

**DOES CAM DEFORMITY LOCATION MATTER? A COMPARISON OF PRE-
OPERATIVE SYMPTOMS, INTRAOPERATIVE FINDINGS AND 5-YEAR
OUTCOMES FOLLOWING HIP ARTHROSCOPY**

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Disclosures

- Thomas Youm: Arthrex, Inc: IP royalties; Paid consultant; Paid presenter or speaker

Background

- Femoroacetabular impingement syndrome (FAIS) can be caused by femoral head asymmetry (cam lesion) abutting the acetabulum.
- There is sparsity of studies exploring the relationship between the location of the cam lesion with symptoms and long-term outcomes.
- A recent study concluded cam deformities most apparent on an AP pelvic radiograph, suggesting a superolateral lesion, correlate with the severity of cartilage and labral injury intraoperatively.
 - Rogers et al. (2022) AJSM

Purpose

- To compare symptoms, intraoperative findings and 5-year patient reported outcomes (PROs) of those who underwent hip arthroscopy for cam lesions at different locations associated with FAIS.

Methods

- Study Design: Retrospective review of a prospectively collected database
- Inclusion criteria
 - Primary hip arthroscopy for FAI
 - ≥ 15 years of age
 - 5-year follow-up
- Outcomes Measured:
 - Total conversion to THAs
 - Total revision procedures
 - Pre and postoperative PROs: modified Harris Hip Score (mHHS) and Non-Arthritic Hip Score (NAHS)
 - Achievable modified Harris Hip Score (mHHS) and Substantial Clinical Benefit (SCB)

Methods: Cam Location

- Cam lesion locations were grouped based on which radiographic view displayed the largest alpha angle. Alpha angles largest on anteroposterior (AP) views were defined as superolateral lesions (Figure 1), those largest on 45° Dunn as anterolateral lesions (Figure 2) and those largest on 90° Dunn as anterior lesions.

Figure 1

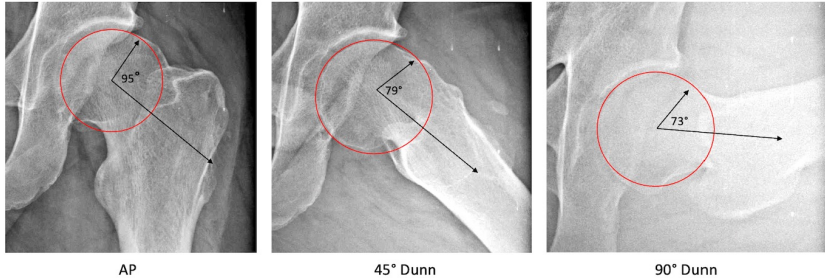


Figure 2

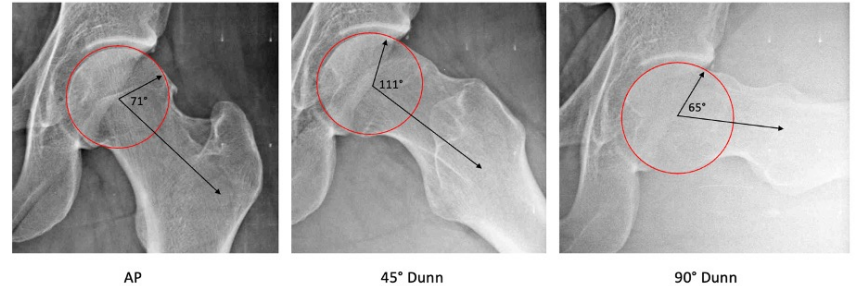
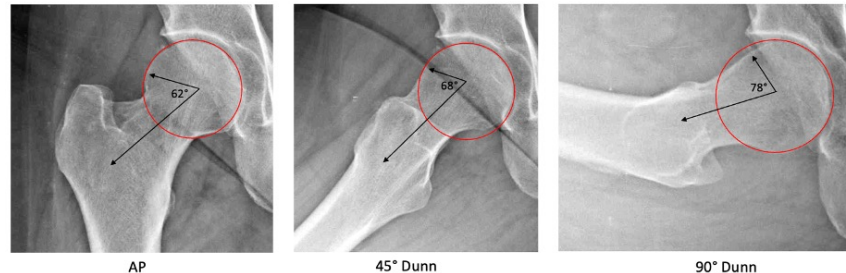


Figure 3



Demographics by Cam Location

Variable	Cam lesion location			P-value
	<i>Anterior</i>	<i>Anterolateral</i>	<i>Superolateral</i>	
Total	13 (10.4%)	41 (32.8%)	71 (56.8%)	
Age	46.6 ± 12.2	44.7 ± 12.2	38.1 ± 12.3	0.006* ANT ≈ AL > LAT
Sex	M: 3 (23.1%) F: 10 (76.9%)	M: 16 (39.0%) F: 25 (61.0%)	M: 29 (40.9%) F: 42 (59.2%)	0.55
BMI	24.8 ± 5.5	26.5 ± 5.7	25.3 ± 4.0	0.71
Preoperative symptom length	<1 yr: 6 (46.2%) ≥1 yr: 6 (46.2%) Unk: 1 (7.7%)	<1 yr: 14 (34.2%) ≥1 yr: 23 (56.1%) Unk: 4 (9.8%)	<1 yr: 36 (50.7%) ≥1 yr: 31 (43.7%) Unk: 4 (5.6%)	0.47

Results: Conversions to THAs and Revisions

- Multivariable analysis showed subjects with anterolateral lesions had significantly lower odds of undergoing conversion to THA by five-year follow-up compared to subjects with superolateral lesions
- Subjects with anterolateral lesions were not found to have different odds of undergoing an arthroscopic revision procedure or a reoperation compared to those with superolateral lesions.
- No differences existed in the odds of undergoing an arthroscopic revision, conversion to THA, or reoperation between subjects with anterior lesions versus those with superolateral lesions.

Results: Patient Reported Outcomes

- No difference in mean preoperative mHHS scores or preoperative NAHS scores between those with superolateral, anterolateral and anterior lesions.
- No inter-group differences in the five-year improvement in mHHS or NAHS scores between cohorts
- No difference in achievement rates of the MCID or SCB scores between cohorts

Conclusion

- Multivariable analysis showed those with superolateral cam lesions were more likely to convert to THAs within five-years compared to those with anterolateral cam lesions
- Those with superolateral lesions were significantly younger compared to those with anterior or anterolateral lesions.
- Cam lesion location did not affect pre-operative PROs, intraoperative findings, or improvement in PROs at five-year follow up.

References

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