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The role of subscapularis repair in reverse total shoulder arthroplasty

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INTRODUCTION

- Controversy surrounds the role of the subscapularis (SSC) in reverse TSA and the need for repair, if possible, at the conclusion of the procedure.
- Some investigators have concluded that an intact SSC is critical for stability; others have found no such correlation

AIM

- It is to identify if there is an advantage or not when the SSC is repaired at the conclusion of the reverse TSA.

METHODS

We have operated 100 patients (78 female, 22 male); clinically all had: active elevation less of 90, 21 patients had ER positive lag sign and positive hornblower sign.

Radiologically there was severe arthritis; in 21 patients there was, also, a severe fatty infiltration of shoulder external rotators.

METHODS

- Follow up was 48 months
- We have used different kind of reverse TSA:
 - 79 implants with a medialized humeral component (SSC is critical to stability)
 - 21 implants with a lateralized humeral component

METHODS

- The prosthesis with a lateralized humeral component allows more stability from horizontal deltoid compression and it doesn't require repair of the SSC (because this tendon increases the workload of the residual posterior rotator cuff and the deltoid).

RESULTS

UCLA score was:

- pre-operative 4.3
- post-operative: 33.2

Constant score was:

- pre-operative 16
- post-operative 75.8

RESULTS

On average **active elevation** was:

- pre-operative 61.5°
- post-operative 130°

RESULTS

On average, **active ER1** was

in group with a **medialized** humeral component:

- pre-operative 10°
- post-operative 30°

On average, **active ER1** was

in group with a **lateralized** humeral component:

- pre-operative -10°
- post-operative 15°

CONCLUSION

- The need for SSC repair in reverse TSA can vary depending on the selected implant.
The subscapularis repair is essential for the stability when the surgeon uses medialized humeral component.

CONCLUSION

- When surgeon uses lateralized humeral component, it isn't required repair of the SSC because there is **better stability from horizontal deltoid compression.**
- On the contrary, the SSC repair has been shown overloaded of the posterior cuff and the deltoid.

