CIBMTR® CENTER FOR INTERNATIONAL BLOOD & MARROW TRANSPLANT RESEARCH

Instructions for Pre-Transplant Essential Data (Pre-TED) Form

This section of the CIBMTR Forms Instruction Manual is intended to be a resource for completing the Pre-Transplant Essential Data (**Pre-TED**) Form. Effective December 3, 2007, the Pre- and Post-TED forms replaced the former Pre-Registration (Pre-Reg), Transplant Essential Data (TED), Modified TED (M-TED) and TED Follow-up (TEDFU) registration forms.

E-mail comments regarding the content of the CIBMTR Forms Instruction Manual to: CIBMTRFormsManualComments@nmdp.org. Comments will be considered for future manual updates and revisions. For questions that require an immediate response, please contact your transplant center's CIBMTR liaison.

TABLE OF CONTENTS

Abbreviations 3
Key Fields 5
CIBMTR Use Only 5
Disease Classification 5
Table 1. Common Diagnosis Combinations 6
Table 2. Common Diagnosis Transformations 6
Hematopoietic Stem Cell Transplant (HSCT) 7
Preparative Regimen 14
Example: Calculating Drug Doses 16
Comorbid Conditions 17
GVHD Prophylaxis (allogeneic only) 20
Post-HSCT Disease Therapy Planned as of Day 0 21
Other Toxicity Modifying Regimen 21
Pre-TED Disease Classification Sheet 22
Acute Leukemias 23
Acute Myelogenous Leukemia or Acute Nonlymphocytic Leukemia 23
Acute Lymphoblastic Leukemia 26
Other Acute Leukemia 29
Chronic Myelogenous Leukemia (CML) 32
Table 3. CML Classifcation Requirements 32

TABLE OF CONTENTS (continued)

Myelodysplastic or Myeloproliferative Diseases....36
MDS or Myeloproliferative Diseases....36
MDS/MPS/CMML....37
JMML....40
Other Leukemias....40
Lymphomas....46
Hodgkin Lymphoma....46
Non-Hodgkin Lymphoma....48
Plasma Cell Disorders....50
Table 4. Plasma Cell Disorders: Disease Combinations....52
Breast Cancer....55
“Other” Disease....60
Other Malignancies....60
Anemia/Hemoglobinopathy....63
Platelet Disorders....63
Histiocytic Disorders....63
Inherited Disorders of Metabolism/Osteopetrosis....64
Immune Deficiencies....64
Autoimmune Disorders....64
Connective Tissue Disease....64
Vasculitis....66
Other Vasculitis....67
Arthritis....67
Multiple Sclerosis....68
Other Autoimmune Neurological Disorder....68
Other Autoimmune Cytopenia....68
Bowel Disease....69

Abbreviations

The following abbreviations are used throughout the Pre- and Post-TED forms. These abbreviations are also listed on page two of the Pre-TED paper form. For a glossary of abbreviations and common terms used throughout the manual, see appendices A and B.

YYYY = 4-digit year
MM = 2-digit month
DD = 2-digit day
AHOP = Adult, Hematology, Oncology or Pediatric Unit
ALLO = Allogeneic
ANC = Absolute Neutrophil Count
AUTO = Autologous
BM = Bone Marrow
BMT-CTN = Blood & Marrow Transplant Clinical Trials Network
CIBMTR = Center for International Blood & Marrow Transplant Research
CIC = Center Identification Code
CMV = Cytomegalovirus
CR = Complete Remission
DCI = Donor Cellular Infusion
DLI = Donor Lymphocyte Infusion
EBMT = European Group for Blood & Marrow Transplantation
EBV = Epstein Barr Virus
FACT = Foundation for the Accreditation of Cellular Therapy
FGF = Fibroblast Growth Factor (e.g., velafermin)
FISH = Fluorescent In-situ Hybridization
GVHD = Graft versus Host Disease
HSCT = Hematopoietic Stem Cell Transplant
KGF = Keratinocyte Growth Factor (e.g., Kepivance)
NMDP = National Marrow Donor Program
NOS = Not Otherwise Specified
NST = Non-myeloablative Stem Cell Transplant
PBSC = Peripheral Blood Stem Cells
PTLD = Posttransplant Lymphoproliferative Disorder
RBC = Red Blood Cell
RCI-BMT = Resource for Clinical Investigations in Blood & Marrow Transplant
RIC = Reduced Intensity Conditioning
SCTOD = Stem Cell Therapeutic Outcomes Database
TBI, TLI, TNI = Total (Body, Lymphoid, Nodal) Irradiation
U = Unclassifiable
UCB = Umbilical Cord Blood
Unit = Adult, Hematology, Oncology, Pediatric (AHOP)
VOD = Veno-occlusive Disease

Pre-Transplant Essential Data (Pre-TED)

All transplant centers participating in the CIBMTR must submit a Pre-TED Form for each recipient receiving a first allogeneic (related or unrelated) HSCT. The Pre-TED is a requirement of the SCTOD for all United States transplant centers when either the stem cell donation or the transplant occurs within the United States. For more information regarding the SCTOD, see General Instructions, Stem Cell Therapeutics Outcomes Database.

Transplant centers are encouraged to submit a Pre-TED for recipients receiving an autologous HSCT. Although data regarding recipients receiving autologous HSCT are not required to be submitted as part of the C.W. Bill Young Transplant Program, the CIBMTR is highly committed to collecting data on these recipients for research studies. For more information regarding data reporting for autologous HSCT, see General Instructions, Autologous Hematopoietic Stem Cell Transplant.

The Pre-TED may be submitted to the CIBMTR up to two weeks prior to the start of the recipient's preparative regimen. The Pre-TED is due the day of the HSCT (day 0), and is past due if not received by that date.

Helpful Hint:
In order to minimize potential changes to HSCT date, complete the data for the Pre-TED (in FormsNet™2 or on paper), but do not submit the Form until the first dose of the preparative regimen is given.

For recipients receiving a subsequent HSCT:

- *TED only* centers must submit a Pre-TED for all subsequent HSCTs.
- *Comprehensive Report Form* centers must submit a Pre-TED only for recipients assigned to TED forms by the form selection algorithm. For recipients assigned to Comprehensive Report Forms by the form selection algorithm, centers will not submit another Pre-TED, but will instead submit a Baseline Form (Form 2000).

For all subsequent HSCTs, the recipient will remain on the original follow-up form track assigned by the form selection algorithm. For more information regarding center type and the form selection algorithm, see General Instructions, Center Type and Data Collection Forms.

For recipients of multiple transplants (and who are assigned to the TED forms), transplant centers are not granted access to the current Pre-TED form in

FormsNet™2 until the Post-TED from the previous transplant has been completed.

Transplant centers can use the FormsNet™2 application to determine if a Baseline Form (Form 2000) is due either by 1) accessing the Forms Due Report, or 2) by entering the recipient's unique ID (CRID) in the Patient Forms Due field.

Key Fields

Accuracy of the Key Fields is essential for ensuring that:

- Data are being reported for the correct recipient.
- Transplant centers have access to their data.
- Data are being shared with the correct donor center, cord blood bank, cooperative registry, or other approved agency.

For instructions regarding the completion of the Key Fields, see appendix K. Key fields include all fields listed in the *Center Identification* and *Recipient Identification* boxes.

CIBMTR USE ONLY

This box appears only on the paper version of the form and is intended for CIBMTR use only. This box does not appear in the FormsNet™2 application.

Do not write in this box.

Disease Classification

NOTE: Disease Classification
The newest version of the TED forms uses the World Health Organization (**WHO**) disease classifications. Each Disease Classification Sheet contains all of the established WHO disease types and subtypes. Therefore, the "other, specify" category should only be used if the recipient's disease is not one of the listed options. For more information regarding disease classification, consult with a transplant physician, contact your center's CIBMTR liaison, or visit the WHO website at: http://www.who.int/classifications/icd/en/.

If the indication for HSCT is due to a combination of diseases or a transformation of one disease to another, multiple Disease Classification Sheets may be required. Tables 1 and 2 list common examples of disease combinations and transformations, and the Disease Classification Sheets required.

Table 1. Common Disease Combinations

Disease Combinations	Report primary disease as:	Report disease diagnosis date of:	Required disease classification sheet(s)
FAN or SAA and AML	AML	AML	Anemia/Hemoglobinopathy and AML
FAN or SAA and MDS	MDS	MDS	Anemia/Hemoglobinopathy and MDS
MYE and AMY	MYE	MYE	Plasma Cell Disorders

Table 2. Common Disease Transformations

Disease Transformation	Report primary disease as:	Report disease diagnosis date of:	Required disease classification sheet(s)
MDS or MPS to AML	AML	AML	AML and MDS/MPS
NHL to another NHL	Second NHL diagnosis	First NHL diagnosis	Lymphoma
CLL to NHL (i.e., Richter's Syndrome)	NHL	CLL	Other Leukemias and Lymphoma

NOTE:
Question numbers correspond to the FormsNet™2 application

Question 1: Date of diagnosis of primary disease for HSCT
Report the date of the first pathological diagnosis (e.g., bone marrow or tissue biopsy) of the disease. Enter the date the sample was collected for examination. Do not report the date symptoms first appeared. The date of diagnosis is important because the interval between diagnosis and HSCT is often a significant indicator for the recipient's prognosis post-HSCT.

If the exact pathological diagnosis date is not known, use the process described in General Instructions, Guidelines for Completing Forms.

If this is a subsequent HSCT for a new malignancy (or other new indication), report the date of diagnosis of the new malignancy and complete the appropriate Disease Classification Sheet. If the recipient is assigned to the TED forms by the forms selection algorithm, the diagnosis date and current status of the previous diagnosis will be reported on the Post-TED.

Hematopoietic Stem Cell Transplant (HSCT)

Question 2: Date of this HSCT
Report the intended start date of the HSCT. If the infusion is planned to last several days, enter the day the infusion is scheduled to start.

If the Pre-TED has been submitted prior to day 0, and the planned infusion date has changed, the original planned date of the HSCT will automatically be reported in FormsNet™2 on either the Post-TED or the 100 Days Post-HSCT Data Form (Form 2100). The Pre-TED should be changed using the paper Error Correction Form process. This will change the transplant date for the subsequent form(s).

If the recipient is scheduled to receive a combination of cellular therapy and stem cell infusions, contact your center's CIBMTR liaison for reporting requirements.

Question 3: Chronological number of this HSCT
An HSCT event is defined as an infusion of mobilized peripheral blood stem cells (PBSC), bone marrow, or cord blood. For recipients who have received a previous HSCT (prior to the HSCT for which this series of forms is being completed), the following are examples of how to calculate the chronological number of this HSCT.

> **Example 1:**
> A recipient was previously transplanted under a protocol that included an infusion of cells over multiple days: day 0, day +1 and day +2. This series of infusions is considered one HSCT event, as opposed to three HSCT events and should be counted as *HSCT Event #1*.
>
> After receiving the infusion, the recipient has relapse of disease. The recipient is scheduled to receive a subsequent HSCT. This HSCT should be reported as *HSCT Event #2*.
>
> **Example 2:**
> A recipient previously received a HSCT (*HSCT Event #1*). Then, because of delayed neutrophil recovery, the recipient received additional mobilized cells (i.e., "boost" - *HSCT Event #2*).
>
> After receiving the boost, the recipient has relapse of disease. The recipient is scheduled to receive a subsequent HSCT. This HSCT should be reported as *HSCT Event #3*.

Autologous rescue **should not** be counted as a separate HSCT. Autologous rescue is generally used to treat the recipient's poor graft response, rather than their disease.

Question 4: If >1, most recent previous HSCT
Report the date of the recipient's **last** autologous or allogeneic (related or unrelated) HSCT. Although the CIBMTR requests either a Pre-TED and/or Recipient Baseline Data (Form 2000) for each HSCT, there may be circumstances where a prior HSCT was not reported (e.g., prior autologous HSCT). Reporting the recipient's last HSCT enables the CIBMTR to appropriately account for recipient survival status in the database.

Question 5: Type (of most recent previous HSCT)
Report the stem cell source of the recipient's **last** HSCT as either autologous or allogeneic.

Questions 6-9: Institution where previous HSCT was performed, if different from current
Report the name, city, state and country of the institution where the recipient's **last** HSCT was performed. These data are used to identify and link the recipient's existence in the database and, if necessary, obtain data from the previous transplant center.

NOTE: Questions 10-18
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 10-14: Cell source for <u>this</u> HSCT
More than one cell source or a combination of cellular therapies may be infused in the same HSCT procedure. Select all the cell sources planned for use in the **current** HSCT.

If "other" is chosen, specify the cell source type.

For more information regarding multiple cell type infusions that occur over a short period of time (e.g., less than two weeks), contact your center's CIBMTR liaison.

Questions 15-16: Allo HSCT donor gender
Indicate each allogeneic donor's biological gender (sex) as "male" or "female." For multiple donors, check all that apply. For autologous HSCT, leave this question blank and continue with question 17.

Question 17: Autologous HSCT?
Indicate if this HSCT is autologous (self-donation).

Question 18: Multiple donors?
Indicate if multiple donor types, or if multiple cord blood units from different donors are to be used for this HSCT.

