2058: Thalassemia Pre-Infusion

The Thalassemia Pre-Infusion (2058) Form is one of the Comprehensive Report Forms. This form captures thalassemia-specific pre-infusion data such as the recipient's thalassemia diagnosis, donor related information, transfusion, hepatic, cardiac, renal, iron overload assessment prior to the start of the preparative regimen, hematologic labs, organ impairment, and pre-infusion therapy.

This form must be completed for all transplant and gene therapy recipients, randomized to the Comprehensive Report Form (CRF) track whose primary disease is reported as **Hemoglobinopathies – Transfusion dependent thalassemia: Transfusion beta dependent thalassemia** or **Other transfusion dependent thalassemia** on the Disease Classification (2402) Form.

Links to Sections of Form:

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 reference the retired manual section on the Retired Forms Manuals webpage.

Date	Manual Section	Add/ Remove/ Modify	Description
4/22/ 2022	2058: Thalassemia Pre-Infusion	Add	Version 1 of the 2058: Thalassemia Pre-Infusion section of the Forms Instructions Manual released. Version 1 corresponds to revision 1 of the Form 2058.

Last modified: Nov 21, 2022

Q1: Subsequent Transplant or Cellular Therapy

Question 1: Is this a second or subsequent transplant or cellular therapy for the same disease?

Report **No** and go to question 2 in any of the following scenarios:

- This is the first infusion reported to the CIBMTR; or
- This is a second or subsequent infusion for a different disease (i.e., the patient was previously transplanted for a disease other than a leukodystrophy); or
- This is a second or subsequent infusion for the same disease subtype and this baseline disease insert was not completed for the previous transplant (i.e., the recipient was on the TED track for the prior infusion, prior infusion was autologous with no consent, etc.).

Report **Yes** and go to question 27 if this is a subsequent infusion for the same disease *and* the Pre-Infusion Thalassemia (2058) Form was completed previously.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q2 – 26: Thalassemia Diagnosis

Questions 2 – 3: What is the recipient's beta-globin genotype?

Beta thalassemia occurs when there are mutations in the beta-globin gene leading to impaired production of the beta globin chains. This leads to an excess of alpha or alpha-type chains. Everyone has two beta globin genes (one from each parent). There are different types of beta thalassemia gene variants:

- Beta^{0}: No beta-globin is produced (B^{0})
- Beta^{+}: A reduced amount of beta-globin is produced (B^{+})
- Beta^{E} (hemoglobin E): A reduced amount of beta-globin is produced (B^{E})

A lack of the beta-globin protein causes a reduced amount of functional red blood cells and hemoglobin resulting in anemia.

Specify the recipient's beta-globin genotype. If the recipient has a normal genotype (i.e., the beta mutation is not detected), select **B / B**.

If the recipient's beta-globin genotype is not listed, select **Other genotype** and specify the other beta-globin genotype.

If the recipient's beta-globin genotype is not known, select **Unknown**.

Question 4: Is documentation being attached? (CIBMTR recommends attaching source documentation)

Indicate whether documentation of the recipient's beta-globin disease genotype was submitted to CIBMTR (e.g., pathology report, laboratory report).

For further instructions on how to attach documents in FormsNet3^{SM}, refer to the Training Guide.

Questions 5 – 6: What is the recipient's alpha-globin genotype?

A healthy individual has four genes to produce the alpha-globin protein. Alpha thalassemia occurs when one or more of the four genes for alpha-globin are defective or absent. Suppressed alpha-globin protein causes reduced amounts of healthy red blood cells and hemoglobin.

Specify the recipient's alpha-globin genotype. The ' – ' represents the number of genes deleted (i.e., ' – - / aa' signifies two gene deletions, ' – - / a-' signifies three gene deletions). Hemoglobin Constant Spring (Hb CS) is a non-deletional α-thalassemia (a^{CS}).

If the recipient has a normal genotype (i.e., the alpha-globin mutation is not detected), select **aa / aa**.

If the recipient's alpha-globin genotype is not listed, select **Other genotype** and specify the other alpha-globin genotype.

