2450: Post-TED

Transplant centers participating in the CIBMTR must submit a Post-TED Form for recipients who meet any of the following criteria:

- Recipient receives a transplant at a United States center designated as a *TED-only* center.
- Recipient receives a transplant at a United States center designated as *Comprehensive Report Form* center and has been assigned to the TED track by the Form Selection Algorithm.
- Recipient receives an allogeneic transplant at a United States center designated as *Comprehensive Report Form* center, but has not consented to participate in research.
- Recipient receives a transplant at an international center, has consented to participate in research, and has been assigned to the TED track by the Form Selection Algorithm.

The Post-TED fulfills the requirements of the SCTOD for recipients meeting any of the above criteria. For more information regarding the SCTOD, see General Instructions, Stem Cell Therapeutics Outcomes Database.

For more information, including information on the TED and Comprehensive Report Form Selection Algorithm, see Section 1 in the Center Reference Guide.

The Post-TED must be completed at the following time points: 100 days, six months, and annually post-HCT. These forms should be completed as closely to these time points as possible. The structure of the TED Forms is such that each form should fit on a timeline with distinct start and stop dates that do not overlap any other forms, except in the case of a subsequent HCT. The Post-TED is considered past due 120 days after each of these time points.

> ✻ If the Post-TED form is being completed for a six-month or annual evaluation, the answers to all questions should reflect the clinical status of the recipient **since the last report**.

Subsequent HCT:
If a recipient receives a subsequent HCT between Post-TED time points (100 day, six months, annually), the TED form sequence will start over again with another Pre-TED.

However, if the recipient receives an autologous HCT as a result of a poor graft or graft failure, the TED form sequence **will not** start over again. Generally this type of infusion (autologous rescue) is used to treat the recipient's poor graft response, rather than to treat the recipient's disease.

Contact your center's CIBMTR CRC if the subsequent Pre-TED does not come due automatically.

> If the recipient received a subsequent transplant (excluding an autologous rescue), the answers to all questions should reflect the clinical status of the recipient the day prior to the start of the preparative regimen or, if no preparative regimen was given, the answers to all questions should reflect the clinical status of the recipient the day prior to HCT infusion.

Non-Malignant Diseases

If the HCT being reported was given to treat a non-malignant disease (as reported on the Pre-TED Disease Classification Form {Form 2402}), do not complete the following sections of the Post-TED Form:

- Q75-97: Disease Assessment at the Time of Best Response to HCT
- Q98-160: Post-HCT Therapy
- Q235-238: Current Disease Status

Questions 161-163 will also be left blank if the HCT being reported was given to treat a non-malignant disease.

Lost to Follow-Up:

Occasionally, centers may lose contact with recipients for a variety of reasons, including the recipient's moving, changing physicians, or death. If contact with a recipient appears lost, please consider calling the recipient at home or work, sending a letter, communicating with the treating or referring physician, or contacting the hospital billing department. If your center receives documented information that a recipient is alive or dead, the form should be filled out with the recipient survival status. If no documentation exists and several unsuccessful attempts have been made to contact the recipient, they are considered lost to follow-up and the form may be marked as such using the Lost to Follow-Up tool in FormsNet3 for each reporting period in which no contact exists.

Select TED

Select TED recipients are required to answer a limited subset of questions on the Post-TED form. These questions include:

- Key fields;
- Survival, questions 1-6;
- Subsequent transplant, questions 7-11; and
- New malignancy, questions 49-56

Instruction for reporting in these data fields does not differ from that provided for all recipients on the TED form. Refer to the applicable sections of the Forms Instructions Post-TED Manual for further information on completing these fields.

Links to Sections in Manual:

Q1-6: Survival
Q7-13: Subsequent Transplant
Q14-16: Initial ANC Recovery
Q17-18: Initial Platelet Recovery
Q19-38: Graft-Versus-Host Disease
Q39-45: Liver Toxicity Prophylaxis
Q46-47: Veno-occlusive disease (VOD) / Sinusoidal obstruction syndrome (SOS)
Q48-55: New Malignancy, Lymphoproliferative or Myeloproliferative Disorder
Q56-74: Chimerism Studies
Q75-97: Disease Assessment at the Time of Best Response to HCT
Q98-160: Post-HCT Therapy
Q161-234: Relapse or Progression Post-HCT
Q235-238: Current Disease Status

Manual Updates:

Sections of the Forms Instruction Manual are frequently updated. The most recent updates to the manual can be found below. For additional information, select the manual section and review the updated text.

If you need to reference the historical Manual Change History for this form, please click here or reference the retired manual section on the Retired Forms Manuals webpage.

Date	Manual Section	Add/ Remove/ Modify	Description
4/ 19/ 19	2450: Post-TED	Modify	Provided additional instruction and examples for reporting the current disease status in Questions 237-238.
4/ 11/ 19	2450: Post-TED	Modify	Updated the instruction on how to report Dexamethasone if given for disease relapse or progression post-HCT. Dexamethasone should be reported as “Other Systemic Therapy,” not “Other Therapy.”
3/ 19/ 19	2450: Post-TED	Add	Added the following red warning box instruction (in red below) below question 75 to clarify when to use the CCR option in the Disease Assessment at the Time of Best Response to HCT section of the Post-TED (2450) form: Continued Complete Remission (CCR) should be reported for all patients who were already in CR at the start of the preparative regimen.

12/ 21/ 18	2450: Post-TED	Remove	Removed the following blue note box instruction (struck out below) above question 82 regarding Flow Cytometry reporting for Lymphoma and Myeloma. These assessments can now be reported in the same way as all other disease assessments. ~~***Myeloma and Lymphoma***~~ ~~*Flow cytometry assessments performed to detect myeloma or lymphoma should not be reported if negative (< 5% malignant cells detected). If flow cytometry was performed to detect myeloma or lymphoma and showed less than 5% malignant cells, report "not applicable" for question 82 and go to question 85.*~~
8/ 10/ 18	2450: Post-TED	Modify	Modified (added text in red and deleted text is struck-out) the instructions for reporting the "date assessed" for questions 80, 83, 87, 90, 96, and 96: *If the best response is "not in complete remission," report the date of the most recent testing performed during the reporting period and prior to ~~relapse or progression~~ treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most recent disease-specific testing performed within approximately 30 days of the follow-up date.*
8/ 10/ 18	2450: Post-TED	Remove	Removed the following instruction from questions 157 and 231: ~~*Reporting the administration of a cellular therapy / donor cellular infusion in question 231 will generate additional cellular therapy forms which are used to capture important details regarding the infusion(s).*~~
4/ 30/ 18	2450: Post-TED	Add	Added the following instruction for question question 34. *Please note, questions 35 and 36 must still be answered if question 34 is reported as "unknown."*
4/ 30/ 18	2450: Post-TED	Modify	Updated language on how to report the "Date of most recent disease assessment" for questions 237-238.
3/ 19/ 18	2450: Post-TED	Add	Added the following instruction for question 235. *The center does not need to repeat all disease-specific assessments (biopsies, scans, labs) each reporting period in order to complete current disease status data fields. Once a particular disease status is achieved, the center can continue reporting that disease status (based on labs / clinical assessments) until there is evidence of relapse / progression.*
3/5/ 18	2450: Post-TED	Modify	Updated language on what to capture as a molecular assessment for questions 75-97.
1/ 23/ 18	2450: Post-TED	Add	Added **Amyloidosis** note box above the instructions for question 75.
8/ 31/ 17	2450: Post-TED	Add	Added text (in red below) to the description of stage 4 gut GVHD provided in the Acute GVHD Grading and Staging Table located below the instructions for question 22. *Severe abdominal pain, with or without ileus, and / or grossly bloody stool*
8/1/ 17	2450: Post-TED	Add	Added the text below to the instructions for question 22. *For reporting purposes, "at diagnosis" is defined as the period between onset of signs / symptoms and the initiation of therapy to treat GVHD (topical or systemic).*

8/1/17	2450: Post-TED	Add	Added the text below to the instructions for questions 23-28. *Report the stage of each organ at diagnosis. For reporting purposes, "at diagnosis" is defined as the period between onset of signs / symptoms and the initiation of therapy to treat GVHD (topical or systemic).*
7/26/17	2450: Post-TED	Add	Added text (in red) to instructions for question 36 to clarify intent of question. *Report the date of maximum chronic GVHD involvement, based on clinical grade , during the current reporting period.*
7/26/17	2450: Post-TED	Modify	Modified instructions for question 34 to clarify intent of question. Added text in red and removed text which is struck out. *Report the maximum chronic GVHD involvement, based on clinical grade, since the date of the last report. ~~as documented by the recipient's primary care provider.~~*
7/11/17	2450: Post-TED	Add	Added the following text to the description of lower GI GVHD provided in the instructions for questions 23-28: *Report overall grade III if stage 2-3 liver involvement is documented at the time point being reported and there is no evidence of grade IV GVHD.*
7/10/17	2450: Post-TED	Add	Added Intervention Reporting Scenarios A, B, C, and D below the instructions for question 172.
7/10/17	2450: Post-TED	Modify	Added (in red) and removed (crossed out) text to / from the instructions for question 172 as indicated below. *Report the date ~~of earliest administration of therapy for relapsed, persistent, or progressive disease or decreasing / loss of donor chimerism within the report period~~ therapy was started for the reason specified in question 165; if multiple instances, cycles, or lines of therapy are administered, report the date of the first treatment. If treatment was started in a prior reporting period and continues into the current reporting period, report the original therapy start date (prior to the start of the current reporting period) and override the validation error in FormsNet3^{SM} using the code "verified correct." If therapy was stopped in a prior reporting period and restarted (or a new therapy was started) during the current reporting period, report the earliest date treatment was administered during the current reporting period. See the intervention reporting scenarios provided below for further clarification.*
7/10/17	2450: Post-TED	Add	Added (in red) text to the instructions for questions 166-171 as indicated below. *Indicate the methods detecting the reason for which therapy for persistent disease, relapsed / progressive disease, or for decreased / loss of donor chimerism was given (as reported in question 165). For each option, select "yes" if the last assessment by that method was performed prior to the start of the intervention(s) and was consistent with the rationale reported in question 165. … If multiple therapies were given during the reporting period for different reasons (e.g., the recipient initially receives treatment for decreased chimerism and subsequently receives different treatment for relapse during the same reporting period), report "yes" for any methods of detection confirming the reason in question 165. See the intervention reporting scenarios provided below for further clarification.*
7/10/	2450: Post-TED	Add	Added (in red) text to the instructions for question 165 as indicated below. *Indicate whether therapy was given for persistent disease, relapsed / progressive*

17			*disease, or for decreased / loss of donor chimerism. In some instances, therapy may be given to treat disease and decrease / loss of chimerism. In these cases, report the indication pertaining to the recipient's disease status (i.e., "persistent disease" or "relapsed / progressive disease"). If therapy continued from a prior reporting period and a new therapy was started for a different reason during the current reporting period, report the reason the new therapy was started. See the intervention reporting scenarios provided below for further clarification.*
7/ 10/ 17	2450: Post-TED	Add	Added Liver Toxicity Prophylaxis warning box above question 39.
6/8/ 17	2450: Post-TED Data	Remove	Removed unnecessary text from the following instruction for question 31 to clarify instructions. Report "no" if chronic GVHD was not clinically diagnosed – initially or as a flare – in the reporting period; this includes instances where chronic GVHD persists from a prior reporting period. ~~without flare in the current reporting period.~~
5/ 25/ 17	2450: Post-TED	Add	Added **Steroids and Non-Steroid Immunosuppression for GVHD** warning box to the instructions for question 37 and 38.
5/ 24/ 17	2450: Post-TED	Add	Added the following information regarding Non-Malignant Diseases to the Post-TED Title Page: ***Non-Malignant Diseases*** *If the HCT being reported was given to treat a non-malignant disease (as reported on the Pre-TED Disease Classification Form {Form 2402}), do not complete the following sections of the Post-TED Form:* • *Q75-97: Disease Assessment at the Time of Best Response to HCT* • *Q98-160: Post-HCT Therapy* • *Q235-238: Current Disease Status* *Questions 161-163 will also be left blank if the HCT being reported was given to treat a non-malignant disease.*
5/ 24/ 17	2450: Post-TED Data	Add	Added **Therapy Over Multiple Reporting Periods** note box to the instructions for question 12.
5/ 24/ 17	2450: Post-TED Data	Add	Added **Malignant Diseases Only** warning box to the following pages of the Post-TED Manual: • Q75-97: Disease Assessment at the Time of Best Response to HCT • Q98-160: Post-HCT Therapy • Q161-234: Relapse or Progression Post-HCT • Q235-238: Current Disease Status
4/ 19/ 17	2450: Post-TED Data	Remove	Removed incorrect instruction from question 231. *Cellular therapy refers to the infusion of human or animal derived cells, which may or may not be modified or processed to achieve a specific composition. Examples include T-cell, NK cell, and mesenchymal cell infusions as well as donor cellular infusions. Indicate "yes" if the recipient received any form of cellular therapy for*

			~~reasons other than~~ relapse, persistent, or progressive disease or decreasing / loss of donor chimerism; hematopoietic cell transplantation should not be reported as cellular therapy, as this is captured in questions 7-13 of the Post-TED form.
4/ 14/ 17	2450: Post-TED Data	Add	Added the following note box to the instructions for question 164 regarding **Interventions for Decreased / Loss of Chimerism:** *The Post-TED Form (Form 2450) captures interventions given for decreased or loss of chimerism in the relapse / progression section of the form. If the recipient receives an intervention for decreased or loss of chimerism during the reporting period, report the therapy in questions 164-234. This instruction may differ from prior guidelines regarding how to report interventions for decreased / loss of chimerism on past revisions (1-3) of the Post-TED Form.*
4/7/ 17	2450: Post-TED Data	Add	Added instructions, in red below, to question 172 regarding treatment which overlaps reporting periods. *Report the date of earliest administration of therapy for relapsed, persistent, or progressive disease or decreasing / loss of donor chimerism within the report period; if multiple instances, cycles, or lines of therapy are administered, report the first. If treatment was started in a prior reporting period and continues into the current reporting period, report the original therapy start date (prior to the start of the current reporting period) and override the validation error in FormsNet3^{SM} using the code "verified correct."*
4/7/ 17	2450: Post-TED Data	Add	Added instructions to questions 23-28 to clarify how to report transaminitis under "other site" for acute GVHD. ***Other site(s) involved with acute GVHD:*** *Indicate whether acute GVHD affected an organ other than skin, upper GI, lower GI, or liver manifesting with hyperbilirubinemia. This includes transaminitis attributed to acute GVHD. Report only other organ involvement at the time of acute GVHD diagnosis or flare in the reporting period. Do not report symptoms ongoing but not attributed to acute GVHD at the time of acute GVHD diagnosis or flare. Specify the other organ system involvement in question 28. If reporting transaminitis under "other site," write in "transaminitis" rather than "liver" when specifying the site. This will prevent queries regarding incorrectly reporting liver GVHD (with bilirubin elevation) under "other site."*
4/6/ 17	2450: Post-TED Data	Modify	Updated instructions for question 21 to clarify reporting questions. The wording has changed, but the intent of the instructions is the same. *Question 21 will only be enabled in FormsNet3^{SM} if the center has reported "no" for question 19 and, therefore, has not reported a date of diagnosis in question 20. If prompted to answer question 21, report "yes" if acute GVHD was diagnosed in a prior reporting period and **any** of the following conditions are met:* • *The recipient's acute GVHD symptoms have been active since diagnosis and continue to be active during the current reporting period (i.e., no period of resolution or quiescence since diagnosis).* • *The recipient's acute GVHD symptoms had resolved before the first day of the current reporting period, but a flare occurred **within 30 days** of symptom resolution / quiescence.* • *The recipient was not diagnosed with chronic GVHD on or before the*

			date of the flare (see note above question 19). *Report "no" for questions 19 and 21 if the recipient had no active acute GVHD symptoms during the reporting period* ***OR*** *all acute GVHD signs / symptoms during the reporting period occurred <u>after</u> a diagnosis of chronic GVHD (see note above question 19).* ~~Indicate whether acute GVHD was clinically diagnosed during a previous reporting period and persisted, with active symptoms, into the present reporting period. Do not report quiescent or inactive acute GVHD, or a prior history of GVHD. If "yes," continue with question 29; questions concerning acute GVHD at the time of diagnosis will be skipped. See question 19 for instructions on reporting an acute GVHD flare or acute GVHD occurring after the onset of chronic GVHD.~~ ~~If the recipient has no active symptoms during the reporting period, report "no" and continue with question 31.~~
4/6/17	2450: Post-TED Data	Modify	Updated instructions for question 19 to clarify reporting questions. The wording has changed, but the intent of the instructions is the same. *Questions 19 and 21 on the Post-TED Form are meant to capture whether the recipient had active symptoms of acute GVHD during the reporting period. If the recipient had active acute GVHD during the reporting period, either question 19 or question 21 must be answered "yes." There will not be a situation where "yes" is reported for both question 19 and question 21. If question 19 is answered yes and a diagnosis date has been reported in question 20, question 21 will be disabled in FormsNet3^{SM}. Centers should report "yes" for question 19 to indicate the recipient developed acute GVHD in the following scenarios:* • *Acute GVHD is diagnosed for the first time during the reporting period.* • *An acute GVHD flare is diagnosed during the current reporting period <u>and* ***all*** *of the following conditions are met</u>:* ◦ *The recipient's prior acute GVHD symptoms did* ***not*** *persist from the prior reporting period into the beginning of the current reporting period.* ◦ *The flare is diagnosed after* ***at least 30 days*** *without any active acute GVHD symptoms.* ◦ *The recipient was not diagnosed with chronic GVHD on or before the date of the flare (see note above question 19).* *If the recipient does have active acute GVHD during the reporting period, but does not match either of the scenarios above, the center will likely need to report "no" for question 19 and "yes" for question 21. Question 21 is intended to capture acute GVHD which has continued from a prior reporting period. This includes any flares which do not meet the above conditions. The intent of*

