

TABLE E-1

DATA ON THE PATIENTS

Case	Gender	Age (yr)	King Type	Thoracic Cobb Angle	Thoracic End-Vertebrae	Lumbar Cobb Angle	Lumbar End-Vertebrae	Thoracic Apical Vertebra	AVR*	Lumbar Apical Vertebra	AVR*
1	M	21	II	70°	T5 - T11	64°	T12 - L4	T7	35°	L2	35°
2	F	15	III	56°	T5 - T12	34°	L1 - L4	T9	26°	L3	5°
3	M	17	II	60°	T4 - T11	44°	T12 - L4	T8	33°	L2	20°
4	F	13	II	80°	T5 - T11	66°	T11 - L4	T8	30°	L2	40°
5	F	14	III	86°	T5 - L1	45°	L1 - L5	T9	28°	L3	5°
6	F	14	II	98°	T5 - T11	86°	T12 - L5	T8	25°	L3	38°
7	M	17	III	56°	T7 - L1	32°	L1 - L4	T9	22°	L3	12°
8	F	17	II	58°	T6 - T11	34°	T12 - L4	T9	22°	L2	12°
9	F	17	III	78°	T6 - L1	44°	L1 - L4	T9	38°	L3	8°
10	F	12	II	54°	T5 - T11	32°	T12 - L4	T8	25°	L2	15°
11	F	20	II	50°	T5 - T10	40°	T11 - L4	T8	32°	L1	15°
12	F	12	II	68°	T4 - T10	58°	T11 - L4	T7	20°	L1	18°
13	F	13	II	56°	T5 - T11	42°	T12 - L4	T8	12°	L3	12°
14	F	15	III	56°	T5 - T11	28°	T12 - L4	T8	25°	L2	5°
15	F	17	II	55°	T5 - T10	50°	T11 - L4	T8	15°	L2	25°
16	F	12	III	62°	T6 - T12	36°	L1 - L4	T9	25°	L3	5°
17	F	14	II	52°	T5 - T11	44°	T12 - L4	T9	22°	L2	12°
18	M	16	III	50°	T4 - T10	34°	T11 - L3	T7	15°	L1	10°
19	F	20	III	66°	T4 - T12	30°	L1 - L4	T8	35°	L3	7°
20	F	16	II	56°	T4 - T10	42°	T11 - L4	T8	22°	L2	12°
21	F	14	III	78°	T5 - T11	46°	T12 - L4	T8	30°	L2	7°
22	F	12	II	66°	T5 - T11	38°	T12 - L4	T8	25°	L2	15°
23	M	13	IV	72°	T6 - L1	34°	L2 - L4	T9	35°	L3	8°
24	F	14	II	108°	T5 - T11	82°	T12 - L4	T8	35°	L2	48°
25	F	16	II	60°	T5 - T11	51°	T11 - L4	T8	20°	L2	15°
26	F	19	II	64°	T6 - L1	56°	L1 - L4	T9	18°	L2	25°

*Apical vertebral rotation according to Perdriolle and Vidal²⁵.