If the recipient's alpha-globin genotype is not known, select **Unknown**.

Question 7: Is documentation being attached? (CIBMTR recommends attaching source documentation)

Indicate whether documentation of the recipient's alpha-globin genotype was submitted to CIBMTR (e.g., pathology report, laboratory report).

For further instructions on how to attach documents in FormsNet3^{SM}, refer to the Training Guide.

Question 8: Is alpha-gene triplication present?

The alpha gene provides instructions for producing the alpha-globin protein. Alpha-gene triplication is referred to as the presence of more than four alpha genes.

Indicate if the alpha-gene triplication is present is at diagnosis. If alpha-gene triplication testing was not assessed or it is not known if it was assessed / present, select **Unknown**.

> **Hemoglobin Electrophoresis**
> Questions 9 – 23 are required to be answered when the recipient's beta-globin and alpha-globin genotype are reported as **Unknown**.

Questions 9 – 10: Was hemoglobin electrophoresis performed at diagnosis? (do not include results if an RBC transfusion occurred within 4 weeks of the electrophoresis study)

Indicate if hemoglobin electrophoresis studies were performed at diagnosis (prior to the initiation of RBC transfusions). If hemoglobin electrophoresis studies were not performed or it is not known if assessments were performed, select **No** or **Unknown**, respectively, and continue with question 24.

If RBC transfusion(s) were given within four weeks prior of the hemoglobin electrophoresis study, select **Not applicable** and continue with question 24.

If **Yes**, report the date of the most recent hemoglobin electrophoresis study prior to the administration of RBC transfusion(s). If the exact date is not known report an estimated date and check the **Date estimated** box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

> **Hemoglobin Types: Hb A and Hb A1**
> Hb A and Hb A1 are the same hemoglobin types. If Hb A1 is assessed, report these results under **Hb A**.

Questions 11 – 23: Specify the hemoglobin allele types based on the sample tested in question 9

Specify the hemoglobin allele types identified in the reported hemoglobin study (reported in question 10). If the hemoglobin allele type was assessed, report **Yes** and specify the percentage.

If additional thalassemia related hemoglobin types are identified but not listed as options on the form, select **Yes** for *Other thalassemia related hemoglobin type*, specify the type and the report the hemoglobin percentage

Alpha Gene Triplication
The HBA1 – HBA triplication ($aaa^{anti–3.7}$ / aa) gene is the same as alpha gene triplication.

Questions 24 – 25: Which genetic mutations were identified at diagnosis? (check all that apply)

Indicate if genetic mutations were identified at diagnosis. Check all that apply. If a genetic mutation was detected at diagnosis but not listed, select Other and specify the mutation.

If testing for genetic mutations were not performed at diagnosis or it is not known, select **Not done** or **Unknown**, respectively and continue with question 27.

Question 26: Is documentation being attached? (CIBMTR recommends attaching source documentation)

Indicate whether documentation of the genetic mutations identified at diagnosis was submitted to CIBMTR (e.g., laboratory report).

For further instructions on how to attach documents in FormsNet3^{SM}, refer to the Training Guide.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q27 – 52: Donor Related Information

Donor Related Information
If this was an autologous infusion, skip the Donor Related Information section and continue with the Transfusion Therapy section. The Donor Related Information section should only be completed if an allogeneic donor was used.

Questions 27 – 28: What is the donor's beta-globin disease genotype?

Specify the donor's beta-globin genotype. If the donor has a normal genotype (i.e., the beta mutation is not detected), select **B / B**.

If the donor's beta-globin genotype is not listed, select **Other genotype** and specify the other beta-globin genotype.

If the donor's Beta thalassemia disease genotype is not known, select **Unknown**.

Question 29: Is documentation being attached? (CIBMTR recommends attaching source documentation)

Indicate whether documentation of the donor's beta-globin genotype was submitted to CIBMTR (e.g., pathology report, laboratory report).

For further instructions on how to attach documents in FormsNet3^{SM}, refer to the Training Guide.

Questions 30 – 31: What is the donor's alpha-globin genotype?

