

Study	Study Design	LOE	Inclusion Criteria	Exclusion Criteria	# Pts (knees)	% Male	Age (Yr)	FU (Mo)	% Lost FU	MINORS
Bastard	Case Series	IV	Athletic patients <60 years old HTO for medial tibiofemoral OA	Knee contractures No regular physical activity	30 (30)	20%	55.6	15.6	0%	8
Bode	Case Series	IV	Circumscribed full-thickness cartilage defects of MFC with ICRS Grade III or IV	Full-thickness cartilage defects of medial compartment (i.e. kissing) Lateral FT/PF compartment cartilage loss Loss of lateral meniscus BMI >35 kg/m ² Active knee flexion <120°, extension deficit >10° High-grade ligamentous instability History of fracture of affected limb Active infection Inflammatory arthropathy	40 (40)	NA	37.6 ± 7.5	6.05 ± 2.5	0%	11
Bonnin	Case Series	IV	OA of the medial TF compartment, grade II or III	Previous contralateral operation/pathology	267 (267)	70.40%	59.1 ± 8.4	49.8 ± 10.9	47.90%	8
Collins	Case Series	IV	Age 15-65 yr No previous fractures or internal fixation of knee 24 months since index procedure	Abnormal anatomic lateral distal femoral articular angle (<81)	21 (22)	54.50%	39 ± 13.2	52	4.30%	12
Cotic	Case Series	III	PTO for varus malalignment combined with medial OA or MFC defects requiring cartilaginous repair	ICRS Grade III/IV lesions of medial compartment Absence/extensive loss of the lateral meniscus Complex high-grade ligamentous instabilities ICRS grade IV patellofemoral osteoarthritis Range of motion < 120° or flexion contracture >5°	28 (28)	67.90%	45 ± 11	24 ± 2	3.60%	15
Faschingbauer	Case Series	IV	Unicompartmental varus OA	BMI >35 kg/m ² ICRS III/IV lesion to LFC Loss of lateral meniscus Extension deficit >15° Severe ligament deficiencies	51 (51)	74.40%	42 ± 11.2	22 ± 9.3	15.70%	8
Hevesi	Retrospective Cohort	III	PTO with previous conventional or modern plate fixation Consented for research	Lack of knee radiographs both before and after HTO HTO for osteonecrosis <2 years of follow-up	90 (95)	62.10%	38.5 ± 10.3	50.4	29.10%	7
Hoell	Retrospective Comparative	III	Younger, active patients Varus gonarthrosis	History of injury to the ipsilateral knee capsule Concomitant or history of ligamentous injury to ipsilateral knee	108 (108)	OW: 62.7%; CW: 70.2%	OW: 46.4 ± 8 CW: 52.1 ± 8.4	22.5	21.60%	14

Ishimatsu	Retrospective Comparative	III	Skeletally mature patients Symptomatic medial OA Genu varus alignment	Follow-up <5 years Lack of any pre/postoperative radiographs or outcome scores	48 (57)	24.60%	64.2 ± 6.9	65.5 ± 5.6	10.30%	9
Isolaori	Retrospective Comparative	IV	Receipt of PTO	NA	50 (50)	30%	58	NA	NA	7
Kin	Prospective Cohort	II	≤65 years of age with isolated medial compartment OA Absence of ligament instability	Diagnosis of traumatic OA Inflammatory arthritis or osteonecrosis Symptomatic lateral or PF OA History of knee joint infection	91 (91)	6.60%	56.1 ± 6.2	24	2.20%	18
Korovessis	RCT	II	Agriculatural employment Unicompartmental medial degenerative varus OA No history previous knee surgery	Rheumatoid or posttraumatic arthritis Knee extension deviation >20°, ROM<60° 2-compartment femorotibial arthritis	63 (63)	11.11%	65	132	7.90%	14
Kubota	Retrospective Comparative	III	Primary medial OA treated with OWHTO	Symptomatic PF or lateral compartment OA Rheumatoid arthritis, a knee range of movement < 100°, high-grade ligamentous instabilities, and extensive loss or absence of the lateral meniscus	69 (71)	39.40%	57	NA	NA	8
Laprade	Case Series	IV	Skeletally mature patients Medial knee OA Genu varus alignment	No pain relief with the unloader brace Concomitant procedures other than arthroscopy/ meniscal lesions Osteotomy as the first stage of future ligamentous/MAT Lack of tobacco cessation Inflammatory arthritis or Osteonecrosis Corticosteroid use Lateral compartment OA Kellgren-Lawrence 3+ OA	47 (47)	68.10%	40.5	43.2	20.33%	10
Minzlaff	Case Series	IV	Regular sport participation 2 year follow-up Age <40 year at time of surgery	NA	30 (30)	NA	31 ± 6	82	0%	10
Nagel	Case Series	IV	Receipt of PTO	NA	34 (37)	100%	49	96	6.41%	6
Niemeyer	Case Series	IV	Varus malalignment Symptomatic medial OA	ICRS grade III or IV lesions Flexion <90°, extension deficit >10° History of lower limb fracture	43 (43)	86.05%	47.3 ± 10.3	24 ± 4	6.50%	13
Ogawa	Case Series	IV	Receipt of OWHTO	ACL rupture Lack of second-look arthroscopy	67 (74)	28.40%	63.5 ± 7.8	30 ± 6.5	0.00%	10