Question 19: Donor Type
If the product for this HSCT is from an allogeneic donor, indicate the donor type.

- **Syngeneic:**
  Includes*:* Monozygotic (identical*)* twins. Occurs when a single egg is fertilized to form one zygote which then divides into two separate embryos.
  Does not include: Other types of twins or HLA-identical siblings (see below).

- **HLA-identical sibling:**
  Includes: Non-monozygotic (dizygotic, fraternal, non-identical) twins. Occurs when two eggs are fertilized by two different sperm cells at the same time. This category also includes siblings who aren't twins, but have identical HLA types.
  Does not include: Half-siblings (report as "HLA matched other relatives" if their HLA is a match, or "mismatched relative" if it does not match).

- **HLA-matched other relative:**
  Includes: All blood-related relatives, other than siblings, who are HLA matched (e.g., parents, aunts, uncles, children, cousins).
  Does not include: Adoptive parents/children or stepparents/children who are HLA matched.

- **HLA-mismatched relative:**
  Includes: Siblings who are not HLA-identical and all other blood-related relatives who have at least one HLA mismatch (e.g., parents, aunts, uncles, children, cousins).
  Does not include: Adoptive parents/children or stepparents/children.

  If the donor is an HLA-mismatched relative, continue with "degree of mismatch" (question 20). If the donor is an HLA-matched relative, continue with the "ex vivo graft manipulation" section (question 25).

- **Unrelated donor:**
  Includes: Donor who shares no known ancestry with the recipient, and is usually found through an unrelated donor registry. Include adoptive parents/children or stepparents/children here. Continue with "registry or UCB bank" (question 21).

Question 20: Degree of mismatch
If the donor is an HLA-mismatched relative, indicate the degree of mismatch as either, "1 HLA antigen mismatch" or, "≥ 2 HLA antigen mismatch (full Haploidentical)." Haploidentical means that one half of the HLA type matches the recipient. This type of HLA mismatch is common between blood-related parents and children.

Question 21: Registry or UCB Bank
For unrelated donors, specify the registry used to obtain the adult donor or umbilical cord blood unit. The code for NMDP donors is USA1. The code for NMDP cord blood units is U1CB. The Bone Marrow Donors Worldwide (**BMDW**) codes have been adopted to avoid submitting the entire name and address of the donor registry.

A donor found through DKMS should be reported as a ZKRD donor. DKMS is part of both the ZKRD registry as well as the NMDP registry.

NOTE: Question 21
FormsNet™2 application: Select the appropriate registry code from the drop down directory.
Paper form submission: Use the BMDW website to look up the registry's appropriate match code. **Enter the match code listed in brackets.**
http://www.bmdw.org/index.php?id=addresses_members&no_cache=1

Example: Registry name: Against Leukemia Foundation Marrow Donor Registry
Match codes: Poland-ALF MDR [PL3]
Report on Pre-TED: PL3

Question 22: Specify other Registry or UCB Bank
If the BMDW website does not list a match code for the adult donor registry or cord blood bank, provide the registry's official name in the "Specify other registry" field. This option should be used in rare circumstances.

Question 23: Complete number of mismatches: Antigenic (2 digits)
For unrelated donors, if HLA testing was serologic or low-resolution DNA typing, indicate the number of mismatches for each locus (Note: A full match equals "0" mismatches). If multiple unrelated donors are used for this HSCT, complete the section for donor registry or cord blood unit, then draw a single line through the HLA mismatch section, and indicate "multiple donors used," or override this error in the FormsNet™2 application.

Question 24: Complete number of mismatches: Allelic (4 digits)
For unrelated donors, if HLA testing was intermediate- or high-resolution DNA typing, indicate the number of mismatches for each locus. If multiple donors are

used for this HSCT, complete the section for donor registry or cord blood unit, then draw a single line through the HLA mismatch section, and indicate "multiple donors used," or override this error in the FormsNet™2 application. For assistance with HLA typing and terminology, consult a specialist within your institution, or contact your center's CIBMTR liaison.

Question 25: Was there *Ex Vivo Graft Manipulation* other than for RBC removal or volume reduction?
Ex vivo refers to *outside the body*. Do not report treatments given to the recipient with the intent of affecting the graft.

If the graft was manipulated ex vivo **other than for RBC removal or volume reduction**, check "yes" and continue with question 26.

If the graft was only manipulated to reduce the volume of the collection (plasma removal), or to remove RBCs (for ABO incompatibility, to prevent hemolysis), check "no" and continue with question 34.

NOTE: Questions 26-33
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Question 26: T-cell depletion
This method of negative selection manipulation is most commonly used for allogeneic HSCT, as it removes some or all of the T-cells to minimize GVHD. The removed T-cells may be infused at a later date (i.e., DLI). Methods of T-cell depletion may include the use of antibodies. For more detail regarding methods of T-cell depletion, see the HSCT Infusion Form (INF Form 2006).

Question 27: Tumor purging
This type of negative selection manipulation removes malignant cells from the collected product. This method is only used for autologous HSCT.

Questions 28-29: Other negative selection
Negative selection refers to removing a specific cell population prior to infusion. If a negative selection method of cell manipulation was used, other than T-cell depletion or tumor purging, check "yes" and specify the method in the space provided.

Question 30: CD34 selection
This manipulation method is also known as "positive selection." This method collects stem cells that have a CD34+ marker on the surface cell, and is commonly done with a CliniMACS/CliniMax or Isolex machine.

Question 31: Ex-vivo expansion
Using a positive selection manipulation technique, CD34+ cells are selected for ex-vivo expansion to increase the quantity of hematopoietic stem cells between collection and infusion. The most common method of ex vivo expansion uses hematopoietic growth factors. Ex-vivo expansion is most commonly used with cord blood transplants.

Questions 32-33: Other, specify
If a positive selection method of cell manipulation was used, other than CD34+ selection or ex vivo expansion, check "yes" and specify the method in the space provided.

Questions 34-35: Performance Score pre-Preparative Regimen
The CIBMTR uses the Karnofsky/Lansky scale to determine the functional status of the recipient immediately prior to the start of the preparative regimen. For the purposes of this manual, the term "immediately prior" represents the **pre-HSCT work-up phase**, or **approximately one month** prior to the start of the preparative regimen.

The Karnofsky Scale is designed for recipients aged 16 years and older, and is not appropriate for children under the age of 16. The Lansky Scale is designed for recipients less than 16 years old.

Select the appropriate performance scale, Karnofsky or Lansky, based on the recipient's age. Using this scale, select the score (10-100) that best represents the recipient's activity status immediately prior to the start of the preparative regimen. For an example of the Karnofsky/Lansky scale, see appendix L.

Recipient performance status is a critical data field that has been determined to be essential for all outcome-based studies. If a Karnofsky/Lansky score is not documented in the source documentation (e.g., inpatient progress note, physician's clinic note), data management professionals **should not** assign a performance score based on analysis of available documents. Rather, a physician should provide documentation of the performance score.

The CIBMTR recognizes that some transplant centers prefer to collect and use the ECOG performance score as opposed to the Karnofsky/Lansky score. Although the ECOG and Karnofsky/Lansky performance score systems are based on similar principles, the scales are not the same. For example, the Karnofsky/Lansky scale is described in 11 categories, whereas the ECOG performance status is reported in six categories. Due to the overlap between the two systems, an ECOG score of "one" can represent either "80" or "90" on the Karnofsky/Lansky scale; whereas, a Karnofsky/Lansky score of "80" or "90" is converted directly to an ECOG score of "one." Therefore, the Karnofsky/Lansky scale can be more accurately converted into ECOG.

However, for centers that collect only an ECOG performance score, CIBMTR will make the following accommodations when auditing the source data:

- Centers collecting ECOG scores should do so using standard practices to ensure accuracy.
- For the purposes of CIBMTR reporting, conversion of ECOG to Karnofsky/Lansky should follow a standard and consistent practice to account for the lack of direct mapping. This practice should be clear and reproducible.

For more information regarding converting an EGOG score to a Karnofsky/Lansky score, see appendix L.

Questions 36-37: CMV-antibodies (IgG or Total)
Report the cytomegalovirus (CMV) status of the recipient—and for allogeneic HSCTs, the donor—immediately prior to the start of the preparative regimen. For the purposes of this manual, the term "immediately prior" represents the **pre-HSCT work-up phase**, or **approximately one month** prior to the start of the preparative regimen. An exception to this definition would apply to a recipient with a documented history of a "reactive" CMV test result. In this case, the CMV test may not be repeated during the pre-HSCT work-up phase. Therefore a timeframe of greater than one month prior to the start of the preparative regimen is acceptable.

A large portion of the population has been exposed to CMV. Following acute infection in the tissues, CMV remains dormant. Primary infection or reactivation of CMV can lead to significant infections and substantial complications for transplant recipients. Prior exposure to CMV, and therefore potential for reactivation, is generally tested during the pre-transplant recipient and donor evaluation. It is estimated that 50%-90% of adults test positive for CMV antibody, but are asymptomatic.

Most laboratory reports indicate a positive result as *reactive,* and a negative result as *non-reactive.* Occasionally, laboratory reports show a specific antibody titer; in this case, the laboratory value must be compared to the reported standards for reactive or non-reactive at the center. Use the "unknown" option only if the test has been completed, but the test results are not known. Selecting the "unknown" option may require a future data query. Use the "not done" option only if CMV status was not evaluated prior to the start of the preparative regimen. If multiple donors are used for this HSCT, report *any* positive result as reactive.

Preparative Regimen

Question 38: Was a preparative regimen given?
Recipients are generally transplanted under a specific protocol that defines the radiation and/or chemotherapy the recipient is intended to receive as a preparative regimen. This protocol, which may be either a research protocol or standard of care protocol, should be referred to when completing this section.

However, there are instances when a preparative regimen may not be given. Examples may include, but are not limited to:

- Primary diagnosis of an immune deficiency.
- Subsequent allogeneic HSCT due to loss of, or poor, neutrophil engraftment.

If a preparative regimen is prescribed per protocol, check "yes" and continue with question 39. If a preparative regimen is not planned, check "no" and continue with question 119.

For more information regarding the recipient's preparative regimen, consult with a transplant physician, or contact your center's CIBMTR liaison.

NOTE: Questions 39-111
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Preparative Regimen: Radiation
The following questions refer to **prescribed** radiation therapy. Do not report the radiation dose that was actually given. If the recipient is assigned to the Comprehensive Report Forms by the forms selection algorithm, then the actual dose given will be reported on the baseline form (Form 2000).

Question 39: Total Body Irradiation (TBI)
If TBI is prescribed per protocol, check "yes" and continue with question 40. Check "yes" even if certain fields (vital organs) will be blocked or shielded from radiation. If TBI is not prescribed per protocol, check "no" and continue with question 41.

Question 40: TBI Total Prescribed Dose
Enter the total dose of radiation as prescribed per protocol. If radiation is prescribed as a single dose, the amount of radiation delivered in the single dose constitutes the total dose. If the radiation is prescribed in fractionated doses, multiply the total number of fractions by the dose per fraction to determine the

total dose. For example, if the protocol prescribes 200 cGy of radiation given over three days, the total dose is 600 cGy. Enter the total dose of radiation in either grays (Gy) or centigrays (cGy).

Question 41: Limited Field
If Total Lymphoid Irradiation (**TLI**), Total Nodal Irradiation (**TNI**), or Total Abdominal Irradiation (**TAI**) is prescribed per protocol, check "yes" and continue with question 42. If TLI, TNI, or TAI is not prescribed per protocol, check "no" and continue with question 43.

Question 42: TLI, TNI, or TAI Total Prescribed Dose
Enter the total dose of radiation as prescribed per protocol. If radiation is prescribed as a single dose, the amount of radiation delivered in the single dose constitutes the total dose. If the radiation is prescribed in fractionated doses, multiply the total number of fractions by the dose per fraction to determine the total dose. For example, if the protocol prescribes 200 cGy of radiation given over three days, the total dose is 600 cGy. Enter the total dose of radiation in either grays (Gy) or centigrays (cGy).

Preparative Regimen: Drugs
The following questions refer to **prescribed** drug therapy as part of the preparative regimen. Do not report the dose that was actually given. If the recipient has comprehensive report forms due, the actual dose given will be reported on the baseline form (Form 2000). **Do not include drugs that are intended to offset the side effects of the chemotherapy** (e.g., corticosteroids for nausea, MESNA for hemorrhagic cystitis, etc.).

The form lists each drug by the generic name. The form also lists some drugs by broad categories, with specific drugs listed individually. For example, *Anthracycline* is listed as the broad drug category, followed by the specific drugs of *daunorubicin*, *doxorubicin*, and *idarubicin*. The following website provides the trade names under which generic drugs are manufactured: http://www.rxlist.com/script/main/hp.asp.

Questions 43-111: Drugs
Report the **total dose** of each drug as **prescribed** in the preparative regimen section of the HSCT protocol. **Do not report the prescribed daily dose.** Drug doses must be reported in whole numbers. If the total dose includes a decimal, round to the nearest whole number. For paper submission, do not modify the number of boxes or include decimal values.

