|  |  | Shoulder   |  | Elbow   |   | Wrist                                      |  | <b>IV</b><br>Hip  |  | V<br>Knee  | )  |   | VI<br>Ankle  |  |
|--|--|--|--|---|---|--|--|---|--|--|--|---|--|--|
|  |  | 1.14   | L1   | 11.1  | II.2                                      | III.2                                      | III.7  | IV.6  | IV.3   | V.3  | V.4  | V.34  | VI.4   | VI.8   |
| Туре   |  | Glenoid/scapula  | Humerus, proximal  | Humerus, distal   | Ulna/radius, proximal                     | Radius/ulna, distal                        | Carpus/metacarpals                                 | Acetabulum/pelvis   | Femur, proximal  | Femur, distal  | Tibia, proximal  | Patella   | Tibia, distal  | Talus  |
| A<br>Apophyseal or extraarticular/<br>periarticular  | A1<br>Avulsion of  | Coracoid process   | Greater tuberosity   | Lateral epicondyle  | Olecranon tip                             | Radial styloid                             | -  | Anterior inferior and superior iliac spine                                      | Greater trochanter   | Lateral epicondyle   | Medial or lateral plateau, nondisplaced                        | Disrupted extensor,<br>proximal pole  | Tip of the medial malleolus                                  | -  |
|  | <b>A2</b><br>Avulsion of                                   | Acromion   | Lesser tuberosity  | Medial epicondyle   | Coronoid process, radial tuberosity       | Ulnar styloid, if ulna retained            | -  | Ischial tuberosity  | Lesser trochanter  | Medial epicondyle  | Tibial tubercle  | Disrupted extensor,<br>distal pole  | Tip of the lateral malleolus                                 | _  |
| <b>B</b><br>Bed of the implant or  | <b>B1</b><br>Prosthesis stable,<br>good bone               | Glenoid implant stable, good bone                                      | Humeral implant stable, good bone                                | Humeral implant stable, good bone                                       | Ulnar implant stable, good bone           | Radial implant stable, good bone           | Carpal/metacarpal implant stable, good bone        | Acetabular rim or floor, good bone  | Stem stable, good bone;<br>Surface replacement: femoral neck                                   | Proximal to stable stem, good bone   | Stem and component stable, good bone                           | Intact extensor, implant stable, good bone  | Transverse or medial malleolus shear,<br>good bone           | Body of the talus, good bone                   |
| around the implant   | <b>B2</b><br>Prosthesis loose, good<br>bone                | Glenoid implant loose, good bone                                       | Humeral implant loose, good bone                                 | Humeral implant loose, good bone  | Ulnar implant loose, good bone            | Radial implant loose, good bone            | Carpal/metacarpal implant loose, good bone         | Loose cup, good bone  | Loose stem, good bone;<br>Surface replacement: loose implant,<br>no proximal femoral bone loss | Proximal to loose stem, good bone  | Loose component/<br>stem, good bone                            | Loose implant, good<br>bone   | Tibial implant loose, good bone                              | Body of the talus, loose, good bone            |
|  | <b>B3</b><br>Prosthesis loose, poor<br>bone or bone defect | Glenoid implant loose, poor bone,<br>defect                            | Humeral implant loose, poor bone,<br>defect                      | Humeral implant loose, poor bone,<br>defect                             | Ulnar implant loose, poor bone,<br>defect | Radial implant loose, poor bone,<br>defect | Carpal/metacarpal implant loose, poor bone, defect | Loose cup, poor bone, defect;<br>Pelvic discontinuity                           | Loose stem, poor bone, defect;<br>Surface replacement: loose implant,<br>bone loss             | Proximal to loose stem, poor bone, defect  | Loose component/<br>stem, poor bone,<br>defect                 | Loose implant,<br>poor bone, defect   | Tibial implant loose, poor bone,<br>defect                   | Body of the talus, bone defect                 |
| <b>C</b><br><i>Clear</i> of or distant to the implant  | -  | Body of the scapula  | Distal to the implant  | Proximal to the implant   | Distal to the implant                     | Proximal to the implant                    | Distal metacarpals                                 | Pelvic/acetabular fractures distant to the implant                              | Distal to the implant and cement mantle  | Proximal to the implant and cement mantle  | Distal to the implant and cement mantle                        | -   | Proximal to the implant                                      | Neck or head of the talus                      |
| <b>D</b><br><i>Dividing</i> the bone between two implants<br>or interprosthetic or intercalary | -  | -  | Between shoulder and elbow arthroplasties, close to the shoulder | Between shoulder and elbow<br>arthroplasties,<br>close to the elbow     | -   | Between wrist and radial head prosthesis   | _  | Pelvic fracture between bilateral total hip arthroplasties                      | Between hip and knee arthroplasties, close to the hip  | Between hip and knee<br>arthroplasties, close to<br>the knee                     | Between ankle and<br>knee arthroplasties,<br>close to the knee | Between ankle and knee arthroplasties, close to the knee  | Between knee and ankle<br>arthroplasties, close to the ankle | Between ankle and talonavicular arthroplasties |
| <b>E</b><br><i>Each</i> of two bones supporting one arthroplasty or polyperiprosthetic         | -  | Scapula and humerus  |  | Humerus and ulna/radius   |   | Radius/ulna and carpus/metacarpals         |  | Pelvis and femur  |  | Femur and tibia/patella  |  |   | Tibia and talus  |  |
| <b>F</b><br><i>Facing</i> and articulating with a hemiarthroplasty                             |  | Fracture of the glenoid articulating with the humeral hemiarthroplasty | -  | Distal humeral fracture articulating<br>with the radial head prosthesis | _   |  | -  | Fracture of the acetabulum<br>articulating with the femoral<br>hemiarthroplasty | -  | Fracture of femoral<br>condyle articulating<br>with tibial hemiarthro-<br>plasty | -  | Fracture of the patella<br>that has no surface<br>replacement and<br>articulates with the<br>femoral component<br>of the total knee<br>arthroplasty | _  | _  |

| IV  |
|-----|
| Hip |

|    | V |
|----|---|
|    | K |
| 17 |   |





Michael Schütz | Carsten Perka

## Periprosthetic Fracture Management



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