Otsuki	Retrospective Comparative	III	Receipt HTO from 2012 to 2016	NA	48 (48)	54.20%	66.8 ± 8.5	31	NA	14
Park	Case Series	IV	Medial OA (KL II-IV) Varus deformity >10°	Flexion contracture >15° or flexion angle <90°, Lateral compartment OA (KL III-IV) Lateral tibial subluxation >10 mm Expected postoperative joint line obliquity after HTO >5° Inflammatory or traumatic arthritis	94 (100)	7%	58.7 ± 7.4	52.8	NA	12
Peterson	Retrospective Comparative	IV	55 to 65 years Medial OA Varus malalignment Receipt of OWHTO or UKA	Ahlback Grade III-V OA ACL insufficiency	48 (48)	29.20%	58.9 ± 2.8	82.1	11.11%	9
Roberson	Cohort Study	III	Age <55 years receiving HTO Mechanical axis malalignment Higher desired activity level (Tegner >3) Inappropriate candidates for UKA	Age ≥55 years Lower desired activity level (Tegner <3) Lack of motivation Patients who are better candidates for UKA	41 (41)	68.30%	44	39	22.32%	15
Saier	Case Series	II	Medial compartment OA Varus ≥3° Age 18-65 years VAS ≥3	Patients receiving DFO Preoperative ligamentous instability Receipt of additional cartilage therapy History of chronic metabolic/neoplastic/arthritis disorders	75 (75)	61.30%	45.5	NA	14.7	10
Salzmann	Case Series	IV	Age <65 years Symptomatic medial varus OA with tibial deformity	BMI >35 kg/m ² Lateral meniscal loss/absence Outerbridge Grade III-IV Extensive PF OA Knee flexion <120° or extension deficit >20° High-grade ligamentous instability Active infection or inflammatory arthropathy	80 (80)	78.50%	41.2 ± 5.6	36	18.8	9
Saragaglia	Case Series	IV	Medial TF OA	NA	95 (97)	67.00%	50.4 ± 9.53	69 ± 16.2	12.6	11
Schallberger	Case Series	IV	Frontal plane valgisation	NA	71 (72)	68.50%	40 [median]	198	23.9	10
Schroter	Case Series	IV	Medial compartment OA Varus limb malalignment Intact lateral joint compartment with ICRS ≤1	History of osteoporosis and any bone disorder BMI >35 kg/m ² Active infection Range of motion ≤100°	35 (35)	68.90%	47 ± 9.2	77 ± 19	NA	10

Seil	RCT	I	Medial compartment OA Varus alignment angle $\geq 5^\circ$	Lateral compartment OA Flexion contracture $>10^\circ$ Symptomatic knee instability Rheumatoid arthritis Previous knee infection or angulated fracture History of or current smoker Weight ≥ 120 kg	70 (70)	53.00%	50	24	0	18
Takeuchi	Case Series	IV	Medial compartment OA or ON Varus malalignment Failed conservative management 3+ mo Isolated medial compartment OA Compliance with rehabilitation program $\geq 15^\circ$ extension, $\geq 120^\circ$ flexion	Current or history of knee infection Severe PF OA o Femorotibial angle $>185^\circ$ (5° anatomic varus) Flexion contracture $>15^\circ$	52 (57)	30%	67	15	0	12
Van Leishout	Cohort Study	III	>18 years Unilateral/bilateral varus-producing MCWHTO Minimum follow-up of 6 months	Double-level knee osteotomy Amputation of the operated leg Medial reefing procedure Deceased	176 (176)	19.90%	50 ± 11.5	54	35.80%	9
Waterman	Case Series	IV	Medial gonarthrosis	Non-active members of the military <2 years of follow-up Recognized miscoding when conducting chart review	181 (202)	93.10%	35.7	47.5	0	9
W-Dahl	Case Series	IV	Radiographic knee OA Symptomatic knee OA Varus knee alignment	Concomitant surgery Bilateral surgery within one year	79 (79)	64.60%	52.8 ± 6.2	120	19.5	11
Yim	Case Series	IV	Age <65 years Valgus OWHTO or UKA Medial OA KL Grade \geq II	Lateral of PF OA KL grade II+ Knee flexion $<120^\circ$ or flexion contracture $>20^\circ$ Ligament instability Inflammatory arthropathy	108 (108)	6.50%	58.3 ± 5.4	43.2	22.00%	10