (PT) for evaluation.



Helpdesk Team: This team handles inquiries and resolutions that fall outside the standard process, including quality control of blood sample arrivals, managing reservations, and addressing special requests. The TC is informed about the donor's availability and any potential limitations including TC Info such as absence times (ABS), other relevant conditions (OTH), multi donation (MUL), risk of infection (ROI), bone marrow personal (BMP), stem cell personal (SCP). TC information for bone marrow medical (BMM) and stem cell medical (SCM) is provided by the PT.

Key Processes:

Order Handling: CT orders are received electronically and are immediately checked for patient and donor history. Donors are informed of a CT request primarily via phone call, followed by SMS and email. If no contact is made within three days, a reminder process is initiated.

Information Sessions: These sessions are vital to ensure donors understand the registration process, the potential donation, and to verify their medical suitability. Donors are informed about the logistics of blood sample collection.

Key Responsibilities:

Initial Contact: The team reaches out to donors to explain the confirmation process, collection procedures and address any questions or concerns.

Medical Screening: The health questionnaire and medical history of the donor are assessed in collaboration with PT.

Coordination: The team manages the logistics of blood sample collection, including coordination with the donor, their Healthcare Provider, and Courier Services.

Information Management: Relevant information is compiled and forwarded to the requesting registry/TC.

Operational Details:

Hours of Operation Donor Support: Monday to Friday, 8 AM - 8 PM; Saturday, 9 AM - 2 PM.

Hours of Operation Helpdesk: Monday to Friday, 8 AM - 5 PM

Standard Response Times:

50% of blood samples are collected within 7 days.

85% within 14 days.

95% within 21 days

Availability Metrics: 75% of donors are available; 25% are not available due to various reasons.

Additional Information:

Reservation Periods: Standard reservations are valid for 90 days and can be extended up to a total of 6 months without needing a reason. The maximum reservation period is 9 months.

KPI Targets: The team aims to ensure timely processing of donor requests and effective management of reservations to maximize the availability of potential life-saving donors.

Contact Information:

For any inquiries related to CT, please contact us at ctteam@dkms.de.

Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers.

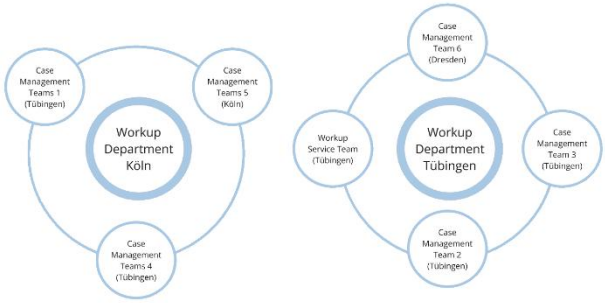
2.3 Workup Department (WU)

After a successful CT request, the TC will send a workup (WU) request for one specifically selected donor. The DKMS WU Department takes care of all incoming WU requests for our donors. The WU Case Managers (CM) carefully check every request and ensure a smooth coordination of all the steps necessary for collection of Bone Marrow (BM) and/or Peripheral Stem Cells (PBSC). In doing so, the WU employees are the interface between the donors, the collection and TCs, courier companies as well as the internal DKMS colleagues – see also 4 Workup (WU) Process.

Structure:

WU Department Tübingen

WU Department Cologne



Collaboration with Collection Centers (CC):

The WU Department works closely with CCs to coordinate the collection of PBSC or BM. This collaboration ensures that the entire process, from donor preparation to the final collection, is seamless and aligned with the highest standards of care. The department serves as the communication HUB, making sure that all necessary information is accurately and efficiently shared between the donor, CC and TC and ensure separateness of collection and TCs and thus anonymity between donors and patients.

Key Responsibilities and General Tasks:

Workup Service Team (WST): All WU sent to the DKMS Donor Center gGmbH Germany (DKMS DC DE) will pass through the WST where they are thoroughly checked for completeness, correctness and plausibility. Any questions that might arise during this check will be clarified with the respective TC or registry sometimes before the WU is assigned to a CM for further processing. In cases requiring approval for a second donation, clarification with external medical advisors may also be initiated as part of this process.

In addition to the WUs, the WST also handles incoming general e-mails (sent to: workup@dkms.de) and faxes for the entire department. On any given day, we receive several hundred transplant-related documents, like e.g. (non-) clearance information, rejection/approval information, laboratory results, etc. Documents that belong to a specific WU will be added to that file electronically.

The WST also handles phone inquiries, taking calls for absent or unavailable colleagues. This allows the CMs to focus even more on the personal care of their donors.

Case Management Teams: After a CM receives a new WU request he/she will cover all the steps involved in organizing the actual collection (see also 4 Workup (WU) Process), i.e.:

- Initial info session (if possible within two days after receipt of the WU)
    - Content: explanation of the entire process, including duration, expectable side effects, downtime at work (un)availabilities, accompanying person, reimbursements and time to answer any questions the donors might have
- Scheduling of dates Physical Examinations (PE) and donation dates).
- Travel Arrangements
- Courier organization for blood samples at PE
- Courier organization for stem cell product transport upon request
- Cryopreservation verification and approval process
- Handling of Postponements and Cancellations
- Clarification of any questions that might arise throughout the entire process

    - Medical questions from donor and/or TC will be clarified with CC that is taking care of the donor
- Detailed documentation through documents, e-mails, notes in the donor management software
- On-call CM – emergency phone number:
    - In case of emergencies, donors and partners can reach the WU Department 24/7. The corresponding number is shared with all internal and external parties involved in the process at the time of donor clearance.

After donation, the Donor-Patient Contacts (DPC) Department will take over, contacting the donor within a week post-donation.

Operational Details:

Hours of Operation: Monday to Friday, 8 AM - 5 PM

Outside of these office hours, one CM is always on call, with the Head of Departments serving as a backup. This ensures that urgent issues are addressed promptly, regardless of the time.

Contact Information:

For any inquiries related to the WU Department, please contact them at workup@dkms.de.

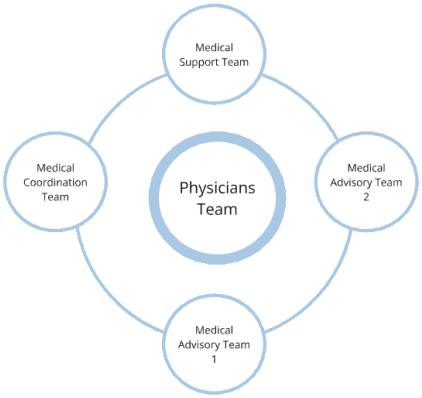
Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers.

2.4 Physicians Team (PT)

The PT at DKMS plays a pivotal role in ensuring the health and safety of potential and registered stem cell donors. This team is responsible for managing medical inquiries, providing expert consultations, and overseeing the medical aspects of the donor journey. The PT collaborates closely with other DKMS Departments, such as the WU department and Feedback Management (FBM) department.

Structure:

Medical Coordination Team (MCT): This team specializes in evaluating the medical questionnaires and infection parameters during the CT phase. They ensure that all medically relevant findings are documented and communicated effectively to the TCs. In cases where no medical concerns are identified, donors are cleared for next steps in the donation process.



Medical Advisory Team 1 (MAT 1): This team is responsible for handling medical consultations related to CT and initial donor inquiries. They assess the medical suitability of donors, review health questionnaires, and coordinate with TCs to ensure that donations are set up to be carried out in a safe and transparent way by focusing

on donor health and donor information and education. To provide donors with the latter, all donors with complex medical conditions are handled by the physicians of MAT 1.

Medical Advisory Team 2 (MAT 2): This team focuses on Donor Follow-up (FU) care and ongoing medical support for donors. They manage post-donation health monitoring, handle serious event and adverse reaction (SPEAR) reporting, and provide medical advice for complex cases that arise during the WU process and after the donation process (during FU) – see also 5.7 Donor FU and 6 Adverse Events and Reactions Reporting (SPEAR).

Medical Support Team (MST): This team is composed of Administrative Specialists and Project Managers. They are responsible for managing and maintaining medical questionnaires within the database. Additionally, they handle mail and phone calls from donors, and forward them to the appropriate departments as needed, including an ongoing exchange between MAT 2 and MST concerning donors' medical support.

Medical Scientific Analyst: The Medical Scientific Analyst is part of the PT and tasked with the regular analysis like non-clearances issued by the different CCs. In addition to that, the Medical Scientific Analyst organizes the monthly Regular Calls and Symposium in cooperation with the Medical Project Manager & Consultant.

Key Processes:

Medical Consultation: The PT provides expert medical advice to potential and registered donors. This includes evaluating whether individuals with pre-existing conditions can register as donors and advising them on any health concerns that may arise during the donation process.

FU and Monitoring: The team supervises the health of donors up to ten years post-donation, ensuring that any reported medical abnormalities are followed up on. This includes regular health questionnaires and the management of the Matched Pair Study, which monitors the health outcomes of donors compared to control groups – see also 5.7 Donor FU.

Medical CT Review: The team conducts thorough reviews of medical health questionnaires and infection markers during the CT. This involves obtaining additional medical reports when necessary and ensuring that all relevant information is accurately communicated to TCs.

Key Responsibilities:

Donor Health Protection: The PT is dedicated to protecting the health of donors. They make decisions on donor eligibility, temporary deferrals or permanent exclusion from the registry based on medical findings.

Collaboration and Training: The team provides medical training to other DKMS departments and supports the implementation of medical standards across DKMS entities. They also contribute to international collaboration by representing DKMS in organizations like World Marrow Donor Association (WMDA) and Zentrales Knochenmarkspender-Register Deutschland (ZKRD).

Scientific Contributions: The PT is actively involved in scientific research, contributing to studies and publications that enhance the understanding of donor health and improve transplantation outcomes.

Training and Education: The PT conducts regular training sessions for DKMS staff, including international teams, to ensure consistent application of medical standards and procedures.

Operational Details:

Hours of Operation: Monday to Friday 8 AM - 5 PM

Contact Information:

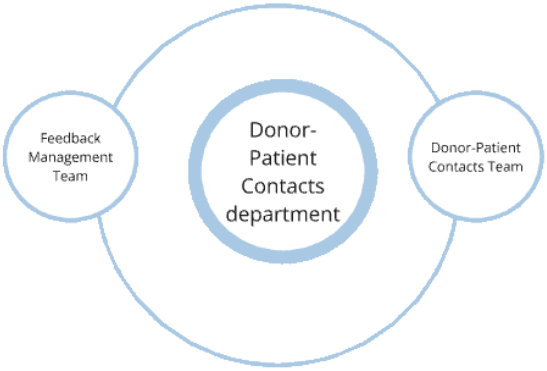
For any inquiries related to the PT, please contact them at:

medizin-koeln@dkms.de

Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers

2.5 Donor–Patient Contacts (DPC) Department

The Donor-Patient Contacts (DPC) department at DKMS ensures comprehensive post-donation support for donors, provides patient follow-ups and facilitates communication between donors and their recipients. All members of the DPC department are responsible for overseeing donor-patient communication, ensuring confidentiality, and addressing donor concerns. Additionally, specific team members within the department manage FBM Tasks, ensuring that donor feedback is thoroughly evaluated and acted upon.



Structure:

The work of the DPC Team starts after the donation process is completed. The department consists of two teams: the team of DPC Coordinators and the FBM Team. Both teams share a great number of tasks, feedback managers have additional tasks.

All Team Members conduct the Post-Tx Interview with donors shortly after donation to assess their well-being, review the donation experience, and - upon request - provide information about the recipient's age group, gender, and country of residence. Donors are informed about country-specific anonymity rules and the possibility of future contact with their recipient (see also 5.4 Anonymous Correspondence between Donors and Patients). The department monitors the status of cryopreserved stem cell products to keep donors informed about the status of their cells (see also 5.3 Patient Follow-up (FU) and Cells not infused). After transplantation, the team manages inquiries related to patient status, providing engraftment data to CCs and forwarding basic and anonymous information to donors. The department facilitates anonymous communication (e.g., letter exchanges) between donors and recipients, ensuring that these interactions are handled with care and respect for privacy. Additionally, the team organizes the release of personal information when permitted by regulations – see also 5.4

Anonymous Correspondence between Donors and Patients. The Department is also in charge of deferring donors due personal or medical reasons or if they reach the age limit of 61 years – see also 5.6 Blocks and Exclusions.

FBM Team: In addition to their DPC responsibilities, certain team members also handle the FBM process. Feedback managers handle any feedback or complaints related to the donation. Medical issues raised by donors during Donor FU, such as discomfort or complaints documented on the FU-Questionnaires, are promptly reported to the relevant teams via feedback@dkms.de for appropriate action. The team remains in contact with donors as needed, offering ongoing support and coordinating with the PT or CCs if further medical attention is required. Feedback managers are also responsible for cost reimbursements and insurance processes – see also 5.5 Feedback Management.

Collaboration with CCs:

The DPC Department collaborates closely with CCs to ensure that donors receive the necessary medical FU and that any issues identified during Post Donation Processes are addressed promptly. This collaboration is vital to maintaining the health and well-being of donors and ensuring that the donation process is as smooth and positive as possible. If available, DPC also provides engraftment data to CCs (Joint Accreditation Committee ISCT-EBMT (JACIE) accreditation).

Key Responsibilities:

Post-Tx Interview / Feedback Management: The department is responsible for conducting the first FU call with donors post-donation. They provide continuous support when needed. This includes managing any complaints or medical concerns that arise post-donation and coordinating with relevant Medical Teams.

Facilitating Donor-Patient Communication: The team manages all forms of communication between donors and recipients, including anonymous letter exchanges and the release of personal information, ensuring that all interactions comply with confidentiality guidelines.

Survey and Feedback Analysis: The department conducts satisfaction surveys with donors three months post-donation. The insights gained from these surveys are shared with relevant departments to continuously improve DKMS's processes and donor care.

By managing post-donation care and facilitating meaningful connections between donors and patients, the DPC Department plays a crucial role in maintaining the long-term well-being and availability of donors and supporting the emotional connections that can develop between donors and their recipients.

Operational Details:

Hours of Operation: Monday to Friday 8 AM - 5 PM

Contact Information:

For any inquiries related to the DPC Team, please contact them at: donor2patient@dkms.de

Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers.

2.6 Quality and CC Relationship Management (QCCRM) Department

In 2023, the DKMS DC DE made the strategic decision to combine both Quality and Process Management and CC Relationship Management in one specialized department. This decision led to the foundation of the Quality and CC Relationship Management (QCCRM) Team in 2024, which became a department in 2026

Structure:

CC Relationship Management (CCRM): The CC Relationship Managers are responsible for establishing and nurturing relationships with both existing and potential CCs. General process clarifications that arise separately from Corrective and Preventive Action (CAPA) management fall under this area of responsibility as does the organization of regular meetings with the CCs and the annual CC symposium. Moreover, the team supports adjustments to contracts and prices. For more information see chapter 9 CC Relationship Management and 10 External Corrective and Preventive Action (CAPA) Management.

External CAPA Management: The CAPA/Deviation Manager jumps into action when deviations and quality incidents need to be clarified with our external partners, i.e. the Collection and TCs or other Registries. In addition to the detailed and neutral analysis of the situation, this also includes the implementation of measures for process improvement and effectiveness checks (see also chapter 10 External Corrective and Preventive Action (CAPA) Management).

Quality and Process Management: The Quality and Process Managers support the entire DKMS DC DE and help to build and maintain a company-wide quality management system. This includes, among other things, internal and external audits, document and process management, risk management, and continuous improvement. For more information see chapter 11 Collection Center (CC) Audits.

Collaboration with CCs:

The QCCRM Department works closely with CCs to ensure that all processes meet the highest quality standards. Regular meetings and annual symposia are organized to facilitate open communication and address any challenges or improvements needed. The team is dedicated to supporting CCs with any questions or issues that arise, promoting a collaborative approach to process management. The CCRM Team serve as the first point of contact for CCs for any general questions and concerns. For more Information see chapter 9.2 Collection Center (CC) Onboarding and Collaboration.

Key Responsibilities:

Relationship Building: The CC Relationship Managers focus on creating and maintaining strong partnerships with CCs through consistent communication and customer relationship management practices.

Process Improvement: By managing deviations and CAPAs and conducting regular audits, the team ensures that any deviations are promptly addressed and that the quality and effectiveness of all processes is continuously improved.

Documentation and Compliance: The department is also responsible for maintaining comprehensive documentation and ensuring compliance with internal and external quality standards, including the WMDA and ZKRD certification requirements.

Contact Information:

For any inquiries related to the QCCRM department, please contact us at:

ccrm@dkms.de (CC Relationship Management)

quality-medical@dkms.de (CAPA Management)

ccaudit@dkms.de (Quality and Process Management)

Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers

2.7 Consultants

2.7.1 Medical Director DC

The Medical Director of the DKMS DE DC is responsible for overseeing all aspects of donor health, safety, and regulatory compliance throughout the donation process. The role provides medical leadership for donor eligibility assessments, adverse event monitoring, and the development and implementation of medical standards across the DCs operations. The Medical Director also supports the interpretation of complex medical findings, provides expert input on donor-related medical issues, and collaborates with internal and external stakeholders to continuously improve donor safety standards across the DKMS DCs.

2.7.2 Medical Project Manager & Consultant

The Medical Project Manager and Consultant reports directly to the Chief Operating Officer for the medical division and serves as a key interface between the DKMS DC, the CCs, and the DKMS Group. This role is essential for ensuring the effective implementation of medical projects and the maintenance of high medical standards across all related processes.

The primary responsibilities include developing and updating medical standards and guidelines, particularly those related to donor eligibility and stem cell collection procedures. The Medical Project Manager and Consultant also plays a vital role in coordinating medical projects, monitoring progress and managing stakeholder communication to ensure that all activities align with DKMS’s quality standards.

Furthermore, the role involves providing expert medical advice and support, particularly in the context of audits and regulatory requirements. This includes moderating regular communications with CCs and facilitating the exchange of knowledge and best practices between different medical departments within the DKMS Organization. The Medical Project Manager and Consultant is also actively engaged in scientific activities, such as participating in medical conferences, delivering presentations and contributing to internal medical studies.

Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers

2.7.3 Senior Manager International CC Partnerships

The Senior Manager for International CC Partnerships plays a key role in expanding and strengthening DKMS's global network of CCs. This includes identifying new strategic partners, supporting existing CCs in enhancing their operational capacity across all DKMS DCs, ensuring that each location can accommodate the growing needs of donors and patients.

2.8 Clinical Trials Unit (CTU)

The Clinical Trials Unit (CTU) is a scientific research division of DKMS, established to address the many unanswered questions in the treatment of blood cancer and other diseases affecting the hematopoietic system. Founded in 2013, the CTU is dedicated to conducting life-saving and innovative research to improve patient outcomes, with a primary focus on allogeneic blood stem cell transplantation.

Despite advancements in treatment, many mechanisms that drive the evolution of blood cancer remain poorly understood. The CTU addresses these knowledge gaps, especially regarding the immune system's role in cancer surveillance and control. Disease-specific research is essential to guide treatment decisions and establish evidence-based medical guidelines. By initiating and supporting fundamental research, the CTU aims to improve survival rates and optimize therapeutic approaches for blood cancer patients.

Located in Dresden, Germany, the CTU benefits from its close collaboration with national and international TCs, academic networks, and scientific institutions. Its proximity to key DKMS facilities such as the DKMS Life Science Lab (LSL), the DKMS Stem Cell Bank (SCB) and the DKMS CC fosters a culture of innovation and interdisciplinary collaboration, ensuring that pivotal studies can be translated into clinical applications.

The CTU also focuses on areas of research overlooked by the pharmaceutical industry, filling a critical gap in blood cancer research. Its work is centered on improving transplant success rates and addressing post-transplant complications, including graft-versus-host disease, viral infections, and relapse. Additionally, the colleagues at the CTU administer the DKMS Biobank (Collaborative Biobank (CoBi)). For more information see chapter 7 CC Engagement related to DKMS supported Research Activities.

Additionally, this Guideline provides an appendix with the most important telephone numbers in chapter 12.2 Frequent contacts incl. telephone numbers

2.9 Additional Important Contacts: Life Science Lab (LSL), Stem Cell Bank (SCB)

2.9.1 DKMS LSL:

The LSL provides the highest quality of genotyping services to ensure the best possible match between donors and patients. The work of the LSL is essential in increasing the chances of survival for people battling blood cancers and other serious diseases. In addition to its genotyping services, the laboratory is also involved in scientific research and clinical collaborations to improve donor selection and treatment options for patients worldwide.

The laboratory's mission is twofold to support the DKMS mission by providing high-quality HLA typing and to promote scientific research that improves stem cell transplantation outcomes. Using advanced Next Generation Sequencing (NGS) technology, the LSL can provide detailed immunogenetic profiles that include HLA loci, blood group (ABO and RhD), MHC class I chain-related gene A (MICA), MHC class I chain-related gene B (MICB), Killer cell Immunoglobulin-like Receptors (KIR) receptor group, and the analysis of the CMV Immunoglobulin G (IgG) status.

The LSL is committed to best practices in molecular genotyping, ensuring that all procedures comply with international standards and that the results are highly reliable and accurate.

High-throughput Genotyping:

The LSL's proprietary NGS workflow enables the laboratory to process large quantities of samples efficiently while maintaining high accuracy. The lab types more than one million samples each year, directly contributing to the expansion of the DKMS donor pool and providing more life-saving matches for patients in need.

Collaboration with Research Centers:

In addition to routine genotyping, the LSL partners with clinical research centers around the world, including the CTU in Dresden, to advance scientific research in donor selection and transplantation outcomes. The lab has discovered nearly 6,000 previously unknown HLA gene variants, adding significant value to global HLA databases.

International Standards Compliance:

The LSL ensures all testing meets the highest quality control standards, including DIN EN ISO 15189, European Federation for Immunogenetics (EFI), Good Manufacturing Practices (GMP) certifications and compliance with International Laboratory Accreditation Cooperation (ILAC).

2.9.2 DKMS SCB:

The SCB was initially established as a Cord Blood Bank, and it remains the first facility in the world to offer cryopreserved PBSC for unrelated allogeneic transplantation. The SCB plays a vital role in ensuring that stem cell products are readily available to patients, significantly reducing the time between donor identification and transplantation.

In addition to cord blood units, the SCB stores and provides ADCUs, derived from PBSC of unrelated volunteer adult donors. These ADCUs offer a unique opportunity to assist two patients with just one donation, improving the chances of success for patients awaiting urgent transplants – even more relevant in cases of emergencies and urgent transplants. Alternatively, an ADCU can also serve as readily available second transplant for the initial patient.

The SCB ensures that stem cell products are cryopreserved under the highest quality standards. By storing excess stem cells collected during a directed donation for one patient, these ADCUs become available for future use, potentially saving another life.

Comprehensive Donor Selection:

Only donors who are already approved for a specific patient donation are considered for ADCU donors are carefully selected based on a range of factors, including HLA genotype, age, weight, and health status. donors are thoroughly informed about the ADCU process and must provide additional informed consent prior to collection.

Quality Control and Testing:

The SCB performs rigorous quality testing on all stem cell products before they are made available. These tests include HLA typing, 4.11 Excursus Cell Counts assessments (including CD34-positive cells), and product viability testing to ensure that each unit meets the highest standards. The SCB is committed to Good Manufacturing Practice and regularly undergoes inspections to maintain compliance. For more information see also: https://professional.dkms.org/about/stem-cell-bank

Rapid Availability of ADCU:

By offering cryopreserved ADCUs "off the shelf," the SCB ensures that TCs can access these products quickly, reducing the time between request and transplantation. The SCB requires a minimum of three days to prepare the product for transport after receiving the initial request.