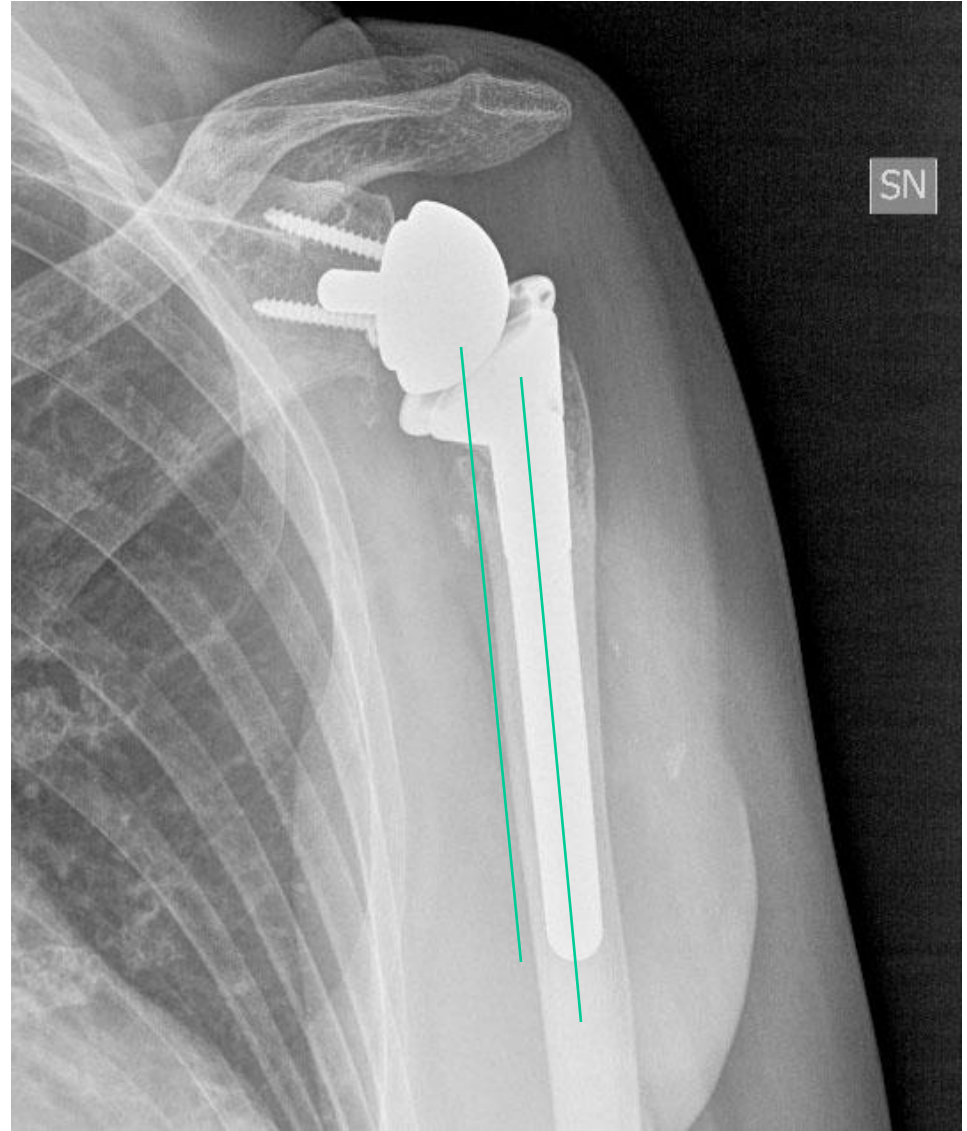