Report the dose units as either "mg/m^2" or "mg/kg." If the total prescribed dose is reported a unit other than mg/m^2 or mg/kg, convert the dose to the appropriate unit. See the example below, or consult with a transplant pharmacist for the appropriate conversion. If drug doses cannot be converted into either mg/m^2 or

g/kg, leave the unit field blank and attach a copy of the source document to the Pre-TED using the Log of Appended Document (Form 2800).

Example: Calculating Drug Doses

Drug doses are calculated either by recipient weight or recipient body surface area (BSA) in m^2. The HSCT protocol will specify "x mg/m^2" or "x mg/kg" and the total number of doses to be administered.

To calculate the total dose administered: multiply "mg of drug per dose" x "total number of doses." If the dose was prescribed in grams (gm) rather than milligrams (mg), multiply the total dose in gm by 1,000 to convert to mg.

For example, if the protocol requires Cyclophosphamide, 60 mg/kg x 2 days (i.e., 2 doses), the "total prescribed dose" should be reported as "120 mg/kg."

The "other, specify" category should only be used if the drug is not one of the listed options. If more than one "other" drug is prescribed, list the name of the drugs in the space provided **and** attach a copy of the source document to the Pre-TED using the Log of Appended Document (Form 2800).

If the Pre-TED is being completed for a subsequent HSCT, do not report therapy that was given to treat the recipient's disease (between the previous and current planned HSCTs) in the preparative regimen section.

If either the drug or the prescribed dose given for the preparative regimen changes after the Pre-TED is submitted, do not correct the Pre-TED. If the recipient is assigned to the comprehensive Report Forms by the form selection algorithm, the actual dose received will be reported on the Baseline Form (Form 2000). If the recipient is assigned to TED Forms by the form selection algorithm, the actual dose given will not be reported.

Question 112: Is the intent of the preparative regimen myeloablative (allo only)?

The purpose of a myeloablative HSCT is to destroy malignant cells using high-dose chemotherapy and/or radiation therapy. A myeloablative regimen may also be used for recipients with a non-malignant disease requiring a stem cell transplant for marrow reconstitution (i.e., immunodeficiencies), or to produce a complete donor chimerism.

In contrast, a non-myeloablative (**NST**) or reduced-intensity (**RIC**) preparative regimen generally uses lower doses of chemotherapy and/or radiation therapy to prevent graft rejection and suppress the recipient's hematopoietic immune system, but not eliminate it completely. A NST relies on the immune cells of the donor to destroy the disease (called graft versus tumor, or GVT), and typically produces a mixed chimerism. NST is a common treatment option for older

recipients, and recipients with other health problems, as the lower chemotherapy and/or radiation doses are easier for the recipient to tolerate.

Currently, there are no published definitions of the difference between NST and RIC preparative regimens. However, in general, an RIC includes any regimen not meeting the criteria for either myeloablative or NST regimens.

Centers must attribute the intent of the regimen based on the standards at their center. Generally speaking, the attribution should be based on protocol, or the opinion of the physician overseeing the care of the recipient at your center.

If the intent of the preparative regimen is myeloablative (produce marrow ablation or pancytopenia), check "yes" and continue with question 119.

If the preparative regimen is intended to be NST or RIC, check "no" and continue with question 113.

NOTE: Questions 113-118
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 113-118: Reason for NST/RIC
Indicate the reason a non-myeloablative or reduced-intensity preparative regimen was prescribed.

Co-morbid Conditions

Questions 119-140 are optional for non-US centers.

Question 119: Is there a history of mechanical ventilation?
A history of mechanical ventilation may impact the recipient's pulmonary function post-HSCT. Mechanical ventilation is any assisted ventilation on behalf of the recipient. Mechanical ventilation can occur as both an endotracheal tube and ventilator, or as a BIPAP machine with a tight fitting mask in continuous use. The one exception to BIPAP is a CPAP used for sleep apnea, which generally involves overnight use only for patients with documented sleep apnea. Therefore, **do not** report a CPAP used for sleep apnea, as it does not have the same implications as other forms of mechanical ventilation.

Indications for mechanical ventilation include but are not limited to the following:

- Apnea with respiratory arrest (excludes sleep apnea)
- Acute lung injury
- Vital capacity <15 mL/kg
- Chronic obstructive pulmonary disease (COPD)
- Clinical deterioration
- Respiratory muscle fatigue
- Obtundation or coma
- Hypotension
- Tachypnea or bradypnea

If the recipient was placed on mechanical ventilation at any time prior to this HSCT event (excluding mechanical ventilation during surgery) check “yes.” If the recipient does not have a history of mechanical ventilation, check “no.”

Question 120: Is there a history of proven invasive fungal infection?
Fungal infections play a major role in the clinical outcome of transplant recipients. For the purposes of this manual, the term “proven” is defined as a pathologic specimen or culture that yields a positive result. For example, a chest x-ray that reveals a positive node **is not** considered a “proven” diagnosis of aspergillus. A biopsy of a specimen with a positive culture for aspergillus **is** a proven diagnosis.

If the recipient has a history of **proven** invasive fungal infection at any time prior to this HSCT event, check “yes.” For both primary and subsequent HSCT, report any documented invasive fungal infections in the recipient’s medical history.

Examples of proven invasive fungal infections include, but are not limited to the following: invasive aspergillosis, zygomycosis and other molds, invasive candidiasis, cryptococcosis, endemic mycosis, other yeasts, and pneumocytosis.

Non-invasive fungal infections such as thrush and nail fungus should not be reported.

For assistance with reporting fungal infections, consult with a transplant physician.

NOTE: Questions 121-140

Prior to answering question 121, review the list of co-existing disease(s) and/or organ impairments listed under questions 122-140.

Report "yes" to question 121 if the recipient has a documented **history** and/or **current** diagnosis of any of the following:

Documented Medical History	Question Number
Arrhythmia	122
Cardiac	123
Cerebrovascular disease	124
Heart valve disease	126
Inflammatory bowel disease	130
Rheumatologic	137
Solid tumor, prior	138
Current diagnosis at the time of pre-HSCT evaluation	**Question Number**
Diabetes	125
Hepatic, mild	127
Hepatic, moderate/severe	128
Infection	129
Obesity	131
Peptic ulcer	132
Psychiatric disturbance	133
Pulmonary, moderate	134
Pulmonary, severe	135
Renal, moderate/severe	136

Question 121: Were there *clinically significant* co-existing disease or organ impairment at the time of patient assessment prior to preparative regimen?
If the recipient has a documented history of clinically significant co-existing disease(s) or organ impairment(s), check "yes." The intent of this question is to identify serious pre-existing conditions that may have an affect on the outcome of the HSCT. For the purposes of this manual, the term "clinically significant" refers to conditions that are being treated at the time of pre-HSCT evaluation, or have affected the recipient's medical history and may cause complications post-HSCT. Conditions listed in the recipient's medical history that have been resolved (e.g., appendectomy), and/or that would not pose a concern during or after the HSCT should not be reported.

Additionally, for the purposes of this manual, the term "at the time of patient assessment" is defined as the pre-HSCT evaluation period, prior to the start of the preparative regimen. If the recipient does not have a documented history of clinically significant disease(s) or organ impairment(s), check "no." If the HSCT is allogeneic continue with question 141. If the HSCT is autologous continue with question 159.

Questions 122-140: Co-existing diseases or organ impairments
For each listed co-existing disease or organ impairment, check "yes," "no," or "not done."

The "other, specify" category should be used to report co-morbid conditions that are of similar clinical concern as the other listed options. For example, if a recipient has a current or prior history of malignancy other than the disease for which the HSCT is being performed, report this malignancy in the "other, specify" field. This would include diseases such as a prior leukemia or lymphoma. Any history of a malignant solid tumor should be reported as "solid tumor, prior." For assistance with reporting co-morbid conditions, consult with a transplant physician.

The physician performing the recipient's pre-HSCT evaluation may use the HCT Co-Morbidity Index (HCT-CI) to document co-morbid conditions (see appendix M).

GVHD Prophylaxis (allogeneic only)

NOTE: Questions 142-158
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 141-158: Was GVHD prophylaxis planned/given?
Following an allogeneic HSCT, specific immunosuppressive therapy may be administered to prevent GVHD or to immunosuppress the host marrow, thereby promoting engraftment of the donor stem cells. Most transplant centers have specific GVHD prophylaxis protocols and graft rejection protocols. Any **planned** agent a recipient is scheduled to receive as a result of these protocols should be included in this section.

The prophylactic drug options listed on the form are intended to be **systemic or oral** administration. If the recipient received one of the listed drugs in a topical form, report the drug in the "other, specify" category.

Do not report T-cell depletion of the graft source or drugs administered after the onset of GVHD.

The Pre-TED form lists the generic chemotherapy drug names. The following website provides the trade names under which generic drugs are manufactured: http://www.rxlist.com/script/main/hp.asp

If GVHD prophylaxis is used for a syngeneic (monozygotic or identical twin) or autologous HSCT, fax or e-mail an explanation to your center's CIBMTR liaison, and request it be scanned as part of the form documentation.

Post-HSCT Disease Therapy Planned as of Day 0

Question 159: Is this HSCT part of a planned multiple (sequential) graft/HSCT protocol?
If, at the time of the current HSCT, a second (tandem transplant) or subsequent HSCT is planned according to the protocol, check "yes" even if the recipient does not receive the planned second HSCT. The word "planned" **should not** be interpreted as: *if the recipient relapses, then the "plan" is to perform a subsequent HSCT*.

NOTE: Questions 161-170
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 161-170 are optional for non-US centers.

Questions 160-170: Is additional post-HSCT therapy planned?
If additional post-HSCT therapy is planned according to the protocol or standard of care, check "yes" even if the recipient does not receive the planned therapy. The word "planned" **should not** be interpreted as: *if the recipient relapses, then the "plan" is to treat with additional therapy.*

Other Toxicity Modifying Regimen

Questions 171-172 are optional for non-US centers.

Question 171: Was KGF (palifermin, Kepivance) started or is there a plan to use it?
Check "yes" if KGF was started or planned. Check "no" if KGF was not started or planned.

Check "masked trial" if the recipient is part of a KGF study where the agent the recipient received is not known (e.g., placebo, drug, or other agent). Use the error correction process to update the data field once the trial is over and the agent the recipient was given is known.

Question 172: Was FGF (velafermin) started or is there a plan to use it?
Check "yes" if FGF was started or planned. Check "no" if FGF was not started or planned.

Check "masked trial" if the recipient is part of a FGF study where the agent the recipient received is not known (e.g., placebo, drug, or other agent). Use the

error correction process to update the data field once the trial is over and the agent the recipient was given is known.

Pre-TED Disease Classification Sheet

NOTE: Disease Classification Sheet

The newest version of the TED forms uses the World Health Organization (**WHO**) disease classifications. Each Disease Classification Sheet contains all of the established WHO disease types and subtypes. The "other, specify" category should **only** be used if the recipient's disease is not one of the listed options. For more information regarding disease classification, consult a transplant physician, contact your center's CIBMTR liaison, or visit the WHO website at: http://www.who.int/classifications/icd/en/.

Several of the Disease Classification Sheets ask for ***"Status at Transplantation."*** Although there are many interpretations of disease response criteria**, when reporting data to the CIBMTR, use the guidelines in this manual to determine disease status**. Citations of resources used to define disease responses are included where applicable.

If the recipient's status is unclear, consult with the transplant physician for further information or contact your center's CIBMTR liaison.

NOTE: Malignant vs. Non-malignant

Malignant diseases involve cells dividing without control, which can spread to other parts of the body through blood and lymph systems. These diseases are usually characterized by unlimited, aggressive growth; invasion of surrounding tissues; and metastasis.

Non-malignant diseases involve cell overgrowth, but lack the malignant properties of cancer.

The diseases listed in the following section are **malignant**.

Question 173: Indicate the primary disease for which the HSCT was performed

Using the appropriate Disease Classification Sheet, select the detailed disease classification within the broad disease group for which this HSCT was performed.

If the indication for HSCT is due to a combination of diseases or a transformation of one disease to another, multiple Disease Classification Sheets may be required. For examples of common disease combinations and transformations, see tables 1 and 2.

Helpful Hint:
The CIBMTR database disease codes are represented in parentheses after the disease subtype on the Disease Classification Sheet, and can be helpful in mapping diagnosis, e.g., Myeloid Sarcoma (280).

Acute Leukemias

Acute Myelogenous Leukemia (AML) or Acute Nonlymphocytic Leukemia (ANLL)

Question 174: Select most specific WHO classification for AML
Indicate the disease classification at diagnosis; the older FAB classifications are shown in brackets, e.g., {M0}.

Question 175: Did AML transform from MDS or MPS?
AML often evolves from MDS or MPS. This transformation is typically distinguished by the percentage of blasts in the bone marrow. AML that transforms from MDS or MPS has a lower survival prognosis because of the association with unfavorable cytogenetic abnormalities.

If AML transformed from MDS or MPS, check "yes" and complete **both the AML and MDS/MPS** Disease Classification Sheets.

NOTE: Questions 177-179
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Question 176: Was AML therapy related?
Agents used to treat other diseases can damage the marrow and lead to a secondary malignancy, such as AML. If the diagnosis of AML is therapy related, check "yes" and continue with question 177. If the diagnosis of AML is not therapy related, check "no" and continue with question 180.

