

# Imaging in hip and groin pain: when is “pathology” actually “pathology”?

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Project

**FORCE**

**lifecare**  
LEADERS IN PHYSIOTHERAPY  
& SPORTS MEDICINE

**HIP & GROIN**  
PHYSIOTHERAPY

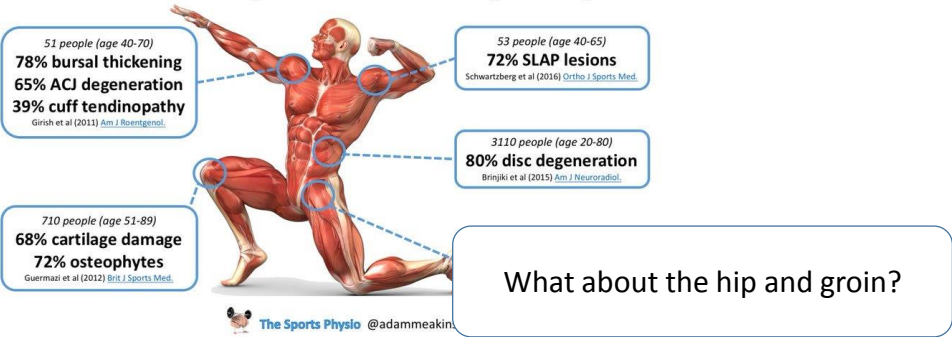
## Background

- Imaging is used to assist in the diagnosis of intra and extra-articular hip pathology<sup>1,2,3</sup>
- Pathology recognised on imaging and symptoms/clinical findings is often the catalyst for surgery<sup>4,5</sup>
- Increase in surgical management of FAI/intra-articular hip pathologies
  - 18 fold increase in FAI surgery between 1999 to 2009<sup>6</sup>

# Background

- Imaging findings suggestive of “pathological changes” have been shown in people with and without pain

## Scans on pain free people



# Radiology report

**PELVIS / BILATERAL HIP X-RAY**

**Report:**  
Both femoral heads are aspherical and there is over-coverage on the left hip. Acetabular retroversion is also suggested on each side and there is borderline coxa profunda

There are prominent anterosuperior femoral head-neck junction cam deformities.

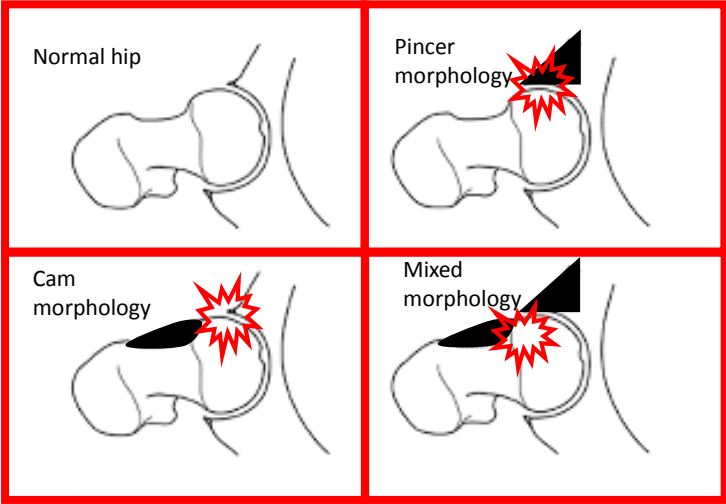
There is delamination, fraying and undisplaced tearing of the anterosuperior acetabular labrum

There is mild hip joint chondropathy present with full thickness cartilage loss noted over the lateral weightbearing portion of the acetabulum and chondral fissuring and fraying evident over the superolateral aspect of the femoral head.

