On-line Table 1: Patient and clinical characteristics of entire cohort

Patient Characteristic	*n* = 510
Male sex	50% (*n* = 255)
Gestational age at birth (median) (IQR)	30.0 wks (28.0–31.7 wks)
Postmenstrual age at MR imaging (median) (IQR)	42.7 wks (41.3–43.7 wks)
Age at neurodevelopmental assessment (median) (IQR)	20.2 mo (20.0–20.7 mo)[a]
Birth weight (median) (IQR)	1277g (1008–1593g)
Multiple pregnancy	162 (32%)
IMD (quintiles)(IMD score)[b]	
1 (≤8.49)	18%
2 (8.5–13.79)	16%
3 (13.8–21.35)	25%
4 (21.36–34.17)	27%
5 (≥4.18)	14%
Ventilation	
Required invasive ventilation	50% (*n* = 257)
Days ventilated (median) (IQR)	1 day (0–3 days)
Necrotizing enterocolitis	8.3% (*n* = 42)
Medical treatment	6.7% (*n* = 34)
Requiring surgery	1.6% (*n* = 8)

Note:—IQR indicates interquartile range.
[a] *n* = 477 for those attending neurodevelopmental follow-up.
[b] Higher scores denote more deprived areas.

On-line Table 2: Percentage of normal/abnormal BSID-III and GMFCS scores by lesion type[a]

Lesion	Normal Development (%)	Abnormal Motor (%)	Abnormal Cognitive (%)	Abnormal Language (%)	GMFCS ≥2 (%)
No lesion (*n* = 113)	58	6	17	37	0
Subependymal cysts (*n* = 133)	54	12	25	43	5
GMH–IVH (*n* = 54)	50	22	24	43	5
Cerebellar hemorrhage					
>5 mm (*n* = 7)	86	0	14	14	0
<5 mm (*n* = 112)	61	13	21	35	
PVL (*n* = 13)	0	100	85	54	100
HPI (*n* = 15)	33	60	60	60	47
Unclassified (*n* = 13)	54	0	23	46	8
Major unclassified (*n* = 8)	38	50	50	50	38
Abnormal myelin[b] (*n* = 47)	30	55	55	51	40

[a] Major lesions have been excluded from other lesion categories; however, there may be concurrent minor lesions. Major lesions are PVL, HPI; major unclassified lesion, >10 PWML.
[b] Abnormal myelin within the posterior limb of the internal capsule.

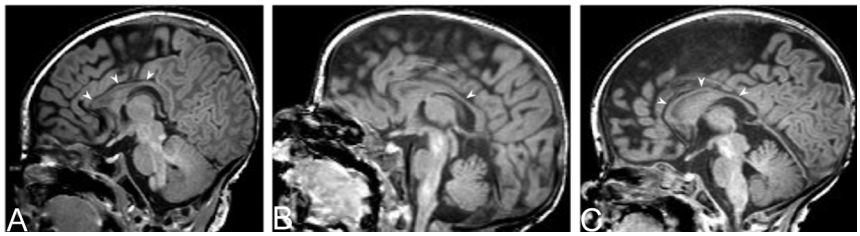
On-line Table 3: Unclassified lesions seen on MR imaging at TEA

Finding	No.
Hemorrhagic/nonhemorrhagic infarcts	6
Prominent vessel or venous anomaly	5
White matter cysts (not cystic PVL)	2
Pseudocyst	7
Choroid plexus hemorrhage	4
Focal cerebellar atrophy	2
Pineal cyst	1
Dilated perivascular spaces	1
Subependymal heterotopia	1
Abnormal basal ganglia signal	1

