

## Welcome to Our Survey

This survey contains 54 randomized, short clinical vignettes describing a patient who is presenting with signs and symptoms of cuff tear arthropathy. Assumptions are listed at the top of each page.

Each vignette has the same 3 questions:

- 1) Grade the radiographs according to Seebauer
- 2) Grade the radiographs according to Hamada
- 3) Select a treatment

Primary Objectives:

- Determine the demographics, signs, symptoms, and radiographic features that impact clinical decision making
- Determine 1) the reliability of the Seebauer and Hamada grading systems 2) whether or not the grading systems correlate with clinical decision making

Thank you for your time!

# Case 1

**An active 30 y.o. who works as a manual laborer presents with mild signs and symptoms (only during strenuous activities)**

**\* 1. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 2. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 3. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 2

**A 30 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with mild signs and symptoms (only during strenuous activities)**

**\* 4. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 5. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 6. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 3

**An inactive 30 y.o. who is very low demand with their shoulder presents with mild signs and symptoms (only during strenuous activities)**

**\* 7. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 8. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 9. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 4

**An active 30 y.o. who works as a manual laborer presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 10. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 11. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 12. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 5

**A 30 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 13. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 14. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 15. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 6

**An inactive 30 y.o. who is very low demand with their shoulder presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 16. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 17. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 18. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 7

An active 30 y.o. who works as a manual laborer presents with severe signs and symptoms  
(constant)

**\* 19. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 20. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 21. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty



## Case 8

**A 30 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with severe signs and symptoms (constant)**

**\* 22. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 23. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 24. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 9

**An inactive 30 y.o. who is very low demand with their shoulder presents with severe signs and symptoms (constant)**

**\* 25. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 26. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 27. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 10

**An active 45 y.o. who works as a manual laborer presents with mild signs and symptoms (only during strenuous activities)**

**\* 28. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 29. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 30. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 11

**A 45 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with mild signs and symptoms (only during strenuous activities)**

**\* 31. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 32. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 33. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 12

**An inactive 45 y.o. who is very low demand with their shoulder presents with mild signs and symptoms (only during strenuous activities)**

**\* 34. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 35. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 36. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 13

An active 45 y.o. who works as a manual laborer presents with moderate signs and symptoms  
(predominant symptoms that limit most things)

**\* 37. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 38. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 39. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 14

**A 45 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 40. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 41. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 42. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 15

**An inactive 45 y.o. who is very low demand with their shoulder presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 43. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 44. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 45. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty



## Case 16

An active 45 y.o. who works as a manual laborer presents with severe signs and symptoms  
(constant)

**\* 46. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 47. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 48. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 17

**A 45 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with severe signs and symptoms (constant)**

**\* 49. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 50. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 51. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 18

An inactive 45 y.o. who is very low demand with their shoulder presents with severe signs and symptoms (constant)

**\* 52. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 53. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 54. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 19

**An active 65 y.o. who works as a manual laborer presents with mild signs and symptoms (only during strenuous activities)**

**\* 55. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 56. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 57. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 20

**A 65 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with mild signs and symptoms (only during strenuous activities)**

**\* 58. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 59. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 60. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 21

**An inactive 65 y.o. who is very low demand with their shoulder presents with mild signs and symptoms (only during strenuous activities)**

**\* 61. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 62. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 63. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 22

**An active 65 y.o. who works as a manual laborer presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 64. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 65. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 66. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 23

**A 65 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 67. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 68. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 69. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty



## Case 24

**An inactive 65 y.o. who is very low demand with their shoulder presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 70. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 71. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 72. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 25

An active 65 y.o. who works as a manual laborer presents with severe signs and symptoms  
(constant)

**\* 73. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 74. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 75. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 26

**A 65 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with severe signs and symptoms (constant)**

**\* 76. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 77. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 78. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 27

**An inactive 65 y.o. who is very low demand with their shoulder presents with severe signs and symptoms (constant)**

**\* 79. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 80. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 81. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 28

An active 30 y.o. who works as a manual laborer presents with mild signs and symptoms (only during strenuous activities)

**\* 82. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 83. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 84. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 29

**A 30 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with mild signs and symptoms (only during strenuous activities)**

**\* 85. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 86. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 87. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 30

**An inactive 30 y.o. who is very low demand with their shoulder presents with mild signs and symptoms (only during strenuous activities)**

