

TABLE E-1 Summary of the Studies on Percutaneous Spine Biopsy That Met the Inclusion Criteria*

Author	Year	Number of Cases	Level	Approach	Image Guidance	Inner Diameter of Needle (mm)	Adequacy	Accuracy	Complications
Armstrong et al. ³⁷	1978	19	T, L, S	Posterolateral	Fluoroscopy	1.5	100%	100%	Tuberculosis abscess (1), <i>Escherichia coli</i> pneumonia (1)
Moore et al. ²¹	1979	20	T	Posterolateral	Fluoroscopy	3.5	95%	75%	Paraplegia (1)
Adapon et al. ¹¹	1981	22	C,T, L, S	Posterolateral	CT scan	1.8	82%	ND	Transient progression of quadriplegia (1)
Shaltot et al. ²⁹	1982	23	T, L	ND	Fluoroscopy	2	96%	96%	L5 radiculopathy (1)
Sloth et al. ³¹	1984	92	C, T, L	Posterolateral	Fluoroscopy	0.6	84%	78%	0
Mick and Zinreich ¹⁶	1985	6	T	Transcostovertebral	CT scan	3.5	100%	ND	0
Stoker and Kissin ³⁵	1985	135	C, T, L	Posterolateral	Fluoroscopy	2	93%	90%	Bleeding (2), urinary retention (1)
Laredo and Bard ³⁶	1986	41	T	Posterolateral	Fluoroscopy	1.6	100%	93%	0
Brugieres et al. ³³	1990	27	T	Transcostovertebral	CT scan	1.6	100%	93%	0
Tampieri et al. ³²	1991	9	C	Anterolateral	Fluoroscopy	1.19	78%	ND	0
Brugieres et al. ²⁸	1991	89	C, T, L, S	Posterolateral	CT scan	1.6	98%	94%	0
Brugieres et al. ²⁷	1992	12	C	Transpedicular anterolateral	CT scan	2	92%	ND	Transient recurrent laryngeal palsy (1)
Metzger et al. ¹⁷	1993	7	T	Posterolateral	Fluoroscopy	3.5	100%	ND	Pneumothorax (1)
Stringham et al. ⁶	1994	6	T, L	Transpedicular	CT scan	3.5	100%	ND	0
Arya et al. ²⁶	1996	15	T, L	Transpedicular	Fluoroscopy	3.2	100%	ND	0
Olscamp et al. ²²	1997	82	C, T, L, S	Transpedicular, direct	CT scan	3.5	97%	94%	Aortic puncture (1), psoas hematoma (2)
Kang et al. ²⁵	1999	87	C, T, L	Multiple	CT scan	0.5	88%	ND	0
Ashizawa et al. ²⁰	1999	26	T, L	Transpedicular	Fluoroscopy	1.4	92%	ND	0
Hsu and Lim ²³	2001	9	T	Transpedicular	CT scan	2.1	89%	ND	ND
Moller et al. ¹²	2001	32	T, L, S	Transpedicular	Fluoroscopy	3.1	94%	94%	Hematoma (2)
Phadke et al. ¹⁹	2001	78	T, L	ND	CT scan	0.5	81%	ND	ND
Yaffe et al. ¹⁸	2003	19	T, L	Posterolateral, transpedicular, transcostovertebral	CT scan	3.1	100%	100%	Bleeding (2)
Lis et al. ²⁴	2004	410	C, T, L, S	Multiple	CT scan	0.8	98%	89%	Spinal canal compromise (2), broken needle (1)
Christodoulou et al. ³⁴	2005	238	T, L, S	Posterolateral	Fluoroscopy	3	89%	89%	Nerve root irritation (2), tuberculosis sinus (1), transient paraplegia (1)
Akhtar et al. ³⁰	2006	124	C, T, L, S	ND	CT scan	0.5	80%	76%	ND

*ND = not described, C = cervical, T = thoracic, L = lumbar, S = sacral, CT = computed tomography.

