normal aEEGs. Background patterns changed in 8/29 (28%) tracings during the recording. Details of individual recordings will be presented.

Conclusions: The majority of patients with metabolic disorders had abnormal aEEG tracings, some with marked and/or unusual changes. As aEEG monitoring allows for ongoing assessment of patients, it may aid in evaluation, monitoring of treatment responses and counseling in this patient group.

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PRENATAL MATERNAL STEROID TREATMENT - EFFECT ON MORTALITY AND BRONCHOPULMONARY DYSPLASIA (BPD) IN EXTREMELY PREMATURE INFANTS

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Background and aims: Prenatal steroids (PS) are considered important in the treatment of extremely premature infants. The study was undertaken to evaluate the impact of PS on mortality and BPD in a national cohort with a high rate of prenatal steroid treatment.

Methods: All 452 admitted infants with GA ≤ 30 weeks from a national cohort of infants with gestational age (GA) of 22⁰ to 27⁶ weeks and/or birth weight (BW) of 500 to 999 g were studied. 83 infants died and 376 infants who survived past day 28 were evaluated for development of BPD.

Results: Although infants with or without PS had similar GA and BW, no significant differences in mortality or development of BPD could be seen (Table 1).

		PS+	PS-	p
Entire cohort	452	381*	54	
GA (wks)	26.2±1.7	26,1±1.7	26,3±1.5	0.398
BW (g)	832±180	829±182	842±156	0.596
Died	83 (18.4%)	68 (17.8%)	13 (24.1%)	0.311
BPD cohort	376	322#	41	
GA (wks)	26.4±1.5	26.4±1.6	26,7±1.6	0.257
BW (g)	853±176	845±175	904±174	0.040
BPD	170	148 (45,9%)	19 (46.3%)	0.963

[Table 1]

* data missing for 17 infants # data missing for 13 infants

Conclusions: The study indicates that treatment with prenatal steroids have only minor effects on mortality and development of BPD in extremely premature infants.

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NEONATAL MORBIDITY IN MODERATELY PRETERM INFANTS. A SWEDISH NATIONAL POPULATION-BASED STUDY

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Objective: To determine the gestational age specific risks for neonatal morbidity, interventions and treatments in infants born at the crossroads between very and moderately preterm.

Study design: A population-based Swedish study including 6,674 infants born at 30 to 34 weeks of gestational age (GA) during 2004-2008. Risks for neonatal morbidity and use of interventions were investigated with respect to GA and birth weight standard deviation scores.

Results: Acute lung disorder was diagnosed in 28%, hypoglycemia in 16%, bacterial infection in 15% and hyperbilirubinemia in 59% of the moderately to very preterm infants. Thirty-eight percent were exposed to antenatal steroid therapy, 43% received nCPAP, 5.5% required mechanical ventilation, 5.2%

were administered surfactant, and 30% received antibiotic therapy. The risks of neonatal diseases increased with decreasing GA, with odds ratios ranging from 2.1 to 23. Low birth weight for GA was more common at lower GA and was associated with increased risks for morbidity.

Conclusions: Despite general advances in perinatal care, moderately preterm infants still face substantially increased risks for neonatal diseases, and these risks increase linearly as GA decreases. Whereas neonatal morbidity was similar to results of previous reports, management of respiratory problems was found to differ markedly from other studies.

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INCREASED RISK OF CEREBRAL MRI PATHOLOGY AND NEUROIMPAIRMENTS IN ADOLESCENTS BORN AS LATE PRETERMS WITH VERY-LOW-BIRTH-WEIGHT (VLBW)

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Backgrounds and aims: Studies of moderate to late preterms have reported increased risk of neuroimpairments in this group of children. The aim of study was to report neurodevelopment and MRI findings in adolescence in two groups of very low birth weight (1500 g) children: one very preterm with gestational age (ga) < 30 weeks and one moderate to late preterm group with ga = 30-35 weeks, compared with term born controls.

Methods: Thirty-eight very preterms, 25 moderate/late preterms and 83 term born controls were evaluated with the following tests: M-ABC, Grooved Pegboard, VMI, WISC-III, Wisconsin Card Sorting, Stroop, Knox Cube and Trail Making tests to investigate motor, perceptual, cognitive and executive functions at age 14. Morphometric MRI and DTI were performed to assess signs of perinatal cortical and white matter pathology.

Results: The clinical test scores were similar in the two preterm groups, and significantly worse than in controls. Both preterm groups had more MRI pathology like ventricular dilatation, white matter reduction, and thinning of corpus callosum than controls. On quantitative MRI both preterm groups had similar and lower FA values in most major tracts compared with controls. They also shared mostly the same areas with cortical thinning compared with controls.

Conclusions: The moderate preterm adolescents had similar neuroimpairments compared to very preterms despite less perinatal illness at age 14. Quantitative MRI measurements showed that white matter microstructure and cortical development were similarly affected in the two preterm groups, which may explain the clinical results.

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EPIDEMIOLOGICAL CHARACTERISTICS OF ESOPHAGEAL ATRESIA IN EUROPE, 1222 CASES

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The objective of this study was to describe prevalence and epidemiologic data on esophageal atresia from 23 well-defined European regions and to compare prevalences between these regions. We wanted to characterize the cases as syndromic, multiple malformed or isolated. Furthermore we wanted to characterize the cases with regards to gender, birth type, gestational age, birth weight and survival.

The study is based on data from 23 European registries of congenital malformations (EUROCAT). For further details see www.eurocat.ulster.ac.uk/memberreg/. All cases with ICD9 and ICD10 code with EA born 1987-2006 were included. The total number of births was 5,027,181.

1222 cases of EA were recorded giving an overall prevalence of 2.43 per 10,000 births. There were large regional differences in the prevalence. Also the prenatal detection rates showed large regional differences.

57.3% of cases were boys. 70.5% had a tracheo-esophageal fistula along with the atresia.