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Assessment of Thermal Necrosis Risk Regions for Different Bone Qualities as a Function of Drilling Parameters

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Highlights

- Risk region of thermal necrosis regions during bone drilling were evaluated.
- The 3D dynamic FE model can effectively simulate the bone temperature elevation during drilling.
- Bone temperature increased as the bone density and drill-bit diameter.
- Increasing the drill speed and feeding force could reduce the thermal necrosis regions.

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