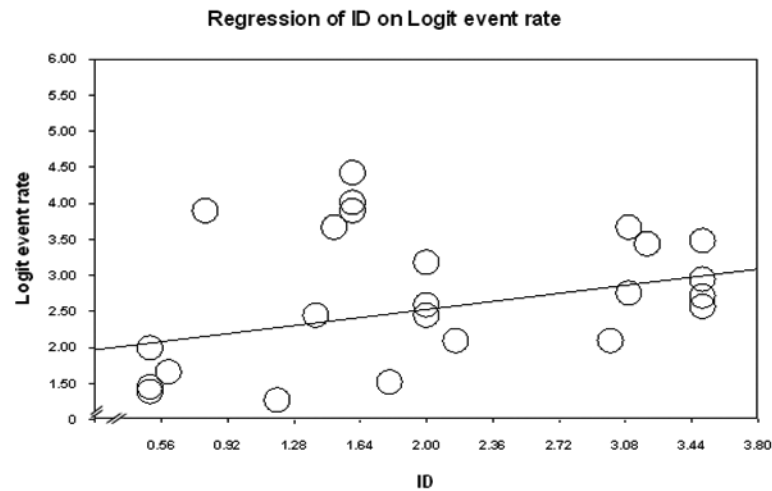


Fig. E-21

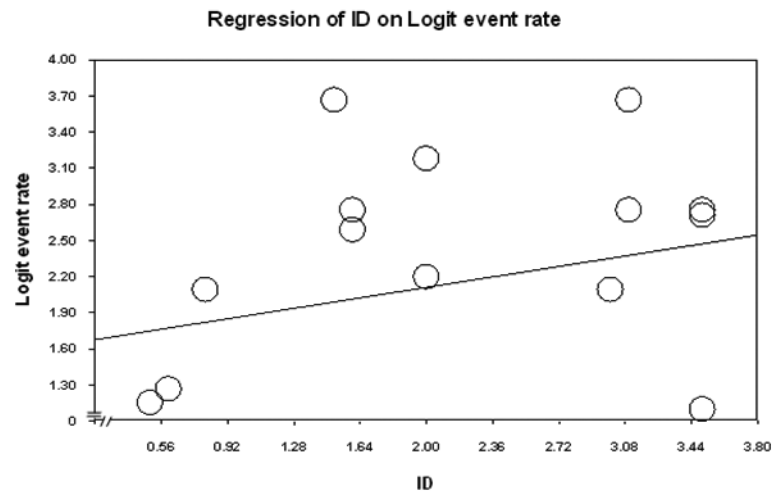


Fig. E-2

Fig. E-1

Graph showing the regression of inner diameter (ID) on the logit event rate of the adequacy of the specimen (slope = 0.311, $p = 0.089$). The inner diameter is expressed in millimeters.

Fig. E-2

Graph showing the regression of inner diameter (ID) on the logit event rate of the accuracy of the specimen (slope = 0.241, $p = 0.11$). The inner diameter is expressed in millimeters.

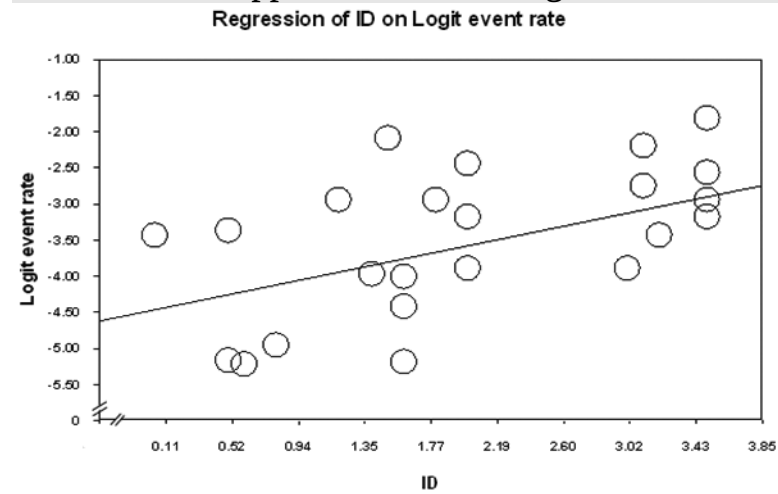


Fig. E-3

Fig. E-3

Graph showing the regression of inner diameter (ID) on the logit event rate of the complication rate (slope = 0.45, $p = 0.013$). The inner diameter is expressed in millimeters.