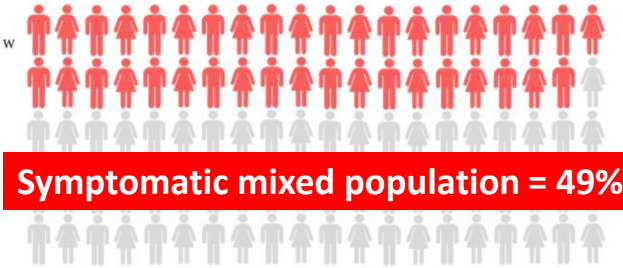
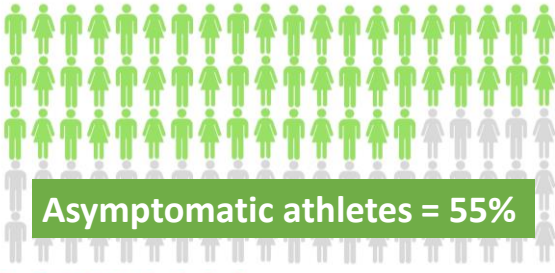
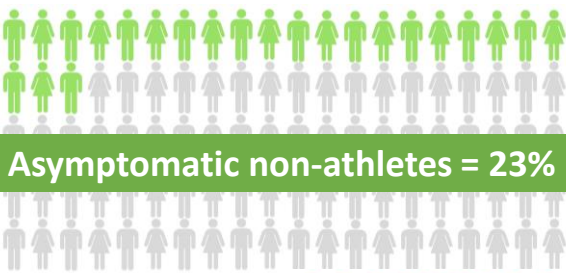
The ligamentum teres demonstrates mild hyperintense delamination and fraying at the foveal attachment

There is a small amount of joint fluid present with evidence of low grade synovitis

