

Summary of Changes

Second Edition FACT Standards for Immune Effector Cells

This document summarizes the major changes proposed for the draft Second Edition FACT Standards for Immune Effector Cells. This summary does not list all changes made to the Standards. Reorganization or clarified verbiage is not included unless considered to be a significant change in the intent of the Standard. Refer to the draft Standards for all proposed revisions.

To clearly identify new requirements, changes to the standards listed have been redlined.

Major Changes

1. A4 Definitions

- a. "Applicable Law" was introduced in the Second Edition Standards to replace "applicable law and regulations".
 - i. The phrase "Applicable Law" is defined as: "Any local, national, or international statute, regulation, or other governmental law that is applicable to hematopoietic cellular therapy product collection, processing, and administration that is relevant to the location or activities of the Clinical Program, Collection Facility, or Processing Facility."

b. Cellular Therapy:

Somatic cell-based product (e.g., mobilized HPC, mononuclear cells, cord blood cells, mesenchymal stromal cells, T cells, natural killer cells) that is procured from a donor and intended for processing and administration, to include IECs, gene-modified cells, and other cellular therapies.

c. Designee:

The concept of designee was added to the document as a tenet to reflect the opinion of the Standards Committee that any activity can be delegated to an appropriate designee as that term is defined. The phrase "or designee" was removed from individual standards throughout.

A2.2 Designee is defined as an individual with appropriate education, experience, or expertise who is given the authority to assume a specific responsibility. The person appointing a designee retains ultimate responsibility.

A4 Definition: Designee: An individual with appropriate education, experience, or expertise who is given the authority to assume a specific responsibility. The person appointing the designee retains ultimate responsibility.

d. Deviation and Variance

Variance was replaced with "planned deviation" in the Standards. The definition for "variance" was removed and a new definition for "deviation" was added.

Deviation: The action of departing from an established course of action or accepted practice.

Planned deviation: Allowed to occur with documented approval as the best course of action when adherence to the established course or accepted practice was not feasible or possible.

Unplanned deviation: The action of departing from an established course or accepted standard without intent.

e. Occurrence

An instance in which an action or circumstance results in errors, accidents, deviations, adverse events, adverse reactions, or complaints.

"Occurrences" has replaced where "errors, accidents, deviations, adverse events, adverse reactions, or complaints" were listed in the Standards.

f. Risk management plan:

A document that describes the current knowledge about the safety and efficacy of a cellular therapy product and the measures to be undertaken to identify, monitor, prevent, or minimize risk associated with the use of that product.

g. Risk Evaluation and Mitigation Strategy (REMS)

A drug safety program that the U.S. Food and Drug Administration (FDA) can require for certain medications with serious safety concerns to help ensure the benefits of the medication outweigh its risks.

NOTE: This term is not used in Standards, but will be used in the accompanying Accreditation Manual.

2. Risk management plan standards

Significant specific standards were added to address risk management plan requirements for Clinical Programs utilizing licensed (or equivalent regulatory approval) cellular therapy products. Related requirements were also added in the Apheresis and Laboratory sections.

Clinical

- a. Clinical Programs administering cellular therapy products shall have risk minimization processes in place appropriate to the product. (B7.9)
- b. Clinical Programs administering licensed (or equivalent regulatory approval) cellular therapy products with a mandated risk management program shall have policies and Standard Operating Procedures in place for the following: (B7.10)
 - i. There shall be a designated person for each applicable cellular therapy product with a mandated risk management program. This person shall be responsible for: (B7.10.1)
 - 1. Verification that enrollment requirements of the manufacturer are met. (B7.10.1.1)
 - 2. Implementation of and compliance with the risk management program requirements. (B7.10.1.2)
 - ii. There shall be policies and Standard Operating Procedures requiring the designated person and all physicians and staff involved in the prescribing, dispensing, or administering of the cellular therapy product to complete the following: (B7.10.2)

