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| 0 | Brain Routine - Plain |  | |
| **Purpose:**  Evaluation of altered mental status, Congenital anomalies, hydrocephalus, hemorrhages, tumors, strokes, headaches, infections (usually IV contrast required), seizures (Contrast may be required), trauma, post-operative changes, Calcifications. | |
| **Instructions:**  Use the image on the right as a guide. Cover the entire brain from foramen magnum to the vertex angled with the OML (base of the skull). | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| No preparation is required |

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| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| W-Volume | 0.5 x 80 | - | 120 | 280 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Below base of skull to vertex | - | |  |  | | --- | --- | | Ax. | 3X2 | | Cor. | 3x3 (only if SOL) | | Sag. | 3x3 (only if SOL) | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain | Kernel | FC68 | Filter | OFF | Boost | OFF | OSR | Head | |
| Comments |
| * SOL implies tumors/ masses/ hematomas/ abscesses. * Display window (WW/WL): 80/40 |

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| 1 | Brain Routine with Contrast |  | |
| **Purpose:**  Evaluation of mental status changes, hydrocephalus, hemorrhages, tumors, strokes, headaches, infections, seizures, trauma, or post-operative changes. | |
| **Instructions:**  Use the image on the right as a guide. Cover the entire brain from foramen magnum to the vertex angled with the OML (base of the skull). | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| * Contrast media preparation is required. * 22G -24G cannula is required. |

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| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| W-Volume | 0.5 x 80 | - | 120 | 280 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Below base of skull to vertex | - | |  |  | | --- | --- | | Ax. | 3X2 | | Cor. |  | | Sag. |  | |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Volume:** | 50-75cc | **Rate:** | 1.5-2.0cc/s | **Delay:** | 75s | | | |
| Brain +C | Below base of skull to vertex | 75s | |  |  | | --- | --- | | Ax. | 3X2 | | Cor. | 3x3 (only if SOL) | | Sag. | 3x3 (only if SOL) | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain | Kernel | FC68 | Filter | OFF | Boost | OFF | OSR | Head | |
| Comments |
| * SOL implies tumors/ masses/ hematomas/ abscesses. * Display window (WW/WL): 80/40 |

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| 2 | Brain FAST / Trauma \*\* |  | |
| **Purpose:**  Evaluation of hemorrhages, strokes, trauma, uncooperative patient who require urgent C T brain. | |
| **Instructions:**  Use the image on the right as a guide. Cover the entire brain from foramen magnum to the vertex angled with the OML (base of the skull). | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| * Contrast media preparation is required (for Brain FAST only). * 22G -24G cannula is required (for Brain FAST only). |

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| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 135 | 350 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Below base of skull to vertex | - | |  |  | | --- | --- | | Ax. | 3X2 (brain), 3x3 (bone) | | Cor. | 3x3 (only if SOL), 3x3 (bone) | | Sag. | 3x3 (only if SOL) | |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Volume:** | 50-75cc | **Rate:** | 1.5-2.0cc/s | **Delay:** | 75s | | | |
| Brain +C | Below base of skull to vertex | 75s | |  |  | | --- | --- | | Ax. | 3X2 | | Cor. | 3x3 (only if SOL) | | Sag. | 3x3 (only if SOL) | |

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| Algorithm Details | | | |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain | Kernel | FC68 | Filter | OFF | Boost | OFF | OSR | Head | | Bone |  | FC30 |  | UE0 |  | OFF |  | Body | | | | |
| Comments | | | |
| * SOL implies tumors/ masses/ hematomas/ abscesses. * Brain FAST does not require contrast injection. Proceed to (Brain +C) phase only if clinically indicated | | | |
| 3 | Brain + Sinuses |  | |
| **Purpose:**  Evaluation of headaches, infections, or post-operative changes. Evaluation of infection, polyps, tumors, trauma and surgical planning. | |
| **Instructions:**  Use the image on the right as a guide. Cover the entire brain from foramen magnum to the vertex angled without angulation | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| No preparation is required |