			classifying GVHD episodes as newly developed or persistent is to avoid having centers re-report diagnosis information which has been captured on a prior form. Refer to the Acute GVHD Diagnosis Scenarios below to see examples of how to answer questions 19 and 21. *Report "no" for questions 19 and 21 if the recipient had no active acute GVHD symptoms during the reporting period* ***OR*** *all acute GVHD signs / symptoms during the reporting period occurred <u>after</u> a diagnosis of chronic GVHD (see note above question 19).* ~~Indicate whether a new clinical diagnosis of acute GVHD was documented during the reporting period. If acute GVHD was diagnosed during the reporting period, report "yes" and continue with question 20.~~ ~~If the recipient had a flare of acute GVHD occurring after at least a 30 day period of symptom quiescence, report "yes" and continue with question 20. Report "no" if symptoms resolve or become quiescent prior to the date of last report and then flare within 30 days. This should be reported as persistent acute GVHD which is captured in question 21.~~ ~~Indicate "no" if acute GVHD was not clinically diagnosed – initially or as a flare – in the reporting period; this includes instances where acute GVHD persists from a prior reporting period without flare in the current reporting period.~~
3/27/17	2450: Post-TED Data	Add	Added another example to questions 22 and 29 regarding when to report "Not Applicable" for the grade of acute GVHD. This instruction was previously available in the description of staging acute lower intestinal tract GVHD. * Lower intestinal tract involvement where the stage cannot be determined in select scenarios (see lower intestinal tract involvement description below)
3/27/17	2450: Post-TED Data	Add	Added instruction to question 30: If "not applicable" was reported for question 29, question 30 must be left blank.
3/15/17	2450: Post-TED Data	Add	Added instruction to question 37 regarding when to use Not Applicable. Instructions for this option choice were not previously available. *Indicate "not applicable" in any of the following scenarios:* • *The recipient has never received systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) to treat or prevent GVHD.* • *This form is being completed for a subsequent HCT and the recipient has never received systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) to treat or prevent GVHD since the start of*

			the preparative regimen for the most recent infusion (or since the date of the most recent infusion if no preparative regimen is given). • *The recipient stopped taking systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) to treat or prevent GVHD in a previous reporting period <u>and</u> did not restart systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) during the current reporting period.*
3/ 15/ 17	2450: Post-TED Data	Add	Added instruction to question 38 regarding when to use Not Applicable. Instructions for this option choice were not previously available. *Indicate "not applicable" in any of the following scenarios:* • *The recipient has never received non-steroidal immunosuppressive agents (including PUVA) to treat or prevent GVHD.* • *This form is being completed for a subsequent HCT and the recipient has never received non-steroidal immunosuppressive agents (including PUVA) to treat or prevent GVHD since the start of the preparative regimen for the most recent infusion (or since the date of the most recent infusion if no preparative regimen was given).* • *The recipient stopped taking non-steroidal immunosuppressive agents (including PUVA) to treat or prevent GVHD in a previous reporting period <u>and</u> did not restart non-steroidal immunosuppressive agents (including PUVA) during the current reporting period.*
3/ 14/ 17	2450: Post-TED Data	Add	Added Scenario D to Acute GVHD Grading Scenarios under question 29.
3/ 14/ 17	2450: Post-TED Data	Add	Added the following instruction below to question 29. This instruction was previously provided under question 19, but has been added to question 29 for further clarification. *If chronic GVHD was diagnosed during the reporting period, report the maximum severity of acute GVHD prior to the onset of chronic GVHD. See question 19 for further instructions. Acute GVHD grading scenario D below has been provided for further clarification.*
3/ 14/ 17	2450: Post-TED	Add	Added scenario B to Acute GVHD Diagnosis Scenarios under question 19.
3/ 14/ 17	2450: Post-TED	Modify	Modified the note above question 19 to address questions received. The instructions have not changed, but the wording has been updated to be clearer. *If acute GVHD is diagnosed prior to chronic GVHD, report the diagnosis information, maximum severity of any symptoms, and treatment administered up to the date of diagnosis of chronic GVHD in the acute GVHD section of the form (questions 19-30). Do not include any signs, symptoms, or treatment occurring on or after the onset of chronic GVHD when completing the acute GVHD section. Report any **new or persistent acute** GVHD symptoms ~~(persistent or newly~~*

			~~diagnosed)~~ occurring on or after the ~~date of diagnosis~~ onset of chronic GVHD only in the chronic GVHD section. ~~of the form (questions 234-323). See the examples included in the instructions for questions 252-301.~~ If chronic GVHD was diagnosed in a prior reporting period, ~~the center should report "no" for questions 19 and 21 in each subsequent reporting period. Any GVHD symptoms occurring in each subsequent reporting period must be reported in the chronic GVHD section of the form and should not be re-reported in the acute GVHD data fields.~~ See reporting scenarios included in question 19.
3/13/17	2450: Post-TED	Add	Added the following instruction to **Lower Intestinal Tract** description beneath questions 23-28: If diarrhea is attributed to acute GVHD during the reporting period, but the volume of stool output is not documented, report "stage 0" for lower intestinal tract involvement. In this case, report "Not Applicable" for the overall grade unless stage 4 acute skin GVHD, stage 4 acute liver GVHD, or an extreme decrease in performance status was also documented at the time point being reported (at diagnosis or maximum grade during the reporting period). Report an overall grade of IV if stage 4 acute skin GVHD, stage 4 acute liver GVHD, or an extreme decrease in performance status is documented at the time point being reported (see GVHD Staging and Grading Table).
3/8/17	2450: Post-TED	Add	Added instruction to Question 173: If therapy has continued from a previous reporting period, report the original start date and override the validation error in FormsNet3^{SM} using the code "verified correct."
3/2/17	2450: Post-TED	Modify	The note box above question 19 referred to the incorrect question numbers. The question numbers have been updated to the correct values. If acute GVHD is diagnosed prior to chronic GVHD, report the diagnosis information, maximum severity of any symptoms, and treatment administered up to the date of diagnosis of chronic GVHD in the acute GVHD section of the form (questions 19-30). Report any GVHD symptoms (persistent or newly diagnosed) occurring on or after the date of diagnosis of chronic GVHD in the chronic GVHD section of the form (questions 31-36). See the examples included in the instructions for question 19. If chronic GVHD was diagnosed in a prior reporting period, the center should report "no" for questions ~~31~~ 19 and ~~33~~ 21 in each subsequent reporting period. Any GVHD symptoms occurring in each subsequent reporting period must be reported in the chronic GVHD section of the form and should not be re-reported in the acute GVHD data fields.
3/1/17	2450: Post-TED	Modify	Updated liver scoring criteria on Chronic GVHD Organ Scoring table included under question 34. The criteria were documented incorrectly and have been updated to match the 2014 NIH Consensus Criteria.
3/1/17	2450: Post-TED	Modify	The note box above question 14 has been updated to indicate question 16 must be completed on all follow-up forms: ~~Questions 14-16 can only be completed on the 100 day, 6 month, 1 year, and 2 year follow-up forms. These questions will be skipped for all subsequent reporting periods.~~ Questions 14-15 can only be completed on the 100 day, 6 month, 1 year, and 2 year follow-up forms. These questions will be skipped for all subsequent reporting

			periods. Question 16 must be answered on all follow-up forms.
1/31/17	2450: Post-TED	Modify	Version 3 of the 2450: Post-TED section of the Forms Instruction Manual released. Version 3 corresponds to revision 4 of the Form 2450.

Last modified: 2019/04/19

Q1-6: Survival

The date of actual contact with the recipient to determine medical status for this follow-up report is based on a medical evaluation conducted by a clinician with responsibility for the recipient's care. Report the date of the medical evaluation performed closest to the designated time period of the form (e.g., Day+100, 6 months, or annual follow-up visit). Time windows are provided to guide selection of dates for reporting purposes. Recipients are not always seen within the time windows used for reporting follow-up dates, and some discretion is therefore required when determining which date to report. If the recipient is not seen within the time windows, report the date closest to the date of contact within reason.

If the Post-TED Form reports a subsequent transplant, report the date of latest follow-up as the day prior to the start of the preparative regimen. If no preparative regimen or conditioning was given, report the day prior to infusion as the date of contact.

Reporting Latest Follow-Up
When reporting the date of latest follow-up prior to a subsequent HCT, report the date specified above regardless whether there is actual patient contact on the date. This is an exception to standard date of follow-up reporting to ensure all dates are captured within the sequence of forms.

Question 1: Date of actual contact with the recipient to determine medical status for this follow-up report

Enter the date of actual contact with recipient to determine medical status for this follow-up report. Acceptable evaluations include those from the transplant center, referring physician, or other physician currently assuming responsibility for the recipient's care. If an evaluation was not performed at Day+100, at 6 months, or on the HCT anniversary, choose the date of the visit closest to the actual time point.

If the recipient has not been seen by a clinician during the reporting period but the survival status is known, submit the Post-TED Form reporting only the survival status.

In general, the date of contact should be reported as close to the 100 day, 6 month, or annual anniversary to transplant as possible. Report the date of actual contact with the recipient to evaluate medical status for the reporting period. In the absence of contact with a clinician, other types of contact may include a documented phone call with the recipient, a laboratory evaluation, or any other documented recipient interaction on the date reported. If there was no contact on the exact time point, choose the date of contact closest to the actual time point. Below, the guidelines show an ideal approximate range for reporting each post-transplant time point:

Time Point	Approximate Range
100 days	+/- 15 days (Day 85-115)
6 months	+/- 30 days (Day 150-210)
Annual	+/- 30 days (Months 11-13, 23-25, 35-37, etc)

Recipients are not always seen within the approximate ranges and some discretion is required when determining the date of contact to report. In that case, report the date closest to the date of contact within reason. The examples below assume that efforts were undertaken to retrieve outside medical records from the primary care provider, but no documentation was received.

Example 1. *The 100 day date of contact doesn't fall within the ideal approximate range.*
The autologous recipient was transplanted on 1/1/13 and is seen regularly until 3/1/13. After that, the recipient was referred home and not seen again until 7/1/13 for a restaging exam and 7/5/13 for a meeting to discuss the results.

What to report:
100 Day Date of Contact: 3/1/13 (Since there was no contact closer to the ideal date of 4/11/13, this date is acceptable)
6 Month Date of Contact: 7/5/13 (note the latest disease assessment would likely be reported as 7/1/13)

Example 2. *The 100 day date of contact doesn't fall within the ideal approximate range and the recipient wasn't seen again until 1 year post-HCT.*
The autologous recipient was transplanted on 1/1/12 and is seen regularly until 3/1/12. After that, the recipient was referred home and not seen again until 1/1/13 for a restaging exam and 1/4/13 for a meeting to discuss the results.

What to report:
100 Day Date of Contact: 3/1/13 (Since there was no contact closer to the ideal date of 4/11/13, this date is acceptable)
6 Month Form: Indicate the recipient is lost to follow-up in FormsNet3
1 Year Date of Contact: 1/4/13 (note the latest disease assessment would likely be reported as 1/1/13)

Additional Information

- A date of contact should never be used multiple times for the same recipient's forms.
    - For example, 6/1/13 should not be reported for both the 6 month and 1 year form. Instead, determine the best possible date of contact for each reporting period; if there is not a suitable date of contact for a reporting period, this may indicate that the recipient was lost to follow-up.

- If the recipient has a disease evaluation just after the ideal date of contact, capturing that data on the form may be beneficial.
    - For example, if the recipient's 90 day restaging exam was delayed until day 115 and the physician had contact with the recipient on day 117, the restaging exams can be reported as the latest disease assessment and day 117 would be the ideal date of contact, even though it is just slightly after the ideal approximate range for the date of contact.

Date of Contact & Death

In the case of recipient death, the date of death should be reported as the date of contact regardless of the time until the ideal date of contact. The date of death should be reported no matter where the death took place (inpatient at the transplant facility, at an outside hospital, in a hospice setting, or within the recipient's home).

If the death occurred at an outside location and records of death are not available, the dictated date of death within a physician note may be reported. If the progress notes detailing the circumstances of death are available, request these records. These records are useful for completing required follow-up data fields and the cause of death data fields on this form. If the exact date of death is not known, use the processed described for reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Example 3. *The recipient has died before their six month anniversary.*
The recipient is transplanted on 1/1/13, was seen regularly through the first 100 days. They had restaging exams on 4/4/13 and was seen on 4/8/13, and then died on 5/13/13 in the hospital emergency room.

What to report:
100 Day Date of Contact: 4/8/13 (note the latest disease assessment would likely be reported as 4/4/13)
6 Month Date of Contact: 5/13/13 (though the death does not occur within the ideal approximate range for 6 months)

Example 4. *The recipient has died after their six month anniversary.*
The recipient is transplanted on 1/1/13, was seen regularly through the first 100 days. They had restaging exams on 4/22/13 and was seen on 4/23/13. Based on findings in the restaging exam, the recipient was admitted for additional treatment. The disease was found to be refractory on a 6/25/13 restaging exam, and the recipient was discharged to hospice on 7/8/13. The hospital was notified via telephone that the recipient died on 7/16/13.

What to report:
100 Day Date of Contact: 4/23/13 (note the latest disease assessment would likely be reported as 4/22/13)

6 Month Date of Contact: 7/16/13 (note the latest disease assessment would likely be reported as 6/25/13)

Date of Contact & Subsequent Transplant

If the recipient has a subsequent HCT, report the date of contact as the day before the preparative regimen begins for the subsequent HCT. If no preparative regimen is given, report the date of contact as the day before the subsequent HCT. In these cases, actual contact on that day is **not** required, and the day prior to the initiation of the preparative regimen (or infusion, if no preparative regimen) should be reported. This allows every day to be covered by a reporting period, but prevents overlap between transplant events.

Example 5. *The recipient had a 2nd transplant with a preparative regimen.*
The recipient has their first transplant on 1/1/13 and a planned second transplant on 2/1/13. The recipient was admitted on and received their first dose of chemotherapy for the preparative regimen for HCT #2 on 1/28/13.

What to report:
100 Day Date of Contact: 1/27/13 (regardless of actual contact on that date)

Example 6. *The recipient had a subsequent transplant without a preparative regimen.*
Following their first transplant on 1/1/13, a recipient with SCID required a subsequent allogeneic transplant due to poor graft function. The recipient has remained inpatient following the first transplant. The physician planned the second transplant for 5/31/13, and proceeded without a preparative regimen.

What to report:
100 Day Date of Contact: 4/11/13 (+/- 15 days)
6 Month Date of Contact: 5/30/13

For more information regarding reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Question 2: Specify the recipient's survival status at the date of last contact:

Indicate the clinical status of the recipient on the date of actual contact for follow-up evaluation. If the recipient is alive continue with question 7. If the recipient has died, continue with question 3.

Question 3: Primary cause of death:

Report the underlying cause of death. Do not report the mode of death, such as cardiopulmonary arrest. According to the Centers for Disease Control and Prevention, National Center for Health Statistics, the underlying cause of death is "the disease or injury that initiated the chain of events that led directly or

inevitably to death."

Report only one primary cause of death; see the Cause of Death Codes section of the Forms Instructions Manual for more details regarding cause of death. If the recipient has recurrent/persistent/progressive disease at the time of death, consider if the disease was the primary cause of death or a contributing cause of death. It should not be assumed that the presence of disease indicates that the disease was the primary cause of death.

Aplastic Anemia
If the recipient received an HCT for aplastic anemia, and the primary cause of death is attributed to relapse/recurrence of disease, report "HCT related causes" and select "Rejection/Poor graft function" as the cause of death.

If the primary cause of death is unclear, consult with a physician for their best medical opinion.

Question 4: Specify

Specify the details for primary cause of death requiring "other" specification. Options which require additional specification include **"Other infection", "Other pulmonary syndrome", "Multiple organ failure", "Other organ failure", "Other hemorrhage", "Other vascular", and "Other cause".** Information reported in the specify field must pertain to the option selected (e.g., an infectious cause of death should be specified for "Other infection").

Question 5: Contributing cause of death:

Report any additional causes of death. All contributing causes of death are important for analysis of transplant outcomes. Refer to the Cause of Death Codes section of the Forms Instructions Manual for more details regarding cause of death.

If there were multiple contributing causes of death, enable an additional instance to report additional causes.

Question 6: Specify

Specify the details for contributing cause of death requiring "other" specification. Options which require additional specification include **"Other infection", "Other pulmonary syndrome", "Multiple organ failure", "Other organ failure", "Other hemorrhage", "Other vascular", and "Other cause".** Information reported in the specify field must pertain to the option selected (e.g., an infectious cause of death should be specified for "Other infection").

Last modified: 2017/02/22

Q7-13: Subsequent Transplant

Question 7: Did the recipient receive a subsequent HCT since the date of last report?

Indicate whether the recipient received a second (or third, etc.) hematopoietic stem cell infusion. Hematopoietic stem cells are defined as mobilized peripheral blood stem cells, bone marrow, or cord blood. The source of the hematopoietic stem cells may be allogeneic unrelated, allogeneic related, or autologous. For more information on how to distinguish infusion types (example: HCT versus DCI), see Appendix D.

If the recipient has received a subsequent HCT since the date of the last report, ensure the date of actual contact reported in question 1 is the date immediately prior to the start of the preparative regimen for the subsequent HCT. If no preparative regimen was given, report the date prior to infusion.

Question 8: Date of subsequent HCT

Report the planned or actual date of the subsequent HCT infusion. If the planned date is reported and changes, this field will need to be updated to reflect the actual date of subsequent HCT infusion. If multiple days of infusion are planned, report the first.

Question 9: What was the indication for subsequent HCT?

Indicate the reason for the subsequent HCT (check only one).

- Graft failure / insufficient hematopoietic recovery. Additional stem cells are required because the hematopoietic recovery indefinitely declined after the initial hematopoietic recovery or hematopoietic recovery was deemed insufficient or too slow for survival following previous high-dose therapy and HCT. If autologous cells are infused for this reason, this is considered autologous rescue; in this case, reporting will continue under the prior HCT date and a new Pre-TED form is not required.
- Persistent primary disease. Additional stem cells are required because of the persistent presence of disease pre and post-transplant (i.e., complete remission was never achieved following the previous transplant).
- Recurrent primary disease. Additional stem cells are required because of relapsed primary disease (i.e., complete remission was achieved pre or post-transplant, but the disease relapsed following the previous transplant).
- Planned second HSCT, per protocol. Additional stem cells are given as defined by the protocol for a subsequent transplant/infusion. This transplant is not based upon recovery, disease status, or any other assessment.
- New malignancy (including PTLD and EBV lymphoma). Additional stem cells are required because the recipient has developed a new malignancy. This does not include a transformation or progression of

the original malignancy for which the recipient was transplanted (refer to question 407 for more information). If “new malignancy” is selected, also complete questions 407-449.