**\* 88. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 89. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 90. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 31

**An active 30 y.o. who works as a manual laborer presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 91. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 92. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 93. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty



## Case 32

**A 30 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 94. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 95. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 96. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 33

**An inactive 30 y.o. who is very low demand with their shoulder presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 97. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 98. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 99. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 34

An active 30 y.o. who works as a manual laborer presents with severe signs and symptoms  
(constant)

**\* 100. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 101. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 102. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 35

**A 30 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with severe signs and symptoms (constant)**

**\* 103. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 104. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 105. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 36

**An inactive 30 y.o. who is very low demand with their shoulder presents with severe signs and symptoms (constant)**

**\* 106. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 107. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 108. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 37

**An active 45 y.o. who works as a manual laborer presents with mild signs and symptoms (only during strenuous activities)**

**\* 109. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 110. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 111. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 38

**A 45 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with mild signs and symptoms (only during strenuous activities)**

**\* 112. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 113. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 114. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 39

**An inactive 45 y.o. who is very low demand with their shoulder presents with mild signs and symptoms (only during strenuous activities)**

**\* 115. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 116. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 117. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty



## Case 40

An active 45 y.o. who works as a manual laborer presents with moderate signs and symptoms  
(predominant symptoms that limit most things)

**\* 118. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 119. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 120. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 41

**A 45 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 121. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 122. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 123. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 42

**An inactive 45 y.o. who is very low demand with their shoulder presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 124. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 125. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 126. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 43

An active 45 y.o. who works as a manual laborer presents with severe signs and symptoms  
(constant)

**\* 127. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 128. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 129. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 44

**A 45 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with severe signs and symptoms (constant)**

**\* 130. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 131. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 132. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 45

**An inactive 45 y.o. who is very low demand with their shoulder presents with severe signs and symptoms (constant)**

**\* 133. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 134. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 135. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 46

**An active 65 y.o. who works as a manual laborer presents with mild signs and symptoms (only during strenuous activities)**

**\* 136. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 137. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 138. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 47

**A 65 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with mild signs and symptoms (only during strenuous activities)**

**\* 139. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 140. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 141. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty



## Case 48

**An inactive 65 y.o. who is very low demand with their shoulder presents with mild signs and symptoms (only during strenuous activities)**

**\* 142. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 143. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 144. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 49

**An active 65 y.o. who works as a manual laborer presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 145. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 146. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 147. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 50

**A 65 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 148. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 149. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 150. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 51

**An inactive 65 y.o. who is very low demand with their shoulder presents with moderate signs and symptoms (predominant symptoms that limit most things)**

**\* 151. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 152. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 153. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 52

An active 65 y.o. who works as a manual laborer presents with severe signs and symptoms  
(constant)

**\* 154. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 155. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 156. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 53

**A 65 y.o. who works a desk job and enjoys playing rec basketball and lifting weights presents with severe signs and symptoms (constant)**

**\* 157. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 158. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 159. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty

## Case 54

**An inactive 65 y.o. who is very low demand with their shoulder presents with severe signs and symptoms (constant)**

**\* 160. Please grade the radiographs according to Seebauer**

- Type 1A-Centered, Stable:** minimal superior migration, C-A arch acetabularization and femoralization of humeral head
- Type 1B-Centered, Medialized:** minimal superior migration, medial glenoid erosion, C-A arch acetabularization and femoralization of humeral head
- Type 2A-Decentered, Limited Stable:** superior migration, superior-medial erosion, extensive C-A arch acetabularization and femoralization of humeral head
- Type 2B-Decentered, Unstable:** anterior-superior escape, absent stabilization, C-A arch and anterior structures deficient

**\* 161. Please grade the radiographs according to Hamada**

- Grade 1:** acromio-humeral interval (AHI) > 6mm
- Grade 2:** acromio-humeral interval (AHI) 5mm or less
- Grade 3:** grade 2 with acetabularization of acromion
- Grade 4:** grade 3 with narrowing of gleno-humeral joint
- Grade 5:** grade 4 with bony destruction and humeral head collapse

**\* 162. Please select a treatment**

- non-operative (includes medications, injections, physical therapy, or watchful waiting)
- arthroscopic treatment
- hemiarthroplasty
- reverse shoulder arthroplasty