

# Association Between MRI Exposure During Pregnancy and Fetal and Childhood Outcomes

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# **Conflicts of Interest**

No conflicts of interest reported.

**SETTING:** Universal health care databases for the entire province of Ontario, Canada.

**PARTICIPANTS:** All births in Ontario, occurring at >20 weeks' gestation, 2003-15.

**EXPOSURE:** Gadolinium MRI exposure at any time in pregnancy.

	Gadolinium-Enhanced MRI at Any Time in Pregnancy (n = 397)		No MRI in Pregnancy (n = 1,418,451)		
Outcome	No.	Incidence rate per 1000 PY	No.	Incidence rate per 1000 PY	Inverse Prob. Weight-Adjusted HR (95% CI)
Stillbirth or neonatal death <sup>b</sup>	7	17.6	9844	6.9	3.70 (1.55-8.85)
Connective tissue or skin disease resembling NSF-like state	≤ 5	3.3	8705	1.8	1.00 (0.33-3.02)
Broad rheumatolog. or inflammatory or infiltrative skin condition	123	125.8	384,180	93.7	1.36 (1.09-1.69)
Congenital anomaly	39	34.8	109,053	24.0	1.25 (0.84-1.86)

## Implications about gad. enhanced MRI

- Not associated with greater risk of congenital anomalies.
- NSF-like outcome extremely rare
- Associated with an adjusted HR of 1.36 for any rheumatological, inflammatory or infiltrative skin condition up to age 4 years,
- Associated with an adjusted RR of 3.70 for stillbirth or neonatal death, albeit just 7 events in the gad MRI group.