- Insufficient chimerism. In the case of a stable, mixed donor chimerism, the infusion of additional cells (usually lymphocytes and not mobilized stem cells) is typically classified as a DCI. Verify with the transplant physician that the cells given should be reported as a subsequent transplant and that stable, mixed chimerism is the reason for the transplant. However, in the case of declining chimerism – when the percentage of donor cells is sequentially decreasing on several studies, indicating possible impending graft failure – additional stem cells are required. Usually the donor chimerism has fallen below 30-50%.
- Other. If additional stem cells are given for a reason other than the options listed, select “other” and complete question 10.

Question 10: Specify other indication

Specify the indication for subsequent HCT.

Question 11: Source of HSCs

Report the stem cell source of the recipient’s subsequent HCT. Allogeneic sources and autologous sources with indication other than “graft failure / insufficient hematopoietic recovery” will require another Pre-TED form to be completed for the subsequent HCT.

Question 12: Has the recipient received a cellular therapy since the date of last report? (e.g. DCI)

> **Therapy Over Multiple Reporting Periods**
> If course of cellular therapy carries over an HCT reporting period, and has already been reported on a prior form, do not re-report that course of cellular therapy. For example, if a course of cellular therapy includes three infusions, and the third infusion overlaps from the one year to two year HCT reporting period, do not report a cellular therapy since the date of the last report on the two year HCT follow up form.

Indicate whether the recipient received a cellular therapy for any reason within the reporting period. The most common type of post-HCT cellular therapy would be a donor cellular infusion (DCI) or donor lymphocyte infusion (DLI). These infusions are not intended to promote hematopoiesis. If the recipient received additional cells due to engraftment issues, or if they received an infusion of unmanipulated CD34+ cellular product (stimulated peripheral blood stem cells, bone marrow, or cord blood), report as a subsequent HCT rather than a cellular therapy. For more information on how to distinguish infusion types (example: HCT versus DCI), see “Appendix D.

A DCI is a form of cellular therapy that uses cells from the original donor, and is commonly used to create a

graft-versus-leukemia / tumor (GVL / GVT) effect. The recipient does not receive a preparative regimen prior to receiving the donor cells because the purpose of a DCI is to activate the immune system rather than repopulate the marrow. The recipient may, however, be given therapy prior to the infusion for the purpose of disease control. The types of cells used in a DCI include, but are not limited to: lymphocytes, unstimulated peripheral blood mononuclear cells, dendritic cells, and / or mesenchymal cells.

Other forms of cellular therapy may include cytotoxic T-lymphocytes (CTLC) to treat infections or chimeric antigen receptor T-cells (CAR T-cells) to treat persistent, progressive or recurrent disease.

Question 13: Date of cellular therapy

Report the date of cellular therapy infusion. If multiple infusions were received in the reporting period, report the earliest. If infusions are continuing from a previous instance of DCI, only report in the period during which the first infusion was received.

Last modified: 2017/06/30

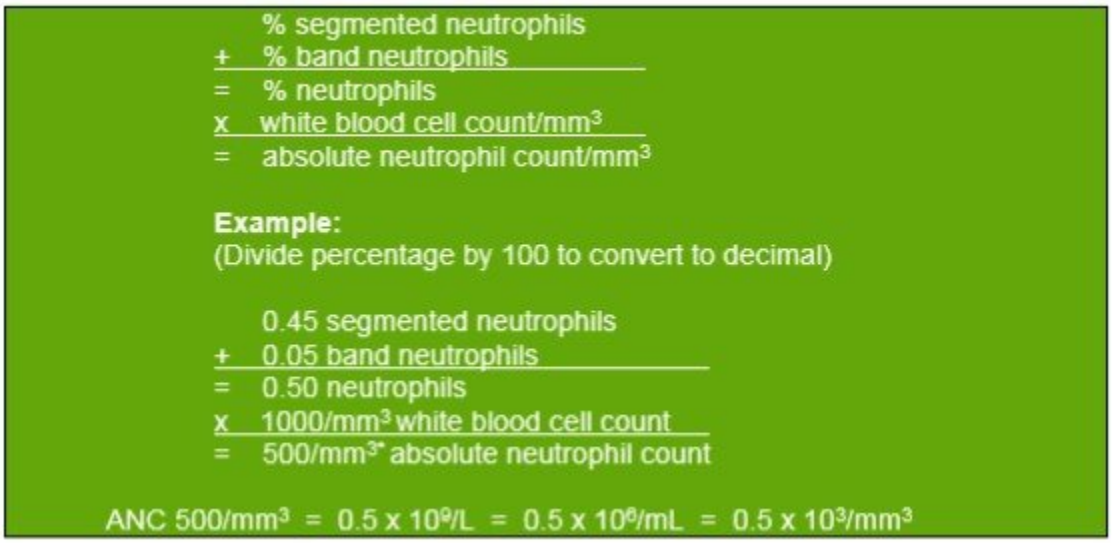
Q14-16: Initial ANC Recovery

Questions 14-15 can only be completed on the 100 day, 6 month, 1 year, and 2 year follow-up forms. These questions will be skipped for all subsequent reporting periods. Question 16 must be answered on all follow-up forms.

Initial ANC Recovery
Recovery, as reported in this section, does not distinguish between allogeneic engraftment (blood and stem cells of donor origin) and autologous engraftment (blood and stem cells of host origin). To demonstrate *engraftment* for allogeneic recipients, particularly non-myeloablative or reduced intensity approaches, chimerism tests must be done. These measure the quantity of donor cells relative to the quantity of host (recipient) cells. While ANC usually represents donor cells in allogeneic HCT, it cannot be proven without chimerism studies.

ANC recovery is defined as an absolute neutrophil count (ANC) of ≥ 0.5 × 10^9/L (500/mm^3) for three consecutive laboratory values obtained on different days. Date of ANC recovery is the date of the first of three consecutive laboratory values where the ANC is ≥ 0.5 × 10^9/L. At some institutions, the laboratory reports display the ANC value once there are sufficient white blood cells to perform a differential count. At other institutions, the laboratory reports do not display the ANC, and it must be calculated from the white blood cell count (WBC) and the percent of segmented and band neutrophils (if the differential was performed on a machine, the percent neutrophils will include both segmented and band neutrophils). If the laboratory report displays an automated ANC value of exactly 0.5, the actual ANC value should be calculated from the manual differential if available. The calculated value from the manual differential will determine ANC recovery. If your institution's laboratory reports do not display the ANC value, use the following calculation to determine the ANC:

Calculating Absolute Neutrophil Count (ANC)[1]



[1] Traditionally, the definition of ANC recovery required selecting the first date of three consecutive days in which the recipient's ANC was ≥ 0.5×10^9/L (500/mm^3). For various reasons it may not be possible to obtain daily laboratory values. Under those circumstances, report ANC recovery based upon three consecutive laboratory values (drawn more than a day apart) as long as the ANC remains ≥ 0.5×10^9/L (500/mm^3).

Tracking the date of ANC recovery may not always be straightforward. In some cases the ANC may fluctuate for a period of time before the recipient fully recovers. In other cases the ANC may remain above 0.5×10^9/L for several days immediately post-HCT and then fall below 0.5×10^9/L. Do not begin counting ANC values of ≥ 0.5×10^9/L towards recovery until the ANC has dropped to the lowest level (nadir) post-HCT. If the recipient was transplanted using a non-myeloablative (NST) or reduced intensity (RIC) regimen, or was transplanted for an immunodeficiency (e.g., SCID, WAS), the recipient's ANC may never drop below 0.5×10^9/L. If this is the case, an ANC recovery date will not be reported, and the "never below" option should be chosen. However, if the recipient's ANC drops below 0.5×10^9/L for even one day, this should be considered the nadir and "never below" should not be chosen. See the following example for more information regarding tracking the date of ANC recovery.

Tracking ANC Recovery

Transplant Date = May 6

Date	WBC	%Neutrophils	ANC	
May 7	900	0.6	540	
May 8	850	0.59	502	
May 9	720	0.7	504	

May 10	300	0.45	135	
May 11	15	No differential	—	
May 12	30	No differential	—	
May 13	50	No differential	—	
May 14	250	0.4	100	
May 15	800	0.7	560	*Date of first recovery: ANC ≥ 0.5×10^9/L*
May 16	1050	0.8	840	
May 17	1000	0.7	700	
May 18	1800	0.6	1080	
May 19	2000	0.55	1100	
May 20	2500	0.53	1325	
May 21	2250	0.43	968	
May 22	1500	0.45	675	

Question 14: Was there evidence of initial hematopoietic recovery?

Indicate whether or not there was evidence of **initial** ANC recovery following this HCT.

Check only **one** response:

- If “yes, ANC ≥ 500/mm^3 (or ≥ 0.5 × 10^9/L) achieved and sustained for 3 laboratory values,” continue with question 15.
- If “no, ANC ≥ 500/mm^3 (or ≥ 0.5 × 10^9/L) was not achieved,” continue with question 16.
- Check “not applicable” if the recipient’s ANC never dropped below 0.5 × 10^9/L at any time post-HCT. This option is only applicable in the 100-day reporting period. Continue with question 16.
- Check “previously reported” if this is the 6 month or annual follow-up, and the initial ANC recovery has already been reported. Continue with question 16.

Question 15: Date ANC ≥ 500/mm^3 (first of 3 labvalues):

Enter the **first** date of the three consecutive laboratory values obtained on different days where the ANC was ≥ 500/mm^3 (or ≥ 0.5 × 10^9/L). For an example of tracking ANC recovery, see the Tracking ANC Recovery example above.

For more information regarding reporting partial or unknown dates, see General Instructions, General

Guidelines for Completing Forms.

Question 16: Did late graft failure occur?

Late (or secondary) graft failure is defined when the recipient meets criteria for initial engraftment but subsequently develops loss of a previously functioning graft by development of at least two lines of cytopenia. Late graft failure is more often associated with allogeneic HCT than with autologous HCT. Some possible causes for late graft failure include graft rejection related to residual host immunity, persistent or progressive disease, low donor cell yield, medication side-effect, infection or GvHD.[2]

If the recipient meets the criteria of graft failure, check “yes.”

[2] Appelbaum, F. R., & Thomas, E. D. (2009). Thomas’ Hematopoietic Cell Transplantation: Stem Cell Transplantation (4th ed.). Chichester, UK: Wiley-Blackwell.

Last modified: 2017/03/01

Q17-18: Initial Platelet Recovery

Questions 17-18 can only be completed on the 100 day, 6 month, 1 year, and 2 year follow-up forms. These questions will be skipped for all subsequent reporting periods.

Optional for Non-U.S. Centers

The following questions refer to **initial** platelet recovery following the HCT for which this form is being completed. All dates should reflect **no platelet transfusions administered for seven consecutive days.**

Report the date of the first of three consecutive laboratory values ≥ 20 × 10^9/L obtained on different days, as shown in the Reporting Platelet Recovery example below. Note that platelet recovery may take place well after the recipient has returned to the referring physician for care. It is essential that information and laboratory values be obtained from the referring physician.

Transfusions temporarily increase blood cell counts. When the data is later used for analysis, it is important to be able to distinguish between a recipient whose own body was creating the cells and a recipient who required transfusions to support the counts.

The following example illustrates the procedure to follow for reporting platelet recovery.

Reporting Platelet Recovery

	Transfusion										
Day	**0**	1	2	3	4	5	6	**7**	8	9	10
Platelet Count	**10,000**	35,000	30,000	25,000	10,000	15,000	19,000	**23,000**	25,000	40,000	50,000
Date	**1/1/2008**	1/2/ 2008	1/3/ 2008	1/4/ 2008	1/5/ 2008	1/6/ 2008	1/7/ 2008	**1/8/ 2008**	1/9/ 2008	1/10/ 2008	1/11/ 2008
								1st of 3			

Report **1/8/08** as date platelet count ≥ 20 × 10^9/L

Question 17: Was an initial platelet count ≥ 20 × 10^9/L achieved?

Indicate whether or not there was evidence of initial platelet recovery following this HCT.

Check only one response:

- If “yes,” continue with question 18.
- If “no,” continue with question 19.
- Check “not applicable,” if the recipient’s platelets never dropped below 20 × 10^9/L at any time post-HCT and a platelet transfusion was never required. If the recipient’s platelet count drops below 20 × 10^9/L and/or the recipient received a platelet transfusion even once, do not use this option. This option is only applicable in the 100-day reporting period. Continue with question 19.
- Check “previously reported” if this is the six-month or annual follow-up, and initial platelet recovery has already been reported on a previous form. Continue with question 19.

Question 18: Date platelet ≥ 20 × 10^9/L

Enter the **first** date of three consecutive laboratory values obtained on different days where the platelet count was ≥ 20 × 10^9/L. Ensure that no platelet transfusions were administered for seven days immediately preceding this date. Include day seven, as shown in the Reporting Platelet Recovery example above, when determining the recovery date.

If three laboratory values were not obtained on consecutive days, but a sequential rise of ≥ 20 × 10^9/L is demonstrated, follow the examples below when determining an estimated date.

Reporting Scenarios:

A. The recipient is being seen in the outpatient clinic and receives a platelet transfusion on January 1. The platelet count is 22 × 10^9/L on January 2, 24 × 10^9/L on January 3, and 28 × 10^9/L on January 4. The recipient does not come into the clinic for evaluation until one month later. The recipient has not received any more platelet transfusions and the platelet count is well above 20 × 10^9/L. Report January 8 (day seven post-platelet transfusion) for the date of platelet recovery.

B. The recipient is being seen in the outpatient clinic and receives a platelet transfusion on January 1. The platelet count is ≥ 20 × 10^9/L on January 2, January 3, and January 4. The recipient is then discharged back to their primary care physician. The transplant center receives a follow-up note from the primary care physician that states “recipient recovered their platelets in January of 2011.” Report an estimated date of recovery using the guidelines available in General Instructions, General Guidelines for

Completing Forms.

For more information regarding reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Last modified: 2017/01/31

Q19-38: Graft versus Host Disease (Allogeneic Only)

Autologous Transplants
If this was an autologous HCT, continue with the Liver Toxicity Prophylaxis section of the form starting with question 39. The graft-versus-host disease section should only be completed for allogeneic HCTs.

Graft versus Host Disease (**GVHD**) is an immunological phenomenon resulting from the reaction of donor immune cells against major or minor histocompatibility antigens of the recipient. GVHD is primarily caused by donor-derived T-cells. Very rarely, GVHD may occur due to autologous reactivity (autologous GVHD), third party transfusions, or with identical twin transplantation.

Factors influencing the severity of GVHD are related to three main categories: 1) donor or graft, 2) recipient, and 3) treatment. The most influential donor/graft factor is the degree of genetic disparity between the donor and the recipient (HLA match), but other risk factors include female donor to male recipient, donor parity, older donors, and T-cell dose. The occurrence of acute GVHD becomes a risk factor for the development of chronic GVHD. Recipient age and prior infections are also factors.

In the past, GVHD was classified as acute or chronic based on its time to diagnosis following transplant, and other clinical and histological (biopsy or post-mortem) features. Today, there has been increased recognition that acute and chronic GVHD are not dependent upon time since HCT, so determination of acute or chronic should rest on clinical and histologic features. **However, organ staging and overall grade should only be calculated from the clinical picture, not histology.** Acute GVHD usually begins between 10 and 40 days after HCT but can appear earlier or later. The organs most commonly affected by acute GVHD are the skin, gut, or liver. Other sites, such as the lung, may be involved.

Acute / Chronic GVHD
If acute GVHD is diagnosed prior to chronic GVHD, report the diagnosis information, maximum severity of any symptoms, and treatment administered up to the date of diagnosis of chronic GVHD in the acute GVHD section of the form (questions 19-30). Do not include any signs, symptoms, or treatment occurring on or after the onset of chronic GVHD when completing the acute GVHD section.
Report any **new or persistent** acute GVHD symptoms occurring on or after the onset of chronic GVHD only in the chronic GVHD section. If chronic GVHD was diagnosed in a prior reporting period, report “no” for questions 19 and 21 in each subsequent reporting period.

See reporting scenarios included in question 19.

Question 19: Did acute GVHD develop since the date of last report?

Questions 19 and 21 on the Post-TED Form are meant to capture whether the recipient had active symptoms of acute GVHD during the reporting period. If the recipient had active acute GVHD during the reporting period, either question 19 or question 21 must be answered "yes" unless there has been a prior / concurrent diagnosis of chronic GVHD (see note above question 19). There will not be a situation where "yes" is reported for both question 19 and question 21. If question 19 is answered yes and a diagnosis date has been reported in question 20, question 21 will be disabled in FormsNet3^{SM}. Centers should report "yes" for question 19 to indicate the recipient developed acute GVHD in the following scenarios:

- Acute GVHD is diagnosed for the first time during the reporting period.
- An acute GVHD flare is diagnosed during the current reporting period and **all** of the following conditions are met:
  - The recipient's prior acute GVHD symptoms did **not** persist from the prior reporting period into the beginning of the current reporting period.
  - The flare is diagnosed after **at least 30 days** without any active acute GVHD symptoms.
  - The recipient was not diagnosed with chronic GVHD on or before the date of the flare (see note above question 19).

If the recipient does have active acute GVHD during the reporting period, but does not match either of the scenarios above, the center will likely need to report "no" for question 19 and "yes" for question 21. Question 21 is intended to capture acute GVHD which has continued from a prior reporting period. This includes any flares which do not meet the above conditions. The intent of classifying GVHD episodes as newly developed or persistent is to avoid having centers re-report diagnosis information which has been captured on a prior form. Refer to the Acute GVHD Diagnosis Scenarios below to see examples of how to answer questions 19 and 21.

Report "no" for questions 19 and 21 if the recipient had no active acute GVHD symptoms during the reporting period **OR** all acute GVHD signs / symptoms during the reporting period occurred after a diagnosis of chronic GVHD (see note above question 19).

Indicate "unknown" if there is no information about the recipient's GVHD status for the reporting period. This option should be used sparingly and only when no judgment can be made about the presence or absence of GVHD in the reporting period.

