

CORAsponding Point Analysis for Distal Femoral Valgus

The CORAsponding Point (Corresponding Point) method can be used to constrain the mechanical axis to pass through any surgeon defined point of the knee joint. Normally the axis passes through the center. For medial joint arthritis, using a high tibial osteotomy the axis can be forced through the Fujisawa Point, up to 1/3 the distance to the lateral border of the joint.

This example addresses a distal femoral deformity with lateral compartment arthritis. The deformity will be addressed with a distal femoral osteotomy and constraining the mechanical axis to pass slightly medial to the center of the joint to slightly offload the lateral compartment.

Fig. 1. Select this mechanical axis point at the joint. This is the **CORAsponding Point**.

Fig. 2. Draw a line from the center of the femoral head to this point and from the center of the ankle to this point. The angle θ between these lines constitutes the valgus deformity.

Fig. 3. At the level of the intended osteotomy measure from the distal mechanical axis to the convexity of the deformity, this line is length **W**. Calculate **W sin θ** .

W sin θ is the additional length needed to prevent impaction at the osteotomy.

Fig. 4. The **Origin** is located **W sin θ** proximal to the **CORAsponding Point** along the distal mechanical axis.

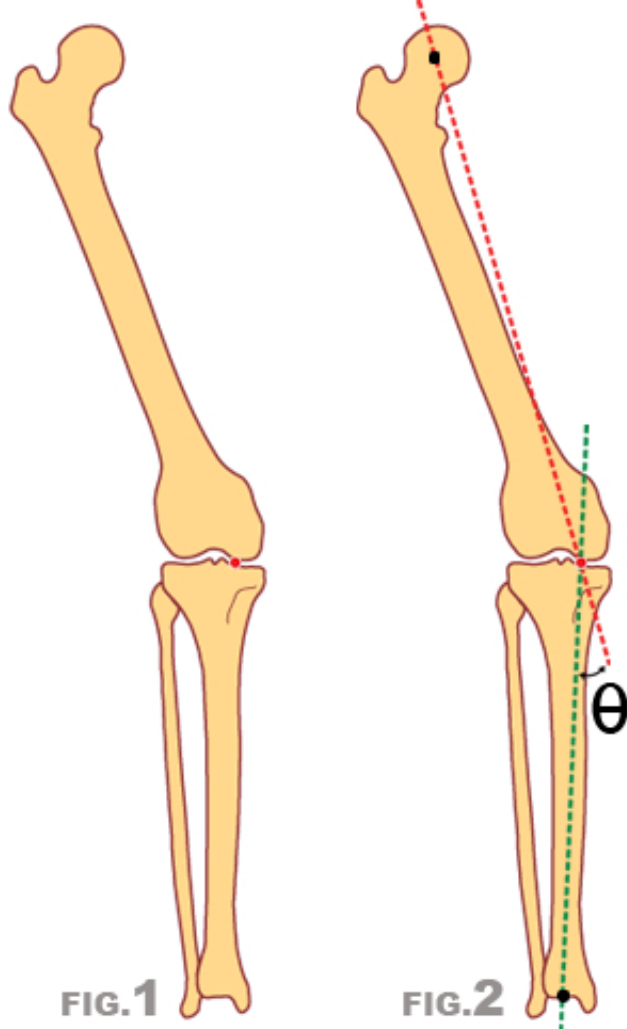


FIG.1

FIG.2

$$W \sin \theta = \text{Length} = L$$

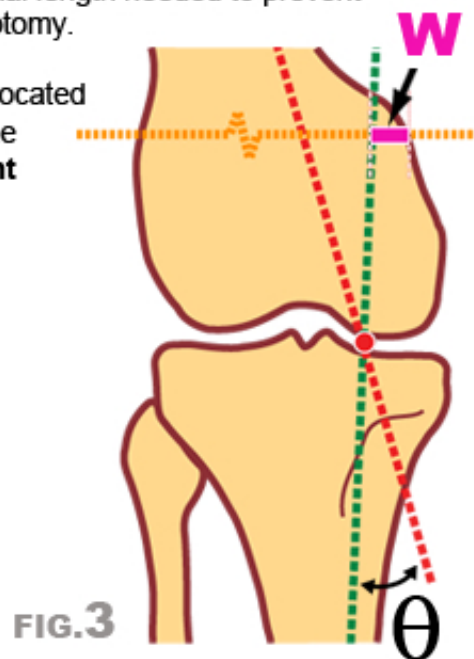


FIG.3

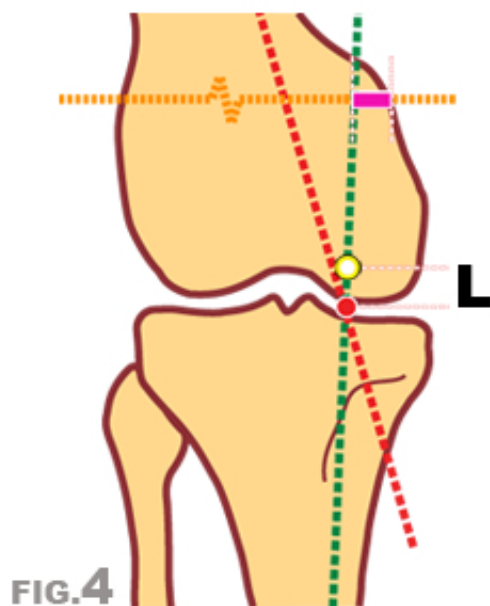


FIG.4

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$$W \sin \theta = \text{Length} = L$$

For this example then, there is a distal reference. The deformity parameters are: AP View angulation equals θ valgus; axial shortening equals $W \sin \theta$. There is no translational deformity.

