

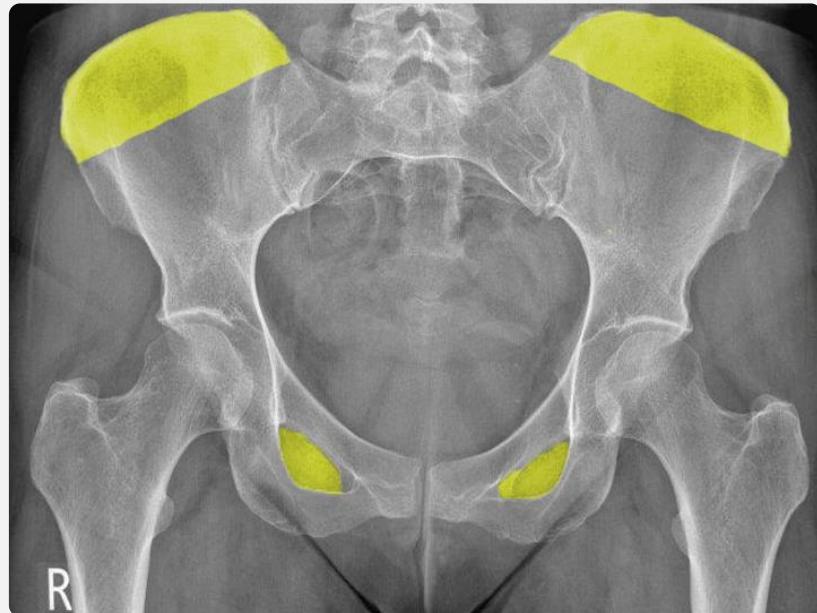


# CalculOrther®

## Novel Orthopedic X-ray Assessment Software

ATN  
Softtech®

CalculOrther® is a software program that uses **artificial intelligence to assist physicians in orthopedic assessment and improve patient treatment**. While all measurements aim towards the future, CalculOrther currently operates on four distinct modules.



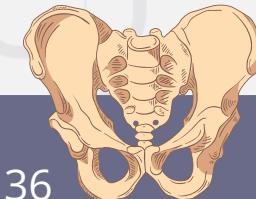


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### 1. Pelvic X-ray Appropriateness (PelSiAn)



- The literature lacks a quantitative analysis for the appropriateness of pelvic X-rays. Only 36 out of every 100 pelvic X-rays are interpretable.
- The literature lacks a quantitative analysis for the appropriateness of pelvic X-rays.
- Orthopedic X-ray measurements necessitate a significant amount of time, which is especially difficult in congested outpatient clinics.