Donor Safety:

The health and well-being of donors is the SCB's top priority. The collection of additional cells for an ADCU does not increase the donor's health risks. No additional administration of G-CSF is necessary, and the total apheresis duration remains within approved limits. donors are fully informed of the process, and additional informed consent is obtained before collection. The SCB holds both the manufacturing authorization and the Paul-Ehrlich-Institut (PEI) approval required for processing and storing cryopreserved products. The approval is registered under authorization number PEI.H.12121.01.1 for the medicinal product designation Allogeneic cryo PBSC, DKMS-1**.**

For more information see also chapter 4.6 Cryopreservation of Stem Cell Products and chapter 4.7 Special Request: Adult Donor Cryopreserved Unit (ADCU).

3 Pre-Workup (WU) Procedures

3.1 Donor Registration in the DKMS Database and Updating of Data

DKMS aims to register healthy individuals between the ages of 17 and 55 who are not significantly overweight, as potential stem cell donors. Donors can register either at in-person events known as "Bone Marrow Donation Days" or through an online registration process. Registration must be voluntary and fully informed, ensuring that potential donors understand the donation methods and medical contraindications.

In-Person Registration:

Bone Marrow (BM) Donation Days are organized by trained adults who are responsible for overseeing the registration process and ensuring that all necessary formal documents are completed. These events can take place in schools, universities, workplaces, or public events. Trained volunteers help potential donors complete the registration form and take a cheek swab.

Online Registration:

Potential donors can also register by ordering an online registration kit, which includes the necessary forms and a cheek swab kit. After completing the registration form and the cheek swab, the donor sends the package back to DKMS using the provided return envelope. The donor has the option to contact DKMS if they have questions about the medical process or registration.

Once the cheek swab is received, the DKMS LSL conducts an Human Leukocyte Antigen (HLA) typing to determine tissue compatibility. The results, along with the donor's personal data, are entered into the DKMS database. This process takes approximately 2-3 months. Donors will receive a confirmation of registration, along with a donor ID card containing their unique database number.

DKMS places great emphasis on maintaining regular contact with potential donors. Annual reminders are sent by email or post, encouraging donors to update their contact and medical information. These reminders also include general updates about DKMS and its mission to promote BM donation.

Data Management and Privacy:

DKMS ensures that all donor data is handled securely and in compliance with data protection laws. Donor information is stored confidentially, and donors have the right to inquire about the processing of their personal data at any time. DKMS also works to ensure that registration forms and swab kits are processed efficiently, with regular monitoring to prevent any delays in HLA typing or data entry.

Reminders: Annual reminders are sent to all registered donors, encouraging them to update their contact and medical details. DKMS strives to make the update process as simple and

accessible as possible, whether through online platforms or by providing pre-paid return envelopes for mailed updates.

3.2 Confirmatory Typing (CT)

Confirmatory Typing (CT) is a critical step in the donation process, ensuring that the HLA match between the donor and the recipient is verified before any stem cell product can be administered. This verification must be conducted with a fresh blood sample from the donor and may occur either prior to or during the workup (WU) phase – see also 4.1.1 Introduction to WU and 4.1.4 Different Processes for Different Needs.

CT involves multiple phases, starting with an information session to assess the donor's willingness and availability for donation, followed by health screening, infectious disease marker (IDM) testing, and HLA verification. All donors undergoing CT must be carefully evaluated to ensure their health and suitability, and the transplantation center (TC) must be informed of any relevant medical details.

Key elements of the CT process include:

Detailed Information Session: The Coordinator of the CT Department conducts a phone session to explain the donation process, verify the donor's willingness, and check their availability. Additionally, the donor also receives a brochure that explains all relevant steps.

Health History Questionnaire (HHQ): The donor completes a medical questionnaire covering past and current illnesses, medical procedures, medications, travel history, and risk factors. The initial review of the questionnaire is handled by a medical professional, with cases referred to a physician only when more complex information or further clarification is required. The evaluation of medical conditions is conducted in accordance with local and World Marrow Donor Association (WMDA) standards and current suitability criteria. This may involve issuing TC information (TCI), assessing eligibility for the method of harvest (Peripheral Stem Cells (PBSC) or BM based on medical or personal reasons), conducting medical clarifications, and determining temporarily unavailable /donor deferred decisions.

IDM Testing: Standard virological tests such as Cytomegalovirus (CMV) Immunoglobulin G (IgG) and Immunoglobulin M (IgM), Hepatitis B surface antigen (HB-s-Ag), Hepatitis B core antibody (Anti-HBc), Hepatitis C virus (HCV), Human Immunodeficiency Virus (HIV) 1 and 2, IgG, and IgM are performed.

Blood Draw for HLA Verification: A fresh blood sample (maximum 50 ml) is collected from the donor to confirm HLA compatibility between the donor and the recipient. The sample is also used for blood typing and Rhesus factor determination.

Sample Shipment: Blood samples are sent to a laboratory designated by the requesting TC for HLA verification.

Donor Reservation: Upon receiving the CT request, the donor is reserved for six weeks, with an extension to three months once contact has been made and the blood draw scheduled.

Donors are also advised on specific health precautions they should follow during the CT phase, including avoiding blood donation, acupuncture, piercings, tattoos, and notifying

DKMS if any health changes occur. Female donors are advised to avoid pregnancy during this period.

Incomplete or Delayed Health Assessments: If the donor fails to complete the HHQ or if required medical documentation is missing, the process will be delayed. In such cases, the CT Coordinator will contact the donor to obtain the necessary information and clarify any medical concerns.

Delays in Blood Draw or Sample Shipment: If there are delays in collecting or shipping the donor's blood sample, the donor's reservation may need to be extended beyond the standard period. The CT Department will coordinate with the donor and TC to resolve any logistical issues.

Changes in donor Health or Availability: If the donor experiences a change in health or is no longer available for donation, DKMS must be informed immediately. The donor's suitability for donation will be reassessed, and the TC will be notified if another donor search is necessary.

3.3 Health and Availability Check (HAC)

The Health and Availability Check (HAC) is a process in the donor selection procedure, particularly for urgent searches or when a donor has already undergone CT. The HAC serves to confirm that the potential donor remains willing, available, and in good health to proceed with the donation process.

HAC Process Overview:

Purpose: The HAC ensures that the donor is still fit for donation, both in terms of health and availability. This check involves the completion of the HHQ by the donor but does not require a blood sample.

Timing: The HAC should be requested instead of, and not prior to, a CT. If IDM testing results are necessary for donor selection, the CT should be requested initially rather than an HAC.

Donor Reservation: Upon completion of the HAC, the donor is reserved for a period of 90 days. This reservation can be extended for up to 9 months if a valid reason for the extension is provided. Requests for reservation extensions should be directed to DKMS registry via email at services@dkmsregistry.org.

A HAC is not applicable if it is a second donation. In these cases, a medical consultant is always consulted first before contacting the donor. The medical consultant requires the relevant WU forms.

Next Steps: After a successful HAC, the HLA confirmation will be included as part of a combined CT and WU request.

The HAC process is a streamlined approach to ensure that potential donors are adequately prepared and available for the donation process, helping to maintain efficiency and reliability in donor selection and donor protection. This process is not used by National Marrow Donor Program (NMDP).

4 Workup (WU) Process

4.1 Overview of WU - Workflow for collection centers (CC)

4.1.1 Introduction to WU

After a successful Confirmatory Typing (CT), the transplantation center (TC) will opt for one specific donor to proceed to Workup (WU). For this, the TC will provide a full WU request containing all relevant information. This information is either provided through specific forms that are shared by e-mail or fax or through available interfaces, e.g. with the DKMS registry or the National Marrow Donor Program (NMDP).

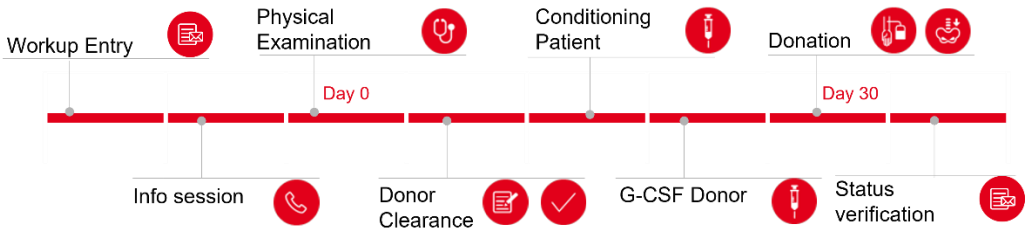
The DKMS WU department takes care of all incoming WU requests for DKMS donors who are registered with DKMS Germany. Every request is first received and thoroughly checked by the Workup Service Team (WST; p.e. clarifying any missing information or second donations, multi recipient requests) before being assigned to the Case Manager (CM) who will take care of all the steps necessary for collection of Bone Marrow (BM) and/or Peripheral Stem Cells (PBSC).

The following chapters give you a detailed overview of all the steps and services provided by DKMS before a WU or a specific task is handed over to the CC.

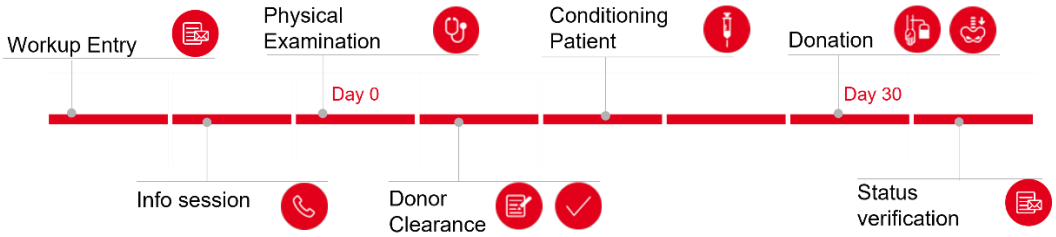
Timeline:

Depending on the requested product, the timeline and steps involved may slightly vary.

Exemplary timeline for PBSC requests:



Exemplary timeline for BM requests:



4.1.4 Different Processes for Different Needs

Apart from the differences resulting from the specific product requested, more process variations might be necessary to cover all possible scenarios.

CT and WU in parallel (CT+WU):

For urgent cases, we allow to have these two services processed in parallel, i.e. the CM will arrange for the CT to be done right after the Physical Examinations (PE).

As the info session by the CT team is skipped for these requests, the Info Session at WU level is more extensive and covers more in-depth questions regarding the donor's health history and such.

Since the CT step is mandatory, it is very important that all samples needed for this are drawn at the CC at the time of PE. Any failure to do so, will result in an additional burden for the donor.

The DKMS CM will organize the courier(s) for the blood samples PE drawn at and make sure that they are delivered to the intended address (pre-collection samples might be sent to a different address than the CT samples).

Subsequent donations:

Second donation: If a donor is asked to donate PBSC / BM for a 2nd time for a patient, the DKMS WU Department will have an independent Medical Advisor review the case beforehand. This applies for every additional PBSC/BM request.

Depending on the time span between the first and this subsequent donation, the DKMS CM will either organize a full PE appointment or a blood draw

For more information see chapter 4.13.3 Multi-Donations and 5.9 Subsequent Donation Request.

Mononuclear Cell (MNC) apheresis: Depending on the time span between the first donation and the mononuclear cell request, the DKMS CM will either organize a full PE appointment or a blood draw. Starting with the fourth mononuclear cell request, the DKMS WU Department will have an independent Medical Advisor review the case beforehand. For more information see also chapter 4.13.4 Mononuclear Cell (MNC).

Multi Donation: Similar to a second donation request, however, in this specific scenario, the donor is asked to donate PBSC/BM for a second time but for a different patient than the first

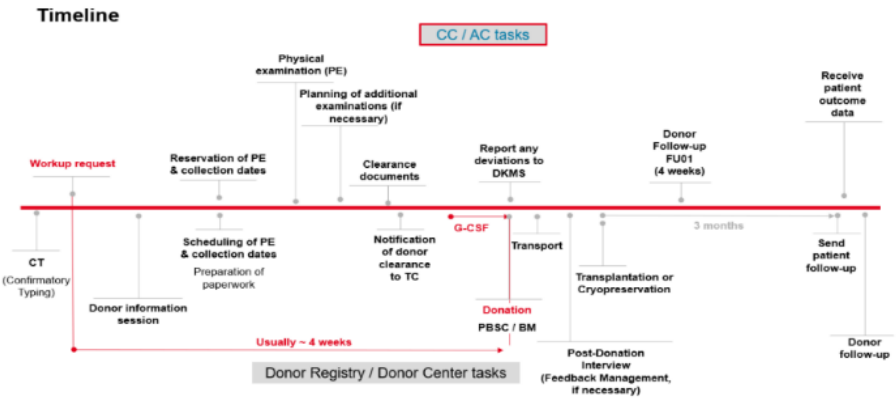
time. Also in this case the CM will have an independent Medical Advisor review the case beforehand. For more information on Multi Donation see also chapter 4.13.3 Multi-Donations.

Country-specific requirements:

Depending on the patient's country of origin, different blood samples and/or testing panels might be needed. Examples include, for example:

- Food and Drug Administration (FDA) samples for NMDP requests - important: Similar to the infectious disease markers (IDM), the FDA samples only remain valid for 30 days, i.e. they must usually be redrawn in postponement scenarios.
- Tick-Borne Encephalitis Virus (TBEV) testing

Timeline of a WU Request:



4.2 Preliminary Review at WU Entry

We have included the prescription for PBSC and BM collection of the Zentrales Knochenmarkspender-Register Deutschland (ZKRD) in 12.4 Appendices: Prescription ZKRD.

4.2.1 WU Verification by the Workup Service Team (WST)

As part of the workup verification process, the WST performs a content check of the submitted documentation. Both formal and medically relevant aspects are reviewed to ensure that all required data for the workup are complete, consistent and accurate.

Data reviewed and typical follow-up requests:

- Cell Count: The plausibility of values is verified. If the requested cell amount exceeds the standard requirement, the WST will ask for the medical reason. This justification must also be stated by the TC on the workup request form. Since the WST is not medically qualified to assess the justification, any further inquiries from the CC are clarified by the responsible CM with the TC. After the pre-collection examination, the CC records the expected achievable cell yield in the verification, and the TC must confirm that this is sufficient for the patient’s transplantation.

- Diagnosis: If the workup request enters the system via the DKMS Registry, the responsibility for verifying the diagnosis lies with the registry. For requests from Germany or the USA, the WST performs the diagnosis review. The WST uses the web-based diagnosis list provided by DKMS physicians. If the list indicates that a specification is needed, the WST requests the specification from the TC/HUB. If the list indicates that the diagnosis must be approved by the medical advisor, the WST contacts the medical advisor.
- Second Donations**:** All requests for second donations are reviewed by the Medical Advisor to ensure medical appropriateness and donor safety.
- Justification-required data: Whenever data are incomplete, unusual, or require clarification, the WST requests additional justification from the TC, depending on the data type.

Division of responsibilities

- Zentrales Knochenmarkspender-Register Deutschland (ZKRD): Performs a review of the correctness of the patient–donor combination. Other content checks are carried out by the WST.
- NMDP: The scope of review by NMDP is currently unknown; therefore, the WST ensures completeness of data on their side.
- DKMS Registry: Performs checks for the data needed for entry into the system and the diagnosis review (as described above). The WST ensures completeness where required.

4.3 Info Session

The DKMS CM is required to contact the donor right after receipt of the WU request to perform the info session. A typical info session at WU level will cover:

- Identification of the donor
- Clarification of the continued willingness to donate
- Information about the PE at the CC and what this entails
- Explanation of the Donation Process requested by the TC, including Granulocyte colony-stimulating factor (G-CSF) injections
- Organization of all appointments
- Travel arrangements
- Cost coverage
- Any questions the donor might have

Please note: As the name "info session" suggests, the CM is only able to inform the donor. The required counselling can only be provided by the Physician in charge at the selected CC.

4.4 Reservation of Dates

It is essential that the scheduling process for all donation-related appointments is coordinated smoothly and efficiently. After confirming the donor's availability, the CM is responsible for ensuring that all relevant dates for the PE, Clearance of the Donor, and Donation Process are reserved with the CC. It is essential that both the PE and the donation occur at the same CC to ensure consistency and for reasons of liability. The donor should not be scheduled to donate at the same center where the patient is receiving treatment.

Key expectations include:

- All necessary dates should be confirmed promptly, with careful consideration of the patient's timeline and the TCs preferred dates.
- The CM ensures that IDM testing remains valid by scheduling the PE within 30 days prior to the donation.
- The CM coordinates final clearance and collection dates to accommodate the patient's conditioning treatment and ensure timely completion of all required paperwork.
- If the donor has significant travel time to the CC, the CM arranges for the donor to arrive the evening before the PE or donation to ensure readiness.

In cases where scheduling conflicts or other issues arise, the CM must promptly address these to avoid any potential impact on the patient's treatment. Deviations could include:

- Donor Availability Conflicts: If the donor cannot proceed with the proposed dates, the CM communicates with both the donor and TC to agree on alternative dates.
- CC Scheduling Conflicts: If the CC is unable to accommodate the preferred dates, the CM coordinates with the donor and TC to propose new dates while maintaining alignment with the patient's treatment timeline.
- IDM Testing Validity: If the PE cannot be scheduled within the required 30-day window, the CM ensures that an additional blood draw for IDM testing is arranged within the appropriate time frame.
- Backup Donors: If there is uncertainty about the donor's primary or backup status, the CM consults with the TC/HUB before reserving CC slots. Appointments at CCs are only reserved for backup donors in rare, exceptional cases, such as an increased probability of failure of the Donor Final Clearance (DFC) of the primary donor or compliance issues.

It is crucial that any deviations are communicated to all relevant parties, including the TC, HUB, and donor, to ensure prompt resolution and avoid delays.

To maintain compliance and ensure the efficient scheduling of appointments, the CM and WST should follow these best practices:

- Coordinating Dates: The CM uses the patient's conditioning schedule and the TC's requested DFC due date to plan the timeline for the donor's appointments. All efforts should be made to schedule the PE, DFC, and donation as early as possible.
- Backup Donor Procedures: If the donor is a backup, the CM ensures that CC slots are only reserved for the primary donor, unless instructed otherwise. The backup donor is informed of their status to manage expectations.
- Flexibility: In the event the proposed dates are not feasible, the CM works with the donor and CC to propose alternative dates that meet the patient's needs while allowing extra time to process the DFC.
- Effective Communication: Throughout the scheduling process, the CM ensures that all parties, including the donor, TC, HUB, and CC, are kept informed of any changes or updates. Clear and timely communication is essential to minimize delays.

4.5 How to use our DKMS forms

4.5.1. DKMS Forms – General Information

The DKMS CM includes specific DKMS forms with every WU request sent to the CC. Other DKMS forms might become relevant when the WU Process has already further progressed.

Notification of Donor Clearance (for more information see chapter 4.10.2 Donor Final Clearance (DFC) and 4.10.3 Non-Clearance or Temporary Non-Clearance). The DFC form contains different sections that are to be filled in by the Donor Center (DC), the CC and the TC.

The CC is asked to use this DFC form to document whether a donor can be cleared for the requested donation method.

Verification of Prescription: The Verification of Prescription form contains different sections that are to be filled in by the DC, the CC and the TC.

This form focusses on the requested cell count and whether the CC considers the cell count feasible or not – for more information see chapter 4.11.1 Feasibility assessment and conservative calculation by CC and 4.11.2 Handling Deviations (10% - ZKRD Rule). The decision whether the feasible cell count given by the CC is sufficient for a patient, lies solely with the TC. They need to confirm acceptance with their signature.

4.5.2 DKMS Forms – Role and Process Steps

Notification of Donor Clearance and Verification of Prescription

- The DKMS CM attaches these two forms to every WU request sent to the CC
- The CC completes the relevant sections, adds the required signatures, and returns the forms to the DKMS CM.
- The DKMS CM forwards the forms to the TC.

- The TC completes their designated sections, provides the necessary signatures (confirming receipt and acknowledgment of the information), and returns the forms to the DKMS CM.
- Declaration of Donor Acceptance (DoDA): This form is completed by the DKMS CM and sent to the TC. In the case of an ineligible donor, the DKMS CM only needs the reasons from the CC for the DoDA by email in the appropriate language, German or English. As soon as the TC has signed the DoDA, the DKMS CM returns the form to the CC - for more information see chapter 4.10.6 TC Information and DoDAs.

4.6 Cryopreservation of Stem Cell Products

Stem cell products may be cryopreserved for various reasons, all of which require proper communication and prior approval from DKMS. Situations that may warrant cryopreservation include donor unavailability, patient-related complications, or specific TC requests.

To mitigate the risks associated with cryopreservation, such as potential patient deterioration due to delays and cell loss during freezing and thawing, which may necessitate a second donation, DKMS has established a comprehensive review and approval process.

Donor Consent: Before proceeding with cryopreservation, the donor's explicit consent must be obtained. Once the signed consent form is received, the DKMS CM will inform the CC via email or phone.

There are 3 different Scenarios:

- Cryopreservation Request upon WU Entry: When a cryopreservation request is received at the time of the WU entry, the regular cryopreservation approval process is initiated. If DKMS approves the cryopreservation, the CC will be informed accordingly.
- Cryopreservation Request during the Process: If any issues arise during the process (e.g. Deterioration of the patient's condition, bed availability or the transplant request could not be fulfilled), the regular cryopreservation approval process is initiated. If DKMS approves the cryopreservation, the CC will be notified accordingly.
- Cryopreservation Request after the donation procedure has begun: For cryopreservation requests after the donation procedure has begun (such as after G-CSF administration or anesthesia), where the patient’s conditioning could not be initiated, it is crucial to assess whether G-CSF injections have already been administered and how many injections the donor has received

The DKMS CM weighs up all the information and, in defined cases after consulting with a WUD leader, decides whether it is justifiable to continue the donation with subsequent cryopreservation or whether the donation process should be terminated. To do this, the DKMS CM contacts the CC to discuss how long the donation process should be paused before the donor can reapply G-CSF. This is aligned with the period of the desired postponement request from the patient. In addition, it must be considered how likely it is that the patient can be transplanted later, as well as the availability of the donor at a later date.

Additionally, scenarios such as a pro-active cryopreservation offer made by the CC or DC—due to BM unavailability or increased risk of donor drop-out (e.g., concerns regarding compliance) - must also be taken into account when evaluating the appropriate course of action.

4.7 Special Request: Adult Donor Cryopreserved Unit (ADCU)

Adult Donor Cryopreserved Units (ADCU) are derived from peripheral hematopoietic stem cells (HSC) from unrelated volunteer adult donors who are already in the collection process for a specific patient as part of a directed donation.

In many cases, donors mobilize a significantly higher number of stem cells than required for the intended patient. If the collected CD34+ Cell Count exceeds the requested amount, the additional cells can be processed into an ADCU, cryopreserved at the DKMS Stem Cell Bank (SCB), and made available for future patients in need. This approach allows a single donor to potentially save two lives with one donation.

By cryopreserving stem cells, ADCUs provide an immediate or future supply of high-quality stem cell products, ensuring rapid availability for patients requiring urgent transplantation.

Regulatory and Procedural Requirements:

For a CC to participate in ADCU collections, it must:

- Hold a contract with the SCB.
- Apply for an extended manufacturing license (Erweiterung Herstellungserlaubnis) from the regional authority and extended authorization from the Paul-Ehrlich-Institute (PEI).
- Ensure compliance with relevant regulations, including:
    - German Medical Association (Bundesärztekammer) Guidelines on the collection of blood and blood components and the use of blood products.
    - German Medical Association (Bundesärztekammer) Guidelines on the production and use of HSC preparations.
    - Donor exclusion criteria under “Richtlinie der Bundesärztekammer“ and AMG §25.

Collection Procedure:

ADCU collections may last up to 5 hours (300 minutes), with a 4-fold maximum processing volume of the donor’s blood volume, aligning with the German Medical Association’s stem cell guidelines. The CC is responsible that no additional G-CSF doses or a second apheresis day are required.