Remember to give mounting parameters based on the **Origin** which is not quite at the joint line.

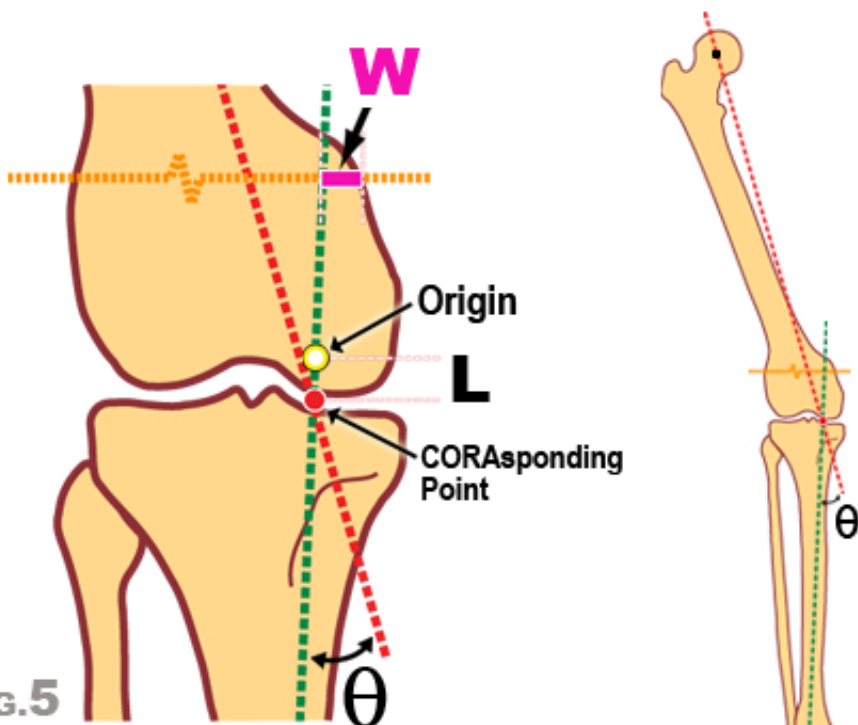


FIG.5

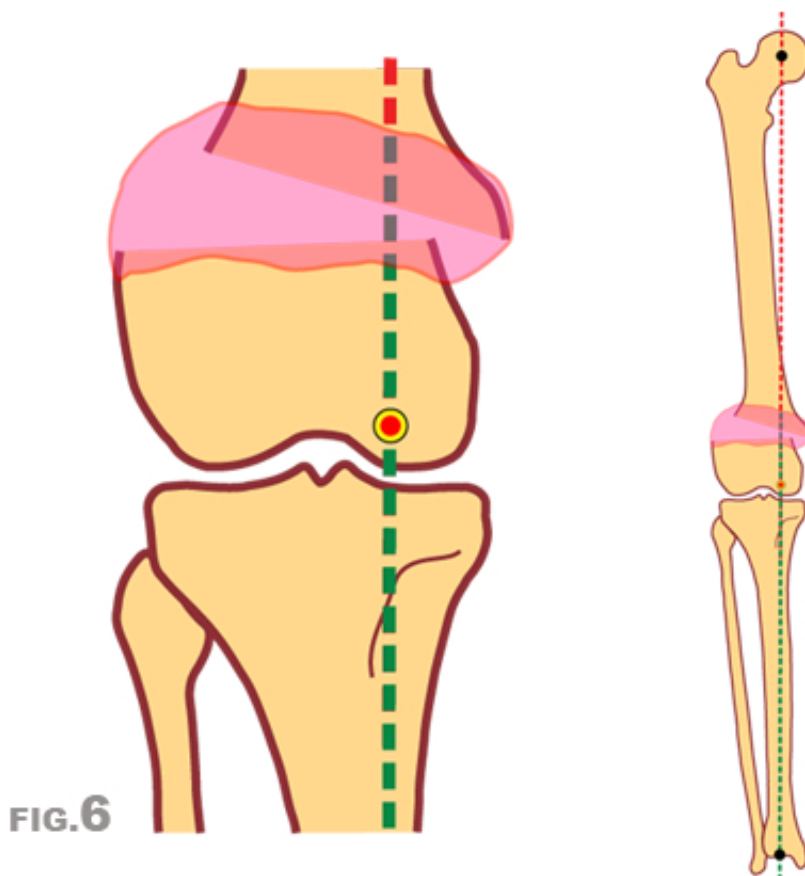


FIG.6