Specify the donor's alpha-globin genotype. The ' – ' represents the number of genes deleted (i.e., ' – - / aa' signifies two gene deletions, '- – / a-' signifies three gene deletions).

If the donor has a normal alpha-globin genotype (i.e., the alpha-globin mutation is not detected), select **aa / aa**.

If the donor's alpha-globin genotype is not listed, select **Other genotype** and specify the other alpha-globin genotype.

If the donor's alpha-globin genotype is not known, select **Unknown**.

Question 32: Is documentation being attached? (CIBMTR recommends attaching source documentation)

Indicate whether documentation of the donor's alpha-globin genotype was submitted to CIBMTR (e.g., pathology report, laboratory report).

For further instructions on how to attach documents in FormsNet3^{SM}, refer to the Training Guide.

Questions 33 – 35: Hemoglobin (for donor)

Hemoglobin is a molecule in red blood cells that delivers oxygen to tissues throughout the body. A low hemoglobin count is considered “anemia” and blood transfusions, or growth factors may be required to increase the hemoglobin level.

Specify if the donor’s hemoglobin is known prior to harvesting of stem cells for infusion. If the donor’s hemoglobin is **Known**, report the most recent value and units of measurement prior to collection of stem cells. In addition, indicate if the donor received red blood cell transfusion(s) within 30 days prior to testing.

Questions 36 – 37: Mean corpuscular volume (MCV) (for donor)

Mean corpuscular volume (MCV) measures the average size of red blood cells.

Specify if the donor’s MCV is known prior to harvesting of stem cells for infusion. If **Known**, report the most recent value and units of measurement prior to collection of stem cells.

Hemoglobin Electrophoresis
Questions 38 – 52 are required to be answered when the donor’s Beta thalassemia and alpha genotype are reported as **Unknown**.

Questions 38 – 39: Was hemoglobin electrophoresis performed for the donor? (do not include results if an RBC transfusion occurred within 4 weeks of the electrophoresis study)

Specify if hemoglobin electrophoresis was performed for the donor at any time prior to the start of the preparative regimen / infusion. If a hemoglobin electrophoresis assessment was not performed or it is not known if performed, select **No** or **Unknown**, respectively and continue with question 53.

If hemoglobin electrophoresis was performed but the donor received RBC transfusions within four weeks of the electrophoresis study, select **Not applicable** and continue with question 53.

If **Yes**, report the date of the hemoglobin electrophoresis test. If the exact date is not known report an estimated date and check the **Date estimated** box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

If multiple hemoglobin electrophoresis assessments were performed prior to the start of the preparative regimen / infusion, report the date of the most recent assessment.

Hemoglobin Types: Hb A and Hb A1
Hb A and Hb A1 are the same hemoglobin types. If Hb A1 is assessed, report these results under **Hb A**.

Questions 40 – 52: Specify the hemoglobin allele types based on the sample tested in question 39

For each hemoglobin type listed, indicate if the specific hemoglobin was assessed on the sample date reported in question 39. If **Yes**, report the hemoglobin percentage. If a hemoglobin type was assessed but is not listed, select **Yes** for *Other thalassemia related hemoglobin allele type*, specify the type and the hemoglobin percentage.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q53 – 59: Transfusion Therapy

Question 53: Were any red blood cell (RBC) transfusions administered?

Red blood cell (RBC) transfusions are often given as supportive care for recipients with thalassemia.

Indicate if any red blood cell transfusions were administered between diagnosis and the start of the preparative regimen / infusion. If the recipient did not receive any RBC transfusions or no information is available to determine if the recipient received transfusion, report **No** and continue with question 57.

Question 54: Is the number of red blood cell (RBC) transfusions known?

Indicate if the number of RBC transfusions between diagnosis and the start of the preparative regimen / infusion are known.

Questions 55 – 56: Number of RBC transfusion events with the last 12 months

Transfusions may be referred to as “simple” or “exchange” transfusions. A simple transfusion refers to a direct infusion of a blood product. An exchange transfusion refers to the slow removal and replacement of the recipient’s blood with that of a healthy donor’s blood. A transfusion event consists of one or more RBC unit(s) given in a day.

