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论文

基于CT数据一致性的双多项式射束硬化校正改进

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摘要：

针对目前各种校正算法对条状伪影校正效果不显著，分析了条状伪影的产生原因.由此考虑射线穿过不同骨厚度对软组织投影贡献的影响，对基于H L一致性条件的双多项式校正算法的软组织校正多项式改进.Forbild头部模体的仿真结果表明，该改进方法对杯状伪影和条状伪影都有良好的校正效果.

关键词： 射束硬化 H-L一致性条件 多项式校正 条状伪影

Improvement of Bi polynomial Method for Beam Hardening Correction Based on Consistency of CT Data

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Abstract:

Due to all kinds of correction algorithms have little effects on streak artifact at present,the reason of streak artifact is analyzed.Therefore,considering that the influence of soft tissue caused by the X rays which penetrate through different bone thicknesses are different,the soft tissue correction polynomial in Bi Polynomial correction method is improved based on H L consistency condition.Forbild head phantom simulation results show that the improved algorithm can get better correction effect on both cupping artifact and streak artifact.

Keywords: Beam hardening H-L consistency Polynomial correction Streak artifact

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