- 1. Training for each applicable cellular therapy product including prescribing information and medication guides, and patient management including preparative regimens and adverse event management. (B7.10.2.1)
- 2. Assessment of knowledge for each applicable cellular therapy product. (B7.10.2.2)
- 3. Retraining and reassessment of knowledge if the Clinical Program has not administered that cellular therapy product for a period of time specified by the manufacturer. (B7.10.2.3)
- iii. For each patient receiving an IEC product the clinical facility shall have immediate access to targeted therapies to manage severe adverse events per manufacturer's requirements. (B7.10.3)
- iv. A patient alert card shall be provided to recipients or their caregivers with the following instructions: (B7.10.4)
 - 1. The recipient or caregiver shall carry the patient alert card at all times. (B7.10.4.1)
 - 2. The recipient or caregiver shall provide the patient alert card to any healthcare provider treating the patient. (B7.10.4.2)
 - 3. The recipient shall be given instructions related to expectations on remaining within the proximity of the clinical program for follow-up care as medically indicated. (B7.10.4.3)
 - 4. The recipient shall be made aware of the risks of cytokine release syndrome, neurologic toxicities, or other known potential adverse events, and the need to monitor for these events and to seek immediate medical attention if they occur. (B7.10.4.4)
 - 5. The recipient shall refrain from driving and other hazardous activities following IEC administration per manufacturer's instructions. (B7.10.4.5)
- v. Adverse events of cytokine release syndrome or neurologic toxicities shall be reported in accordance with regulatory requirements. (B7.10.5)
- vi. The Clinical Program shall maintain written guidelines for the management of complications that comply with the mandated risk management plan. (B7.10.6)
 - 1. Following administration of an IEC product, the recipient shall be monitored in accordance with the manufacturer's requirements. (B7.10.6.1)
- vii. Documentation of training and compliance with the risk management plan shall be established and maintained for review by the commercial manufacturer or applicable regulatory agency upon request. (B7.10.7)
- viii. There shall be policies or Standard Operating Procedures for the management of external audits requested by the commercial manufacturer or applicable regulatory agency. (B7.10.8)

Collection and Processing

a. Personnel involved in the dispensing of commercial cellular therapy products shall comply with the mandated risk management program, if applicable. (D3.4.2)

- b. When collecting cellular therapy products for further manufacturing there shall be risk minimization processes in place appropriate to the product. (C8.12)
- c. When collecting cellular therapy products for further manufacturing of licensed (or equivalent regulatory approval) cellular therapy products with a mandated risk management program, shall document implementation and compliance with applicable requirements of the risk management program. (C8.13)
- c. Processing Facilities providing service to a Clinical Program shall have risk minimization processes in place appropriate to the product. (D8.15)
- d. Processing Facilities providing service to a Clinical Program that administers licensed (or equivalent regulatory approval) cellular therapy products with a mandated risk management program, shall document implementation and compliance with applicable requirements of the risk management program. (D8.16)
 - i. Risk management program requirements shall include at a minimum: (C8.13.1/D8.16.1)
 - 1. Training for each applicable cellular therapy product. (C8.13.1.1/D8.16.1.1)
 - 2. Assessment of knowledge for each applicable cellular therapy product. (C8.13.1.2/D8.16.1.2)
 - 3. Retraining and reassessment of knowledge if the Collection Facility has not collected a cellular therapy product for a period of time specified by the manufacturer. (C8.13.1.3/D8.16.1.3)
 - ii. Documentation of training and compliance with the risk management program shall be established and maintained for review by the commercial manufacturer or applicable regulatory agency upon request. (C8.13.2/D8.16.2)
 - iii. There shall be policies or Standard Operating Procedures for the management of external audits requested by the commercial manufacturer or applicable regulatory agency. (C8.13.3/D8.16.3)
- 3. Addition of standards related to gene-modified cells

The FACT Gene-modified Cell Task Force proposed the following additional standards:

- a. There shall be a biosafety plan consistent with the institutional biosafety committee that addresses gene-modified products. (D2.8)
- b. Ten (10) hours of educational activities related to the field of cellular therapy, including HPC, IEC, gene-modified cells, and other cellular therapies annually at a minimum. (B3.1.6, B3.2.2, B3.5.3)
- c. (Nurses training and competency) Administration of cellular therapy products, including HPC, IEC, gene-modified cells, and other cellular therapies. (B3.7.2.2)
- d. Continuing education shall include, but is not limited to, activities related to cytokine release syndrome and neurological toxicities resulting from cellular therapies, including HPC, IEC, gene-modified cells, and other cellular therapies. (B3.8.4.1, B3.10.3.1)

