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Investigation of different cage designs and mechano-regulation algorithms in the lumbar interbody fusion process – A Finite Element Analysis

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Abstract

Lumbar interbody fusion cages are commonly used to treat painful spinal degeneration and instability by achieving bony fusion. Many different cage designs exist, however the effect of cage morphology and material properties on the fusion process remains largely unknown. This finite element model study aims to investigate the influence of different cage designs on bone fusion using two mechano-regulation algorithms of tissue formation. It could be