SPECIMEN COLLECTION FORM for Visit 5 (L51)

CKiD Chronic Kidney Disease in Children Cohort Study SECTION A: GENERAL INFORMATION

A1. PARTICIPANT ID: AFFIX ID LABEL OR ENTER NUMBER IF ID LABEL IS NOT AVAILABLE

Ser	um	CBL	BATCHED	
	<u>nples:</u> um	<u>Shipped to:</u> CBL	<u>Shipped:</u> IMMEDIATELY	
The	e following sam	ple should be c	ollected.	
A6.	Is this study vis (accelerated) v		Yes No	1 2
A5.	FORM COMPL (INITIALS)	ETED BY:		
A4.	SPECIMEN CO DATE:	DLLECTION	$\frac{1}{M} \frac{1}{M} \frac{1}{D} \frac{1}{D} \frac{1}{Y} \frac{1}{Y} \frac{1}{Y} \frac{1}{Y} \frac{1}{Y}$	
A3.	FORM VERSIC	DN:	<u>0 4 / 0 1 / 0 9a</u>	
A2.	CKiD VISIT #:			
			- -	

 Urine
 CBL
 IMMEDIATELY

 *lohexol Blood
 CBL
 IMMEDIATELY

*ONLY COLLECT IOHEXOL BLOOD IF THIS IS AN ACCELERATED STUDY VISIT.

Please refer to questions 22 on the Eligibility Form to determine if biological consent was obtained.

Depending on the type of consent, the following samples may or may not be collected:

<u>Samples:</u>	Shipped to:	<u>Shipped:</u>
Serum (Biological)	NIDDK Biosample Repository	BATCHED
		(Ship in Jan, Apr, Jul or Oct)
Plasma (Biological)	NIDDK Biosample Repository	BATCHED
/		(Ship in Jan, Apr, Jul or Oct)
Urine (Biological)	NIDDK Biosample Repository	BATCHED
		(Ship in Jan, Apr, Jul or Oct)
*Whole Blood (Genetic) Rutgers Repository	IMMEDIATELY

*ONLY collect whole blood for Genetic Repository, if sample was not collected at V1b OR if sample collected at V1b was inadequate.

SECTION B: PREGNANCY TEST AND FIRST MORNING URINE COLLECTION

B1.	Is participant	a female of	child-bearing	potential?
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Yes	1 (See PROMPT Below)
No	2 (Skip to B3)

PROMPT: QUESTION B2 IS FOR FEMALE PARTICIPANTS OF CHILD-BEARING POTENTIAL ONLY. URINE PREGNANCY TEST DATE MUST FALL WITHIN 72 HOURS.

- B2. a. Urine pregnancy test date:

Positive...... 1 (END; COMPLETE DISENROLLMENT FORM)

FIRST MORNING URINE COLLECTION

Obtain urine collected at home in the specimen container that was shipped to the family before the visit. IF URINE WAS NOT collected at home, collect FRESH urine into a specimen container provided by central biochemistry laboratory (containers were shipped in batches to each site).

Pour 10 to 14.5 mL of urine into light blue top urine collection tube (provided by CBL).

Check that all information is correct on the urine collection tube and follow packaging instructions and ship to CBL.

Reasons Code List [*] :	1= Not required	3 = Participant Refused	5 = Inadvertently Destroyed
	2 = Difficult Urine Collection	4 = Collection Contamination	6 = Oversight

Sample Type (Required Volume in Top Color Tube Type):		(a) Sample Obtained:		(b) If No, specify reason *SEE CODE LIST ABOVE	(c) Additional Requirements:
		Yes	<u>No</u>		
ВЗ.	1 st Morning Urine (Urine Creatinine, Urine Protein, Urine Albumin) (10.0 mL–14.5 mL in Light Blue Top tube)	1 (skip to c→)	2	(skip to C1)	 i. Is this a first morning urine sample? Yes1 No2 ii. Time of Collection: : 1 = am, 2 = pm

SECTION C: Visit 5 BLOOD DRAW

For Initial Blood Draw with Syringe, Vacutainer OR Butterfly Method: Select the Type of Consent Obtained (options 1 through 4):

ONLY collect whole blood for Genetic Repository, if sample was not collected at V1b or sample collected at V1b was inadequate.