Questions 177-179: AML, therapy related
Indicate the therapy associated with the diagnosis of AML.

Question 180: Was imatinib mesylate given for pre-transplant therapy anytime prior to start of preparative regimen?
Imatinib mesylate is also known as Gleevec, Glivec, STI-571, or CGP57148B.

Questions 181-185: Status at Transplantation
Indicate the disease status of AML immediately prior to the start of the preparative regimen.

Disease Status	Definition
Never Treated	The recipient was diagnosed with acute leukemia and never treated. For example, this disease status may be appropriate if MDS was initially diagnosed and treated, the MDS then transformed into AML, and a decision was made to proceed immediately to transplant instead of treating the AML with therapy.
Primary Induction Failure (PIF)	The recipient was treated for acute leukemia, **but never achieved complete remission (CR)** with any therapy. PIF is not limited to the number of treatments used unsuccessfully. This status only applies to recipients who have **never** been in CR.
Complete Remission (CR)*	A treatment response where **all** of the following criteria are met for at least four weeks:** • < 5% blasts in the bone marrow • Normal maturation of all cellular components in the bone marrow • No blasts with Auer rods (AML only) • No extramedullary disease (e.g., central nervous system or soft tissue involvement) • ANC of > 1,000/µL • Platelets ≥ 100,000/µL • Transfusion independent **In some cases, there may not be a four-week interval between the completion of treatment for disease and the disease assessment immediately prior to the HSCT. If this is the case, CR should still be reported as the status at transplantation. Although this is an exception to the general condition that CR is "durable" beyond four weeks, the status of CR represents the "best assessment" prior to HSCT. **The pre-HSCT disease status should not be changed based on early relapse or disease assessment post-HSCT.** Report that the recipient is in CR at the time of transplant no matter how many courses of therapy it may have taken to achieve that CR. Include recipients with persistent cytogenetic abnormality who otherwise meet all the criteria of CR. The cytogenetic abnormality should be reported in the appropriate section (see question 182).

Do not include recipients with extramedullary disease. They should be considered to have persistent disease, or to be in relapse.

NOTE: Recipients with MDS that transformed to AML
If the recipient has residual MDS following treatment for AML, report the AML disease status as either PIF or relapse (i.e., the recipient cannot be in an AML CR if there is evidence of MDS at the time of assessment).

Questions 182-184: For hematologic CR
Hematologic CR includes all the criteria listed for CR above.

For recipients who achieve a hematologic CR, indicate in questions 182-183 if the response also qualified as a cytogenetic or molecular remission.

Question 182: Cytogenetic remission
Cytogenetic assessment involves testing blood or bone marrow for the presence of a known cytogenetic abnormality that reflects the recipient's disease. FISH is categorized with cytogenetics. Although often used for finding specific features in DNA, FISH is not as sensitive as molecular methods, even though the markers identified may be the same.

Cytogenetic remission is a treatment response where **all** of the following criteria are met:

- The karyotype reverts to normal
- There are no clonal chromosomal abnormalities detected in the blood and/or marrow

Question 183: Molecular remission
Molecular assessment involves determining whether a molecular marker for the disease exists in the blood or bone marrow. Molecular assessment is the most sensitive method of detection, and can indicate known genetic abnormalities. RFLP testing (with PCR amplification) is an example of a molecular test method.

Molecular remission is a treatment response in which no minimal residual disease in the blood and/or marrow can be detected by molecular methods (e.g., PCR).

	Question 184: Number Indicate the number of this hematologic CR.
Relapse	Recurrence of disease after CR. Relapse is defined as: • > 5% blasts in the marrow • Extramedullary disease • Reappearance of cytogenetic abnormalities and/or molecular markers associated with the diagnosis that, in the judgment of a physician, are at a level representing relapse **Question 185: Number** Indicate the number of this relapse using the following guidelines: • **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse **Do not include a partial response (PR) when calculating the number of relapses.** Recipients who achieve a PR to treatment should be reported as either PIF (if never in CR previously) or relapse. PR in AML is generally of short duration and unlikely to predict clinical benefit.

*Sources of disease response definitions:
1) www.uptodate.com
2) www.cancer.gov/help
3) www.jco.ascopubs.org Cheson vol. 21 number 24 pp4642-4649

Acute Lymphoblastic Leukemia (ALL)

Question 186: Specify (disease classification)

Indicate the disease classification at diagnosis; the older FAB classifications are **shown** in brackets, e.g., {L2}.

The current WHO disease classification for ALL is divided between precursor B-cell and precursor T-cell. If cytogenetic abnormalities present at diagnosis are among the other options listed on the Pre-TED form, check the sub-type rather than precursor B-cell ALL option.

Question 187: Was imatinib mesylate given for pre-transplant therapy anytime prior to start of prep regimen?
Imatinib mesylate is also known as Gleevec, Glivec, STI-571, or CGP57148B.

Questions 188-192: Status at Transplantation
Indicate the disease status of ALL immediately prior to the start of the preparative regimen.

Disease Status	Definition
Never Treated	The recipient was diagnosed with acute leukemia and never treated.
Primary Induction Failure (PIF)	The recipient was treated for acute leukemia, **but never achieved CR** with any therapy. PIF is not limited to the number of treatments used unsuccessfully. This status only applies to recipients who have **never** been in CR.
Complete Remission (CR)*	A treatment response where **all** of the following criteria are met for at least four weeks:** • < 5% blasts in the bone marrow • Normal maturation of all cellular components in the bone marrow • No extramedullary disease (e.g., central nervous system or soft tissue involvement) • ANC of > 1,000/µL • Platelets ≥ 100,000/µL • Transfusion independent **In some cases, there may not be a four-week interval between the completion of treatment for disease and the disease assessment immediately prior to the HSCT. If this is the case, CR should still be reported as the status at transplantation. Although this is an exception to the general condition that CR is "durable" beyond four weeks, the status of CR represents the "best assessment" prior to HSCT. **The pre-HSCT disease status should not be changed based on early relapse or disease assessment post-HSCT.** Report that the recipient is in CR at the time of transplant no matter how many courses of therapy it may have taken to achieve that CR. Include recipients with persistent cytogenetic abnormality who otherwise meet all the criteria of CR. The cytogenetic abnormality should be reported in the appropriate section (see question 182). Do not include recipients with extramedullary disease. They should be considered to have persistent disease, or to be in relapse.

	Questions 189-191: For hematologic CR Hematologic CR includes all the criteria listed for CR above. For recipients who achieve a hematologic CR, indicate in questions 189-190 if the response also qualified as a cytogenetic or molecular remission. **Question 189: Cytogenetic remission** Cytogenetic assessment involves testing blood or bone marrow for the presence of a known cytogenetic abnormality that reflects the recipient's disease. FISH is categorized with cytogenetics. Although often used for finding specific features in DNA, FISH is not as sensitive as molecular methods, even though the markers identified may be the same. Cytogenetic remission is a treatment response where **all** of the following criteria are met: • The karyotype reverts to normal • There are no clonal chromosomal abnormalities detected in the blood and/or marrow **Question 190: Molecular remission** Molecular assessment involves determining whether a molecular marker for the disease exists in the blood or bone marrow. Molecular assessment is the most sensitive method of detection, and can indicate known genetic abnormalities. RFLP testing (with PCR amplification) is an example of a molecular test method. Molecular remission is a treatment response in which no minimal residual disease in the blood and/or marrow can be detected by molecular methods (e.g., PCR). **Question 191: Number** Indicate the number of this hematologic CR.
Relapse	Recurrence of disease after CR. Relapse is defined as: • > 5% blasts in the marrow • Extramedullary disease • Reappearance of cytogenetic abnormalities and/or molecular markers associated with the diagnosis that, in the judgment of a physician, are at a level representing relapse.

	Question 192: Number Indicate the number of this relapse using the following guidelines: • **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse **Do not include a partial response (PR) when calculating the number of relapses.** Recipients who achieve a PR to treatment should be reported as either PIF (if never in CR previously) or relapse.

*Sources of disease response definitions:
1) www.uptodate.com
2) www.cancer.gov/help
3) www.jco.ascopubs.org Cheson vol. 21 number 24 pp4642-4649

Other Acute Leukemias (Acute leukemias of ambiguous lineage)

Questions 193-194: Specify (disease classification)
Indicate the disease classification at diagnosis. The "other, specify" category should only be used if the recipient's disease is not one of the listed options.

- Acute undifferentiated leukemia is a type of AML characterized by immature predominating cells that cannot be classified.
- Biphenotypic, bilineage, or hybrid leukemias have characteristics representative of both myeloid and lymphoid lineages.
- Mast cell leukemia is characterized by an increased number of tissue mast cells in the peripheral blood.

Question 195: Was imatinib mesylate given for pre-transplant therapy anytime prior to start of prep regimen?
Imatinib mesylate is also known as Gleevec, Glivec, STI-571, or CGP57148B.

Questions 196-199: Status at Transplantation
Indicate the disease status immediately prior to the start of the preparative regimen.

Disease Status	Definition
Never Treated	The recipient was diagnosed with acute leukemia and never treated.
Primary Induction Failure (PIF)	The recipient was treated for acute leukemia, **but never achieved CR** with any therapy. PIF is not limited to the number of treatments used unsuccessfully. This status only

	applies to recipients who have **never** been in CR.
Complete Remission (CR)*	A treatment response where **all** of the following criteria are met for at least four weeks:** • < 5% blasts in the bone marrow • Normal maturation of all cellular components in the bone marrow • No extramedullary disease (e.g., central nervous system or soft tissue involvement) • ANC of > 1,000/µL • Platelets ≥ 100,000/µL • Transfusion independent **In some cases, there may not be a four-week interval between the completion of treatment for disease and the disease assessment immediately prior to the HSCT. If this is the case, CR should still be reported as the status at transplantation. Although this is an exception to the general condition that CR is "durable" beyond four weeks, the status of CR represents the "best assessment" prior to HSCT. **The pre-HSCT disease status should not be changed based on early relapse or disease assessment post-HSCT.** Report that the recipient is in CR at the time of transplant no matter how many courses of therapy it may have taken to achieve that CR. Include recipients with persistent cytogenetic abnormality who otherwise meet all the criteria of CR. The cytogenetic abnormality should be reported in the appropriate section (see question 182). Do not include recipients with extramedullary disease. They should be considered to have persistent disease, or to be in relapse. **Questions 197-198: For hematologic CR** Hematologic CR includes all the criteria listed for CR above. For recipients who achieve a hematologic CR, indicate in questions 197-198 if the response also qualified as a cytogenetic or molecular remission. **Question 197: Cytogenetic remission** Cytogenetic assessment involves testing blood or bone marrow for the presence of a known cytogenetic abnormality

	that reflects the recipient's disease. FISH is categorized with cytogenetics. Although often used for finding specific features in DNA, FISH is not as sensitive as molecular methods, even though the markers identified may be the same. Cytogenetic remission is a treatment response where **all** of the following criteria are met: • The karyotype reverts to normal • There are no clonal chromosomal abnormalities detected in the blood and/or marrow **Question 198: Molecular remission** Molecular assessment involves determining whether a molecular marker for the disease exists in the blood or bone marrow. Molecular assessment is the most sensitive method of detection, and can indicate known genetic abnormalities. RFLP testing (with PCR amplification) is an example of a molecular test method. Molecular remission is a treatment response in which no minimal residual disease in the blood and/or marrow can be detected by molecular methods (e.g., PCR). **Question 199: Number** Indicate the number of this hematologic CR.
Relapse	Recurrence of disease after CR. Relapse is defined as: • > 5% blasts in the marrow • Extramedullary disease • Reappearance of cytogenetic abnormalities and/or molecular markers associated with the diagnosis that, in the judgment of a physician, are at a level representing relapse. **Question 200: Number** Indicate the number of this relapse using the following guidelines: • **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse **Do not include a partial response (PR) when calculating the number of relapses.** Recipients who achieve a PR to treatment should be reported as either PIF (if never in CR

	previously) or relapse.

*Sources of disease response definitions:
1) www.uptodate.com
2) www.cancer.gov/help
3) www.jco.ascopubs.org Cheson vol. 21 number 24 pp4642-4649

Chronic Myelogenous Leukemia (CML)

Question 201: Philadelphia chromosome+, Ph+, t(9;22)(q34;q11), or variant OR bcr/abl+
Indicate the disease classification at diagnosis. The WHO disease classification requirements state that a diagnosis of CML must include the following: Philadelphia chromosome, complex variation and/or variant form, or bcr/abl gene rearrangement (see table 3 below). Evidence of these chromosomal abnormalities may be found at any time between diagnosis and the start of the preparative regimen.

Report the combination that best describes the chromosomal abnormalities. If none of the listed abnormalities are identified, but CML is suspected, submit the Disease Classification sheet for "Other Leukemias" and report "Atypical chronic myeloid leukemia" as the detailed disease classification (questions 262-264).

Table 3. CML Classification Requirements

Term	Definition
Philadelphia chromosome t(9;22)(q34;q11)	An exchange of genetic material between region q34 of chromosome 9 and region q11 of chromosome 22.
Complex variation	Translocation of three or more chromosomes, one of which must be chromosome 22 [e.g., t(3; 9; 22)].
Variant form	Any translocation involving 22q11, or 22.q11.2 in which CML is the suspected diagnosis [e.g., t(13; 22)(p3;q11)].