TABLE E-2
MORPHOMETRIC MEASUREMENTS IN THE TRANSVERSE PLANE*

Level	Pedicule Width (mm)			Pedicule Angle (degrees)			Chord Length (mm)			Pedicule Length (mm)		
	Convex	Concave	P Value**	Convex	Concave	P Value**	Convex	Concave	P Value**	Convex	Concave	P Value**
T4	2.3±0.6 (1.4-3.2)	2.4±0.5 (1.7-3.1)	NS	13.9±1.7 (11-16)	14.7±1.6 (12-17)	NS	33.8±2.9 (29.7-38.2)	33.8±3.2 (30.0-39.4)	NS	17.7±2.0 (15.4-21.0)	17.3±1.9 (15.7-20.7)	NS
T5	3.1±0.6 (2.0-4.0)	3.0±0.9 (1.2-5.0)	NS	14.2±2.5 (11-21)	14.9±2.6 (11-22)	NS	35.1±2.0 (32.0-38.6)	35.0±2.4 (31.4-40.7)	NS	18.1±1.8 (15.6-21.5)	17.7±2.0 (15.4-22.2)	NS
T6	3.4±0.7 (2.3-5.0)	2.7±0.8 (1.0-4.4)	0.006	14.3±2.0 (10-18)	15.0±2.3 (11-19)	0.005	37.9±2.2 (34.2-42.6)	37.5±2.3 (32.9-42.0)	NS	19.1±1.5 (15.7-22.6)	18.3±1.3 (15.9-20.7)	0.009
T7	3.9±0.5 (3.0-5.1)	2.3±1.0 (1.0-4.7)	<0.0001	14.1±2.3 (10-19)	15.2±2.1 (10-20)	0.002	40.3±2.6 (36.4-44.9)	40.3±2.7 (34.9-44.8)	NS	19.4±2.6 (14.6-22.5)	19.3±1.5 (16.9-22.1)	NS
T8	4.1±0.8 (2.6-5.6)	2.5±1.1 (1.0-5.1)	<0.0001	14.0±1.4 (12-17)	14.7±2.0 (12-19)	0.006	41.8±3.3 (34.7-48.4)	42.3±3.3 (37.6-52.1)	NS	20.6±1.7 (16.7-23.6)	20.0±1.7 (17.3-23.5)	NS
T9	4.4±1.0 (2.4-6.8)	3.2±1.1 (1.0-5.8)	0.0001	14.5±1.9 (11-19)	14.5±1.8 (11-19)	NS	42.8±2.9 (37.9-49.2)	43.0±3.2 (35.7-48.9)	NS	20.9±1.4 (17.0-23.3)	20.2±2.2 (16.0-24.0)	NS
T10	5.1±1.1 (3.3-7.5)	4.1±1.2 (2.2-6.9)	0.0001	13.4±2.2 (10-18)	13.1±2.3 (9-18)	NS	43.1±3.7 (36.2-52.9)	42.9±3.5 (36.1-49.7)	NS	21.1±2.2 (17.5-25.1)	20.4±1.9 (16.9-24.2)	0.02
T11	6.0±1.3 (4.2-8.7)	5.4±1.3 (3.6-8.5)	0.009	9.7±2.3 (6-14)	9.4±2.1 (6-14)	NS	43.7±4.0 (37.7-53.7)	43.1±3.6 (35.1-51.0)	NS	21.5±2.0 (18.1-25.6)	20.7±2.2 (16.7-24.5)	NS
T12	6.1±1.6 (3.8-11.3)	5.8±1.5 (3.8-9.8)	NS	7.5±2.5 (4-13)	7.4±2.2 (4-14)	NS	46.4±4.1 (38.4-53.6)	46.6±3.9 (37.5-52.0)	NS	24.5±2.2 (19.5-28.3)	23.7±2.7 (18.3-27.8)	0.04
L1	4.8±1.0 (2.9-7.1)	4.6±1.2 (2.3-7.5)	NS	10.7±2.3 (7-15)	10.9±2.5 (6-16)	NS	48.1±3.3 (43.2-55.0)	48.0±3.2 (43.5-53.9)	NS	24.6±1.5 (22.2-28.2)	24.3±2.2 (19.3-28.3)	NS
L2	4.9±1.0 (3.0-7.3)	5.1±1.7 (2.0-8.7)	NS	12.1±1.5 (9-14)	12.4±1.8 (9-16)	NS	49.5±3.8 (43.8-57.2)	49.2±3.7 (42.4-55.6)	NS	23.9±2.0 (19.8-27.9)	23.6±2.0 (20.0-27.2)	NS
L3	6.4±1.5 (3.8-9.1)	6.6±1.9 (3.1-10.3)	NS	14.3±1.6 (10-17)	13.9±2.2 (8-18)	NS	50.3±3.9 (43.5-59.8)	51.2±3.9 (45.2-61.3)	0.02	23.9±1.9 (20.4-27.8)	25.2±2.8 (18.9-30.3)	0.003
L4	7.9±2.1 (4.6-13.5)	7.6±2.3 (3.5-11.5)	NS	16.0±2.5 (12-24)	15.3±2.6 (10-24)	0.01	49.0±4.4 (40.4-60.3)	49.2±4.4 (40.4-61.4)	NS	22.3±2.4 (17.9-26.4)	23.3±2.5 (18.3-27.3)	0.005

*The values are given as the mean and the standard deviation, with the range in parentheses.

**The p values were determined applying the Wilcoxon matched-pairs signed rank test (level of significance, p<0.05). NS=not significant.