Indicate the total number of RBC transfusion events the recipient received within 12 months prior to the start of the preparative regimen / infusion and specify the date of the last transfusion administered. If the exact date is not known report an estimated date and check the **Date estimated** box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

Example A: The progress notes state a recipient was transfused with one RBC unit each month, for six months. The number of transfusions increased, and the recipient receives two RBC units on the same day, each month, for the following six months prior to the start of the preparative regimen. The total number of RBC transfusion events within the last 12 months would be reported as “12.”

Question 57: Were the RBC units used for transfusion of an extended phenotype match (D, C, c, E, e, K)? (includes partial extended phenotype matches)

Extended phenotype testing may be performed on RBC units prior to transfusion to ensure donor and recipient matches are confirmed beyond the standard ABO compatibility matching to decrease the risk of alloimmunization. This information is typically found within the blood bank section of the medical record.

Report **Yes** if the RBC unit(s) used for transfusion are of an extended phenotype match (particularly D, C, c, E, e, or K). If the RBC unit(s) used for transfusion were not matched for extended phenotype D, C, c, E, e, or K or it is unknown if matched, report **No** or **Unknown**, respectively.

Questions 58 – 59: Were RBC alloantibodies present?

The presence of RBC alloantibodies may cause serologic incompatibility and make the selection of RBC

units for future transfusions difficult. RBC alloantibodies are typically present once alloimmunization has occurred.

If RBC alloantibodies are present prior to the start of the preparative regimen / infusion, report **Yes** and specify the number of alloantibodies identified. If testing for RBC alloantibodies were performed multiple times prior to the start of the preparative regimen / infusion, report the most recent assessment.

If RBC alloantibodies were not present prior to the start of the preparative regimen / infusion, report **No** and go to question 60.

Report **Unknown** if testing was not performed or it is not known if alloantibodies were present and go to question 60.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q60 – 62: Hepatic Assessments

Hepatic Assessments
Report the hepatic laboratory values prior to the start of the preparative regimen / infusion using results measured within 60 days prior to the start of the preparative regimen. If the assessment was performed multiple times, report the closest value to the start of the preparative regimen.

Questions 60 – 62: Direct bilirubin

Bilirubin is a pigment that is formed from the breakdown of hemoglobin in red blood cells. Serum bilirubin is a test of liver function that reflects the ability of the liver to take up, process, and secrete bilirubin. Direct bilirubin is also known as conjugated bilirubin

Indicate if the direct bilirubin is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, specify the value, units of measurement, and the upper limit of normal. If the direct bilirubin was assessed multiple times, report the most recent assessment prior to the start of the preparative regimen.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q63 – 67: Cardiac Assessments

Cardiac Assessments
Report cardiac assessments prior to the start of the preparative regimen / infusion using results measured within 60 days prior to the start of the preparative regimen. If the assessment was performed multiple times, report the closest value to the start of the preparative regimen.

Question 63: Was an echocardiogram performed?

Indicate if an echocardiogram was performed within 60 days prior to the start of the preparative regimen / infusion.

If an echocardiogram was not performed or it is not known if performed, report **No** or **Unknown**, respectively, and continue with question 68.

The **Unknown** option be selected sparingly and only when no information is available to determine if an echocardiogram was performed at any time prior to the start of the preparative regimen / infusion.

Questions 64 – 66: Was left ventricular ejection fraction (LVEF) or left ventricular shortening fraction reported?

The left ventricular ejection fraction (LVEF) is a percentage that represents the volume of blood pumped from the left ventricle into the aorta (also known as stroke volume) compared to the volume of blood in the ventricle just prior to the heart contraction (also known as end diastolic volume). The left ventricular shortening fraction is the percentage change in cavity dimensions of the left ventricle with systolic contraction.

Report **Yes** if either the LVEF or left ventricular shortening fraction were reported and provide the percentage(s). If the LVEF and left ventricular shortening fraction were assessed, report the results of both. If the LVEF or left ventricular shortening fraction were assessed multiple times, report the most recent value(s).