# Bony morphology

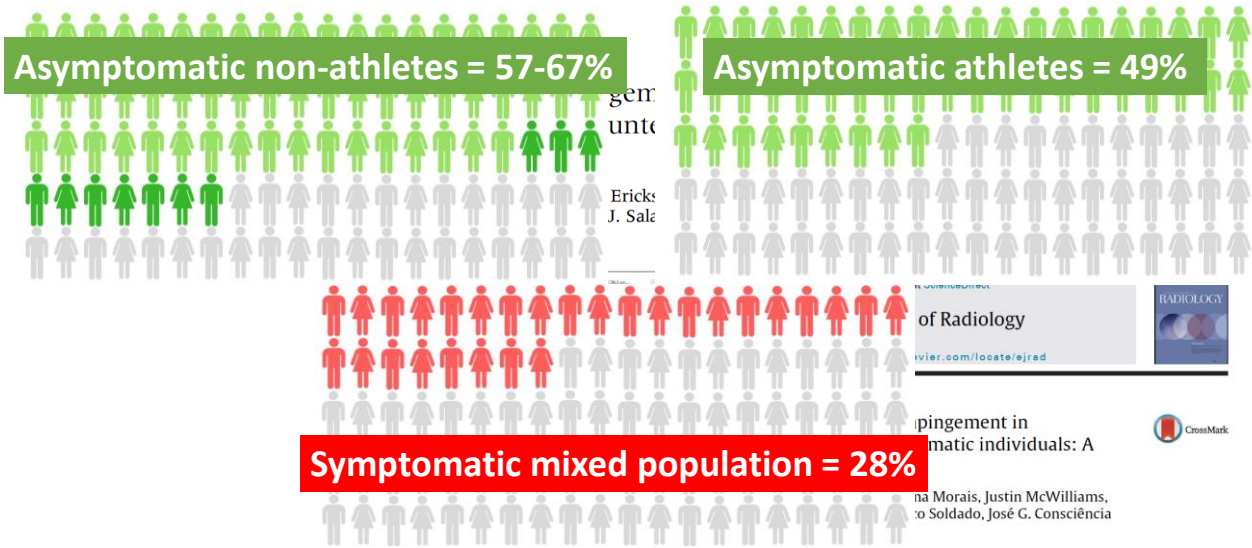


# Cam morphology

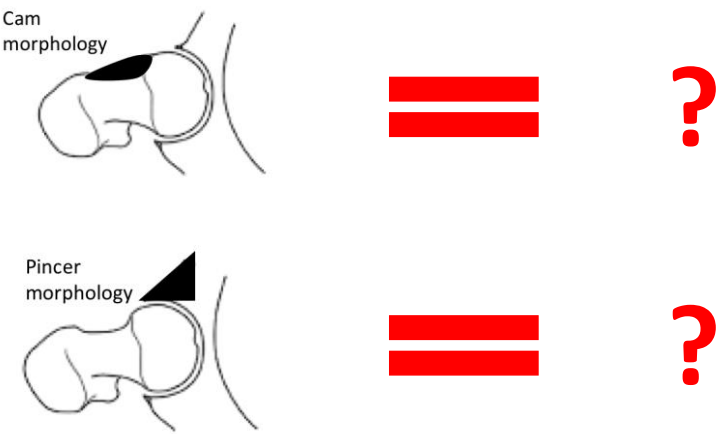


Contents lists available at ScienceDirect  
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Pedro Dantas, Fátima Morais, Justin McWilliams,  
João Gaspar, Francisco Soldado, José G. Consciência

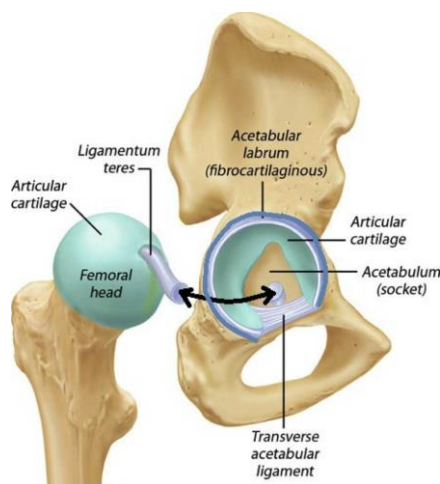
# Pincer morphology



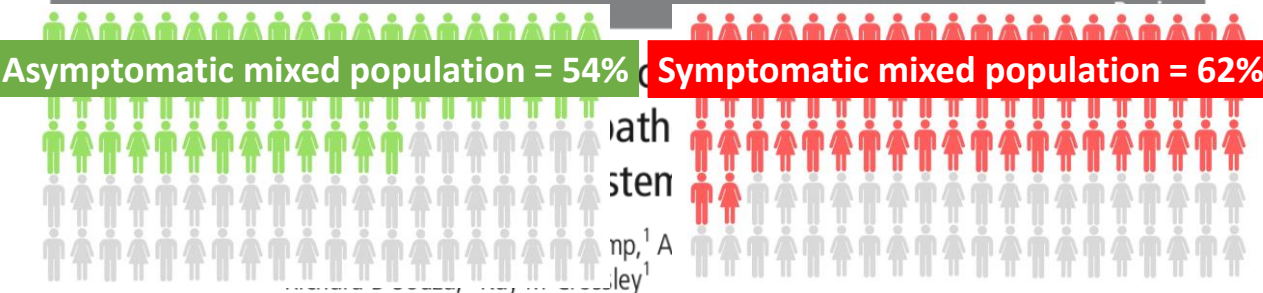
# Bony morphology



# Acetabular labral tears



# Acetabular labral tears

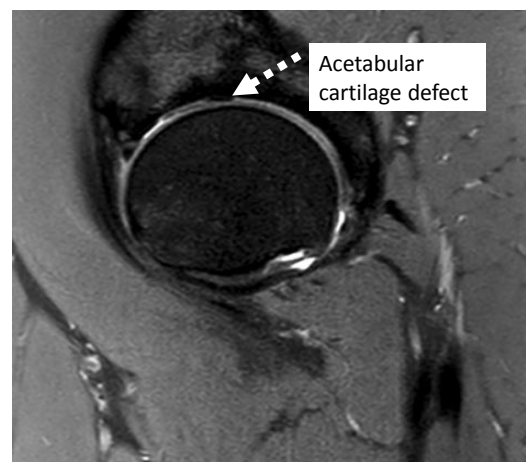
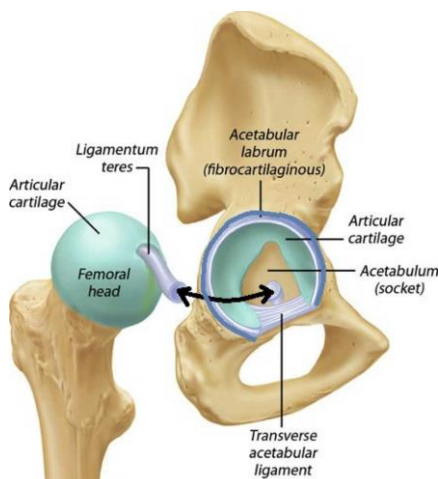


