

Supplementary Table 2. Detail of the index cases

		N	Severe group		Control group		<i>p</i>
Number of patients		245	53		192		
Sex (male:female)		120:125	19:34		101:91		0.04*
Type of <i>FBNI</i> variants							0.06
PTVs	(%)	120	32	(26.7)	88	(73.3)	
Non-PTVs	(%)	125	21	(16.8)	104	(83.2)	
Location of <i>FBNI</i> variants							0.04*
Neonatal region (exon 25–33)	(%)	32	12	(37.5)	20	(62.5)	
Other regions	(%)	213	41	(19.2)	172	(80.8)	

PTV, protein-truncating variant. \*:  $p < 0.05$

Supplementary Table 3. Univariate and multivariate logistic regression analysis limited to 245 index cases of severe scoliosis development

	Univariate analysis		Multivariate analysis	
	OR 95% [CI]	<i>p</i>	OR 95% [CI]	<i>p</i>
Sex		0.03*		0.02*
Female	1.99 [1.07–3.78]		2.15 [1.14–4.18]	
Male	Reference		Reference	
Type of <i>FBNI</i> variants		0.06		0.03*
PTVs	1.80 [0.98–3.38]		2.05 [1.09–3.96]	
Non-PTVs	Reference		Reference	
Location of <i>FBNI</i> variants		0.03*		0.02*
Neonatal region (exon 25–33)	2.52 [1.11–5.51]		2.84 [1.22–6.44]	
Other regions	Reference		Reference	

OR, odds ratio; CI, confidence interval; PTV, protein-truncating variant. \*:  $p < 0.05$ .

Supplementary Table 4. Demographic data of the severe scoliosis and control cases with Cobb angle  $\geq 10^\circ$ 

		N	Severe group		Control group		<i>p</i>
Number of patients		220	57		163		
Sex (male:female)		103:117	20:37		83:80		0.045*
Type of <i>FBNI</i> variants							0.06
PTVs	(%)	110	35	(31.8)	75	(68.2)	
Non-PTVs	(%)	110	22	(20.0)	88	(80.0)	
Location of <i>FBNI</i> variants							0.04*
Neonatal region (exon 25–33)	(%)	31	13	(41.9)	18	(58.1)	
Other regions	(%)	189	44	(23.3)	145	(76.7)	

PTV, protein-truncating variant. \*:  $p < 0.05$

Supplementary Table 5. Univariate and multivariate logistic regression analysis limited to patients with Cobb angle  $\geq 10^\circ$ 

	Univariate analysis		Multivariate analysis	
	OR 95% [CI]	<i>p</i>	OR 95% [CI]	<i>p</i>
Sex		0.04*		0.01*
Female	1.92 [1.04–3.63]		2.22 [1.17–4.32]	
Male	Reference		Reference	
Type of <i>FBNI</i> variants		0.04*		0.01*
PTVs	1.87 [1.01–3.49]		2.20 [1.17–4.25]	
Non-PTVs	Reference		Reference	
Location of <i>FBNI</i> variants		0.04*		0.02*
Neonatal region (exon 25–33)	2.38 [1.06–5.22]		2.82 [1.22–6.46]	
Other regions	Reference		Reference	

OR, odds ratio; CI, confidence interval; PTV, protein-truncating variant. \*:  $p < 0.05$ .