

Guideline Report - DGOU Guideline "Distal Radius Fracture"

AWMF register number: 187-019 (replaced: 012-015), level S2e

Amendment March 2021

Last version 2015

Scope and purpose

1. Aim of the guideline

For this purpose, the general preamble for accident surgery guidelines of the former DGU Guidelines Commission was formulated as an integral part of the present guideline, which is published on the second page of each guideline. The present guideline on distal radius fracture was developed to improve the quality of care for patients with this injury.

2. Medical questions/problems

The underlying questions and problems as well as the key recommendations are discussed extensively in the guideline and supported by literature references.

3. Patient target group

The Distal Radius Fracture guideline refers to adult patients who have sustained a distal radius fracture as a result of trauma.

Stakeholder participation

4. Developer Group

The lead scientific society is the German Society for Trauma Surgery (Deutsche Gesellschaft für Unfallchirurgie e.V.). (DGU). The lead author Prof. Dr. Klaus Dresing has been a member of the guideline commission of the DGU, now the DGOU guideline commission, for many years and is a recognised expert on distal radius fractures.

The former guideline commission of the German Society for Trauma Surgery (DGU), the Austrian Society for Trauma Surgery (ÖGU) and the Swiss Society for Surgery (SGC) is composed representatively of the physicians named in the guideline. These are experienced trauma surgeons and orthopaedic surgeons from inpatient and outpatient facilities from the participating countries Germany, Austria and Switzerland.

5. Patients' views and preferences

The views and wishes of the patients have been realised to the extent that optimal and rapid care should be provided on the basis of the guideline. At the same time, corresponding preventive measures were formulated that appear necessary to prevent such accidents. Patients were not directly involved, as there are no patient organisations or self-help groups for the distal radius fracture injury.

6. Target user group

This guideline is addressed to doctors in the "field of orthopaedics and trauma surgery" in the "field of surgery", with or without additional training in "special trauma surgery", insofar as they provide care and support for patients with a distal radius fracture. In addition, recommendations for follow-up treatment are given, which also serve to inform physiotherapists.

7. Pilot study

A pilot study was not possible. The guideline is based on the available medical literature and the experience of the collaborating developers.

Methodological accuracy of guideline development

8. Evidence search

The systematic search of primary literature from the period 01.01.1989 to 28.02.2021 was carried out:

- Systematic meta-analyses (review studies) in the databases:
- Medline
- Cochrane Library
- Embase
- randomised clinical trials in the databases:
- Medline
- Embase
- Observational studies in the databases:
- Medline
- Embase

A systematic search was carried out using the specified keywords in international databases such as Medline and Embase as well as in the Cochrane Library. Furthermore, already known guidelines such as those of the *Scottish Intercollegiate Guideline Network (SIGN)* were analysed. The last updated search was carried out in February 2021.

German, English and French were considered as languages of publication. The following searches were carried out and the studies were selected according to methodological quality and then analysed with regard to the questions, see below.

The following keywords were searched for in the databases:

In English:

accessory injuries, acute support, aetiology, algodystrophy, alternative method, technique, analgesia, anamnesis, case history, anatomical reduction, antibiotic prophylaxis, arthritis (also pl.), arthrography, arthroscopically-assisted reduction, arthroscopy, arthrosis, articular fracture, articular step, Barton fracture, Barton`s fracture, BMD, bone cement, bone density, bone graft, bone mineral density, bone substitute, brace support, external brace support, brace treatment, brace immobilization, capability, physical function, carpal fracture, carpal injury, carpal instability, carpal tunnel decompression, carpal tunnel release, carpal tunnel syndrome, case history, cast immobilization, splint immobilization, Castaing score, Castaing`s score, Chauffeur fracture, Chauffeur`s fracture, circumstances of an accident, details of an accident, mechanism of injury, classification, clinical..., closed soft tissue injury, Colles` fracture, combined fixation, combined method or procedure, complex regional pain syndrome (grade 1), compulsory accident (casualty) insurance, computed tomography, concomitant disorders (diseases), concomitant injuries, concomitant injuries , concomitants, concomitant circumstances, conservative treatment, conservative procedure, nonoperative treatment, controll, exam, examination, follow-up examination, evaluation, Cooney score, Cooney`s score, criteria of instability, instability criteria, CRPS complex regional pain syndrome (grade 1), CT, CT scan, DASH score, delayed wound healing, delayed, retarded healing, demographic data, diagnostics (investigation, examination, evaluation), directly trauma, directly injury, displaced radius (radial) fracture, distal radius (radial) fracture, documentation, dorsal plating, dorsal plate fixation, dorsal tilt, DRUJ, distal radio-ulnar joint (radioulnar), dynamic examination, early complications, emergency procedure, examination, external fixation (fixateur externe), extra-articular, facility for complications, fixation, fixed-angle implants, fluoroscopy, follow-up evaluations, forearm cast, splint, fracture localization, fracture site, fracture gap, fracture type, type of fracture, Frykman type, functional disorder (failure), functional examination (function evaluation), Gartland and Warley score, gender, general accident prevention, general injury prevention, general carpal disorder, Goyrand-Smith`s fracture, haematoma block, high-energy accident, hydroxylapatite, implant breakage, implant removal, hardware removal, inactivity dystrophy, incidence, indirectly trauma