1 If participant consented to both BIOLOGICAL AND GENETIC samples:

Collect 27.3-29.8 mL if participant is < 30 kg OR 31.3-33.8 mL if participant is $\geq 30 \text{ kg}$.

- If < 30 kg, immediately transfer (using 18 gauge needle) or draw: If ≥ 30 kg, immediately transfer (using 18 gauge needle) or draw: If not collected at V1b and V3 - 7.8 mL into (3) 2.6mL ACD tubes for Rutgers Genetic If not collected at V1b and V3 - 7.8 mL into (3) 2.6mL ACD tubes for Rutgers Genetic Repository Repository (ACD Tubes must be COMPLETELY FILLED) (ACD Tubes must be COMPLETELY FILLED) 12.5 mL into (2) Tiger-Top SST for CBL and NIDDK Biosample Repository 14.5 mL into (2) Tiger-Top SST for CBL and NIDDK Biosample Repository 3 mL into (1) PST for NIDDK Biosample Repository 5 mL into two (2) PSTs for NIDDK Biosample Repository 1 mL in lavender-top tube for local CBC (tube not provided in CBL kit) 1 mL in lavender-top tube for local CBC (tube not provided in CBL kit) 3 mL in another tube (not provided) for local Renal Panel 3 mL in another tube (not provided) for local Renal Panel 2 If participant consented to BIOLOGICAL samples ONLY: Collect 19.5-22.0 mL if participant is < 30 kg OR 23.5-26.0 mL if participant is $\ge 30 \text{ kg}$. If < 30 kg, immediately transfer (using 18 gauge needle) or draw: If \geq 30 kg, immediately transfer (using 18 gauge needle) or draw: 12.5 mL into (2) Tiger-Top SSTs for CBL & NIDDK BR 14.5 mL into (2) Tiger-Top SSTs for CBL & NIDDK BR 5 mL into (2) PST for NIDDK Biosample Repository 3 mL into PST for NIDDK Biosample Repository 1 mL in lavender-top tube for local CBC (tube not provided in CBL kit) 1 mL in lavender-top tube for local CBC (tube not provided in CBL kit) 3 mL in appropriate tube (not provided) for local Renal Panel 3 mL in appropriate tube (not provided) for local Renal Panel 2.5 mL of additional blood in SST for CBL (if initial sample is GROSSLY HEMOLYZED) 2.5 mL of additional blood in SST for CBL (if initial sample is GROSSLY HEMOLYZED) 3 If participant consented to GENETIC samples ONLY, collect 21.3 – 23.8 mL (regardless of weight): Immediately transfer or draw: If not collected at V1b and V3 - 7.8 mL into (3) 2.6mL ACD tubes for Rutgers Genetic Repository (ACD Tubes must be COMPLETELY FILLED)
 - 9.5 mL into (2) Tiger-Top SST for CBL
 - 1 mL in lavender-top tube for local CBC (tube not provided in CBL kit)
 - 3 mL in another tube (*not provided*) for local Renal Panel
 - 2.5 mL of additional blood in SST for CBL (if initial sample is GROSSLY HEMOLYZED)

If participant did NOT consent to BIOLOGICAL samples and Genetic samples:

Collect 13.5-16.0 mL from all participants (regardless of weight) as specified below.

