

Table 1. Global institutions with at least eight publications on orthopedic robotic surgery.

Institutions	Number of articles	Country	H-index	Sum of Times Cited	Average citations per item
Beijing Jishuitan Hospital	15	China	5	97	6.47
Cleveland Clinic	13	USA	7	145	11.15
University of London	13	England	7	140	10.77
Hospital for Special Surgery	10	USA	7	178	17.8
Northwell Health	8	USA	4	33	4.13
University of Göttingen	8	Germany	7	404	50.5

Table 2. Top nine authors in the orthopedic robotic surgery field ranked according to the number of publications.

Author name	Number of article	Country	Institution	h-index	Sum of times cited	Average citations per item
Mont, Michael A	14	USA	Cleveland Clinic	7	115	8.21
Tian, Wei	14	China	Beijing Jishuitan Hospital	5	84	6
Domb, Benjamin G	10	USA	Hinsdale Orthopaedics	6	153	15.3
Liu, Ya-Jun	10	China	Beijing Jishuitan Hospital	5	59	5.9
Haddad, Fares S	9	England	University of London	5	91	10.11
Khlopas, Anton	9	USA	Cleveland Clinic	6	83	9.22
Konan, Sujith	9	England	University of London	5	88	9.78
Sodhi, Nipun	9	USA	Cleveland Clinic	6	81	9
Kayani, Babar	9	England	University of London	5	91	10.11

Table 3. Journals with at least six publications in orthopedic robotic surgery.

Journals	Total publications	Total cites	Average citations per item
Journal of Arthroplasty	27	238	8.81
Spine	13	212	16.31
International Journal of Medical Robotics and Computer Assisted Surgery	13	78	6
Orthopaedic Surgery	13	15	1.15
World Neurosurgery	10	26	2.6
Knee Surgery, Sports Traumatology, Arthroscopy	9	62	6.89
Journal of Knee Surgery	9	30	3.33
Neurosurgical Focus	7	48	6.86
Bone & Joint Journal	7	18	2.57
Clinical Orthopaedics and Related Research	6	104	17.33
European Spine Journal	6	108	18
Expert Review of Medical Devices	6	20	3.33
Knee	6	54	9

Table 4. Top 10 journals on orthopedic robotic surgery ranked according to impact factor.

Journals	Impact factor (2018)	Total publications
Sports Medicine	7.583	1
Journal of Bone and Joint Surgery-American Volume	4.716	4
Neurosurgery	4.605	4
Bone & Joint Journal	4.301	7
Clinical Orthopaedics and Related Research	4.154	6
Scientific Reports	4.011	1
Plastic and Reconstructive Surgery	3.946	1
Annals of Translational Medicine	3.689	3
Bone & Joint Research	3.652	1
Haemophilia	3.59	1

Table 5. Type of robotic orthopedic surgery and surgical site.

Surgical site	Type of procedure	n (%)
Spine	Pedicle screw implantation	56 (89%)
	Vertebral augmentation	3 (5%)
	Laparoscopic anterior lumbar interbody fusion	1 (1%)
	Spine tumor resection surgery	1 (1%)
	Intraoperative localization	1 (1%)
	Anterior lumbar interbody fusion	1 (1%)
Knee	Total knee arthroplasty	24 (50%)
	Unicompartmental Knee Arthroplasty	23 (48%)
Hip	Anterior cruciate ligament reconstruction	1 (2%)
	Total hip arthroplasty	30 (100%)
Femur	Femoral neck cannulated screw placement	3 (60%)
	Intramedullary nail fixation	1 (20%)
	Core decompression of the femoral head	1 (20%)
	Internal fixation of pelvic acetabular injuries	1 (25%)
Pelvis	Percutaneous cannulated screw fixation,INFIX fixation, open reduction and internal plate fixation	1 (25%)
	Percutaneous screw placement combined with INFIX	1 (25%)
Hand	Neurolysis	1 (25%)
Elbow	Percutaneous internal fixation	1 (100%)
	Oberlin procedure	1 (100%)

Table 6. Top 20 most frequently used keywords in robotic orthopedic surgery publications.

Keywords	Number of occurrences
Robotics	43
Pedicle screw	33
Total knee arthroplasty	30
Unicompartmental knee arthroplasty	27
Navigation	25
Outcome	24
Spinal fusion	24
Robotic surgery	21
Minimally invasive	20
Total hip arthroplasty	17
Computer-assisted surgery	17
Accuracy	16
Arthroplasty	14
ROBODOC	9
MAKO	9
Learning curve	8
Complication	7
Freehand technique	7
TKA	7
Mazor	6