(accident), infection, injury (accident) modus, injury modus, injury modus, intra-articular fracture, intrafocal fixation, Kirschner wire fixation, k-wire fixation, late complications, long-term complications, ligament complex, localization, long-term effect, long-term outcome, long-term results, long-term results (complications, outcome), loss of grip strength, loss of reduction, loss of strength, malfunction, malfunction, malposition, medications, medication, drugs, mobility, movement exercises, movement limitation, limitation of movement, MRI, magnetic resonance, MRSA, multi-resistant germs, microbes, nerve compression, occurrence of complications, open fractures, osteoporotic radial (radius) fractures, osteosynthesis, palmar tilt, palpation, partially intra-articular fractures, pathological fracture, Pechlaner classification, Pechlaner-classification, pharmacologic osteoporosis prophylaxis, pharmacologic therapy (substitution, replacement), physiotherapy, plain radiograph, plain radiography, plaster cast, plaster of paris, polyarthrosis, POP, postoperative treatment, care, posttraumatic arthrosis, predictors, prevention, prophylaxis, primary support, primary support, primary treatment, prognosis, protective clothing (gowning), pseudarthrosis, radial shortening, re-displacement, reduction, regional anaesthesia, rehabilitation, restoration of radial length, risks, risk factors, rupture of the extensor pollicis longus tendon, screw fixation, secondary displacement, Smith fracture, soft tissue damage, soft tissue injuries, soft tissue lesions, stability control, stability evaluation, styloid fracture, fracture of processus styloideus, supplemental injuries, surgical procedure, symptoms, TFCC (complex), time of surgery, typically concomitant injuries, ultrasonography, volar plate fixation (osteosynthesis), wrist arthroscopy, x-ray evaluation, x-ray examination

These keywords were then combined with the following search criteria for specific questions:

1. *German:*

- Mortality
- Stay
- Complications
- Rehabilitation
- Dismissal
- Preoperative preparation
- Anticoagulants
- Warfarin/Marcoumar
- Cardiac risk
- Thrombosis prophylaxis
- DVT prophylaxis
- Compression stockings
- Falls
- Studies epidemiological
- Cross-sectional study
- Case study (Follow up / Observation)
- Cohort study

- Study longitudinal
 - Study retrospective
 - Study experimental
2. *English:*
- Mortality
 - Length of stay
 - Complications
 - Rehabilitation
 - Discharge
 - Preoperative care
 - Anticoagulants
 - Warfarin
 - Cardiac risk
 - Thromboprophylaxis
 - DVT prophylaxis
 - Compression stockings
 - Accidental falls
 - Studies epidemiological
 - Studies cross sectional
 - Studies case cohort
 - Studies cohort (follow up /observational)
 - Studies longitudinal
 - Studies retrospective
 - Studies experimental

The relevant studies were selected through systematic analysis and selection according to methodological quality (meta-analysis to good methodological individual studies). In order to maintain the current reference, time limits were set for the database search. The studies should not be older than 15 years.