Donor consent:

The SCB provides the current version of the informed consent to the CC.

Donor Selection Criteria for ADCU:

To ensure optimal mobilization and stem cell quality, ADCUs are only collected from donors meeting the following criteria. At the stage of WU request at the DC a donor algorithm is applied:

Age:	Male donors: ≤ 40 years	Female donors: ≤ 30 years
Weight:	Male donors: ≥ 70 kg	Female donors: ≥ 60 kg
HLA Type:	Ranked within top 1 – 20,000 frequency	
Venous Access:	**Must allow for sufficient flow rate for apheresis (**CC's responsibility)	
Thrombocyte count:	**≥ 150,000/µl** (CC's responsibility)	

Product Division:

The primary directed donation must reach the required cell count + 20%.

Once the cell count is confirmed, the product is split in the CC´s lab and the additional cells can be allocated to the SCB.

Two couriers are required: One for the directed donation and one organized by SCB for the ADCU. Shipment occurs in a pre-conditioned Credobox prepared by the SCB, containing:

- Apheresis product
- Donor blood samples
- Accompanying documentation, including:
    - Product Information (approved by the CC, original document)
    - Donor consent form
    - Transport Protocol

4.8 Information, Forms, Documents Shared with all Parties Involved

Information sent from DKMS to the donor:

After all dates for PE, donation and travel have been agreed upon and confirmed, the DKMS CM will send the following documents to the donor:

- Confirmation of dates, including:
    - When and where donor is expected to be for PE and donation.
    - Travel and/or hotel information if applicable.
- For donations in participating CCs, information about the Collaborative Biobank (CoBi): CoBi information brochure and the template of the Informed Consent Form
- Study information

- For NMDP: Research study information
- Reimbursement guidelines, information and form
    - depending on employment status
    - excuse from work/school
- Information brochure for the selected CC including
    - Directions to get to the CC
- Train / flight tickets
    - if applicable
- Social media guidelines (if they were not sent to the donor before)

The donor can choose whether they would like to receive the documents via e-mail or post.

Documents /Forms: DKMS to CC:

After all dates for PE, donation and travel have been agreed upon and confirmed, the DKMS CM will send the following documents to the CC:

Confirmation of dates, including:

- Information about the donor (birth date, contact information)
- PE, donor clearance and donation date
- Amount and type of pre-collection and study samples, if applicable.
- TC address
- Pre-filled Notification of DFC (see chapter: 4.10 Physical Examinations (PE)
- Pre-filled Verification of Prescription (see chapter 4.5 How to use our DKMS forms)
- Accompanying sheets with laboratory addresses for courier of the blood samples (pre-collection samples), if applicable.
- For NMDP: Accompanying sheets with IDM laboratory requisition and with laboratory addresses for courier of these samples (FDA samples) if applicable. In addition, a health questionnaire and information about if applicable the research study are included.

Additional documents:

- WU request
- HLA check signed by WU CM
- Up-to-date health questionnaire Health History Questionnaire: (HHQ; from CT and not older than 6 months)
- Labels (if applicable)
- Study documents (plus labels if applicable)
- Previous medical findings and reports that the donor might have shared

- Country-specific documents:
  - For France (FGM): ABO form if applicable
  - For the US (NMDP): Allergy form if applicable

Documents /Forms: DKMS to TC:

After all dates for PE, donation and travel have been agreed upon and confirmed, the DKMS CM will send the following documents to the TC:

- TC/HUB confirmation of dates, including
  - all dates concerning the collection, including date of PE, expected date of donor clearance and collection as well as the start of G-CSF injections, if applicable.
  - address of the CC
- Courier details and Courier instructions
  - If the TC organizes the transport
- Country-specific documents
  - France: IDM form for the corresponding CC
  - India: Reminder letter for import form

Documents /Forms: DKMS to Courier companies:

The DKMS CM will use specific forms to ask Courier Companies for support with blood sample transports (pre-collection samples, study samples). The Courier Company must be selected according to the selected CC.

Upon request, DKMS will also organize the product transport – see also 4.13.13 Transport.

Documents /Forms: DKMS to Home Physician:

In certain postponement scenarios, the DKMS CM has to schedule a blood draw with the donor's home physician instead of a full PE at the CC. These blood samples need to be delivered to corresponding laboratories.

4.9 Handling of Postponements and Cancellations

In the WU Process, postponements and cancellations can happen due to both donor and patient-related reasons. It is critical that all postponements or cancellations are communicated immediately to ensure transparency and to minimize any disruptions in the donation timeline. CMs and all involved parties must maintain clear and timely communication with the CC, TC and the donor to manage expectations and rearrange necessary appointments.

The CM is responsible for documenting all postponements and cancellations in DKMS´ database and ensuring that all actions are accurately reflected in the system. This includes tracking any follow-up appointments or procedures required due to the change in scheduling.

There are multiple reasons for a postponement or cancellation, and each must be addressed with the correct process in place.

Postponements:

- If the patient experiences medical complications, the TC must inform the DKMS immediately in writing. The information will be passed on to all involved parties.
- If a donor requires postponement due to personal or medical reasons during or after PE, the CC must communicate this in writing. All involved parties must confirm receipt of the postponement information to prevent misunderstandings.

Cancellations:

- Patient-Related: If a TC cancels due to a patient's condition, written confirmation must be provided. The CM must immediately inform the donor, the CC, and all involved third parties, including couriers or travel arrangers.
- Donor-Related: If the donor cancels for personal or medical reasons through the WU department, the CM must notify the TC and CC and cancel any scheduled appointments or arrangements. Depending on the reason, the donor may either be temporarily unavailable or excluded from further donations.

In all cases, once cancellation is confirmed, the CM must ensure that any necessary medical information is shared with relevant parties, and the status is updated promptly.

To avoid delays and ensure that any postponements or cancellations are handled efficiently, follow these best practices:

- Proactive Communication: Immediately notify the CM about any potential scheduling issues. Timely communication minimizes the impact of postponements and helps keep the process moving forward.
- In all scenarios: After office-hours the TC or CC must call the WU CM on call at the DKMS emergency phone.
- Follow up after one month (FU01) after aborted mobilization: In most cases, CC require completion of the FU01 following any aborted mobilization before a donor can be cleared to restart G-CSF. A FU01 must always be performed after G-CSF administration before any renewed mobilization. Depending on how much time has passed since the last IDM test, the CC decides whether the IDMs need to be repeated. In general, a renewed mobilization can be expected no earlier than 4 weeks after the last G-CSF injection.

Reasons for Postponements:

Patient-Related Reasons:

- Medical Problems
- General Condition
- Infection
- Relapse/Disease Progression

- Remission
- Recovery Time
- Organizational Reason by the TC
- Product Change
- Other donor
- Personal Reasons of the patient
- Reason Unknown
- Other Reasons
- Change for Additional Treatment

Donor-Related Reasons:

- Personal
- Medical
- Organizational (As an example, extraordinary circumstances such as an emergency bomb disposal at the CC may require a complete reorganization of the donation process. However, general logistical or scheduling conflicts on the donor's side are classified under "personal reasons" and do not fall under the same category.)

4.10 Physical Examinations (PE)

The PE is a mandatory step before any donation, taking place at the same CC where the donation will occur. The PE must be completed within 30 days (2-4 weeks) before the donation, but prior to the patient beginning conditioning treatments. The CC is responsible for conducting the PE according to the standards set by the ZKRD and World Marrow Donor Association (WMDA). The process includes thorough medical briefings, informed consent and extensive testing to ensure the safety of both donor and patient.

4.10.1 PE of the donor

During the PE a comprehensive assessment is conducted to verify the donor’s suitability for the procedure and to identify any potential risks. Key steps include:

Medical Briefing: A Physician provides the donor with detailed information about the collection methods, risks, and the donation process - for more information about the donation process see chapter 4.13 Donation Process.

Informed Consent: The donor signs a consent form acknowledging their understanding and agreement to proceed with any testings and the collection.

Study Information (if applicable): If the donor is participating in a study, both the donor and the Physician sign an additional informed consent form – for more information see chapter 7.1 Support of Research Studies involving DKMS stem cell donors.

Medical History: A thorough review of the donor's medical history is conducted, including any travel to high-risk areas, and any relevant personal or family health conditions.

Extensive Medical Testing is then performed, which includes:

- A thorough PE to assess overall health
- Blood Count (including virologic and bacteriological testing according to national medical guidelines and ZKRD standards)
- IDM Testing: Human Immunodeficiency Virus (HIV), Hepatitis E Virus (HEV), Human T-cell Lymphotropic Virus (HTLV), Epstein-Barr Virus (EBV), Cytomegalovirus (CMV), Hepatitis C Virus (HCV), Hepatitis B Virus (HBV), Syphilis, Toxoplasmosis)
- Sonography of the upper abdomen to assess spleen and liver size
- Electrocardiogram (ECG)
- Stress ECG, if required (for donors over 45 years old or with a medical indication)
- Chest X-ray, if required (only repeated if it was conducted more than one year before the PE, at the discretion of the CC Physician)
- Pregnancy Test (if the donor is female)

In Case of PBSC:

- Explanation of G-CSF, including its role, risks, and possible side effects
- Training on how to self-administer G-CSF injections, if necessary
- Distribution of G-CSF to the donor
- Evaluation of the donor's venous access to ensure smooth collection: Veins are prioritized in the following order: median cubital vein, basilic vein, and cephalic vein.
    - In cases of uncertainty, an ultrasound-guided venous evaluation should be considered. Its recommended to visualize the cubital vein in a longitudinal (long-axis) view to allow for optimal assessment of its course. The vein should show no intraluminal echoes (e.g., valves or other structures), and the lumen should measure at least 0.3 cm in diameter.
- A discussion on the potential switch to BM donation, if necessary
- A discussion regarding the arrangement of an accompanying person for the donor can be initiated, though it is generally handled conservatively. In case of uncertainty, the CCs will make decisions on a case-by-case basis.

In Case of BM:

- Education about anesthesia should be provided. While this may not always occur during the PE, it is typically discussed at the time of admission for the donation procedure.

These steps help ensure that the donor is fully informed, prepared, and physically capable of proceeding with the donation in a safe manner, minimizing risks for both the donor and the patient.

4.10.2 Donor Final Clearance (DFC)

The DFC process ensures that a donor is medically fit and eligible to proceed with either a PBSC or BM donation. This process is crucial to ensure the safety of both the donor and the patient receiving the transplant.

Support for donors between clearance and collection:
The DKMS CM informs the donor in writing once they are cleared for the collection of stem cells. At this moment the donor is also provided with emergency contact information, allowing them to reach a DKMS representative during evenings and weekends.
The medical care and advice for the donor, from the time of clearance to the scheduled stem cell collection, is the sole responsibility of the CC. The CC must ensure that a physician or a designated medical professional, experienced with the administration of G-CSF and its potential side effects, is available by phone at all times. If a donor directly contacts the emergency number of the CC, the DKMS on-call service must be informed accordingly.

4.10.3 Non-Clearance or Temporary Non-Clearance

DFC is a critical step in confirming that a donor is medically fit to proceed with the donation and has agreed to do so. The CC is responsible for informing the DKMS WU department of the donor's clearance status. Non-clearance or temporary non-clearance occurs when a donor is found to be medically unfit or temporarily unable to donate. In such cases, it is crucial for the process to immediately inform all relevant parties, including the TC or HUB – see also 4.9 Handling of Postponements and Cancellations. Therefore, the information about the clearance or non-clearance should ideally be provided by the CC within 3 days of the examination, or within 24 hours in urgent cases. If Additional Examinations beyond the required tests are necessary, the CC must notify the DKMS WU CM immediately, especially if it could delay the donor's clearance. These additional tests should be organized by the CC and completed in a timely manner to avoid any impact on the planned donation timeline.

If the donor is not cleared, the Notification of Donor Clearance form must still be completed by the CC and forwarded to the WU, which will forward the information directly to the TC/HUB. The donor's medical information should be documented and shared as needed.

To ensure compliance with medical and organizational standards and for efficient handling of non-clearance or temporary non-clearance cases, the following practices should be observed:

- The CC must adhere to all ZKRD and WMDA guidelines for PEs and ensure that all relevant medical tests are completed.
- The donor should be fully informed about the administration of G-CSF, including the potential risks, side effects, and proper injection procedures. The donor must be capable of self-administering G-CSF or arrangements should be made for a healthcare provider to assist.
- If a healthcare provider is required for G-CSF administration, the CC must notify DKMS, which will coordinate and arrange payment for the service.
- All PE documentation, including the injection plan and relevant medical reports, must be sent to the DKMS WU CM by the agreed clearance date, either via email or post.

In cases of non-clearance, all information including the PE report — must still be forwarded promptly to the responsible CM.

- In cases where pre-collection samples are requested by the TC, the CC is responsible for the proper packaging and shipment of these samples in compliance with International Air Transport Association (IATA) and national regulations
- Always ensure prompt communication with all parties involved. This includes the donor and the DKMS WU department to avoid any delays or confusion regarding the donor's status.
- Medical Information: Ensure that the donor receives all relevant medical information. If there is any follow-up required, it should be clearly communicated.
- If medical conditions arise that do not immediately disqualify the donor, the CC must work with WU CM, who will forward the information to the TC/HUB and the Physicians Team (PT) to decide whether to proceed with the donation, postpone it, or cancel it altogether.

Excursus Non-Clearance and Venous Issues

Data from 2022 show that approximately 8.06% of donors were not cleared for donation after the PE, with significant variation between CCs. The primary reason for non-clearance was poor peripheral venous status, which accounted for the majority of cases. Several factors contribute to poor venous access, including:

- High BMI
- Lack of physical activity
- Arterial proximity or branching of veins
- Complications during venous puncture

Some CCs use a "four-eye principle" to assess veins, involving both apheresis physicians and the use of sonography with a blood pressure cuff. In cases of poor venous access, multiple puncture attempts are made, with the option of a second collection day or, in extreme cases, the placement of a central venous catheter (CVC).

Other reasons for non-clearance include current medical conditions such as anemia, recent illness, or psychological conditions like burnout. Additionally, temporary health conditions like a cold or menstruation-related low hemoglobin levels may result in a temporary non-clearance, pending further evaluation.

4.10.4 PE Report

The results of the PE, including the medical examination, IDM testing, ECG, and any additional screenings, should ideally be provided by the CC within 3 days of the examination, or within 24 hours in urgent cases. This report ensures there are no contraindications for donation (BM,anesthesia, G-CSF) and assesses whether the donor will require assistance during G-CSF administration.

In the event of a donor's unavailability for BM collection, the CC should inform the CM on the day of the PE. This allows the TC to be notified in advance that, in the case of an emergency (e.g., 4.13.7 Definition and Handling of Poor Mobilizers), a BM donation will not be possible. Additionally, if the donor has agreed to cryopreservation (see also 4.6 Cryopreservation of Stem Cell Products) in such a scenario this information should also be communicated to the CM, ideally via email, or included in the PE Report. Some CCs may also provide this information through a specific designated document for such cases. This becomes even more important if the Donor is either unwilling or unable to proceed with a BM donation and has also not consented to cryopreservation**,** as this significantly limits available emergency options and must be clearly documented.

4.10.5 Maximum Amount and Prioritization of Blood to Be Drawn at PE inclusive their consent forms (pre-collection samples and other samples)

Blood sample collection during the PE is essential for ensuring the safety of both the donor and recipient, as well as for fulfilling regulatory and research requirements. The total amount of blood drawn must be carefully managed to prevent excessive burden on the donor, while also ensuring that all necessary tests and studies are accommodated.

Blood samples collected during the PE may serve multiple purposes. It is important that the most critical samples are prioritized, provided that donor safety and well-being are ensured:

The medical staff responsible for donor counseling must assess the donor's ability to comprehend and provide informed consent for sample collection. While pre-determined guidelines outline the priority of blood samples, the final decision regarding the feasibility and volume of blood to be drawn is made by the physicians at the CC on the day of the PE. If you would like to change the requested amount of blood volume, please contact the responsible case manager in advance.

This final assessment ensures that the donor’s well-being remains the highest priority while allowing necessary blood samples to be drawn for clinical, regulatory, and research purposes. The process should remain flexible and dynamic, allowing for real-time adjustments based on the donor's condition, clinical necessity, and logistical feasibility.

4.10.6 Transplant Center (TC) information and Declaration of Donor Acceptance (DoDA)

TC Information:

A TC Info is a medical or organizationally relevant notification provided to a TC to support donor selection and risk assessment. The purpose of a TC Info is to ensure that all information potentially relevant to donor suitability, donor availability, or transplant planning is communicated transparently and in a timely manner.

TC Infos may be initiated during CT or at any later stage of the donor workup process if new information becomes available. For donor selection purposes, acknowledgement of receipt is generally sufficient. No formal acceptance document is required for standard TC Infos.

Typical reasons for a TC Info include:

- Medical conditions that may influence donor selection
- Donor availability restrictions
- Travel history or potential infectious disease risks
- Donation method limitations

Examples:

Absence time (ABS): “Donor unavailable from 01.08.2026 to 20.08.2026 due to international travel.”

Stem cell personal (SCP):“Donor available for PBSC donation only, due to personal preference or personal circumstances.

Donor Declaration of Acceptance: The DoDA is a specific regulatory requirement used in Germany when a donor does not fully meet all eligibility criteria defined by the applicable German blood donation regulations and guidelines but donation is nevertheless considered acceptable following an individual medical risk assessment. The DoDA process is associated with the collection center's manufacturing authorization and serves to document and justify such deviations in accordance with applicable regulatory requirements.

The purpose of the DoDA is not donor selection but documentation of a justified deviation from standard donor eligibility requirements while ensuring donor and recipient safety.

Examples:

Recent tattoo or piercing within a deferral period: “Above mentioned donor has had a tattoo done in [dd.mm.yyyy] in a licensed studio under sterile conditions and she/he has not shown any signs of infection. The results of the high sensitivity NAT’s are negative.

The collection center is responsible for preparing the DoDA in English and documenting the rationale for the deviation. The completed document is submitted to the responsible DKMS Case Manager, who forwards it to the transplant center for review and signature. Final donor clearance can only be issued after the signed DoDA has been returned to the collection center.

We have included the DoDa in 12.3 Appendices: DKMS forms**.**

It should be noted that the DoDA represents a German regulatory process and should not be considered an international standard for communication of donor-related information. Important donor-related information should always be communicated through the established TC Information process.(see also: https://www.bundesaerztekammer.de/fileadmin/user_upload/BAEK/Themen/Medizin_und_Ethik/Richtlinie-Haemotherapie-2023_neu2.pdf)

4.10.7 Additional Examinations

In certain cases, some donors may require additional examinations or more extensive testing beyond the standard PE of the donor. For the WU CM, it is essential to coordinate with the CC to determine whether these additional tests will allow for the timely submission of the DFC. If there is a risk that the clearance cannot be provided on time, the TC or HUB CM

must be informed immediately about the anticipated delay. They have to decide on the best course of action, which may involve:

- Postponing the donation and adjusting the timeline.
- Activating a backup donor, if available.
- Initiating a new donor search if no backup donor is on standby.

If the donor is ultimately found unable to donate, it is critical to inform the TC/HUB CM as soon as possible, even if not all of the necessary paperwork has been completed by the CC.

This early notification is crucial, as the search for an alternative donor might be required, and any delays could negatively impact the patient's treatment. Despite the need for swift communication, the Notification of DFC form must still be submitted to the TC/HUB once it becomes available. To mitigate these issues, CCs are encouraged to share any anticipated donor unavailability periods as early as possible. When feasible, they should also provide a prognosis regarding the likelihood of the donor receiving clearance following the additional testing.

The responsibility for organizing and conducting all Additional Examinations required to determine donor clearance for donation lies solely with the CC. In rare cases, such as medical emergencies, DKMS may provide support. In these situations, proactive communication between the CC and DKMS is essential.

If the Additional Examination is essential for final clearance, the CC remains responsible until the examination is completed and the final status has been submitted. Once the WU request is formally closed, the CCs responsibility ends. At this point, Follow-up (FU) on outstanding results falls under the responsibility of the PT – see also 2.4 Physicians Team (PT) and 5.7 Donor FU.

4.10.8 "Conditions of Approval"

The newest Version of the donor suitability criteria ("Conditions of Approval"), v1.5 from 2025 you can find here: https://medabapp.dkmsnet.lan/index.html#page_coa

4.10.9 Donor Insurance

All donors are covered by statutory accident insurance through the Berufsgenossenschaftliche Unfallversicherung, as stem cell donation is classified as voluntary service. In addition, DKMS has secured a group accident insurance policy, which provides a certain compensation payment if a permanent impairment (disability) is medically proven to have resulted directly from the donation. To qualify for this compensation, the following conditions must be met:

- The permanent impairment must occur within the first 12 months following the donation.
- The diagnosis of the impairment must be made by a physician within 18 months of the donation.

- The claim must be submitted to the insurance provider within 24 months of the donation.

Insurance Coverage Overview:

- Coverage for Travel to and from the Donation: Accidents occurring on the direct way to or from the donation are covered.
- Coverage During the Donation Procedure: Any health impairments occurring directly and causally due to the donation process are insured. Insurance claims require clear medical evidence proving a causal link between the donation and the impairment.

Practical Scenarios:

- Traffic and Parking Accidents: Statutory accident insurance does not cover damage from traffic or parking incidents. In such cases, HDI private insurance may apply, extending coverage to accompanying persons as well.
- Claims Process: If an accident occurs, the donor must report it to DKMS, which will coordinate with their Legal & Insurance Department. Documentation, including photos of the vehicle and a police report, is required. The police must be called in all cases, especially if city property is involved.

The insurance does not cover damage to health/physical injuries and aggravation of already existing health impairments. For more details, please refer to the DKMS Insurance Flyer: DKMS Insurance Coverage for Stem Cell Donors.

4.11 Excursus Cell Counts

In stem cell collections, the requested CD34+ cell counts for HSC apheresis vary widely. Generally, a CD34+ count of 5 x 10^6 CD34+/kg is considered sufficient, but some protocols may require higher numbers. For HSC BM collections, the requested Total Nucleated Cell (TNC) count usually falls between 3 x 10^8 and 5 x 10^8 TNC/kg of recipient body weight.

Higher cell counts may be necessary for children with rare diseases, such as SCID, congenital disorders, or severe aplastic anemia due to a higher risk of graft failure. TCs should justify requests for CD34+ cell counts exceeding 5 x 10^6 CD34+/kg recipient body weight. The rationales for the higher requirements in each case must be indicated by the TC on the WU Request Forms. If no plausible explanation is provided, WU staff will request at the TC to give a statement. Otherwise, these requests cannot be accepted.

4.11.1 Feasibility Assessment and Conservative Calculation by CC

The CC holds the responsibility for determining the feasibility of the requested donation procedure. To ensure the safety of the donor and the success of the collection process, a conservative approach to calculations and assessments is strongly advised. The assessment takes place during the pre-examination. This includes evaluating all aspects of the

procedure, such as cell count targets, donor health, and logistical considerations, to provide a realistic and reliable estimation of what can be achieved.

Key Guidelines:

- HSC apheresis: A CD34+ cell count of 5 x 10^6 CD34+/kg recipient body weight is typically sufficient. Justification is required for higher requests.
- HSC BM**:** Due to the limited volume of BM that can be collected (20 ml/kg donor body weight, up to a maximum of 1,500 ml), TCs should carefully consider the donor's weight when making requests.
- Feasibility of BM requests: 25% QUARTILE TNC / mL x (20mL x kg Body weight donor). Example: Donor BW = 75kg, 25% Quartile *(p.e. 11.9)* = 11.9 x 10^6 / mLx20mlx75kg BWD :“Feasible” = 178,5 x 10^8 TNC total (This can be achieved in *3 out of 4* collections- explanation will be added to verification form)
- Cryopreservation of Stem Cell Product: In cases where the HSC product is intended for cryopreservation, higher target cell counts may be approved if considered feasible for the donor. The WU Department follows a standardized process for assessing cryopreservation requests and determining the appropriate target values.