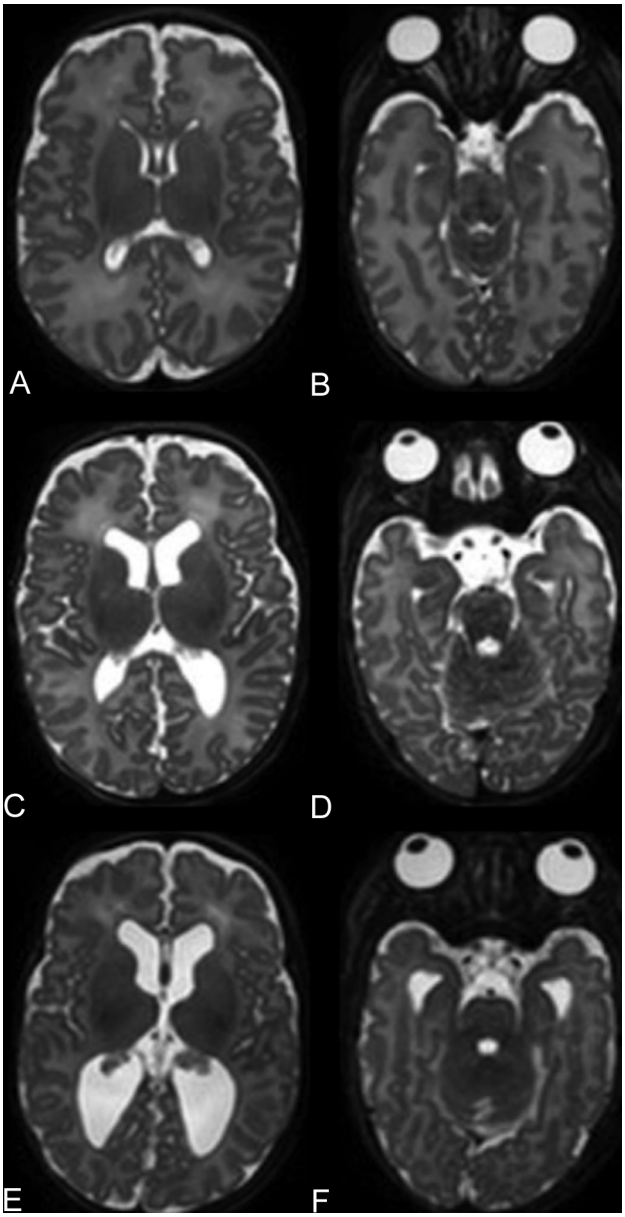
On-line Table 4: Sensitivity, specificity, positive predictive value, and negative predictive value for ventriculomegaly and corpus callosal thinning in infants with no other acquired lesions

Findings in Nonlesioned Brain (n = 113)[a]	Abnormal Motor Outcome				Abnormal Cognitive Outcome				Abnormal Language Outcome			
	SENS	SPEC	PPV	NPV	SENS	SPEC	PPV	NPV	SENS	SPEC	PPV	NPV
Corpus callosal thinning (n = 92)	86	19	7	95	79	18	16	81	82	19	34	67
Ventriculomegaly (n = 21)	57	84	19	97	32	84	29	86	24	84	43	69

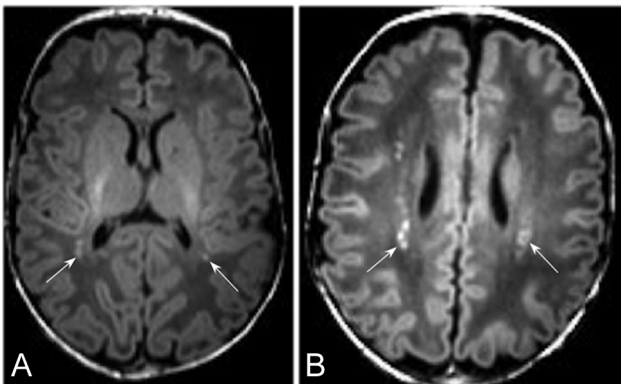
Note:—SENS indicates sensitivity; SPEC, specificity; PPV, positive predictive value; NPV, negative predictive value.
[a] n = 20 had no acquired lesions and neither ventriculomegaly nor corpus callosal thinning.