9. Evidence assessment

The criteria for the selection of evidence correspond to those of the AWMF. The evidence classification of the recommendations is scientifically supported in the literature and assessed here with the appropriate level of evidence; likewise the assessment of the evidence and graduation of the recommendations.

As a result of the evidence search mentioned under point 8, all studies dealing with the treatment of distal radius fractures were included: systematic reviews and meta-analyses, as well as randomised controlled trials or comparative studies and - with regard to epidemiological data - also observational studies. If not enough such studies were found on the

respective topics, case series were also considered. Only publications that were available as full texts in German and English were considered.

The evidence rating of the recommendations is scientifically supported in the literature and rated here with the appropriate level of evidence.

As a working basis for the formulation of the recommendations, the studies identified through the literature search were classified in terms of their methodological quality. The following scheme was used for this purpose:

Evidence classes (EC) modified according to AHCPR 1992, SIGN 1996

- Ia Evidence based on meta-analyses of randomised controlled trials
- Ib Evidence based on at least one randomised controlled trial
- IIa Evidence based on at least one well-designed, controlled study without randomisation
- IIb Evidence based on at least one well-designed, non-randomised and non-controlled clinical trial, e.g. cohort study.
- III Evidence based on well-designed, non-experimental, descriptive studies, such as comparative studies, correlation studies and case-control study.
- IV Evidence based on expert committee reports or expert opinions and/or clinical experience of recognised authorities

The evidence classes are given after the literature reference in ().

The assessment of the studies was based on the study design, the quality of the execution and the evaluation. The studies were evaluated and the core statements derived from them.

Evidence table (examples)

Aim of the evidence table:

Assessment of the current evidence base on the topic as a basis of information for the formulation and graduation of recommendations

Reference	Year		LoE	Study type	Participants (number and characteristics)		Drop out rate	Fracture localisation	Intervention	Control	Target figure(s)	Main result	Comment
					total								
					Per arm								
					Number of patients in the intervention group (I)	Number of patients in the control group (II)			I	II			
{Rupp et al., 2019, #79662}	2019	[218]	IV	Review					Drill wire (BD)	angular stable volar plate osteosynthesis VLP		Short-term results/function > wkvPO Long-term results identical	

{Brennan et al., 2016, #40542}	2016	[25]	III	Case-control study	151	167			Drill wire (BD)	angular stable volar plate osteosynthesis VLP	PRWE, DASH X-ray	II better radiographic anatomy (radial inclination, volar inclination, radius length), early function better for Platten ø evidence for better long-term function than I	Recommendation: BD for AO/OTA A1, A3, B1, B2 BD VLP at AO/OTA C2, C3
{Peng et al., 2018, #92052}	2018	[188]	Ia	Meta-analysis, 14 RCT, 6 non RCT					unstable fracture Drill wire (BD) percutaneous	angular stable plate osteosynthesis (VLP)	PRWE, DASH, ROM, VAS, X-ray	VLP Advantages in unstable fractures, øVAS, øPRWE, ROM greater for VLP	BD higher complication rate, e.g. CRPS, superficial wound infections. Wound infections

{Chaudhry et al., 2015, #64726}	2015	[36]	Ia	Meta-analysis, 7 RCT	875			Intra-extra-articular fractures	Drill wire (BD) percutaneous	angular stable plate osteosynthesis (VLP)	DASH, ROM, X-ray	VLP low better function n. 3 M, n. 6/12 M ø differences radiologically (radial inclination, radial height, volar inclination), ø ROM	only slight tendency II better DASH n. 6/12M øSign.
{Zong et al., 2015, #68277}	2015	[287]	Ia	Meta-analysis, 7 RCT	438	437		Dorsally dislocated distal radius fractures	Drill wire (BD) percutaneous	angular stable plate osteosynthesis (VLP)	DASH, ROM, gripping force	no significant differences, VLP less pop complications, VLP 3M:> grip strength, >motion measure, VLP 12 M. ø difference ROM, DASH, VLP< infections.	ø Differentiation intra-extra-articular, 5 RCT 12M, 2 RCT 6M Follow-up VLP overall fast recovery