Report **No** if both the LVEF and left ventricular shortening fraction were not reported.

Question 67: Is documentation being attached? (CIBMTR recommends attaching the echocardiogram report)

Indicate whether the echocardiogram report is attached to this form. For instructions on how to attach documents in FormsNet3^{SM}, refer to the Training Guide.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)

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Last modified: Apr 24, 2022

Q68: Renal Assessments

Renal Assessments
Report the renal assessments prior to the start of the preparative regimen / infusion using results measured within 60 days prior to the start of the preparative regimen. If the assessment was performed multiple times, report the closest value to the start of the preparative regimen.

Question 68: Was proteinuria detected? (excluding microalbuminuria)

Proteinuria, also known as albuminuria, is excess protein in the urine and may be a sign of kidney disease. Proteinuria may be assessed by 24-hour urine collection or by a urine dipstick analysis. A value of > 150 mg by 24-hour urine collection or 'positive' by a dipstick analysis is indicative of proteinuria.

If proteinuria was assessed within 60 days prior to the start of the preparative regimen / infusion, indicate if proteinuria (excluding microalbuminuria) was detected.
Report **Yes** if the proteinuria was:

- > 150 mg by 24-hour urine collection or
- 'Positive' result by urine dipstick analysis. This also can be reported in EHR as trace, 1+, 2+, 3+, or 4+

Report **No** if the proteinuria was:

- ≤ 150 mg (by 24-hour urine collection) or
- 'Negative' result (by urine dipstick analysis)

If proteinuria was assessed multiple times within 60 days prior to the start of the preparative regimen, report based on the results of the most recent assessment.

If proteinuria was not assessed within 60 days prior to the start of the preparative regimen / infusion, select **Not done**.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q69 – 74: Additional Iron Overload Assessments

Additional Iron Overload Assessments
Report the additional iron overload assessments prior to the start of the preparative regimen / infusion using results measured within 60 days prior to the start of the preparative regimen. If the assessment was performed multiple times, report the closest value to the start of the preparative regimen.

Questions 69 – 72: Serum ferritin

Ferritin is a protein that stores, transports, and release iron. Iron is toxic to cells, so it is stored within the ferritin protein for use. Ferritin that is too low might be indicative of iron deficiency related anemia. Ferritin that is too high might be indicative of iron overload.

Indicate if the serum ferritin is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, specify the value in ng / mL (µg/L), sample collection date, and the upper limit of normal. If the exact date is not known report an estimated date and check the **Date estimated** box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

If the serum ferritin was assessed multiple times, report the most recent assessment prior to the start of the preparative regimen.

Questions 73 – 74: Soluble transferrin receptors (sTfR)

Soluble transferring receptors (sTfR) are proteins found in the blood and are used as a measure of functional iron status. These levels are typically elevated in individuals with an iron deficiency (i.e., iron deficiency anemia).

Indicate if sTfR is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, report the sTfR value in mg / L. If the sTfR was assessed multiple times, report the most recent results prior to the start of the preparative regimen / infusion.

Questions 75 – 76: Erythropoietin (EPO)

Erythropoietin (EPO) is a hormone predominantly produced in the kidneys which plays a critical role in the production of red blood cells.

Indicate if EPO is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, specify the EPO level in IU / L. If EPO was measured multiple times, report the most recent results prior to the start of the preparative regimen / infusion.

Questions 77 – 78: Serum hepcidin

Hepcidin is a peptide hormone produced in the liver which regulates iron delivered to blood plasma.

Indicate if serum hepcidin is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, specify the serum hepcidin level in ng / mL (µg / L). If serum hepcidin was measured multiple times, report the most recent results prior to the start of the preparative regimen / infusion.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q79 – 83: Additional Hematologic Labs

Additional Hematologic Labs
Report the additional hematologic labs prior to the start of the preparative regimen / infusion using results measured within 60 days prior to the start of the preparative regimen. If the assessment was performed multiple times, report the closest value to the start of the preparative regimen.