NOTE: Questions 202-210
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Question 202: Did recipient receive treatment prior to this HSCT?
If the recipient received therapy to treat CML prior to this HSCT, check "yes" and continue with question 203. If the recipient did **not** receive therapy to treat CML, check "no" and continue with question 211.

Questions 203-210: CML treatment
Indicate the therapy the recipient received to treat CML prior to this HSCT. If the recipient's treatment consisted of a combination of chemotherapeutic agents, check the "combination chemotherapy" box **and** each drug included in the combination from the list provided. The "other, specify" category should only be used if the drug is not one of the listed options. For example, if the recipient received a combination of interferon and cytarabine, check all of the following: "combination chemotherapy," "interferon," and "other, specify: cytarabine."

Questions 211-216: Status at Transplantation – Phase
Indicate the recipient's disease phase immediately prior to the start of the preparative regimen.

Disease Response: Phase	Definition

Hematologic CR	A treatment response where **all** of the following criteria are met:
	• White blood count is less than 10 x 10^9/L, without immature granulocytes and with less than 5% basophils
	• Platelet count less than 450 x 10^9/L
	• Non-palpable spleen
	
	NOTE:
	Question 212 is optional for non-U.S. transplant centers.
	
	Question 212: CML disease status before treatment that achieved this CR
	From the options listed below, indicate the disease status of CML immediately prior to the treatment that achieved this complete remission.
	• **Chronic Phase:** Characterized by relatively few blasts (<10%) present in the blood and bone marrow. Symptoms are often not present. The chronic phase may last several months to years depending on the individual recipient and the treatment received.
	
	• **Accelerated Phase: One or more** of the following must be present (WHO definition):
	  • 10-19% blasts in blood or marrow
	  • ≥ 20% basophils in peripheral blood
	  • Clonal cytogenetic abnormalities in addition to the single Philadelphia chromosome (clonal evolution)

- Increasing spleen size, unresponsive to therapy
- Increasing WBC, unresponsive to therapy
- Thrombocytopenia (platelets < 100,000) unrelated to therapy
- Thrombocytosis (platelets > 1,000,000) unresponsive to therapy

- **Blast Phase:** Characterized by ≥ 20% blasts (formerly ≥ 30%) in the peripheral blood or bone marrow. Extramedullary blastic infiltrates (i.e., myeloid sarcoma, granulocytic sarcoma, or chloroma) also qualifies as blast phase. The red cell, platelet, and neutrophil counts may decrease, and episodes of infection and bleeding may result. Symptoms such as fatigue, shortness of breath, abdominal pain, bone pain, and spleen enlargement may occur. Blast crisis is similar to acute leukemia in its signs and its effects on the recipient, and can involve lymphoid or myeloid lineages (so-called lymphoid blast crisis or myeloid blast crisis).

Questions 213-214: Indicate if the response also qualified as a cytogenetic or molecular remission.

Question 213: Cytogenetic remission
Cytogenetic response is determined by either conventional or FISH cytogenetics for the Philadelphia chromosome [t(9;22)].

Cytogenetic responses are divided into several categories:

- Complete: Ph+ 0%
- Partial: Ph+ 1%-35%
- Minor: Ph+ 36%-65%
- Minimal: Ph+ 66%-95%
- None: Ph+ >95%

For purposes of reporting disease status, a “major” cytogenetic response includes any partial or complete response (Ph+ < 35%).

Question 214: Molecular remission
PCR testing reveals no molecular evidence of the BCR-ABL fusion gene in the blood (e.g., BCR-ABL transcript is non-detectable and non-quantifiable in an assay that has at least

	4-5 log range of detection).
Chronic Phase	Characterized by relatively few blasts (<10%) present in the blood and bone marrow. Symptoms are often not present. The chronic phase may last several months to years depending on the individual recipient and the treatment received. **Questions 215 -216:** Indicate if the response also qualified as a cytogenetic or molecular remission. **Question 215: Cytogenetic remission** Cytogenetic response is determined by either conventional or FISH cytogenetics for the Ph chromosome (t(9;22)). Cytogenetic responses are divided into several categories: • Complete: Ph+ 0% • Partial: Ph+ 1%-35% • Minor: Ph+ 36%-65% • Minimal: Ph+ 66%-95% • None: Ph+ >95% For purposes of reporting disease status, a "major" cytogenetic response includes any partial or complete response (Ph+ < 35%) **Question 216: Molecular remission** PCR testing reveals no molecular evidence of the BCR-ABL fusion gene in the blood (e.g., BCR-ABL transcript is non-detectable and non-quantifiable in an assay that has at least 4-5 log range of detection).
Accelerated Phase*	**One or more** of the following must be present: • 10-19% blasts in blood or marrow • ≥ 20% basophils in peripheral blood • Clonal marrow cytogenetic abnormalities in addition to the single Philadelphia chromosome (clonal evolution) • Increasing spleen size, unresponsive to therapy • Increasing WBC, unresponsive to therapy • Thrombocytopenia (platelets < 100,000) unrelated to therapy • Thrombocytosis (platelets > 1,000,000) unresponsive to therapy
Blast Crisis	Characterized by ≥ 20% blasts (formerly ≥ 30%) in the peripheral blood or bone marrow. Having extramedullary blastic infiltrates (i.e., myeloid sarcoma, granulocytic sarcoma, or chloroma) also qualifies as blast phase. The red

	cell, platelet, and neutrophil counts may decrease, and episodes of infection and bleeding may result. Symptoms such as fatigue, shortness of breath, abdominal pain, bone pain, and spleen enlargement may occur. Blast crisis is similar to acute leukemia in its signs and its effects on the recipient, and can involve lymphoid or myeloid lineages (so-called lymphoid blast crisis or myeloid blast crisis).

*Source of disease response definition: WHO definition as listed on the CIBMTR Pre-HSCT CML Disease Form 2012

Question 217: Status at Transplantation – Number
Indicate the number of the disease phase reported in question 211.

Myelodysplastic or Myeloproliferative Diseases

NOTE: MDS
If the recipient is being transplanted for AML that has transformed from MDS, the primary disease for HSCT must be reported as AML. Disease Classification Sheets must be completed for both AML and MDS.

MDS or Myeloproliferative Diseases

NOTE: Questions 218-250
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check the most specific WHO classification.

Questions 218-250: Classification
MDS and MPS contain a range of disorders that may transform from one subtype to another during the course of the disease. Therefore, indicate the recipient's disease classification both at diagnosis and immediately prior to the start of the preparative regimen.

If MDS or MPS transformed to AML, continue to question 251, and complete both the MDS and the AML Disease Classification Sheets.

Question 251: If AML, date of MDS diagnosis
If MDS transformed into AML between initial diagnosis and the start of the preparative regimen, enter the MDS diagnosis date. (Report the AML diagnosis date in question 1.)

If the source documentation does not include the exact pathological diagnosis date of the MDS/MPS, enter the AML diagnosis date in this field.

NOTE:
Question 252 should only be answered if the recipient is being transplanted for a chronic myeloproliferative disease (**MPS**).

Question 252: Was Janus kinase 2 (JAK2) gene mutation positive?
The JAK2 pathway is responsible for activation of proteins that are involved in the development and function of the immune system, and that also play a role in maintaining immune tolerance and tumor surveillance. JAK2 disruption has been associated with a variety of myeloproliferative disorders due to resulting immunosuppression and enhanced survival of tumors.

Questions 253: Was MDS/MPS therapy related?
Agents used to treat other diseases can damage the bone marrow and lead to MDS/MPS.

If the diagnosis of MDS/MPS is therapy related, check “yes” and continue with question 254.

If the diagnosis of MDS/MPS is not therapy related, check “no” and continue with question 257.

Questions 254-256: MDS, therapy related
Indicate the therapy associated with the diagnosis of MDS/MPS.

MDS/MPS/CMML

Questions 257-260: Status at Transplantation
Indicate the disease status of MDS/MPS/CMML immediately prior to the start of the preparative regimen.

Disease Status	Definition
Supportive care or treatment without chemotherapy	Examples of this status include but are not limited to: • Observation with periodic blood count tests (also known as “watch and wait”) • Blood transfusions and iron chelation therapy • Administration of erythropoietin (EPO) and other blood cell growth factors • Therapy with antithymocyte globulin (ATG) • Immune modulation agents including thalidomide and lenalidomide
Treated with chemotherapy*	Examples of this status include but are not limited to: • Low intensity chemotherapy including cytarabine, azacitidine (Vidaza®), and decitabine (Dacogen®)

- High intensity chemotherapy that may include aggressive antileukemic therapy such as a combination of cytarabine and idarubicin

Question 258: Status at Transplantation, specify
From the options listed below, indicate the recipient's disease status immediately prior to the start of the preparative regimen.

Complete Remission (CR): A treatment response where **all** of the following criteria are met and maintained for ≥ 4 weeks:

- Bone marrow evaluation:
  - < 5% myeloblasts with normal maturation of all cell lines
- Peripheral blood evaluation:
  - hemoglobin ≥ 11 g/dL untransfused and without erythropoietin support
  - ANC ≥ 1000/mm^3 without myeloid growth factor support
  - platelets ≥ 100 x 10^9/L without thrombopoietic support
  - 0% blasts

If the timeframe between achieving CR and the start date of the HSCT (i.e., day 0) is less than four weeks, and the recipient is believed to be in CR, report the status at transplantation as CR.
Important: if within four weeks following transplant the recipient's status is determined to **not be CR**, then an Error Correction Form must be submitted changing the pre-HSCT status.

Question 259: Number
Indicate the number of this CR.

Improvement, but no CR: A treatment response where **one or more** of the following criteria are met and maintained for ≥ 8 weeks without ongoing cytotoxic therapy:

- *Hematologic Improvement (HI)-E*
  - Hemoglobin increase of ≥ 1.5 g/dL untransfused
  - For RBC transfusions performed for Hgb ≤ 9.0, reduction in RBC units transfused in 8 weeks by ≥ 4 units compared to the pre-

	treatment transfusion number in the previous 8 weeks • *HI-P* – For pre-treatment platelet count of > 20 x 10^9/L/L, platelet absolute increase of ≥ 30 x 10^9/L/L – For pre-treatment platelet count of < 20 x 10^9/L/L, platelet absolute increase of ≥ 20 x 10^9/L /L and ≥ 100% from pre-treatment level • *HI-N* – Neutrophil count increase of ≥ 100% from pre-treatment level and an absolute increase of ≥ 500/mm^3 **NR – no response:** A treatment response that does not meet the criteria for the "improvement, but not CR" category, and no evidence of disease progression. **Progressive/Worse:** A treatment response where **one or more** of the following criteria are met in the absence of another explanation (e.g., infection, bleeding, ongoing chemotherapy, etc.): • ≥ 50% reduction from maximum response levels in granulocytes or platelets • Reduction in hemoglobin by ≥ 1.5 g/dL • Transfusion dependence
Relapsed after CR*	A treatment response where **one or more** or the following criteria are met: • Return to pre-treatment bone marrow blast percentage • Decrease of ≥ 50% from maximum response levels in granulocytes or platelets • Transfusion dependence or hemoglobin level ≥ 1.5g/dL lower than prior to therapy **Question 260: Number** Indicate the number of this relapse using the following guidelines: • **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse

	Do not include PRs when calculating the number of relapses.

*Source of disease response definition: CIBMTR Pre-HSCT MDS/MPS Disease Form 2014

JMML

Question 261: Status at Transplantation
Indicate the recipient's disease status of JMML immediately prior to the start of the preparative regimen.

Disease Status	Definition
Continued Complete Response (CCR)*	Recipient achieved CR and has remained in CR. Continued absence of all known disease after achieving CR following a previous line of therapy.
Complete Response (CR)*	Characterized by normalization of WBC and organomegaly.
Partial Response (PR)*	Less than or equal to a 50% reduction in WBC and/or organomegaly.
Minimal Response (MR)*	Requires **one or more** of the following: • Between 25% and 50% reduction in WBC and organomegaly • Partial response in WBC but no change in organomegaly • Partial response in organomegaly but no change in WBC
Stable Disease (SD)*	Less than or equal to a 25% reduction in WBC and/or organomegaly.
Progressive Disease (PD)*	Characterized by an increase in WBC and/or organomegaly.
Not Assessed*	No assessment of the recipient's disease has been done. This option should rarely be used.

*Source of disease response definition: CIBMTR Pre-HSCT JMML/JCML Disease Form 2015

Other Leukemias

Questions 262-263: Classification
Indicate the disease classification at diagnosis. The "other, specify" category should only be used if the recipient's disease is not one of the listed options.

Question 264: Status at Transplantation
Each disease classification has different criteria for disease status. Use the disease-specific criteria listed in the tables below to determine the recipient's disease status immediately prior to the start of the preparative regimen.

- **Atypical CML** is a chronic myeloproliferative disorder that is similar to chronic myelogenous leukemia (**CML**). The criteria for atypical CML include, but are not limited to, lack of Philadelphia chromosome and bcr/abl or PDGFR-beta rearrangements; 10%-20% immature granulocytes; significant granulocytic dysplasia; less than 2% basophils and less than 10% monocytes.