- e. Review of outcome analysis and/or product efficacy shall include at a minimum: (B4.7.3) For gene-modified HPC products, an endpoint of clinical function as approved by the Clinical Program Director. (B4.7.3.2)
- f. Clinical Programs/Processing Facilitates utilizing gene therapy shall incorporate or reference institutional or regulatory requirements related to the disposal of genetic material when gene-modified cellular therapy products are utilized on the clinical unit/facility. (B5.1.15.1, D5.1.19.1)
- g. When gene therapy is utilized during collection, institutional or regulatory requirements related to the disposal of genetic material shall be incorporated or referenced. (C5.1.15.1)
- h. Agreements for storage of gene-modified cellular therapy products should include information regarding the discard procedure. (D12.1.1.1)
- 4. Addition of training requirements in applicable good manufacturing practices as required by applicable law for Collection and Processing Facilities.
 - a. Annual training in applicable current GMP appropriate to the processes performed in collection of cellular therapy products for further manufacturing in accordance with Applicable Law. (C4.4.2.5)
 - b. Annual training in applicable current GMP appropriate to the processes performed in accordance with Applicable Law. (D4.4.2.5)
- 5. Accreditation of HLA Typing Laboratories The College of American Pathologists (CAP) has been approved as an accrediting organization providing histocompatibility services appropriate for hematopoietic cellular therapy, and is expressly listed in the Standards. (See B2.8; B6.1.31)

Changes Made to the Quality Management Standards

In addition to revising standards to explicitly and consistently state requirements, the following changes and additions were made:

- 1. Agreements shall be established with external parties providing critical services that could affect the quality and safety of the cellular therapy product or health and safety of the donor or recipient. (B/C4.6.1; This was added to Clinical and Collection to be consistent with the Processing Facility standard.)
- 2. Agreements should include the responsibility of the external parties to provide clinically relevant information related to products or services. (B4.6.2.1)
- 3. Audits shall be conducted by an individual with sufficient expertise and competence to identify problems, but who is not solely responsible for the process being audited. (B/C/D4.8.1)
- 4. Periodic Annual audit of the accuracy of clinical data. (B4.8.3.1)
- 5. A thorough investigation shall be conducted by the Apheresis Collection Facility in collaboration with the Processing Facility, and the Clinical Program, and other entities involved in the manufacture of the cellular therapy product, as appropriate. (C/D4.10.2.1)

Cumulative files of errors, accidents, biological product deviations, serious adverse events, and complaints occurrences shall be maintained, tracked, and trended. (B/C/D4.10.3.3)

Changes to Clinical Program Standards

In addition to revising standards to explicitly and consistently state requirements, the following changes and additions were made:

1. General

- a. The Clinical Program shall consist of an integrated medical team that includes a Clinical Program Director (s) housed in a defined location(s). (B1.1)
 - i. These Standards apply to all services of the Clinical Cellular Therapy Program. (B1.1.1)
- b. If the Clinical Program or an intermediary facility receives cellular therapy products directly from a third-party provider, the following responsibilities shall should be defined, at a minimum, by a written agreement: (B1.2.1)

2. Clinical Unit

- a. The Clinical Program shall have a written safety manual that includes instructions for action in case of exposure, as applicable, to liquid nitrogen; communicable disease; and to chemical, biological, erradiological, electrical, or fire hazards. (B2.11)
- b. All waste generated by the Clinical Program activities shall be disposed of in a manner that minimizes any hazard to facility personnel and to the environment in accordance with Applicable Law. (B2.12, C2.11; This was added to Clinical and Collection to be consistent with the Processing Facility standard.)
- c. Personal protective equipment, including gloves and protective clothing shall be used while handling biological specimens. Such protective equipment shall not be worn outside the work area. (B2.13, C2.12; This was added to Clinical and Collection to be consistent with the Processing Facility standard.)
- 3. Personnel and Policies and SOPs Several changes were made to this section to provide clarity and improve the requirements as the field evolves.

The section for nursing SOPs (B3.7.4) was integrated into Clinical Program SOPs (B5).