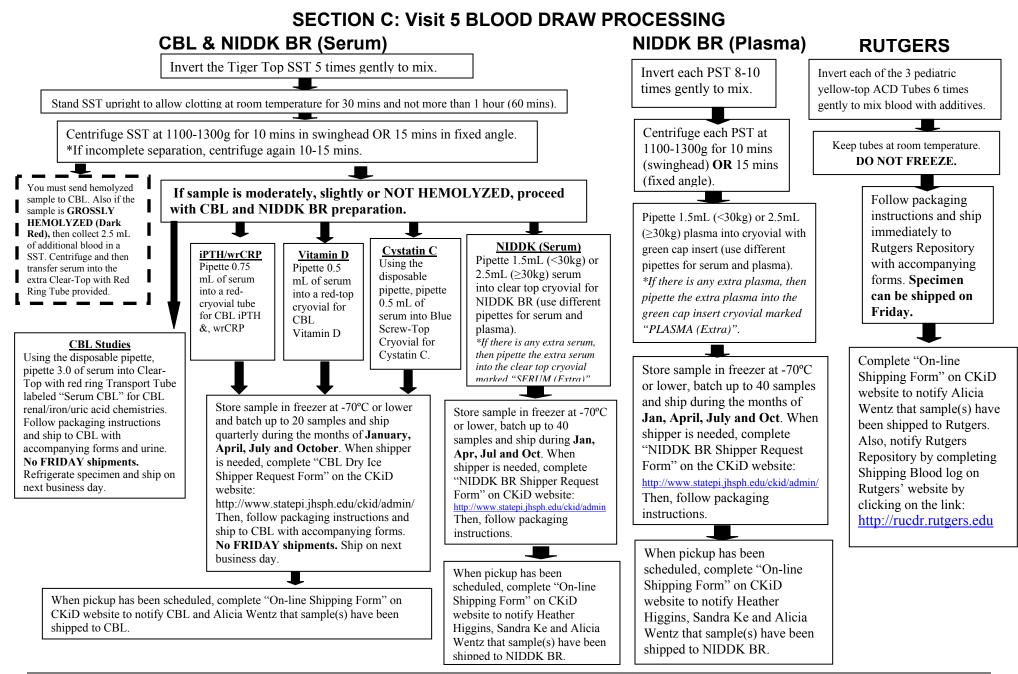
Immediately transfer (using 18 gauge needle) or draw:

• 9.5 mL into (2) Tiger-Top SSTs for CBL

4

- 1 mL in lavender-top tube for local CBC (tube not provided in CBL kit)
- 3 mL in another tube (not provided) for local Renal Panel
- 2.5 mL of additional blood in SST for CBL (if initial sample is GROSSLY HEMOLYZED)

SPECIMEN COLLECTION FORM for Visit V5 (L51)



SECTION C: VISIT 5 BLOOD DRAW AND PROCESSING

C1. ACTUAL TIME OF BLOOD DRAW _____ : ____ 1 = AM 2 = PM

Reasons Code List:1= Not required3 = Participant Refused5 = Inadvertently Destroyed2 = Difficult Blood Draw4 = Red Blood Cell Contamination6 = Oversight

	Sample Type (Required Volume in Top Color Tube Type):	(a) Sample Obtai <u>Yes</u>	ned: <u>No</u>	(b) If No, specify reason *SEE CODE LIST ABOVE	(c) Additional Requirements:
C2.	Renal/Iron Chemistries (6.0 mL in Tiger Top SST)	1 (skip to c→)	2	(skip to C2a)	i. Indicate the appearance of the serum after centrifuging. Grossly (Dark Red)1 Moderately (Red/Light Red)2 Slightly (Pink)3 Not Hemolyzed (Yellow)4
C2a.	Cystatin C (1.0 mL in Tiger Top SST)	1 (skip to c→)	2	(skip to C3)	Date Frozen: / / / M M D D Y Y Y Y
C3.	Serum for iPTH, wrCRP & Vitamin D (2.5 mL of blood in Tiger Top SST)	1 (skip to c→)	2	(skip to C4a)	Date Frozen: / / / M M D D Y Y Y Y
C4a.	Local CBC (1.0 mL in Lavender Top tube)	1 (skip to C4b)	2	(skip to C4b)	N/A
C4b.	Local Renal Panel (3.0 mL in Local SST)	1 (skip to C5)	2	 (skip to C5)	N/A

Sites can obtain results for lab values that have been identified as "KEY VARIABLES". To obtain results, go the CKiD Nephron Website:

https://statepiaps.jhsph.edu/nephron/groups/aspproc/, click on "Report Menu" and choose the appropriate lab report (i.e., Selected Renal Panel Lab Variables Report.)

C5. Did the participant consent to have biological samples (i.e., serum, plasma and urine) stored at NIDDK Biosample Repository?

