embrace®
aspectimaging

# embrace®

## Neonatal MRI System

Redefining Neuro Imaging
*Inside* the NICU

# Neuro Imaging *Inside* the NICU!

Save time and reduce patient risk with the revolutionary compact Embrace® Neonatal MRI system. Ergonomically designed to fit inside the NICU, this scanner is the first of its kind that strictly focuses on the specialized needs of premature and critically ill infants. Quiet, efficient and convenient. See how the gentle design of Embrace® is setting a new standard in the NICU.

## Why Embrace?

- Self-shielded system does not require a zone 4 room and can be placed near NICU equipment with no restrictions
- Accommodates more than 95% of the newborn population
- Smaller footprint allows NICU equipment, staff and parents to remain close
- Non-cryogen technology does not require any cooling system

## Boost Your Productivity

- Dedicated NICU scanner enables greater patient throughput and scheduling on other MRI scanners
- Faster prep and transport times lead to less motion artifacts and rescans
- Minimizing disruption of care helps optimize high-resolution scans the first time around
- Imaging inside the NICU significantly reduces the complexity of scanning a critically ill infant

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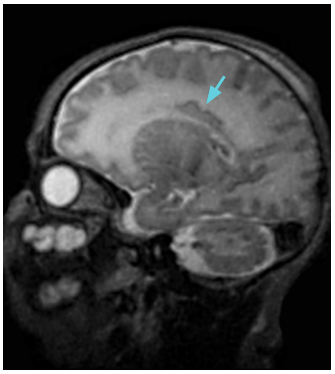
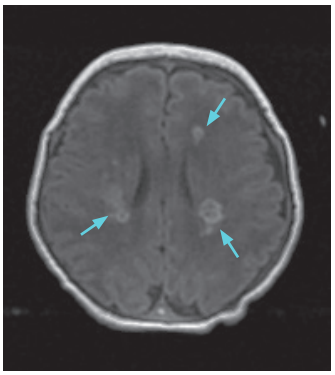
# The Results are Clear

Compared to competitive 1.5T scanners, the Embrace® system delivers high-quality diagnostic imaging in a comfortable, quieter, less stressful environment.

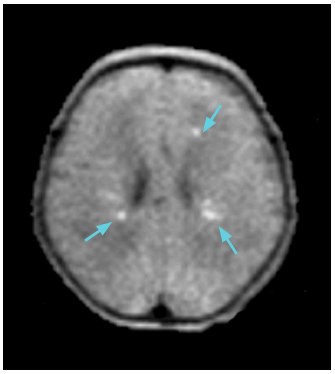
## Embrace® System



SAG T2 FSE
TR/TE=6751/160.8 ms
voxel size=0.7 x 0.7 x 3.0 mm
NSA=2, AT=2:42 min.

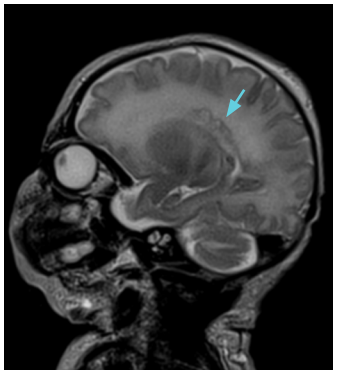


AX T1 SE
TR/TE=600/10.4 ms
voxel size=0.8 x 0.8 x 3.0 mm
NSA=2, AT=2:37 min.

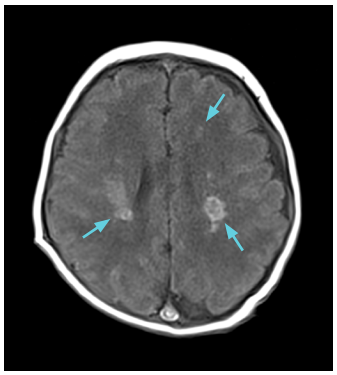


DWI
TR/TE=13173/121.7 ms
3–directions, b-value=700
voxel size=1.5 x 1.5 x 3.0 mm
NSA=3, AT=4:23 min.

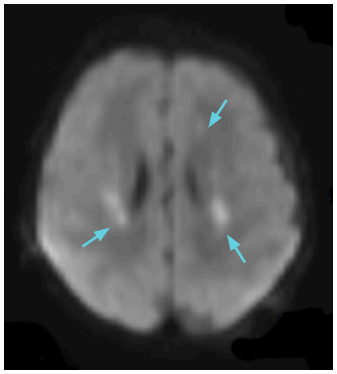
## 1.5T MRI System



SAG T2 FSE MIDLINE
TR/TE=3150/175 ms
voxel size=0.63 x 0.63 x 3.0 mm
NSA=1, AT=0:50 min.

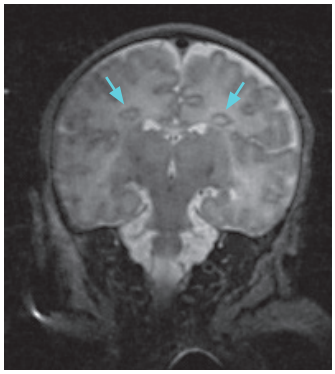


AX T1 SE
TR/TE=415/11 ms
voxel size=0.63 x 0.63 x 3.0 mm
NSA=2, AT=2:40 min.

