NATIONAL ANALGESIC NEPHROPATHY STUDY

EVALUATION OF CT SCAN

Slone Epidemiology Unit
Boston University School of Medicine

April 2001

Note: The following is a printed version of the computerized forms that were used for recording the CT information. While it contains all of the key elements, it is not an exact representation of the screens or the computer program.

NATIONAL ANALGESIC NEPHROPATHY STUDY
EVALUATION OF CT-SCAN

ENROLLMENT FORM FOR NORMAL SUBJECTS

Study ID number ☐☐☐☐☐☐

Date of Evaluation ☐☐☐☐☐☐
month day year

Subject's initials ☐☐

Age ☐☐

Sex 1. ☐ Male 2. ☐ Female

Height ☐ ft ☐☐ in **or** ☐☐☐ cm

Weight ☐☐☐ lb **or** ☐☐☐ kg

NATIONAL ANALGESIC NEPHROPATHY STUDY
EVALUATION OF CT-SCAN

INITIAL INFORMATION

☐ ESRD patient ☐ Normal subject

Date of CT Scan ☐☐☐☐☐☐ (month day year)

Study ID number ☐☐☐☐☐☐

Renal unit ☐☐

Subject's initials ☐☐

Age ☐☐

Sex 1. ☐ Male 2. ☐ Female

Race ☐

1. White 2. Black/African-American 3. Asian/Pacific Islander
4. Native American 5. Something else _____

Height ☐ ft ☐☐ in **or** ☐☐☐ cm

Current weight ☐☐☐ lb **or** ☐☐☐ kg

Body mass index ☐☐ . ☐

SOFT TISSUE WINDOW

Window ☐☐☐ HU

Level ☐☐☐ HU

Field of view ☐☐ cm

STONE WINDOW

Window ☐☐☐ HU

Level ☐☐☐ HU

Field of view ☐☐ cm

RIGHT KIDNEY

Present ☐ Absent ☐

LEFT KIDNEY

Present ☐ Absent ☐

RENAL LENGTH and VOLUME

RIGHT KIDNEY

Total number of slices in which renal tissue is seen ☐☐ **× 0.5 (slice thickness) =** Length ☐☐.☐ cm

Width ☐☐.☐ cm (maximum diameter at level of renal artery entering hilum)

AP Dimension ☐☐.☐ cm (at level of renal artery entering hilum)

Renal volume (L × W × AP Dimension × 0.49) ☐☐☐ cm^3

Renal diagram to be inserted. See Figure 12 in proposal.

LEFT KIDNEY

Total number of slices in which renal tissue is seen ☐☐ **×0.5 (slice thickness) =** Length ☐☐.☐ cm

Width ☐☐.☐ cm (maximum diameter at level of renal artery entering hilum)

AP Dimension ☐☐.☐ cm (at level of renal artery entering hilum)

Renal volume (L × W × AP Dimension × 0.49) ☐☐☐ cm^3

PARENCHYMAL THICKNESS

MEASUREMENT OF 3 CONTIGUOUS CENTRAL SLICES

RIGHT KIDNEY

	Anterior thickness		Posterior thickness		Lateral thickness		Parenchymal thickness
1.	☐.☐ cm	+	☐.☐ cm	+	☐.☐ cm	÷ 3 =	☐.☐ cm
2.	☐.☐ cm	+	☐.☐ cm	+	☐.☐ cm	÷ 3 =	☐.☐ cm
3.	☐.☐ cm	+	☐.☐ cm	+	☐.☐ cm	÷ 3 =	☐.☐ cm
						Average	☐.☐ cm

LEFT KIDNEY

	Anterior thickness		Posterior thickness		Lateral thickness		Parenchymal thickness
1.	☐.☐ cm	+	☐.☐ cm	+	☐.☐ cm	÷ 3 =	☐.☐ cm
2.	☐.☐ cm	+	☐.☐ cm	+	☐.☐ cm	÷ 3 =	☐.☐ cm
3.	☐.☐ cm	+	☐.☐ cm	+	☐.☐ cm	÷ 3 =	☐.☐ cm
						Average	☐.☐ cm

Renal diagram to be inserted. See Figure 13 in proposal.

KIDNEY POSITION

RIGHT KIDNEY

	No	Yes
Normal kidney position/orientation	☐	☐
If no:		
Malrotation	☐	☐
Ectopia	☐	☐
Other (describe below)	☐	☐

If other, describe _____

_____

LEFT KIDNEY

	No	Yes
Normal kidney position/orientation	☐	☐
If no:		
Malrotation	☐	☐
Ectopia	☐	☐
Other (describe below)	☐	☐

If other, describe _____

_____

RENAL CONTOUR

RIGHT KIDNEY

☐☐ Number of minor (<5 mm deep) indentations on renal surface (total from all slices).