Disease Status	Definition
Never Treated	The recipient was diagnosed with atypical CML and never treated.
Complete Remission (CR)	**All** of the following criteria are met and maintained for ≥ 4 weeks: • Marrow with normal maturation of all cellular components • ≤ 5% blasts in the marrow • No signs or symptoms of the disease If the timeframe between achieving CR and the start date of the HSCT (i.e., day 0) is less than four weeks, and the recipient is believed to be in CR, report the status at transplantation as CR. Important: if within four weeks following transplant the recipient's status is determined to **not be CR**, then an Error Correction Form must be submitted to change the pre-HSCT status. Report that the recipient is in CR at the time of transplant no matter how many courses of therapy it may have taken to achieve that CR. Include recipients with persistent cytogenetic abnormality who otherwise meet all the criteria of CR. The cytogenetic abnormality should be reported in the appropriate section (see question 182). Do not include recipients with extramedullary disease. They should be considered to have persistent disease, or to be in relapse.
Nodular Partial Remission (nPR)	Not applicable.

Partial Remission (PR)	Not applicable.
No Response/Stable Disease (NR/SD)	The recipient was treated for acute leukemia, **but never achieved CR** with any therapy. PIF is not limited to the number of treatments used unsuccessfully. This status only applies to recipients who have **never** been in CR.
Progression	Not applicable.
Relapse (untreated)	Recurrence of disease after CR. Relapse is defined as: • > 5% blasts in the marrow • Extramedullary disease • Reappearance of cytogenetic abnormalities and/or molecular markers associated with the diagnosis at a level representing relapse as determined by a physician.

- **CLL** is known as either chronic lymphocyctic leukemia or chronic lymphoblastic leukemia, and is characterized by an increased number of lymphoblasts in the blood and bone marrow.

Disease Status	Definition
Never Treated	The recipient was diagnosed with leukemia and never treated.
Complete Remission (CR)*	Requires **all** the following: • No lymphadenopathy • No organomegaly • Neutrophils > 1.5 x 10^9/L • Platelets > 100 x 10^9/L • Hemoglobin 11g/dL • Lymphocytes < 4 x 10^9/L/L • Bone marrow < 30% lymphocytes • Absence of constitutional symptoms
Nodular Partial Remission (nPR)*	Complete response with persistent lymphoid nodules in bone marrow.
Partial Remission (PR)*	Requires **all** of the following: • 50% decrease in peripheral blood lymphocyte count from pretreatment value • 50% reduction in lymphadenopathy if present pretreatment • 50% reduction in liver and spleen size

	if enlarged pretreatment **AND one or more** of the following: • Neutrophils ≥ $2.5x10^9$/L or 50% above baseline • Platelets > $100x10^9$/L or 50% improvement over baseline • Hemoglobin > 11.0 g/dL or 50% improvement over baseline
No Response/Stable Disease (NR/SD)*	No change. Not complete response, partial response, or progressive disease.
Progression*	Requires **one or more** of the following: • ≥ 50% increase in the sum of the products of ≥ 2 lymph nodes (≥ 1 node must be ≥ 2 cm) or new nodes • ≥ 50% increase in liver or spleen size, or new hepatomegaly or splenomegaly • ≥ 50% increase in absolute lymphocyte count to ≥ 5 x 10^9/L • Transformation to a more aggressive histology
Relapse (untreated)	The re-appearance of disease after complete recovery. Relapse should be determined by one or more diagnostic tests.

*Source of disease response definition: CIBMTR Pre-HSCT CLL Disease Form 2013

- **Hairy cell leukemia** is characterized by the presence of abnormal B-lymphocytes in the bone marrow, peripheral blood, and spleen.

Disease Status	Definition
Never Treated	The recipient was diagnosed with hairy cell leukemia and never treated.
Complete Remission (CR)*	Disappearance of all evidence of disease. Requires **all** of the following: • Neutrophils ≥ 1.5 x 10^9 • Hemoglobin ≥ 12.0 g/dL • Platelets ≥ 100 x 10^9/L • Absence of hairy cells on peripheral blood smear • No palpable lymphadenopathy or hepatosplenomegaly
Nodular Partial Remission (nPR)	Not applicable

Partial Remission (PR)*	Requires **all** of the following: • ≥ 50% reduction in the absolute hairy cell count in the peripheral blood and the bone marrow • ≥ 50% improvement of all cytopenias • ≥ 50% reduction in abnormal lymphadenopathy or hepatosplenomegaly
No Response/Stable Disease (NR/SD)	Not applicable
Progression	Not applicable
Relapse (untreated)*	**Relapse after CR:** • Reappearance of hairy cells in the peripheral blood smear and/or bone marrow (regardless of the degree of infiltration) • Development of peripheral blood cytopenias • Splenomegaly **Relapse after PR:** • ≥ 50% increase of residual hairy cells in the marrow • Development of cytopenias • Splenomegaly insufficient to qualify as PR Or • Reappearance of hairy cells in the bone marrow of those patients classified as partial responders based on residual splenomegaly only

*Source of disease response definition:
http://bloodjournal.hematologylibrary.org/cgi/content/full/92/6/1918

- **PLL,** or prolymphocytic leukemia, is a type of CLL and is characterized by an increased presence of immature prolymphocytes in the bone marrow and peripheral blood.

Disease Status	Definition
Never Treated	The recipient was diagnosed with leukemia and never treated.
Complete Remission (CR)*	Requires **all** the following: • No lymphadenopathy • No organomegaly • Neutrophils > 1.5 x 10^9/L • Platelets > 100 x 10^9/L

	• Hemoglobin > 11g/dL • Lymphocytes < 4 x 10^9/L/L • Bone marrow < 30% lymphocytes • Absence of constitutional symptoms
Nodular Partial Remission (nPR)*	Complete response with persistent lymphoid nodules in bone marrow.
Partial Remission (PR)*	Requires **all** of the following: • 50% decrease in peripheral blood lymphocyte count from pretreatment value • 50% reduction in lymphadenopathy if present pretreatment • 50% reduction in liver and spleen size if enlarged pretreatment **AND one or more** of the following: • Neutrophils ≥ 2.5x10^9/L or 50% above baseline • Platelets > 100x10^9/L or 50% improvement over baseline • Hemoglobin > 11.0 g/dL or 50% improvement over baseline
No Response/Stable Disease (NR/SD)*	No change. Not complete response, partial response, or progressive disease.
Progression*	Requires **one or more** of the following: • ≥ 50% increase in the sum of the products of ≥ 2 lymph nodes (≥ 1 node must be ≥ 2 cm) or new nodes • ≥ 50% increase in liver or spleen size, or new hepatomegaly or splenomegaly • ≥ 50% increase in absolute lymphocyte count to ≥ 5 x 10^9/L • Transformation to a more aggressive histology
Relapse (untreated)	The re-appearance of disease after complete recovery. Relapse should be determined by one or more diagnostic tests.

*Source of disease response definition: CIBMTR Pre-HSCT CLL Disease Form 2013

- **Other:** This category should be used only if the recipient's disease does not fit one of the other leukemia options listed. To determine the disease status, use the criteria for the leukemia that most closely resembles the disease for which this form is being completed. For questions, contact your transplant center's CIBMTR liaison.

Lymphomas

NOTE: Waldenstrom Macroglobulinemia
On previous versions of the CIBMTR forms, Waldenstrom Macroglobulinemia was classified as a Plasma Cell Disorder. Per the WHO disease classifications, Waldenstrom Macroglobulinemia is now classified in the Non-Hodgkin Lymphoma section.

Hodgkin Lymphoma (**HL**) and Non-Hodgkin Lymphoma (**NHL**) are WHO disease classification subtypes of Lymphoma. HL and NHL often transform into other disease subtypes. NHL can transform into other NHL subtypes, or into HL subtypes, but HL will rarely transform into NHL. Additionally, HL and NHL can occur at the same time.

In order to complete the correct Disease Classification Sheet for a recipient who has a history of both HL and NHL, **it is important to determine which disease is active prior to the start of the preparative regimen**.

The following two scenarios are examples of the data reporting practice for recipients with a combination of HL and NHL.

Scenario 1: A recipient is being transplanted for active NHL, but has a history of HL that is in remission at the start of the preparative regimen. Report the active NHL on the Disease Classification Sheet for Lymphomas, and report HL as a prior malignancy in the “other, specify” field in the co-morbid condition section (questions 139-140).

Scenario 2: A recipient is being transplanted for both active NHL and active HL. Complete the Disease Classification Sheet for “Other” Disease (code 900). Do not complete the Disease Classification Sheet for Lymphomas.

Hodgkin Lymphoma

Question 265: Specify disease type
Indicate the disease classification at diagnosis.

Question 266: Status at Transplantation
Indicate the recipient’s disease status immediately prior to the start of the preparative regimen.

Disease Status	Definition
Never Treated	The recipient was diagnosed with lymphoma and never treated.
Primary Refractory (less than PR to initial therapy)/PIF res	The response of the lymphoma to treatment is less than in a partial response (PR). This status would also include recipients who achieved a prior PR (but never CR) but are not in either PR or relapse immediately prior to transplant.
Partial Response (PR)*	Reductions of ≥ 50% in greatest diameter of all sites of known disease and no new sites. **Question 267: Specify** Partial response may be represented as PR1, PR2, etc. There are differing interpretations of what the number after "PR" represents. To avoid confusion, distinguish the type of PR with the following: "without prior CR" and "with prior CR", as that is what is important in CIBMTR analysis.
CR Confirmed*	Complete disappearance of all known disease for ≥ 4 weeks. **Question 268: Number** Indicate the number of this CR. For the purposes of this manual, the term "confirmed" is defined as a laboratory and/or pathological radiographic determination. The term "unconfirmed" is defined as scan abnormalities of unknown significance that are not biopsied or otherwise evaluated.
CR Unconfirmed (CRU)*	Complete disappearance of all known disease for ≥ 4 weeks with the exception of persistent scan abnormalities of unknown significance. **Question 268: Number** Indicate the number of this CR. For the purposes of this manual, the term "confirmed" is defined as a laboratory and/or pathological radiographic determination. The term "unconfirmed" is defined as scan abnormalities of unknown significance that are not biopsied or otherwise evaluated.
Relapse (Rel)	Recurrence of disease after CR. This may involve an increase in size of known disease or new sites of disease. **Question 269: Number** Indicate the number of this relapse using the following guidelines:

	• **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse. • Do not include PRs when calculating the number of relapses. **Question 270: Sensitivity to Chemotherapy:*** Sensitivity is measured based on the **last chemotherapy given within the six months prior to HSCT**. Indicate the recipient's sensitivity to chemotherapy using the following guidelines: • Sensitive = ≥ 50% reduction in the bi-dimensional diameter of all disease sites with no new sites of disease (PIF sen, PR1, CR, CRU, REL sen) • Resistant = < 50% reduction in the diameter of all disease sites or development of new disease sites (PIF sen, REL res) • Untreated = No chemotherapy was given within the 6 months prior to the preparative regimen (disease untreated, REL unt) • Unknown (PIF unk, REL unk)

*Source of disease response definition: CIBMTR Pre-HSCT Lymphoma Disease Form 2018

Non-Hodgkin Lymphoma

Question 271: Specify disease type
Indicate the disease classification at diagnosis.

If Follicular NHL is reported, for paper form submission, indicate the grade at diagnosis. In the FormsNet™2 application, select the appropriate grade at diagnosis.

If Non-Hodgkin Lymphoma transforms from one subtype to another, report the most current subtype. Report the initial diagnosis date of the first subtype in question 1.

Question 272: Diffuse large B-cell lymphoma – If known, indicate subtype
If the recipient has a diagnosis of diffuse large B-cell lymphoma, indicate the subtype. If the subtype is unknown, write "unknown" on the paper form, or override the question with the "unknown" override option in FormsNet™2.

Question 273: Other B-cell lymphoma, specify

This category should be used only if the recipient's disease does not fit one of the other B-cell options listed.

Question 274: Other T/NK cell lymphoma, specify
This category should be used only if the recipient's disease does not fit one of the other T/NK cell options listed.

Question 275: Status at Transplantation
Indicate the recipient's disease status immediately prior to the start of the preparative regimen.

Disease Status	Definition
Never Treated	The recipient was diagnosed with lymphoma and never treated.
Primary Refractory (less than PR to initial therapy)/PIF res	The response of the lymphoma to treatment is less than in a partial response (PR). This status would also include recipients who achieved a prior PR (but never CR) but are not in either PR or relapse immediately prior to transplant.
Partial Response (PR)*	Reductions of ≥ 50% in greatest diameter of all sites of known disease and no new sites. **Question 276: Specify** Partial response may be represented as PR1, PR2, etc. There are differing interpretations of what the number after "PR" represents, and this can be confusing. What is important to CIBMTR data analysis is to distinguish the type of PR as either: "**without** prior CR" or "**with** prior CR."
CR Confirmed*	Complete disappearance of all known disease for greater than or equal to four weeks. **Question 277: Number** Indicate the number of this CR. For the purposes of this manual, the term "confirmed" is defined as a laboratory and/or pathological radiographic determination. The term "unconfirmed" is defined as scan abnormalities of unknown significance that are not biopsied or otherwise evaluated.
CR Unconfirmed (CRU)*	Complete disappearance of all known disease for ≥ 4 weeks with the exception of persistent scan abnormalities of unknown significance.* **Question 277: Number** Indicate the number of this CR.

