### Cerebrovascular Disease-Child

**Variant 1:** Child age older than 6 months. Emergent imaging for clinical presentation suggestive of acute nonsickle–cell related stroke. New focal fixed or worsening neurologic defect lasting less than 24 hours from last seen normal state. No contraindications to emergent intervention. Initial imaging.

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- References: 20 (19039041), 6 (20054007), 18 (19216043), 16 (20445969), 17 (20113901), 19 (20625171), 22 (12743660), 23 (21975501), 24 (25063989), 21 (16841210), 25 (28705823)

| CT head without IV contrast      | Usually appropriate      | Limited   | 1-10 mSv   | 0.3-3 mSv [ped] | 8      | 8      | 1 0 0 0 0 2 4 6 6  |

- References: 16 (20445969)

- Study Quality: 4
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Variant 3: Child. Clinical presentation suggestive of acute stroke, known or suspected arteriopathy, or moyamoya. Not a candidate for emergent treatment. Initial imaging.
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39 (22462697)
52 (21979145)
50 (25987283)
53 (19351813)

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**Variant 5:** Child. Clinical presentation suggestive of acute stroke, known or suspected central nervous system vasculitis. Initial imaging.

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52 (21979145) | 4
43 (9885601) | 2
17 (20113901) | 4
17 (20113901) | 4
56 (15986347) | 4
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- **May be appropriate**
- **Limited**
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- **6 6 1 0 0 0 6 10 1 0 0**

### Arteriography cervicocerebral
- **May be appropriate**
- **Limited**
- **☢☢☢ 1-10 mSv**
- **☢☢☢☢ 3-10 mSv [ped]**
- **5 5 1 0 0 2 7 6 2 0 0**

### MRI head with IV contrast
- **May be appropriate (Disagreement)**
- **Expert Opinion**
- **0 0 mSv**
- **0 0 mSv [ped]**
- **5 5 3 0 2 3 6 3 1 0 0**

### CT head with IV contrast
- **Usually not appropriate**
- **Limited**
- **☢☢☢ 1-10 mSv**
- **☢☢☢☢ 0.3-3 mSv [ped]**
- **2 2 6 5 6 0 0 1 0 0 1**

### CT head without and with IV contrast
- **Usually not appropriate**
- **Limited**
- **☢☢☢ 1-10 mSv**
- **☢☢☢☢ 3-10 mSv [ped]**
- **2 2 8 5 4 1 0 0 0 1 0**

### US duplex Doppler head
- **Usually not appropriate**
- **Expert Consensus**
- **0 0 mSv**
- **0 0 mSv [ped]**
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### Variant 6: Child. Nontraumatic intraparenchymal hemorrhage (hematoma) found on CT or MRI. Unknown etiology. Next imaging study.
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### Variant 7: Child. Nontraumatic subarachnoid hemorrhage (SAH) detected by noncontrast CT. Next imaging study.

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59 (24156863)  

**Study Quality**
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67 (24326447)  
51 (24156864)  
68 (9933265)

**Study Quality**
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66 (21990495)  
65 (22143927)

**Study Quality**
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**CT head without and with IV contrast**

- **Usually not appropriate**
- **Limited**
- **☢☢☢ 1-10 mSv**
- **☢☢☢☢ 3-10 mSv [ped]**

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**US duplex Doppler head**

- **Usually not appropriate**
- **Expert Consensus**
- **☢☢☢ 0 mSv**
- **☢☢☢☢ 0 mSv [ped]**

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**Variant 8:** Child. Clinical presentation suggestive of acute stroke, known or suspected high-flow vascular anomaly. Initial imaging.

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**MRA head without IV contrast**

- **Usually appropriate**
- **Expert Consensus**
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- **☢☢☢☢ 0 mSv [ped]**

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**MRI head without IV contrast**

- **Usually appropriate**
- **Limited**
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- **☢☢☢☢ 0 mSv [ped]**

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**MRI head without and with IV contrast**

- **May be appropriate**
- **Limited**
- **☢☢☢ 0 mSv**
- **☢☢☢☢ 0 mSv [ped]**

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**MRA head with IV contrast**

- **May be appropriate**
- **Expert Consensus**
- **☢☢☢ 0 mSv**
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Variant 10: Child. Clinical presentation suggestive of acute stroke, known or suspected cortical vein or dural venous sinus thrombosis. Initial imaging.

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| MRI head without IV contrast | Usually appropriate | Limited | O 0 mSv | O 0 mSv [ped] | 7 | 7 | 0 | 1 | 0 | 1 | 4 | 3 | 7 | 0 | 3 |
|-----------------------------|--------------------|---------|---------|--------------|---|---|---|---|---|---|---|---|---|---|
| CT head with IV contrast    | Usually not appropriate | Limited | ☢☢☢ 1-10 mSv | ☢☢☢ 0.3-3 mSv [ped] | 3 | 3 | 6 | 1 | 5 | 1 | 4 | 0 | 1 | 0 | 0 |
| CT head without and with IV contrast | Usually not appropriate | Limited | ☢☢☢ 1-10 mSv | ☢☢☢ 0.3-3 mSv [ped] | 2 | 2 | 8 | 4 | 2 | 2 | 1 | 0 | 1 | 0 | 0 |
| Arteriography cervicocerebral | Usually not appropriate | Expert Consensus | ☢☢☢ 1-10 mSv | ☢☢☢ 0.3-3 mSv [ped] | 2 | 2 | 8 | 4 | 3 | 1 | 1 | 0 | 0 | 2 | 0 |
| MRI head with IV contrast   | Usually not appropriate | Limited | O 0 mSv | O 0 mSv [ped] | 2 | 2 | 7 | 3 | 3 | 0 | 3 | 2 | 0 | 0 | 0 |
| US duplex Doppler head      | Usually not appropriate | Expert Consensus | O 0 mSv | O 0 mSv [ped] | 1 | 1 | 10 | 6 | 2 | 0 | 0 | 0 | 0 | 0 | 0 |

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Appendix Key
A more complete discussion of the items presented below can be found by accessing the supporting documents at the designated hyperlinks.

**Appropriateness Category**: The panel's recommendation for a procedure based on the assessment of the risks and benefits of performing the procedure for the specified clinical scenario.

**SOE**: Strength of Evidence. The assessment of the amount and quality of evidence found in the peer reviewed medical literature for an appropriateness recommendation.

- **References**: The citation number and PMID for the reference(s) associated with the recommendation.
- **Study Quality**: The assessment of the quality of an individual reference based on the number of study quality elements described in the reference.

**RRL**: Relative Radiation Level. A population based assessment of the amount of radiation a typical patient may be exposed to during the specified procedure.

**Rating**: The final rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Median**: The median rating (1-9 scale) for the procedure as determined by the panel during rating rounds.

**Final tabulations**: A histogram showing the number of panel members who rated the procedure as noted in the column heading (ie, 1, 2, 3, etc.).

Additional supporting documents about the AC methodology and processes can be found at [www.acr.org/ac](http://www.acr.org/ac).