Questions 79 – 80: Reticulocyte count

Indicate if reticulocyte count is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, specify the reticulocyte cell count in cells / µL. If reticulocyte counts were measured multiple times prior to the start of the preparative regimen / infusion, report the most recent results.

Questions 81 – 83: Haptoglobin

Haptoglobin is a protein produced by the liver that the body uses to clear free hemoglobin from circulation. Free hemoglobin is the hemoglobin outside of the red blood cells.

Indicate if haptoglobin is known within 60 days prior to the start of the preparative regimen / infusion. If **Known**, specify the value, units of measurement, and the lower limit of normal. If haptoglobin was measured multiple times, report the most recent results prior to the start of the preparative regimen / infusion.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q84 – 94: Specify Existing Organ Impairments

Reporting Multiple Organ Impairments

FormsNet3^{SM} application: Complete questions 84 – 94 for each co-exiting disease or organ impairment by adding an additional instance in the FormsNet3SM application.
Paper form submission: Complete questions 84 – 94 for each co-exiting disease or organ impairment.

Question 84: Specify co-existing diseases or organ impairments any time prior to the start of the preparative regimen

Indicate if the recipient had any co-existing disease or organ impairments any time prior to the start of the preparative regimen / infusion. Report all co-existing disease or organ impairments.

- **Amenorrhea**: Absence of menstruation
- **Cardiomyopathy**: A disease of the heart muscle that makes it more difficult for the heart to pump blood to the rest of the body
- **Cholelithiasis**: Presence of one or more gallstones in the gallbladder
- **Growth hormone deficiency / short stature**: A condition in which the body does not produce enough growth hormone / a reduced overall rate of growth.
- **Hypersplenism**: Overactive spleen. Diagnosis is typically based on a physician's exam (checking for splenomegaly), a CBC to assess the concentration of red and white blood cells, and / or an ultrasound, measuring the size of the spleen.
- **Hypothyroidism requiring replacement therapy**: Decreased activity of the thyroid gland. Diagnosis of hypothyroidism includes high levels of thyroid-stimulating hormone (TSH). Symptoms of hypothyroidism include fatigue, depression, weakness, weight gain, musculoskeletal pain, decreased taste, hoarseness, and / or puffy face.
- **Osteopathies (porosis, penia)**: Includes osteoporosis or osteopenia. Osteopathies should be reported if osteopenia or osteoporosis is documented within the medical record by the physician or based on the Z or T-score. Osteopenia is defined as a Z or T-score between -1.0 and -2.0 by a DEXA or quantitative CT scan. Osteoporosis is defined as a Z or T-score less than -2.0 by a DEXA or quantitative CT scan.
- **Pulmonary hypertension**: Refers to elevated pulmonary arterial pressure and is diagnosed either by an echocardiogram or right heart catherization
- **Retinal changes**: Changes include but are not limited to macular degeneration, floaters, diabetic eye disease, retinal detachment, and retinitis pigmentosa.
- **Thrombosis**: Blood clot within a vein or artery.

If there were no co-existing diseases or organ impairments prior to the start of the preparative regimen / infusion, select **None** and continue question 95.

Question 85: Date of diagnosis

Report the diagnosis date of the co-existing disease or organ impairment. If the organ impairment occurred multiple time times prior to the start of the preparative regimen, report the co-existing disease or organ

impairment once and the diagnosis date of the most recent occurrence. See the example below for additional information.

If the exact date is not known report an estimated date and check the Date estimated box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

Example A: A recipient developed a blood clot (thrombosis) on 1/15/2015 which resolved; however, the recipient developed another blood clot 8/20/2019. The recipient's transplant was on 12/1/2019. The diagnosis date of the thrombosis should be reported as 8/20/2019 as this is the date of the most recent episode.

Question 86: Method used to assess osteopathies (report the most recent Z-score or T-score available; Z-scores are used in patients younger than or equal to 20 and T-scores in patients older than 20) (check all that apply)

Specify the method used to assess osteopathies at any time prior to the start of the preparative regimen / infusion. Select all that apply.

