



# AO Trauma Course—Fragility Fractures and Orthogeriatrics

Cases for small group discussions (listed on pages 2 and 3)

## Day 1

10:45–12:00	<p><b>Small group discussions</b>            Group 1            Group 2            Group 3            Group 4</p> <p>3 cases with comorbidities, polypharmacy–timing of surgery, anticoagulation (recommend cases number <b>x, y, z</b>)            Breakout rooms</p>	<p>Surgeon and geriatrician            Surgeon and geriatrician            Surgeon and geriatrician</p> <p>+ anesthesiologist</p>
16:55–18:00	<p><b>Small group discussions: Upper extremity</b>            Group 1            Group 2            Group 3            Group 4</p> <p>Upper extremity cases (2 or 3 cases)            Breakout rooms</p>	<p>Surgeon and geriatrician            Surgeon and geriatrician            Surgeon and geriatrician</p>

## Day 2

12:45–13:45	<p><b>Small group discussions: Lower extremity</b>            Group 1            Group 2            Group 3</p> <p>Atypical, plus 2 or 3 cases - Include pelvis and ankle as optional</p>	<p>Surgeon and geriatrician            Surgeon and geriatrician            Surgeon and geriatrician</p>
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## Case list

No.	Title	Learning objectives
1	Contralateral femoral lesion	<ul style="list-style-type: none"> <li>• Discuss the indications for a prophylactic nail or plate on the contralateral side following an atypical fracture</li> <li>• Discuss the pain assessment and medication in the emergency room as well as postoperatively</li> <li>• Discuss anticoagulation treatment with aspirin in terms of a delay of surgery</li> <li>• Discuss treatment of osteoporosis (duration of treatment with alendronate, missing basic treatment with vitamin D and calcium)</li> <li>• Discuss risk of GI bleeding in this setting (indication of PPI in combination with aspirin, in terms of stress ulcer prophylaxis, in terms of side effects of long-term treatment with PPI)</li> <li>• Discuss and select further treatment options for osteoporosis</li> </ul>
2	Periprosthetic total knee prosthesis	<ul style="list-style-type: none"> <li>• Discuss the risk factors of falls and of osteoporosis, including HIV and medications</li> <li>• Classify the periprosthetic fracture</li> <li>• Discuss the revision options and procedure steps</li> </ul>
3	Periprosthetic total knee replacement	<ul style="list-style-type: none"> <li>• Review the medication list</li> <li>• Discuss anticoagulation and management (indications, inappropriate prescribing)</li> <li>• Discuss the diagnosis of osteoporosis without any treatment/undertreatment</li> <li>• Discuss the use of MIPO</li> </ul>
4	Unstable pertrochanteric fracture and augmentation	<ul style="list-style-type: none"> <li>• Discuss comorbidities, risk factors of delirium, and prophylaxis</li> <li>• Discuss the role and usefulness of the various preoperative tests in fragility fracture patients</li> <li>• Discuss cement augmentation</li> </ul>
5	Revision surgery after pertrochanteric fracture	<ul style="list-style-type: none"> <li>• Discuss preoperative assessment and optimization, focus on the usefulness of an echo, and in case of a delay of surgery, make a plan and time schedule for the process</li> <li>• Discuss the usefulness of a urinary catheter and the risk in terms of urinary tract infections and delirium</li> <li>• Discuss the management of rivaroxaban and other DOACs</li> <li>• Discuss the need for a DEXA as well as the result in this case</li> <li>• Discuss the anticoagulation management and doses, time of restart?</li> <li>• Discuss the management of cutout</li> </ul>
6	Vertebral fracture	<ul style="list-style-type: none"> <li>• Discuss the results of the DEXA</li> <li>• Discuss the indication of vertebroplasty</li> <li>• Discuss the risk of immobilization in terms of sarcopenia</li> <li>• Discuss the assessment and treatment of pain in older adults</li> <li>• Discuss treatment for osteoporosis</li> </ul>
7	Total hip periprosthetic fracture	<ul style="list-style-type: none"> <li>• Recognize the importance of a multidisciplinary approach in complex situations</li> <li>• Discuss the treatment plan and required tests/examinations of a complex patient, in the emergency room and during care</li> <li>• Discuss early mobilization and physiotherapy so that the patient can resume activities of daily living as soon as possible and to prevent further injuries by making the home environment safer</li> </ul>

<b>8</b>	Humeral shaft fracture	<ul style="list-style-type: none"> <li>• Discuss nailing vs plate fixation</li> <li>• Discuss osteoporosis, nutrition, and prevention of falls, especially after a first fracture</li> </ul>
<b>9</b>	Distal radial fracture	<ul style="list-style-type: none"> <li>• Discuss wrist function as an outcome and operative vs nonoperative care</li> <li>• Recognize and manage a patient with dementia and describe how to get patient consent in this situation</li> <li>• List and recognize the risk factors for delirium</li> </ul>
<b>10</b>	Proximal humeral fracture	<ul style="list-style-type: none"> <li>• Discuss operative and nonoperative treatment options</li> <li>• Discuss the impact of further information on the management of complex fragility fracture patients</li> <li>• Discuss the pain treatment</li> <li>• Discuss the risk factors for delirium, the use of restraints, and family support</li> <li>• Discuss the results of lab tests and the indication of antibiotic treatment</li> <li>• Recognize the value and process of shared decision making</li> <li>• Discuss the treatment of delirium</li> </ul>
<b>11</b>	Periprosthetic acetabular fracture	<ul style="list-style-type: none"> <li>• Consider revision arthroplasty for (periprosthetic) acetabular fractures</li> <li>• Discuss full weight bearing in geriatric fracture treatment</li> <li>• Discuss management of UTI, infection prevention, and antibiotic prophylaxis</li> </ul>
<b>12</b>	Difficulties in fixation and healing	<ul style="list-style-type: none"> <li>• Discuss the medication list regarding comorbidities, and check the indications and discuss undertreatment</li> <li>• Discuss the recommendation for osteoporosis treatment</li> <li>• Discuss the importance of secondary fracture prevention and reasons for treatment failure of osteoporosis medication</li> <li>• Discuss the indication of teriparatide and the treatment of osteoporosis after two years</li> </ul>
<b>13</b>	Elbow fracture	<ul style="list-style-type: none"> <li>• Discuss the definition of fragility fracture and the osteoporosis work-up in that case</li> </ul>
<b>14</b>	Ankle wfracture	<ul style="list-style-type: none"> <li>• Discuss the risk of wound healing and the problem of fully weight bearing</li> <li>• Discuss the osteoporosis work-up</li> </ul>
<b>15</b>	Pelvic fracture	<ul style="list-style-type: none"> <li>• Discuss the prognosis of this patient in terms of independency in the future</li> <li>• Discuss the osteoporosis work-up</li> <li>• Discuss fully weight bearing</li> </ul>
<b>16</b>	Simple two-part proximal humeral fracture	<ul style="list-style-type: none"> <li>• Discuss pain management</li> <li>• Discuss bone quality and the osteoporosis work-up</li> <li>• Discuss the risk of anaesthesia in terms of mortality and delirium</li> </ul>