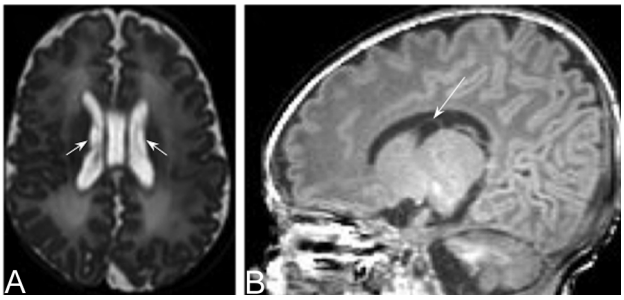
ON-LINE FIG 1. Grading of corpus callosal thinning. T1 MPRAGE in the sagittal plane. *A*, Normal thickness of the corpus callosum throughout (*arrowheads*). *B*, Focal thinning of the midbody/isthmus of the corpus callosum (*arrowhead*). *C*, Global thinning of the corpus callosum (*arrowheads*).



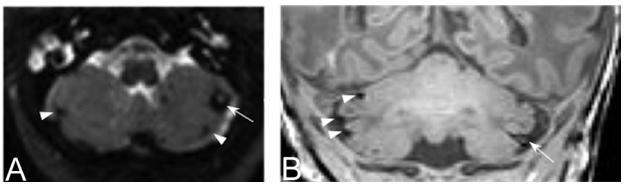
ON-LINE FIG 2. Grading of ventriculomegaly. T2 axial slices obtained at the midventricular level (left-sided images) and temporal horns (right-sided images). *A* and *B*, Normal appearance. *C* and *D*, Moderate enlargement. Note that the temporal horns remain undilated. *E* and *F*, Global moderate-to-severe enlargement.



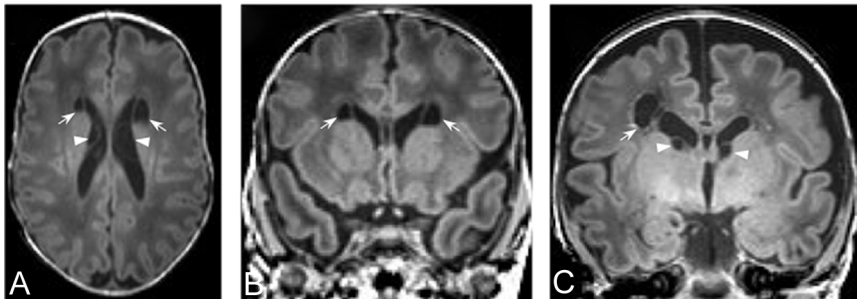
ON-LINE FIG 3. PWML. T1-weighted images of low-burden PWML (*arrows, A*) in an infant born at 30 + 4 weeks and imaged at 42 + 1 weeks and high-burden PWML (*arrows, B*) in an infant born at 31 + 2 weeks, imaged at 39 + 5 weeks. Note the deep and periventricular white matter distribution.



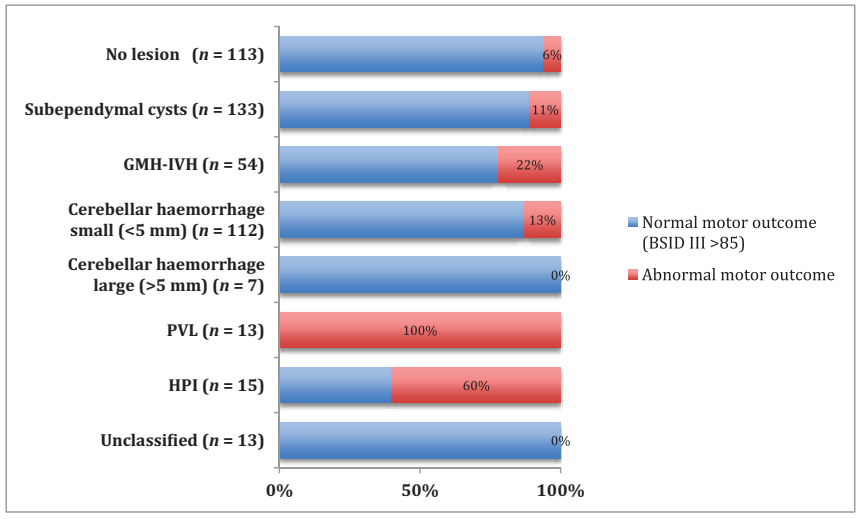
ON-LINE FIG 4. Subependymal cysts. T2-weighted MR imaging in the axial plane (*A*) and T1-weighted MR imaging in the sagittal, paramedian plane (*B*) of an infant born at 26 + 2 weeks and imaged at 41 + 6 weeks. There are bilateral, thin-walled cysts protruding from the caudothalamic notches into the lateral ventricles (*arrows*). There is no associated parenchymal destruction and only mild associated ventriculomegaly.