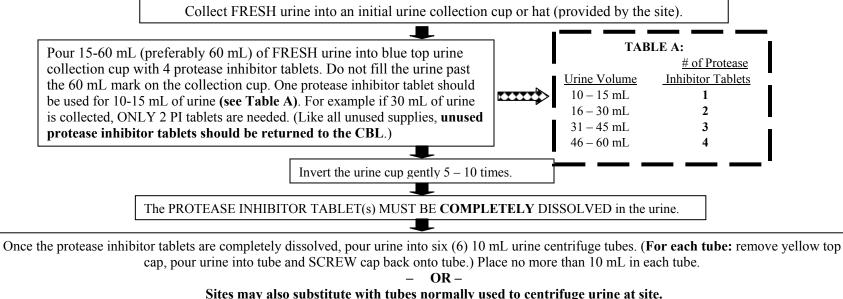
Yes..... 1

Reasons Code List*:1= Not required3 = Participant Refused5 = Inadvertently Destroyed2 = Difficult Blood Draw4 = Red Blood Cell Contamination6 = Oversight

Sample Type (Required Volume in Top Color Tube Type):		(a) Sample Obtained:		(b) If No, specify reason *SEE CODE LIST ABOVE	(c) Additional Requirements:
		Yes	<u>No</u>		
C6.	Serum for NIDDK Biosample Repository (**3.0 mL or **5.0 mL of blood in Tiger Top SST)	1 (skip to c→)	2	(skip to C7)	Date Frozen: / / / M M D D Y Y Y Y
C7.	Plasma for NIDDK Biosample Repository (**3.0 mL of blood (1) Green Top or **5.0 mL (2) Green Top PSTs)	1 (skip to c→)	2	(skip to D1)	Date Frozen: / / /

** Collect 3.0 mL of whole blood for children < 30 kg and 5.0 mL for children \ge 30 kg





Centrifuge urine tube(s) at MAX SPEED (between 1100-1300g) for 10 mins (swinghead units) – **OR** – 15 mins (fixed angle units).

Decant (pour off) the supernates (liquid reaction) into seven (7) 10 mL urine cryovials. Pour no more than 9 mL of urine into each 10 mL cryovial to allow for expansion.

Check that all information is correct on the urine cryovials, promptly freeze and store sample(s) at -70°C or lower. Batch samples and ship at least quarterly (include maximum of 36 cryovials per shipper.) When shipper(s) is needed, complete "*NIDDK Shipper Request Form*" on CKiD website: <u>http://www.statepi.jhsph.edu/ckid/admin/</u>.

When pickup has been scheduled, complete "Online Shipping Form" on CKiD website to notify Heather Higgins and Alicia Wentz that sample(s) have been shipped to NIDDK BR.

Reasons Code List [*] :	1= Not required	2 = Difficult Urine Collection	3 = Participant Refused	4 = Collection Contamination	5 = Inadvertently Destroyed	6 = Oversight

Sample Type (Required Volume in Top Color Tube Type):		(a) Sample Obtained: <u>Yes No</u>		(b) If No, specify reason *SEE CODE LIST ABOVE	(c) Additional Requirements:
D1.	Urine for NIDDK Biosample Repository (15.0 - 60.0 mL of urine in specimen container and transferred into collection cup with protease inhibitors)	1 (skip to c→)	2		i. Was supernate decanted into urine transport cryovials? Yes1 No2 ii. Date Frozen: / / / M D D Y Y

SECTION E: WHOLE BLOOD FOR GENETIC REPOSITORY

BLOOD FOR THE GENETIC REPOSITORY SHOULD BE SHIPPED ONLY IF THE SAMPLE <u>WAS NOT</u> COLLECTED AT V1B OR IF THE SAMPLE OBTAINED AT V1B WAS INADEQUATE (i.e, cell lines were not immortalized).

If participant has consented to have blood stored at Rutgers but it is not necessary to collect the blood for the Genetic Repository, Code question E2b as "01."

E1. Did the participant consent to have whole blood stored at Rutgers, the Genetic Repository?