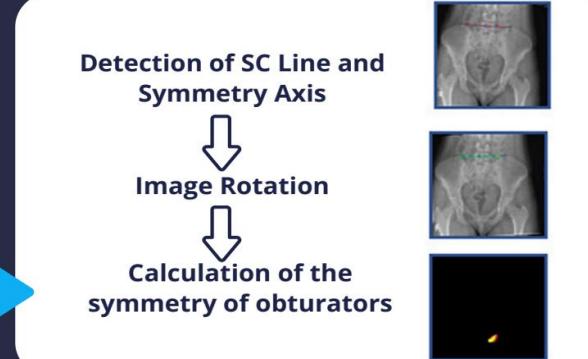
### Stages of the PelSiAn System



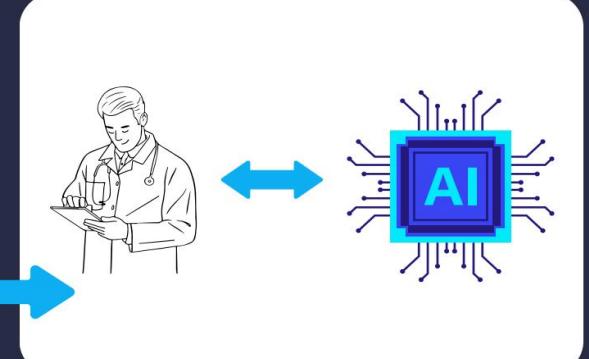
**DATASET**



**DETECTION OF  
LANDMARKS**



**POSTPROCESSING**



**PERFORMANCE  
EVALUATION**



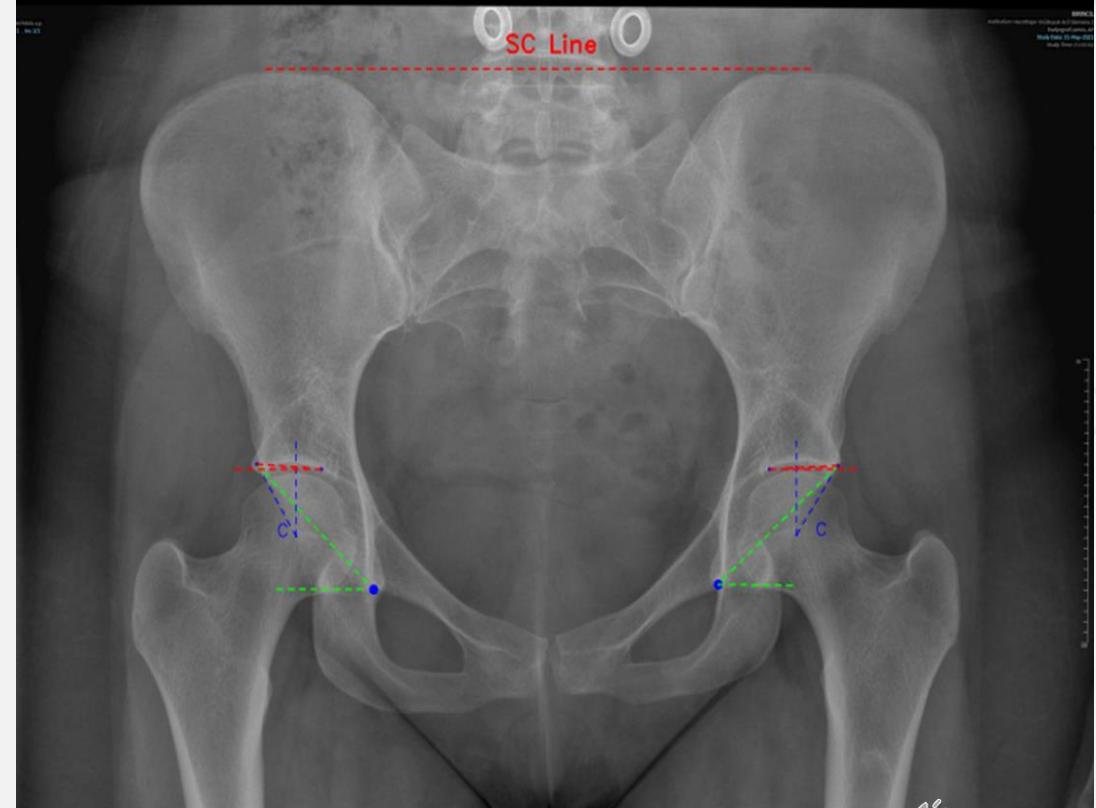
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## 2. Femoroacetabular Impingement

- Femoroacetabular impingement (FAI) syndrome is a significant source of hip pain.
- The FAI module of CalculOrther® automatically performs precise radiographic measurements, including Tönnis angle, Sharp's angle, and acetabular offset parameters.
- This automation ensures superior accuracy, consistency, and efficiency compared to manual assessment methods.





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### 3. Pes Planus

- Pes planus, or flatfoot, is a condition where the foot arch is abnormally low or absent, reducing the normal inner-foot curvature.
- Diagnostic errors and overlooked symptoms are common in practice, making early and accurate diagnosis crucial.
- The Pes Planus module in CalculOrther® facilitates timely diagnosis, enhancing treatment management and patient quality of life.