4.11.2 Handling Deviations (10% - ZKRD Rule)

Deviations in requested cell counts are not uncommon, particularly when there are significant differences in body weight between the donor and recipient. In these cases, CCs must inform the TC on the day of collection (via the WU CM) if the expected cell count is lower than requested.

Key Considerations at the time of PE and clearance:

Non-Feasible Cell Counts: If the expected cell count falls below the requested count, the TC must be informed about the maximum achievable count via the verification form before any decision is made.

TC Decision: The TC is responsible for deciding whether to proceed with a lower cell count or explore other options, such as a second collection or using an alternative donor.

A donor non-clearance should not be performed automatically in the event of non-feasibility of the requested cell count. It is commonly agreed that low cell counts are defined as less than <2 x 10^6 CD34+ cells/kg for PBSC and less than <1 x 10^8 TNC/kg for BM.

For external reference, these values represent less than 50% of the recommended lower threshold (as indicated in the EBMT Handbook, https://www.ebmt.org/education/ebmt-handbook).

This should not be confused with counts that are considered *too* low. Many successful transplants have been carried out with these lower doses, even after cryopreservation and thawing. It is also important to note that such counts do not necessarily indicate poor mobilization or harvest, as the reference values are typically based on the donor's weight.

Regarding SPEAR: Low cell counts alone are not considered a SPEAR. They are a known and occasionally expected occurrence, much like patient deterioration or poor mobilization, and do not need to be reported unless there is an avoidable or unexplained error (e.g., miscommunication, loss during shipping, or issues during preparation). WMDA has stated that any counts above 1.5 x 10^6 CD34+/kg for the recipient are not considered a SPEAR by definition, though this guidance is typically directed at TCs or receiving registries. Some of these entities may report *lower than requested* cell counts, but it is easier to address these situations with a clear threshold.

The "10% Rule" in the context of collection refers to the allowable deviation from the originally requested cell counts used in stem cell transplantation. This means that a deviation of up to 10% from the requested CD34+ cell count or TNC count may be considered acceptable without necessitating a delay or modification of the transplantation process. This also means that in cases where there is only a shortfall of < 10% on the first day of donation, a second day of donation is not required, and the CC does not have to explicitly inform the DC.

Tolerance for Cell Count Deviations: For example, if 5 x 10^6 CD34+ cells/kg have been requested for a patient, a deviation of up to 10% (i.e., between 4.5 x 10^6 and 5.5 x 10^6 CD34+ cells/kg) could be deemed acceptable.

This tolerance allows for flexibility in the process and ensures that small variations in cell counts do not impede the overall success of the transplant.

4.11.3 Consultation with DKMS for Poor Mobilizers

When a donor is identified as a poor mobilizer on day of collection, the CC should immediately contact the DKMS CM. The DKMS CM will then assess whether this situation constitutes an emergency, defined as requiring a fresh product with no alternative options available (such as another donor or ADCU).

For further information on poor mobilizers or if Plerixafor is considered a potential option for the donor, please see chapter 4.13.7 Definition and Handling of Poor Mobilizers.

4.12 Between DFC and the Donation Process

Once a donor receives DFC, it indicates they are medically fit to donate and have provided their consent to proceed. The CC must ensure that the following steps are completed promptly and accurately to initiate the donation process:

- The CC is responsible for providing key documents, including the medical report, the Notification of Donor Clearance form, and the Verification of Prescription for – see also 4.5 How to use our DKMS forms.
- For donors involved with the NMDP, an additional HHQ must be included.

- Once the DFC paperwork is complete, the WU CM must forward it to the TC or HUB so they are fully informed about the planned collection.

The donor will receive a DFC letter from the CC confirming CC that provides confirmation of the donor's clearance. This letter includes important details such as collection dates and the emergency contact number of their emergency medical service. In case of PBSC donation, the letter additionally contains a detailed application plan for G-CSF. DKMS informs the donor (usually via email) additionally of the clearance approval and provides their DKMS emergency contact number for any urgent inquiries.

If a donor is not cleared for donation, the CC must communicate the non-clearance and its reason. The WU will then notify the TC/HUB immediately. Additional steps include:

- Ensuring the Notification of Donor Clearance form is completed and provided by the CC.
- Arranging for appropriate follow-up care or medical instructions for the donor, if necessary.

To maintain a smooth process between DFC and the donation:

- Timely Notification: The WU CM ensures that the donor, CC, and TC/HUB are promptly informed about the donor's clearance status. Accurate and complete documentation is crucial.
- Emergency Contacts: CCs should always provide the donor with their emergency contact number for use during the donation process. This number should be clearly indicated in the DFC Letter.
- Confirmation of Collection Dates: Three days before the donor's G-CSF injections (or MNC apheresis) or five days prior to a BM Harvest, the CM must re-confirm the collection dates again with the TC/HUB. If no confirmation is received, follow-ups via phone are required to avoid any delays in the donation process.
- Handling Special Requests: For situations where IDMs are required more than 30 days before the collection, the CM plans an additional blood draw to ensure results are up to date. This involves coordinating with the CC for a second clearance, if necessary, and notifying the TC/HUB accordingly.

In cases of postponements or complications – see also 4.9 Handling of Postponements and Cancellations-, it's critical to handle the situation efficiently to avoid unnecessary preparation or inconvenience for the donor.

4.13 Donation Process

4.13.1. Peripheral Stem Cells (PBSC)

PBSC is a critical process that begins with G-CSF administration to stimulate the release of stem cells from the BM into the bloodstream. Donors receive G-CSF injections once or twice daily for four days prior to the scheduled donation. In general, the final injection is given on the morning of the first collection day. It is recommended to plan two days for HSC

apheresis. On the day of the first apheresis, infection serology must be carried out according to the current state of medical science and technology. This is in accordance with the requirements of the German transfusion Act (TFG) and the guidelines of the German Medical Association (Bundesärztekammer). The values obtained must be available at the latest on the second day after the first apheresis. However, if a donation occurs on a Friday, they must be available by the following Monday. If a second collection day is necessary, additional G-CSF doses will be administered.

The maximum volume processed is typically 3.5 to 4 times the donor's total blood volume, with a maximum duration of five hours per session. In exceptional cases, the apheresis process may be extended on a single day to avoid a second collection day, but this must be carefully monitored for donor safety. In rare cases, such as when G-CSF doses are lost or damaged, the CC is responsible for providing replacement doses and ensuring that the donor’s treatment continues without unnecessary interruptions. For apheresis, if collection targets are not met on the first day, the CC may decide to extend the procedure or schedule a second collection day based on the donor’s health and well-being.

G-CSF Scheduling and Administration:

G-CSF injections must be given on time, ideally 12 hours apart, to maintain optimal levels in the bloodstream. CCs should ensure that the injection schedule is clearly communicated to both donors and the WU CM, particularly in cases of postponements or cancellations. Generally returning unused G-CSF is not recommended, but depending on the collection center, specific instructions for disposal or return may apply and must be followed accordingly.

Donor Support:

Donors requiring assistance with G-CSF injections should be referred to a healthcare provider who is equipped to administer the injections. It is important to ensure that the provider has the proper G-CSF prescription and completes the necessary G-CSF Administration Packet. This is coordinated by the WU CMs.

Automated SMS Reminders:

To support donors, automated SMS reminders will be sent one day before the first G-CSF injection by the WU CM. DKMS must be updated in case of schedule changes, cancellations, or postponements to avoid confusion. An injection schedule should be clearly included in the 4.10 Physical Examinations (PE) letter of donor clearance or provided as a separate document to ensure clarity for the donor.

Pain Management:

If a donor experiences pain during mobilization, the standard analgesics used by the CCs are paracetamol and ibuprofen. It is important for donors to be fully informed about the possibility of bone pain and reassured that this is a normal response to G-CSF. This information helps to reduce fear and anxiety during the process. Some CCs may provide pain relief such as oxycodone or tramadol, although this is not standard across all centers.

Individual collection target:

Minimum target of CD34+ cells: 4.0 x10^6 /kg patient´s body weight per transplantation. The decision regarding the number of stem cell apheresis sessions lies solely within the responsibility of the CC Physician. If the recommended minimum dose has been reached or if the collected cell count falls short of a higher requested dose by less than 10%, it is generally not necessary to consult the CM and thus the TC. In such cases, the collection process should be concluded without further coordination – see also 4.11.2 Handling Deviations (10% - ZKRD Rule).

Dosage according to specialized information for allogeneic stem cell collection:

- Filgrastim 10 µg (1.0 million I.U.) /kg /day s.c. for 5-6 days
- Lenograstim 10 µg (1.28 million I.U.) /kg /day s.c. for 5-6 days

Available dosages Filgrastim:

- 30 million I.U. (=300 µg)
- 48 million I.U. (=480 µg)

Available dosages Lenograstim:

- 13 million I.U. (=105 µg)
- 34 million I.U. (=263 µg)

Dosage recommendations:

- Rounding off: No overload when rounding off, but possibly less mobilization + additional apheresis day may be necessary
- Rounding up: Danger of overdosing

	Allogenic transplantation
Optimal dose of mobilized CD34+ cells for one transplant	5-8 x 10^6 CD34+ cells /kg pt bw
Minimum dose of mobilized CD34+ cells for one transplant	4 x 10^6 CD34+ cells/kg pt bw

4.13.2 Bone Marrow (BM)

BM donation involves the collection of stem cells directly from the BM from the iliac crests (pelvic bones) under general anesthesia. To ensure the safety of both donor and patient, the following protocols must be adhered to:

- **Blood Count Before Discharge**: In accordance with ZKRD Standards Version 13 (section 5.6.17), a blood count must be conducted prior to the donor's discharge. Some CCs perform this check on the day of discharge, while others may do so immediately after the BM harvest, before discharge the following day. This procedure helps detect post-discharge bleeding and facilitates the initiation of any necessary iron substitution therapy.
- **Airway Management for BM Harvest**: The choice of intubation technique is always at the discretion of the anesthesiologist. Endotracheal intubation is considered the gold standard in most CCs, as it provides reliable protection against aspiration. However, in some centers, a laryngeal mask airway is used as the primary airway management device during BM harvest. While the laryngeal mask airway offers a nearly 100% success rate and is associated with less trauma to the lungs, vocal cords, and trachea compared to other airway devices, it lacks rotational stability and does not offer adequate protection against aspiration.
- **Switch to BM**: In cases where PBSC clearance is not granted, a potential switch to BM harvest needs to be discussed with the TC. A majority of CCs do not automatically switch of the product source without discussing with the TC cannot be proceeded. A switch would not only mean various logistical changes, including the need for a complete anesthesia education by an anesthesiologist and fully booked BM harvest slots for the CC but would– see also impact the TCs schedule and procedure with the patient chapter 4.11.1 Feasibility Assessment and Conservative Calculation by CC.

Switching from PBSC to BM Harvest: When considering switching from PBSC to BM harvest due to non-clearance, ensure that the donor has received all necessary information and education, particularly regarding anesthesia. This should be coordinated with the TC and the donor, and all logistics, including BM harvest scheduling and donor education, must be in place to avoid delays or complications.

If a donor is discharged on the same day as the bone marrow collection – either as planned or at the donor's own request – certain safety criteria should be fulfilled to ensure donor well-being and medical safety.

- The donor is largely pain-free and hemodynamically stable.
- An accompanying adult is present to care for the donor after discharge.
- The donor does not drive themselves; safe transportation home must be arranged.
- The donor's place of residence or accommodation is within reasonable proximity to the CC or to a medical facility that can be reached in case of emergency.
- The total travel time to the donor's place of stay should not exceed a medically acceptable limit.

The final decision regarding same-day discharge lies with the CC, as it holds medical responsibility and liability for the donor's post-anesthesia recovery.

4.13.3 Multi-Donations

A maximum of two BM donations, two PBSC donations and unlimited MNC apheresis are permitted, in accordance with national guidelines. In cases of multi-donation, a Transplant Coordination Inquiry is required: "Donor donated XX in XX for another patient. Donation limitations must be observed. Please prioritize an alternative donor, if available. We will not contact the donor until we receive your response. Please reply within one week." – see also 4.1.4 Different Processes for Different Needs and 4.1 Overview of WU – Workflow for collection center (CC).

Subsequent Donations: If patients experience a relapse or graft failure, a subsequent donation of HSC from the same donor may be necessary. This occurs in approximately 2-3% of our cases. A donor can also be requested as the best match for a different recipient, although this is rare (<1% of cases). Each subsequent donation is subject to prior review and approval by an external medical advisor designated by DKMS before the donor is scheduled for collection at a CC – see also 5.9 Subsequent Donation Request. An aborted mobilization is not considered a donation – see also 4.9 Handling of Postponements and Cancellations. Whether an aborted apheresis procedure is classified as a donation is ultimately a decision made by the CC and must be evaluated on a case-by-case basis. However the FU procedure (see chapter 5.7 Donor FU) is initiated with the administration of the first dose of G-CSF or the induction of anesthesia.

DKMS recommends that donors wait at least three months after their stem cell donation before donating blood, provided they meet the Hämotherapierichtlinien. However, some blood donation services may require a six-month waiting period. Ultimately, the decision on when a donor is eligible to donate blood again lies with the respective blood donation service.

4.13.4 Mononuclear Cell (MNC)

The MNC apheresis entails the collection of specific immune cells without prior stimulation with G-CSF, primarily for purposes such as immune support in transplant cases. In some cases the term Donor Lymphocytes Infusion (DLI) might be used, which is the same request as a MNC apheresis, but describes it out of the patients perspective.

Usually a MNC follows a BM or PBSC collection. There are certain protocols that require a MNC collection prior a Hematocrit (HCT) donation.

Pre-Collection Requirements and ZKRD Standards:

For MNC apheresis procedures, the preliminary assessment requirements differ slightly from those for PBSC or BM collections. A full PE (see chapter 4.10 Physical Examinations (PE)) is typically not required for MNC apheresis under standard conditions.

- General Requirements: donors are evaluated with an approach similar to stem cell donation protocols, encompassing informed consent, insurance coverage, and preliminary examination.
- Blood Testing: Blood tests must be performed or repeated to confirm the donor's health status and suitability for the MNC apheresis procedure. In case FU01 or FU

after six month (FU06) showed abnormal findings after the last donation, the CC may decide to proceed with a broader blood panel or a full PE

For donors who have completed a stem cell donation within the last 24 months:

- DKMS initiates the required blood tests.
- The donor receives and signs an informed consent specific to lymphocyte donation, following a consultation with the CC physician to review any recent medical history or concerns. If necessary, additional diagnostic testing may be required.

In cases where the donor's last donation occurred more than 24 months ago, the process mirrors a standard stem cell donation by having a regular PE, but diagnostic testing may be limited if no significant medical history has emerged since the last donation.

Timing of PE and Counseling:

Ideally, PE and counseling should take place before the day of leukapheresis to ensure thorough evaluation and avoid any last-minute complications. However, the examination can occur on the day of leukapheresis if no preliminary assessment was requested by the donor or deemed necessary by medical personnel. Pre-collection procedures include:

- Venous Access Assessment: A detailed assessment of venous access is performed, checking for any limitations that could impede the collection.
- Additional Monitoring: If the medical history since the last donation reveals new health conditions or concerns, more extensive testing and physical examination may be warranted.

Required blood testing and donor safety:

In accordance with ZKRD Standards each MNC-A procedure requires:

- Blood testing to assess the current health status of the donor.
- Confirmation of results provided to the CC to ensure all health parameters meet safety standards.

4.13.5 Maximum Amount and Prioritization of Blood to be Drawn at Day of Collection (day of collection samples and other samples)

Blood sample collection during the Day of collection follows the same protocol as during the physical examination. Please see chapter: 4.10 Physical Examinations (PE).

4.13.6 Achieving Target Cell Counts

To ensure transparent communication and clarity in achieving target cell counts for stem cell products, DKMS requests that CCs provide detailed written confirmation of cell counts at various stages in the collection process. This documentation helps streamline processes and minimize misunderstandings among CMs and TCs.

Written Confirmation of Cell Counts:

CCs are asked to provide written confirmation of the following information via email prior to finalizing product details:

- Intermediate Results: Cell counts and concentrations recorded during the collection process.
- Collected Cell Counts: Confirmation of cell counts achieved on the first day of collection.
- Expected Cell Counts: Calculated estimates for total cell counts based on donor-patient weight ratio and other factors.

Including specific information, such as cell type and concentration (e.g., $5x10^6$ CD34+ cells/kg recipient body weight), facilitates communication between CCs and DKMS. A clear breakdown of each cell type - CD34+ cells, CD3+ cells, and TNCs - helps prevent confusion and provides CMs with essential information.

Reporting Incomplete Cell Collection:

If it becomes evident that the requested cell count will not be achieved as given as “feasible” on the verification during PE clearance, the responsible CM at DKMS must be notified immediately. In cases where the collected cell count deviates up to 10% below the requested cell count, the apheresis may conclude after one day without additional notification to the TC, following German Standards for cell collection.

See also chapter 4.11 Excursus Cell Counts for further information.

4.13.7 Definition and Handling of Poor Mobilizers

In the context of stem cell mobilization, the definition of a Poor Mobilizer is inconsistent.

Approximately 2-5% of healthy allogeneic donors may be classified as "poor mobilizers" from the perspective of the TC. These donors exhibit an inadequate response to G-CSF stimulation, producing fewer than 2×10^6 CD34+ cells/kg recipient body weight on the first day of apheresis. From the CC perspective, poor mobilization is typically defined as an inability to achieve ≥20 CD34+ progenitor cells/µL in peripheral blood prior to the first apheresis session.

Being a "Poor Mobilizer" can result from a variety of factors, including biological characteristics or medical conditions. At DKMS, except for DKMS BMST India and DKMS Africa, donors are asked in advance if they would consider a BM donation if they do not mobilize well. If the donor declines, the TC or registry is informed, and the product may be cryopreserved.

In Dresden, Kristina Hölig et al. conducted a prospective clinical trial “Salvage treatment with plerixafor in poor mobilizing allogeneic stem cell donors: results of a prospective phase II-trial”. The study investigated the use of Plerixafor as a mobilization aid for donors experiencing Poor Mobilization.

If a donor is identified as a poor mobilizer, several steps are taken to determine the appropriate course of action:

- BM Switch: If a donor does not mobilize well and has agreed to donate BM as an alternative, the CM should be informed immediately and the CM will inform the TC and discuss the possibility of switching the collection method – see also 4.13.2 Bone Marrow (BM).
- Plerixafor Use: In some regions, such as the U.S., plerixafor may be administered to donors experiencing Poor Mobilization. This drug aids in releasing more stem cells into the bloodstream, enhancing collection success. More information see below.
- Multiple Collection Days: For donors who have lower-than-expected CD34+ cell counts, a second day may be required. The CC should assess the donor's response and coordinate with the TC on whether additional collection days are feasible and necessary – see also 4.13.11 First and Second Apheresis Days. An information to the CM is always required if the anticipated collection days differ from the initial assumption on the verification.
- Cell Count Expectations: If a donor's mobilization is suboptimal and will not meet the requested cell count, the TC must be informed about the expected maximum number of cells. The TC will then decide if the available product is sufficient or if alternative actions should be considered - for more information see chapter 4.11 Excursus Cell Counts

Donor Risk Factors: Certain characteristics may increase the likelihood of Poor Mobilization. These include:

- Female donors
- Older age
- Low white blood cell (WBC) count (<30 x 10^9/L) after five days of mobilization

These factors should be considered when planning the donor's mobilization and collection process.

- Proactive Communication: It is essential to maintain clear communication with the donor and the TC. The donor should be fully informed about the possibility of requiring two collection days or the switch to BM donation. If a donor is identified as a Poor Mobilizer, the CM must promptly inform the TC of the situation and discuss available options.
- Adjusting G-CSF dosage: For donors at higher risk of poor mobilization, such as underweight females or donors with specific metabolic conditions like Steatosis Hepatis, adjusting the dosage of G-CSF (granulocyte-colony stimulating factor) may be advisable to avoid over-mobilization. A lower G-CSF dose may prevent adverse effects while still allowing for adequate stem cell collection.

By implementing these best practices, CCs and TC can effectively manage poor mobilizers, ensuring the highest possible collection yield while safeguarding the donor's well-being.

Handling of emergency BM collection:

Emergency BM collections require an expedited process due to their urgency. Senior medical staff at the CC are actively involved in evaluating available emergency options, ensuring swift decision-making. This includes on-call availability on both sides, the CC and the WU Department, and enabling donor clearance and collection procedures, even on weekends if necessary.

Usage of Plerixafor:

If the expected total yield is significantly lower than anticipated, considering the donor-recipient weight ratio, and the target dose of ≥2 × 10^6 CD34+ cells/kg recipient body weight is likely to be missed by a substantial margin, the use of Plerixafor might be justified. Plerixafor functions through a mechanism distinct from G-CSF, releasing additional stem cells for collection. Although not generally authorized for allogeneic donations within the EU, it may be used on a compassionate use in emergencies. In all cases DKMS needs to be informed before the decision is finalized. Explicit counselling of the Donor and written consent needs to be documented.

Cases in which Plerixafor might be used:

- preferable to an emergency BM donation
- can be used if an emergency BM donation is no option
- if the donor had a mild allergic reaction to G-CSF

In cases of severe allergic reactions to G-CSF or other medications, however, Plerixafor is not recommended. **Attention**: Plerixafor inhibits the receptor CXCR4 and is potentially teratogenic. A pregnancy has to be ruled out prior to the use. Thus, if before apheresis CD34+ progenitor cells are < 20-30/µL, blood test for β-HCG should be arranged immediately for donors with child-bearing potential. Also, Plerixafor leads to a slightly different product composition than the ones stimulated with G-CSF. To be able to use Plerixafor, we need the consent of the donor, the approval of the WU Head of Department (HoD), the TC and the CC.

Process outline for using plerixafor in emergencies:

- Identification and confirmation of poor mobilizer status: Upon recognizing that a donor is a poor mobilizer, the CC should promptly inform the DKMS CM. The CM confirms the poor mobilizer status based on the donor-patient weight ratio and projected cell dose.
- Assessment of emergency status: The DKMS CM assesses if the situation qualifies as an emergency, defined as cases where a fresh product is essential, and no alternative donor or cell source is available (ADCU, BM).
- CC Recommendation and Approval: If Plerixafor is deemed an option by the CC, the CC provides DKMS CM with a written statement confirming its recommendation. If the CC does not initially suggest Plerixafor, the CM may inquire about its feasibility. Should the CC agree, a formal written confirmation is required.
- Approval by HoD and TC:

  - HoD Approval: The DKMS CM must inform the HoD of the WU Department, who will review and either approve or deny the Plerixafor recommendation. This decision must be documented in a written statement.
  - TC Approval: DKMS CM reaches out to the TC, seeking approval for Plerixafor use due to the modified composition of the product (e.g., increased CD3+ cells, leukocytes, and mononucleated cells).
- Donor consent and preparation: The donor must be informed about the Plerixafor treatment and provide written consent, which the CC oversees. For female donors, the CC is responsible for performing a β-HCG pregnancy test to ensure eligibility for Plerixafor use.

Gastrointestinal side effects (vomiting, nausea, flatulence) are not only common, but can be more severe than usually expected. While counselling the donor about side effects is generally in the responsibility of the CC physician, CM should clarify before that the donor brings a companion. The donor should not stay alone in a hotel; consider hospital admission for one night instead. If Plerixafor is not feasible, an emergency BM collection should be considered.

CVC Use Policy for Poor Mobilizers:

For DKMS, every effort must be made to avoid using a CVC for donors, due to associated risks. CVC use is limited strictly to emergency situations when no other options are viable and its usage must comply with ZKRD standards, which generally advise against CVC due to complication risks. Instead, if peripheral venous access is not possible, a BM collection, usage of plerixafor or alternative donor should ideally be sought.