Yes..... 1 No..... 2 (Skip to E3)

Reasons Code List*:1= Not required3 = Participant Refused5 = Inadvertently Destroyed2 = Difficult Blood Draw4 = Red Blood Cell Contamination6 = Oversight

Sample Type (Required Volume in Top Color Tube Type):		(a) Sample Obtained:		(b) If No, specify reason	(c) Additional Requirements:
E2.	Whole Blood for Rutgers Cell & DNA Repository (7.8 mL of blood in 3 pediatric (2.6 mL) Yellow Top ACD tubes)	<u>Yes</u> 1 (skip to c→)	<u>No</u> 2	*SEE CODE LIST ABOVE (skip to E3)	i. Date of Blood Draw: / / /
					Male1 Female2 iv. Age of participant : years

COPY THIS PAGE AND SHIPMENT TRACKING FORM (ST04) AND SEND TO RUTGERS WITH RUTGERS SPECIMEN.

E3. Is this an irregular (accelerated) study visit?

Yes	1
No	2 (END)

ONLY COMPLETE SECTIONS F & G IF THIS IS AN IRREGULAR STUDY VISIT.

For an accelerated study visit, additional blood should be collected for lohexol-Based GFR.

SECTION F: IRREGULAR STUDY VISIT INFUSION SYRINGE WEIGHT

F1. SCALE MUST FIRST BE ZEROED BEFORE WEIGHING. REMOVE ALUMINUM FOIL PRIOR TO WEIGHING THE SYRINGE. THE <u>SAME</u> SCALE MUST BE USED TO WEIGH THE SYRINGE <u>PRE AND POST</u> IOHEXOL INFUSION.

- a. Syringe Weight **Pre-lohexol Infusion**: _____ (g)
- b. Syringe Weight Post-Iohexol Infusion: _____ (g)

(Post-Infusion Weight should be **at least 6.0g** less than Pre-Infusion Weight. If Post-Infusion Weight is not at least 6g less, please confirm.)

PRE AND POST SYRINGE WEIGHT MUST BE OBTAINED IN ORDER TO CALCULATE CHILD'S GFR.

SECTION G: IRREGULAR STUDY VISIT

IOHEXOL – Refer to Instructions for Iohexol Infusion and GFR Blood Draws Flow Chart on Page 12

- > BEFORE INFUSING 5 mL OF IOHEXOL, SET TIMER = 0. SIMULTANEOUSLY START TIMER AND BEGIN IOHEXOL INFUSION
- COMPLETE INFUSION BETWEEN 1 TO 2 MINS
- ► LEAVE TIMER RUNNING THROUGHOUT IOHEXOL INFUSION AND SUBSEQUENT BLOOD DRAWS
- G1. IOHEXOL INFUSION
 - a. INFUSION START TIME: ______ : _____ 1 = AM 2 = PM
- > DO NOT DRAW BLOOD FROM THE IV SITE WHERE IOHEXOL WAS INFUSED. ANOTHER IV SITE MUST BE USED.
- > WASTE 1 mL OF BLOOD IF DRAWING FROM A SALINE/HEPARIN LOCK.
- > COLLECT 1 mL OF BLOOD FOR EACH IOHEXOL BLOOD DRAW IN THE PROVIDED SST.
- RECORDING THE EXACT NUMBER OF MINUTES ON THE TIMER IS MORE IMPORTANT THAN DRAWING THE BLOOD EXACTLY AT 120, 240 & 300 MINUTES AFTER IOHEXOL INFUSION. FOR EXAMPLE, IF BLOOD IS DRAWN AT 133 MINS INSTEAD OF 120 MINS, DOCUMENT BLOOD DRAWN @ 133 MINS.
- > TIME SHOULD BE RECORDED IMMEDIATELY <u>AFTER</u> EACH BLOOD SAMPLE IS OBTAINED (i.e., B1, B2, and B3).

POST VITALS SHOULD BE TAKEN 10 MINUTES AFTER INFUSION USING LOCAL BLOOD PRESSURE MEASUREMENT (i.e. DINAMAP)

- If rash develops after lohexol Infusion, consider it a reaction to lohexol and notify PI immediately. Consider administration of 1 mg/kg Benadryl IV (maximum dose: 50 mg Benadryl IV).
- In the rare event that systolic BP decreases more than 25 mm Hg, diastolic BP decreases more than 20 mmHg, or pulse increases more than 20 beats per min, notify PI immediately to evaluate reaction and complete the Adverse Event (ADVR) Form. Consider the possibility of an anaphylactic reaction to lohexol. Consider administration of 1 mg/kg Benadryl IV (maximum dose: 50 mg Benadryl IV). Draw up to 0.1 mL 1:1000 Epinephrine for SQ injection and 2 mg/kg Solumedrol IV for administration as ordered by physician.