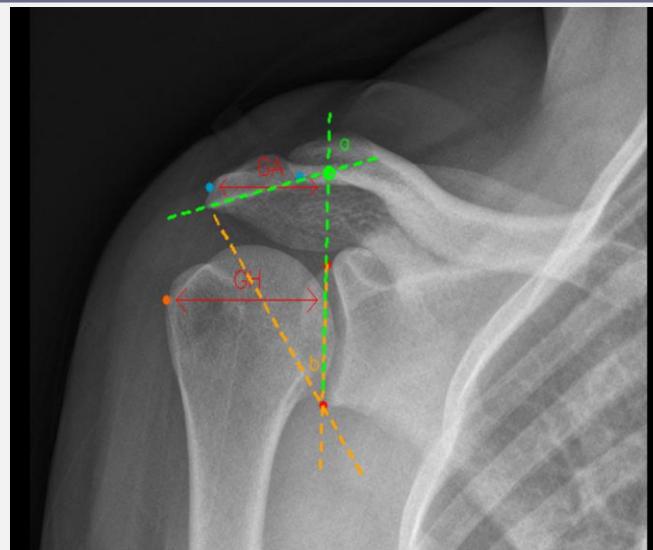
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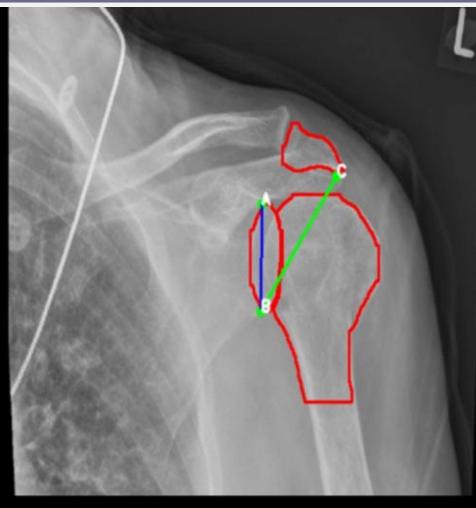
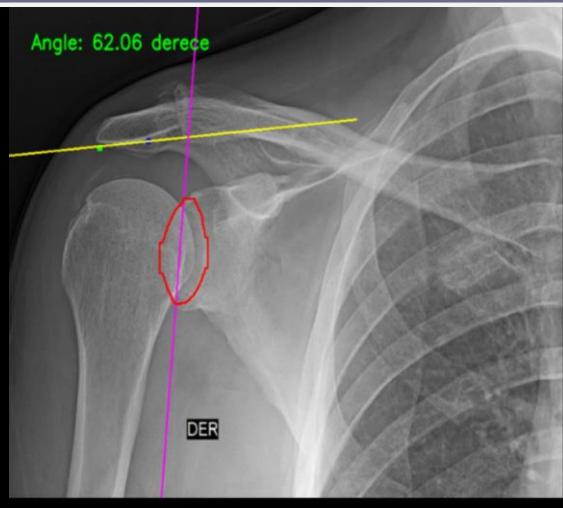
ATN  
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### 4. Shoulder Impingement

- The shoulder joint's wide range of motion makes it highly mobile but also susceptible to stress and pathologies, including rotator cuff tears and glenohumeral osteoarthritis. Anatomical factors play a key role in these disorders, and radiographic measurements—such as Critical Shoulder Angle (CSA), Lateral Acromion Angle (LAA), and Acromion Index (AI)—are essential for accurate assessment.
- The Shoulder Impingement Measurements module in CalculOrther® performs these measurements automatically and precisely, enabling faster diagnosis and supporting improved treatment planning and patient care.



**Measurements**  
1) CSA: **36.71°**  
2) LAA: **74.94°**  
3) AI: **0.73**





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