If the osteopathy was not assessed at any time prior to the start of the preparative regimen / infusion or it is not known if assessed, select **Unknown** and continue with question 95.

Questions 87 – 88: DEXA scan vertebral

Indicate if the vertebral Z-score by DEXA is known. If **Known**, report the Z or T-score. Select **Negative value** if the Z or T-score is a negative (i.e., Z-score is -1.0).

If multiple DEXA scans were performed prior to the start of the preparative regimen / infusion, report the most recent vertebral Z or T-score.

Questions 89 – 90: DEXA scan hip

Indicate if the hip Z-score by DEXA is known. If **Known**, report the Z or T-score. Select **Negative value** if the Z or T-score is a negative (i.e., Z-score is -1.0).

If multiple DEXA scans were performed prior to the start of the preparative regimen / infusion, report the most recent hip Z or T-score.

Questions 91 – 92: Quantitative CT vertebral

Indicate if the vertebral Z-score by quantitative CT is known. If **Known**, report the Z or T-score. Select **Negative value** if the Z or T-score is a negative (i.e., Z-score is -1.0).

If multiple quantitative CT scans were performed prior to the start of the preparative regimen / infusion, report the most recent vertebral Z or T-score.

Questions 93 – 94: Quantitative CT hip

Indicate if the hip Z-score by quantitative CT is known. If **Known**, report the Z or T-score. Select **Negative value** if the Z or T-score is a negative (i.e., Z-score is -1.0).

If multiple quantitative CT scans were performed prior to the start of the preparative regimen / infusion, report the most recent hip Z or T-score.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022

Q95 – 101: Disease Modifying Therapy

Question 95: Were disease modifying therapy given? (excludes blood transfusions)

Indicate if the recipient received disease modifying therapies (see question 96 for a list of common disease modifying therapies) at any time between diagnosis and the start of the preparative regimen / infusion, excluding blood transfusion(s).

If the recipient did not receive disease modifying therapies or if no information is available to determine if the recipient received disease modifying therapies, select **No** or **Unknown**, respectively and submit the form.

Reporting Multiple Disease Modifying Therapies
FormsNet3^{SM} application: Complete questions 96 – 101 for each line of therapy by adding an additional instance in FormsNet3SM application.
Paper form submission: Copy questions 96 – 101 and complete for each line of therapy.

Same Therapy Restarted
If the same therapy was started and stopped multiple times prior to the start of the preparative regimen, only one instance needs to be reported. In this case, report the therapy start date as the date when therapy first began.

Questions 96 – 97: Specify the disease modifying therapy (check all that apply)

Select the disease modifying therapy administered as part of the line of therapy being reported. Select all that apply.

- **Hydroxyurea**: A type of chemotherapy. Common brand names include Droxia and Hydrea.
- **Luspatercept**: Treatment for anemia with recipient's beta thalassemia. Also known as Reblozyl.

If the recipient received a therapy which is not listed, select **Other** and specify the treatment. Examples of the other disease modifying therapies includes drugs given as part of a clinical trial for thalassemia or future therapies not yet developed. Report the generic name of the agent, not the brand name.

Questions 98 – 99: Date therapy started

Indicate if the therapy start date is known. If the therapy start date is **Known**, report the first date the recipient began this line of therapy.

If the exact date is not known report an estimated date and check the **Date estimated** box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

If the therapy start date is not known, select **Unknown**.

Questions 100 – 101: Date therapy stopped

Indicate if the stop date is known. If **Known**, specify the end date. If the therapy is given in cycles, report the end date as the date when the recipient started the last cycle for this line of therapy. Otherwise, report the final administration date.

If the exact date is not known report an estimated date and check the **Date estimated** box. Refer to General Instructions, General Guidelines for Completing Forms for information about reporting estimated dates.

Report **Not applicable** if the recipient is still receiving therapy at the start of the preparative regimen / infusion.

Section Updates:

Question Number	Date of Change	Add/Remove/Modify	Description	Reasoning (If applicable)
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Last modified: Apr 24, 2022