

Unified Classification System (UCS)

Clive P Duncan, Fares S Haddad





I Shoulder

Type

A

Apophyseal or extraarticular/
periarticular

A1
Avulsion of

A2
Avulsion of

B

Bed of the implant or
around the implant

B1
Prosthesis stable,
good bone

B2
Prosthesis loose, good
bone

B3
Prosthesis loose, poor
bone or bone defect

C

Clear of or distant to the implant

–

D

Dividing the bone between two im-
plants or interprosthetic or intercalary

–

E

Each of two bones supporting one
arthroplasty or polyperiprosthetic

–

F

Facing and articulating with a hemiar-
throplasty

–

I.14

Glenoid/scapula

I.1

Humerus, proximal

Coracoid process

Greater tuberosity

Acromion

Lesser tuberosity

Glenoid implant stable,
good bone

Humeral implant stable,
good bone

Glenoid implant loose,
good bone

Humeral implant loose,
good bone

Glenoid implant loose,
poor bone, defect

Humeral implant loose,
poor bone, defect

Body of the scapula

Distal to the implant

–

Between shoulder and elbow
arthroplasties,
close to the shoulder

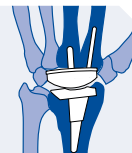
Scapula and humerus

Fracture of the glenoid articulating
with the humeral hemiarthroplasty

–



II Elbow



III Wrist

II.1	II.2
Humerus, distal	Ulna/radius, proximal
Lateral epicondyle	Olecranon tip
Medial epicondyle	Coronoid process, radial tuberosity
Humeral implant stable, good bone	Ulnar implant stable, good bone
Humeral implant loose, good bone	Ulnar implant loose, good bone
Humeral implant loose, poor bone, defect	Ulnar implant loose, poor bone, defect
Proximal to the implant	Distal to the implant
Between shoulder and elbow arthroplasties, close to the elbow	–
Humerus and ulna/radius	
Distal humeral fracture articulating with the radial head prosthesis	–

III.2	III.7
Radius/ulna, distal	Carpus/metacarpals
Radial styloid	–
Ulnar styloid, if ulna retained	–
Radial implant stable, good bone	Carpal/metacarpal implant stable, good bone
Radial implant loose, good bone	Carpal/metacarpal implant loose, good bone
Radial implant loose, poor bone, defect	Carpal/metacarpal implant loose, poor bone, defect
Proximal to the implant	Distal metacarpals
Between wrist and radial head prosthesis	–
Radius/ulna and carpus/metacarpals	
–	–



IV.6	IV.3
Acetabulum/pelvis	Femur, proximal
Anterior inferior and superior iliac spine	Greater trochanter
Ischial tuberosity	Lesser trochanter
Acetabular rim or floor, good bone	Stem stable, good bone; Surface replacement: femoral neck
Loose cup, good bone	Loose stem, good bone; Surface replacement: loose implant, no proximal femoral bone loss
Loose cup, poor bone, defect; Pelvic discontinuity	Loose stem, poor bone, defect; Surface replacement: loose implant, bone loss
Pelvic/acetabular fractures distant to the implant	Distal to the implant and cement mantle
Pelvic fracture between bilateral total hip arthroplasties	Between hip and knee arthroplasties, close to the hip
Pelvis and femur	
Fracture of the acetabulum articulating with the femoral hemiarthroplasty	–



V.3	V.4	V.34
Femur, distal	Tibia, proximal	Patella
Lateral epicondyle	Medial or lateral plateau, nondisplaced	Disrupted extensor, proximal pole
Medial epicondyle	Tibial tubercle	Disrupted extensor, distal pole
Proximal to stable stem, good bone	Stem and component stable, good bone	Intact extensor, implant stable, good bone
Proximal to loose stem, good bone	Loose component/stem, good bone	Loose implant, good bone
Proximal to loose stem, poor bone, defect	Loose component/stem, poor bone, defect	Loose implant, poor bone, defect
Proximal to the implant and cement mantle	Distal to the implant and cement mantle	–
Between hip and knee arthroplasties, close to the knee	Between ankle and knee arthroplasties, close to the knee	Between ankle and knee arthroplasties, close to the knee
Femur and tibia/patella		
Fracture of femoral condyle articulating with tibial hemiarthroplasty	–	Fracture of the patella that has no surface replacement and articulates with the femoral component of the total knee arthroplasty