Excursus: Assessment and Criteria for CVC Use:

If a donor presents as a poor mobilizer on the day of PBSC collection, the CC may propose a CVC placement to the WU CM. In this case, the following conditions must be met:

- Thorough vein assessment: A complete venous assessment is performed during the PE, focusing on suitability for apheresis. Veins are prioritized in the following order: median cubital vein, basilic vein and cephalic vein. An ultrasound guided venous assessment in case of any doubt should be the gold standard.
- Exceptional Circumstances: CVC use may only be considered when:
  - The donor is fully mobilized, but peripheral collection is not possible – see also chapter 4.13.1. Peripheral Stem Cells (PBSC)
  - No alternative, suitably matched donor or cell source (i.e., ADCU) is available within a feasible timeframe.
  - No emergency BM collection is possible for the donor and/or the CC – see also chapter 4.13.2 Bone Marrow (BM) and 4.13 Donation Process.
  - The patient's conditioning regimen has already commenced or conditioning must be urgently scheduled.

Approval and Preparation for CVC Use:

If CVC placement is deemed necessary, the following steps and conditions must be strictly observed:

- CC Protocol: Before CVC use, the CC must demonstrate:
  - Adequate protocols and monitoring procedures for CVC placement.
  - Trained personnel experienced in CVC insertion.
  - Comprehensive donor counseling on the risks and requirements for written informed consent.
- TC Communication: The CM must inform the TC promptly and potential alternative solutions (such as BM collection switch or alternate cell source) must be explored.

Donor Consent and Requirements:

If CVC use is approved, the donor must:

- Provide Written Consent: The CC is responsible for obtaining signed informed consent from the donor, who must be fully counseled on CVC risks.
- Avoid Subclavian Catheterization: Subclavian vein catheterization is not recommended to minimize risks. It should be followed the gold standard of each clinic (p.e. femoral line).
- Verification: The CVC placement must be verified via imaging to ensure proper positioning.
- The donor must be admitted for one night in the hospital and monitored thoroughly.

Final Review and Reporting:

In cases where CVC use proceeds, all involved parties (CC, TC, and DKMS) must document the decision comprehensively, with the following steps:

Record All Decisions: Document any rationale for CVC use, including the patient's urgency, donor availability, and alternative solutions considered.

4.13.9 Product Information, IDMs from day of donation and Collection Report

Collection Report:

The Collection Report is a crucial document, as it provides a concise medical summary of the donation process. The report should include:

- Overall course of donation: Was the collection procedure uneventful, or were there any complications or notable events during G-CSF mobilization and apheresis?
- Venous access observations: Any difficulties in placing the access lines?
- Supportive measures: Documentation of any interventions required during collection.

- Pre- and post-apheresis blood counts: At a minimum, include WBC count [G/L], Hemoglobin (HGB) [g/dL], HCT [%], and Platelets [G/L]. A complete blood count (CBC) and clinical chemistry panel are preferable.
- Collection method, Apheresis duration and processed blood volume: Specify the collection procedure used and the total processed blood volume and duration.
- Collected blood volume (PBSC): Indicate the total volume of collected stem cell product.
- Anticoagulation: Document the type of anticoagulant used during collection.
- Post-donation FU plan: Include planned FU01 and laboratory testing schedules – see also chapter 5.7 Donor FU.
- Contact information for post-donation concerns: Ensure that the donor has a contact number in case of any post-donation questions or complications.

Collection report submission: The CC must submit a comprehensive Collection. Report to DKMS as soon as possible, but no later than 30 days after collection.

Reporting of abnormalities: Any irregularities or complications during donation should be actively communicated to feedback@dkms.de – for more information see chapter 6 Adverse Events and Reactions Reporting (SPEAR).

Product Information:

The contracted CC is responsible for timely reporting of all collection results, including a clear definition of the measured cell populations. The required reporting timeline is as follows:

- First and potential second apheresis day: The CC must send the results to DKMS via email and to the TC via fax or email by 5:00 PM (17:00 CET) on the respective collection day.
- In case of delays: If reporting cannot be completed by 5:00 PM, the CC must immediately notify the DKMS emergency contact number to prevent disruptions in the coordination process. It is helpful to provide information if the reports were successfully sent to the transplant center directly and if there have been deviations in number of collection days (2nd days required).
- Automated cell count measurement: The CC must provide initial documentation of the device used and the specific measurement profile applied. Any deviations from the standard protocol must be updated and communicated to DKMS accordingly.
- For international registries: When collecting stem cells for international registries, all required official forms must be sent to DKMS via email and to the TC via fax.

If only one day of apheresis is required and the donor wishes to return home on the same day, the CC must ensure that the hotel reservation is canceled in a timely manner.

If the actual apheresis duration deviates from the estimate in the Verification of donor Clearance document, the CC must:

- Immediately inform DKMS by phone so that all involved parties (e.g., couriers) can be updated.

- After 5:00 PM (17:00 CET), notify the DKMS emergency service.

In cases where product release information is available at the time of clearance, DKMS will provide product details upon request.

The final product information should contain the following parameters:

- Nucleated Cells (TNC) total x 10^8
- TNC (BM) per kg recipient Body Weight x10^8
- Erythrocyte Volume ml
- Platelets per Transplant x10^9
- CD34+ Total Count x 10^6
- CD34+ per kg recipient Body Weight cells x 10^6
- CD3+ Cells total x 10^8
- CD3+ Cells per kg recipient Body Weight x 10^8
- HTC total in %
- WBC x 10^6/ml
- Cell Viability/Vitality CD34 und TNC in %

Additions: How much Anticoagulant Citrate Dextrose Solution A (ACD-A) in ml und Heparin [IE] has been added. Storage and transportation at which temperature [°C]

IDM Testing on the Day of Donation:

IDM testing must be performed in compliance with „Richtlinie zur Herstellung und Anwendung von hämatopoetischen Stammzellzubereitungen“ and should include:

- HIV
- CMV
- HCV
- HEV
- HBV
- Treponema pallidum
- HTLV testing only needs to be repeated in cases where there is a known risk.

These information’s must be documented, reported, and communicated in a structured manner to ensure regulatory compliance and effective coordination between all involved parties. IDM results must be transmitted as soon as the complete set is available. Depending on the scope of the manufacturing authorization, product release may be granted based on preliminary values obtained on the day of the PE.

4.13.10 Compensation for Costs Arising for the Donor during PE and Donation, Work Release and Incapacity to Work, Sports Restrictions

Travel and Accommodation Costs:

- Public Transport: Whenever possible, donors are encouraged to use public transportation for travel to and from the PE or donation site. DKMS will cover the full cost of public transportation tickets.
- Personal Vehicle Use: In cases where a personal vehicle is used, DKMS will reimburse mileage at the current tax-deductible rate covering the shortest round-trip route.
- Air Travel: Economy-class airfare with one checked bag (up to 20 kg) will be covered if necessary.
- Parking Fees: DKMS will cover fees for parking at the train station, airport, or hotel, as well as any toll charges.
- Accommodation:
    - For PE: DKMS covers one single room with breakfast.
    - For Donation: DKMS covers either one double room with breakfast or two single rooms with breakfast, depending on the needs of the donor and any necessary accompanying person.

Compensation for Work Absences:

- Work Absences: DKMS encourages donors to discuss leave options with their employers, who may grant paid leave for both the PE and donation days. If an employer requests compensation for the employee's absence, DKMS can cover these expenses. Freelancers can also request compensation for income lost due to participation in the donation process.
- Medical Certification: DKMS provides donors with a certificate confirming participation in the donation process, which can be presented to employers, schools, or educational institutions as needed.
- Convalescence:
    - After PBSC Donation: Donors typically require one day off work, which corresponds to the unused second apheresis day**.**
    - For BM Donation: Donors generally need five days off, which includes the three-day hospital stay for the procedure.
    - If additional time off or a sick leave certificate is required, the donor's physician can provide this documentation.

Additional Reimbursable Costs:

- Childcare: DKMS will reimburse costs related to childcare during the donation process:

  - Private Care (no income loss): Up to 8 hours per day, with a maximum reimbursement of 9.60 EUR per hour.
  - Private Care (with income loss): If a family member or friend provides cares and incurs income loss, DKMS will cover these costs at the same rate as compensation for the donor's own lost income.
  - Formal Childcare Services: Expenses for daycare, babysitters, or other registered services will be covered as invoiced.
- Pet Care: DKMS reimburses pet boarding costs up to 30 EUR per day.
- Medications: Costs for any medications prescribed in connection with the donation process are covered, provided that the original prescription and receipt are submitted.
- Medical and Laboratory Tests: DKMS will cover all approved lab and medical tests requested by DKMS or the CC. If the donor incurs these costs directly, DKMS will reimburse the expenses upon receiving original invoices.

Meal Allowances:

DKMS covers meal costs during the PE and donation days as follows:

- Lunch: Up to 25 EUR per meal.
- Dinner: Up to 40 EUR per meal.

Note: DKMS does not cover food expenses for accompanying persons.

Non-Reimbursable Costs:

Certain expenses are not eligible for reimbursement by DKMS. These include, but are not limited to:

- Fines, penalties, or towing fees incurred during travel
- Fees for premium services such as pay-tv, hotel phone charges for international calls, or additional hotel amenities (e.g., spa, wellness areas)
- Personal care services or alcohol from the minibar
- Any fees resulting from violation of hotel policies (e.g., smoking in a non-smoking room)

Incapacity to Work:

The convalescence period post-donation can differ significantly among donors:

- Certification of Incapacity: The duration of a donor's medical leave following donation should be documented and forwarded to the FBM team. In most cases, the employer's certificate of work absence can be extended as needed. However, if the donor experiences a decline in general condition, they should consult their primary care physician for an extended medical leave certificate. This should be send to DKMS and not to the donor´s health insurance provider. In certain individual cases, DKMS may provide an additional extended work exemption.

Work Absence Coverage:
DKMS covers loss of earnings due to donation-related incapacity to work. For PE, if the donor is unable to work after donation, they must submit the official medical leave certificate directly to DKMS. When submitting the certificate, the donor should list DKMS as the responsible payer, rather than their health insurance provider.

Special Considerations for Certain Professions:
Certain professions may require special exemption from work. These include:

- Industrial climbers
- Passenger transport personell
- Professional divers
- Police officers
- Pilots

For these professions, it may be necessary to assess whether a temporary reassignment to non-operational duties is possible during G-CSF administration. If a donor for the first time mentions this at the day of PE, the CC should inform the WU CM right away so that a prolonged exemption from work can be issued.

Sports and Physical Activity Restrictions:

To mitigate health risks, particularly splenic rupture, restrictions on sports and physical activity are recommended during and after the mobilization period:

- High-Impact and Contact Sports: Donors are advised to avoid high-impact team sports, such as handball, soccer, and basketball, as well as high-risk activities like mountain biking and horseback riding, until one week after PBSC.
- Contact Sports: Avoid all contact sports for at least one week following PBSC.
- Low-Impact Sports: Low-contact activities that carry minimal trauma risk, such as fitness training, swimming, and running, may generally be resumed as tolerated.

Some CCs may advise against any sports activities during the mobilization phase.

Consensus: Activities with a high risk of splenic injury should be avoided from the start of mobilization until at least one-week post-PBSC.

Reimbursable Expenses

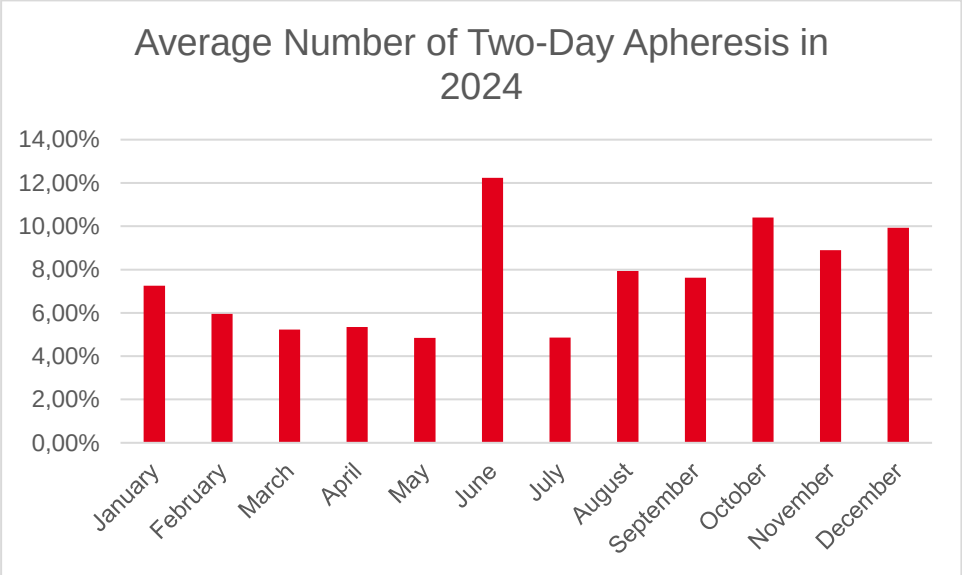
DKMS aims to support donors throughout the PE and donation process by providing reimbursement for necessary expenses related to travel, accommodation, work absences, and other associated costs.

4.13.11 First and Second Apheresis Days

The decision on whether a second apheresis day is required depends on the collected CD34+ cell count after the first apheresis session. As a general reference, approximately 7.5% donors require a second collection day to reach the requested cell dose.

For further information see chapter 4.11 Excursus Cell Counts and 4.13.6 Achieving Target Cell Counts.

4.13.12 Excursus Average Number of Two-Day Apheresis in 2024



4.13.13 Transport

The blood stem cell product will be picked-up at the CC by a courier. The timing of the pickup is determined based on the availability of laboratory results (specifically the CD34+ count). The collection process is as follows:

- For apheresis starting at 08:00 AM: The pick-up will typically occur early the following morning, coordinated with the courier in the late afternoon of the apheresis day.
- For apheresis starting at 12:00 PM: The pick-up will take place either in the morning or early afternoon of the following day (in cases of second apheresis).

The CC is responsible for facilitating the pick-up of the blood stem cell product by a courier service communicated by DKMS. The CC is responsible for ensuring the integrity of the blood stem cell product until it has been properly handed over to the selected courier. Furthermore, the CC is accountable for ensuring that the blood stem cell product is manufactured and tested in compliance with Good Manufacturing Practices (GMP).

The CC must ensure that the blood stem cell product is transferred into an appropriate container, labeled correctly, and accompanied by the necessary information as per regulatory requirements as well as requested blood tubes from the day of collection. The CC is authorized to condition the handover of the blood stem cell product to the transportation company upon confirmation that the courier has suitable transport equipment. If the CC deems the transportation equipment inadequate, it must immediately contact DKMS to arrange for a prompt resolution.

4.13.13.1 Transport Arrangements to be Made by International Registries and TCs

International registries and TCs are usually responsible for organizing the transportation of blood stem cell products. Key steps include:

- Courier Information Submission: The TC – via DKMS - must provide the CC with the courier's full name, passport or ID number, and contact details in advance of the donation. This ensures proper identification and the secure handover of the product to the right person.

It is the TC's responsibility to promptly communicate all courier and transport details to the DKMS, ensuring that all parties are fully informed ahead of the donation date.

4.13.13.12 Transport Arrangements to be Made by DKMS

In cases where DKMS is responsible for organizing the courier, the following procedures apply:

- Courier Organization: DKMS arranges for the designated courier to collect the blood stem cell product from the CC. The CC must ensure the proper handover of the product and verify that the courier has the correct transport equipment. If the CC identifies any issues with the courier's equipment, they must notify DKMS immediately to resolve the situation.
- Courier Details Collection: DKMS will collect the courier's full name, passport number, phone number, and travel itinerary. This information is shared with both the TC and CC in advance to ensure proper coordination and handover procedures.
- Verification of Transport Equipment: The CC is responsible for confirming that the courier's transport equipment meets the required standards for carrying the blood stem cell product. If the equipment is inadequate, the CC must immediately inform DKMS so that alternative arrangements can be made.
- Legal Responsibilities: Until the stem cell product is handed over to the courier, the CC is responsible for its safety and integrity. The product must be prepared according to GMP. After the handover, the responsibility for the product's security transfers to the courier.
- Security Measures: DKMS ensures that the courier has all necessary documents to pass through airport security and customs smoothly. This includes a letter stating that the stem cell product must not be irradiated or delayed under any circumstances.

There are two process options regarding customs documentation:

  - Option 1 (preferred): The CC arranges the airport registration and prepares the customs documents for the Federal Police, which are then handed over to the courier. DKMS is not involved in this step.
  - Option 2 (upon request): DKMS arranges the airport registration and prepares the customs documents, which are sent to the CC. The CC then hands them over to the courier.

5 Post Donation Processes

5.1 Post-Tx Interview

In the first few days (1-5 days) after the donation, each donor is contacted by DKMS's Donor-Patient Contacts (DPC) Department for a post-Tx interview (Tx = day of donation) – see also chapter 2.5 Donor–Patient Contacts (DPC) Department. This interview centers around the donor's donation experience and well-being, asking for possible side-effects of G-CSF/anesthetics, puncture site etc. If interested and bearing in mind donor's right not to know, general information about the recipient is being shared: sex, age group (preschooler 0-5 years, pupil 6-12 years; teenager 13-19 years; young adult 20-30 years; adult > 30 years) and country the transplantation takes place in. Important feedback to the collection center (CC) is shared with the CC as well as relevant medical issues. If needed, also a note to the team responsible for SPEAR reporting is sent out – see also chapter 6 Adverse Events and Reactions Reporting (SPEAR).

5.2 Microbiological Findings

All collected stem cell products undergo microbiological testing at the CC to detect potential bacterial contamination. Despite strict disinfection measures, contamination with skin bacteria cannot always be completely avoided, particularly in BM collections, where such findings occur in approximately 10-15% of cases. In contrast, PBSC collections are rarely affected but can still show occasional contamination.

Each CC conducts an initial microscopic examination of the product. If bacteria are detected, an interim report is issued, and aerobic and anaerobic cultures are initiated. The final microbiological report, typically available within 14 days, often includes an antibiotic susceptibility test (antibiogram), providing crucial information on bacterial resistance patterns. This ensures that, in the event of an infection, the patient can receive immediate and targeted antibiotic treatment.

It is the responsibility of the CC to report any positive microbiological findings to the transplantation center (TC) or Hub without delay, typically via DKMS. However, TCs routinely conduct their own contamination testing upon receipt of the product. In some cases, a TC may report a positive result despite a previously negative report from the CC, which is usually indicative of secondary contamination occurring after shipment.

By maintaining rigorous microbiological testing and reporting standards, CCs play a vital role in ensuring the safety and integrity of stem cell products, minimizing risks to patients undergoing transplantation.

5.3 Patient Follow-up (FU) and Cells not infused

If cells have been cryopreserved, DKMS tracks their infusion by regularly contacting the TC – see also chapter 4.6 Cryopreservation of Stem Cell Products. Any delays are being monitored until the cells have been infused or until it is certain that an infusion will not take place. Information gathered is passed on to the donor if they wanted to be kept updated. If the cells have been (fresh or cryopreserved) infused and the donor would like to receive updates on the patient, DKMS requests patient updates from the TC.

Patient FU Process:

- Initial patient Follow-Up: DKMS typically requests follow-up information on patient outcomes three months after transplantation, including data on engraftment. The engraftment data will be sent to the respective CC for their quality management and Joint Accreditation Committee ISCT-EBMT (JACIE) accreditation – see also chapter 11.2 Differences from other Audits (Joint Accreditation Committee ISCT-EBMT (JACIE)). Responses from TCs may be delayed up to 2 years.
- Basic information for donors: donors are provided with general, anonymized updates on the recipient's health status. If requested, further updates can be arranged at 12 and 24 months and in subsequent years. For further information see chapter 2.5 Donor–Patient Contacts (DPC) Department and chapter 5.4 Anonymous Correspondence between Donors and Patients.
- After transfusion of an Adult Donor Cryopreserved Unit (ADCU), the same processes of requesting patient follow-ups apply. However, due to regulatory requirements of DKMS Stem Cell Bank (SCB) (pharmacovigilance), more detailed patient outcome data is required for up to 5 years and forwarded to DKMS SCB.

5.4 Anonymous Correspondence between Donors and Patients

5.4.1 Anonymous Correspondence

In most countries, anonymous communication between the donor and patient is allowed once the transplantation took place. Correspondence must be anonymous, i.e. will be read and – if needed – redacted. Communication must not contain information that makes it possible to identify patient or donor, e.g. names, places, age, profession, employer, specific hobbies, etc. Therefore, letters/emails must be forwarded to DKMS and/or the respective TC. CCs must not facilitate the hand-over of any gifts or communication between donors or couriers but immediately inform DKMS and sent the gift or letter to DKMS.

See also chapter 2.5 Donor–Patient Contacts (DPC) Department.

5.4.2 Release of Personal Information

After a successful stem cell transplantation, DKMS allows for the exchange of personal information between donors and recipients under certain conditions, provided there is no conflict with local regulations in the donor’s or patient’s country.

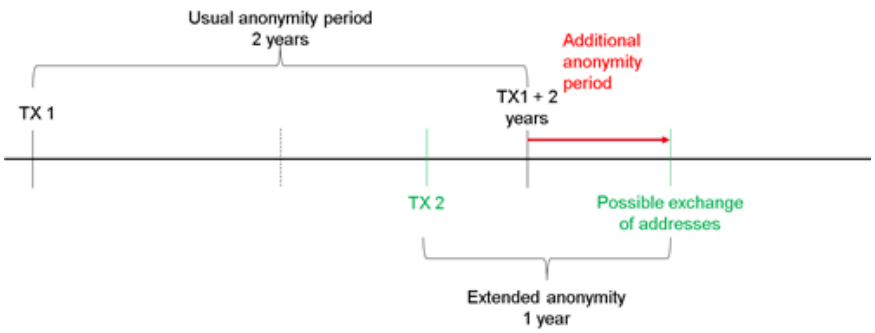
Anonymity Criteria for DKMS Donors

- Anonymity Period: In most cases, personal information can be exchanged two years after the initial transplant.
- In the event of patient death: If a patient has passed away, the two-year anonymity period may be lifted, allowing exchange of information between the donor and the patient's relatives right away

Special Considerations for Subsequent Donations:

- Additional Anonymity Period: If the donor provides a subsequent stem cell or Mononuclear Cell (MNC) apheresis within the second year after the original transplant, the confidentiality period will be extended – see also chapter 4.13.3 Multi-Donations and 5.9 Subsequent Donation Request.
    - For Hematopoietic Stem Cells (HSC) Donations: An additional one-year anonymity period applies, starting from the date of the second donation.
    - For MNC apheresis: A three-month extension applies from the day of infusion of the MNCs. If a MNC is not infused, please contact the donor-patient department regarding the anonymity period - see also 4.13.4 Mononuclear Cell (MNC).
- Initiation of Request: Either the recipient (through their TC) or the donor may initiate the request to exchange personal information.
- Consent Requirements:
    - Recipient Consent: The recipient's (in case of minors from parents) written consent to release their personal information to the donor should be obtained by the TC and be on file with DKMS when the request is submitted.
    - Donor Consent: The donor must also sign a consent form to allow the release of their personal information to the recipient.
- Exchange of Information: Once DKMS has received signed consent forms from both the donor and the recipient, the personal information that has been released can be securely exchanged.

After transfusion of an ADCU, direct contact between the donor and the patient may also be initiated after the anonymity period, following the same processes.