{Qu et al., 2019, #71623}	2019	[194]	Ia	Meta-analysis, 10 RCT	451	481		Unstable distal radius fractures	External fixator (EF)	angular stable volar plate osteosynthesis VLP	ROM, DASH, gripping force	VLP low better early function, DASH n. 3M sign. better, better grip strength and ROM n. 3 M., no difference thereafter, no difference re-operation.	Limited statement due to heterogeneity of studies
{Fu et al., 2018, #91540}	2018	[80]	Ia	Meta-analysis, 9 RCT	397	379		distal radius fractures	External fixator (EF)	angular stable volar plate osteosynthesis VLP	DASH, ROM, grip force n. 3, 6, 12 M, X-ray n. 12 M	VLP better early function, DASH >after 3 and 6 mon, >grip strength, >flexion, extension after 3 mon. VLP low less pop. Complications 12 mon. pop	only closed fractures, in the early phase (3M) DASH, grip strength, ROM are better, long-term ø sign. Differences
{Shukla et al., 2014, #3717}	2014	[238]	Ib	RCT	68	42		Distal, dislocated radius	External fixator (EF)	angular stable volar plate osteosynthesis VLP	ROM, gripping force	Pat. < 50 yrs: after 12 months EF significantly	

								fractures				better ROM, grip strength	
{Wang et al., 2018, #75023}	2018	[264]	Ia	Meta-analysis, 7 RCT	190	162		AO type C fracture	External fixator (EF)	angular stable volar plate osteosynthesis VLP	ROM, X-ray	VLP: Reposition is held ø significant difference in outcome, palmar tilt, ulnar variance, VLP radial inclination slightly better,	
{Xie et al., 2013, #69879}	2013	[279]	Ia	Meta-analysis, 10 RCT	363	377		AO/OTA A, B, C fractures	External fixator (EF)	Internal osteosynthesis (IF) (predominantly (60%) angular stable volar plate osteosynthesis	DASH, ROM, X-ray	IF: 12M: better functional outcome DASH, > supination, recovery of volar inclination and radial inclination, faster recovery 3+6M	with IF faster recovery
{Saving et al., 2019, #35946}	2019	[224]	IIb	RCT	56	62	70/70	AO/OTA 23 A2, A3, C1, C2, C3	External fixator (EF)	angular stable volar plate osteosynthesis VLP	DASH, PRWE, EQ-5D, ROM, gripping force,	n. 3 years ø difference DASH, PRWE, ROM, grip strength, X-ray, Osteoarthritis sign	Long-term results

{Gouk et al., 2017, #7303}	2017	[93]	Ia	Meta-analysis, 9 RCT	780			distal radius fractures	External fixator (EF)	Internal osteosynthesis (mainly stable-angle volar plate osteosynthesis)	DASH, ROM, gripping force	∅ Difference in long-term analysis	
{Zhang et al., 2016, #56310}	2016	[286]	III	Cohort study retrospective	21	31		AO/OTA C	External fixator (EF)	angular stable volar plate osteosynthesis VLP	X-ray, Gartland-Werley Score	WVL: Outcome better, more expensive, metal removal if necessary.	Follow-up 17-21M
{Esposito et al., 2013, #1211}	2013	[72]	Ia	Meta-analysis, 10 RCT	351	356		distal radius fractures	External fixator (EF)	ORIF plate osteosynthesis	DASH, ROM, gripping force, X-ray	ORIF better DASH, better recovery radius length, otherwise no X-ray differences, < infections.	No differentiation according to classification
{Niu et al., 2017, #94877}	2017	[176]	Ib	Meta-analysis, 6 RCT	370			distal radius fractures	intra-medullary nail (IM)	volar plate osteosynthesis (VP)	ROM, gripping force, X-ray	IM idem with VP grip strength, clinical outcome, no change pop complications.	No differentiation according to classification

