

TABLE E-1 External Rotation Error for Five Alignment Techniques and Eleven Surgeons*

Surgeon	Digitized Epicondyles	Whiteside's Line	Projected Epicondyles	Posterior Referencing Guide	Surgeon's Own Method	Surgeon's Mean Alignment
1	$3.4^{\circ} \pm 7.4^{\circ}$	$-1.0^{\circ} \pm 8.4^{\circ}$	$2.0^{\circ} \pm 7.5^{\circ}$	$1.9^{\circ} \pm 6.5^{\circ}$	$1.8^{\circ} \pm 6.6^{\circ}$	$1.6^{\circ} \pm 7.2^{\circ}$
2	$3.6^{\circ} \pm 7.1^{\circ}$	$6.9^{\circ} \pm 2.4^{\circ}$	$6.7^{\circ} \pm 4.7^{\circ}$	$0.1^{\circ} \pm 6.7^{\circ}$	$3.4^{\circ} \pm 6.3^{\circ}$	$4.2^{\circ} \pm 6.0^{\circ}$
3	$-1.2^{\circ} \pm 7.5^{\circ}$	$0.0^{\circ} \pm 6.7^{\circ}$	$2.9^{\circ} \pm 6.4^{\circ}$	$5.7^{\circ} \pm 3.2^{\circ}$	$5.7^{\circ} \pm 3.2^{\circ}$	$2.6^{\circ} \pm 6.2^{\circ}$
4	$8.9^{\circ} \pm 2.5^{\circ}$	$-1.6^{\circ} \pm 8.2^{\circ}$	$8.0^{\circ} \pm 2.5^{\circ}$	$7.0^{\circ} \pm 3.8^{\circ}$	$8.5^{\circ} \pm 4.6^{\circ}$	$6.2^{\circ} \pm 6.1^{\circ}$
5	$7.3^{\circ} \pm 4.7^{\circ}$	$4.8^{\circ} \pm 6.9^{\circ}$	$5.8^{\circ} \pm 6.1^{\circ}$	$3.2^{\circ} \pm 6.9^{\circ}$	$4.4^{\circ} \pm 7.5^{\circ}$	$5.1^{\circ} \pm 6.4^{\circ}$
6	$4.5^{\circ} \pm 6.4^{\circ}$	$3.7^{\circ} \pm 7.6^{\circ}$	$5.7^{\circ} \pm 6.4^{\circ}$	$4.8^{\circ} \pm 6.2^{\circ}$	$4.7^{\circ} \pm 6.5^{\circ}$	$4.7^{\circ} \pm 6.4^{\circ}$
7	$3.2^{\circ} \pm 8.4^{\circ}$	$2.3^{\circ} \pm 8.0^{\circ}$	$3.5^{\circ} \pm 7.3^{\circ}$	$4.8^{\circ} \pm 7.2^{\circ}$	$5.3^{\circ} \pm 6.3^{\circ}$	$3.8^{\circ} \pm 7.2^{\circ}$
8	$5.2^{\circ} \pm 6.1^{\circ}$	$-2.3^{\circ} \pm 8.2^{\circ}$	$-5.3^{\circ} \pm 6.3^{\circ}$	$3.5^{\circ} \pm 6.6^{\circ}$	$3.5^{\circ} \pm 6.6^{\circ}$	$1.0^{\circ} \pm 7.6^{\circ}$
9	$7.3^{\circ} \pm 6.5^{\circ}$	$2.9^{\circ} \pm 8.5^{\circ}$	$2.3^{\circ} \pm 7.6^{\circ}$	$-0.5^{\circ} \pm 7.4^{\circ}$	$3.1^{\circ} \pm 7.2^{\circ}$	$3.0^{\circ} \pm 7.6^{\circ}$
10	$0.3^{\circ} \pm 4.1^{\circ}$	$4.1^{\circ} \pm 6.3^{\circ}$	$-2.9^{\circ} \pm 8.0^{\circ}$	$5.8^{\circ} \pm 5.5^{\circ}$	$-3.1^{\circ} \pm 7.4^{\circ}$	$0.8^{\circ} \pm 7.6^{\circ}$
11	$8.8^{\circ} \pm 3.7^{\circ}$	$7.1^{\circ} \pm 6.2^{\circ}$	$4.8^{\circ} \pm 6.8^{\circ}$	$5.1^{\circ} \pm 5.5^{\circ}$	$6.1^{\circ} \pm 5.5^{\circ}$	$6.4^{\circ} \pm 5.6^{\circ}$
Technique Mean	$4.7^{\circ} \pm 6.8^{\circ}$	$2.5^{\circ} \pm 7.6^{\circ}$	$3.1^{\circ} \pm 7.3^{\circ}$	$3.8^{\circ} \pm 6.3^{\circ}$	$4.0^{\circ} \pm 6.6^{\circ}$	

*The values are given as the mean and the standard deviation. Positive angles indicate external rotation from the reference transepicondylar axis.