- 4. Donor Selection, Evaluation, and Management
 - a. Family members and legally authorized representatives shall should not serve as interpreters or translators. (B6.1.3.1)
 - b. Donor informed consent for the cellular therapy product donation shall be obtained and documented by a licensed health care professional familiar knowledgeable with in the collection procedure. (B6.1.6)
 - c. The allogeneic donor shall give informed consent and authorization prior to release of the donor's health or other information to the recipient's physician and/or the recipient. (B6.1.8)

d. The donor shall be informed of the policy for cellular therapy product storage, discard, or disposal, including actions taken when an intended recipient no longer requires the cellular therapy product. (B6.1.9)

5. Recipient Care

- a. Recipient informed consent for the cellular therapy shall be obtained and documented by a licensed health care professional knowledgeable in familiar with the proposed cellular therapy. (B7.1)
- b. The Clinical Programinformed consent process shall provide include information regarding the risks and benefits of the proposed cellular therapy. (B7.1.1)

Clinical Research

- a. Documentation for all All clinical research protocols performed by the Clinical Program shall be maintained performed in accordance with institutional policies and applicable laws and regulations Applicable Law, including audits; approvals by the Institutional Review Board, Ethics Committee, or equivalent; correspondence with regulatory agencies; and any adverse events and the resolution. (B8.2)
- b. Documentation of approvals by the Institutional Review Board, Ethics Committee, or equivalent; and if applicable, the Institutional Biosafety Committee or equivalent; correspondence with regulatory agencies; audits; and any adverse events and the resolution shall be maintained. (B8.2.1)

7. Data Management

- a. The Clinical Program should collect all the and maintain complete and accurate data elements included in the applicable CIBMTR Cellular Therapy forms or EBMT forms. (B9.1)
- b. The Clinical Program should collect all data elements included in the Cellular Immunotherapy Data Resource (CIDR) forms or Cell Therapy — Minimum Essential Data – A form. (B9.2)

8. Records

- a. Cleaning and sanitation records shall be retained for at least three (3) years or longer in accordance with applicable laws or regulations, or by a defined program or institution policy. (B10.1.2)
- b. Validation studies for a current procedure shall be retained at a minimum until no products manufactured using that procedure remain in inventory. (B10.1.3)

Changes to Collection Facility Standards

1. General

- a. These Standards apply to the collection activities of all cellular therapy products collected from living donors. (C1.1)
- 2. Collection Activities

- a. There shall be adequate lighting, ventilation, toilets, and access to sinks for handwashing during collection to prevent the introduction, transmission, or spread of communicable disease. (C2.2)
- b. There shall be attending physician oversight if general medical physicians, physicians in training, or APPs provide care to the cellular therapy donors. The scope of responsibility of general medical physicians or APPs shall be defined.
- c. There shall be a written safety manual that includes instructions for action in case of exposure to communicable disease and to chemical, biological, or radiological, electrical, or fire hazards. (C2.10)

3. Policies and SOPs

- a. Policies and/or Standard Operating Procedures addressing critical aspects of operations and management in addition to those required in C4 shall be established and maintained. These documents shall include all elements required by these Standards and shall address at a minimum: (C5.1)
- b. Donor screening, testing, eligibility and suitability determination, and management. (C5.1.3)
- c. Packaging, Itransportation and shipping, including methods and conditions to be used for distribution to external facilities including additives and preservatives for long distance or duration of shipment. (C5.1.10)
- d. Critical equipment, reagent, and supply management including recalls and corrective actions in the event of failure. Critical reagent and supply management. (C5.1.11)
 - i. Recalls of equipment, supplies, and reagents. (Was Standard C5.1.13 in first edition Standards)
- e. Cleaning and sanitation procedures including identification of the individuals responsible for the activities. (C5.1.13)
- f. A Standard Operating Procedures Manual A detailed list of controlled documents for collection activities shall be maintained, including a listing of all current Standard Operating Procedures, including title, and identifier, and version. (C5.2)
- g. Donor Aage-specific and size-specific issues where relevant. (C5.3.5)
- h. Variances Planned deviations shall be pre-approved by the Medical Director and reviewed by the Quality Manager. (C5.7)
- 4. Allogeneic and Autologous Donor Evaluation and Management
 - a. Family members and legally authorized representatives should shall not serve as interpreters or translators. (C6.2.3)
 - b. Donor informed consent for the cellular therapy product collection shall be obtained and documented by a licensed health care professional familiar knowledgeable with in the collection procedure. (C6.2.6)
- 5. Coding and Labeling of Cellular Therapy Products
 - a. A system of label reconciliation shall be used to ensure the final disposition of all labels allocated to a specific product are documented. (C7.1.2.1)