Acute GVHD Diagnosis Scenarios:

A. A recipient receives a HCT on 1/1/2015 and develops acute GVHD which is clinically diagnosed on 2/1/2015. At least one of their symptoms, attributed to acute GVHD, persists beyond the 100 day date of contact which is 4/5/2015. Treatment continues and symptoms completely resolve on 5/1/2015. Immunosuppression is tapered until a flare of acute GVHD is diagnosed on 5/25/2015. Immunosuppression is given and symptoms quickly resolve with no active acute GVHD beginning 6/10/2015. The six month date of contact is 6/20/2015. Another flare of acute GVHD is clinically diagnosed on 8/15/2015.

100 Day Post-TED Form:

Question 19: Report “yes” to indicate a new clinical diagnosis of acute GVHD.
Question 20: Report the initial date of diagnosis (2/1/2015).
Question 21: Leave blank. This question will be skipped whenever a diagnosis date has been entered in question 20.
Questions 22-28: Answer these questions based on the assessments performed at the time of diagnosis (2/1/2015).

Six Month Post-TED Form:

Question 19: Report “no” to indicate acute GVHD persists from a previous report. Notes, the flare of acute GVHD was < 30 days from symptoms resolution so it doesn’t count as a new reportable episode.
Question 20: Leave blank. This question will be skipped whenever question 19 is answered “no.”
Question 21: Report “yes” to indicate GVHD persists from a previous report.
Questions 22-28: Leave blank. Answering “yes” for question 21 prevents the center from re-reporting diagnosis information already captured on the 100 day form.

One Year Post-Infusion Data Form:

Question 19: Report “yes” to indicate a flare of acute GVHD occurred at least 30 days after resolving during a prior reporting period.
Question 20: Report the diagnosis date of the flare occurring during the reporting period (8/15/2015).
Question 21: Leave blank. This question will be skipped whenever a diagnosis date has been entered in question 20.
Questions 22-28: Answer these questions based on the assessments performed at the time of diagnosis of the flare of acute GVHD (8/15/2015).

B. A recipient receives a HCT on 1/1/2015 and develops acute skin GVHD on 2/1/2015 and then chronic eye GVHD on 3/1/2015. Both acute and chronic symptoms resolve by the 100 day date of contact (4/5/2015). While tapering their immunosuppression, the recipient has a flare of their acute skin GVHD on 5/30/2015. Treatment continues and symptoms completely resolve by the six month date of contact (6/20/

2015).

100 Day Post-Infusion Data Form:

Question 19: Report “yes” to indicate a new clinical diagnosis of acute GVHD.
Question 20: Report the initial date of diagnosis (2/1/2015).
Question 21: Leave blank. This question will be skipped whenever a diagnosis date has been entered in question 20.
Questions 22-28: Answer these questions based on the assessments performed at the time of diagnosis (2/1/2015).
Questions 29-30: Answer these questions based on any symptoms and treatment documented from the onset of acute GVHD (2/1/2015) up to the diagnosis of chronic GVHD (3/1/2015). This instruction is provided in the note box above question 19.

Six Month Post-Infusion Data Form:

Question 19: Report “no” to indicate acute GVHD did not develop during the reporting period.
Question 20: Leave blank. This question will be skipped whenever question 19 is answered “no.”
Question 21: Report “no” to indicate acute GVHD did not persist from a previous report.

If chronic GVHD has been diagnosed in a prior reporting period, report “no” for questions 19 and 21. Any new or persistent acute GVHD symptoms occurring after the onset of chronic GVHD must be reported in the chronic GVHD section of the form. Do not include any signs, symptoms, or treatment occurring on or after the onset of chronic GVHD when completing the acute GVHD section. This instruction has been provided in the note above question 19.

Question 20: Date of acute GVHD diagnosis

Report the date of clinical diagnosis of acute GVHD. The clinical diagnosis date may not necessarily be the date the symptoms began (example: the recipient developed a rash one week prior to the physician clinically diagnosing acute skin GVHD). If the clinical diagnosis is documented, but the diagnosis date is unclear, obtain documentation from the primary physician confirming the clinical diagnosis date.

If the recipient developed more than one episode of acute GVHD in the same reporting period, report the date of onset of the first episode of acute GVHD.

For more information regarding reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Question 21: Did acute GVHD persist since the date of last report?

Question 21 will only be enabled in FormsNet3^{SM} if the center has reported "no" for question 19 and, therefore, has not reported a date of diagnosis in question 20. If prompted to answer question 21, report "yes" if acute GVHD was diagnosed in a prior reporting period and **any** of the following conditions are met:

- The recipient's acute GVHD symptoms have been active since diagnosis and continue to be active during the current reporting period (i.e., no period of resolution or quiescence since diagnosis).
- The recipient's acute GVHD symptoms had resolved before the first day of the current reporting period, but a flare occurred **within 30 days** of symptom resolution / quiescence.
- The recipient was not diagnosed with chronic GVHD on or before the date of the flare (see note above question 19).

Report "no" for questions 19 and 21 if the recipient had no active acute GVHD symptoms during the reporting period **OR** all acute GVHD signs / symptoms during the reporting period occurred after a diagnosis of chronic GVHD (see note above question 19).

Indicate "unknown" if there is no information about the recipient's GVHD status for the reporting period. This option should be used sparingly and only when no judgment can be made about the presence or absence of GVHD in the reporting period.

Question 22: Overall grade of acute GVHD at diagnosis

Indicate the overall grade of acute GVHD at the time of diagnosis. For reporting purposes, "at diagnosis" is defined as the period between onset of signs / symptoms and the initiation of therapy to treat GVHD (topical or systemic). The acute GVHD grading scale is based on **clinical evidence** (physician observation), not histology. Pathology reports sometimes list a histologic grade of GVHD. Do not report the histologic grade. GVHD scoring and grading is based on *clinical* severity, not histologic severity. Biopsy of affected organs allows for more precise diagnosis as to the presence or absence of GVHD. However, **overall grading remains clinical** and is based on the criteria published by Przepiorka et al., *Bone Marrow Transplant* 1995; 15(6):825-8, see the GVHD Grading and Staging table below.

If acute GVHD was present, but the grade at diagnosis was not documented and it cannot be determined from the grading and staging table, report "not applicable."

Examples may include:

- Only elevated liver function tests without increased bilirubin
- Any other organ involvement without skin, liver, or gut symptoms attributable to GVHD

- Lower intestinal tract involvement where the stage cannot be determined in select scenarios (see lower intestinal tract involvement description below)

Upper GI GVHD
If the recipient only has upper GI GVHD during the reporting period, report this as overall grade II. This may differ from prior instructions regarding how to report upper GI GVHD.

GVHD Grading and Staging

Stage	Skin	Liver	Gut
1	Rash on <25% of skin[1]	Bilirubin 2-3 mg/dl[2]	Diarrhea > 500 ml/day[3] or persistent nausea[4] *Pediatric*: 280-555 ml/m^2/day or 10-19.9 mL/kg/day
2	Rash on 25-50% of skin	Bilirubin 3-6 mg/dl	Diarrhea >1000 ml/day *Pediatric*: 556-833 ml/m^2/day or 20-30 mL/kg/day
3	Rash on >50% of skin	Bilirubin 6-15 mg/dl	Diarrhea >1500 ml/day *Pediatric*: >833 ml/m^2/day or > 30 mL/kg/day
4	Generalized erythroderma with bullous formation	Bilirubin >15 mg/dl	Severe abdominal pain, with or without ileus, and / or grossly bloody stool
Grade[5]			
I	Stage 1-2	None	None
II	Stage 3	Stage 1	Stage 1
III	—	Stage 2-3	Stages 2-4
IV[6]	Stage 4	Stage 4	—

[1] Use “Rule of Nines” (Percent Body Surfaces table) or burn chart to determine extent of rash.

[2] Range given as total bilirubin. Downgrade one stage if an additional cause of elevated bilirubin has been documented.

[3] Volume of diarrhea applies to adults. For pediatric patients, the volume of diarrhea should be based on body surface area. Downgrade one stage if an additional cause of diarrhea has been documented.

[4] Persistent nausea with or without histologic evidence of GVHD in the stomach or duodenum.

[5] Criteria for grading given as minimum degree of organ involvement required to confer that grade.

[6] Grade IV may also include lesser organ involvement with an extreme decrease in performance status

Questions 23-28: List the stage for each organ at diagnosis of acute GVHD.

Report the stage of each organ at diagnosis. For reporting purposes, “at diagnosis” is defined as the period between onset of signs / symptoms and the initiation of therapy to treat GVHD (topical or systemic).

Skin: Select the stage that reflects the body surface area involved with a maculopapular rash attributed to acute GVHD at the time of acute GVHD diagnosis or flare in the reporting period. See the Percent Body Surfaces table below to determine the percent of body surface area involved with a rash. Do not report ongoing rash not attributed to acute GVHD at the time of acute GVHD diagnosis or flare.

Percent Body Surfaces

Body Area	Percent	Total Percentage
Each Arm	9%	18%
Each Leg	18%	36%
Chest & Abdomen	18%	18%
Back	18%	18%
Head	9%	9%
Pubis	1%	1%

Lower intestinal tract (use mL/day for adult recipients and mL/m^2/day for pediatric recipients): Select the stage that reflects the volume of diarrhea attributed to acute GVHD at the time of acute GVHD diagnosis or flare in the reporting period. Use mL/day for adult recipients and mL/m^2/day for pediatric recipients. Input and output records may be useful in determining the volume of diarrhea. Do not report diarrhea ongoing but not attributed to acute GVHD at the time of acute GVHD diagnosis or flare.

If diarrhea is attributed to acute GVHD during the reporting period, but the volume of stool output is not documented, report “stage 0” for lower intestinal tract involvement. In this case, report “Not Applicable” for the overall grade unless stage 4 acute skin GVHD, stage 2-4 acute liver GVHD, or an extreme decrease in performance status was also documented at the time point being reported (at diagnosis or maximum grade during the reporting period).Report an overall grade of IV if stage 4 acute skin GVHD, stage 4 acute liver GVHD, or an extreme decrease in performance status is documented at the time point being reported (see GVHD Staging and Grading Table). Report overall grade III if stage 2-3 liver involvement is documented at the time point being reported and there is no evidence of grade IV GVHD.

Upper intestinal tract: Select the stage that reflects the presence of persistent nausea or vomiting attributed to acute GVHD at the time of acute GVHD diagnosis or flare in the reporting period. Do not report nausea or vomiting ongoing but not attributed to acute GVHD at the time of acute GVHD diagnosis or flare.

Liver: Select the stage that reflects the bilirubin level attributed to acute GVHD at the time of acute GVHD diagnosis or flare in the reporting period. Do not report hyperbilirubinemia ongoing but not attributed to acute GVHD at the time of acute GVHD diagnosis or flare.

For recipients who have a normal bilirubin level with elevated transaminase levels attributed to acute GVHD, report this in “Other clinical organ involvement.”

Other site(s) involved with acute GVHD: Indicate whether acute GVHD affected an organ other than skin, upper GI, lower GI, or liver manifesting with hyperbilirubinemia. This includes transaminitis attributed to acute GVHD. Report only other organ involvement at the time of acute GVHD diagnosis or flare in the reporting period. Do not report symptoms ongoing but not attributed to acute GVHD at the time of acute GVHD diagnosis or flare. Specify the other organ system involvement in question 28. If reporting transaminitis under “other site,” write in “transaminitis” rather than “liver” when specifying the site. This will prevent queries regarding incorrectly reporting liver GVHD (with bilirubin elevation) under “other site.”

Question 29: Maximum Overall Grade of Acute GVHD

Indicate the overall maximum grade of acute GVHD since the date of the last report.. Grading is based on **clinical evidence** (physician observation), not histology. Pathology reports sometimes list a histologic grade of GVHD. Do not report the histologic grade. GVHD scoring and grading is based on *clinical* severity, not histologic severity. Biopsy of affected organs allows for more precise diagnosis as to the presence or absence of GVHD. However, **overall grading remains clinical** and is based on the criteria published by Przepiorka et al., *Bone Marrow Transplant* 1995; 15(6):825-8; see the GVHD Grading and Staging table above.

If chronic GVHD was diagnosed during the reporting period, report the maximum severity of acute GVHD prior to the onset of chronic GVHD. See question 19 for further instructions. Acute GVHD grading scenario D below has been provided for further clarification.

Report the recipient’s maximum acute GVHD grade in the reporting period; **this may differ from the grade at diagnosis or may be the same.** If acute GVHD was present, but the maximum grade was not documented and it cannot be determined from the grading and staging table, report “not applicable.”

Examples may include:

- Only elevated liver function tests without increased bilirubin
- Any other organ involvement without skin, liver, or gut symptoms attributable to GVHD
- Lower intestinal tract involvement where the stage cannot be determined in select scenarios (see lower intestinal tract involvement description above)

Upper GI GVHD
If the recipient only has upper GI GVHD during the reporting period, report this as overall grade II. This may differ from prior instructions regarding how to report upper GI GVHD.

Acute GVHD Grading Scenarios:

A. A recipient developed stage 2 skin involvement and elevated liver function tests (LFTs) attributed to acute GVHD; however, there was no total bilirubin manifestation. In this case, overall maximum grade I acute GVHD should be reported since the staging / grading can be determined using the GVHD Grading and Staging table above.

B. A recipient developed acute liver GVHD with elevated LFTs (i.e., transaminases) with no total bilirubin manifestation. The progress notes indicate stage 1 (grade II overall) acute GVHD of the liver. In this case, the clinical manifestations do not fit the criteria used in the GVHD Grading and Staging table above; “not applicable” would be the best option to report.

C. A recipient developed stage 2 skin involvement, which showed improvement in response to topical steroids. However, the recipient then developed hyperbilirubinemia attributed to stage 1 liver involvement; the skin involvement at that time was stage 1. In this case, grade II would be reported (assuming this was the extent of the recipient’s acute GVHD in the reporting period).

D. A recipient developed stage 2 skin involvement which resolved in response to topical steroids. Later in the reporting period, the recipient was diagnosed with mild chronic eye GVHD. Shortly thereafter, they were diagnosed with a stage 3 flare of acute skin GVHD. In this case, grade I would be reported. Do not consider any new or persistent acute GVHD symptoms occurring after the onset of chronic GVHD when completing the acute GVHD section of the form.

Question 30: Date maximum overall grade of acute GVHD

Report the date of maximum acute GVHD involvement, based on clinical grade. If the recipient had multiple instances in which their GVHD reached the same maximum grade, report the earliest date. If “not applicable” was reported for question 29, question 30 must be left blank.

Question 31: Did chronic GVHD develop since the date of last report?

Indicate whether a new clinical diagnosis of chronic GVHD was documented during the reporting period. If chronic GVHD was diagnosed during the reporting period, report “yes” and continue with question 32.

If the recipient had a flare of chronic GVHD occurring after *at least* a 30 day period of symptom quiescence, report “yes” and continue with question 32. Report “no” if symptoms resolve or become quiescent prior to the date of last report and then flare within 30 days. This should be reported as persistent chronic GVHD which is captured in question 33.

Report “no” if chronic GVHD was not clinically diagnosed – initially or as a flare – in the reporting period; this includes instances where chronic GVHD persists from a prior reporting period.

Indicate “unknown” if there is no information about the recipient’s GVHD status for the reporting period. This option should be used sparingly and only when no judgment can be made about the presence or absence of GVHD in the reporting period.

Question 32: Date of chronic GVHD diagnosis:

Report the date of clinical diagnosis of chronic GVHD. The clinical diagnosis date may not necessarily be the date the symptoms began (example: the recipient developed shortness of breath one month prior to the clinical diagnosis of pulmonary chronic GVHD). If the clinical diagnosis is documented, but the diagnosis date is unclear, obtain documentation from the primary physician confirming the clinical diagnosis date.

If the recipient developed more than one episode of chronic GVHD in the same reporting period, report the date of onset of the first episode of chronic GVHD.

For more information regarding reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Question 33: Did chronic GVHD persist since the date of last report?

Indicate whether chronic GVHD was clinically diagnosed during a previous reporting period and persisted, with active symptoms, into the present reporting period. Do not report quiescent or inactive chronic GVHD, or a prior history of GVHD. If “yes,” continue with question 34; questions concerning chronic GVHD at the time of diagnosis will be skipped. See question 31 for instructions on reporting a chronic GVHD flare.

If the recipient has no active symptoms during the reporting period, report “no” continue with question 37.

Indicate “unknown” if there is no information about the recipient’s GVHD status for the reporting period. This option should be used sparingly and only when no judgment can be made about the presence or absence of

GVHD in the reporting period.

Question 34: Maximum grade of Chronic GVHD (according to best clinical judgement)

Report the maximum chronic GVHD involvement, based on clinical grade, since the date of the last report. The intent of this question is to capture the maximum grade based on the best clinical judgment. If the maximum clinical grade is not documented, request documentation from the recipient's primary care provider.

Indicate "unknown" if there is no information about the recipient's GVHD status for the reporting period. This option should be used sparingly and only when no judgment can be made about the presence or absence of GVHD in the reporting period. Please note, questions 35 and 36 must still be answered if question 34 is reported as "unknown."

Organ Scoring of Chronic GVHD

Organ	Score 0	Score 1	Score 2	Score 3
Skin % BSA[1]	No BSA involved	1-18% BSA	19-50% BSA	>50% BSA
Skin Features	No sclerotic features	N/A	Superficial sclerotic features, but not "hidebound"	Deep sclerotic features; "hidebound;" impaired mobility; ulceration
Mouth	No symptoms	Mild symptoms **with** disease signs but not limiting oral intake significantly	Moderate symptoms with disease signs **with** partial limitation of oral intake	Severe symptoms with disease signs **with** major limitation of oral intake
Eyes	No symptoms	Mild dry eye symptoms not affecting ADL (requirement of lubricant drops ≤ 3x/day)	Moderate dry eye symptoms partially affecting ADL (requiring lubricant drops > 3x/day or punctal plugs) **WITHOUT** new vision impairment due to keratoconjunctivitis sicca (KCS)	Severe dry eye symptoms significantly affecting ADL (special eyewear to relieve pain) **OR** unable to work because of ocular symptoms **OR** loss of vision due to keratoconjunctivitis sicca (KCS)
GI Tract	No symptoms	Symptoms without significant weight loss (< 5%)	Symptoms associated with mild to moderate weight loss (5-15%) within 3 months **OR** moderate diarrhea without significant interference with daily living	Symptoms associated with significant weight loss (> 15%) within 3 months, requires nutritional supplement for most calorie needs **OR** esophageal dilation **OR** severe diarrhea with significant interference with daily living.