5.5 Feedback Management (FBM)

A team of specially trained feedback managers takes care of any feedback/problem donors have during or after donation, be it medically, organizationally or emotionally. Feedback regarding organizational issues is used to improve internal and external processes, if needed with involvement of DKMS's deviation/ Corrective and Preventive Action (CAPA) or CC Relationship Management (CCRM) managers (see chapter 9 CC Relationship Management and 10 External Corrective and Preventive Action (CAPA) Management). Medical issues are handled in close collaboration with CCs and DKMS' own Physicians Team (PT). DKMS' feedback managers provide assistance for donors who need more support or a stronger feeling of „being taken care of", ensure donors' well-being post donation and take care of questions regarding insurance or cost reimbursements (see also chapter 4.10.9 Donor Insurance, 4.10 Physical Examinations (PE) and chapter 4.13.10 Compensation for Costs Arising for the Donor during PE and Donation, Work Release and Incapacity to Work, Sports Restrictions).
DKMS may learn about cases for feedback management (FBM) from donors directly, often through the Post-Tx Interview, the Workup (WU) Department, CCs, Donor FU or the Finance department.

Each case is handled individually until all needs are satisfied. DKMS' FBM team can be reached via feedback@dkms.de

5.6 Blocks and Exclusions

After donation, every donor is reserved for the patient for 2 years (see also 5.10 Donor Reservation after Donation). Donors may furthermore become temporarily or permanently unavailable for further donations. If they are only temporary unavailable, donors are being blocked, if they are permanently unavailable, they are being deferred.

Donors are deferred due to withdrawal, medical reasons, reaching the age limit, emigration or if they pass away. The donor will then be excluded from the international donor search permanently and will no longer be available for international searches. Data are kept according to legal requirements. As long as the donors are still reserved for the patient, the TC is informed about any block/exclusion.

Furthermore, the TC/registry is informed if the donor reports a serious disease that could be relevant for a patient, e.g., leukemia, cancer, etc. These cases are reviewed by a 2.4 Physicians Team at DKMS and communicated by Donor-Patient-Contacts (DPC) coordinators to the TC/registry Case Managers (CM).

5.7 Donor FU

Following a stem cell donation, DKMS maintains structured follow-up (FU) procedures to ensure donor well-being and fulfill accreditation requirements, including those outlined by JACIE (see also 11.2 Differences from other Audits (Joint Accreditation Committee ISCT-EBMT (JACIE))). These FUs support quality management, maintain donor safety, and provide feedback on the success of the donation for both donors and CCs.

Donor FU Process:

- Ongoing Donor FU: Donors receive regular FUs at six months and annually for up to ten years post-donation. This process includes evaluations to confirm the donor's ongoing eligibility for future donations and tracks any serious events or adverse reactions (see also 5.6 Blocks and Exclusions and 6 Adverse Events and Reactions Reporting (SPEAR)). All medical data is coded following ICD-10 and "Rote Liste" standards to ensure consistency and facilitate detailed analysis.
- Matched Pair Study for Donor Health Monitoring: Since 2009, DKMS has implemented the Matched Pair Study: each donor is paired with a comparison partner to enable long-term monitoring of their health. This initiative enhances understanding of post-donation health trends and helps ensure donor safety and evaluate the existence of late side effects.

Reporting Medical and Non-Medical Concerns:

- Report any medical and non-medical issues directly to feedback@dkms.de – for further information see 5.5 Feedback Management.
- Organizational feedback is relayed between the Feedback Management team in cooperation with the Quality and CC Relationship Management (QCCRM) department and CCs, and CCs may be asked to provide a statement.
- Updates and any required information are communicated to the donor.

FU after 1 month (FU01)

At the moment, the FU01 is divided by CCs which is either:

The FU01 is a collaborative effort between DKMS and the CC.

The FU01 process, which starts 14 days post donation by sending an email by the DKMS Physicians Team (PT) for arranging a blood draw approximately one month after donation. 28 Days post donation the donor receives a second Email with a link to the Health History Questionnaire (HHQ) and a reminder to organize a blood draw if this has not taken place yet.

FU01: This FU is required even if the donation was started but not completed (e.g., after the first GCSF injection or initiation of anesthesia). Once DKMS receives the blood results from the donor's general practitioner and the completed questionnaire, these documents are forwarded to the CC along with an evaluation form.

The CC physician is responsible for reviewing the results, completing the evaluation form, and signing it with their initials. If any additional tests or FU examinations are required, the CC is responsible for arranging these. Should any abnormalities be identified, the CC physician must determine whether further contact with the donor is necessary and instruct additional investigations if needed. The results of any supplementary examinations are to be communicated back to DKMS, and the finalized evaluation form should be sent to the DKMS PT, preferably via email to followup_faxdis@dkms.de with "GRID + Gesundheitsfragebogen and/or Labor" in the subject line.

- Incomplete or Missing Data: If the donor fails to submit the completed questionnaire and/ or the blood test, DKMS will coordinate to remind the donor and facilitate the completion of these steps.
- Abnormal Results: Should the blood results or questionnaire indicate any health concerns, the CC physician is responsible for reviewing the data, completing the evaluation form, and determining whether additional tests or FU actions are necessary. The CC must communicate any abnormalities to DKMS promptly and indicate any further steps taken.

In case the CC does not return the evaluation questionnaire a reminder process will be started including:

- First reminder 30 days after sending the results.
- Second reminder 28 days past the first reminder.

Or: The FU01 process is completely organized by the CC which includes a Blood draw after approximately 28 days and a Health questionnaire. The CC may hand-over the required information and letter to the general practitioner of the donor at the day of collection or send it to the donor in time before 28 days. The CC sends the final results including information about additional examinations and their results to DKMS (followup_faxdis@dkms.de with "GRID + Gesundheitsfragebogen and/or Labor").

Responsible Department: DKMS PT, see chapter 2.4 Physicians Team (PT).

5.8 Genetic Findings Post Donation

Genetic testing plays a crucial role in monitoring patients after Hematopoietic Stem Cell Transplantation (HSCT). These tests are primarily conducted to detect minimal residual disease, assess the risk of relapse, and identify genetic mutations that may impact disease progression. While such analyses provide valuable insights for TCs and patients´ treatment, they also raise significant ethical and regulatory considerations, particularly when genetic findings could relate to the donor. These incidental genetic findings can present complex challenges regarding disclosure and FU.

Ethical and Regulatory Considerations:

The WMDA provides guidance on how genetic findings should be managed to balance transparency, privacy, and ethical responsibilities.

Key principles include:

- No routine genetic testing prior to donation.
- Donors should be informed prior to donation that genetic testing of recipient blood cells may be done routinely after stem cell transplantation which in rare cases may yield information that may be clinically relevant to them. This information should be

provided in writing for the donors at the time when informed consent for the donation is obtained.

- Consideration of implications for the donor: If TCs perform genetic testing on the patient, they should be aware that some findings may have relevance to the donor.
- Communication between TCs and donor registries: If a patient's test results indicate a potential donor-related genetic issue, DKMS must be informed to assess the appropriate next steps. This process typically involves consultation with DKMS´ Medical Advisor, who evaluates the findings and advises the PT on the necessary course of action, including whether and how to approach the donor. The Medical Advisor's feedback is documented accordingly. When the PT contacts the donor, they inform them that a genetic finding has been identified in the patient, which may or may not be relevant to the donor. However, specific details regarding the findings are not disclosed to the donor. Instead, the donor is provided with a list of human genetic counseling centers and encouraged to schedule an appointment.
- The costs for genetic counseling are covered by DKMS. Once the donor confirms their appointment, the genetic findings will be sent directly to the genetic counseling center, where the donor will receive specialized counseling and further evaluation.
    - Informed Consent for Disclosure: Donors must provide explicit consent before any of their genetic information is shared with the genetic counseling center.
- TCs should be cognizant of the potential for donor-recipient contact when discussing genetic findings of potential donor origin with the recipient.

The Genetic Diagnostics Law provides a framework for managing donor- related genetic findings findings, including:

- Case Assessment: Each case is reviewed internally to determine whether the donor should be informed.
- Genetic Counseling: If a genetic finding is deemed relevant to the donor, professional counseling must be offered.
- Documentation and FU: All findings and decisions must be carefully documented to ensure compliance with legal and ethical standards.

Confidentiality and the Right to Not Know:

A fundamental ethical dilemma involves balancing the donor's right to know versus their right not to know. Some donors may prefer not to receive genetic information unless it has direct medical relevance. Similarly, patients may not always be informed of genetic findings unless they significantly impact post-transplant care.

5.9 Subsequent Donation Request

If a Subsequent Donation Request is received, the case is first reviewed by a DKMS Medical Advisor to assess the feasibility and medical suitability of a second donation (see also chapter 4.13.3 Multi-Donations). Once approved, the Workup (WU) Process is initiated,

ensuring all necessary evaluations and preparations are conducted in accordance with standard protocols.

5.10 Donor Reservation after Donation

After a donor completes their first stem cell or BM donation, they are reserved exclusively for the patient they donated to for a period of two years, starting from the first day of collection (see also 5.6 Blocks and Exclusions). This ensures that, should the patient require additional stem cells or BM, the same donor can provide them – see also 5.9 Subsequent Donation Request and 4.13.3 Multi-Donations. Reserving the donor for this period enhances the continuity of care and maximizes the likelihood of a successful treatment outcome for the recipient.

In the event that a donor becomes unavailable for subsequent donations, whether due to health reasons, personal circumstances, or other factors, DKMS will inform the TC during this reservation period.

In case of transfusion of an ADCU, the initial donor will be reserved for 2 years as well – starting from day of transplant - as long as the donor is not still reserved for the first patient.

6 Adverse Events and Reactions Reporting (SPEAR)

The purpose of Adverse Events and Reactions Reporting (SPEAR) reporting is to collect and analyze all adverse events and reactions related to stem cell donation to improve safety for donors and recipients. While reporting to World Marrow Donor Association (WMDA) does not replace compliance with national regulations, it provides a valuable global framework for tracking rare incidents.

At DKMS, reporting Serious Adverse Events and Reactions is crucial for ensuring the safety of both donors and recipients. The objective is to identify, document and report any complications that arise during the donation process in a timely and thorough manner. This helps maintain high standards of safety and compliance, enabling participation in global data-sharing initiatives such as WMDA's SPEAR reporting.

The DKMS Medical Advisory Team (MAT) 2 is responsible for SPEAR submissions to WMDA. Any adverse medical complications identified must be reported via email to: sear@dkms.de, medizin-köln@dkms.de and feedback@dkms.de including a detailed description of the complication, its timing, the investigations performed, and any treatment provided.

The apheresis unit must also promptly (within 15 days) notify the Paul-Ehrlich-Institute (PEI) of any serious adverse reactions or events that affect the quality or safety of the blood stem cell product. DKMS will ensure that all reports are forwarded appropriately to WMDA. The responsible FBM Team member or the MAT will follow up with the collection center (CC)

physician as necessary. If the adverse event occurred at the CC, the final WMDA SPEAR report will also sent to the CC.

What to Report:

Any serious, unexpected, medically relevant, or previously unknown issue. Also risk of harms, like unnecessary donations or critical cases of cryopreservation (see 4.6 Cryopreservation of Stem Cell Products).

WBMT Minimal Data Set A (Long-Term Donor Follow-Up (FU)):

Up until 10 years after donation, the following events must be recorded:

- Malignancy
- Severe autoimmune disorder
- Donor death (unless clearly unrelated to the donation)

SPEAR Reporting

Reporting product or patient adverse events/reactions is primarily the responsibility of the transplantation center (TC). However, the TC might not always be aware of this obligation, so DKMS should actively participate in reporting any such incidents, especially if the TC has the same official reporting line (e.g., Zentrales Knochenmarkspender-Register Deutschland (ZKRD)).

No SPEAR Report Required If:

- The SPEAR is patient-related, and the report is already made by the TC.
- Consultation with the TC is required. Contact the TC via Feedback Management (FBM) to ask if they will handle the report.
- FU is necessary. Create a task reminder if no report has been made by the TC after a renewed notification. If needed, DKMS will complete the report.
- The SPEAR is due to issues at the CC (e.g., problems with the collection bag or similar during collection). In such cases, DKMS will report it.

7 Collection Center (CC) Engagement related to DKMS supported Research Activities

7.1 Support of Research Studies involving DKMS stem cell donors

Requested by transplant physician:

As part of DKMS´ commitment to support scientific research, our Clinical Trials Unit (CTU) team also supports clinical trials and research projects which require donor blood or donor

stem cells. Many of these studies aim at developing new strategies to prevent or treat post-transplant complications (e.g., graft versus host disease, virus infections).

Academic research groups that require blood or stem cells from DKMS Germany donors can request this at workup (WU) level (see 2.3 Workup Department). Participation in research is always voluntary, and the primary objective of DKMS is to protect stem cell donors from unnecessary burden.

Only after review and approval of a research project DKMS donors may be approached for participation, ensuring that their involvement is both ethically justified and scientifically valuable. Regulatory Affairs Experts within the CTU ensure compliance with the requirement for approval of the competent Ethics Committee in Germany.
Collection centers (CC) that are collaborating with DKMS to support such research studies will receive all necessary information for donor consent and study conduct in timely manner prior to the date of donors´ physical examination as well as a written note when a donor is requested for study participation or contribution. This includes:

- Study Protocol: The detailed outline of the research project/ clinical trial.
- Sample Collection Details: Information about the samples that need to be collected.
- Ethics Committee (EC) Approvals: Valid approvals from the Ethics Committee responsible for the study group as well as from a competent German Ethics Committee.
- Accompanying Documents: Any necessary transportation instructions or additional clarifications relevant to the study.
- Donor information and donor consent form.

Should there be any questions or need for clarification, CCs can reach out to the designated contact address: externalstudy@dkms.de.

CCs must send signed donor consents or denials to the WU coordinator so that DKMS can inform the respective transplantation center (TC) about participation or denial. DKMS also tracks approvals or denials of donors of each study.

Requested by CCs:

If CCs plan to conduct a study, the study proposal should be submitted to ccrm@dkms.de, including the study protocol, ethics approval, and donor informed consent form.

The CTU reviews the proposed study and either approves or declines the request. Upon approval, DKMS provides clearance for approaching DKMS donors.

The CC informs the DKMS in writing (via email) about the start and end dates of donor recruitment. For each participating donor, the CC sends the informed consent to DKMS Workup for documentation purposes.

Any publication resulting from the study must include an appropriate acknowledgment of DKMS. The specific wording of this acknowledgment should be agreed upon with the DKMS.

7.2 Biobank activities - Collaborative Biobank (CoBi)

The Collaborative Biobank (CoBi) is a research initiative coordinated by the 2.8 Clinical Trials Unit in partnership with key stakeholders involved in stem cell transplantation including TCs as well as CCs in Germany.

It was established in 2016 by DKMS to create long-term resources for future research purposes with the objective of improving and expanding donor selection for hematopoietic stem cell transplants (HSCT) and optimizing patient treatment. The conceptual design of CoBi was aligned in compliance to legal recommendations and current standards for biobanking.

CoBi holds biological material (whole blood and Peripheral Blood Stem Cells (PBSC) samples; processed to Deoxyribonucleic acid (DNA), viable cells and plasma) and associated medical data from both, donors and patients, who voluntarily participate in the Biobank. Primary donor samples (9 ml Ethylenediaminetetraacetic acid (EDTA) blood or 27 ml Acid Citrate Dextrose (ACD) blood and 4 ml PBSC product) shall be procured by participating CCs according to information given in the manuals for CoBi Sample collection ("Handbuch zur Probenentnahme an Entnahmezentren" v5.1 and v6.0 respectively). The samples are stored under standardized laboratory conditions to enable effective use in prospective high-quality research. The CoBi provides access to more than 50,000 donor samples and over 5,000 patient samples. A special feature of the CoBi is the availability of material and data (associated genetic and medical data) of matched donor-patient pairs.

The use of participant samples and associated data is restricted according to the research framework of CoBi. Participants are informed, that samples and data may only be used within the research framework of CoBi that is for research to improve prevention, diagnosis and treatment of blood cancers well as optimizing donor selection for allogeneic stem cell transplants.

Research groups can request CoBi resources for a specific research project, provided certain conditions are met. Applications must comply with the research framework and will be evaluated based on mandatory documents provided by applicants. These include the research project protocol and a written statement from the competent EC as well as an access application form. The review process ensures that research conducted with CoBi resources meets appropriate scientific and ethical standards.

By supporting biomedical research in the field of blood cancer the CoBi is able to contribute to the improvement of prevention, diagnosis, and treatment of hematological diseases. This setting is quite valuable for its participants, whose altruistic donation for one patient is able to extend into another dimension by creating additive medically relevant output.

For more information about DKMS studies and other DKMS research activities as well as related documents, please visit https://professional.dkms.org/ and https://www.cobi-biobank.com/

8 Finance - Billing

Centralized Invoice Submission Process:

To enhance the efficiency and reliability of invoice processing, DKMS has implemented an SAP-supported automated invoice review system. This centralized process ensures timely and accurate handling of all incoming invoices.

Below, you will find detailed information and guidelines for submitting invoices to DKMS.

Submission of PDF Invoices via Email (Preferred Method)

To streamline invoice processing, we strongly encourage the submission of invoices in PDF format via email. The designated email addresses for different DKMS entities are as follows:

- DKMS Donor Center gGmbH (DC): Rechnungseingang_DKMS@dkms.de

Important Requirements for PDF Invoices:

- Use unprotected PDF format (Type A).
- Submit only one invoice per email, including all supporting documents in the same file.
- The first page of the PDF must display the invoice.
- Ensure the complete name and address of the DKMS invoice recipient and service recipient are clearly stated.
- Include order or project number, and optionally, the relevant contact person (please confirm with your DKMS contact if unavailable).
- If donor numbers are referenced, format them as a single string (e.g., 6969123400012345678, no spaces or dashes).
- Add the invoice number in the email subject line.
- Avoid including invoice-related details in the email body.
- Do not send a duplicate paper invoice for invoices submitted via email.

Submission of Paper Invoices (If Email Submission Is Not Possible)

Invoices can also be submitted via mail to the following address:

DKMS Donor Center gGmbH
Kreditorenbuchhaltung
Kressbach 1
72072 Tübingen

Requirements for Paper Invoices:

- Paper invoices must be sent directly to the address above, specifically to the Accounting Department.

- Include the complete name and address of the DKMS invoice recipient and service recipient.
- Clearly reference the order or project number, and optionally, the relevant contact person (please confirm with your DKMS contact if unavailable).
- If donor numbers are referenced, format them as a single string (e.g., 6969123400012345678, no spaces or dashes).

Additional Recommendations

To ensure smooth processing and reduce the need for resubmission, we kindly request adherence to the following best practices:

- Align invoice line items with the corresponding items in DKMS purchase orders.
- Issue one invoice per order line item, if possible.
- Ensure good print quality (e.g., avoid faint ink or poor-quality printing).
- Use standard fonts (e.g., avoid cursive or decorative fonts).
- Avoid shading, color backgrounds, or unnecessary formatting; simple black-and-white formatting is ideal.
- Avoid stapling or physically binding invoices and supporting documents.

General Information:

Invoices that do not comply with these requirements may be returned with a request for correction or reissuance. We appreciate your understanding and cooperation in this matter.

For any questions or assistance, please contact the DKMS finance team via Email: AccountsPayable_DKMSDE@dkms.de.

Thank you for your efforts in ensuring a seamless transition to this improved invoicing process

9 CC Relationship Management (CCRM)

9.1 General Information about CCRM

The DKMS Donor Center gGmbH Germany (DKMS DC DE) employs two CC Relationship Managers who take care of all collection centers (CC) that are cooperating with the DKMS DC DE. Tasks include among other things:

- Regular exchange through calls, online meetings and/or on-site visits and audits
- Process clarification or adaptation
- Topics relating to contracts and/or pricing
- Mediation between all parties involved

- Organization of the annual CC symposium or topic-related workshops

The CC Relationship Managers make sure that the CCs and DKMS Departments are always up-to-date by channeling all relevant information through one central point of contact.

Feel free to get in touch with the CCRM Team whenever you have questions or requests. They are your main point of contact for everything that is not directly related to specific cases and they know who else might have to be involved to provide you with a quick solution.

The CC Relationship Management (CCRM) Team also participate in the regular CC calls that are organized by the DKMS Physicians Team (PT) and are available for your questions there as well.

New cooperation's: The DKMS DC DE registers an ever-growing number of Confirmatory Typing (CT) and Workup (WU) requests underlining the need for as many collection slots as possible.

The CC Relationship Managers are therefore in close collaboration with the Senior Manager for International CC Partnerships (see chapter 2.7.3 Senior Manager International CC Partnerships) on the lookout for suitable new collaboration options and closely involved when business relationships are established and during the onboarding of possible new CCs.

Goals: The CC Relationship Managers want to create and further develop a trust-based and constructive network between the CCs and the DKMS DC. Through this exchange, they try to optimize processes whenever needed and possible to help us grow together and benefit from the mutual exchange.

9.2 Collection Center (CC) Onboarding and Collaboration

Onboarding of new CCs

DKMS registers an ever-growing number of CT and WU requests underlining the need for as many collection slots as possible.

The Quality and CC Relationship Management (QCCRM) in collaboration with the Senior Manager for International CC Partnerships (see 2.7.3 Senior Manager International CC Partnerships), are therefore on the lookout for suitable new collaboration options and closely involved when business relationships are established and during the onboarding of new CCs.

The initial contact and successful contract negotiations are followed by in-depth explanations of all the operational processes. During these meetings, the expectations and possible differences can be discussed with representatives of all DKMS medical departments involved. In addition to that, every new CC is asked to provide relevant information, e.g. addresses, pick-up times, courier instructions, by filling out a checklist. In return, DKMS will share lists and/or organigrams of the medical teams to allow for easier identification of contact persons.

As soon as the cooperation is officially launched, the Quality and Process Managers will get in touch with the new CC and ask to conduct a pre-audit which will later be followed by the first on-site audit.

The CC Relationship Managers will remain in close contact with the new CC throughout the entire onboarding process and schedule regular exchange meetings to ensure a smooth start of operations.

9.2.1 Cerberus Protocols for CC Calls - Explanation and Functionality

CC-DKMS Video Conferences

The CC-DKMS video conferences are conducted via Webex. Minutes from the previous meetings and the agenda for the upcoming meeting are included in the email invitation, which is sent a few days before each conference. CCs are encouraged to submit interesting and relevant topics for discussion and collaboration amongst all DKMS-contracted CCs.

Typically, the attached agenda and the meeting itself are conducted in German; however, the minutes are provided in English for broader accessibility. Additional conference calls can be arranged if necessary. For convenience, all minutes from previous conference calls are available on the Cerberus platform.

These video conferences are held on a monthly basis. Invitations for the recurring meetings are sent by the PT. The regular schedule includes calls on the second Friday of every other month and the second Wednesday of the alternating months.

Cerberus File Transfer Protocol (FTP) Server: Secure Content Exchange

The Cerberus FTP Server, commonly referred to as Cerberus, provides a secure platform for exchanging content across locations and time zones. This tool allows seamless collaboration not only within DKMS but also with external partners. The collaborative CC´s server is easily accessible via a web browser, ensuring user convenience.

Accessing the Cerberus FTP Server

The Cerberus web interface can be accessed using the following URL:https://files.dkms.de/file/d/DKMS-Entnahmezentren/CC%20Telko/.

Given that sensitive data—such as C4-class confidential information (e.g., individual-specific medical data)—is frequently shared on the platform, it is strongly recommended to enable two-factor authentication (2FA) for all external user accounts.

To use 2FA, external users need to install one of the following smartphone applications (available for both iOS and Android):

- Google Authenticator
- Authy 2FA

By implementing these security measures, Cerberus ensures that sensitive data is handled with the utmost confidentiality and meets compliance requirements for secure data exchange.

