

TABLE E-1 Evolution of the Coonrad-Morrey Total Elbow Arthroplasty Prosthesis

Generation	Year	Change
I	1971	Original constrained Coonrad device
II	1978	Semiconstrained bearing allowing 7 degrees varus-valgus laxity; surface finish is smooth and throughout entire humeral and ulnar stem; prosthesis bearing locking mechanism is axis pin with a horseshoe-shaped clip
III	1981	Humeral anterior flange added; surface of distal humeral and proximal ulnar stem changed to circumferential plasma spray band
IV	1984	Surface of distal humeral and proximal ulnar stem changed to circumferential beaded band
V	1991	Surface of proximal part of ulnar component changed to circumferential polymethylmethacrylate precoat band
VI	1993	Titanium pin replaced by cobalt-chromium pin
VII	1998	Prosthesis bearing locking mechanism changed to a male-female pin within a pin
VIII	2000	Surface of proximal part of ulnar component changed to circumferential plasma spray

TABLE E-2 Clinical Data

Implant	Implant Generation*	Age at Insertion (Yrs)	Gender	Diagnosis**	Time to Revision (Mos.)	Diagnosis at Revision in Addition to Osteolysis	Pain at Revision	Instability at Revision	Mechanical Symptoms
1	IV	36	F	IA	68	Fracture and loosening of ulnar component, worn bushings	Yes	Yes	Squeaking
2	IV	32	M	PTA	142	Disassembly of locking clip	Yes	Yes	Clunk on flexion/extension
3	V	61	F	PTA	42	Periprosthetic ulnar fracture	Yes	Yes	No
4	V	47	M	PTA	>27	Loosening of ulnar component	Yes	Yes	Crepitus
5	V	49	M	IA	48	Fracture of humeral stem, loosening of ulnar component	Yes	No	Squeaking/grinding with extension
6	V	70	F	IA	60	Periprosthetic ulnar fracture	Yes	No	Click
7	V	65	M	OA	41	Loosening of humeral and ulnar components	Yes	No	No
8	V	39	M	PTA	42	Loosening of ulnar component	Yes	Yes	Crunching with axis push-pull test
9	VI	67	M	OA	30	Loosening of ulnar component	Yes	No	No
10	VI	38	F	IA	77	Loosening of ulnar component, periprosthetic fracture nonunion medial humeral condyle	Yes	Yes	No
11	VI	74	F	IA	24	Loosening of ulnar component	Yes	No	No
12	VI	47	F	IA	62	Fracture and loosening of humeral component	Yes	No	Yes
13	VI	59	M	IA	84	Periprosthetic ulnar fracture	No	No	No
14	VI	83	M	OA	72	Post mortem retrieval	N/A	N/A	No
15	VI	47	F	IA	48	Polyethylene bushing wear	No	No	No
16	VII	41	M	IA	75	Fracture of the humeral component	Yes	Yes	Yes

*See Table E-1 for a description of the implant generations. ** IA, inflammatory arthritis; PTA, post traumatic arthritis; OA, osteoarthritis; N/A, not applicable