Liver	Normal total bilirubin and ALT or AP < 3 x ULN	Normal total bilirubin with ALT ≥ 3 to 5 x ULN or AP ≥ 3 x ULN	Elevated total bilirubin but ≤ 3 mg / dL or ALT > 5 x ULN	Elevated total bilirubin > 3 mg / dL
Lungs Symptom Score:	No symptoms	Mild symptoms (SOB after climbing one flight of steps)	Moderate symptoms (SOB after walking on flat ground)	Severe symptoms (SOB at rests; requires O2)
Lungs Lung Score:	FEV1 ≥ 80%	FEV1 60-79%	FEV1 40-59%	FEV1 ≤ 39%
Joints and Fascia	No symptoms	Mild tightness of arms or legs, normal or mild decreased range of motion **AND** not affecting ADL	Tightness of arms or legs **OR** joint contractures, erythema thought to be due to fasciitis, moderate decrease of range of motion **AND** mild to moderate limitation of ADL	Contractures **WITH** significant decrease of range of motion **AND** significant limitation of ADL (unable to tie shoes, button shirts, dress self, etc.)
Genital Tract[2]	No signs	Mild signs and females with or without discomfort on exam	Moderate signs and may have signs of discomfort on exam	Severe signs with or without symptoms
Other Features[3]	No GVHD	Mild	Moderate	Severe

NIH Consensus Criteria, 2014

[1] Features to be scored by BSA: Maculopapular rash, lichen planus-like features, sclerotic features, papulosquamous lesions or ichthyosis, keratosis pilaris-like GVHD.

[2] Scoring is based on severity of the signs instead of symptoms, based on limited available data and the opinions of experts. Female or male genital GVHD is not scored if a practitioner is unable to examine the patient.

[3] May include ascites, pericardial effusion, pleural effusion(s), nephrotic syndrome, myasthenia gravis, peripheral neuropathy, polymyositis, weight loss without GI symptoms, eosinophilia > 500/µL, platelets < 100,000/µL, others.

Question 35: Specify if chronic GVHD was limited or extensive:

The grading system for chronic GVHD is divided into two categories: limited and extensive. Definitions are

based on Sullivan KM, *Blood* 1981; 57:267.

Report “limited” if chronic GVHD includes only localized skin involvement and/or liver dysfunction. Report “extensive” if **any** of the following symptoms are attributed to chronic GVHD:

- Generalized skin involvement and/or liver dysfunction
- Liver histology showing chronic aggressive hepatitis, bridging necrosis, or cirrhosis
- Involvement of the eye: Schirmer’s test with <5 mm wetting, or
- Involvement of the salivary glands or oral mucosa, or
- Involvement of any other target organ

Question 36: Date of maximum grade of chronic GVHD

Report the date of maximum chronic GVHD involvement, based on clinical grade, during the current reporting period. If the recipient had multiple instances in which their GVHD reached the same maximum grade, report the earliest date.

For more information regarding reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Question 37: Is the recipient still taking systemic steroids? (Do not report steroids for adrenal insufficiency, ≤10 mg/day for adults, <0.1 mg/kg/day for children)

Steroids and Non-Steroid Immunosuppression for GVHD
Questions 37 and 38 will only be completed if the center has reported “Yes” for question 19, 21, 31, or 33. If each of these questions has been answered “No,” questions 37 and 38 will be left blank.

Corticosteroids
Corticosteroids are captured differently depending on whether they are used topically or systemically. Use the following guidelines when determining how to report corticosteroids used to treat acute GVHD:
Topical Creams for Skin: Do not report topical ointments or creams used to treat skin GVHD including corticosteroid creams such as Triamcinolone or Hydrocortisone.
Other Topical Treatments: Certain corticosteroid treatments are inhaled or ingested, but are not absorbed and are therefore considered topical. Examples include beclomethasone and budesonide. Do not consider these medications when answering question 37.
Systemic Treatments: Systemic administration of corticosteroids, including use of prednisone and dexamethasone, should be reported in question 37.

Indicate whether the recipient is still taking systemic steroids to treat or prevent GVHD on the date of contact. Refer to the guidelines included in the question text if the recipient is taking low dose steroids or steroids for adrenal insufficiency.

Indicate “not applicable” in any of the following scenarios:

- The recipient has never received systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) to treat or prevent GVHD.
- This form is being completed for a subsequent HCT and the recipient has never received systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) to treat or prevent GVHD since the start of the preparative regimen for the most recent infusion (or since the date of the most recent infusion if no preparative regimen is given).
- The recipient stopped taking systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) to treat or prevent GVHD in a previous reporting period and did not restart systemic steroids (> 10 mg / day for adults or ≥ 0.1 mg / kg / day for children) during the current reporting period.

Indicate “unknown” if there is no information to determine if the recipient is still taking systemic steroids. This option should be used sparingly and only when no judgment can be made about the recipient still receiving treatment for GVHD on the date of contact.

If the recipient has died prior to the discontinuation of systemic steroids used to treat or prevent acute and / or chronic GVHD, select “yes.”

Question 38: Is the recipient still taking (non-steroid) immunosuppressive agents (including PUVA) for GVHD?

> **Steroids and Non-Steroid Immunosuppression for GVHD**
> Questions 37 and 38 will only be completed if the center has reported yes for question 19, 21, 31, or 33. If each of these questions has been answered “No,” questions 37 and 38 will be left blank.

Indicate whether the recipient is still taking non-steroidal immunosuppressive agents (including PUVA) to treat or prevent acute and / or chronic GVHD on the date of contact. Descriptions of many immunosuppressive agents are included below.

If the recipient did not receive non-steroidal immunosuppressive agents to treat or prevent acute and / or chronic GVHD during the reporting period, report “not applicable.”

Indicate “not applicable” in any of the following scenarios:

- The recipient has never received non-steroidal immunosuppressive agents (including PUVA) to treat or prevent GVHD.
- This form is being completed for a subsequent HCT and the recipient has never received non-steroidal immunosuppressive agents (including PUVA) to treat or prevent GVHD since the start of the preparative regimen for the most recent infusion (or since the date of the most recent infusion if no preparative regimen was given).
- The recipient stopped taking non-steroidal immunosuppressive agents (including PUVA) to treat or prevent GVHD in a previous reporting period and did not restart non-steroidal immunosuppressive agents (including PUVA) during the current reporting period.

Indicate “unknown” if there is no information to determine if the recipient is still taking non-steroidal immunosuppressive agents. This option should be used sparingly and only when no judgment can be made about the recipient still receiving treatment for GVHD in the reporting period.

Immunosuppresive Agents:

Aldesleukin (Proleukin): Increases production of several white blood cells including regulatory T-cells. This drug is also known as interleukin-2.

ALG (Anti-Lymphocyte Globulin), ALS (Anti-Lymphocyte Serum), ATG (Anti-Thymocyte Globulin) ATS (Anti-Thymocyte Serum): Serum or gamma globulin preparations containing polyclonal immunoglobulins directed against lymphocytes. These drugs are usually prepared from animals immunized against human lymphocytes. Also report the animal source. If “other” is selected, specify the source.

Azathioprine (Imuran): Azathioprine inhibits purine synthesis. Usually it is used at low doses in combination with other treatments.

Bortezomib (Velcade): A proteasome inhibitor.

Cyclosporine (CSA, Neoral, Sandimmune): Calcineurin inhibitor which decreases cytokine production by T-cells. Usually given for ≥ 3 months.

Cyclophosphamide (Cytoxan): Given in high doses near the date of infusion as single agent prophylaxis.

Extra-corporeal photopheresis (ECP): The recipient’s blood is removed from the body, exposes to

psoralen and ultraviolet light, and re-infused.
FK 506 (Tacrolimus, Prograf): Inhibits the production of interleukin-2 by T-cells.

Hydroxychloroquine (Plaquenil): Hydroxychloroquine inhibits transcription of DNA to RNA and is commonly used as an anti-malarial drug.

Interleukin Inhibitor: Interleukin inhibitors suppress production of white blood cells and are grouped according to their target. Examples of IL-2 inhibitors include daclizumab (Zynbryta) and basiliximab (Simulect). Examples of IL-6 inhibitors include tocilizumab (Actemra) and siltuximab (Sylvant).

In vivo monoclonal antibody: Antibody preparations that are infused in the recipient following HSCT. Specify the antibody used as: anti CD25 (Zenapax, Daclizumab, AntiTAC), alemtuzumab (Campath), entanercept (Enbrel), infliximab (Remicade), and / or rituximab (Rituxan).

In vivo immunotoxin: Antibody preparations linked to a toxin that is infused in the recipient following HCT. Specify the immunotoxin.

Janus Kinase 2 Inhibitors: Suppress function of T-effector cells. Examples: ruxoloitinib (Jakafi, Jakavi) and tofacitinib (Xeljanz, Jakvinus).

Methotrexate (MTX) (Amethopterin): Inhibits the metabolism of folic acid. It is most often used with cyclosporine and is usually for a short duration of time.

Mycophenolate mofetil (MMF) (CellCept, Myfortic): Inhibits the de novo pathway used for lymphocyte proliferation and activation.

Pentostatin (Nipent): Inhibits adenosine deaminase, which blocks DNA (and some RNA) synthesis.

Sirolimus (Rapamycin, Rapamune): Inhibits the response to interleukin-2, blocking the activation of T-cells.

Tyrosine Kinase Inhibitor (TKI): Suppress function of tyrosine kinases thereby downregulating the function of many other cellular proteins / processes including fibrosis and inflammation. Examples: imatinib (Gleevec, Glivec), nilotinib (Tasigna), and dasatinib (Sprycel).

UV Therapy: UVA or UVB radiation administered to affected areas of the skin in order to suppress proliferation of cells responsible for GVHD.

PUVA (Psoralen and UVA): Psoralen is applied or taken orally to sensitize the skin, and then the skin is exposed to UVA radiation.

UVB: Broadband- or Narrowband-UVB radiation is applied to the affected areas of the skin.

Last modified: 2019/02/04

Q39-45: Liver Toxicity Prophylaxis

Liver Toxicity Prophylaxis
Questions 39-45 can only be completed on the 100 day and 6 month follow-up forms. These questions will be skipped for all subsequent reporting periods.

Question 39: Was specific therapy used to prevent liver toxicity?

Liver toxicities in transplant patients may be related to drugs / treatments, infection, GVHD, iron overload, cirrhosis, or sinusoidal obstructive syndrome (SOS) / veno-occlusive disease (VOD). Agents such as ursodiol may be given as prophylaxis against one or more of these transplant-related liver injuries. Agents given to prevent liver toxicity will generally be started prior to or during the conditioning regimen, and may be continued well after transplant.

Indicate whether the recipient received any therapy intended to prevent liver toxicity during the reporting period, including therapy given during the conditioning regimen. Report only agents given to prevent liver toxicities, not those given to treat a diagnosed liver injury or toxicity. If liver toxicity prophylaxis was given, report “yes” and go to question 40. If liver toxicity prophylaxis was not given during the reporting period, report “no” and go to question 46.

Questions 40-45: Specify therapy (Defibrotide, N-acetylcysteine, tissue plasminogen activator (TPA), Ursodiol, Other)

Report all agents given during the reporting period to prevent liver toxicity, including therapy given during the conditioning regimen. Only report agents given to prevent liver toxicities, not those given to treat a diagnosed liver injury or toxicity. If “other” therapy is reported in question 44, specify agent(s) in question 45.

Last modified: 2017/07/10

Q46-47: Veno-occlusive disease (VOD) / Sinusoidal obstruction syndrome (SOS)

Veno-occlusvie disease (VOD) / Sinusoidal obstruction syndrome (SOS) occurs following injury to the hepatic venous endothelium, resulting in hepatic venous outflow obstruction due to occlusion of the hepatic venules and sinusoids. This typically results in a distinctive triad of clinical signs including hepatomegaly with right upper quadrant tenderness, third space fluid retention (e.g., ascites), and jaundice with a cholestatic picture. For more information on VOD / SOS including diagnostic criteria, refer to the VOD / SOS section of the Forms Instructions Manual.

Question 46-47: Did veno-occlusive disease (VOD) / sinusoidal obstruction syndrome (SOS) develop since the date of last report?

Indicate whether VOD / SOS was diagnosed during the reporting period. If “yes,” report the date of diagnosis in question 47. If VOD / SOS persisted from the prior reporting period, indicate “no” and go to question 47.

For more information regarding reporting partial or unknown dates, see General Instructions, General Guidelines for Completing Forms.

Last modified: 2017/01/31

Q48-55: New Malignancy, Lymphoproliferative or Myeloproliferative Disorder

Question 48: Did a new malignancy, myeloproliferative, or lymphoproliferative disease / disorder occur that is different from the disease / disorder for which the HCT or cellular therapy was performed? (include clonal cytogenetic abnormalities, and post-transplant lymphoproliferative disorders)

Indicate whether a new or secondary malignancy, lymphoproliferative disorder, or myeloproliferative disorder has developed. Do not report recurrence, progression, or transformation of the recipient's primary disease (disease for which the transplant was performed), or relapse of a prior malignancy.

New malignancies, lymphoproliferative disorders, or myeloproliferative disorders include but are not limited to:

- Skin cancers (basal, squamous, melanoma)
- New leukemia
- New myelodysplasia
- Solid tumors
- PTLD (post-transplant lymphoproliferative disorder) (report as lymphoma or lymphoproliferative disease)

The following should **not** be reported as new malignancy:

- Recurrence of primary disease (report as relapse or disease progression)
- Relapse of malignancy from recipient's pre-HCT medical history
- Breast cancer found in other (i.e., opposite) breast (report as relapse)
- Post-HCT cytogenetic abnormalities associated with the pre-HCT diagnosis (report as relapse)
- Transformation of MDS to AML post-HCT (report as disease progression)

Recurrent Skin Cancers
For most malignancies, do not report recurrence, progression or transformation of the recipient's primary disease (disease for which the transplant was performed) or relapse of a prior malignancy in the "New Malignancy" section.
For example, a recipient had a basal cell skin cancer diagnosed on the neck four months post-HCT and six months later had another basal cell located on the nose. The lesion on the nose is not considered a metastasis from the neck, but a new discrete lesion. These

discrete episodes should be reported in the “Other skin malignancy” questions on the Post-TED forms (revision 4, questions 48-55).

If a new malignancy, lymphoproliferative disorder, or myeloproliferative disorder was diagnosed during the reporting period, report “yes” and complete questions 49-55. If “no”, continue with question 56.

Copy and complete questions 49-55 to report each new malignancy diagnosed since the date of last report. The submission of a pathology report or other supportive documentation for each reported new malignancy is strongly recommended.

Question 49-50: Specify new malignancy

Copy and complete questions 49-55 to report each new malignancy diagnosed since the date of last report. The submission of a pathology report or other supportive documentation for each reported new malignancy is strongly recommended.

If the new malignancy or disorder does not fit into one of the categories specified in question 49, indicate “other new malignancy,” and specify the type in question 50.

Question 51: Is the tumor EBV positive?

If the disorder is lymphoma or lymphoproliferative disease, indicate if the tumor is EBV positive. This question only applies if lymphoma or lymphoproliferative disorder is selected in question 49.

Question 52: Date of diagnosis

Report the date of first pathological diagnosis (e.g., biopsy) of the new malignancy. Enter the date the sample was collected for examination. If the diagnosis was determined at an outside center, and no documentation of a pathological or laboratory assessment is available, the dictated date of diagnosis within a physician note may be reported. Do not report the date symptoms first appeared.

For malignancies or disorders without pathologic diagnosis, report the date of clinical diagnosis or date of specimen collection for laboratory assessment confirming diagnosis.

If exact date of diagnosis is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 53: Was documentation submitted to the CIBMTR? (e.g. pathology / autopsy report or other documentation)

Indicate whether documentation of the new malignancy, lymphoproliferative disorder, or myeloproliferative disorder was submitted to CIBMTR (e.g., pathology report, autopsy report).

For further instructions on how to attach documents in FormsNet3, refer to the training guide.

Question 54-55: Was the new malignancy donor / cell product derived?

Indicate whether the new malignancy originated from the donor / cell product. If “yes,” indicate whether documentation was submitted to CIBMTR (e.g., cell origin evaluation (VNTR, cytogenetics, FISH)) in question 55.

For further instructions on how to attach documents in FormsNet3, refer to the training guide.

Last modified: 2017/01/31

Q56-74: Chimerism Studies (Cord Blood Units Only)

This section relates to chimerism studies from allogeneic HCTs using cord blood units only. If this was an autologous HCT, or an allogeneic HCT using a bone marrow or PBSC product, continue to the disease assessment section.

Questions 56-74 can only be completed on the 100 day, 6 month, 1 year, and 2 year follow-up forms. These questions will be skipped for all subsequent reporting periods.

Chimerism studies are performed to determine the percent of blood or marrow cells post-transplant that are produced from donor hematopoietic stem cells and the percent that are produced from host (recipient) hematopoietic stem cells. Different types of blood cells and a variety of laboratory tests can be used to determine if a chimera (presence of both donor- and host-derived cells) exists. If cytogenetic testing was performed to look for disease markers, and the donor and recipient are different sexes, the test may also be used to determine if a chimera exists. If the donor and recipient are of the same sex, cytogenetic testing using the common staining technique, known as giemsa banding (G-banding), cannot be used to determine if there is a chimera. However, quinicrine banding (Q-banding) can be used to identify if the cells are of donor origin or not in a same-sex transplant, as this staining technique highlights inherited chromosome polymorphisms on certain human chromosomes including 3, 4, 13, 15, 21, 22, and Y. This is not a commonly used staining technique and is only helpful when the polymorphism is documented pre-HCT.

Chimerism Studies
If chimerism studies were attempted, but no evaluable results were obtained, do not report the test.
When a multi-donor chimerism exists and includes a donor (or donors) from a previous HCT, report as a multi-donor chimerism though there may only be one donor for the current transplant.

Question 56-57: Were chimerism studies performed since the date of last report?

Indicate whether chimerism studies were performed within the reporting period. If “yes,” indicate whether documentation was submitted to CIBMTR (e.g., chimerism laboratory reports) in question 57.

If chimerism studies were not performed within the reporting period, select “no,” and continue with question 75.

Question 58: Were chimerism studies assessed for more than one donor / multiple donors?

