Copy of ANSYS - Rat Femur

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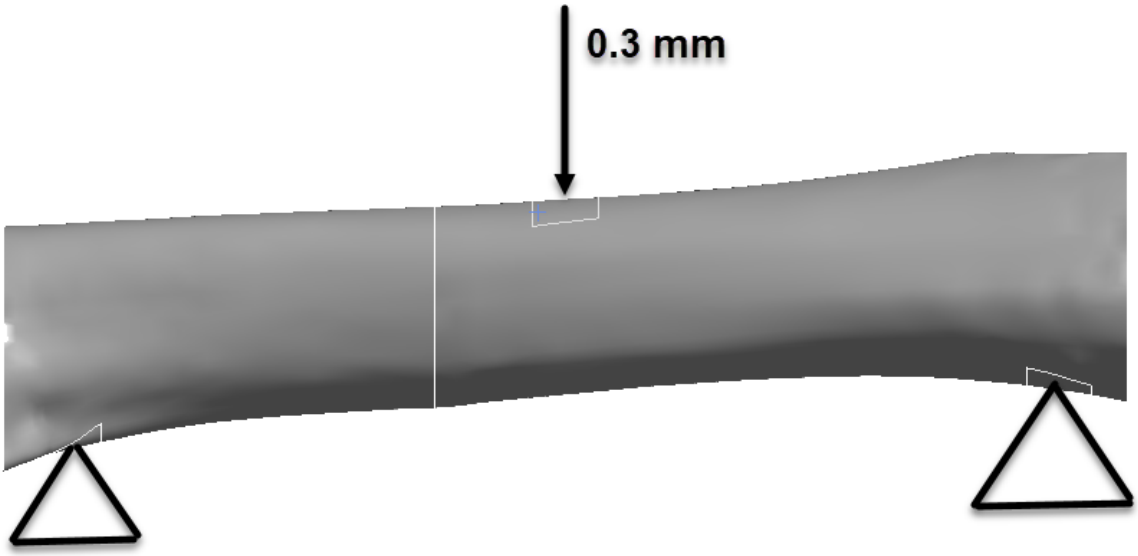
Rat Femur

Created using ANSYS 2019 R2

Problem Specification

Consider the rat femur shown in the figure below. The geometry was obtained using a CT scan. The femur is loaded in a 3-point bending configuration with a displacement of 0.3 mm. The distance between the supports is 15 mm. The femur is hollow, with an average outer radius of 1.9 mm and a thickness of 0.7 mm. Additionally, assume the femur has a Young's Modulus of 5 GPa and a Poisson Ratio of 0.4. Using ANSYS, calculate the following:

1. Total deformation along the femur
2. Reaction force at the supports
3. Stresses and strains along the femur



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