## 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):

[ ] Initial

[ ] Monitoring

## Technical Information

1. Ultrasound Type:

[ ]  Transcranial Color-coded Real-time Sonography (TCCS)

[ ]  Transcranial Doppler (TCD)

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

If Acute Stroke, indicate study type:

[ ] Initial

[ ] Follow-up 1

[ ] Follow-up 2

1. [ ]  Chronic

i. **[ ]** Stroke:

[ ]  Hemisphere

[ ]  Eye

[ ]  Vertebrobasilar

ii. **[ ]** TIA:

[ ]  Hemisphere

[ ]  Eye

[ ]  Vertebrobasilar

iii. Laterality:

[ ]  Left

[ ]  Right

1. [ ]  Brain Edema
2. [ ]  Brain Death
3. [ ]  Sickle Cell
4. [ ]  Arteriovenous Malformation
5. [ ]  Monitoring
6. [ ]  Right Shunt
7. [ ]  Left Shunt
8. [ ]  Vasospasm
9. Interpretation site:
10. [ ]  Onsite
11. [ ]  Offsite

If Offsite, indicate type:

[ ] Video

[ ] Print

[ ] Digital

1. Contrast Agent:

[ ] Yes

Type:

[ ] Bolus

[ ] Infusion

[ ] Other, specify:

[ ] No

1. Insonation plane:

[ ] Free

[ ] Coronal

[ ] Axial mesencephalic

1. Insonation window:

[ ] Orbital

[ ]  Excellent

[ ]  Fair

[ ]  Poor

[ ] Temporal

[ ]  Excellent

[ ]  Fair

[ ]  Poor

[ ] Posterior

[ ]  Excellent

[ ]  Fair

[ ]  Poor

## Vessels

1. M1

1 Vessels M1 Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index  | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index  |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. Insular M2

2 Vessels Insular M2 Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index  | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index  |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. A1

3 Vessels A1 Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. Internal Carotid Artery (ICA)

4: Vessels ICA Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. P1

5: Vessels P1 Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. P2

6: Vessels P2 Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. Vertebral

7: Vertebral Vessels Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. Basilar

8: Basilar Vessels Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** 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 |
| Depth  | (mm): | (mm): |
| Findings: (select all that apply) | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index | [ ]  No Signal[ ]  Systolic Spike[ ]  Reversed Diastolic Flow[ ]  Reduced upstroke/ Pulsatility Index |
| Flow Direction: | [ ]  Towards[ ]  Away from | [ ]  Towards[ ]  Away from |

1. EC ICA

9: Vessels EC ICA Table

| Side | Right | Left |
| --- | --- | --- |
| B-mode | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion | **[ ]** Normal**[ ]** Stenosis**[ ]** Occlusion |

## Power M Mode

* 1. Left MCA:

[ ]  Absent

[ ]  High Resistance

[ ]  Low Resistance

* 1. Right MCA:

[ ]  Absent

[ ]  High Resistance

[ ]  Low Resistance

## High Intensity Transient Signal Hits

1. Duration time (msec):
2. Intensity (dB):
3. A1:

|  |  |
| --- | --- |
| **Right** | **Left** |
| [ ] Yes[ ] No  | [ ] Yes[ ] No  |
| Number: | Number: |
| Start Time:(hh:mm, 24 hr clock) | Start Time:(hh:mm, 24 hr clock) |
| End Time:(hh:mm, 24 hr clock) | End Time:(hh:mm, 24 hr clock) |

1. Siphon:

|  |  |
| --- | --- |
| **Right** | **Left** |
| [ ] Yes[ ] No  | [ ] Yes[ ] No  |
| Number: | Number: |
| Start Time:(hh:mm, 24 hr clock) | Start Time:(hh:mm, 24 hr clock) |
| End Time:(hh:mm, 24 hr clock) | End Time:(hh:mm, 24 hr clock) |

1. P1:

|  |  |
| --- | --- |
| **Right** | **Left** |
| [ ] Yes[ ] No  | [ ] Yes[ ] No  |
| Number: | Number: |
| Start Time:(hh:mm, 24 hr clock) | Start Time:(hh:mm, 24 hr clock) |
| End Time:(hh:mm, 24 hr clock) | End Time:(hh:mm, 24 hr clock) |

1. M1:

|  |  |
| --- | --- |
| **Right** | **Left** |
| [ ] Yes[ ] No  | [ ] Yes[ ] No  |
| Number: | Number: |
| Start Time:(hh:mm, 24 hr clock) | Start Time:(hh:mm, 24 hr clock) |
| End Time:(hh:mm, 24 hr clock) | End Time:(hh:mm, 24 hr clock) |

1. Ophthalmic:

|  |  |
| --- | --- |
| **Right** | **Left** |
| [ ] Yes[ ] No  | [ ] Yes[ ] No  |
| Number: | Number: |
| Start Time:(hh:mm, 24 hr clock) | Start Time:(hh:mm, 24 hr clock) |
| End Time:(hh:mm, 24 hr clock) | End Time:(hh:mm, 24 hr clock) |

1. Vert:

|  |  |
| --- | --- |
| **Right** | **Left** |
| [ ] Yes[ ] No  | [ ] Yes[ ] No  |
| Number: | Number: |
| Start Time:(hh:mm, 24 hr clock) | Start Time:(hh:mm, 24 hr clock) |
| End Time:(hh:mm, 24 hr clock) | End Time:(hh:mm, 24 hr clock) |

1. Basilar:

|  |
| --- |
| [ ] Yes[ ] No  |
| Number: |
| Start Time:(hh:mm, 24 hr clock) |
| 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)

* 1. [ ] Collateral:

[ ] OA

[ ] ACA

[ ] VA

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

[ ] No

1. Intracranial stenosis:

[ ] Yes

1. Vessel(s):

[ ] MCA

[ ] ICA

[ ] VA

[ ] Basilar

[ ] Other, specify:

1. % Stenosis:
2. Peak Systolic Velocity (PSV) criterion:
3. Mean velocity criterion:
4. Other:

[ ] No

1. Vasospasm:

[ ] Yes

1. Severity:

[ ] Mild

[ ] Moderate

[ ] Severe

1. Vessel(s):

[ ] MCA

[ ] ICA

[ ] VA

[ ] Basilar

1. Criterion:
2. Lindegaard ratio:
3. Posterior ratio:
4. Intracranial pressure (ICP):
5. Resistive Index (RI):
6. Partial pressure of carbon dioxide (PCO2):
7. Hemoglobin:

[ ] No

1. Brain Death:

[ ] Yes (Select all that apply)

1. [ ] Reversed diastolic flow
2. [ ] Systolic spike
3. [ ] No signals

[ ] No

1. Sickle Cell (indication for study):

[ ] Normal

[ ] Conditional

* 1. Vessel(s):

[ ] MCA

[ ] Other, specify

* 1. Velocity:

[ ] Abnormal

1. Vessel(s):

[ ] MCA

[ ] Other, specify

1. Velocity:

## General Instructions

This CRF contains data that would be collected when a transcranial vessel imaging study is performed to examine brain vessels and evaluate cerebral hemodynamics.

The data elements 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.

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)