	For the purposes of this manual, the term "confirmed" is defined as a laboratory and/or pathological radiographic determination. The term "unconfirmed" is defined as scan abnormalities of unknown significance that are not biopsied or otherwise evaluated.
Relapse (Rel)	Recurrence of disease after CR. This may involve an increase in size of known disease or new sites of disease. **Question 278: Number** Indicate the number of this relapse using the following guidelines: • **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse. • Do not include PRs when calculating the number of relapses. **Question 279: Sensitivity to Chemotherapy:*** Sensitivity is measured based on the **last chemotherapy given within the six months prior to HSCT**. Indicate the recipient's sensitivity to chemotherapy using the following guidelines: • Sensitive = ≥ 50% reduction in the bi-dimensional diameter of all disease sites with no new sites of disease (PIF sen, PR1, CR, CRU, REL sen) • Resistant = < 50% reduction in the diameter of all disease sites or development of new disease sites (PIF sen, REL res) • Untreated = No chemotherapy was given within the 6 months prior to the preparative regimen (disease untreated, REL unt) • Unknown (PIF unk, REL unk)

*Source of disease response definitions: CIBMTR Pre-HSCT Lymphoma Disease Form 2018

Plasma Cell Disorders

The role of plasma cells is to produce and release immunoglobulins (or antibodies) to attack and destroy disease-causing bacteria and viruses.

Immunoglobulins typically contain two large *heavy chains* and two small *light chains*. There are five types of immunoglobulin heavy chains: IgG, IgA, IgD, IgE, and IgM, and there are two types of light chains: lambda and kappa.

Abnormal plasma cells often produce tumors in the bone marrow. A single plasma cell tumor is referred to as a *plasmacytoma.* Tumors that spread throughout the bone marrow are referred to as *myeloma* or *multiple myeloma.*

Symptoms of plasma cell disorders (PCD) include, but are not limited to: bone pain and fractures, anemia, decreased immunity to infection, kidney dysfunction, muscle weakness, malaise and fatigue, and mental confusion.

Question 280: Classification
Indicate the disease classification at diagnosis.

If the recipient's disease classification is one of the following, continue with question 281.

1. Multiple myeloma - IgG
2. Multiple myeloma - IgA
3. Multiple myeloma - IgD
4. Multiple myeloma - IgE
5. Multiple myeloma - IgM (not Waldenstrom macroglobulinemia)
6. Multiple myeloma - light chain only

If the recipient's disease classification is 7, multiple myeloma - non-secretory, neither kappa nor lambda light chains will be present; therefore, continue with question 282 (Durie-Salmon) **or** question 284 (I.S.S.).

Question 281: Light Chain
Indicate the presence of light chains as either kappa or lambda.

NOTE: Questions 282-286, stage at diagnosis
Report the recipient's stage at diagnosis using either the Durie-Salmon staging system (questions 282-283) or the International Staging System (I.S.S.) (questions 284-286).

Questions 282-283: Stage at Diagnosis: Durie-Salmon
Indicate stage and sub-classification.

Questions 284-286: Stage at Diagnosis: I.S.S.
Report the recipient's lab values from diagnosis and/or the stage of myeloma.

Question 287: Other Plasma Cell Disorder, specify
On occasion, a recipient could have two heavy-chain types. In this instance report "other plasma cell disorder" and specify the appropriate types.

In situations of tandem autologous HSCT, oligoclonal reconstitution from a previous HSCT should not be reported as a new subtype. For questions

regarding oligoclonal reconstitution, contact your transplant center's CIBMTR liaison.

For recipients diagnosed with more than one PCD, either sequentially or concurrently, see table 4 below.

Table 4. Plasma Cell Disorders: Disease Combinations

Disease Combination	Required disease classification sheet:	Report the disease diagnosis date of (question 1):
Plasmacytoma transformed to Myeloma	Myeloma	Myeloma
Myeloma and Plasma Cell Leukemia	Plasma Cell Leukemia	Plasma Cell Leukemia
Myeloma and Amyloidosis	Myeloma	Myeloma

Question 288: Status at Transplant
Indicate the recipient's disease status immediately prior to the start of the preparative regimen.

Disease Status	Definition
Never Treated*	No treatment given in the six months prior to HSCT.
Complete Remission (CR)*	A treatment response where **all** of the following criteria are met: • Negative immunofixation on serum and urine samples • Disappearance of any soft tissue plasmacytomas • ≤ 5% plasma cells in the bone marrow (confirmation with repeat bone marrow biopsy not needed) CR requires two consecutive assessments made at any time before the institution of any new therapy, and no known evidence of progressive or new bone lesions if radiographic studies were performed; radiographic studies are not required to satisfy CR requirements. **Question 289: Number** Indicate the number of this CR.
Stringent Complete Remission (sCR)*	Follow criteria for CR as defined above, **plus all of the following**: • Normal free light chain ratio, • Absence of clonal cells in the bone marrow by

	immunohistochemistry or immunofluorescence (confirmation with repeat bone marrow biopsy not needed). (Presence and/or absence of clonal cells is based upon the κ/λ ratio. An abnormal κ/λ ratio by immunohistochemistry and/or immunofluorescence requires a minimum of 100 plasma cells for analysis. An abnormal ratio reflecting the presence of an abnormal clone is κ/λ of > 4:1 or < 1:2.) sCR requires two consecutive assessments made at any time before the institution of any new therapy, and no known evidence of progressive or new bone lesions if radiographic studies were performed; radiographic studies are not required to satisfy sCR requirements. **Question 289: Number** Indicate the number of this sCR.
Very Good Partial Response (VGPR)*	**One or more** of the following must be present: • Serum and urine M-protein detectable by immunofixation but not on electrophoresis • ≥ 90% reduction in serum M-protein and urine M-protein level < 100 mg/24 hours. VGPR requires two consecutive assessments made at any time before the institution of any new therapy, and no known evidence of progressive or new bone lesions if radiographic studies were performed; radiographic studies are not required to satisfy VGPR requirements. **Question 289: Number** Indicate the number of this VGPR.
Partial Response (PR)*	**Both** of the following must be present: • ≥ 50% reduction in serum M-protein • Reduction in 24-hour urinary M-protein by ≥ 90% or to < 200 mg/24 hours. If the serum and urine M-protein are not measurable (i.e., do not meet any of the following criteria: • Serum M-protein ≥ 1 g/dL • Urine M-protein ≥ 200 mg/24 hours • Serum-free light chain assay shows involved level ≥ 10 mg/dL, provided serum-free light chain ratio is abnormal) A ≥ 50% decrease in the difference between involved and uninvolved free light chain

	levels is required in place of the M-protein criteria. If serum and urine M-protein are not measurable, and serum-free light assay is also not measurable, a ≥50% reduction in plasma cells is required in place of M-protein, provided the baseline bone marrow plasma cell percentage was ≥ 30%. In addition to the above listed criteria, a ≥ 50% reduction in the size of soft tissue plasmacytomas is also required, if present at baseline. PR requires two consecutive assessments made at any time before the institution of any new therapy, and no known evidence of progressive or new bone lesions if radiographic studies were performed; radiographic studies are not required to satisfy PR requirements. If there is no documented marrow with <5% plasma cells, status must be classified as PR. **Question 289: Number** Indicate the number of this PR.
Stable Disease (SD)*	Does not meet the criteria for CR, VGPR, PR, or PD. SD requires two consecutive assessments made at any time before the institution of any new therapy, and no known evidence of progressive or new bone lesions if radiographic studies were performed; radiographic studies are not required to satisfy SD requirements.
Progression*	Requires **one or more** of the following: Increase of ≥ 25% from baseline in: • Serum M-component and/or (absolute increase ≥ 0.5 g/dL) (for progressive disease, serum M-component increases of ≥ 1 g/dL are sufficient to define relapse if the starting M-component is ≥ 5 g/dL) • Urine M-component and/or (absolute increase ≥ 200 mg/24 hours) • For recipients without measurable serum and urine M-protein levels: the difference between involved and uninvolved free light chain levels (absolute increase > 10 mg/dL) • Bone marrow plasma cell percentage with absolute percentage ≥ 10% (relapse from CR has a 5% cutoff vs. 10% for other categories of relapse) • Definite development of new bone lesions or soft

	tissue plasmacytomas, or definite increase in the size of any existing bone lesions or soft tissue plasmacytomas • Development of hypercalcemia (corrected serum calcium > 11.5 mg/dL or 2.65 mmol) that can be attributed solely to the plasma cell proliferative disorder PR requires two consecutive assessments made at any time before classification as disease progression, and/or the institution of any new therapy. **Question 289: Number** Indicate the number of this progression.
Relapse from CR (untreated)*	Requires **one or more** of the following: • Reappearance of serum or urine M-protein by immunofixation or electrophoresis • Development of ≥ 5% plasma cells in the bone marrow (relapse from CR has a 5% cutoff vs. 10% for other categories of relapse) • Appearance of any other sign of progression (e.g., new plasmacytoma, lytic bone lesion, hypercalcemia) Relapse requires two consecutive assessments made at any time before classification as relapse, and/or the institution of any new therapy. **Question 289: Number** Indicate the number of this relapse.

*Source of disease response definitions: CIBMTR Pre-HSCT Multiple Myeloma/Plasma Cell Leukemia Disease Form 2016

Breast Cancer

Question 290: Classification
Indicate the disease classification at diagnosis as either “inflammatory” or “non-inflammatory.”

Inflammatory breast caner is characterized by a red and swollen appearance. The skin of the breast may also feel warm to the touch and show a pitted appearance known as *peau d’orange* (i.e., orange peel).

NOTE: Question 291
If the recipient is considered stage IV, select stage III for question 291, and select "metastatic" for question 292.

Question 291: Stage at Diagnosis
Indicate the recipient's disease stage (stage I-IV) at diagnosis. Cancer stage is based on the size of the tumor, whether the cancer is invasive or non-invasive, whether lymph nodes are involved, and whether the cancer has spread beyond the breast.

The most common system used to describe the stages of breast cancer is the American Joint Committee on Cancer (AJCC) TNM system. The letter *T* refers to *Primary Tumor, N* refers to *Lymph Node,* and *M* refers to *Distant Metastasis.* The additional letters or numbers appearing after T, N, and M provide more details about the tumor, lymph nodes, and metastasis:

- The letter T followed by a number from 0 to 4 describes the tumor's size and spread to the skin or to the chest wall under the breast. Higher T numbers indicate a larger tumor and/or wider spread to tissues near the breast.
- The letter N followed by a number from 0 to 3 indicates whether the cancer has spread to lymph nodes near the breast and, if so, how many lymph nodes are affected.

The letter M followed by a 0 or 1 indicates whether the cancer has spread to distant organs—for example, the lungs or bones.

Stage	Definition
0	Carcinoma in situ. • **Lobular carcinoma in situ (LCIS):** Abnormal cells are in the lining of a lobule • **Ductal carcinoma in situ (DCIS):** Abnormal cells are in the lining of a duct. DCIS is also called intraductal carcinoma
I	The tumor is no more than 2 cm (¾ inch) across, **and** the cancer cells have not spread beyond the breast (T1, N0, M0).
II	**One** of the following criteria must be met: • The tumor is no more than 2 cm (¾ inch) across. The cancer has spread to the lymph nodes under the arm (T1, N1, M0). • The tumor is between 2 cm and 5 cm (¾ inch and 2 inches). The cancer has not spread to the lymph nodes under the arm (T2, N0, M0).

	• The tumor is between 2 cm and 5 cm (¾ inch and 2 inches). The cancer has spread to the lymph nodes under the arm (T2, N1, M0). • The tumor is larger than 5 cm (2 inches). The cancer has not spread to the lymph nodes under the arm (T3, N0, M0).
III	Locally advanced cancer. Stage III is generally divided into Stage IIIA, IIIB, and IIIC. **Note:** The Pre-TED does not collect the detail of stage III. **Stage IIIA** - **One** of the following criteria must be met: • The tumor is no more than 5 cm (2 inches) across. The cancer has spread to underarm lymph nodes that are attached to each other or to other structures. Or the cancer may have spread to lymph nodes behind the breastbone (T0-2, N2, M0). • The tumor is more than 5 cm across. The cancer has spread to underarm lymph nodes that are either alone, attached to each other, or attached to other structures. Or the cancer may have spread to lymph nodes behind the breastbone (T3, N1-2, M0). **Stage IIIB** - A tumor of any size has grown into the chest wall or the skin of the breast. It may be associated with swelling of the breast or with nodules (lumps) in the breast skin (T4, N0-2, M0). • The cancer may have spread to lymph nodes under the arm. • The cancer may have spread to underarm lymph nodes that are attached to each other or other structures. Or the cancer may have spread to lymph nodes behind the breastbone. • Inflammatory breast cancer is a rare type of breast cancer. The breast looks red and swollen because cancer cells block the lymph vessels in the skin of the breast. When a doctor diagnoses inflammatory breast cancer, it is at least Stage IIIB, but it could be more advanced. **Stage IIIC** - A tumor of any size has spread in one of the following ways (T0-4, N3, M0):

	• The cancer has spread to the lymph nodes behind the breastbone and under the arm. • The cancer has spread to the lymph nodes above or below the collarbone.
IV	Distant metastatic cancer. The cancer has spread to other parts of the body (including the ipsilateral supraclavicular lymph nodes).