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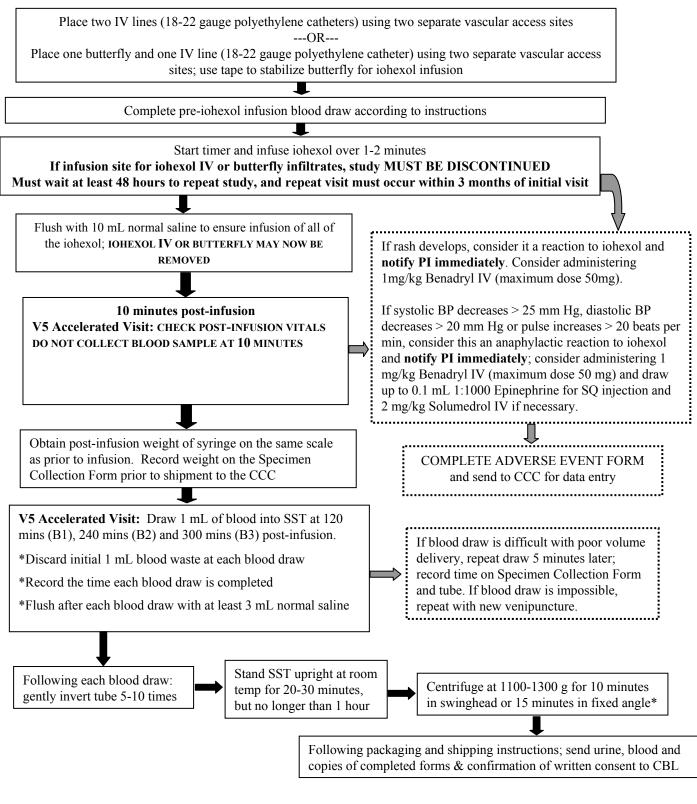
	(i) Post Vitals:						
G2a.	Post- infusion blood pressure:	//					
b.	Post-infusion temperature:	1 = °C 2 = °F					
C.	Post-infusion number of heart beats per minute:						
d.	Post-infusion respirations per minute:						

INVERT TUBE 5-10 TIMES AFTER EACH BLOOD DRAW LET SST TUBE STAND 20-30 MINUTES (BUT NO LONGER THAN 1 HOUR)

CENTRIFUGE AT 1100-1300g (3000rpm with 10cm radius rotor) for 10 MINUTES IN SWING HEAD OR 15 MINUTES IN FIXED ANGLE

	ALL TIMES should be documented from the initial infusion time	(i) ACTUAL HOURS/ MINUTES on TIMER	(ii) ONLY if Timer malfunctions, record Clock Time using the same clock used for G1a	(iii) Difficult Blood Draw: Yes No	(iv) Blood Volume Collected (1 mL):	(Centrifuged at Yes	/) Clinical Site: No
G3a.	B1 2 hrs (120 min):	hr mins	: 1 = AM 2 = PM	1 (Skip to b) 2	mL	1 (Skip to G4a)	2 (Skip to G4a)
b.	B1 2 nd attempt:	hr mins	: 1 = AM 2 = PM	1 2	mL	1	2
G4a.	B2 4 hrs (240 min):	hr mins	: 1 = AM 2 = PM	1 (Skip to b) 2	mL	1 (Skip to G5a)	2 (Skip to G5a)
b.	B2 2 nd attempt:	hr mins	: 1 = AM 2 = PM	1 2	mL	1	2
G5a.	B3 5 hrs (300 min):	hr mins	: 1 = AM 2 = PM	1 (Skip to b) 2	mL	1 (END)	2 (END)
b.	B3 2 nd attempt:	hr mins	: 1 = AM 2 = PM	1 2	mL	1	2

Instructions for Iohexol Infusion and GFR Blood Draws



Physician should be immediately available (in person or by phone) during lohexol Infusion Encourage fluids throughout the visit.

*1100-1300 g = 3000 rpm with 10 cm radius rotor