Table e-3: Associations of *time to surgery*, *time to referral* and *time from referral to surgery* with clinical, diagnostic (MRI normal vs. abnormal), and demographic variables *

	Time to surgery		Time to referral		Time from referral to surgery	
	HR (95% CI)	**p-value**	**HR (95% CI)**	**p-value**	**HR (95% CI)**	**p-value**
Clinical Variables						
Infantile Spasms *(Ref: No spasms)*						
Active Spasms	**5.80 (3.82 – 8.81)**	**<0.001**	**5.50 (3.60 – 8.39)**	**<0.001**	**1.77 (1.19 – 2.64)**	**0.005**
Successfully treated spasms	**2.20 (1.64 – 2.96)**	**<0.001**	**2.25 (1.67 – 3.04)**	**<0.001**	1.16 (0.86 – 1.56)	0.34
Daily or Greater Seizures *(Ref: < daily)*	**2.10 (1.59 – 2.77)**	**<0.001**	**2.14 (1.61 – 2.84)**	**<0.001**	1.11 (0.83 – 1.47)	0.48
Etiology ND *(Ref: non-ND)*	1.27 (0.99 – 1.63)	0.06	1.24 (0.97 – 1.59)	0.11	1.19 (0.91 – 1.57)	0.20
Number of AEDs *(Ref: 0 – 1)*						
2 AEDs	0.79 (0.58 – 1.08)	0.15	**0.66 (0.48 – 0.90)**	**0.009**	1.11 (0.81 – 1.52)	0.53
≥ 3 AEDs	0.98 (0.71 – 1.33)	0.88	0.88 (0.64 – 1.21)	0.44	1.11 (0.81 – 1.52)	0.52
Age of epilepsy onset	**1.09 (1.05 – 1.14)**	**<0.001**	**1.09 (1.05 – 1.14)**	**<0.001**	0.99 (0.95 – 1.04)	0.75
Diagnostic Variables						
MRI Prior to Referral *(Ref: No/Unknown)*						
MRI completed - normal	**1.67 (1.16 – 2.40)**	**0.006**	**1.64 (1.13 – 2.38)**	**0.01**	1.17 (0.81 – 1.68)	0.41
MRI completed - abnormal	**2.03 (1.52 – 2.71)**	**<0.0001**	**1.82 (1.36 – 2.44)**	**<0.0001**	**1.51 (1.12 – 2.03)**	**0.007**
Demographic Variables						
Male	1.20 (0.97 – 1.49)	0.10	1.08 (0.87 – 1.35)	0.47	1.14 (0.92 – 1.44)	0.23
Race *(Ref: non-Hispanic White)*						
Hispanic	1.34 (0.99 – 1.83)	0.06	1.26 (0.92 – 1.71)	0.15	1.11 (0.81 – 1.52)	0.52
Other	0.78 (0.52 – 1.17)	0.23	0.88 (0.59 – 1.33)	0.55	0.95 (0.63 – 1.43)	0.79
Private Insurance *(Ref: Medicaid)*	**1.52 (1.12 – 2.05)**	**0.007**	**1.46 (1.07 – 1.97)**	**0.02**	1.20 (0.88 – 1.63)	0.25
Year of surgery cohort *(Ref: 1986-1990)*						
1991 – 1995	0.86 (0.57 – 1.32)	0.49	0.69 (0.46 – 1.05)	0.08	1.16 (0.76 – 1.77)	0.50
1996 – 2000	1.17 (0.74 – 1.84)	0.47	1.13 (0.72 – 1.77)	0.60	1.21 (0.75 – 1.94)	0.44
2001 – 2005	0.80 (0.53 – 1.19)	0.29	0.71 (0.48 – 1.05)	0.09	1.03 (0.70 – 1.57)	0.88
2006 – 2010	**0.66 (0.44 – 1.00)**	**0.05**	**0.55 (0.37 – 0.83)**	**0.004**	1.03 (0.67 – 1.57)	0.91

* Cox proportional hazard (CPH) models. ↑ HR means <u>shorter</u> time to event compared to reference group. Dependent variables (in separate models) = 'time to surgery', 'time to referral' or 'time from referral to surgery'. Independent variables for all models include clinical, diagnostic and demographic variables as described above, all adjusted for year of cohort. Bold indicates statistical significance of p ≤ 0.05.

Abbreviations: HR = hazard ratio; Ref = reference group; AEDs = anti-epileptic drugs; MRI = Magnetic resonance imaging; LA = Los Angeles; ND = neurodevelopmental

Missing data for seizure frequency (n=6); operation type (n=7); etiology (n=26); # AEDs (n=18); Race/ethnicity (n=2), Insurance type (n=10)