## Patient Information

1. \*Study ID number:
2. \*Date and time of study (M M/D D/Y Y Y Y):

(HH:MM, 24 hr clock):

1. NIH Stroke Scale (NIHSS) at time of study (0-42):[[1]](#footnote-1)
2. Scan purpose (Select all that apply):

[ ] Diagnostic

[ ] Post-treatment

[ ] Monitoring

## Technical Information

1. Probe:
	1. Type:
	2. Frequency (Hz):
2. Patient type:
	1. [ ]  Asymptomatic
	2. [ ]  Acute Stroke

If Acute Stroke, indicate study type:

[ ] Initial

[ ] Follow-up 1

[ ] Follow-up 2

* 1. [ ]  Chronic Stroke
	2. [ ]  Brain Edema
	3. [ ]  Vasospasm
1. Interpretation site:
	1. [ ]  Onsite
	2. [ ]  Offsite

If Offsite, indicate type:

[ ] Video

[ ] Print

[ ] Digital

1. Contrast Agent:

[ ] Yes

[ ] No (Skip to Question 5)

* 1. Agent:
	2. Type:

[ ] Bolus

[ ] Infusion

[ ] Other, specify:

1. Read type (Select all that apply):

[ ] Local read

[ ] Local report

[ ] Central read

1. Reader blinded to clinical data:

[ ] Yes

[ ] No

1. Study technically satisfactory:

[ ] Yes

[ ] No

1. Insonation plane:

[ ] Free

[ ] Coronal

[ ] Axial mesencephalic

## \*Vessels

(All elements in this section are considered Core Stroke CDEs for TCCS)

1. M1

 Vessels M1 Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |
| Color flow | [ ] Yes[ ] No | [ ] Yes[ ] No |
| Spectrum | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): |
| Symptomatic? | [ ] Yes[ ] No | [ ] Yes[ ] No |

1. Insular M2

 Vessels Insular M2 Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |
| Color flow | [ ] Yes[ ] No | [ ] Yes[ ] No |
| Spectrum | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): |
| Symptomatic? | [ ] Yes[ ] No | [ ] Yes[ ] No |

1. A1

 Vessels A1 Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |
| Color flow | [ ] Yes[ ] No | [ ] Yes[ ] No |
| Spectrum | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): |
| Symptomatic? | [ ] Yes[ ] No | [ ] Yes[ ] No |

1. Internal Carotid Artery (ICA)

: Vessels ICA Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |
| Color flow | [ ] Yes[ ] No | [ ] Yes[ ] No |
| Spectrum | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): |
| Symptomatic? | [ ] Yes[ ] No | [ ] Yes[ ] No |

1. P1

: Vessels P1 Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |
| Color flow | [ ] Yes[ ] No | [ ] Yes[ ] No |
| Spectrum | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): |
| Symptomatic? | [ ] Yes[ ] No | [ ] Yes[ ] No |

1. P2

: Vessels P2 Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |
| Color flow | [ ] Yes[ ] No | [ ] Yes[ ] No |
| Spectrum | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): | Depth (mm):Angle correction:[ ] Yes[ ] NoPeak velocity (cm/sec):Mean velocity (cm/sec):Direction to Probe:[ ] Towards[ ] Away fromAsymmetry index:End diastolic ratio:COGIF score:[ ] No flow[ ] Low flow/No diastolic flow[ ] Low flow/diastolic flow[ ] Established perfusionCOGIF Follow-up:[ ] Yes[ ] NoIf yes, Date (M M/D D/Y Y Y Y):(HH:MM, 24 hr clock): |
| Symptomatic? | [ ] Yes[ ] No | [ ] Yes[ ] No |

1. EC ICA

: Vessels EC ICA Table

| Side | Right | Left |
| --- | --- | --- |
| Bmode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |

## Microembolic Signals

1. Unidirectional?

[ ] Yes

[ ] No

1. Duration time (msec):
2. Intensity (dB):
3. Settings:
	1. Leading cols (mm):
	2. Trailing cols (mm):
	3. Threshold (mm):
	4. Rejection (mm):
4. A1: {CDE# C14015}
	1. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

* 1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Siphon:
2. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. P1:
2. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. M1:
2. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Ophthalmic:
2. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Vert:
	1. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

* 1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

1. Basilar:
	1. Right:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

* 1. Left:

[ ] Yes

[ ] No

Number:

Start Time:

End Time:

(hh:mm, 24 hr clock)

## Vasomotor Response (VMR)

1. Vessel(s):

[ ] MCA

[ ] Other, specify:

1. VMR:

[ ] Normal (Skip to Diagnosis)

[ ] Abnormal

1. Breath-holding index (BHI):

## Diagnosis

1. Extracranial stenosis:

[ ] Yes (Select all that apply)

[ ] No (Skip to Question 2)

* 1. [ ] Collateral:

[ ] OA

[ ] ACA

[ ] VA

* 1. [ ] Reduced upstroke
	2. [ ] Reduced Pulsatility Index (PI)
	3. [ ] VMR
	4. [ ] Reduced velocity
1. Intracranial stenosis:

[ ] Yes

[ ] No (Skip to Question 3)

* 1. Vessel(s):

[ ] MCA

[ ] ICA

[ ] VA

[ ] Basilar

[ ] Other, specify:

* 1. % Stenosis:
	2. PSV criterion:
	3. Mean velocity criterion:
	4. Other:
1. Vasospasm:

[ ] Yes

[ ] No (Skip to Question 4)

* 1. [ ] Normal

[ ] Abnormal

* 1. Severity:

[ ] Mild

[ ] Moderate

[ ] Severe

* 1. Vessel(s):

[ ] MCA

[ ] ICA

[ ] VA

[ ] Basilar

* 1. Criterion:
	2. Lindegaard ratio:
	3. Posterior ratio {CDE# C14029}:
	4. Intracranial pressure (ICP):

[ ] Resistive Index (RI), specify:

[ ] Other:

* 1. Partial pressure of carbon dioxide (PCO2):
	2. Hemoglobin:
1. Brain Death:

[ ] Yes (Select all that apply)

[ ] No (Skip to Question 5)

* 1. Vessel(s):

[ ] MCA

[ ] ICA

[ ] VA

[ ] Basilar

[ ] Ophthalmic Artery

* 1. [ ] Reversed diastolic flow
	2. [ ] Systolic spike
	3. [ ] No signals
1. Sickle Cell:

[ ] Yes

[ ] No (Stop)

* 1. Vessel(s):

[ ] MCA

[ ] Other, specify

* 1. Velocity:
	2. Criterion:
	3. Diagnosis:

[ ] Normal

[ ] Conditional

[ ] Abnormal

## General Instructions

This CRF contains data that would be collected when an imaging study is performed using TCCS to examine the brain vessels and evaluate cerebral hemodynamics.

Important note: A subset of the data elements included on this CRF Module is considered Core (i.e., strongly recommended for stroke clinical studies to collect if imaging studies are performed). The remaining data elements (i.e., non Core) are supplemental and should only be collected if the research team considers them appropriate for their study.

## Specific Instructions

Please see the Data Dictionary for definitions for each of the data elements included in this CRF Module. There is actually a single Data Dictionary for all of the imaging CDEs as the six different CRF Modules for stroke imaging share many elements.

The CRF includes all instructions available for the data elements at this time. More detailed instructions will be added in Version 4.0 of this CRF Module.

\*Recommended as a Core Stroke CDE if protocol includes imaging

1. NIHSS is also included on other Stroke CDE CRF Modules. This item should be pre-populated if initially collected elsewhere so as to avoid redundant data points. [↑](#footnote-ref-1)