{Wang et al., 2016, #34803}	2016	[266]	Ia	Meta-analysis, 6 RCT					in-tramedullary nail (IM)	angular stable volar plate osteosynthesis VLP	DASH, Gartland-Werley Score	Identical clinical, functional, radiological results; carpal tunnel syndrome < after I	
{Çalbiyık and Ipek, 2018, #54417}	2018	[29]	III					Extra-articular, simple intra-articular fractures	intramedullary nail (IM) Sonoma WRx	in-tramedullary nail (IM) Micronail	DASH, ROM, gripping force, X-ray Gartland-Wertley Score	I better restoration of volar tilt, shorter OP time II better supination, radioulnar variance	
{Bartl et al., 2014, #99681}	2014	[17]	Ib	Mulicenter study randomized controlled	68	48		AO/OTA C Age ≥65J	non-operative, closed + plaster immobilisation (NOC)	angular stable volar plate osteosynthesis VLP	DASH, SF-36, EQ-5D Score,	No significant superiority for one method, only marginal differences n. 12 M, DASH, EQ-5D ødifference	No significant differences with regard to quality of life, function, mobility
{Mellstrand Navarro et al., 2019, #34524}	2019	[162]	Ia						non-operative, closed + plaster immobilisation (NOC)	Plate osteosynthesis		øklin. Difference after 1 year	

{Mellstrand Navarro et al., 2019, #34524}	2019	[162]	Ia	Meta-analysis, 6 RCT, 1 cohort studies				distal radius fractures	non-operative, closed + plaster immobilisation (NOC)	percutaneous procedures	DASH, PRWE, EQ-5D, SF-36, ROM, grip strength, WHOQoL	II Quality of life equal to I I < complications than II, grip strength no difference	in older patients, no differentiation. Classification
{Zengin et al., 2019, #58138}	2019	[284]	III	Cohort study retrospective	24	25		AO/OTA 23 C	non-operative, closed + plaster immobilisation (NOC)	angular stable volar plate osteosynthesis VLP	DASH, ROM, gripping force, X-ray	In complex AO C fractures, >60 J: no static differences after 16 months in function; VLP better in grip strength, radial inclination, radial height, joint steps.	
{Mulders et al., 2019, #74275}	2019	[171]	Ib	RCT, Multicenter control trial, randomised	44	48		Extra-articular distal radius fractures	non-operative, closed + plaster immobilisation (NOC)	volar plate osteosynthesis (VLP)	DASH	In extra-articular radius fractures, VLP is functionally better after 12 months.	28% of primarily conservatively treated patients = secondary surgery

{Saving et al., 2019, #49396}	2019	[226]	Ib	RCT	72	68	13% n. 12 M	dorsally unstable distal radius fractures:	non-operative, closed + plaster immobilisation (NOC)	angular stable volar plate osteosynthesis VLP	DASH, PRWE, EQ-5D, ROM, gripping force	VLP DASH, PRWE after 3 + 12 mon. better	
{Arora et al., 2011, #27911}	2011	[13]	Ib	RCT	61	53		AO/OTA A2, A3, C1-3	non-operative, closed + plaster immobilisation (NOC)	angular stable volar plate osteosynthesis VLP	DASH, ROM, gripping force, X-ray	after 6 and 12 months no difference in DASH, PRWE, ROM, n. 3 M VLP slightly better, X-ray better at VLP	VLP >Complications
{Mellstrand Navarro et al., 2019, #34524}	2019	[162]	Ia	Meta-analysis, 8 RCT, 2 cohort studies				distal radius fractures	non-surgical	operational	DASH, PRWE, EQ-5D, SF-36, ROM, grip strength, WHOQoL	No difference in clinical outcome in moderate dislocated fractures	in older patients, no differentiation n. Classification
{Lee et al., 2019, #16864}	2019	[146]	Ia	Meta-analysis, 14 RCT	139	149		distal radius fractures	MIPO angular stable volar plate osteosynthesis MVLP	Conventional angular stable volar plate osteosynthesis VLP	MIO, DASH, ROM, gripping force, X-ray	MVLP greater patient satisfaction ∅ Differences in grip strength, for clinical scores, ROM,	No differentiation n. Classification

												radial inclination, volar inclination.	
{Thomas et al., 2019, #19557}	2019	[248]	III	Cohort study	10	10		Distal radius fractures, unstable, extra-articular	Nailless telescopic synthesis (IM)	MIPO	MIO, DASH, PRWE, ROM, gripping force, X-ray	for extra-articular unstable fractures MIPO incision shorter, after 6 w. IM better clin. Results	Very short observation time of 6 W