## Acetabular labral tears



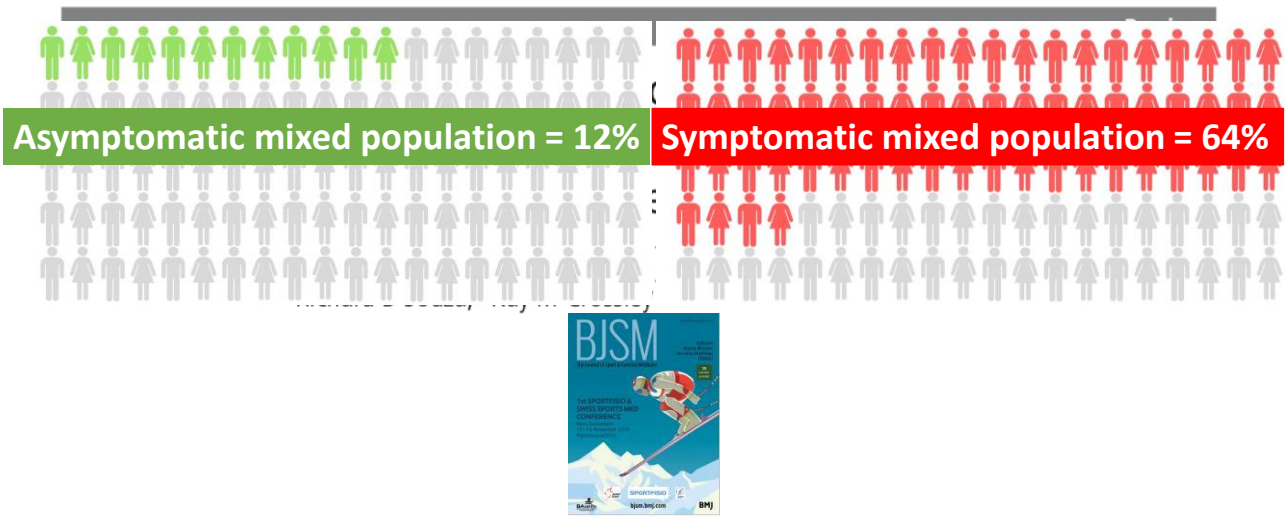
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## Cartilage defects