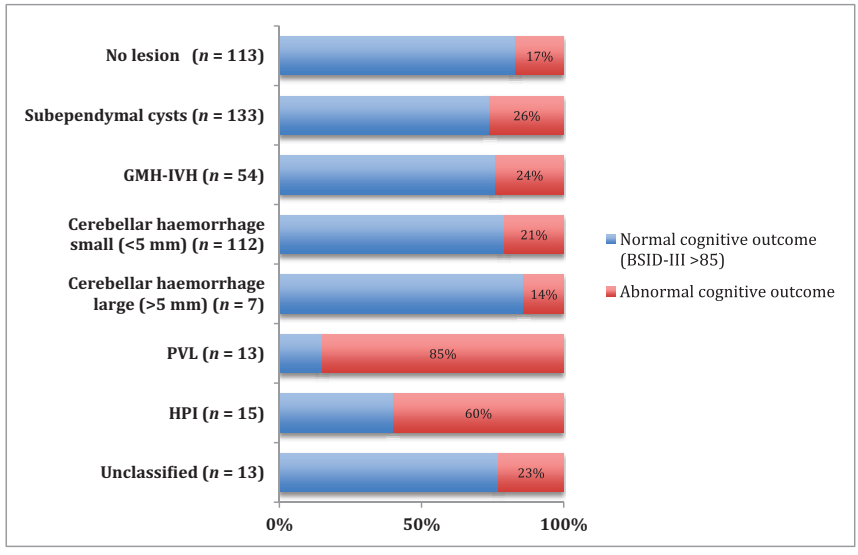
ON-LINE FIG 5. Cerebellar hemorrhage. T2-weighted axial (*A*) and T1-weighted coronal (*B*) images of an infant born at 29 + 4 weeks and imaged at 39 + 1 weeks. There are bilateral punctate hemorrhages (*arrowheads*) and a larger left-sided cerebellar hemorrhage (*arrows*, *A* and *B*). The peripheral distribution suggests that these may be germinal matrix in origin.



ON-LINE FIG 6. Differentiating cerebral cysts in preterm neonates at term-equivalent age. T1-weighted images in the axial (*A*) and coronal (*B*) planes of an infant born at 29 + 7 weeks and imaged at 40 + 2 weeks, and a T1 coronal image (*C*) in an infant born at 29 + 5 weeks and imaged at 39 + 1 weeks. Pseudocysts (*arrows*, *A* and *B*) are seen abutting the frontal horns of the lateral ventricles, inferior to the external angle of the ventricle. Bilateral subependymal cysts are also noted in this infant, more posteriorly, protruding into the ventricle (*arrowheads*, *A*). *C*, The cysts seen in cystic PVL (*arrow*, *C*) are superior to the angle of the ventricle (these were multiple and bilateral in this infant). Note additional bilateral subependymal cysts in this infant (*arrowheads*, *C*) for comparison.



ON-LINE FIG 7. Ratio of normal/abnormal BSID-III motor outcomes by isolated lesion type. "Isolated" implies major lesions excluded. There may be concurrent minor lesions. Major lesions are PVL, HPI; major unclassified lesions, >10 PWML.



ON-LINE FIG 8. Ratio of normal/abnormal BSID-III cognitive outcomes by isolated lesion type. "Isolated" implies major lesions excluded. There may be concurrent minor lesions. Major lesions are PVL, HPI; major unclassified lesions, >10 PWML.