☐☐ Number of major (>5 mm deep) indentations on renal surface (total from all slices).

☐☐ Number of major indentations > 1 cm wide.

LEFT KIDNEY

☐☐ Number of minor (<5 mm deep) indentations on renal surface (total from all slices).

☐☐ Number of major (>5 mm deep) indentations on renal surface (total from all slices).

☐☐ Number of major indentations > 1 cm wide.

CALCIFICATIONS

PAPILLARY CALCIFICATIONS — RIGHT KIDNEY — No ☐ Yes ☐ Quantum Mottle ☐

Total number of papillae with calcifications from all slices (enter class) ☐

1. Class 1: 1-3 papillae
2. Class 2: 4-10 papillae
3. Class 3: >10 papillae

Size of papillary calcifications (enter grade) ☐

1. Grade 1: Majority of papillary calcifications are < 2 mm
2. Grade 2: Majority of papillary calcifications are 2-4 mm
3. Grade 3: Majority of papillary calcifications are > 5 mm

OTHER CALCIFICATIONS — No ☐ Yes ☐

Specify location of additional calcifications

	Number
☐ Cortex	☐☐
☐ Calyces/Collecting system	☐☐
☐ Outer medulla	☐☐
☐ In renal mass or cyst	☐☐
☐ In vessels	☐☐

Number curvilinear ☐☐

PAPILLARY CALCIFICATIONS — LEFT KIDNEY — No ☐ Yes ☐ Quantum Mottle ☐

Total number of papillae with calcifications from all slices (enter class) ☐

1. Class 1: 1-3 papillae
2. Class 2: 4-10 papillae
3. Class 3: >10 papillae

Size of papillary calcifications (enter grade) ☐

1. Grade 1: Majority of papillary calcifications are < 2 mm
2. Grade 2: Majority of papillary calcifications are 2-4 mm
3. Grade 3: Majority of papillary calcifications are > 5 mm

OTHER CALCIFICATIONS — No ☐ Yes ☐

Specify location of additional calcifications

	Number
☐ Cortex	☐☐
☐ Calyces/Collecting system	☐☐
☐ Outer medulla	☐☐
☐ In renal mass or cyst	☐☐
☐ In vessels	☐☐

Number curvilinear ☐☐

MASSES

RIGHT KIDNEY

Masses ☐ No ☐ Yes If yes, number: ☐☐ For each, specify size and density below:

Size
1. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
2. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
3. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
4. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
5. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other

LEFT KIDNEY

Masses ☐ No ☐ Yes If yes, number: ☐☐ For each, specify size and density below:

Size
1. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
2. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
3. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
4. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other
Size
5. ☐.☐ cm ☐ Low density ☐ High density ☐ Isodense ☐ Mixed density ☐ Other

EXTRA-RENAL FINDINGS

☐ No ☐ Yes

Describe: _____

_____

_____

_____

DECISION OF REVIEWERS

CRITERIA OF DEBROE AND ELSEVIERS*

KIDNEY DIMENSIONS:
at level of renal vessels

	horizontal	vertical	total dimensions	Kidney absent
Right kidney	☐☐☐ mm	☐☐☐ mm	☐☐☐ mm	☐
Left kidney	☐☐☐ mm	☐☐☐ mm	☐☐☐ mm	☐

CONTOUR:

	Number of indentations: 0	1-2	3-5	>5	Kidney absent
Right kidney	☐	☐	☐	☐	☐
Left kidney	☐	☐	☐	☐	☐

CALCIFICATIONS: No ☐ Yes ☐

if yes:
- ☐ cortical
- ☐ papillary
- ☐ central
- ☐ other

	No	Yes
1. DECREASED RENAL MASS BOTH SIDES (sum of both dimensions less than 103mm (male) / 96mm (female))	☐	☐
2. BUMPY CONTOURS BOTH SIDES (3 or more indentations)	☐	☐
3. SIGNS OF RENAL PAPILLARY NECROSIS (calcifications on the papillary line)	☐	☐

ANALGESIC NEPHROPATHY — No ☐ Yes ☐

ANALGESIC NEPHROPATHY ACCORDING TO NEW PARAMETERS** — Definite ☐ Probable ☐ Possible ☐ No ☐

Signatures of reviewers: _____

_____

_____

* Adapted from the ANNE Study
** Criteria for new parameters will be developed during Phase I of the study

Date of review ☐☐☐☐☐☐ (month day year)