Abbreviations

- DASH Disabilities of the Arm, Shoulder, and Hand
- EF External fixator
- PRWE Patient-Related Wrist Evaluation
- X-ray X-ray criteria:radial inclination, volar inclination, ulnar variance, radial height
- ROM Range of motion
- EQ-5D Score EuroQol-5 Dimensions score
- IM intramedullary intramedullary nail
- MIO Minimally invasive osteosynthesis
- MIPO Minimally invasive plate osteosynthesis
- VLP volar plate osteosynthesis
- VLP angular stable volar plate osteosynthesis
- WHOQoL World Health Organization Quality of Life

10. Finding consensus

The developer groups shown under point 4 coordinate as follows:

The lead author develops a first guideline text according to the specifications of the former DGU Guidelines Commission. The result is sent by e-mail to the members of the DGU Guidelines Commission. There are comments and suggestions for changes that are incorporated.

In a full-day attendance conference of the DGU Guideline Commission (1st reading) chaired by Prof. Dr. med. K. M. Stürmer, Göttingen, together with the lead author, the guideline is worked through word for word and all comments and proposed changes are discussed. Changes and new formulations in the text are adopted by consensus. If this is exceptionally not possible, the item is postponed to the 2nd reading in order to find a formulation that can reach consensus. A to-do list is always drawn up for the lead author if individual points require more time-consuming editing. Once all the agreed changes have been incorporated and the to-do list has been worked through, the guideline is adopted in the consensus conference of the DGU Guideline Commission.

11. Formulation of the recommendations

The recommendations of the guidelines were summarised according to the consensus conference. Certain risks were presented and discussed and the corresponding recommendations were made. Corresponding effects on the expected health outcome are summarised. In part, objective as well as subjective target values are depicted. Recommendations of the joint commission of DGU, ÖGU, SGC have been specially marked, e.g. on the restoration of mobility or return to the home environment.

The DGU guidelines are formulated in a checklist-like manner and avoid complete sentences and verbs such as "should, should, can, must" etc. wherever possible. The degree of recommendation of the statements is made clear in the subheadings: e.g. diagnostics: necessary - optional - exceptionally - not necessary, or therapy: most frequent procedures - alternative procedures - rare procedures.

All DGU guidelines have the same uniform structure up to the first sub-items. If a point does not apply, "not applicable" appears. This helps the reader to find his way around more quickly.

The recommendations of the guideline are derived by the expert panel taking into account the above-mentioned evidence and the expected benefits. In addition to the evidence, risks and effects on the expected health outcome were also taken into account in the formulation of the recommendations.

The highlighted recommendations of the Guidelines Commission have been unanimously adopted by the Commission.

12. Link between recommendations and underlying evidence

The literature references were summarised according to evidence classes and then evaluated. Recommendations were made according to the methodological relevance. The evidence classes are indicated in **bold** type after the references. The recommendations were made according to clinical relevance and depending on the available evidence.

13. Adoption

The final approval of the Executive Board of the DGOU was given on 18.03.2021.

14. Update

This guideline is an update of the last version from 2015. The guideline is revised every five years. The need for an update is also reviewed by the Guideline Commission in the meantime.

Clarity and design

15. Recommendations

The evidence-based recommendations are specifically identified in the guideline and weighted according to AHCPR 1992 and SIGN 1996 (see point 9).

The sentences marked as "Recommendations of the Guideline Committee" reflect the unanimous opinion of the Guideline Committee and the lead authors; they do not necessarily refer to evidence-based literature results, but primarily consider clinical experience and knowledge. A weighting of these recommendations was deliberately omitted.

16. Presentation of the supply problems

For the individual points of the guideline, the treatment options are presented with a corresponding evaluation. The respective recommendations of the professional society are listed in summary.

17. Key recommendations of the guideline

The summary recommendations of the professional society of the German Society for Trauma Surgery, the Austrian Society for Trauma Surgery and the Swiss Society for Surgery are highlighted and marked accordingly in the guideline.

18. Versions of the Guideline

The final consented version of the guideline "Distal Radius Fracture" will be published via the internet on the AWMF pages, via the pages of the professional societies in Germany, Austria and Switzerland.