Indicate whether this HCT included product(s) from multiple donors. When a multi-donor chimerism exists and includes a donor or donors from a previous HCT, report as a multi-donor chimerism even though there may only be one donor for the current transplant.

Question 59-74: Provide date(s), method(s) and other information for all chimerism studies performed since the date of last report.

Copy question 59-74 if needed for multiple chimerism studies. When reporting chimerism studies for multiple donors, there should be one instance for each donor for each chimerism test results.

Transplant centers may perform frequent chimerism studies. If there is a need to reduce the number of chimerism study results reported due to volume, ensure that the following are reported at a minimum:

- Studies performed on or at approximately Day+28
- Most recent studies performed prior to the date of contact, particularly for Day+100
- Most recent studies performed prior to and after an intervention (such as a donor cellular infusion)
- The first result to show complete / 100% donor chimerism

Chimerism – Single Donor

Data Field	Description
59. NMDP donor ID	If the donor or one of the donors was an NMDP PBSC or marrow donor, enter the 9 digit NMDP donor ID.
60. NMDP cord blood unit ID	If the donor or one of the donors was an NMDP cord blood unit, enter the 9 digit NMDP cord blood unit ID.
61. Non-NMDP unrelated donor ID	If the donor or one of the donors was a non-NMDP unrelated PBSC or marrow donor, enter the non-NMDP registry donor ID.
62. Non-NMDP cord blood unit ID	If the donor or one of the donors was a non-NMDP cord blood unit, enter the non-NMDP registry donor ID.
63. Date of	If the donor was related or the cord blood unit was related or supplied by a non-NMDP registry,

birth or age	provide the date of birth, if known; if date of birth is not known, provide the donor's age at donation.
64. Sex	If the donor was related or the cord blood unit was related or supplied by a non-NMDP registry, provide the biological sex.
65. Date sample collected	Enter the date the sample was collected for the chimerism test.
66-67. Method	Report the test method used for the reported chimerism study. Cytogenetic testing methods include karyotyping and fluorescent in situ hybridization (FISH). Cytogenetic methods are only valid for sex mismatched transplants with the exception of quinicrine banding. VNTR / STR is one of the most common molecular methods for assessing chimerism. See the Chimerism Methods table below for additional details on chimerism testing methods.
68. Cell source	Report whether the specimen taken for chimerism testing was from a marrow or peripheral blood source.
69-70. Cell type	Indicate the cell type tested. If the specimen was not sorted for a specific cell line, indicate "unsorted / whole." See the Chimerism Cell Types table below for additional details on cell markers unique to certain cell lines.
71. Total cells examined	Cytogenetic testing methods include karyotyping and fluorescent in situ hybridization (FISH), each of which examines a specific and relatively low number of cells – generally 15 to 200, depending on specimen and test method. If a cytogenetic method was used, enter the total number of cells that were examined. If a non-cytogenetic test was used, leave these boxes blank.
72. Number of donor cells	Cytogenetic methods, karyotyping and FISH, examine a specific and relatively low number of cells – generally 15 to 200, depending on specimen and test method. If a cytogenetic method was used, enter the total number of cells that were examined and found to be of donor origin. If a non-cytogenetic test was used, leave these boxes blank.
73. Were donor cells detected?	Molecular testing methods include RFLP and VNTR / STR. If a molecular method was used, indicate whether donor cells were detected. Report "yes," if the testing identified any percentage of cells as being of donor origin.
74. Percent donor cells	Molecular testing methods include VNTR / STR, RFLP, and AFLP. Report the percentage of donor cells identified by molecular testing. If the test result did not detect any recipient cell population within the sensitivity of the assay, report 100% donor cells. If the test detected recipient cells, but indicated donor cells "> n%," report "n + 1" percent donor cells. If the test detected donor cells but indicated donor cells "< n%," report "n – 1" percent donor cells.

Chimerism Methods

Method	Description
Karyotyping for XX / XY	Cells are grown in culture, stained, and examined under a microscope to identify the **number** of cells matching the sex of the donor. This method is only valid when donor and recipient are sex mismatched.
Fluorescent in situ	Cells are exposed to fluorescent DNA probes which attach to X and Y chromosomes. A microscope is used to identify the *number *of cells matching the sex of the donor. This

hybridization (FISH) for XX / XY	method is only valid when donor and recipient are sex mismatched. *Do not report FISH testing for disease-specific abnormalities in the chimerism section of the Post-TED.*
Restricted fragment length polymorphisms (RFLP)	A restriction fragment is a portion of DNA which has been cut out by an enzyme. RFLP testing begins by isolating DNA from the sample. Enzymes are used to cut the DNA at specific loci resulting in many unique restriction fragments. The fragments are separated according to size by electrophoresis. The unique pattern of separation is used to identify the **percent** donor DNA present in the sample.
Variable number tandem repeat (VNTR), micro- or minisatellite	VNTR refers to a portion of DNA containing a repeating sequence of base pairs (micro- or minisatellite). The number of times a micro- or minisatellite repeats within specific loci can differ between individuals. These differences are used to distinguish donor DNA from recipient DNA. VNTR testing involves obtaining samples from the recipient and donor prior to transplant. Specific loci are compared to determine which loci contain VNTRs unique to the donor. After transplant, DNA is isolated from recipient samples. Donor-specific VNTRs are amplified by PCR techniques. The sample is then analyzed to determine the **percent** donor DNA present.
Small tandem repeat (STR), micro- or minisatellite	STR also refers to a portion of DNA containing a repeating sequence of base pairs (micro- or minisatellite). The number of times a micro- or minisatellite repeats within specific loci can differ between individuals. These differences are used to distinguish donor DNA from recipient DNA. STR testing involves obtaining samples from the recipient and donor prior to transplant. Specific loci are compared to determine which loci contain STRs unique to the donor. After transplant, DNA is isolated from recipient samples. Donor-specific STRs are amplified by PCR techniques. The sample is then analyzed to determine the **percent** donor DNA present.
Amplified fragment length polymorphisms (AFLP)	A restriction fragment is a portion of DNA which has been cut out by an enzyme. AFLP testing begins by isolating DNA from the sample. Enzymes are used to cut the DNA at specific loci resulting in many unique restriction fragments. Many restrictions fragments are amplified using PCR techniques. The fragments are separated according to size by electrophoresis. The unique pattern of separation is used to identify the **percent** donor DNA present in the sample. *Report AFLP testing using the VNTR/STR method option on the 2450 form.*

Chimerism Cell Types

Cell Type	Description
Unsorted / whole	The peripheral blood or bone marrow sample has not been sorted or selected for a certain cell line.
Red blood cells	Also known as RBCs or erythrocytes; carry the CD235a cell marker
Hematopoietic progenitor cells	Includes CD34+ cells
Total mononuclear cells	Total mononuclear cells would be a specimen containing only and both lymphocytes and monocytes
T cells	Includes CD3+, CD4+, and / or CD8+ cells
B cells	Includes CD19+ or CD20+ cells

Granulocytes	Also known as polymorphonuclear leukocytes (PMNs, PMLs) and includes neutrophils, eosinophils, and basophils. Includes CD33+ cells
NK cells	Includes CD56+ cells
Other, specify	Use this option to report cell types that do not fit in a category above.

Last modified: 2018/02/21

Q75-97: Disease Assessment at the Time of Best Response to HCT

Malignant Diseases Only
Only complete questions 75-97 if the HCT being reported was given to treat a malignant disease. If the HCT being reported was given to treat a non-malignant disease, leave questions 75-97 blank. FormsNet should enable / disable this section based on the primary disease reported on the Pre-TED Disease Classification Form (Form 2402). Contact your CRC if you believe FormsNet is incorrectly enabling / disabling these fields.

This section collects the data known as “best response to transplant.” **The purpose of this section is to report the recipient’s best response to the planned course of the HCT.** This includes response to any therapy given for post-HCT maintenance or consolidation, but does not include response to treatment given for relapsed or persistent disease that was not planned before the HCT was executed. Best response is often achieved in the first 100 days. However, for some diseases such as multiple myeloma and CLL, the best response to HCT may take longer.

If the recipient relapses/progresses and receives therapy for the disease relapse/progression, the response to that additional therapy should not be reported in this section. The best response prior to the relapse/progression should be reported. Reporting periods subsequent to that in which best response prior to the start of unplanned was reported will indicate that best response was previously reported.

Reporting Complete Remission (CR) Post-HCT
Complete remission (CR) criteria vary by disease and are outlined in the CIBMTR Forms Instructions Manual. Please refer to the appropriate disease response criteria section of the Forms Instructions Manual and review the criteria to report CR.

Amyloidosis
Centers were previously instructed to report “Not applicable” for pre-HCT disease status on the Pre-TED Form (Form 2400) or Disease Classification Form (Form 2402) for all amyloidosis cases regardless of response. However, instruction has now been modified so that if a patient was in complete remission prior to HCT by meeting all applicable CR criteria, CR is selected as pre-HCT disease status instead of “Not applicable.” “Continued complete remission” should be then be selected for the post-HCT response status. If a validation error has occurred for question 75 on the Post-TED Form due to the scenario described above, do not override the error. Instead, change the pre-HCT response reported

on the Pre-TED or Disease Classification Form to CR.

Question 75: Compared to the disease status prior to the preparative regimen, what was the best response to HCT since the date of the last report? (Include response to any therapy given for post-HCT maintenance or consolidation, but exclude any therapy given for relapsed, persistent, or progressive disease):

If the recipient was already in CR at the start of the preparative regimen, check “Continued complete remission (CCR)” and continue with question 98.

! Continued Complete Remission (CCR) should be reported for all patients who were already in CR at the start of the preparative regimen.

If the recipient achieved CR post-HCT (excluding unplanned therapy), check “complete remission (CR)” and continue with question 77.

If the recipient has not achieved a post-HCT CR to date, check “not in complete remission” and continue with question 76.

If the recipient’s disease status was not evaluated post-HCT, check “not evaluated” and continue with question 98. This option is **not** commonly used, as this would indicate that no tests (radiological, laboratory, or a clinical assessment) were performed to assess the CR status at **any time** during the reporting period.

If the recipient never achieved a post-transplant complete response and started unplanned therapy, given for relapsed, persistent, or progressive disease, in a previous reporting period, indicate “not evaluated.”

Question 76: Specify disease status if not in complete remission:

For recipients “not in complete remission,” indicate whether clinical evidence of disease persisted on disease-specific assessments within the reporting period. If all assessments have shown resolution of disease, but not all assessments required to report complete remission have been completed, indicate “no disease detected but incomplete evaluation to establish CR.” This option is also appropriate for scenarios in which the recipient has not previously achieved a post-HCT CR but does not have any disease assessments performed within the reporting period. Indicate “disease detected” if disease persists by any method of radiological or clinical assessment; persistence of abnormalities by molecular, cytogenetic, or flow cytometry assessments does not constitute “disease detected.”

Example 1: A recipient with multiple myeloma goes to transplant in VGPR, without a bone marrow

showing < 5% plasma cells completed prior to transplant. Post-transplant serum and urine electrophoreses and immunofixations are negative. However, no bone marrow biopsy is performed within the 100-day reporting period. In this case, “not in complete remission” should be selected for question 75, and “no disease detected by incomplete evaluation to establish CR” for question 76.

Example 2: A recipient with AML goes to transplant in primary induction failure. Post-transplant, they recover their counts, but had circulating blasts noted on differential. They expire due to persistent disease with their last CBC performed on their date of death showing circulating blasts. In this case, “not in complete remission” should be selected for question 75, and “disease detected” in question 76.

Example 3: Similar to example 2, a recipient with AML goes to transplant in primary induction failure. They expire on D+11 due to infection, and had not engrafted as of that date. Their last CBC showed a WBC of 0.5×10^9/L with no blasts detected on their differential. A bone marrow biopsy was not performed between transplant and the date of death. In this case, “not in complete remission” should be selected for question 75, and “no disease detected by incomplete evaluation to establish CR” in question 76.

Question 77: Was the date of best response previously reported?

Indicate whether complete remission was reported in a previously reporting period; if “yes,” continue with question 98 and if “no,” continue with question 78. This question does not apply for “not in complete remission” responses to question 75.

Question 78: Date assessed:

Report the date complete remission was achieved. This date should fall after transplant but before or on the date of contact for the current reporting period. This should reflect the date of specimen collection or imaging for the latest assessment required to fulfill complete remission criteria for the recipient’s transplant disease.

Disease Assessment at Time of Best Response

Questions 79-97 refer to disease assessments performed at the time of best response (question 78). The following guidelines should be used to determine whether testing was performed at the time of best response:

If the recipient’s best response is **“Not in Complete Remission,”** report the latest assessment performed during the reporting period. If the recipient has started treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease), report the latest assessment prior to the initiation of therapy.

If the recipient' best response is **"Complete Remission,"** report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table.

Disease Assessment Time Windows

Follow-Up Form	Approximate Range
100 Day	+/- 15 days of date of best response (question 78)
6 Month	+/- 15 days of date of best response (question 78)
Annual	+/- 30 days of date of best response (question 78)

Disease Assessment Reporting Scenarios:

A. A recipient receives a transplant on 1/1/2015 for multiple myeloma in partial remission. Prior to HCT, FISH testing detects an IGH rearrangement associated with the recipient's primary disease. During the 100 day reporting period, the recipient achieves a very good partial remission. FISH testing is only performed on 2/1/2015 is positive for the previously detected IGH rearrangement. The 100 day date of contact is 4/15/2015. In this case, the center would report the recipient was "Not in Complete Remission" on the 100 Day Post-TED Form. The center would report FISH testing was performed on 2/1/2015. When the best response is "Not in Complete Remission" report the most recent testing performed during the reporting period (assuming treatment was not started for relapsed, progressive, or persistent disease during the reporting period – see Scenario B).

B. A recipient receives a transplant on 1/1/2015 for multiple myeloma in partial remission. Prior to HCT, FISH testing detects an IGH rearrangement associated with the recipient's primary disease. During the 100 day reporting period, the recipient has disease progression and starts treatment on 3/1/2015. FISH testing is performed on 2/1/2105 and 3/15/2015. Both tests are positive for the previously detected IGH rearrangement. The 100 day date of contact is 4/15/2015. In this case, the center would report the recipient was "Not in Complete Remission" on the 100 Day Post-TED Form. The center would report FISH testing was performed on 2/1/2015. When the best response is "Not in Complete Remission" report the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive or persistent disease.

> **Note:** For all subsequent reporting periods, the center would report "Not Evaluated" for question 75 and skip questions 76-97. If treatment was started in a prior reporting period, the center is not able to report and assessments performed during the reporting period and prior to treatment

C. A recipient receives a transplant on 1/1/2015 for AML in primary induction failure. Prior to HCT, molecular testing confirms the recipient's disease is FLT3 positive. On 2/1/2015, the recipient achieves a

hematologic remission, but FLT3 is not tested at that time. Later, on 2/10/2015, molecular testing is performed and confirms the recipient is FLT3 negative. In this case, the center would report the recipient achieved a CR on 2/1/2015 on the 100 Day Post-TED Form. The center would report molecular testing was performed at the time of best response as testing was done within 15 days of 2/1/2015.

D. A recipient receives a transplant on 1/1/2015 for AML in primary induction failure. Prior to HCT, molecular testing confirms the recipient's disease is FLT3 positive. On 2/1/2015, the recipient achieves a hematologic remission, but FLT3 is not tested at that time. Later, on 3/1/2015, molecular testing is performed and confirms the recipient is FLT3 negative. In this case, the center would report the recipient achieved a CR on 2/1/2015 on the 100 Day Post-TED Form. The center would report no molecular testing was performed at the time of best response as testing was not done within 15 days of 2/1/2015.

Molecular

Question 79: Was the disease status assessed by molecular testing (e.g. PCR)?

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 associated with the disease for which the HCT was performed. Molecular assessments include polymerase chain reaction (PCR) amplification to detect single specific disease markers; however, molecular methods are evolving and now include chromosomal microarray / chromosomal genomic array, Sanger sequencing, and next generation sequencing (e.g., Illumina, Roche 454, Proton / PGM, SOLiD).

Report **"not applicable"** if molecular studies were never performed (since diagnosis) or have never shown abnormalities associated with the recipient's primary transplant disease.

Report **"no"** if molecular studies were not performed during the reporting period.

If the recipient's best response is "Not in Complete Remission," report the latest assessment performed during the reporting period **and** prior to treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report "no" and go to question 82.

If the recipient' best response is "Complete Remission," report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report "no" and go to question 82.

Question 80: Date assessed:

If the best response is “complete remission,” report the date of testing performed nearest the date of best response and prior to relapse or progression, if applicable.

If the best response is “not in complete remission,” report the date of the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most disease-specific testing performed within approximately 30 days of the follow-up date.

Report the date of specimen collection for molecular disease assessment. If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms for information about reporting partial or unknown dates.

Question 81: Was disease detected?

Report whether the recipient’s primary disease was detected by molecular testing on the date reported in question 80. In order to be considered positive for disease, the assay must detect a number of copies of the molecular marker exceeding the threshold for sensitivity of the assay, for a quantitative study. However, do note that presence of only a single marker amongst numerous tested is sufficient to indicate disease detected.

Flow Cytometry

Question 82: Was the disease status assessed via flow cytometry?

Flow cytometry is a technique that can be performed on blood, bone marrow, or tissue preparations where cell surface markers can be quantified on cellular material. This allows for the detection of abnormal cell populations for some diseases.

Report **“not applicable”** if flow cytometry was never performed (since diagnosis) or have never shown abnormalities associated with the recipient’s primary transplant disease.

Report **“no”** if flow cytometry was not performed during the reporting period.

If the recipient’s best response is “Not in Complete Remission,” report the latest assessment performed during the reporting period **and** prior to any treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report “no” and go to question 85.

If the recipient’ best response is “Complete Remission,” report testing performed closest to the date of best

response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report “no” and go to question 85.

Question 83: Date assessed

If the best response is “complete remission,” report the date of testing performed nearest the date of best response and prior to relapse or progression, if applicable.

If the best response is “not in complete remission,” report the date of the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most disease-specific testing performed within approximately 30 days of the follow-up date.

Report the date of specimen collection for flow cytometry assessment. If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 84: Was disease detected?

