

# Hypoxic Brain Injuries: Cerebral Palsy, Autism Spectrum Disorder, and Developmental Delay

*Diffusion MRI helps predict outcomes in neonatal HIE, detecting brain injuries missed by standard MRI and guiding early intervention decisions*

LOS ANGELES, CA, UNITED STATES, August 20, 2025 /EINPresswire.com/ -- "Diffusion Magnetic

“

There are children with global developmental delay and autism spectrum disorder who have normal routine MRIs, only to have abnormalities consistent with hypoxic injury on a diffusion MRI.”

*Greg Vigna, MD, JD*

Resonance Imaging can be used to assist with the prognosis of children with hypoxic ischemic encephalopathy. It can certainly predict babies who need to be followed more closely for developmental delays," states Greg Vigna, MD, JD, Board Certified Physical Medicine and Rehabilitation.

What does Kenichi Oishi, MD, PhD, from Johns Hopkins University School of Medicine, Baltimore, Maryland, say about diffusion tensor imaging (DTI) in the Prognostic Prediction of Neonatal Hypoxic-Ischemic Encephalopathy?

"Diffusion tensor imaging is one of the most powerful neuroimaging tools with which to predict the prognosis of neonatal HIE by providing microscopic features that cannot be assessed by conventional magnetic resonance imaging (MRI)."

Read Dr. Oishi's article, "Quantification of Diffusion Magnetic Resonance Imaging for Prognostic Prediction of Neonatal Hypoxic-Ischemic Encephalopathy", published in Developmental Neuroscience: <https://karger.com/dne/article/46/1/55/843460>

Dr. Greg Vigna, MD, JD, Board Certified Physical Medicine and Rehabilitation, explains, "Prediction of outcome is important with diagnostic imaging, but any evidence of hypoxic brain damage on a DTI in an area of the brain susceptible to hypoxic brain damage represents a child that should be monitored closely by their physician and deserves early intervention with therapy services, as they are at risk of falling behind developmentally."

[Dr. Vigna](#) further describes, "We have known for decades that there are children diagnosed with autism spectrum disorder who have upper motor findings on physical examination consistent

with brain damage, but have normal conventional MRIs of the brain. Any finding on diffusion MRI in an area that correlates with hypoxic brain injury at birth is important for the diagnosis of hypoxic brain damage, and these children should be referred for early intervention therapies."

Can diffusion MRI predict clinical outcomes in hypoxic-ischemic encephalopathy?

According to Dr. Yvonne W. Wu, MD, "Numerous studies describe statistically significant associations between brain MRI and HIE outcomes, measurement of MRI brain injury alone is far from perfect in predicting the full range of long-term neurodevelopmental outcomes, regardless of the scoring system that is used."

Read Dr. Wu's article, "Advancing brain MRI as a prognostic indicator in hypoxic-ischemic encephalopathy":

<https://pubmed.ncbi.nlm.nih.gov/37696979/>



Dr. Greg Vigna

Dr. Vigna continues, "There are cases of hypoxic brain damage that are undetected with a routine MRI but evident with diffusion weighted MRI. We know there are children with global developmental delay and autism spectrum disorder who will require 24-hour care for their life expectancy, have normal routine MRIs, only to have abnormalities consistent with hypoxic injury on a diffusion MRI. That is considered a birth injury, and those children need their birth records reviewed to understand if there was a negligent delivery that caused harm."

Dr. Vigna concludes, "We are evaluating cases with histories that might include 1) Neonatal encephalopathy, 2) Seizures, 3) Low APGARS, 4) Emergent C-section, 5) Born blue, 6) Born flaccid, 7) Acidotic, 8) Feeding difficulties, 9) Neonatal intensive care unit (NICU), 10) Hypoxic ischemic encephalopathy (HIE), and 11) Babies that don't cry at birth."

Click here to read Dr. Vigna's book, ['The Mother's Guide to Birth Injury'](#).

Dr. Vigna is a California and Washington, D.C., lawyer who focuses on neurological injuries caused by medical negligence, including birth injuries. He is Board Certified in Physical Medicine and Rehabilitation. Dr. Vigna co-counsels with [Ben Martin Law Group](#), a national pharmaceutical injury law firm and birth injury lawyer in Dallas, Texas.

Click here to learn more: <https://vignallawgroup.com/practice-areas/birth-injuries/>

California Offices:

8939 S. Sepulveda Blvd., Suite 102, Los Angeles, CA 90045

2570 N. First Street, 2nd Floor, San Jose, CA 95131

931 10th Street, #962, Modesto, CA 95354

2281 Lava Ridge Court, Suite 200, Roseville, CA 95661

600 West Broadway, Suite 700, San Diego, CA 92101

Connecticut Office:

515 Centerpoint Drive, Suite #2212, Middletown, CT 06457

Washington, DC Office:

700 12th Street, N.W., Suite 700, Washington, District of Columbia 20005

Greg Vigna, MD, JD

Vigna Law Group

+1 8178099023

[email us here](#)

Visit us on social media:

[LinkedIn](#)

[Facebook](#)

[X](#)

---

This press release can be viewed online at: <https://www.einpresswire.com/article/841649560>

EIN Presswire's priority is source transparency. We do not allow opaque clients, and our editors try to be careful about weeding out false and misleading content. As a user, if you see something we have missed, please do bring it to our attention. Your help is welcome. EIN Presswire, Everyone's Internet News Presswire™, tries to define some of the boundaries that are reasonable in today's world. Please see our Editorial Guidelines for more information.

© 1995-2025 Newsmatics Inc. All Right Reserved.