19. Possible organisational barriers

The guideline identifies corresponding problem areas. Risks are presented that could limit implementation. Possible options or alternative procedures are outlined.

20. Potential financial impact

Potential effects on the course of treatment are discussed. There is no health economic cost-benefit analysis.

21. Clinical measures

The guideline names appropriate clinical-scientific measurement instruments for the outcome as well as a prognosis estimate, which allow an assessment of the treatment outcome and thus an evaluation of the guideline benefit or the effects of the use of the guideline.

Editorial independence

22. Editorial independence

The guideline was prepared with the financial support of the professional societies for trauma surgery in Germany (DGU), Austria (ÖGU) and the Swiss Society for Surgery (SGC) in the form of travel and conference expenses. No fees were paid. No influence on the content was associated with the funding.

23. Declaration of interests and handling of conflicts of interest

The members of the guideline development group work purely out of medical and professional interest. They are each members of the scientific professional societies DGU, ÖGU or SGC. Conflicts of interest in the sense that a member represented or supported a

company did not exist. In particular, the group did not list any brand names of implants or medicines, but merely referred to comparable implants and principles of treatment without company names. The lead author and the members of the commission did not receive any financial benefits or reimbursement of expenses, only travel expenses were covered by the individual professional societies.

The declarations of interest were collected using the AWMF form. The external assessment of the declarations for thematic relevance and low, moderate or high conflicts of interest of the individual colleagues took place on 11.9.2019 in the meeting of the DGU Guideline Commission. It was initially determined that there were no indications of conflicts of interest on the part of the head of the commission, Prof. K.M. Stürmer, especially as he has been retired since April 2016. There were also no indications of conflicts of interest - neither low, moderate nor high - among the other Commission members and experts that would have necessitated a consequence such as abstention. A separate table showing the interests is attached.

Applicability in the German health system

24. Service areas

In the guideline Distal Radius Fracture, evidence-based recommendations on preventive, diagnostic, therapeutic and rehabilitative measures in the areas of care are made in the corresponding subsections. These are marked accordingly.

25. Inappropriate, superfluous or obsolete measures

The guideline evaluates various treatment procedures, which are occasionally also evaluated as inappropriate, superfluous or obsolete. These assessments are supported by literature references.

26. Clinical algorithm

The medical decision-making processes are elaborated in the guideline within the framework of the respective chapters in relation to surgical and non-surgical care, so that a clinical algorithm emerges that allows a corresponding recommendation for action to be derived.

27. Dissemination of the guideline

The guideline will be published on the internet as part of the AWMF website. Furthermore, the guideline will be communicated within the professional societies DGU, ÖGU, DGOU and DGOOC in the newsletter and on their homepages.

28. Implementation of the guideline

The implementation of the guideline is carried out, among other things, via the training circles of the DGU Trauma Network in the almost 800 hospitals involved in Germany, Switzerland, Austria and the Netherlands. A concept for the implementation of the guideline is formulated in the preamble.

29. Guidelines Report

This document contains a description of the methodological procedure (guideline report).

Methodological accuracy of guideline development when using Existing guidelines

29. Source guidelines

A systematic search for current guidelines was conducted within the framework of the systematic literature search and in the AWMF register. No guidelines were found that were suitable as source guidelines, so no recommendations were adopted from source guidelines.

Guidelines or recommendations of the own or other professional societies to which reference is made are cited in the text (e.g. on thrombosis prophylaxis or implant removal).

30. Quality of the source guide

The existing guidelines, which served as a reference, as well as the deposited literature references were reviewed by the lead author and the commission and accordingly incorporated into the present guideline.

Lead author: Prof Dr Klaus Dresing

Göttingen, May 2021

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Review planned:

The AMWF records and publishes the guidelines of the professional associations with the greatest possible care - yet the AWMF can not assume any responsibility for the accuracy of the content.
Espacially dosage information of the manufacturer must always be considered!

Die AWMF erfasst und publiziert die Leitlinien der Fachgesellschaften mit größtmöglicher Sorgfalt - dennoch kann die AWMF für die Richtigkeit des Inhalts keine Verantwortung übernehmen. **Insbesondere bei Dosierungsangaben sind stets die Angaben der Hersteller zu beachten!**

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