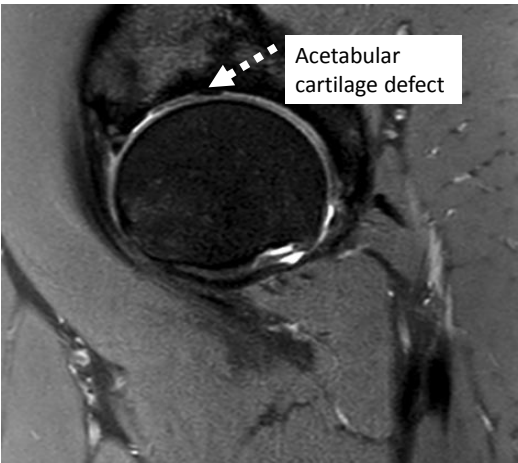




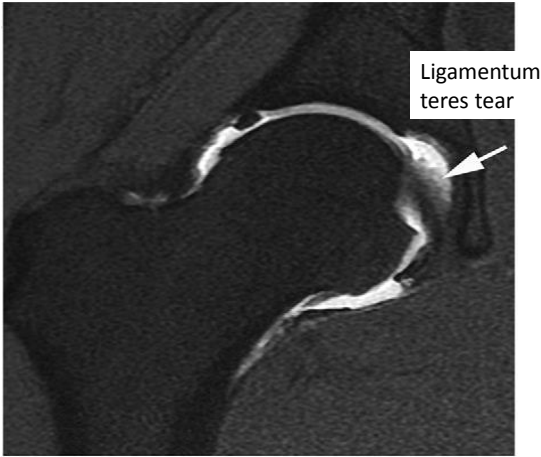
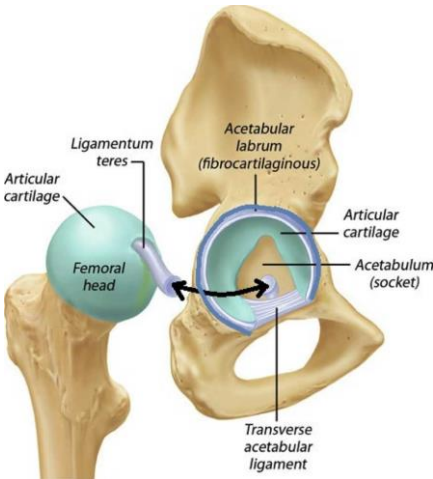
# Cartilage defects