Report whether the recipient’s primary disease was detected by flow cytometry on the date reported in question 83. Report “disease detected” if an abnormal cell population associated with the recipient’s primary transplant disease was detected regardless of the sensitivity of the flow cytometry panel performed; this means an abnormal cell population detected by MRD flow cytometry would be reported in the same way as an abnormal cell population detected by a standard flow cytometry assay.

Cytogenetic Testing (Karyotyping or FISH)

Question 85: Was the disease status assessed by cytogenetic testing (karyotyping or FISH)?

Cytogenetic studies involve the study of chromosomes, typically through one of two methods: karyotyping or fluorescence in situ hybridization (FISH). Blood, bone marrow, or tissue preparations may be tested by either of these two methods. Karyotyping is both less sensitive and less specific than FISH testing; FISH studies identify only abnormalities detectable by the employed probe set, and cannot provide information about the presence or absence of chromosomal abnormalities or markers outside the specific probe set utilized.

Report **“not applicable”** if cytogenetic studies were never performed (since diagnosis) or have never shown abnormalities associated with the recipient’s primary transplant disease.

Report **“no”** if cytogenetic studies were not performed during the reporting period.

If the recipient's best response is "Not in Complete Remission," report the latest assessment performed during the reporting period **and** prior to any treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report "no" and go to question 92.

If the recipient' best response is "Complete Remission," report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report "no" and go to question 92.

Question 86: Was the disease status assessed via FISH?

FISH XX/XY probe sets are not considered relevant to disease assessment, and should not be reported in the disease assessment section.

Report **"not applicable"** if FISH studies were never performed (since diagnosis) or have never shown abnormalities associated with the recipient's primary transplant disease.

Report **"no"** if FISH studies were not performed during the reporting period.

If the recipient's best response is "Not in Complete Remission," report the latest assessment performed during the reporting period **and** prior to any treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report "no" and go to question 89.

If the recipient' best response is "Complete Remission," report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report "no" and go to question 89.

Question 87: Date assessed

If the best response is "complete remission," report the date of testing performed nearest the date of best response and prior to relapse or progression, if applicable.

If the best response is "not in complete remission," report the date of the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most disease-specific testing performed within approximately 30 days of the follow-up date.

Report the date of specimen collection for FISH assessment. If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 88: Was disease detected?

Report whether the recipient's primary disease was detected by FISH testing on the date reported in question 87.

Question 89: Was the disease status assessed via karyotyping?

Report **"not applicable"** if karyotyping was never performed (since diagnosis) or have never shown abnormalities associated with the recipient's primary transplant disease.

Report **"no"** if karyotyping was not performed during the reporting period.

If the recipient's best response is "Not in Complete Remission," report the latest assessment performed during the reporting period **and** prior to any treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report "no" and go to question 92.

If the recipient' best response is "Complete Remission," report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report "no" and go to question 92.

Question 90: Date assessed

If the best response is "complete remission," report the date of testing performed nearest the date of best response and prior to relapse or progression, if applicable.

If the best response is "not in complete remission," report the date of the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most disease-specific testing performed within approximately 30 days of the follow-up date.

Report the date of specimen collection for karyotyping. If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 91: Was disease detected?

Report whether the recipient's primary disease was detected by karyotyping on the date reported in question 90. Do not include clinically insignificant polymorphism, or chromosomal abnormalities of no known significance, as disease detected; this includes anomalies such as age-dependent loss of the chromosome Y.

Radiologic

Question 92: Was the disease status assessed by radiological assessment (e.g. PET, MRI, CT)

Radiologic assessments are imaging techniques used to assess disease response to transplant, typically for lymphomas or solid tumors, though valuable in some less common presentations of disease, such as leukemia cutis. Imaging techniques used to evaluate disease response typically include PET, CT, or MIBG, but may include x-ray, skeletal survey, or ultrasound in some cases.

Report **"not applicable"** if radiological assessments were never performed (since diagnosis) or have never shown abnormalities associated with the recipient's primary transplant disease.

Report **"no"** if radiological assessments were not performed during the reporting period.

If the recipient's best response is "Not in Complete Remission," report the latest assessment performed during the reporting period **and** prior to any treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report "no" and go to question 95.

If the recipient' best response is "Complete Remission," report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report "no" and go to question 95.

Question 93: Date assessed

If the best response is "complete remission," report the date of the assessment performed nearest the date of best response and prior to relapse or progression, if applicable.

If the best response is "not in complete remission," report the date of the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most disease-specific testing performed within approximately 30 days of the follow-up date.

Report the date of radiological assessment. For recipients with "complete remission" reported in question 76, this may match the date CR was achieved reported in question 79 for recipients with lymphomas, solid tumors, or other diseases with imaging criteria for reporting CR. If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 94: Was disease detected?

Report whether the recipient's primary disease was detected by radiologic assessment on the date reported in question 93.

Clinical/Hematologic

Question 95: Was the disease status assessed by clinical/hematologic assessment?

Clinical/hematologic assessment is the least sensitive method of disease detection. Examples include circulating blasts in the bloodstream for AML, and enlargement of a malignant mass for lymphoma or a solid tumor on physical examination. Every recipient who has an evaluation by a physician has a "clinical" assessment. Do not include radiologic or imaging assessments when reporting for question 95.

If the recipient's best response is "Not in Complete Remission," report the latest assessment performed during the reporting period **and** prior to any treatment for relapsed, progressive, or persistent disease (excluding treatment for minimal residual disease). If testing was not performed prior to the initiation of treatment, report "no" and go to question 98.

If the recipient' best response is "Complete Remission," report testing performed closest to the date of best response (questions 78) and within the time windows in the Disease Assessment Time Windows table. If testing was not performed within the applicable time window, report "no" and go to question 98.

Question 96: Date assessed

If the best response is "complete remission," report the date of the assessment performed nearest the date of best response and prior to relapse or progression, if applicable. This will likely match the date CR was achieved reported in question 78, since complete remission criteria generally require clinical or hematologic assessment to confirm.

If the best response is "not in complete remission," report the date of the most recent testing performed during the reporting period and prior to treatment for relapsed, progressive, or persistent disease, if applicable. If no treatment for relapsed, progressive, or persistent disease was given, report the date of the most disease-specific testing performed within approximately 30 days of the follow-up date.

If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 97: Was disease detected?

Report whether clinical / hematologic abnormalities associated with the primary disease were detected. In

general, if the clinical/hematologic assessment date is that same as that reported in question 78, for recipients achieving complete remission in the reporting period, the answer to question 97 should be “no.”

Last modified: 2019/03/19

Q98-160: Post-HCT Therapy

> **Malignant Diseases Only**
> Only complete questions 98-160 if the HCT being reported was given to treat a malignant disease. If the HCT being reported was given to treat a non-malignant disease, leave questions 98-160 blank. FormsNet should enable / disable this section based on the primary disease reported on the Pre-TED Disease Classification Form (Form 2402). Contact your CRC if you believe FormsNet is incorrectly enabling / disabling these fields.

Report therapy given since the date of last report for reasons other than relapse, persistent, or progressive disease. This may include maintenance and consolidation therapy as well as treatment for minimal residual disease. Do not report any therapy given for relapse, persistent, or progressive disease.

Question 98: Was therapy given since the date of the last report for reasons other than relapse, persistent, or progressive disease? (Include maintenance and consolidation therapy)

Indicate whether therapy was given during the reporting period for maintenance or consolidation; this therapy may have been specifically planned as part of the original transplant protocol or determined after transplant. Do not include therapy given for relapse, persistent, or progressive disease. Any post-transplant therapy included as part of the initial transplant protocol should be reported in this area of the form.

Question 99: Systemic therapy

Systemic therapy refers to a delivery mechanism where a therapeutic agent is delivered orally or intravenously, enters the bloodstream, and is distributed throughout the body. Indicate whether systemic therapy was given. Indicate “yes” if the recipient received systemic therapy during the reporting period for reasons other than relapse, persistent, or progressive disease.

Questions 100-155: Specify systemic therapy

Systemic therapy agents and treatment regimens vary based on disease, prognosis, and protocol. Treatment may consistent of one or multiple drugs, and may be given in an inpatient or outpatient setting; additionally, drugs may be administered on a single day, over consecutive days, or continuously.

Form options are arranged by drug class, which is determined by the chemical structure and action against cancer cells. Review each option within the drug classes to determine whether any agents from that class were given. Report “yes” or “no” for each drug class with an agent administered during the current reporting period for reasons other than relapse, persistent, or progressive disease. For each drug class where “yes” indicated, report “yes” or “no” for each agent listed below. If the recipient received a therapeutic agent that

is not listed within the class, select “other” and specify; if the recipient received a therapeutic agent that does not fall into any of the drug class options available on the form, select “yes” for question 154 and specify in question 155.

Drug Classes

Drug Class	Description
Monoclonal antibody (mAb)	Monoclonal antibodies are developed to bind to a specific cell surface marker or protein. These antibodies either prompt the recipient’s immune system to attack the target or they deliver treatments directly to sites of disease (e.g., radioimmunotherapy). *Do not report PD1 or tyrosine kinase inhibitors under this class. These drugs are captured separately.*
Tyrosine kinase inhibitors (TKI)	Tyrosine kinases (TKs) are proteins responsible for many cell functions and can be found in the cell membrane, cytoplasm, and nucleus. This large category of proteins is involved in many different cellular processes. Overactive TKs can result in significant disruption of normal cellular processes including uncontrolled growth and proliferation. TKI’s disrupt the function of these overactive proteins allowing other normal cell processes such as adhesion and apoptosis to resume. *Do not report FLT3 or BTK inhibitors under this class. These drugs are captured separately.*
FLT3 inhibitor	The FLT3 gene produces a specific receptor type tyrosine kinase which acts as a cell surface receptor for cytokines. This protein has been shown to be overactive in certain malignancies such as AML. Treatments have been developed to target and disrupt FLT3 protein function and restore normal cellular processes. Report all FLT3 targeted therapies under this class.
Hypomethylating agent	Methylation of specific nucleotides impacts whether specific portions of DNA are available for transcription. Some cancers experience significant cell growth and proliferation due to excessive methylation of DNA which can turn off tumor suppressor genes. Hypomethylating agents counter this process by reducing the amount of DNA methylation and restoring function to tumor suppressor genes. Report all hypomethylating agents under this class.
Proteasome inhibitor	Certain intracellular proteins, such as P53, are necessary for the activation of apoptosis in cancer cells. Proteasomes break down many intracellular proteins including P53. Proteasome inhibitors disrupt the function of proteasomes and are believed to slow or prevent the excessive degradation of the proteins which activate apoptosis. Report all proteasome inhibitors under this class.
Immune modulating agent	Immune modulating agents have varied targets and mechanisms of action, but are all similarly intended to prompt an anti-tumor response from the recipient’s own immune system. *Do not report mAb therapy or PD1 inhibitors under this class. These drugs are captured separately.*
PD1 inhibitor	PD1 is a cell surface receptor protein present on T-cells. It detects the presence of normal cell surface molecules on healthy cells and prevents T-cells from destroying them. Some cancer cells also produce similar cell surface molecules which prevent T-cells from recognizing and attacking them. PD1 inhibitors block this interaction allowing T-cells to attack cancer cells. Report all PD1 inhibitors under this class.
BTK inhibitor	Bruton’s tyrosine kinase is a protein involved in B-cell maturation. This protein has been shown to be overactive in certain malignancies such as CLL. Treatments have been

	developed to target and disrupt BTK function and restore normal cellular processes. Report all BTK inhibitors under this class.
Chemotherapy	Any systemic cytotoxic agents not already reported under a drug class above. *Do not report intrathecal therapy under this class. These treatments should be reported under "other therapy" in questions 160-161.*
Other systemic therapy	Any therapeutic agents that the recipient received that do not fall into any of the drug class options available above (e.g., dexamethasone) should be reported under this class.

Question 156: Radiation

Radiation therapy uses high-energy radiation to kill cancer cells. External beam radiation is one of the more frequently used types of radiation. In this method, a beam of radiation is delivered to a specific part of the body, such as the mediastinum. Radiation may be planned if bulky disease was present just prior to transplant for a recipient with lymphoma or a solid tumor. Indicate "yes" if the recipient received radiation therapy during the reporting period for reasons other than relapse, persistent, or progressive disease.

Question 157: Cellular therapy

Cellular therapy refers to the infusion of human or animal derived cells, which may or may not be modified or processed to achieve a specific composition. Examples include T-cell, NK cell, and mesenchymal cell infusions as well as donor cellular infusions. Indicate "yes" if the recipient received any form of cellular therapy for reasons other than relapse, persistent, or progressive disease or decreasing / loss of donor chimerism; hematopoietic cell transplantation should not be reported as cellular therapy, as this is captured in questions 7-13 of the Post-TED form.

Question 158: Blinded randomized trial

A blinded, randomized trial refers to a research treatment protocol in which the participant is assigned to the control arm or investigational group, and the researcher or clinician is not informed whether the subject is receiving the placebo or standard of care versus the investigational therapy. This makes it impossible to report agents or therapies the recipient is receiving. Indicate "yes" if the recipient is receiving therapy on a randomized, blinded clinical trial during the reporting period for reasons other than relapsed, persistent, or progressive disease or decreasing / loss of donor chimerism.

Questions 159-160: Other therapy

Report whether the recipient received additional therapy for reasons other than relapsed, persistent, or progressive disease or declining / loss of donor chimerism which does not fit into the previous form categories. Examples may include intrathecal therapy or surgery. Specify the other therapy given in question 160.

Last modified: 2018/08/10

Q161-234: Relapse or Progression Post-HCT

Malignant Diseases Only
Only complete questions 161-163 if the HCT being reported was given to treat a malignant disease. If the HCT being reported was given to treat a non-malignant disease, leave questions 161-163 blank. Questions 164-234 must be completed regardless of disease type. FormsNet should enable / disable this section based on the primary disease reported on the Pre-TED Disease Classification Form (Form 2402). Contact your CRC if you believe FormsNet is incorrectly enabling / disabling these fields.

Report if the recipient has experienced a clinical/hematologic relapse or progression post-HCT. If the relapse or progression was detected in a previous reporting period indicate that and continue on. If the first clinical/hematologic relapse occurred since the date of the last report, indicate the date it was first detected in this reporting period.

Question 161: Did the recipient experience a clinical/hematologic relapse or progression post-HCT?

Clinical/hematologic assessment is the least sensitive method of disease detection. Examples include circulating blasts in the bloodstream for AML, or enlargement of a malignant mass for lymphoma or a solid tumor. Every recipient who has an evaluation by a physician has a “clinical” assessment. Include radiographic evidence of relapse or progression as clinical/hematologic relapse or progression. Disease specific criteria for establishing relapse or progression are published as part of the CIBMTR Forms Instructions Manual. If the recipient dies, and the relapse or progression of disease is discovered by autopsy, the date of assessment should be reported as the date of death, not the autopsy date.

If clinical/hematologic evidence of relapse/progressive disease was found at any time post-transplant, check “yes” and continue with question 162.

If clinical/hematologic evidence of relapse/progressive disease was not found at any time post-transplant, check “no” and continue with question 164.

Question 162: Was the date of clinical/hematologic relapse or progression previously reported?

Only the date of first clinical/hematologic relapse or progression post-transplant needs to be reported. Therefore, if the recipient experienced clinical/hematologic relapse or progression in a prior reporting period, report “yes” and continue with question 164. If this is the report of first instance of clinical/hematologic relapse or progression, indicate “no” and continue with question 163.

Question 163: Date first seen:

Indicate the date relapse/progressive disease was determined by clinical/hematological evaluation. If exact date is not known, refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates.

Question 164: Was intervention given for relapsed, persistent or progressive disease, or decreased/loss of chimerism since the date of last report?

Interventions for Decreased / Loss of Chimerism
The Post-TED Form (Form 2450) captures interventions given for decreased or loss of chimerism in the relapse / progression section of the form. If the recipient receives an intervention for decreased or loss of chimerism during the reporting period, report the therapy in questions 164-234. This instruction may differ from prior guidelines regarding how to report interventions for decreased / loss of chimerism on past revisions (1-3) of the Post-TED Form.

Indicate whether therapy was given during the reporting period for persistent disease, relapsed / progressive disease, or for decreased / loss of donor chimerism. Do not include therapy given for maintenance or planned post-transplant consolidation. Any post-transplant therapy included as part of the initial transplant protocol should not be reported in this area of the form. See the intervention reporting scenarios provided below for further clarification.

Question 165: Specify reason for which intervention was given

Indicate whether therapy was given for persistent disease, relapsed / progressive disease, or for decreased / loss of donor chimerism. In some instances, therapy may be given to treat disease and decrease / loss of chimerism. In these cases, report the indication pertaining to the recipient's disease status (i.e., "persistent disease" or "relapsed / progressive disease"). If therapy continued from a prior reporting period and a new therapy was started for a different reason during the current reporting period, report the reason the new therapy was started. See the intervention reporting scenarios provided below for further clarification.

Question 166-171: Specify the method(s) of detection for which intervention was given

Indicate the methods detecting the reason for which therapy for persistent disease, relapsed / progressive disease, or for decreased / loss of donor chimerism was given (as reported in question 165). For each option, select "yes" if the last assessment by that method was performed prior to the start of the intervention(s) and was consistent with the rationale reported in question 165. There may be some cases for which an assessment by a particular method was last performed in the prior reporting period, but was still consistent with the justification reported in question 165; in this case, the response should still indicate "yes." For example, in the 100-day reporting period, the last cytogenetic assessment detected a new

abnormality associated with the recipient's primary transplant disease. In this case, monosomy 7 was identified on a peripheral blood sample for a recipient transplanted for AML in CR1 with normal cytogenetics prior to transplant. In the 6-month reporting period, relapse was detected in the bone marrow morphology (clinical assessment) and concurrent flow cytometry (flow cytometry) and therapy was initiated for relapsed / progressive disease. In this case, each of questions 166, 168, and 169 would be answered "yes" on the Post-TED form in the 6-month reporting period.

If multiple therapies were given during the reporting period for different reasons (e.g., the recipient initially receives treatment for decreased chimerism and subsequently receives different treatment for relapse during the same reporting period), report "yes" for any methods of detection confirming the reason in question 165. See the intervention reporting scenarios provided below for further clarification.

If assessment by that method was not performed or was performed and not consistent with the reason for which intervention was given reported in question 165, report "no."

