

Table S1. Overview on sex and age of the pediatric patients and their ICD-10 diagnoses.

Age (years, mean \pm SD)		<i>n</i>
males	8.2 \pm 4.7	92
female	8.8 \pm 4.7	55
sum	8.4 \pm 4.7	147
ICD-10 code	Diseases	<i>n</i>
C00–D48	Neoplasms	8
D50–D53	Nutritional anaemias	1
E00–E90	Endocrine, nutritional and metabolic diseases	25
F00–F99	Mental and behavioural disorders	112
F70–F79	Intellectual disability	22
F80–89	Disorders of psychological development	102
G00–G99	Diseases of the nervous system	70
G40	Epilepsy	49
G80–G83	Cerebral palsy and other paralytic syndromes	20
H00–H59	Diseases of the eye and adnexa	10
H60–H95	Diseases of the ear and mastoid process	9
I00–I99	Diseases of the circulatory system	17
K00–K93	Diseases of the digestive system	4
M00–M99	Diseases of the musculoskeletal system and connective tissue	11
P00–P96	Certain conditions originating in the perinatal period	20
Q00–Q99	Congenital malformations, deformations and chromosomal abnormalities	74
Q00–Q07	Congenital malformations of the nervous system	26
Q20–Q28	Congenital malformations of the circulatory system	7
Q50–Q56	Congenital malformations of genital organs	6
Q65–Q79	Congenital malformations and deformations of the musculoskeletal system	13
Q85	Phacomatoses, not elsewhere classified	30
Q90–99	Chromosomal abnormalities, not elsewhere classified	14
R00–R99	Symptoms, signs and abnormal clinical and laboratory findings, not elsewhere classified	12

ICD-10, International Statistical Classification of Diseases and Related Health Problems 10th Revision; SD, standard deviation.

Table S2. Comparison of serum TE levels of pediatric patients with published references.

		ref. values, healthy children *		neuropediatric values, this study	
	Age Group	<i>n</i>	Mean \pm SD ($\mu\text{g/L}$)	<i>n</i>	Mean \pm SD ($\mu\text{g/L}$)
Cu	1 m–18 y	137	1296.3 \pm 311.4	147	1288.1 \pm 293.6
	0–<1	18	876.9 \pm 317.7	2	1568.0 \pm 605.1
	1–<2	15	1340.8 \pm 292.3	9	1539.8 \pm 278.4
	2–<4	23	1366.2 \pm 247.8	16	1395.6 \pm 234.2
	4–<6	19	1232.8 \pm 336.8	26	1413.6 \pm 301.7
	6–<10	25	1487.8 \pm 158.9	39	1294.1 \pm 246.3
	10–<14	21	1340.8 \pm 235.1	31	1187.7 \pm 263.5
	14–<18	17	1302.7 \pm 279.6	24	1082.4 \pm 252.3
	adults (EPIC) ** 2069		1371.6 \pm 319.1		
Zn	1 m–18 y	133	823.8 \pm 232.1	147	1437.8 \pm 406.3
	0–<1	18	804.2 \pm 255.0	2	1150.4 \pm 248.2
	1–<2	15	758.4 \pm 222.3	9	1356.5 \pm 386.4
	2–<4	23	719.2 \pm 215.8	16	1385.9 \pm 350.5
	4–<6	19	836.9 \pm 176.5	26	1364.1 \pm 344.3
	6–<10	25	882.6 \pm 202.7	39	1458.9 \pm 447.2
	10–<14	21	869.6 \pm 307.3	31	1411.3 \pm 399.3
	14–<18	17	882.6 \pm 209.2	24	1606.5 \pm 443.4
	adults (EPIC) ** 2069		976.3 \pm 293.7		
Se	1 m–18 y	130	60.8 \pm 26.8	147	56.5 \pm 13.1
	0–<1	18	32.4 \pm 18.2	2	54.4 \pm 5.3
	1–<2	15	45.8 \pm 15.0	9	49.2 \pm 18.7
	2–<4	23	58.5 \pm 24.5	16	57.9 \pm 12.7
	4–<6	19	67.9 \pm 30.8	26	59.9 \pm 15.4
	6–<10	25	73.4 \pm 24.5	39	54.7 \pm 11.2
	10–<14	21	71.1 \pm 23.7	31	55.5 \pm 11.6
	14–<18	17	71.9 \pm 25.3	24	58.8 \pm 13.3
	adults (EPIC) ** 2069		84.7 \pm 23.3		