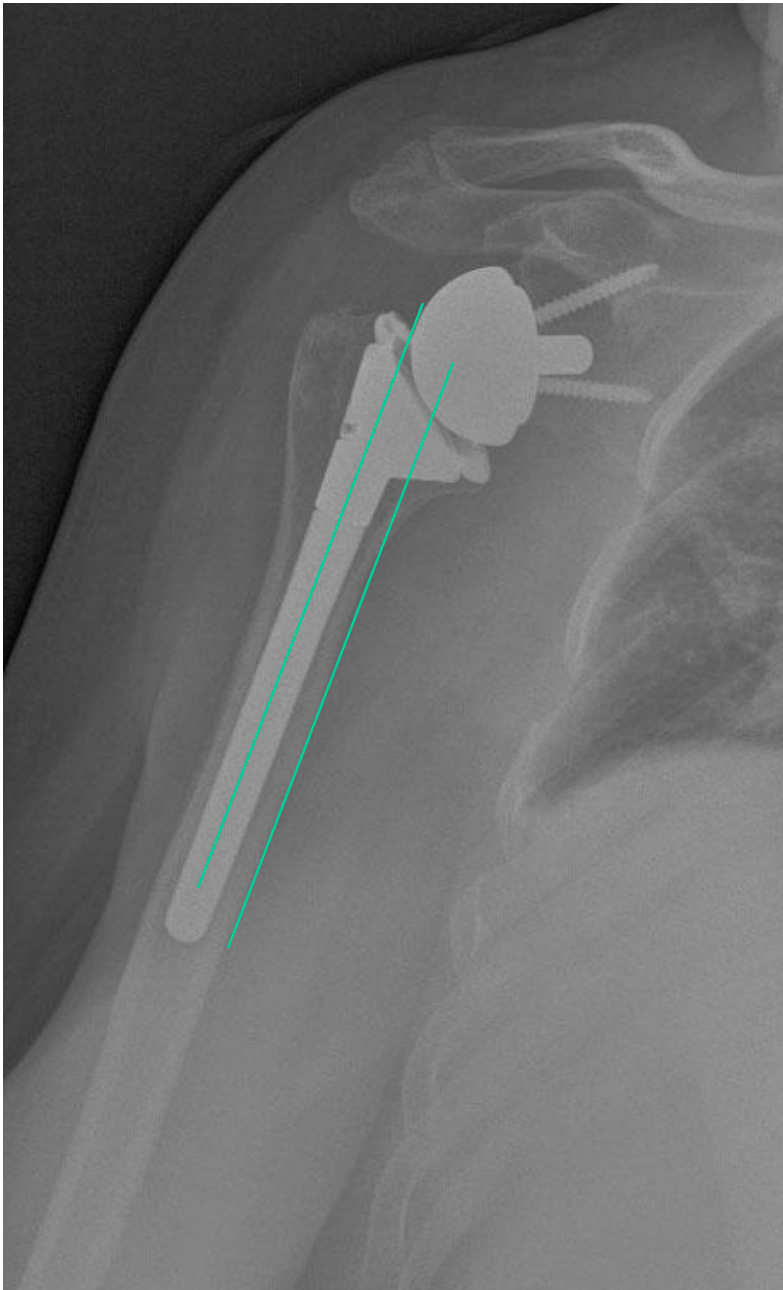
CONCLUSION