See below for definitions and examples of each method of detection:

- **Clinical / hematologic:** Clinical / hematologic assessment is the least sensitive method of disease detection. Examples include circulating blasts in the bloodstream for AML, or enlargement of a malignant mass for lymphoma or a solid tumor. Every recipient who has an evaluation by a physician has a "clinical" assessment. Examples of clinical/hematologic assessments include: bone marrow biopsy / morphologic evaluation, complete blood count, serum protein electrophoresis, etc.

- **Radiologic (e.g., PET, MRI, CT):** Radiologic assessments are imaging techniques used to assess disease response. Imaging techniques used to evaluate disease response typically include PET, CT, or MIBG, but may include x-ray, skeletal survey, or ultrasound in some cases.

- **Cytogenetic:** Cytogenetic studies involve the study of chromosomes, typically through one of two methods: karyotyping or fluorescence in situ hybridization (FISH). Blood, bone marrow, or tissue preparations may be tested by either of these two methods. Karyotyping is both less sensitive and less specific than FISH testing; FISH studies identify only abnormalities detectable by the employed probe set, and cannot provide information about the presence or absence of chromosomal abnormalities or markers outside the specific probe set utilized.

- **Flow cytometry:** Flow cytometry is a technique that can be performed on blood, marrow, or tissue preparations where the cell surface markers can be quantified on cellular material. This allows for the detection of abnormal cell populations for some diseases. Flow cytometry may also be referred to as immunophenotyping.

- **Disease specific molecular marker:** 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 associated with the disease for which the HCT was performed.

- **Chimerism testing:** Chimerism testing refers to cytogenetic or molecular evaluation used to detect presence of donor- and recipient-specific cells. Examples include VNTR / STR for recipient specific markers or FISH testing using an XX / XY probe set after sex mismatched transplant.

Question 172: Date intervention started

Report the date therapy was started for the reason specified in question 165; if multiple instances, cycles, or lines of therapy are administered, report the date of the first treatment. If treatment was started in a prior reporting period and continues into the current reporting period, report the original therapy start date (prior to the start of the current reporting period) and override the validation error in FormsNet3^{SM} using the code "verified correct." If therapy was stopped in a prior reporting period and restarted (or a new therapy was started) during the current reporting period, report the earliest date treatment was administered during the current reporting period. See the intervention reporting scenarios provided below for further clarification.

Intervention Reporting Scenarios

A. A recipient with NHL in complete remission at the time of HCT has a relapse during the 100 day reporting period. Relapse was detected by a PET scan and a lymph node biopsy. Following these assessments, rituximab was started on 5/1/2016. The disease did not respond to this therapy prompting a switch to brentuximab on 6/1/2016. The 100 Day date of contact is 6/15/2016.

100 Day Post-TED Form:

Q164: Report "Yes" to indicate therapy was given for relapsed disease during this reporting period.
Q165: Report "Relapsed / progressive disease."
Q166-171: Report "Yes" for clinical/hematologic (lymph node biopsy) and radiological (PET Scan). All other methods of detection must be reported "no."
Q172: Report "5/1/2016" to reflect the date of the first treatment given for relapsed disease.
Q173-234: Report both rituximab and brentuximab as treatments for relapsed disease given during the reporting period.

B. A recipient with multiple myeloma in VGPR at the time of HCT was started on maintenance lenalidomide during the six month reporting period. Later in the reporting period, progression was detected by serum protein electrophoresis on 9/15/2014 and so the recipient stopped lenalidomide and started bortezomib as well as dexamethasone on 9/20/2014 The recipient continued bortezomib and dexamethasone treatment into the one year reporting period.

Six Month Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for relapsed disease during this reporting period.
Q165: Report “Relapsed / progressive disease.”
Q166-171: Report “Yes” for clinical/hematologic (serum protein electrophoresis). All other methods of detection must be reported “no.”
Q172: Report “9/20/2014” to reflect the date of the first treatment given for progressive disease.
Q173-234: Report both bortezomib and dexamethasone as treatments for progressive disease given during the reporting period. The lenalidomide therapy should not be reported in this section of the form. This medication was given as maintenance therapy and will therefore be reported under Post-HCT Therapy.

One Year Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for relapsed disease during this reporting period.
Q165: Report “Relapsed / progressive disease.”
Q166-171: Report “Yes” for clinical/hematologic (serum protein electrophoresis). Centers are instructed to report “yes” for all methods of assessment performed prior to the start of treatment which confirmed the reason therapy was given (question 165). This includes assessments which may have been performed during a prior reporting period.
Q172: Report “9/20/2014” to reflect the date of the first treatment given for relapsed disease. Reporting a date outside the current reporting period will cause a FormsNet3 error. Centers are instructed to override this error using the code “Verified Correct.”
Q173-234: Report both bortezomib and dexamethasone as treatments for progressive disease given during the reporting period.

C. A recipient with Ph+ ALL in CR at the time of HCT has decreasing donor chimerism during the six month reporting period. To improve donor chimerism, two DLIs were given during the six month reporting period with the first infusion administered on 1/1/2015. One additional DLI was given at the beginning of the one year reporting period on 2/1/2015. Relapse was detected on 2/15/2015 by cytogenetic and molecular assays performed on peripheral blood samples. Relapse was confirmed by a bone marrow biopsy performed on 2/20/2015 and treatment with dasatinib was commenced that same day. Dasatinib therapy was continued into the two year reporting period.

Six Month Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for decreased chimerism during this reporting period.
Q165: Report “Decrease / loss of chimerism.”
Q166-171: Report “Yes” for chimerism testing. All other methods of detection must be reported “no.”

Q172: Report “1/1/2015” to reflect the date of the first DLI given for decreased chimerism.
Q173-234: Report the DLI’s given during the reporting period as “Cellular Therapy.”

One Year Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for decreased chimerism and relapsed disease during this reporting period.
Q165: Report “Relapsed / progressive disease.” When interventions are given to treat disease and decrease / loss of chimerism, report the indication pertaining to the recipient’s disease status (i.e., “persistent disease” or “relapsed / progressive disease”).
Q166-171: Report “Yes” for clinical / hematologic, cytogenetic, and disease specific molecular marker. All other methods of detection must be reported “no.” This question must be answered based on the reason for the intervention as specified in question 165.
Q172: Report “2/20/15” to reflect the first new treatment administered during the reporting period.
Q173-234: Report the DLI and dasatinib as treatments received during the reporting period. Any treatments received during the reporting period for persistent disease, relapsed / progressive disease, or decrease / loss of chimerism must be reported in question 173-234.

Two Year Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for relapsed disease during this reporting period.
Q165: Report “Relapsed / progressive disease.”
Q166-171: Report “Yes” for clinical / hematologic (bone marrow biopsy), cytogenetic, and disease specific molecular marker. All other methods of detection must be reported “no.” The first treatment administered during the reporting period was dasatinib (continued from prior reporting period). Questions 166-171 must be answered based on the methods of detection confirming the reason the first treatment during the reporting period was administered.
Q172: Report “2/20/2015” to reflect the date dasatinib was started. Reporting a date outside of the current reporting period will cause a FormsNet3 error. Centers are instructed to override this error using the code “Verified Correct.”
Q173-234: Report dasatinib given for relapsed disease. No other treatment was given during the reporting period.

D. A recipient with multiple myeloma in PR at the time of HCT was started on lenalidomide during 100 day reporting period (started 3/15/2012) due to persistent disease (detected by serum electrophoresis testing). This treatment was not planned and was given due to an unsatisfactory disease response to HCT. Thirty days after lenalidomide was started, a karyotype assessment confirmed persistent cytogenetic abnormalities present in a bone marrow sample. Lenalidomide was continued into the six month reporting period, during which, there was disease progression (detected by serum electrophoresis). Lenalidomide

was stopped and carfilzomib was started on 5/30/2012. By the end of the six month reporting period, the recipient achieved a complete remission in response to carfilzomib and was switched to a lower maintenance dose of carfilzomib which was continued into the one year reporting period.

100 Day Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for persistent disease during this reporting period.
Q165: Report “Persistent disease.”
Q166-171: Report “Yes” for clinical / hematologic (serum protein electrophoresis). All other methods of detection must be reported “no.” The karyotype test would not be reported as a method of detection since it was performed after treatment was started and, therefore, did not inform the decision to start lenalidomide.
Q172: Report “3/15/2012” to reflect the date of the first treatment for persistent disease.
Q173-234: Report lenalidomide as the only treatment given during the reporting period.

Six Month Post-TED Form:

Q164: Report “Yes” to indicate therapy was given for persistent and progressive disease during this reporting period.
Q165: Report “relapsed / progressive disease.” If therapy continued from a prior reporting period and a new therapy was started for a different reason during the current reporting period, report the reason the new therapy was started.
Q166-171: Report “Yes” for clinical / hematologic (serum protein electrophoresis). All other methods of detection must be reported “no.”
Q172: Report “5/30/2012” to reflect the date of the first treatment for progressive disease.
Q173-234: Report the lenalidomide and carfilzomib as treatments received during the reporting period. Any treatments received during the reporting period for decrease / loss of chimerism, relapsed disease, or progressive disease must be reported in question 173-234.

One Year Post-TED Form:

Q164: Report “No” to indicate therapy was not given for decrease / loss of chimerism, relapsed disease, or progressive disease during this reporting period. The lower dose carfilzomib given as maintenance (to keep the recipient in CR) must be reported in the Post-HCT Therapy Section of the Post-TED Form. Reporting “No” for question 164 will disable questions 165-234.

Question 173: Systemic therapy

Systemic therapy refers to a delivery mechanism where a therapeutic agent is delivered orally or intravenously, enters the bloodstream, and is distributed throughout the body. Indicate whether systemic

therapy was given. Indicate “yes” if the recipient received systemic therapy during the reporting period for relapsed, persistent, or progressive disease, or decreased / loss of donor chimerism. If therapy has continued from a previous reporting period, report the original start date and override the validation error in FormsNet3^{SM} using the code “verified correct.”

Questions 174-229: Specify systemic therapy

Systemic therapy agents and treatment regimens vary based on disease, prognosis, and protocol. Treatment may consistent of one or multiple drugs, and may be given in an inpatient or outpatient setting; additionally, drugs may be administered on a single day, over consecutive days, or continuously.

Form options are arranged by drug class, which is determined by the chemical structure and action against cancer cells. See the Drug Classes table for additional information regarding drug classes. Review each option within the drug classes to determine whether any agents from that class were given. Report “yes” or “no” for each drug class with an agent administered during the current reporting period for relapsed, persistent, or progressive disease or for decreased / loss of donor chimerism. For each drug class where “yes” indicated, report “yes” or “no” for each agent listed below. If the recipient received a therapeutic agent that is not listed within the class (e.g. dexamethasone), select “other” and specify; if the recipient received a therapeutic agent that does not fall into any of the drug class options available on the form, select “yes” for question 228 and specify in question 229.

Question 230: Radiation

Radiation therapy uses high-energy radiation to kill cancer cells. External beam radiation is one of the more frequently used types of radiation. In this method, a beam of radiation is delivered to a specific part of the body, such as the mediastinum. Radiation may be planned if bulky disease was present just prior to transplant for a recipient with lymphoma or a solid tumor. Indicate “yes” if the recipient received radiation therapy during the reporting period for relapsed, persistent, or progressive disease.

Question 231: Cellular therapy

Cellular therapy refers to the infusion of human or animal derived cells, which may or may not be modified or processed to achieve a specific composition. Examples include T-cell, NK cell, and mesenchymal cell infusions as well as donor cellular infusions. Indicate “yes” if the recipient received any form of cellular therapy for relapse, persistent, or progressive disease or decreasing / loss of donor chimerism; hematopoietic cell transplantation should not be reported as cellular therapy, as this is captured in questions 7-13 of the Post-TED form.

Question 232: Blinded randomized trial

A blinded, randomized trial refers to a research treatment protocol in which the participant is assigned to the

control arm or investigational group, and the researcher or clinician is not informed whether the subject is receiving the placebo or standard of care versus the investigational therapy. This makes it impossible to report agents or therapies the recipient is receiving. Indicate “yes” if the recipient is receiving therapy on a randomized, blinded clinical trial during the reporting period for relapsed, persistent, or progressive disease or decreasing / loss of donor chimerism.

Questions 233-234: Other therapy

Report whether the recipient received additional therapy for relapsed, persistent, or progressive disease or declining / loss of donor chimerism which does not fit into the previous form categories. Examples may include intrathecal therapy or surgery. Specify the other therapy given in question 234.

Last modified: 2019/04/11

Q235-238: Current Disease Status

> **Malignant Diseases Only**
> Only complete questions 235-238 if the HCT being reported was given to treat a malignant disease. If the HCT being reported was given to treat a non-malignant disease, leave questions 235-238 blank. FormsNet should enable / disable this section based on the primary disease reported on the Pre-TED Disease Classification Form (Form 2402). Contact your CRC if you believe FormsNet is incorrectly enabling / disabling these fields.

Question 235: What is the current disease status?

Indicate the disease status of the primary transplant disease as of the last evaluation in the reporting period. Complete remission (CR) criteria vary by disease, and are outlined in the CIBMTR Forms Instructions Manual. If the recipient achieves CR or continues in CR at the time of last evaluation in the reporting period, indicate “complete remission (CR).” If the recipient is not in CR due to presence of disease on last evaluation in the reporting period or an incomplete evaluation that does not allow for reporting CR, indicate “not in complete remission.” If the recipient’s disease status was not evaluated post-HCT, check “not evaluated” and continue with question 98. This option is not commonly used, as this would indicate that no tests (radiological, laboratory, or a clinical assessment) were performed to assess the CR status at **any time** during the reporting period.

The center does not need to repeat all disease-specific assessments (biopsies, scans, labs) each reporting period in order to complete current disease status data fields. Once a particular disease status is achieved, the center can continue reporting that disease status (based on labs / clinical assessments) until there is evidence of relapse / progression.

Question 236: Specify disease status if not in complete remission

Disease status criteria are generally based upon clinical assessment confirming ongoing presence or absence of disease. However, there are also situations in which an evaluation may have been performed but be incomplete and not have all testing required in order to meet the criteria for reporting complete remission (CR).

For recipients “not in complete remission,” indicate whether clinical evidence of disease persisted on disease-specific assessments within the reporting period. If all assessments have shown resolution of disease, but not all assessments required to report complete remission have been completed, indicate “no disease detected but incomplete evaluation to establish CR.” This option is also appropriate for scenarios in which the recipient has not previously achieved a post-HCT CR but does not have any disease assessments

performed within the reporting period. Indicate “disease detected” if disease persists by any method of radiological or clinical assessment; persistence of abnormalities by molecular, cytogenetic, or flow cytometry assessments does not constitute “disease detected.”

Example 1: A recipient with multiple myeloma goes to transplant in VGPR, without a bone marrow showing < 5% blasts completed prior to transplant. Post-transplant serum and urine electrophoreses and immunofixations are negative. However, no bone marrow biopsy is performed within the 100-day reporting period. In this case, “not in complete remission” should be selected for question 235, and “no disease detected by incomplete evaluation to establish CR” for question 236.

Example 2: A recipient with AML goes to transplant in primary induction failure. Post-transplant, they recover their counts, but had circulating blasts noted on differential. They expire due to persistent disease with their last CBC performed on their date of death showing circulating blasts. In this case, “not in complete remission” should be selected for question 235, and “disease detected” in question 236.

Example 3: Similar to example 2, a recipient with AML goes to transplant in primary induction failure. They expire on D+11 due to infection, and had not engrafted as of that date. Their last CBC showed a WBC of 0.5 × 109/L with no blasts detected on their differential. A bone marrow biopsy was not performed between transplant and the date of death. In this case, “not in complete remission” should be selected for question 235, and “no disease detected by incomplete evaluation to establish CR” in question 236.

Question 237-238: Date of most recent disease assessment

Indicate whether the date of most recent disease assessment is known or unknown. Use known even if only approximate date is known, then refer to General Instructions, General Guidelines for Completing Forms, for information about reporting partial or unknown dates. “Unknown” should only be used when there is no record – exact or approximate – of disease assessment within the reporting period.

Report the date of the clinical / hematologic assessment using the guidelines below:

- If the current disease status is “complete remission,“ report the date of the most disease specific clinical / hematologic assessment performed within approximately 30 days of the contact date.
- If the current disease status is “not in complete remission – disease detected,” report the most recent clinical / hematologic assessment performed in the reporting period that detects disease.
- If the current disease status is “not in complete remission – no disease detected but incomplete evaluation to establish CR,” report the last clinical / hematologic disease assessment performed in the reporting period.
- If there are no disease-specific assessments within the reporting period, report the latest assessment in which the recipient was clinically assessed by a physician or midlevel clinician. In this scenario, this date does not need to be consistent with the disease status reported in question 235-236.

Example 1: The current disease status for a recipient with non-Hodgkin's lymphoma is "complete remission." A PET scan was performed 3 months prior to the contact date showing no evidence of disease and a physician's exam was performed on the contact date. In this case, the physician's exam performed on the contact date should be reported as the current disease assessment date since this is the most disease specific clinical / hematologic assessment performed within 30 days of the contact date.

Example 2: For a recipient with neuroblastoma, the current disease status is "not in complete remission – disease detected" since disease was still present on the last PET scan. The PET scan was performed 7 months prior to the contact date and a physician's exam was performed on the contact date – disease cannot be detected by the physician's exam. The date of the PET scan should be reported as the current disease assessment date since this is the most disease specific clinical / hematologic assessment showing evidence of disease.

Example 3: The bone marrow biopsy performed for a recipient with AML still showed > 5% blasts in the bone marrow and therefore, the current disease status is reported as "not in complete remission – disease detected." The bone marrow biopsy was performed 6 months prior to the contact date and a CBC was performed 2 weeks prior to the contact date – the CBC showed > 5% blasts in the blood. In this scenario, the current disease assessment date should be reported as the date of the CBC as this is the most recent disease specific clinical / hematologic assessment showing evidence of disease.

Example 4: A recipient with multiple myeloma had a bone marrow biopsy performed 2 weeks prior to the contact date which showed < 5% plasma cells; however, the last set of myeloma labs performed in the prior reporting period still showed evidence of disease; these labs were not repeated in the current reporting period. On the contact date, a physician's exam was performed. The current disease status is "not in CR – no disease detected but incomplete evaluation to establish CR" and the current disease assessment date should be reported as the date of the physician's exam as this is the last clinical / hematologic assessment performed in the reporting period.

Last modified: 2019/04/19