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| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| W-Volume | 0.5 x 80 | - | 120 | 280 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Below maxillary sinuses to skull vertex | - | |  |  | | --- | --- | | Ax. | 3X2 (brain), 0.5x0.5 (sinus) | | Cor. | 1x1 (sinus) | | Sag. |  | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain | Kernel | FC68 | Filter | OFF | Boost | OFF | OSR | Head | | Sinuses |  | FC30 |  | UE0 |  | OFF |  | Body | |
| Comments |

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| --- | --- | --- | --- |
| 6 | Sinuses |  | |
| **Purpose:**  Evaluation of headaches, infections, or post-operative changes. Evaluation of infection, polyps, tumors, trauma and surgical planning. | |
| **Instructions:**  Use the image on the right as a guide. Scan Cover from Maxillary sinuses through Frontal sinuses angled with the hard palate. | |
| Dual Scanograms | | 120kVp | 20mA |
|  | | | |
| Patient Preparation | | | |
| No preparation is required | | | |

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| --- | --- | --- | --- | --- | --- | --- |
| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 200 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Below maxillary sinuses to above frontal sinuses | - | |  |  | | --- | --- | | Ax. | 0.5x0.5 (Sinus) | | Cor. | 1x1 (sinus) | | Sag. |  | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Sinuses | Kernel | FC30 | Filter | UE0 | Boost | OFF | OSR | Body | |
| Comments |
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| 8 | IAM |  | |
| **Purpose:**  Evaluation of infection, tumors and congenital abnormalities of the external auditory canal, middle ear, inner ear, internal auditory canal and course of 7th cranial nerve. | |
| **Instructions:**  Use the image on the right as a guide. Scan Cover from mastoid tip and finish at the top of petrous bone. | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| No preparation is required |

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| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 200 | OFF | S |

|  |  |  |  |
| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Below mastoid tip to above superior mastoid air cells | - | |  |  | | --- | --- | | Ax. | 0.5x0.5 (both)(R)(L) | | Cor. | 1x1(R)(L) | | Sag. |  | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | IAM | Kernel | FC30 | Filter | UE0 | Boost | OFF | OSR | Body | |
| Comments |
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| 9 | Orbits |  | |
| **Purpose:**  Evaluation of trauma, tumors, inflammation, infection and congenital abnormalities of the orbits, optic nerve and eye ball. Evaluation of raised intracranial pressure Cavernous sinus abnormalities. | |
| **Instructions:**  Use the image on the right as a guide. Cover from the infra orbital rim tot the top of the orbits. | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| No preparation is required |

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| --- | --- | --- | --- | --- | --- | --- |
| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 200 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Orbits standard | - | |  |  | | --- | --- | | Ax. | 0.5x0.5(Soft HR)(Bone) | | Cor. | 3x3 (Soft HR) | | Sag. | 3x3 (R+L Soft HR) | |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Volume:** | 50cc | **Rate:** | 2.0cc/s | **Delay:** | 55s | | | |
| Orbit +C | Orbits standard | 55s | |  |  | | --- | --- | | Ax. | 0.5x0.5 (Soft HR) | | Cor. | 3x3 (Soft HR) | | Sag. | 3x3 (R + L Soft HR) | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Soft HR | Kernel | FC09 | Filter | AIDR 3D STND | Boost | OFF | OSR | Body | | Bone |  | FC30 |  | UE0 |  | OFF |  | Body | |
| Comments |
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| 10 | Facial Bones (Volume) |  | |
| **Purpose:**  Evaluation of trauma, or post-operative changes. | |
| **Instructions:**  Use the image on the right as a guide. Cover the entire head from below the chin to the vertex. | |
| Dual Scanograms | | 120kVp | 20mA |

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| Patient Preparation |
| No preparation is required |

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| --- | --- | --- | --- | --- | --- | --- |
| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 200 | OFF | S |

|  |  |  |  |
| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Plain | Hyoid to top of forehead | - | |  |  | | --- | --- | | Ax. | 0.5x0.5 (Bone), 3x3(Soft) | | Cor. | 3x3 (Bone)(Soft) | | Sag. |  | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Bone | Kernel | FC30 | Filter | UE0 | Boost | OFF | OSR | Body | | Soft |  | FC09 |  | AIDR 3D STND |  | OFF |  | Body | |
| Comments |
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| 4 | Brain CTA (C.O.W) |  | |
| **Purpose:**  Examining blood vessel disease or related condition, Such as aneurysms or blockages. | |
| **Instructions:**  Use the image on the right as a guide. | |
| Dual Scanograms | | 120kVp | 20mA |