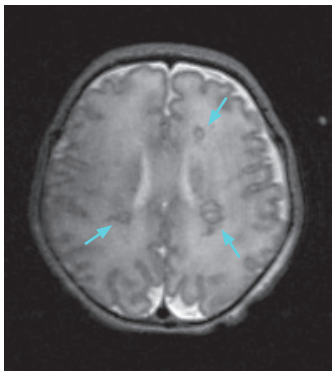


DWI
TR/TE=5600/83 ms
3–directions, b-value=700
voxel size=1.7 x 1.7 x 3.0 mm
NSA=7, AT=2:55 min.

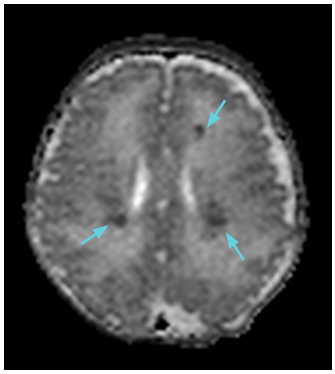
## Embrace® System



COR T2 FSE
TR/TE=8102/160.8 ms
voxel size=0.7 x 0.7 x 3.0 mm
NSA=2, AT=2:42 min.

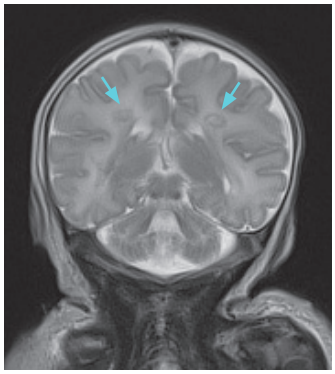


AX T2 FSE
TR/TE=7291/161.1 ms
voxel size=0.7 x 0.7 x 3.0 mm
NSA=2, AT=2:25 min.

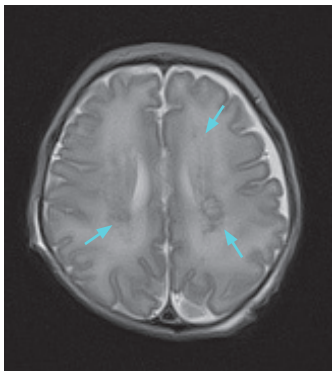


ADC

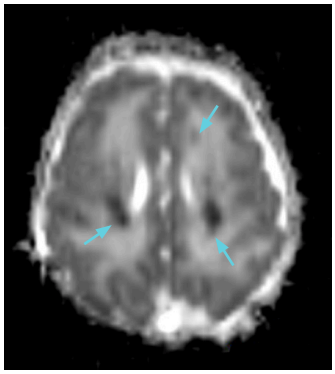
## 1.5T MRI System



COR T2 FSE
TR/TE=6520/154 ms
voxel size=0.63 x 0.63 x 3.0 mm
NSA=1, AT=1:31 min.



AX T2 FSE
TR/TE=7450/150 ms
voxel size=0.7 x 0.7 x 3.0 mm
NSA=1, AT=1:30 min.



ADC

# Embrace®: A Patient-Centric Approach

## Magnet:

- Fixed permanent magnet
- Field strength 1.0T
- Weight: 5,500 kg
- Patient accessible bore size 184 mm W x 260 mm H
- Iron-based magnetic shielding
- Passive and active shimming
- 0 external magnetic field
- 5 Gauss Line confined within system cover
- H: 71 in (181 cm)
- W: 57 in (145 cm)
- L: 67 in (171 cm)

## Gradient System:

- 150m T/m peak gradient strength
- Slew rate 500 T/m/Sec
- Fastest rise time 0.3 mSec

## Pulse Sequences:

- 2D SE: T1
- 2D FSE: T2
- 2D ADC Map SPLICE (Diffusion)
- 2D ADC Map SE (Diffusion)
- 2D IRsnap (T1 map)
- 2D/3D GRE (T1)
- 3D GRE SWI
- 3D MPRAGE (T1)

## Imaging:

- Field of view is an ellipsoid –120 mm (horizontal) x 130 mm (vertical) x 130 mm (depth)
- Minimum achievable slice thickness 2D: 1.5 mm
- In-plane sampling resolution 2D, 3D: 16-512 px
- Minimal imaging voxel size 0.3 x 0.3 x 0.3 $mm^3$

## Connectivity:

- PACS/HIS/RIS connectivity with DICOM compatibility
- MR workstation supports Modality Work List and multiple PACS systems

## RF Head Coil:

- Maximum head circumference: 38 cm
- Transmit-receive head coil with integrated connector designed specifically for infants
- Solenoid design for optimal signal-to-noise with the magnet's horizontal static magnetic field
- RF coil inner diameter is 143 mm

## Patient Specifications:

- Accommodates babies weighing 1 to 4.5 kg
- Maximum head circumference: 38 cm
- Designed for both intubated and non-intubated patients

## Acoustic Noise:

- Patient acoustic output (in magnet): Average 85 dB(A), peak 87 dB(A)
- System acoustic output (in room): Average 69 dB(A), peak 71 dB(A)

Become a part of the transformation.

Discover more at **embracemri.com**

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