VI Ankle

VI.4

Tibia, distal

Tip of the medial malleolus

Tip of the lateral malleolus

Transverse or medial malleolus shear, good bone

Tibial implant loose, good bone

Tibial implant loose, poor bone, defect

Proximal to the implant

Between knee and ankle arthroplasties, close to the ankle

Tibia and talus

–

VI.8

Talus

–

–

Body of the talus, good bone

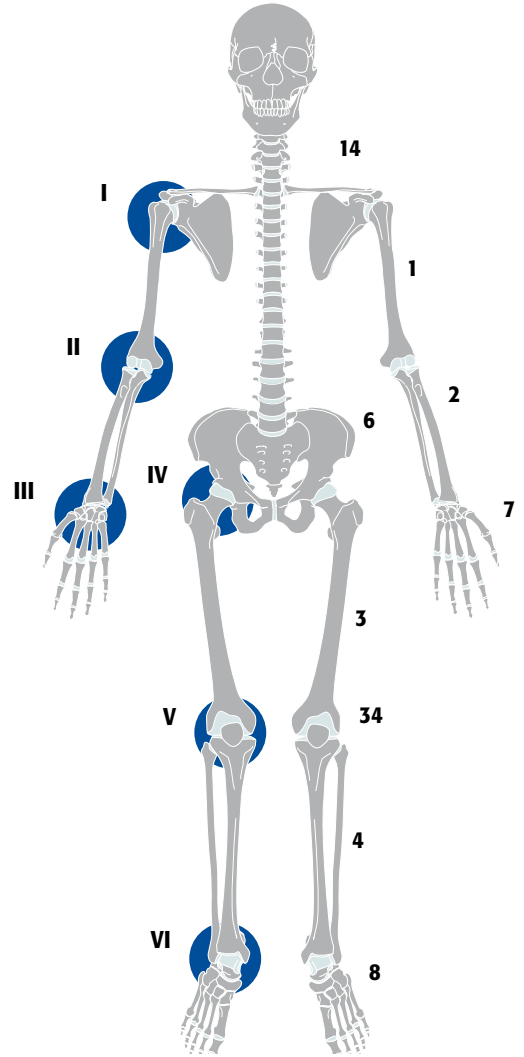
Body of the talus, loose, good bone

Body of the talus, bone defect

Neck or head of the talus

Between ankle and talonavicular arthroplasties

–



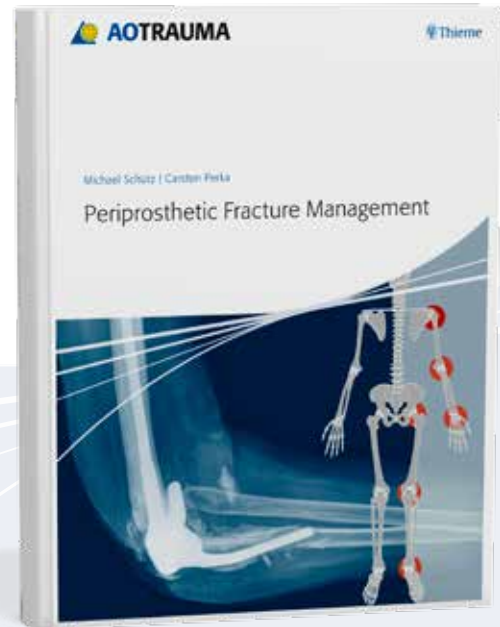
Editors

Clive P Duncan MD, MSc, FRCSC
Professor and Emeritus Chair
Department of Orthopaedic Surgery
University of British Columbia
Senior Consultant and Emeritus Chief
Department of Orthopaedics
Vancouver General and University Hospitals
Vancouver, British Columbia, Canada

Fares S Haddad BSc, MD(Res), MCh (Orth), FRCS (Orth), Dip.Sports Med FFSEM
Consultant Orthopaedic Surgeon
University College London Hospitals NHS Trust
Professor at the Institute of Sport, Exercise and Health

Michael Schütz | Carsten Perka

Periprosthetic Fracture Management



Periprosthetic Fracture Management brings together the latest knowledge on periprosthetic fractures and introduces the Unified Classification System for periprosthetic fractures

AOR-E1-029.1

Copyright © 2015 by AO Foundation, Switzerland
Check legal restrictions and copyright information on
www.aofoundation.org/legal

Hardcopies
order online on
www.thieme.com

E-books
order online on
<http://ebookstore.thieme.com>