TABLE E-3

WIDTH OF THE PEDICLE-RIB UNIT*

Level	Convex		Concave		P Value**
	Mean	Range	Mean	Range	
T4	11.1±1.5	9.2-13.7	11.2±1.2	10.0-13.5	NS
T5	11.1±1.7	8.0-14.5	11.3±1.6	8.3-15.1	NS
T6	12.2±1.8	8.7-15.9	12.2±1.9	8.0-16.0	NS
T7	12.1±1.7	9.2-16.3	12.9±2.4	8.2-18.3	0.02
T8	12.0±1.9	9.4-16.3	13.1±2.1	8.6-18.4	0.007
T9	12.4±1.6	9.8-15.3	13.8±2.5	8.4-19.4	0.0007
T10	13.1±1.5	10.2-16.3	13.9±2.5	8.6-19.4	0.02
T11	13.8±1.6	11.5-17.1	14.4±2.0	10.7-18.6	NS
T12	13.4±1.3	10.2-15.2	13.3±2.0	10.6-19.0	NS

*Measurements in millimeters.

**The p values were determined applying the Wilcoxon matched-pairs signed rank test (level of significance, $p < 0.05$).

NS=not significant.

TABLE E-4

MORPHOMETRIC MEASUREMENTS IN THE FRONTAL PLANE*

Level	Pedicule Width (mm)			Pedicule Height (mm)		
	Convex	Concave	P Value**	Convex	Concave	P Value**
T4	2.5±0.7 (1.2-3.4)	2.5±0.4 (1.8-3.0)	NS	7.8±0.2 (7.3-8.0)	7.3±0.4 (6.8-7.9)	NS
T5	3.0±0.6 (1.9-4.1)	2.9±0.8 (1.5-4.6)	NS	8.7±1.1 (7.2-11.6)	8.0±1.1 (7.2-11.6)	0.009
T6	3.6±0.7 (2.5-5.2)	2.9±1.1 (1.0-5.8)	0.004	9.0±0.9 (7.0-11.0)	8.1±1.1 (6.5-10.4)	0.002
T7	4.0±0.9 (2.8-6.3)	2.4±1.0 (1.0-4.4)	<0.0001	9.5±1.3 (7.5-13.2)	8.1±1.2 (6.1-11.7)	0.0001
T8	4.2±0.9 (2.5-6.5)	2.5±1.1 (1.0-4.8)	<0.0001	9.8±1.3 (7.8-13.8)	8.4±1.3 (6.5-12.3)	<0.0001
T9	4.4±1.0 (2.2-6.5)	3.4±1.2 (1.0-5.8)	0.0002	9.8±1.2 (7.6-12.7)	9.0±1.4 (6.4-12.6)	0.0023
T10	5.1±1.3 (3.0-7.9)	4.1±1.3 (1.9-7.0)	0.0004	11.6±1.3 (9.5-14.8)	11.2±1.3 (8.9-14.4)	NS
T11	6.2±1.4 (4.2-8.9)	5.6±1.5 (3.4-8.9)	0.007	12.7±1.7 (9.4-17.6)	12.8±2.0 (10.0-18.0)	NS
T12	6.0±1.6 (3.7-11.0)	5.7±1.6 (3.0-9.5)	NS	12.4±2.1 (8.4-17.6)	12.3±1.9 (9.1-17.6)	NS
L1	4.9±1.1 (3.1-7.9)	4.9±1.2 (2.5-7.8)	NS	11.4±2.0 (8.2-15.8)	11.3±1.9 (7.8-16.6)	NS
L2	4.9±1.0 (3.2-7.0)	5.3±1.8 (2.1-9.0)	NS	10.8±1.5 (7.5-13.0)	10.4±1.3 (7.2-13.0)	0.02
L3	6.6±1.5 (3.9-9.0)	6.8±2.0 (3.5-11.4)	NS	10.2±1.5 (7.6-13.3)	10.0±1.4 (7.9-13.1)	NS
L4	8.1±2.3 (4.3-15.0)	7.6±2.3 (4.0-12.3)	0.04	10.3±1.8 (8.0-13.8)	10.7±1.7 (7.6-14.4)	NS

*The values are given as the mean and the standard deviation, with the range in parentheses.

**The p values were determined applying the Wilcoxon matched-pairs signed rank test (level of significance, p<0.05).

NS=not significant.