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| --- |
| Patient Preparation |
| * Contrast media preparation is required. * 18-20G cannula is required. |

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| --- | --- | --- | --- | --- | --- | --- |
| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 300 | OFF | S |

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| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Volume:** | 50cc | **Rate:** | 4.0-5.0cc/s | **Delay:** | SureStart | | | |
| Brain CTA | 1cm below base of skull to vertex | Sure  Start | |  |  | | --- | --- | | Ax. | 0.5x0.5, 5x1 MIP | | Cor. | 5x1 MIP | | Sag. | 5x1 MIP | |

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| --- |
| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain CTA | Kernel | FC43 | Filter | AIDR 3D STND | Boost | OFF | OSR | Head | |
| Comments |

|  |  |  |  |
| --- | --- | --- | --- |
| 5 | Brain CTA (C.O.W) + Brain |  | |
| **Purpose:**  Examining blood vessel disease or related condition, Such as aneurysms or blockages. | |
| **Instructions:**  Use the image on the right as a guide. | |
| Dual Scanograms | | 120kVp | 20mA |

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| --- |
| Patient Preparation |
| * Contrast media preparation is required. * 18-20G cannula is required. |

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| --- | --- | --- | --- | --- | --- | --- |
| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 300 | OFF | S |

|  |  |  |  |
| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Brain Plain | 1cm below base of skull to vertex | - | |  |  | | --- | --- | | Ax. | 3x3 (brain) | | Cor. |  | | Sag. |  | |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Volume:** | 50cc | **Rate:** | 4.0-5.0cc/s | **Delay:** | SureStart | | | |
| Brain CTA | 1cm below base of skull to vertex | Sure  Start | |  |  | | --- | --- | | Ax. | 0.5x0.5 (Brain CTA), 5x1 MIP | | Cor. | 5x1 MIP | | Sag. | 5x1 MIP | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain | Kernel | FC68 | Filter | OFF | Boost | OFF | OSR | Head | | Brain CTA |  | FC43 |  | AIDR 3D STND |  | OFF |  | Head | |
| Comments |

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| 11 | Brain CTV (Venogram) + Brain |  | |
| **Purpose:**  Examining Dural venous sinuses related condition, such as hemorrhagic infarctions, atypical infractions and headache/altered sensorium due to suspected Dural venous sinus thrombosis. | |
| **Instructions:**  Use the image on the right as a guide. | |
| Dual Scanograms | | 120kVp | 20mA |

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| --- |
| Patient Preparation |
| * Contrast media preparation is required. * 18-20G cannula is required. |

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| --- | --- | --- | --- | --- | --- | --- |
| Scan Details | | | | | | |
| Mode | Beam | Pitch | kVp | mA | Sure Exp. 3D | FOV |
| Volume | 0.5 | - | 120 | 300 | OFF | S |

|  |  |  |  |
| --- | --- | --- | --- |
| Procedure & Reconstruction Details | | | |
| Phase | Coverage | Timing | Reconstructions (mm) |
| Brain Plain | 1cm below base of skull to vertex | - | |  |  | | --- | --- | | Ax. | 3x3 (brain) | | Cor. |  | | Sag. |  | |
|  | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Volume:** | 70cc | **Rate:** | 4.0-5.0cc/s | **Delay:** | 35-45s | | | |
| Brain CTV | 1cm below base of skull to vertex |  | |  |  | | --- | --- | | Ax. | 0.5x0.5 (Brain CTV), 5x1 MIP | | Cor. | 5x1 MIP | | Sag. | 5x1 MIP | |

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| Algorithm Details |
| |  |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | --- | | Brain | Kernel | FC68 | Filter | OFF | Boost | OFF | OSR | Head | | Brain CTV |  | FC43 |  | AIDR 3D STND |  | OFF |  | Head | |
| Comments |