9.2.2 Regular Calls and Symposium

The Quality and CC Relationship Management stays in regular contact with all cooperating CCs, i.e. through calls, or video online meetings. The exchange format and frequency are chosen according on the specific needs of all partners involved and the exchange can be initiated by either side.

In addition to these meetings which focus on one specific CC, the CC Relationship Managers also organize the annual DKMS CC Symposium. This event aims to bring together all the cooperating CCs and their DKMS Counterparts, e.g. the CC Relationship Management, WU case manager, PT, Donor-Patient Contacts (DPC), etc.

Apart from the professional exchange about specific topics, the event represents a great networking opportunity and allows for an open exchange of ideas and experiences. DKMS considers such an exchange invaluable for a successful cooperation.

From 2025, the CC Symposium will take place annually at the end of the year (preferably at the end of November).

9.2.3 On-site Visits

The regular exchange formats described above are accompanied by on-site visits for which the CC Relationship Management will travel to the respective CC.

To minimize the organizational efforts at the CC, the CC Relationship Managers will try to combine their on-site visits whenever possible with the on-site audits (see also 11 Collection Center (CC) Audits) performed by the DKMS Quality and Process Managers.

10 External Corrective and Preventive Action (CAPA) Management

Our Corrective and Preventive Action (CAPA)/Deviation Manager (see also 2.6 Quality and CC Relationship Management) handles deviations and quality incidents that might occur at one of our partners, i.e. the Collection and transplantation centers (TC) or other Registries. The main reporters of deviations and quality incidents are our Workup (WU), Donor-Patient Contacts (DPC), and our external Partners themselves. For every case, we want to determine appropriate CAPA that should solve the immediate issue and help prevent such occurrences in the future. During the validation step, the success of the implemented measures is evaluated.

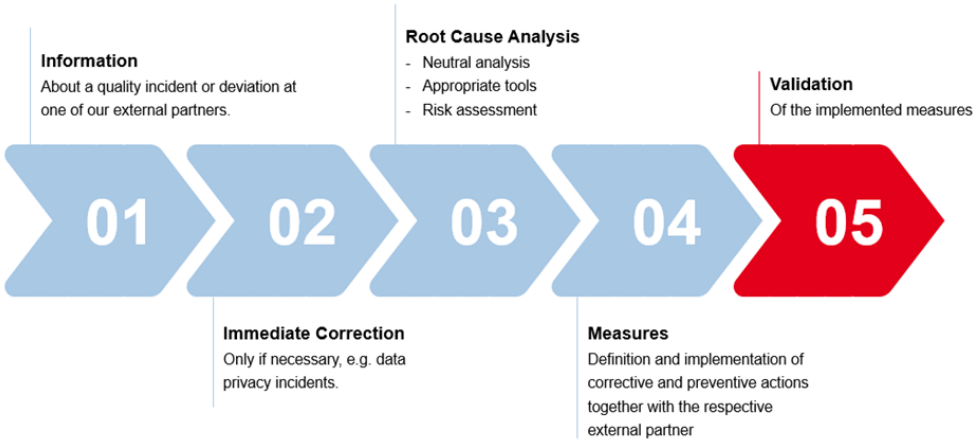
Definitions:

- Quality Incident**:** An incident that has a negative impact on the quality of the product or service provided.
- Deviation: An incident that deviates from contracts, agreements, standards (can lead to a QI).

- Correction: Measures to correct the occurred incident, if necessary
- Corrective Action: Measures to prevent the same incident from happening again
- Preventive Action: Measures to prevent that a similar incident might happen in the future

CAPA Management step-by-step:

The ideal process looks as follows:



Goals:

We want to foster a trust-based and constructive cooperation with all external Partners and we consider the CAPA/Deviation Management a good starting point for process optimization between the collection centers (CC), TCs, Registries and our DKMS Entities.

11 Collection Center (CC) Audits

11.1 Roles and Responsibilities

According to the World Marrow Donor Association (WMDA) Standards 2024 (standard 2.10), a donor registry must implement a Quality Management System to assess, ensure, conduct and improve the quality of its operations. A system of quality management is required to ensure a registry meets basic quality management requirements set forth and voluntary accreditation/certification entities, and contributes to well-functioning internal operations and processes.

Evidence that the registry carries out regular systematic monitoring of its operational activities must be provided (standard 2.10).

The registry must ensure that the collection centers (CC) comply with WMDA Standards. The registry itself might audit the CCs (standard 1.08).

Within the DKMS organizational structure, the DKMS registry has tasked the DKMS Donor Center gGmbH Germany (DKMS DC DE) with auditing the cooperating CCs on a regular basis. The audits are carried out by the Quality and Process Managers (see also: 2.6 Quality and CC Relationship Management). Communication will be done via this e-mail address: ccaudit@dkms.de

For further information see also chapter 2.6 Quality and CC Relationship Management, 9 CC Relationship Management and 10 External Corrective and Preventive Action (CAPA) Management.

The final audit report includes possible findings and recommendations. The auditee is requested to review the audit report and follow-up issues accordingly. For resolution of the audit findings, the auditee is responsible.

11.1.1. Audit types and Schedule

DKMS uses two types of CC audits:

- Onsite audits
- Paper-based audits

As the name suggests, onsite audits are carried out as in-person meetings at the CC while paper-based audits are carried out via exchange of documents.

Onsite audits are scheduled at regular intervals (about every four years) interspersed with paper-based audits in the years between. Time intervals can be adapted, i.e. prolongated or shortened, depending on the individual situation.

New CCs will be audited onsite in the first to second year after the contract has been signed and collections started. As soon as the contract is signed, a paper-based audit will take place to collect necessary information, e.g. Good Manufacturing Practices (GMP) certificate and Manufacturing authorization according to §13 Arzeimittelgesetz (AMG).

11.1.2 Content and Goals

The specific scope of each audit is determined beforehand and illustrated in the audit plan.

The following areas might be reviewed:

- Organization and responsibilities
- Quality Management and SOPs
- Essential documents
- Training & Qualification
- Archiving
- SPEAR Reporting
- Obtaining Informed Consent

- Facilities and equipment
- IT-System

The main goals are:

- to confirm that the auditee has sufficient staff, resources, procedures and infrastructure to be able to manage the planned services
- to confirm that the auditee works in compliance WMDA standard, applicable regulatory requirements and contractual agreement(s)
- to evaluate the internal SOPs and their compliance with applicable regulatory requirements and WMDA standards
- to assess the adherence of all relevant activities to defined Quality System
- to identify compliance gaps, procedural inefficiencies and improvement potential.

11.2 Differences from other Audits (Joint Accreditation Committee ISCT-EBMT (JACIE))

We are proud of the great cooperation with all our CCs and value their great support for our mission.

We have a duty to audit our partners, but above all, we consider our CC audits a great opportunities for exchange that allow us to forge strong partnerships and to grow together.

12 Appendices

12.1 Quality Improvement and Benchmarks

DKMS
WE DELETE BLOOD CANCER

Liste der Quality Marker Stand 08.05.26

erarbeitet durch CC Ärzt:innen und DKMS Mitarbeiter:innen in der Arbeitsgruppe
„Gemeinsam Standards setzen - Entwicklung relevanter Marker und Benchmarks rund um die Stammzellentnahme“

Benchmark	**Thema**	Wert	**Vermerk**
PBSC pos. Mibi	Collection and Product Quality	Unter 1%	
PBSC 2.Tag Apheresen	Collection and Product Quality	Unter 10%	
PBSC Hämatokrit	Collection and Product Quality	Unter 10%	
KME TNC nl	Collection and Product Quality	12,0/nl?	Wenn Gerät Sysmex /Facs
KME pos.Mibi	Collection and Product Quality	Bis 20%	QM nur bei CC mit >10 KME /Jahr
Testung Mibi	Collection and Product Quality	Tag 7	gesetzliche Vorgabe
PBSC ZVK	Safety und Schnittstellen	1%	
NFG	Safety und Schnittstellen	10%	
Thrombozyten PBSC unter 100.000	Safety und Schnittstellen	12,4%	Zahlen abhängig vom Fuhrpark
Thrombozyten PBSC unter 80.000	Safety und Schnittstellen	2,5%	Zahlen abhängig vom Fuhrpark
VU Bericht (ohne ZU)	CC Response, QI und FBM	5 Tage	
Produktinfo	CC Response, QI und FBM	Tag der Spende	
Spenderfreigabe	CC Response, QI und FBM	3 – 4 Tage	
IDMs nach TX	CC Response, QI und FBM	Bis 3 Tage	
KME pos. Mibi Zusendung	CC Response, QI und FBM	Bis 14 Tage	
Zusendung Entlassbrief	CC Response, QI und FBM	Bis 3 Tage	

12.2 Frequent contacts incl. telephone numbers

Confirmatory Typing (CT) Department:

Email: ctteam@dkms.de

Head of Department: Julia Stolze: +49 7071 943-1210

Workup (WU) Department:

Email: workup@dkms.de

Work up Department group call: +49 7071 943-1301

Head of Department:

Melina Hägele (Tübingen): +49 7071 943-1310

Alexander Schott (Cologne): +49 7071 943-1397

Physicians Team (PT):

Medical Advisory Team 1 (MAT 1): +49 221 940582 3404

Medical Advisory Team 2 (MAT 2): +49 221 940582 3401

Medical Coordination Team (MCT): +49 221 940582 3403

Medical Support Team (MST): +49 221 940582 3402

Email: medizing-koeln@dkms.de (for general medical inquiries)

Email: Medizin-ct@dkms.de (for general medical inquiries at CT level)

Email: followup_faxdis@dkms.de (for results of any supplementary examinations)

Head of Department: Dr. Lisa Reitsma (+49 221 94 05 82-3456),

Quality and CC Relationship Management (QCCRM) Department:

Email: CAPA Management: quality-medical@dkms.de

Email: QPM: QPM_DC@dkms.de

Email: Audit team: ccaudit@dkms.de

Email: CC Relationship-Manager: ccrm@dkms.de

CC Relationship-Manager: Sarah Zythke: +49 7071 943-2996

CC Relationship-Manager: Alisa Petermann: +49 7071 943-2995

Head of Department: Isabelle Petit: +49 7071 943 2990

Donor-Patient Contacts (DPC) / Feedback Management (FBM) Department:

Email: donor2patient@dkms.de

Head of Department: Andreas Walz: +49 7071 943-2340,

Medical Consultants:

Medical Director of DKMS: Thilo Mengling: tmengling@dkms.de, +49 221 94 05 82-3450

Medical Project Manager and Consultant: +49 221 94 05 82-3407

Finance:

Email for electronic receipt of invoices -Rechnungseingang_DKMS@dkms.de

Email in case of queries -AccountsPayable_DKMSDE@dkms.de

DKMS Biobank (Collaborative Biobank (CoBi):

kontakt@cobi-biobank.com

External Studies:

externalstudy@dkms.de

12.3 DKMS Forms (verification, notification, DoDa)

The following forms are shown using a peripheral stem cell collection as an example. Forms for BM and MNC may differ slightly.

DKMS WIR BESIEGEN BLUTKREBS
DKMS Donor Center gGmbH
Kressbach 1
72072 Tübingen, **Germany**

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Verification of Prescription HPC, Apheresis

SECTION A: TO BE COMPLETED BY THE DONOR CENTER

PATIENT DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)		**Date of birth** (DD.MM.YYYY): {PATI_Part-Gebdat}	
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**Additional Patient ID:** {PATI_CONNECT_ID_Prefix} {PATI_EMDIS_ID_Prefix}	**Gender:** {PATI_Geschlecht}	**Weight** (kg): {Recipient Body weight in kg}
Transplant center: {TC_Part-Name}			

DONOR DATA

GRID: {SPEN_GRID_FORMATTED}	**Date of birth** (DD.MM.YYYY): {SPEN_Part-Gebdat}
Donor center: DKMS	

COLLECTION DATA

Total number of CD34+ cells requested by transplant center: {Total number of CD34+ cells (= 3. + 4.)} x 10^6		
Comments:		
Donor center representative (printed name): {Gezeichnet}	Date (DD.MM.YYYY): {Aktdat}	Signature: {Unterschrift}

SECTION B: TO BE COMPLETED BY THE COLLECTION/APHERESIS CENTER

Name of collection/apheresis center: {KME_Part-Nachname} {KME_Part-Vorname}

Donor Data:	**Product anticoagulants:**	**Peripheral blood to be collected at the time of the collection:**	
		1st day of apheresis	2nd day of apheresis – if applicable
Weight (kg): _____	☐ Heparin	_____ ml Heparin	_____ ml Heparin
Gender: _____	☐ ACD	_____ ml ACD	_____ ml ACD
ABO/Rh D/Kell: _____	☐ EDTA	_____ ml EDTA	_____ ml EDTA
	☐ Other	_____ ml no anticoagulant	_____ ml no anticoagulant
	Volume/ratio: _____		

Donor plasma requested? ☐ No ☐ Yes, amount: _____, in a separate bag: ☐ No ☐ Yes

Transport temperature:

Based on the experience at this center, we feel that the requested amount of cells is:

☐ Feasible (Note that this is not a guarantee that the requested number of cells will be supplied. The number of collected cells may be larger or smaller)

☐ Not feasible – Total number of CD34+ cells that may be collected: _____x10^6

(This cell count will be achieved in about 3 out of 4 collections)

Estimated numbers of collections: ☐ one ☐ two

Comments:

Collection/Apheresis center representative (printed name):	Date (DD.MM.YYYY):	Signature:

DKMS WIR BESIEGEN BLUTKREBS
DKMS Donor Center gGmbH
Kressbach 1
72072 Tübingen, Germany

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Verification of Prescription HPC, Apheresis

PATIENT/DONOR DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)	
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**Additional Patient ID:** {PATI_CONNECT_ID_Prefix} {PATI_EMDIS_ID_Prefix}
GRID: {SPEN_GRID_FORMATTED}	

DISCLAIMER

- The cell products collected from this donor are intended solely for the purpose of immediate therapeutic treatment for the above mentioned patient. Any planned cryopreservation of the cell products prior to initial infusion to the patient may only occur with the advance written approval from the donor center.
- Excess cells may be stored for future therapeutic treatment for this patient. No other uses of these cells are permissible. Cells not used for the therapeutic treatment of the above mentioned patient must be disposed of properly and details must be provided to the donor center.
- The donor center must be provided detailed information concerning the use and/or disposal of all portions of this cell product. By accepting these cells, the transplant physician also accepts these terms and conditions. Deviations from these terms are not permitted without prior written approval from the donor centre. Any serious product events and/or adverse reactions must be reported both to the donor's registry and transplant center. Corresponding SEAR/SPEAR reports must be completed by the registry providing the product, submitted to the WMDA Office and details must be provided to the donor center.

SECTION C: TO BE COMPLETED BY THE TRANSPLANT CENTER

TRANSPLANT CENTER ACCEPTANCE OF TERMS PROVIDED BY DONOR & COLLECTION/APHERESIS CENTER AND AS STATED IN SECTION A AND B

Product information to be sent to:	Fax:	Email:
Transplant center representative (printed name):	Date (DD.MM.YYYY):	Signature:

DKMS WIR BESIEGEN BLUTKREBS
DKMS Donor Center gGmbH
Kressbach 1
72072 Tübingen, Germany

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Notification of Donor Clearance HPC, Apheresis

SECTION A: TO BE COMPLETED BY THE COLLECTION/APHERESIS CENTER

PATIENT DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)	**Date of birth** (DD.MM.YYYY): {PATI_Part-Gebdat}
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**Additional Patient ID:** {PATI_CONNECT_ID_Prefix} {PATI_EMDIS_ID_Prefix}
Transplant center: {TC_Part-Name}	

DONOR DATA

GRID: {SPEN_GRID_FORMATTED}	**Date of birth** (DD.MM.YYYY): {SPEN_Part-Gebdat}	
Donor center: DKMS	**Weight** (kg):	**Gender:**
Pregnancies: ☐ No ☐ N/A ☐ Yes, number:	**ABO/Rh D/Kell:**	
Transfusions: ☐ No ☐ Yes, number/year:	**RBC irregular antibody:** ☐ positive ☐ negative ☐ not tested	

COLLECTION DATE INFORMATION (DD.MM.YYYY)

Donor informed consent signed on: {SU1DAT}	**Donor clearance confirmed on:**
First date of donor G-CSF injections: {DATGCSF}	**Confirmed first collection date:** {COLLDAT2}

TEST DATA

Donor Infectious Disease Test Results	positive	negative	not tested	Date of blood collection (DD.MM.YYYY)
Hepatitis B Virus (HBV)				
HBs Ag (surface antigen screening test)	☐	☐	☐	{SU1DAT}
Anti HBc (antibody screening test)	☐	☐	☐	{SU1DAT}
HBV NAT (Nucleic Acid Amplification Technique)	☐	☐	☐	{SU1DAT}
Hepatitis C Virus (HCV)				
Anti HCV (antibody screening test)	☐	☐	☐	{SU1DAT}
HCV NAT	☐	☐	☐	{SU1DAT}
Hepatitis E Virus (HEV)				
HEV NAT	☐	☐	☐	{SU1DAT}
Human T-Lymphotropic Viruses (HTLV)				
Anti HTLV 1/2 (screening test)	☐	☐	☐	{SU1DAT}
Human Immunodeficiency Virus (HIV)				
HIV 1 p24 Ag (screening test)	☐	☐	☐	{SU1DAT}
Anti HIV 1/2 (antibody screening test)	☐	☐	☐	{SU1DAT}
HIV NAT	☐	☐	☐	{SU1DAT}
Syphilis				
STS (serologic test for syphilis)	☐	☐	☐	{SU1DAT}

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72072 Tübingen, Germany

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Notification of Donor Clearance HPC, Apheresis

PATIENT/DONOR DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)	
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**Additional Patient ID:** {PATI_CONNECT_ID_Prefix} {PATI_EMDIS_ID_Prefix}
GRID: {SPEN_GRID_FORMATTED}	**Donor center:** DKMS

TEST DATA

Donor Infectious Disease Test Results		positive	negative	not tested	Date of blood collection (DD.MM.YYYY)
Other					
CMV (Cytomegalovirus) antibodies	IgG	☐	☐	☐	{SU1DAT}
	IgM	☐	☐	☐	{SU1DAT}
	total	☐	☐	☐	{SU1DAT}
EBV (Epstein Barr Virus) antibodies	IgG	☐	☐	☐	{SU1DAT}
	IgM	☐	☐	☐	{SU1DAT}
Toxoplasmosis antibodies	IgG	☐	☐	☐	{SU1DAT}
	IgM	☐	☐	☐	{SU1DAT}
	total	☐	☐	☐	{SU1DAT}
VZV (Varicella Zoster Virus) antibodies	IgG	☐	☐	☐	{SU1DAT}
WNV NAT (West Nile Virus)		☐	☐	☐	{SU1DAT}
Chagas		☐	☐	☐	{SU1DAT}
Verification test(s), if performed:					
Other(s), please specify:					

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Kressbach 1
72072 Tübingen, Germany

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Notification of Donor Clearance HPC, Apheresis

PATIENT/DONOR DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)	
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**Additional Patient ID:** {PATI_CONNECT_ID_Prefix} {PATI_EMDIS_ID_Prefix}
GRID: {SPEN_GRID_FORMATTED}	**Donor center:** DKMS

SECTION B: TO BE COMPLETED BY THE COLLECTION/APHERESIS CENTER

DONOR FINAL CLEARANCE

Based on the results of the donor history, examination and tests:

☐ The donor has **no** medical problems which would make them unsuitable for the donation.

The donor is in good health and a fit candidate for: ☐ **Bone Marrow** ☐ **PBSC** ☐ **MNC**

Based on the results of the donor history, examination and tests:

The donor is **not able** to proceed with donation as scheduled:

☐ The donor cannot be cleared at the moment. The scheduled collection must be **postponed**. Potential delay of / until

_____

☐ The donor cannot be cleared for donation. The scheduled collection must be **cancelled**.

☐ The donor cannot be cleared for the requested donation method but might be available for a **product switch** to

_____ (pending AC/CC and donor availability)

Comments:

☐ Additional documents attached

Name of collection/apheresis center: {KME_Part-Nachname} {KME_Part-Vorname}

Responsible physician (printed name):	Date (DD.MM.YYYY):	Signature:
Reviewer checking this form (printed name):	Date (DD.MM.YYYY):	Signature:

DKMS WIR BESIEGEN BLUTKREBS
DKMS Donor Center gGmbH
Kressbach 1
72072 Tübingen, **Germany**

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Notification of Donor Clearance HPC, Apheresis

PATIENT/DONOR DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)	
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**Additional Patient ID**: {PATI_CONNECT_ID_Prefix} {PATI_EMDIS_ID_Prefix}
GRID: {SPEN_GRID_FORMATTED}	**Donor center**: DKMS

SECTION C: TO BE COMPLETED BY THE TRANSPLANT CENTER

TRANSPLANT CENTER ACCEPTANCE OF DONOR FINAL CLEARANCE

I have received and reviewed the pre-collection physical examination test results and/or summaries from the lead collection physician for this donor.

I confirm the receipt of the information above and

☐ I find that this volunteer stem cell donor is an acceptable donor for stem cell collection.

☐ Patient consent for the transplantation has been verified.

First date of patient conditioning regimen (DD.MM.YYYY): _____

Confirmed first collection date (DD.MM.YYYY): _____

Scheduled transplantation date (DD.MM.YYYY): _____

☐ I confirm that verification typing for this donor and this patient has been performed and that this donor is suitable for this patient.

☐ I agree to **postpone** the collection date.

☐ I request to **postpone** the collection date (Please provide reason in the comments).

☐ I acknowledge the **cancellation** of the workup.

☐ I request a **cancellation** of the workup (Please provide reason in the comments).

☐ I want to continue with this donor with another collection method. Please **switch** the requested collection method to

☐ **Bone Marrow** ☐ **MNC** (Please provide additional scheduling requests in the comments).

Comments:

Transplant center contact person(s):

Phone:

24-hour phone:

Transplant center representative (printed name):	Date (DD.MM.YYYY):	Signature:

DKMS
WIR BESIEGEN BLUTKREBS

DKMS Donor Center gGmbH
Kressbach 1
72072 Tübingen, **Germany**

Contact: {PERS_PART_NAME}
T {PERS_PART-TELEFON}
F {PERS_PART-FAX}
{PERS_PART-EMAIL}

Declaration of Donor Acceptance HPC, Apheresis

SECTION A: TO BE COMPLETED BY THE DONOR CENTER

PATIENT DATA

Patient name/initials: {PATI_Part-Vorname} **{PATI_Part-Nachname}** (last name/initial in bold)	**Date of birth** (DD.MM.YYYY): {PATI_Part-Gebdat}
Patient ID: {PATI_Nummer} (assigned by donor's registry)	**EMDIS ID:** {PATI_EMDIS_ID}
Transplant center: {TC_Part-Name}	

DONOR DATA

GRID: {SPEN_GRID_FORMATTED}	**Date of birth** (DD.MM.YYYY): {SPEN_Part-Gebdat}
Donor center: DKMS	**Collection dates** (DD.MM.YYYY): {COLLDAT2} / {COLLDAT}

INFORMATION FROM CC

Donor screening and/or testing performed on the above donor suggest that the donor may be at increased risk for transmission of a communicable disease or other increased risk to the transplant recipient. As a result, the donor falls into the German classification of an ineligible donor. Below you see the reason of donor's ineligibility.

SECTION B: TO BE COMPLETED BY THE TRANSPLANT CENTER

Due to the possible increased risk associated with transplanting products from an ineligible donor, urgent medical need must be documented in order for DKMS to proceed. Urgent medical need indicates the potential risk from this donor is outweighed by the benefits associated with transplantation of a product from this donor.