* Reference values for children as reported by Rukgauer et al. [51]; ** Reference data from a European cross-sectional analysis (EPIC) [46]. Ref., reference, TE, trace element; m, month; y, year; Cu, copper; Zn, zinc; Se, selenium.

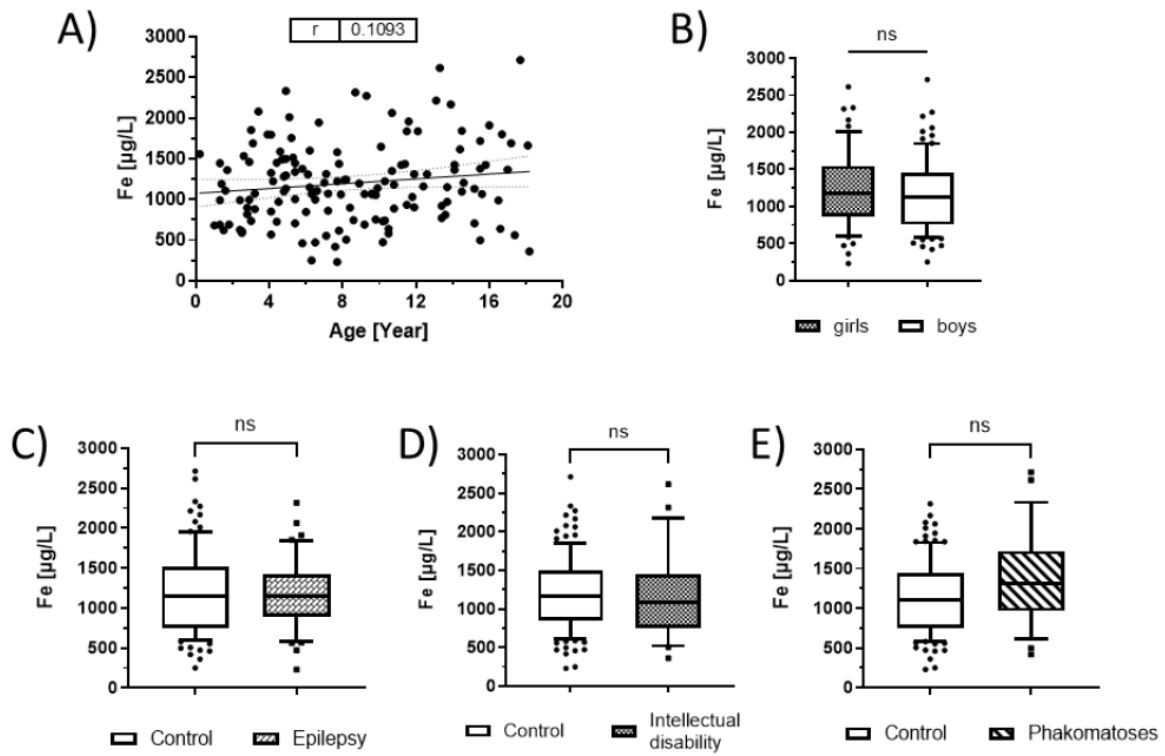


Figure S1. Analysis of serum Fe in pediatric patients with neurodevelopmental diseases. Serum iron (Fe) was not significantly associated with (A) age, (B) sex, (C) epilepsy, (D) intellectual disability, or (E) phakomatoses in the group of pediatric patients analysed in our study. ns, not significant.