

Table S1 Perioperative outcomes of included studies.

Study	Hospital stay(days)		Bleeding amounts(ml)		Operative time(min)	
	ACCF	ACDF	ACCF	ACDF	ACCF	ACDF
Oh 2009	16.82±7.7	15.14±8.5	777.8±644.3	306.43±151.1	210±6	140.71±44.5
Park 2010		NA		NA		NA
Wang 2001		NA		NA		NA
Burkhardt 2013		NA		NA		NA
Yu 2012		NA		NA		NA
Yu 2007		NA	306.75±74.63	207.5±65.86	110.4±18.16	91.8±19.43
Jia 2012	11.11±8.52	10.79±7.74	279.93±63.21	102.21±31.71	141.23±63.21	97.37±17.72
Liu 2011	12.2±2.7	11.2±2.6	263.0±130.4	148.3±71.3	190.9±61.4	139.9±12.7
Kim 2012		NA		NA		NA

NA=not available, ACCF= anterior cervical corpectomy and fusion, ACDF= anterior cervical discectomy and fusion.

Table S2 Clinical outcomes of included studies.

Study	Postoperative visit	JOA at last	Postoperative neck VAS		Postoperative arm VAS	
	ACCF	ACDF	ACCF	ACDF	ACCF	ACDF
Oh 2009	14.72±1.7	15.25±1.5	3.63±2.3	2.93±2.5	2.63±2.7	2.79±2.3
Park 2010	NA		NA		NA	
Wang 2001	NA		NA		NA	
Burkhardt 2013	NA		0.9±3.1	1.3±3.2	1.4±3.2	2.4±2.7
Yu 2012	NA		NA		NA	
Yu 2007	NA		NA		NA	
Jia 2012	15.32±1.54	15.01±1.76	3.62±2.01	2.81±1.33	2.51±1.43	2.35±1.69
Liu 2011	14.1±1.4	13.6±1.2	NA		NA	
Kim 2012	NA		NA		NA	

NA= not available, JOA=Japanese Orthopedic Association scores, VAS= Visual Analog Scale scores. ACCF= anterior cervical corpectomy and fusion, ACDF= anterior cervical discectomy and fusion, * the study just reported the data at the sixth month of postoperative.

Table S3a Postoperative radiologic outcomes of included studies.

Study	sagittal alignment		C2-C7 Cobb		fusion Cobb	
	ACCF	ACDF	ACCF	ACDF	ACCF	ACDF
Oh 2009	NA		14.59±10.6	23.43±7.4	NA	
Park 2010	32L	30L	9.6±9.1	11.2±8.5	2.5±5.9	4.4±5.7
Wang 2001	NA		NA		NA	
Burkhardt 2013	NA		9.7±7.7	13.6±8.6	NA	
Yu 2012	36L	47L	NA		4.4±4.9	7.5±5.9
Yu 2007	NA		NA		NA	
Jia 2012	NA		20.26±10.26	22.08±9.78	NA	

Liu 2011	NA	NA		6.9±2.5	8.8±2.7
Kim 2012	NA	15.7±8.6	16.7±8.5	5.8/4.6	6.8/6.8

ACCF= anterior cervical corpectomy and fusion, ACDF= anterior cervical discectomy and fusion, NA= not available.

Table S3b Postoperative radiologic outcomes of included studies.

Study	total cervical ROM		fusion ROM		fused segment height	
	ACCF	ACDF	ACCF	ACDF	ACCF	ACDF
Oh 2009	30.23±15.1	28.13±13.4	5.12±4.8	3.88±3.4	49.9±5	56.0±7
Park 2010	NA		NA		NA	
Wang 2001	NA		NA		NA	
Burkhardt 2013	NA		NA		37.3±4.3	39.9±4.3
Yu 2012	NA		NA		NA	
Yu 2007	NA		NA		NA	
Jia 2012	27.98±12.94	29.19±10.33	3.39±3.01	4.01±2.93	53.11±1.90	55.55±1.84
Liu 2011	NA		NA		56.4±2.4	56.1±2.2
Kim 2012	33.5	26.8	NA		55.1±3.9	55.4±3.8

ACCF=anterior cervical corpectomy and fusion, ACDF=anterior cervical discectomy and fusion, NA=not available,ROM=range of motion.

Table S3c Postoperative radiologic outcomes of included studies.

Study	graft collapse		fusion rate		degeneration ^a	
	ACCF(An/Po/Cr/Ca)	ACDF(An/Po/Cr/Ca)	ACCF	ACDF	ACCF	ACDF
Oh 2009	NA		100%	100%	3	2
Park 2010	5.0±2.9/3.5±2.5/1.7±1.6/3.9±2.6	4.2±2.6/3.0±2.4/1.5±1.1/3.4±2.0	NA		NA	
Wang 2001	NA		NA		NA	
Burkhardt 2013	NA		94.7%	97.5%	2	3
Yu 2012	3.7±1.3/5.2±2.2/1.8±0.6/4.4±1.0	2.9±1.2/3.6±2.3/1.6±0.6/3.3±1.3	100%	100%	1	1
Yu 2007	NA		100%	100%	NA	
Jia 2012	NA		100%	100%	NA	
Liu 2011	NA		NA		NA	
Kim 2012	NA		100%	88.9%	NA	

a degeneration means degeneration of the adjacent-level to the fusion. An= anterior, Po= posterior, Cr= cranial, Ca= caudal, ACCF= anterior cervical corpectomy and fusion, ACCF= anterior cervical corpectomy and fusion, ACDF= anterior cervical discectomy and fusion, NA= not available.

Table S4 Complications including short term and long term.

Study	Complications	
	ACCF	ACDF
Oh 2009	3	0
Park 2010	NA	
Wang 2001	1	0
Burkhardt 2013	3	14
Yu 2012	3	1
Yu 2007	3	1
Jia 2012	3	2
Liu 2011	5	4
Kim 2012	3	10

ACCF= anterior cervical corpectomy and fusion, ACDF= anterior cervical discectomy and fusion, NA= not available.