After having read the above statement and having reviewed the relevant documentation, I elect to:

☐ Accept the donor and continue with WU process

☐ Put this WU process on-hold until further notice

☐ Decline receiving a product from this donor and cancel the request

Please refax the completed form as soon as possible to DKMS: +49 7071 943 1399

Transplant center representative (printed name):	Date (DD.MM.YYYY):	Signature:

12.4 ZKRD Forms

ZKRD
Zentrales
Knochenmarkspender-
Register Deutschland

P.O.B. 4244, 89032 Ulm, Germany
Helmholtzstr. 10, 89081 Ulm,
Germany
Fon: +49 731 399 679-000

STS-WU-TM:
Fon: -240
Fax: -501

24/7-Fon:
+49 731 399 679-200
e-mail:
workupteam@zkrd.de

PRESCRIPTION FOR BONE MARROW COLLECTION

(To be completed by the transplant center)

PATIENT DATA

Patient Last Name, First Name:		Date of Birth: *(yyyy-mm-dd)*
Patient ID: *(assigned by patient's registry)*	Patient ID: *(assigned by donor's registry)*	Patient Registry:

DONOR DATA

GRID:	Donor ID:	Donor Registry:
Date of Birth: *(yyyy-mm-dd)*	Sex:	Weight: *(kg)*

PRE-COLLECTION SAMPLES (max. 50ml) ☐ Not needed **WU parallel with CT: always send WU_049!**

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*
Samples to be shipped to[1]:		Contact name:	
		Phone:	
		Fax:	
		E-mail:	
EORI number (mandatory for non-EU-donors):			

BONE MARROW COLLECTION *(use comma as decimal separator)*

Cryopreservation requested: ☐ Yes, at TC ☐ Yes, at other unit (not at TC) ☐ No **If yes, please send WU_050!**	
Required nucleated cells per kg (uncorrected)	x 10^8/kg
x recipient body weight (kg)	kg
+ Nucleated cells for quality assurance	x 10^8
Total nucleated cells requested:	**x 10^8**

Reason for a request more than 5 x 10^8/kg:
Further processing:
Specify bone marrow transport conditions:

DAY OF COLLECTION PERIPHERAL BLOOD SAMPLES

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*	Product:
Comments:				

Transplant physician/Authorized person:	Signature:	Date: *(yyyy-mm-dd)* **2026-08-07**

DISCLAIMER: The cell products collected from this donor are intended solely for the purpose of immediate therapeutic treatment for the above mentioned patient. Excess cells may be stored for future infusion for this patient. No other uses of these cells are permissible. Cells not used for the therapeutic treatment of the above mentioned patient must be disposed of properly. The donor center must be provided detailed information concerning the use and/or disposal of all portions of this cell product. By accepting these cells, the transplant physician also accepts these terms and conditions. Requests for deviations from these terms must be submitted in writing to the donor center for approval.

[1] The blood will be shipped at the time of the donor physical exam unless otherwise requested.

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ZKRD
Zentrales
Knochenmarkspender-
Register Deutschland

P.O.B. 4244, 89032 Ulm, Germany
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Fon: +49 731 399 679-000

STS-WU-TM:
Fon: -240
Fax: -501

24/7-Fon:
+49 731 399 679-200
e-mail:
workupteam@zkrd.de

PRESCRIPTION FOR PERIPHERAL BLOOD STEM CELL (PBSC) COLLECTION

(To be completed by the transplant center)

PATIENT DATA

Patient Last Name, First Name:		Date of Birth: *(yyyy-mm-dd)*
Patient ID: *(assigned by patient's registry)*	Patient ID: *(assigned by donor's registry)*	Patient Registry:

DONOR DATA

GRID:	Donor ID:	Donor Registry:
Date of Birth: *(yyyy-mm-dd)*	Sex:	Weight: *(kg)*

PRE-COLLECTION SAMPLES (max. 50ml) ☐ Not needed **WU parallel with CT: always send WU_049!**

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*

Samples to be shipped to[1]	Contact name:
	Phone:
	Fax:
	E-mail:
EORI number (mandatory for non-EU-donors):	

PBSC COLLECTION *(use comma as decimal separator)*

Cryopreservation requested: ☐ Yes, at TC ☐ Yes, at other unit (not at TC) ☐ No
If yes, please send WU_050!

Required CD34+ cells per kg	x 10^6/kg
x recipient body weight (kg)	kg
+ CD34+ cells for quality assurance	x 10^6
Total number of CD34+ cells requested:	**x 10^6**

Reason for a request more than 5 x 10^6/kg:
Further processing:
Specify PBSC transport conditions:

1st DAY OF COLLECTION PERIPHERAL BLOOD SAMPLES

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*	Product:

2nd DAY OF COLLECTION PERIPHERAL BLOOD SAMPLES

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*	Product:

Donor plasma requested: ◯ No ◯ Yes: *(ml)* ☐ in a separate bag ☐ added to the product

Comments:

Transplant physician/Authorized person:	Signature:	Date: *(yyyy-mm-dd)* **2026-08-07**

DISCLAIMER: The cell products collected from this donor are intended solely for the purpose of immediate therapeutic treatment for the above mentioned patient. Excess cells may be stored for future infusion for this patient. No other uses of these cells are permissible. Cells not used for the therapeutic treatment of the above mentioned patient must be disposed of properly. The donor center must be provided detailed information concerning the use and/or disposal of all portions of this cell product. By accepting these cells, the transplant physician also accepts these terms and conditions. Requests for deviations from these terms must be submitted in writing to the donor center for approval.

[1] The blood will be shipped at the time of the donor physical exam unless otherwise requested.

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ZKRD
Zentrales
Knochenmarkspender-
Register Deutschland

P.O.B. 4244, 89032 Ulm, Germany
Helmholtzstr. 10, 89081 Ulm,
Germany
Fon: +49 731 399 679-000

STS-WU-TM:
Fon: -240
Fax: -501

24/7-Fon:
+49 731 399 679-200
e-mail:
workupteam@zkrd.de

PRESCRIPTION FOR MONONUCLEATED CELLS (MNC)

(To be completed by the transplant center)

PATIENT DATA

Patient Last Name, First Name:		Date of Birth: *(yyyy-mm-dd)*
Patient ID: *(assigned by patient's registry)*	Patient ID: *(assigned by donor's registry)*	Patient Registry:

DONOR DATA

GRID:	Donor ID:	Donor Registry:
Date of Birth: *(yyyy-mm-dd)*	Sex:	Weight: *(kg)*

Transplant center address:	Contact name:
	Phone:
	Fax:
	E-mail:

Diagnosis: Current disease stage:

Diagnosis text:

Reason for request:

Preferred Collection Date:

PRE-COLLECTION SAMPLES (max. 50ml) ☐ Not needed **WU parallel with CT: always send WU_049!**

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*

Other, please specify:

Samples to be shipped to:	Contact name:
	Phone:
	Fax:
	E-mail:

EORI number (mandatory for non-EU-donors):

MNC-A COLLECTION *(use comma as decimal separator)*

Required CD3+ cells per kg	x 10^6/kg
x recipient body weight (kg)	kg
+ CD3+ cells for quality assurance	x 10^6
= Total number of CD3+ cells requested:	**x 10^6**

☐ First portion infused fresh, rest of the product frozen in portions.
☐ Cryopreservation of the complete product (-> send WU_050!)
Processing Site: ☐ At TC ☐ At DC ☐ At other unit (not at TC/DC)

Specify MNC-A transport conditions: Cooled 2°-6°

Comments:

DAY OF COLLECTION PERIPHERAL BLOOD SAMPLES

EDTA: *(ml)*	ACD: *(ml)*	Heparin: *(ml)*	No anticoagulant: *(ml)*	Product:

Donor plasma requested: ◯ No ◯ Yes: *(ml)* ☐ in a separate bag ☐ added to the product

Transplant physician/Authorized person:	Signature:	Date: *(yyyy-mm-dd)* **2026-08-07**

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12.5 Further interesting facts

Use of the DKMS FU knowledge database:

- All ICD-coded diseases are generally searchable
- Clarification of specific questions from the FU
- How often has a particular disease occurred? Have exotic diseases occurred more frequently?
- Our service: Please contact medizin-koeln@dkms.de if you have a specific question and our doctors will check what is in the database.

Further Information:

- **Data Privacy and donor Records:**

Donors have the right to access information on the processing of their personal data. collection centers (CC) must respond to donors´ requests regarding data processing while ensuring that patient anonymity is protected. Legal counsel should be consulted as necessary to address any data privacy inquiries.

- **Information Exchange with CCs:**

Ensuring regular communication with CCs to foster best practices and facilitate continuous improvement. Key initiatives include:

- Regular Meetings: DKMS holds calls with CCs approximately every six weeks to discuss processes, case studies and updates.
- Annual CC Symposium: Held annually since 2018, this symposium addresses current topics, case studies, processes and medical decisions.
- Conditions of Approval List: Maintained by the DKMS Physicians Team, this document outlines global DKMS standards for stem cell donation and is available on the Cerberus platform for secure access (http://files.dkms.de/public/folder/lpfv4p3p7emrelgjkl3wrw/DKMS-Entnahmezentren Password: on request at ccrm@dkms.de).

SPEAR Reference materials:

- EU Directives: https://ec.europa.eu/health/blood_tissues_organs/overview_en
- WBMT minimal data set: https://www.nature.com/articles/bmt2012119
- WMDA: Overview: https://wmda.info/professionals/promoting-donor-care/adverse-events-searspear/
- Examples: https://wmda.info/wp-content/uploads/2017/09/20141209-SEAR-INFO-SPEAR-Examples.pdf
- CTCAE:https://ctep.cancer.gov/protocoldevelopment/electronic_applications/docs/ctcae_v5_quick_reference_5x7.pdf

13 Abbreviations

List and Definitions of Abbreviations Used

This chapter provides a list of abbreviations and their definitions used throughout this User Guide. Familiarity with these abbreviations is essential for understanding the procedures and protocols described in this document.

Abbreviation	Full Term	Definition
2FA	2-Factor Authentication	A security method that requires users to verify their identity using two different authentication factors before access is granted.
ABS	Absence time	TC-Info: Example: "Donor is not available from __ to __ due to (personal/medical) reasons."
ACD	Acid Citrate Dextrose	An anticoagulant solution containing citrate and dextrose, used to prevent blood clotting during blood collection and processing.
ACD-A	Anticoagulant Citrate Dextrose Solution A	A specific formulation of citrate-based anticoagulant solution commonly used during apheresis to prevent blood clotting in the extracorporeal circuit.
ADCU	Adult Donor Cryopreserved Unit	The ADCUs are stored in the DKMS Stem Cell Bank and can be made available to another patient on request. Stored stem cells (ADCUs) are available for transplantation centers via the DKMS registry. They are also listed in the German National Bone Marrow Donor registry (ZKRD) and can also be requested there by clinics
AMG	Arzneimittelgesetz	German federal law governing the authorization, manufacture, distribution, and safety of medicinal products.
Anti-HBc	Hepatitis B core antibody	Total hepatitis B core antibody (anti-HBc): Appears at the onset of symptoms in acute hepatitis B and persists for life. The presence of anti-HBc indicates

		previous or ongoing infection with hepatitis B virus in an undefined time frame.
BM	Bone Marrow	Stem cells collected directly from the bone marrow.
BMM (TC Info)	Bone Marrow Medical	TC-Info: Example: "Donor is (possibly) only available for bone marrow donation due to medical reasons.
BMP (TC Info)	Bone Marrow Personal	TC-Info: Example: "Donor is only available for bone marrow donation due to personal reasons.".
CAPA	Corrective and Preventive Action	The CAPA/Deviation Manager jumps into action when deviations and quality incidents need to be clarified with our external partners, i.e. the collection and transplantation centers or other registries.
CBC	Complete Blood Count	A laboratory blood test that evaluates the number and characteristics of the key blood cell types.
CC	Collection Center	The facility where stem cell collections from donors take place
CCRM	CC Relationship Management	The CC Relationship Manager is responsible for establishing and nurturing relationships with collection centers
CM	Case Manager	A Case Manager coordinates workup requests. This means they coordinate the scheduling of the physical examination and donation and communicate with donors, collection centers, and transplant centers about all donation related matters to ensure that the donor is cleared and that the donation takes place at the most favorable time for the patient
CMV	Cytomegalovirus	Cytomegalovirus is a virus that belongs to the Herpesviridae family and is also known as HHV 5 (Human Herpesvirus 5).

CoBi	DKMS Biobank (Collaborative Biobank (CoBi))	Established in 2016 and coordinated by the DKMS Clinical Trials Unit, the Collaborative Biobank is a cooperative science platform that provides resources for research projects in the field of blood cancer worldwide
CT	Confirmatory Typing	The process of confirming the HLA type of the donor prior to donation. CT is frequently used synonymously with Verification Typing (VT).
CTU	Clinical Trial Unit	The Clinical Trials Unit is a scientific research unit of DKMS. Many questions remain unanswered in the treatment of blood cancer and other diseases of the hematopoietic system. DKMS, therefore, promotes life-saving and innovative research in the field of blood cancer treatment.
CVC	Central Venous Catheter	A tube placed in a large vein to administer medications or collect stem cells.
DC	Donor Center	A Donor Center serves as the primary point of coordination for donor recruitment, medical assessments and support throughout the donation process, ensuring high standards of care and compliance with regulatory guidelines
DFC	Donor Final Clearance	Donor Final Clearance confirms whether the donor is medically fit and fully approved to proceed with the scheduled donation, ensuring all health, regulatory and procedural requirements are met.
DKMS	Deutsche Knochenmarkspenderdatei	DKMS stands for "German Bone Marrow Donor Center". As part of our internationalization, DKMS has also expanded its mission and is now active in Poland, the USA, the UK, Chile, India and South Africa. In order to ensure a globally uniform presence, since 2016, DKMS operates with only one common name: “DKMS”.

DKMS DC DE	DKMS Donor Center gGmbH Germany	The DKMS Donor Center operating in Germany
DLI	Donor Lymphocytes Infusion	A procedure in which lymphocytes are infused into a patient post-transplant.
DNA	Deoxyribonucleic acid	DNA is the molecule that carries genetic information for the development and functions of an organism.
DoDa	Declaration of Donor Acceptance	Donors typically considered ineligible under hematotherapy guidelines must receive a transplantation center approval (TC Acceptance) to be cleared for stem cell donation, for example in cases involving tattoos or sexual risk behaviors, in order to be allowed for stem cell donation.
DPC	Donor-Patient Contact	The DPC team is responsible for providing patient follow-ups, communication between donor and patient and feedback management.
EBV	Epstein-Barr virus	A common human herpesvirus that remains latent in the body after infection and may reactivate, particularly in immunocompromised individuals.
EC	Ethics Committee	A committee that evaluates ethical aspects and provides guidance or approval where required.
ECG	Electrocardiogram	An ECG is a test that records the electrical activity of the heart, including the rate and rhythm. It usually is quick and painless.
EDTA	Ethylenediaminetetraacetic acid	An anticoagulant commonly used in blood collection tubes to prevent blood clotting by binding calcium ions.
EFI	European Federation for Immunogenetics	An association dedicated to supporting the development of immunogenetics in Europe through research, training, scientific exchange, standardisation, quality control and accreditation, immunogenetic databases, and collaboration with organisations with similar aims.

FBM	Feedback Management	The Feedback Management Team is responsible for taking care of complaints or medical concerns post-donation, e.g. by organizing medical advice when needed.
FDA	Food and Drug Administration	The Food and Drug Administration is responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices; and by ensuring the safety of our nation's food supply, cosmetics, and products that emit radiation.
FTP	File Transfer Protocol	A standard network protocol used to transfer files between computers or systems.
FU	Follow-up	The monitoring of a donor's health up to ten years after the donation process.
FU01	Follow up after one month	The monitoring of a donor's health one month after the donation process.
FU06	Follow up after six months	The monitoring of a donor's health six months after the donation process.
G-CSF	Granulocyte colony-stimulating factor	G-CSF is a peptide from the group of colony-stimulating factors, which are cytokines. It is produced by a variety of cells and stimulates the proliferation and differentiation of granulocytes in the bone marrow. It causes the blood stem cells to be washed out of the bone marrow and into the blood. This growth factor has been artificially produced for several years and is administered to the donor over a period of about five days prior to the peripheral blood stem cell collection.
GMP	Good Manufacturing Practices	A set of requirements and standards designed to ensure that medicinal products are consistently produced and controlled according to defined quality standards.
HAC	Health and Availability Check	For urgent searches and for donors who have already undergone a CT, a Health and Availability Check (HAC) can be

		requested. The HAC provides confirmation that the potential donor is still willing and available to donate and in good health.
HB-s-Ag	Hepatitis B surface antigen	Hepatitis B surface antigen (HBsAg): A protein on the surface of hepatitis B virus; it can be detected in high levels in serum during acute or chronic hepatitis B virus infection. The presence of HBsAg indicates that the person is infectious. The body normally produces antibodies to HBsAg as part of the normal immune response to infection. HBsAg is the antigen used to make hepatitis B vaccine.
HBV	Hepatitis B Virus	A virus that infects the liver and can cause acute or chronic hepatitis B infection.
HCT	Hematocrit	The volume percentage of red blood cells in blood.
HCV	Hepatitis C virus	A virus that infects the liver and can cause acute or chronic hepatitis C infection.
HEV	Hepatitis E Virus	A virus that infects the liver and usually causes acute hepatitis E. In rare cases, particularly in immunocompromised individuals, infection can become chronic.
HHQ	Health History Questionnaire	A questionnaire to assess the health history of a donor.
HIV	Human Immunodeficiency Virus	The virus that causes AIDS, relevant in donor screening.
HLA	Human Leukocyte Antigen	Surface proteins on cells that are used to match donors and recipients for transplants.
HoD	Head of Department	A person responsible for the management and oversight of a specific department.
HSC	Hematopoietic Stem Cell	Hematopoietic stem cells are essential for hematopoiesis, the formation of cells in the blood. Hematopoietic stem cells

		can produce all types of blood cells and are self-renewing.
HSCT	Hematopoietic Stem Cell Transplantation	The transplantation of HSCs to treat certain diseases.
HTLV	Human T-cell Lymphotropic Virus	A human retrovirus that infects T cells and can be associated with certain blood disorders and neurological diseases.
HUB	HUB	HUBs are a communication interface between TCs and DCs. Transplant physicians / search units can search electronically in the provided networks for a matching donor for their patients. They are not responsible for the transmission of the HLA data for the worldwide search. Not every country has a HUB, but if so, the communication goes almost exclusively via the HUB.
IATA	International Air Transport Association	The International Air Transport Association is the trade association for the world's airlines, representing some 330 airlines and over 80% of global air traffic.
IDM	Infectious Disease Markers	Results of laboratory tests to screen for infections in donors before and after donation.
IgG	Immunoglobulin G	A class of antibodies that plays an important role in the immune response and can indicate previous exposure to an infectious agent or an established immune response.
IgM	Immunoglobulin M	A class of antibodies typically produced early in an immune response and often used as a marker of recent or acute infection.
ILAC	International Laboratory Accreditation Cooperation	ILAC is the international organisation for accreditation bodies operating in accordance with ISO/IEC 17011 and involved in the accreditation of conformity assessment bodies including calibration laboratories, testing laboratories, medical testing laboratories, inspection bodies,

		proficiency testing providers, reference material producers, and biobanks.
IT	Information Technology	IT is the use of computers, storage, networking and other physical devices, infrastructure and processes to create, process, store, secure and exchange all forms of electronic data.
JACIE	Joint Accreditation Committee ISCT-EBMT	The accreditation body for facilities involved in hematopoietic stem cell transplantation.
KIR	Killer Cell Immunoglobulin-like Receptors	Structures on the outside of killer cells that play an important role in our immune system.
LSL	DKMS Life Science Lab	The DKMS laboratory is the world leader in HLA typing. Up to 7,000 samples from DKMS donors are tested there every day.
MAT 1	Medical Advisory Team 1	The team (physicians) handling medical consultations related to Confirmatory Typing.
MAT 2	Medical Advisory Team 2	The team (physicians) focusing on follow-up care and ongoing medical support for donors.
MCT	Medical Coordination Team	The team (coordinators) handling medical consultations related to Confirmatory Typing.
MICA	MHC class I chain-related gene A	A gene encoding a cell-surface protein involved in immune recognition and activation of immune cells.
MICB	MHC class I chain-related gene B	A gene encoding a cell-surface protein involved in immune recognition and activation of immune cells.
MNC	Mononucleated Cell	A type of blood cells that includes lymphocytes and monocytes.
MST	Medical Support Team	The team focusing on follow-up care and ongoing medical support for donors as part of the Physicians Team.
MU (TC-Info)	Multi donation	TC-Info: Example: "Donor donated PBSC/BM in yyyy for another patient.".

NGS	Next Generation Sequencing	NGS is an improved technology for DNA sequencing. In contrast to Sanger sequencing and it allows higher speeds: An entire human genome can be sequenced in one day.
NMDP	National Marrow Donor Program	The National Marrow Donor Program is a nonprofit organization in the United States of America, founded in 1987 and based in Minneapolis, Minnesota.
OTH (TC Info)	Other relevant conditions	TC-Info: Example: “Donor has had a XY vaccination 2 weeks ago.”
PBSC	Peripheral Blood Stem Cell	Stem cells collected from the bloodstream.
PE	Physicial Examination	The examination of a donor to assess their health before donation.
PEI	Paul-Ehrlich-Institute	The Paul-Ehrlich-Institut (PEI), Federal Institute for Vaccines and Biomedicines, is responsible for the medicinal products including Human Medical Products and Veterinary Medicinal Products.
PT	Physicians Team	This department is responsible for ensuring the health and safety of potential and actual stem cell donors.
QCCRM	Quality and CC Relationship Management	The team responsible for quality assurance, risk management and collection center relationship management.
ROI (TC Info)	Risk of infection	TC-Info: Example: “Donor grew up in malaria region.”
SCB	DKMS Stem Cell Bank	In the Stem Cell Bank, blood stem cells that exceed the amount required for the patient during peripheral collection are cryopreserved and stored as ADCU.
SCM (TC Info)	Stem Cell Medical	TC-Info: Example: "Donor is only available for PBSC (medical reasons); [Condition], if appropriate".
SCP (TC Info)	Stem Cell Personal	TC-Info Example: "Donor is only available for PBSC (personal reasons); [Condition], if appropriate".

SPEAR	Serious Product Event and Adverse Reaction	Reporting of serious adverse events related to the stem cell product
TBEV	Tick-Borne Encephalitis Virus	A virus transmitted mainly by infected ticks that can cause tick-borne encephalitis, an infection affecting the central nervous system.
TC	Transplantation Centers	The facility where patients receive stem cell transplants.
TCI	Transplantation Center Information	All patient-relevant information needed for transplant planning is sent to the transplantation center as a TC Info, including details on infection risks, autoimmune diseases and harvesting restrictions. Additionally, advance TC Infos are provided for urgent matters, such as extended unavailability periods.
TFG	German transfusion Act	German federal law regulating the collection of blood and blood components and their use for transfusion purposes.
TNC	Total Nucleated Cell	The total number of nucleated cells in a stem cell product.
WBC	White Blood Cell Count	A blood test that measures the number of leukocytes in the blood and provides information about the immune system.
WMDA	World Marrow Donor Association	The global organization setting standards for bone marrow and stem cell donation.
WST	Workup Service Team	All workups are received by the Workup-Service team and checked for completeness, accuracy, and plausibility. Any queries are clarified by the team with the respective TC or registry.
WU	Workup	Once a donor has been identified as the best possible match for a patient in need of a transplant and the decision is made to proceed with a donation, the DKMS Workup Department is responsible for the next steps.

ZKRD	Zentrales Knochenmarkspender-Register Deutschland	The central coordination office for bone marrow donor searches in Germany. Acting as the hub between transplantation centers, search centers, donor centers and other donor registries across the world, the ZKRD facilitates the interaction of all involved, from searching for suitable donors to transporting donated cells.