- b. Print on demand Label systems shall be validated to confirm accuracy regarding identity, content, and conformity of labels to templates approved by the Medical Director or designee. (C7.1.3)
- c. Cellular therapy products for third-party manufacturers shall be labeled with product labels that conform to FACT requirements or Applicable Law. (C7.3.6)

6. Process Controls

- a. There shall be a process for inventory control that encompasses equipment, transport containers, supplies, reagents, and labels. (C8.2)
- b. Supplies and reagents shall be quarantined or segregated prior to approval for use, until acceptance criteria have been met. (C8.2.2.1)
- c. Processes for equipment management in C8.3 were streamlined for clarity.

There shall be a process for equipment management that encompasses maintenance, cleaning, and calibration. (C8.3)

- i. Equipment shall be maintained in a clean and orderly manner. (C8.3.1)
 - 1. Maintenance, calibration, and cleaning shall be performed according to established schedules as described in Standard Operating Procedures and in accordance with the manufacturer's recommendations. (C8.3.1.1)
 - 2. The equipment shall be inspected for cleanliness and verified to be in compliance with the maintenance schedule prior to use. (C8.3.1.2)

7. Cellular Therapy Product Storage

- a. Cellular therapy products collected, stored, or released for administration or further manufacturing shall be assigned an expiration date and time for noncryopreserved products and for products thawed after cryopreservation. (C9.2.1)
 - i. Storage time, duration, and conditions of all cellular therapy products shall be validated. (C9.2.1.1)

8. Cellular Therapy Product Transportation and Shipping

a. A risk assessment shall be performed to evaluate the need for continuous temperature monitoring during transportation or shipment of cellular therapy products. (C10.3.2)

9. Records

- a. Safeguards to secure the confidentiality of all records and communications between the collection, processing, and clinical facilities, and health care providers and their recipients and donors, shall be established and followed in compliance with applicable laws and regulations Applicable Law. (C11.1.4)
- b. Cleaning and sanitation records shall be retained for a minimum of three (3) years or longer in accordance with applicable laws or regulations. (C11.2.2)
- c. Validation studies for a current collection procedure shall be retained for the duration of the use of the procedure to demonstrate compliance with the validation requirements. (C11.2.3)

Changes to Processing Facility Standards

1. General

a. These Standards apply to all processing, storage, and distribution activities performed in the Processing Facility on cellular therapy products obtained from living donors. (D1.1)

2. Processing Facility

- a. There shall be appropriate secured and controlled access to designated areas for processing of cellular therapy products, processed products, and for storage of equipment, supplies, and reagents. (D2.1)
 - i. There shall be a designated area for processing with the appropriate location and The Processing Facility shall be of adequate space, and design, and location for the intended procedures to minimize the risk of airborne microbial contamination. (D2.1.1)
 - ii. The Processing Facility shall provide adequate lighting, ventilation, toilets, and access to sinks for hand washing, and to prevent the introduction, transmission, or spread of communicable disease. (D2.1.2)

3. Policies and Standard Operating Procedures

- a. Processing of ABO-<u>incompatible mismatched</u> cellular therapy products to include a description of the indication for and processing methods to be used for red cell and plasma <u>depletion</u>reduction. (D5.1.4)
- b. <u>Appropriate processing procedures for specific products, including</u>

 Cryopreservation and thawing. (D5.1.7)
- c. <u>Packaging, Ttransportation</u> and shipping, including methods and conditions within the Processing Facility and to and from external facilities. (D5.1.11)
- d. Critical <u>equipment</u>, reagent, and supply management, <u>including recalls and corrective actions in the event of failure</u>. (D5.1.14)
 - i. Recalls of equipment, supplies, and reagents. (Was Standard D5.1.16 in first edition Standards)
- e. <u>Variances Planned deviations</u> shall be pre-approved by the appropriate Processing Facility Director and/or Medical Director, and reviewed by the Quality Manager. (D5.7)