- So, for these reasons we use a **lateralized** humeral component (without SSC repair) when there is an **irreparable** lesion of posterior cuff too, and we use a **medialized** humeral component (with SSC repair) when the posterior cuff is **intact or reparable**.

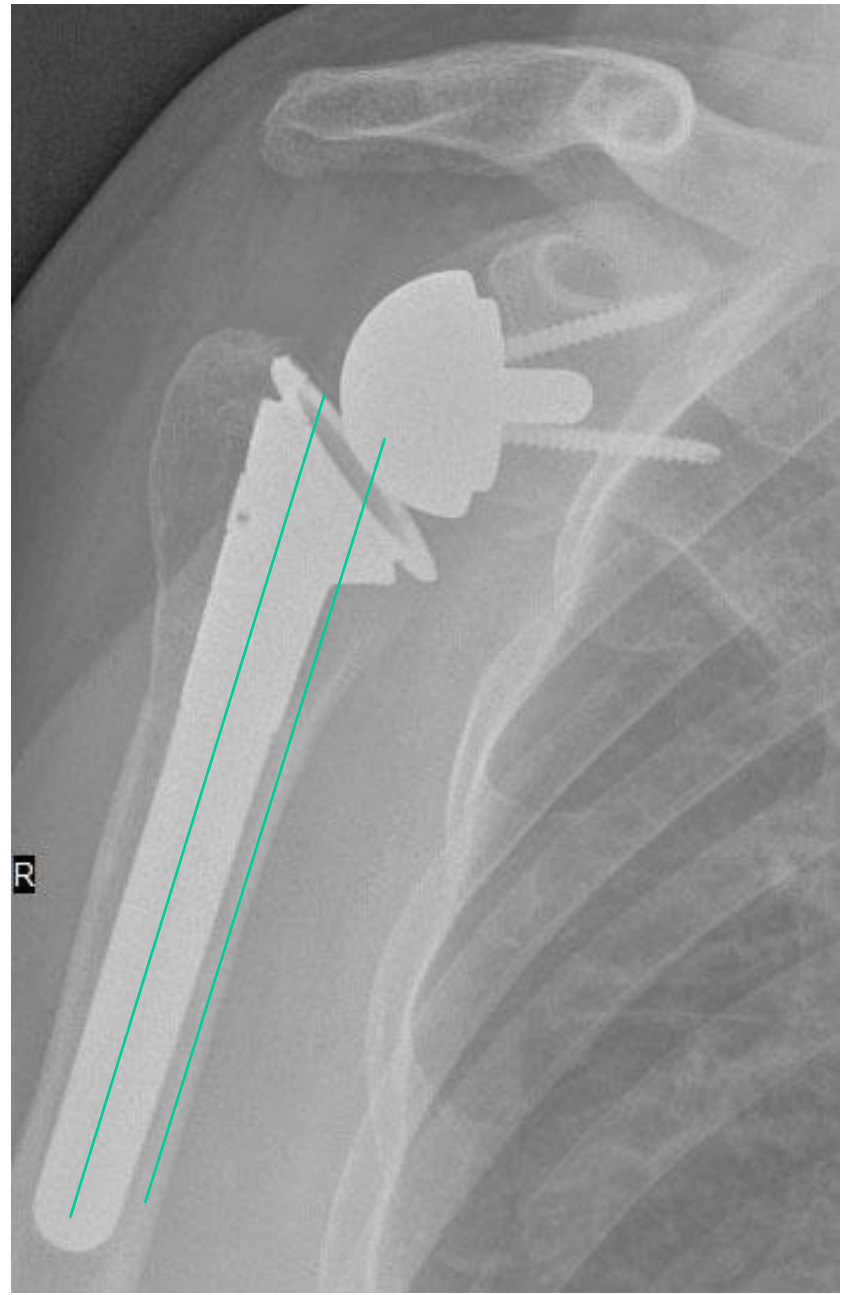
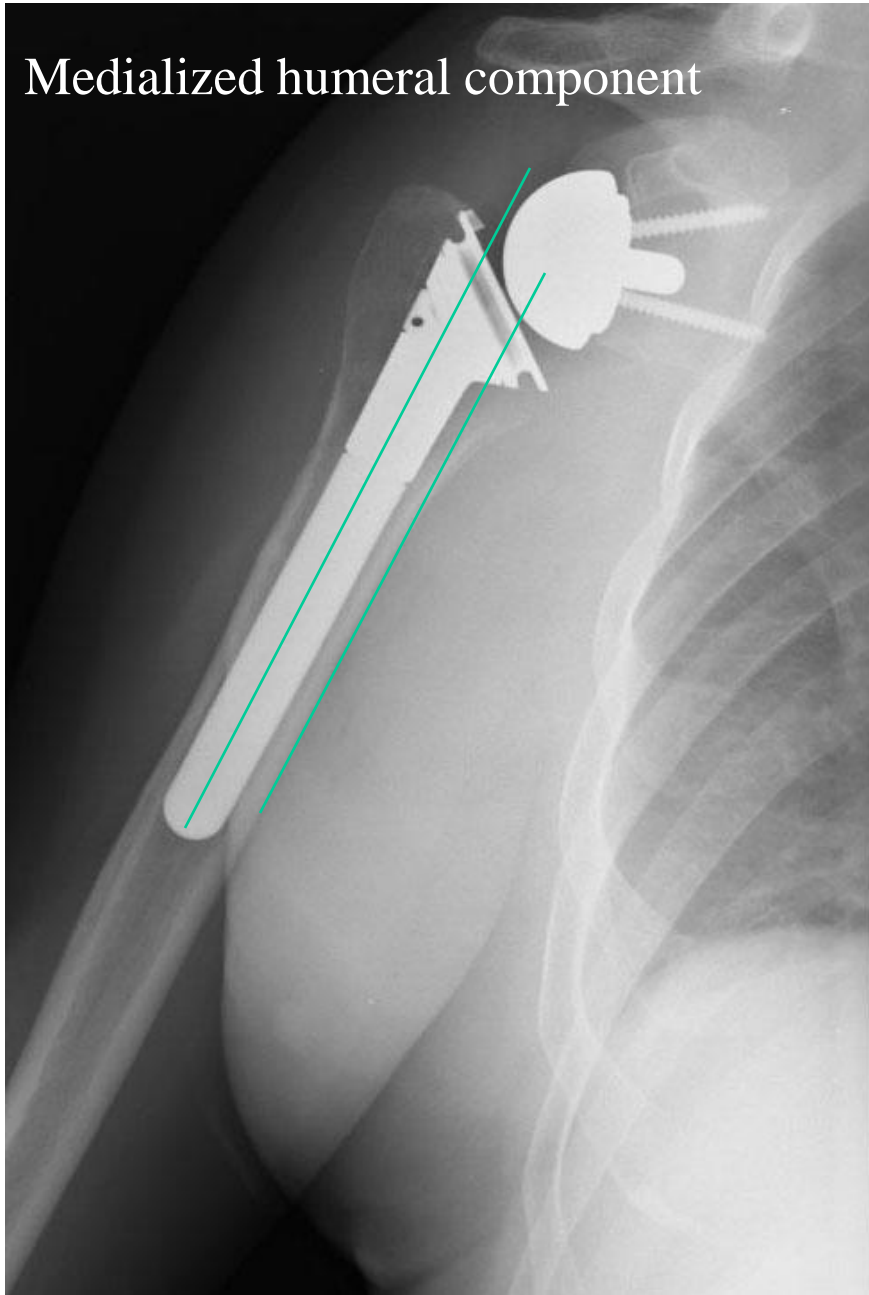
CONCLUSION