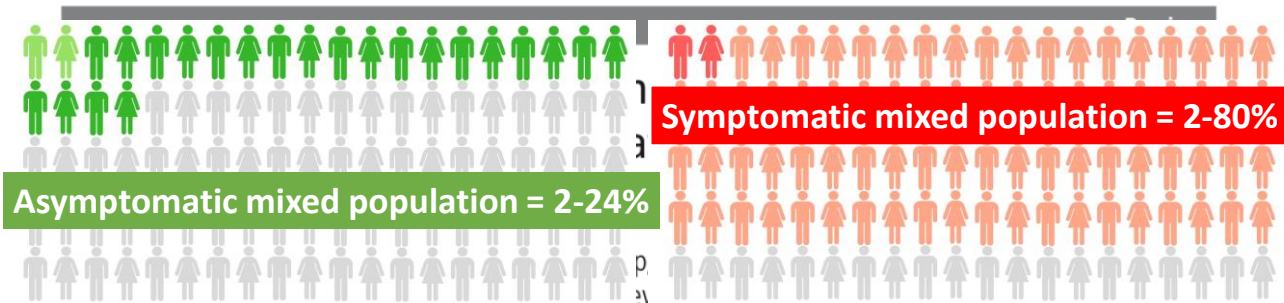
# Cartilage defects



# Ligamentum teres tears

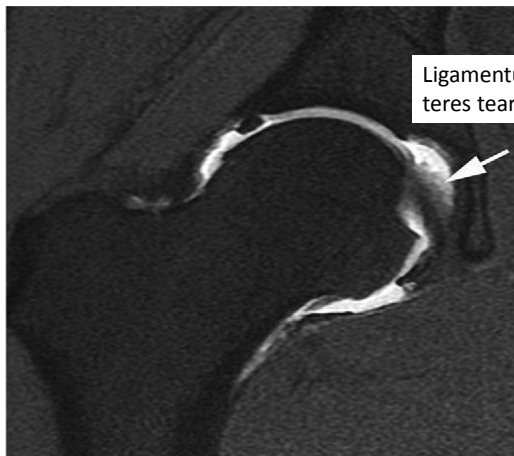


# Ligamentum teres tears





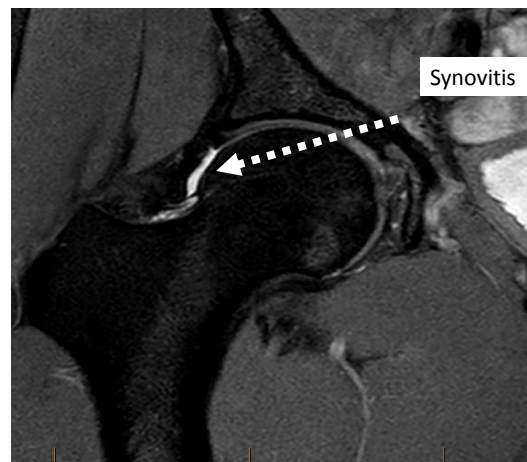
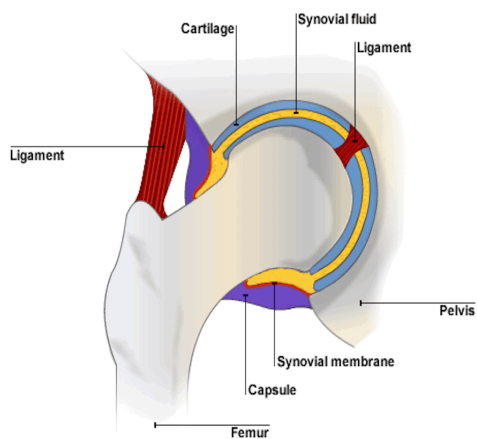
## Ligamentum teres tears



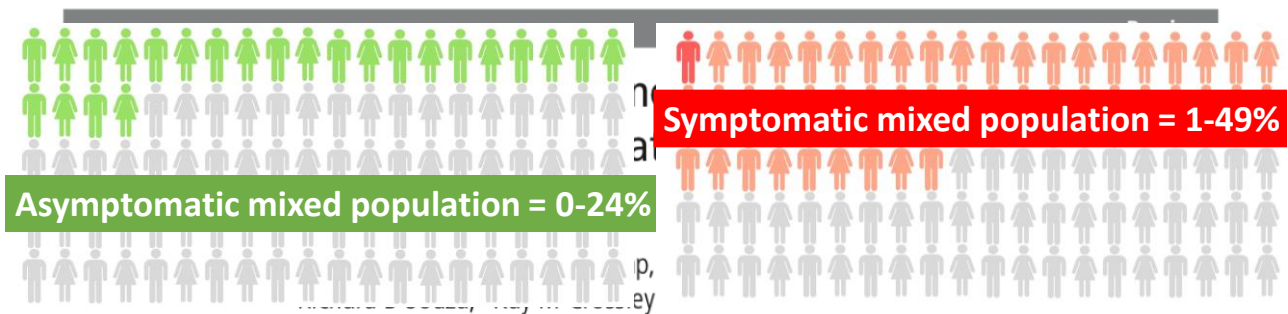
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## Synovitis/effusion



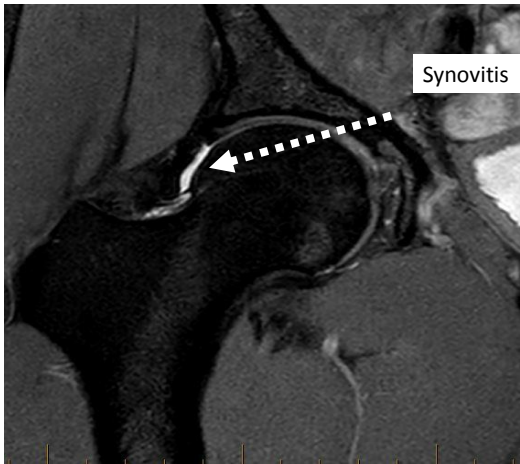
# Synovitis/effusion



## Hip Joint Effusion-Synovitis Is Associated With Hip Pain and Sports/Recreation Function in Female Professional Ballet Dancers

Susan Mayes, PhD,\*† April-Rose Ferris, PT,‡ Peter Smith, MBBS, FRANZCR,§ and Jill Cook, PhD†

# Synovitis/effusion



## Take home messages

- Hip pathology is seen often in people with and without pain
- Cam and pincer morphology are seen often in asymptomatic populations
- Labral tears are seen more often in symptomatic individuals
  - 54% of asymptomatic individuals have labral tears
- Cartilage defects are seen more often in symptomatic individuals

## Take home messages

- Ligamentum teres tears appear to more prevalent in symptomatics
  - Up to 25% of asymptomatic with have tears
- Synovitis appears to more prevalent in symptomatics
  - A target for our interventions
- Assess and treat the person not the scan!!
  - What is the relevance of imaging findings in relation to subjective and objective assessment

# Thank you



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