4. Equipment, Supplies, and Reagents

a. There shall be adequate equipment and materials for the procedures performed. (D6.2)

5. Coding and Labeling

- a. A system of label reconciliation shall be used to ensure the final disposition of all labels allocated to a specific product are documented. (D7.1.2.1)
- b. Print-on-demand ILabel systems shall be validated to confirm accuracy regarding identity, content, and conformity of labels to templates approved by the Processing Facility Director-or designee. (D7.1.3)
- c. At all stages of processing, the cellular therapy product shall be labeled with the proper name of the product and the unique numeric or alphanumeric identifier, at a minimum. (D7.3.1)

d. <u>Cellular therapy products from third-party manufacturers shall be labeled with product labels that conform to FACT requirements or Applicable Law.</u> (D7.3.8)

6. Process Controls

- a. For tests performed within the Processing Facility, tThere shall be documentation of ongoing proficiency testing as designated by the Processing Facility Director. The results shall be reviewed by the Processing Facility Director or designee and outcomes reviewed with the staff. (D8.1.4.5)
- b. Preparation for administration of products manufactured by third-parties, If the Processing Facility shall follow the instructions provided by the manufacturer. lacks experience with the type of cellular therapy product requested for a recipient, personnel shall obtain the manufacturer's instructions and follow these instructions to the extent possible. (D8.4.3)
 - i. <u>If relabeling of prepared third-party products is required, the label shall follow manufacturer's requirements.</u> (D8.4.3.2)
 - ii. If the manufacturer does not provide instructions regarding preparation for administration, existing Standard Operating Procedures may be followed or adapted as appropriate under direction of the Facility Director and Medical Director. (D8.4.3.3)
- c. Critical calculations shall be verified and documented where appropriate. (D8.6)
- d. Processing using more-than-minimal manipulation shall only be performed in accordance with institutional policies and Applicable Law; with Institutional Review Board or Ethics Committee approval, and with the written informed consent of the donor, if applicable, and the recipient of the cellular therapy product, and in compliance with applicable laws and regulations. (D8.12)
 - i. <u>Documentation of approvals by the Institutional Review Board, Ethics Committee, or equivalent; and the Institutional Biosafety Committee, or equivalent; correspondence with regulatory agencies; audits; and any adverse events and the resolution shall be maintained.</u> (D8.12.1)

7. Cellular Therapy Product Storage

- a. <u>Storage time, duration, and conditions of all cellular therapy products shall be validated.</u> (D9.2.1.1)
- 8. Cellular Therapy Product Transportation and Shipping
 - a. Cellular therapy products transported internally shall be packaged in a closed and rigid outer container. (D10.6)
 - i. The outer container for internal transport shall be labeled as defined in Appendix II B. (D10.6.1)

9. Records

- a. Safeguards to secure the confidentiality of all records and communications between the collection, processing, and clinical facilities, and health care providers and their recipients and donors, shall be established and followed in compliance with applicable laws and regulations Applicable Law. (D13.1.6)
- b. Processing Facility records related to quality control, investigational protocols, personnel training and competency, facility maintenance, facility management, complaints, or other general facility issues shall be retained for a minimum of ten (10) years after the date of the cellular therapy product's distribution, disposition, or expiration, or the creation of the cellular therapy product record, whichever is most recent, or according to Applicable Law.by the Processing Facility, or longer in accordance with applicable laws or regulations, or with a defined program or institution policy. (D13.3.1)
 - Validation studies for a current processing procedure shall be retained at a minimum until no products manufactured using that procedure remain in inventory. (D13.3.1.3)
- c. The Processing Facility shall furnish to the facility of final disposition a <u>summary</u> copy of all records relating to the collection, processing, and storage procedures performed related to the safety, purity, or potency of the cellular therapy product involved. (D13.4.2)

10. Appendix II

B: CELLULAR THERAPY PRODUCT LABELS FOR INTERNAL TRANSPORT

Element	Internal transport label
Statements "Human Cells for Administration" or	<u>AF</u>
equivalent and "Handle with Care"	
Emergency contact person name and phone	<u>AF</u>
number	