Question 292: Metastases
Indicate whether the recipient's disease has metastasized beyond the breast and/or lymph nodes. Metastatic disease (M1) confirms that the disease has spread to the distant organs and is considered stage IV.

Question 293: Status at Transplant
Indicate the recipient's disease status immediately prior to the start of the preparative regimen.

Disease Status	Definition
Adjuvant (Stage II, III only)	Adjuvant therapy uses chemotherapy drugs, radiation, hormone therapy, targeted therapy, or a combination of these to help destroy any cancer cells that were not removed during the breast cancer operation. Its goal is to decrease the risk of the breast cancer coming back.
Never Treated	Never treated indicates the recipient was not treated for breast cancer (including surgery such as lumpectomy or mastectomy) prior to the start of the preparative regimen. This disease status at transplant should be chosen rarely.
Primary Refractory	The response of the breast cancer to treatment is less than in a PR. This status would also include recipients who had achieved a prior PR (but never CR) but are not in either PR or relapse immediately prior to transplant.
Complete Remission*	**CR Confirmed:** Disappearance of target lesions for a period of at least one month. **CR Unconfirmed:** Complete response with persistent imaging abnormalities of unknown significance. **Note: Question 294** For the purposes of this manual, the term "confirmed" is defined as a laboratory and/or pathological radiographic determination. The term "unconfirmed" is defined as scan abnormalities of unknown significance that are not biopsied or otherwise evaluated.

	Question 294: CR, specify Using the definitions listed above, indicate whether the CR was "confirmed" or "unconfirmed." **Question 295: CR, number** Indicate the number of this response.
1st Partial Response*	At least 30% decrease in the sum of the longest diameter of measured lesions (target lesions), taking as reference the baseline sum of longest distance. **Note: 1st Partial Response** For CIBMTR reporting purposes, this response is reserved for recipients who have **never** achieved CR, but a PR was achieved and maintained at the time of the preparative regimen.
Relapse	Recurrence of the disease after CR. Can be local or metastatic. **Question 296: Relapse, specify** Using the definitions below, indicate whether the relapse is "local" or "metastatic." **Local:** Recurrence occurred in the same side breast or local lymph nodes. **Metastatic:** Recurrence occurred anywhere in the body other than the same side breast or local lymph nodes. **Question 297: Relapse, number** Using the guidelines below, indicate the number of this relapse. • **1st relapse:** one prior complete remission • **2nd relapse:** two prior complete remissions • **3rd or higher:** three or more complete remissions followed by relapse. Do not include PRs when calculating the number of relapses. **Question 298: Relapse, sensitivity to chemotherapy*** Sensitivity is measured based on the last chemotherapy given prior to HSCT; chemotherapy must include ≥ 2 cycles of treatment given ≤ 6 months prior to HSCT. Indicate the sensitivity to chemotherapy using the following guidelines:

	• Sensitivity is defined as ≥ 50% reduction in bi-dimensional diameter of all disease sites with no new sites of disease. • Resistant is defined as < 50% reduction in diameter of all disease sites or development of new disease sites. • Untreated should be reported only if the last treatment was not chemotherapy. • Unknown should be reported only if there no documentation of the recipient's response following treatment.

*Source of disease response definitions: CIBMTR Pre-HSCT Breast Cancer Disease Form 2020

"Other" Disease

Question 299: Specify
Before using this category, check with a transplant physician to determine whether the disease can be classified as one of the listed options on the Disease Classification Sheets.

Question 300: For any "other" disease: Is a pathology report attached to this form?
Indicate if a pathology report is attached. Attaching a pathology report will help the CIBMTR confirm reported data and reduce data queries. Attach a copy of the pathology report using the Log of Appended Document (Form 2800).

Questions 301-302: Alternative HCT:
Report the indication for this HSCT.

Other Malignancies

NOTE: Sarcoma
The names of the sarcoma subtypes have changed with the revised Pre-TED form. If the sarcoma subtype documented in the recipient's medical record is not one of the listed options, consult with a transplant physician as the name of the subtype may have changed.

Questions 303-304: Classification
Most of the malignancies listed in this section are solid tumors. Germ cell tumors that originate in the ovary or testes should be reported as *Ovarian* or *Testicular*, respectively. If the subtype is not listed, report as "other, solid tumor" and specify the reported malignancy. If a certain disease becomes a common indication for HSCT, the CIBMTR will add the disease as a separate category.

Question 305: Status at Transplantation
Indicate the recipient's disease status immediately prior to the start of the preparative regimen.

Disease Status	WHO Definition	RECIST Definition
Adjuvant	Treatment given after the primary cancer treatment to increase the chances of a cure. Adjuvant cancer therapy may include chemotherapy, radiation therapy, hormone therapy, or biological therapy.	Not applicable
Never Treated	Never treated indicates the recipient was not treated for the malignancy prior to the start of the preparative regimen. This disease status at transplant should rarely be used.	Not applicable
Complete Response (CR)	Complete disappearance of all known disease for ≥ 1 month. Includes disappearance of all signs and symptoms of disease with normalization of all biochemical and radiologic parameters, as well as a negative repeat biopsy.	Disappearance of all target lesions for a period of at least one month.
Complete Response Unconfirmed (CRU)	Disappearance of all signs and symptoms of disease with normalization of all biochemical and radiologic parameters, but with persistent, unchanging imaging abnormalities of unknown significance.	Complete response with persistent imaging abnormalities of unknown significance.
Partial Response (PR)	Decrease of ≥ 50% in	At least a 30% decrease

	total tumor load of the lesions that have been measured for at least 4 weeks. Partial response may be represented as PR1, PR2, etc. There are differing interpretations of what the number after "PR" represents, and this can be confusing. What is important to CIBMTR data analysis is to distinguish the type of PR as either: "**without** prior CR" or "**with** prior CR."	in the sum of the longest diameter of measured lesions (target lesions), taking as reference the baseline sum of longest diameter.
	Question 306: Specify If the recipient is in a partial response, indicate whether there was a previous CR.	
No Response/Stable Disease (NR/SD)	Disease has been treated and the size of one or more lesions has neither increased 25% or more in the size of one or more lesions, nor has total tumor size decreased 50% or more.	Neither sufficient shrinkage to qualify for PR nor sufficient increase to qualify for PD, taking as reference the smallest sum of the longest diameter since the treatment started.
Progressive Disease (PD)	Increase of ≥ 20% in the size of one or more measurable lesions, or the appearance of new lesions.	At least a 20% increase in the sum of the longest diameter of measures lesions (target lesions), taking as reference the smallest sum longest diameter recorded since the treatment started or the appearance of one or more new lesions.
Relapse (untreated)	The reappearance of disease after complete recovery. Should be determined by one or more diagnostic tests.	Not applicable.

Question 307: Was Response Evaluation Criteria in Solid Tumors (RECIST) used for this status evaluation?
Check "yes" or "no" to indicate whether the RECIST disease response definitions were used to evaluate the recipient's status. For more information regarding RECIST criteria, see appendix N.

Question 308: CR, CRU or relapse, number
Indicate which number the response represents.

Question 309: REL, sensitivity to chemotherapy
Indicate if the disease is sensitive to chemotherapy. Sensitivity is measured based on the last chemotherapy given prior to HSCT; chemotherapy must include ≥ 2 cycles of treatment given ≤ 6 months prior to HSCT. Sensitivity is defined as ≥ 50% reduction in bi-dimensional diameter of all disease sites with no new sites of disease. Resistant is defined as < 50% reduction in diameter of all disease sites or development of new disease sites. If the last treatment was not chemotherapy, then report as "untreated" (by chemotherapy).

NOTE: Malignant vs. Non-malignant
Malignant diseases involve cells dividing without control, which can spread to other parts of the body through the blood and lymph systems. These diseases are usually characterized by unlimited, aggressive growth; invasion of surrounding tissues; and metastasis.

Non-malignant diseases involve cell overgrowth, but lack the malignant properties of cancer.

The diseases listed in the following section are **non-malignant.**

Anemia/Hemoglobinopathy

Questions 310-313: Classification
Indicate the disease classification at diagnosis.

Platelet Disorders

Questions 314-315: Classification
Indicate the disease classification at diagnosis.

Histiocytic Disorders

Questions 316-317: Classification
Indicate the disease classification at diagnosis.

Inherited Disorders of Metabolism/Osteopetrosis

Questions 318-319: Classification
Indicate the disease classification at diagnosis.

Immune Deficiencies

Questions 320-322: Classification
Indicate the disease classification at diagnosis.

Autoimmune Disorders

NOTE:
For all recipients with autoimmune disease, the Pre-TED form should be submitted at the time of mobilization.

Question 323: Autoimmune Deficiencies, Specify
Indicate the disease classification at diagnosis.

Systemic Sclerosis (Connective Tissue Disease)

NOTE: Questions 324-347
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply

Questions 324-347: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Questions 348-350: Miscellaneous Labs at Original Diagnosis
For each antibody listed, indicate whether the result was normal, elevated, or not done.

Systemic Lupus Erythematosus (Connective Tissue Disease)

NOTE: Questions 351-377
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 351-377: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Questions 378-384: Miscellaneous Labs at Original Diagnosis
For each test listed, indicate whether the result was normal, abnormal, or not done.

Sjögren Syndrome (Connective Tissue Disease)

NOTE: Questions 385-397
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 385-397: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Polymyositis-dermatomyositis (Connective Tissue Disease)

NOTE: Questions 398-412
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 398-412: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Questions 413-416: Miscellaneous Labs at Diagnosis
For each test listed, indicate whether the result was normal, elevated, or not done.

Antiphospholipid Syndrome (Connective Tissue Disease)

NOTE: Questions 417-432
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 417-432: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Questions 433-436: Miscellaneous Labs at Diagnosis
For each test listed, indicate whether the result was normal, elevated, or not done.

Other Connective Tissue Disease

Question 437: Other connective tissue disease, specify:
Specify the other connective tissue disease classification at the time of original diagnosis.

Wegener Granulomatosis (Vasculitis)

NOTE: Questions 438-449
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 438-448: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Questions 450-454: Miscellaneous Labs at Diagnosis
For each antibody listed, indicate whether the result was normal, elevated, or not done.

Polyarteritis Nodosa, Classical and Microscopic (Vasculitis)

NOTE: Questions 455-468
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 455-468: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Questions 469-471: Miscellaneous Labs at Diagnosis

For each test listed, indicate whether the result was normal, elevated, or not done.

Churg-Strauss, Giant Cell Arteritis, Takayasu, Behçet's Syndrome, and Overlap Necrotizing Arteritis

If the recipient's primary disease is listed in the box above, check the appropriate disease, and submit the form.

Other Vasculitis

Question 472: Other vasculitis, specify
Specify the other vasculitis disease classification at the time of original diagnosis.

Rheumatoid Arthritis

NOTE: Questions 473-487
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 473-487: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Psoriatic Arthritis/Psoriasis

NOTE: Questions 488-494
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 488-494: Involved Organs/Clinical Problem(s) and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problem(s) at the time of original diagnosis, and whether or not that involvement was the primary reason for the HSCT.

Juvenile Idiopathic Arthritis: Other

Question 495: Juvenile idiopathic arthritis: other, specify
Specify the other juvenile idiopathic arthritis disease classification at the time of original diagnosis.

Other Arthritis

Question 496: Other arthritis, specify
Specify the other arthritis disease classification at the time of original diagnosis.

Multiple Sclerosis

NOTE: Questions 497-505
FormsNet™2 application: Check either "yes" or "no" for each option listed.
Paper form submission: Check all that apply.

Questions 497-505: Involved Organs/Clinical Problem and Primary Reason(s) for Transplant
Indicate the involved organs and/or clinical problems at the time of original diagnosis, and whether that involvement was the primary reason for the HSCT.

Myasthenia Gravis

If the recipient's primary disease is Myasthenia gravis, check the box and submit the form.

Other Autoimmune Neurological Disorder

Question 506: Other autoimmune neurological disorder, specify
Specify the other autoimmune neurological disorder at the time of original diagnosis.

Idiopathic Thrombocytopenic Purpura (ITP), Hemolytic Anemia, and Evan Syndrome

If the recipient's primary disease is listed in the box above, check the appropriate disease, and submit the form.

Other Autoimmune Cytopenia

Question 507: Other autoimmune cytopenia, specify
Specify the other autoimmune cytopenia disease classification at the time of original diagnosis.

Crohn's Disease and Ulcerative Colitis

If the recipient's primary disease is listed in the box above, check the appropriate disease, and submit the form.

Other Autoimmune Bowel Disorder

Question 508: Other autoimmune bowel disorder, specify
Indicate the disease at the time of original diagnosis.