- So, for these reasons, when we have shoulder arthritis with an irreparable posterior cuff lesion we use a **lateralized humeral component** and we **don't repair subscapularis tendon**, and when we have shoulder arthritis without posterior cuff lesion (or with reparable lesion) we use a **medialized humeral component with subscapularis repair**.

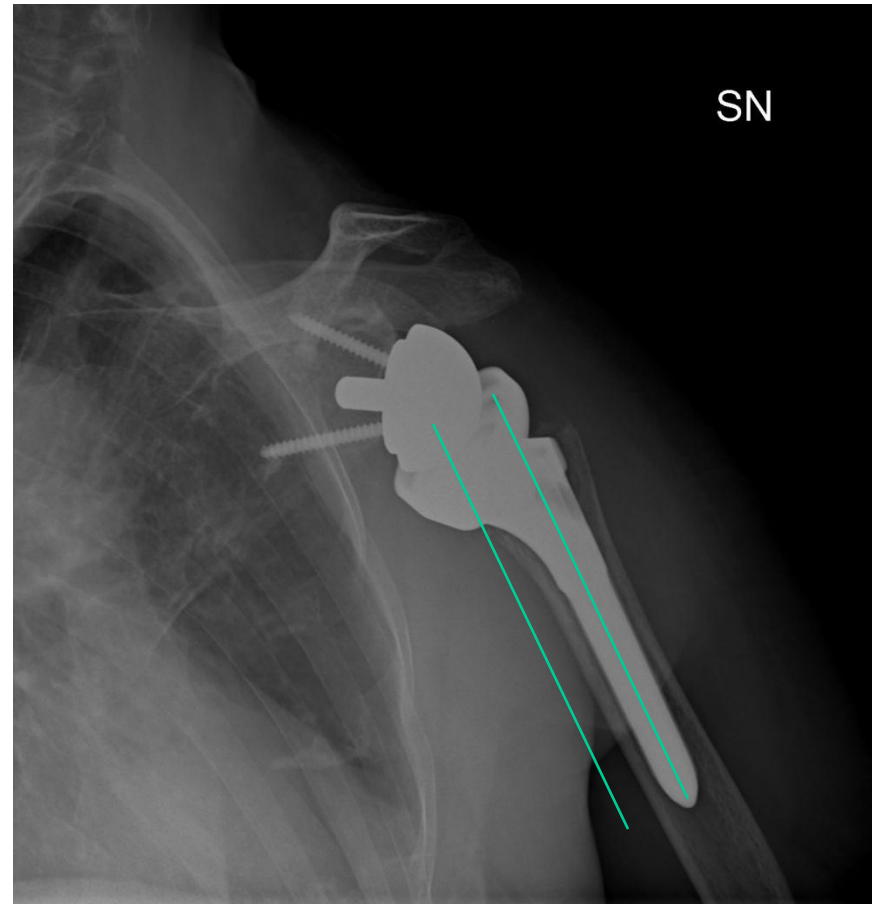
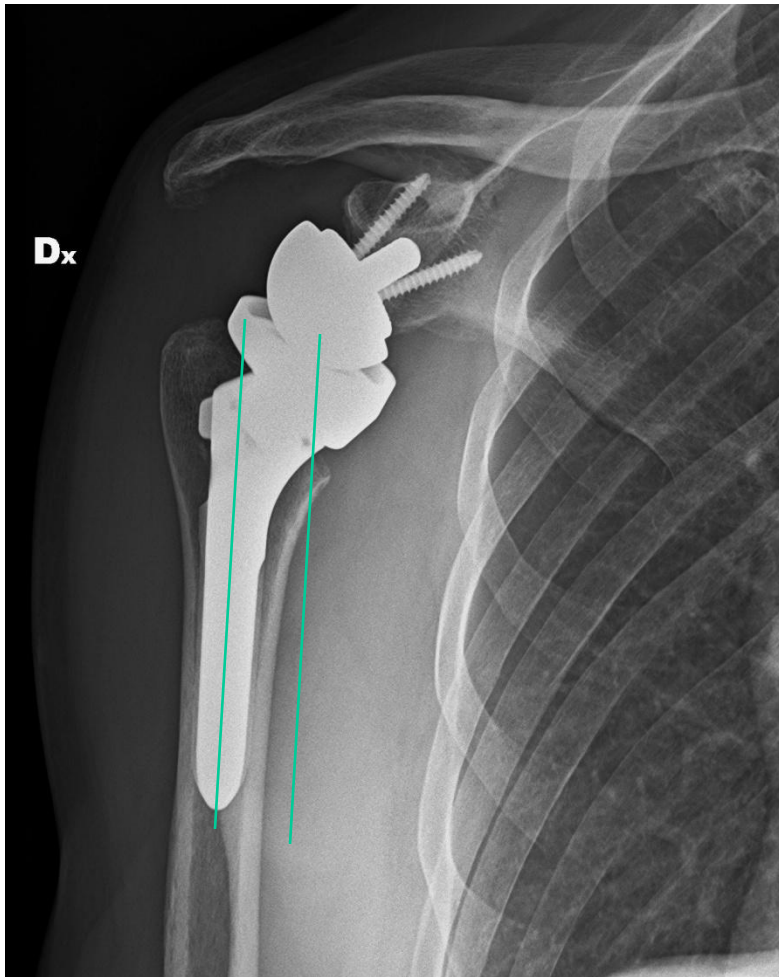
Medialized humeral component



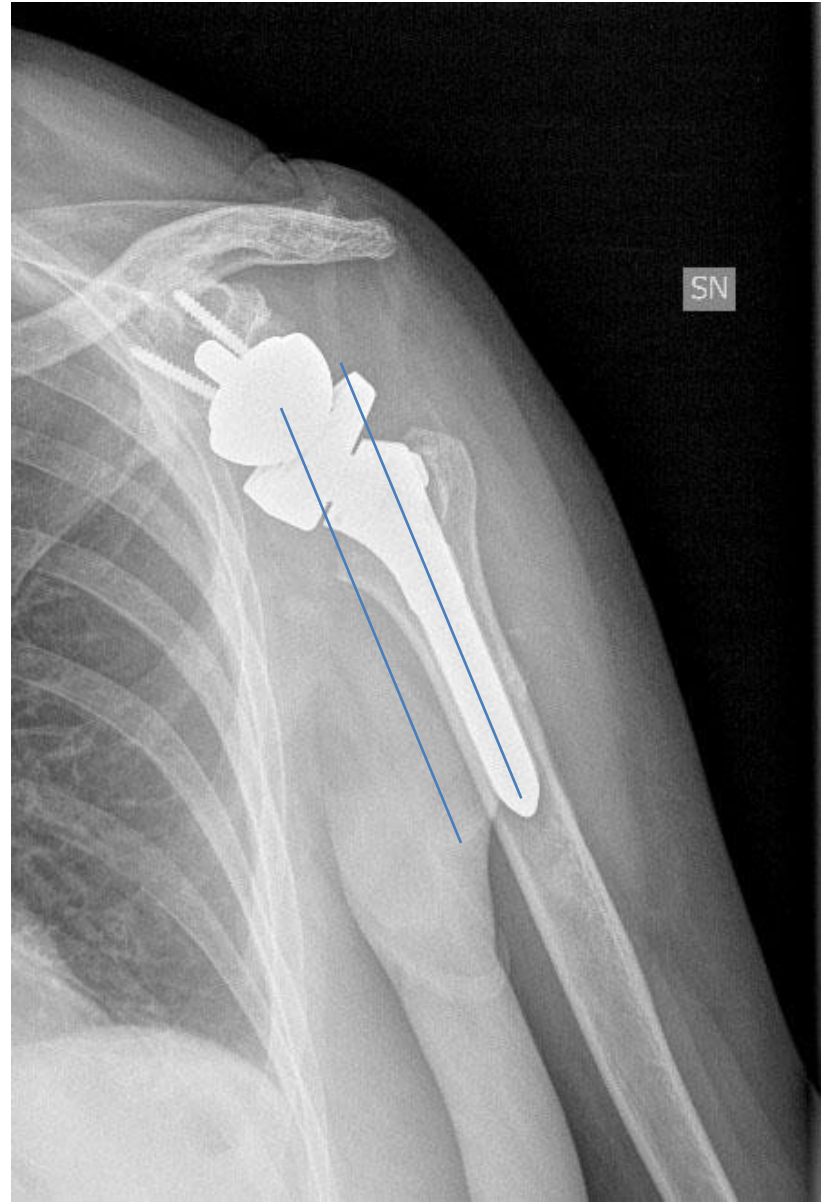
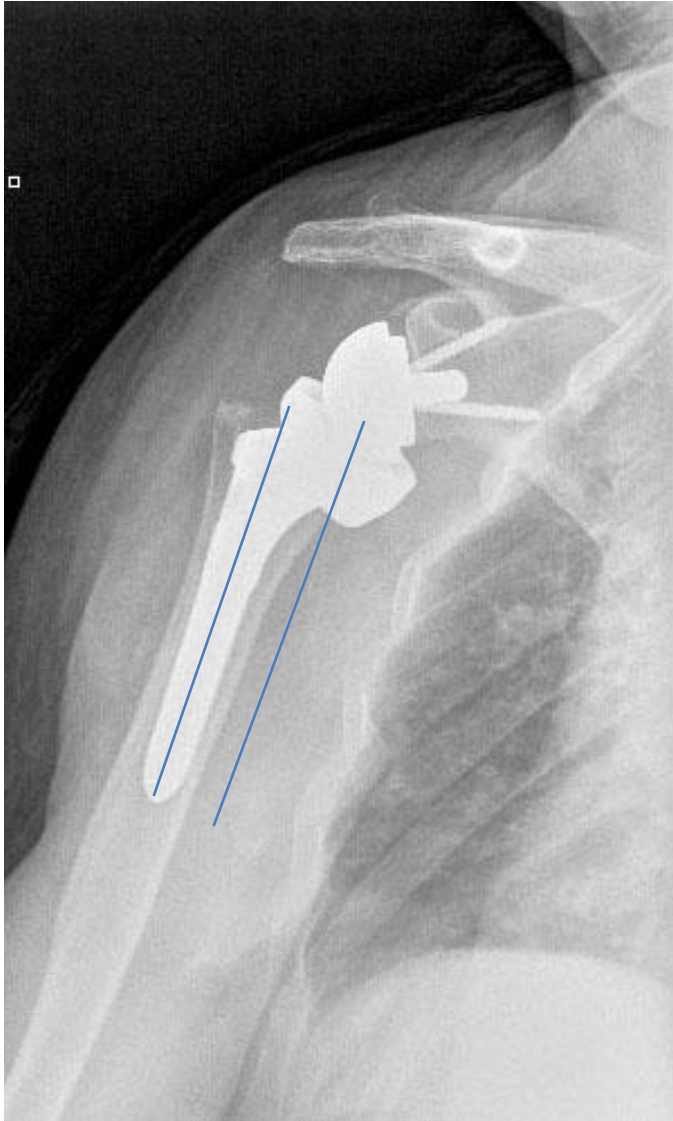
Medialized humeral component



Lateralized humeral component



Lateralized humeral component



THANK YOU