

髕骨滑行機轉診斷自動化之研究

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摘要

本論文主要目的是利用電腦精確、迅速及低成本的特性對膝關節髕骨滑行機轉自動化診斷進行全面性的研究。以動態性自動分析研究方式取代傳統靜態性診斷方式。每位志願者都有橫縱切各八張不同角度的膝關節影像。橫切部分是利用骨頭位置限制結合亮度能量最大法及滑動視窗二值化分割法之互補功能分割橫切影像求出三個生理角度。縱切部分利用骨頭位置限制及亮度能量最大法分割影像求初股骨與脛骨之夾角，然後再由統計分析求出所有角度的平均值及標準差的範圍，我們的研究可以幫助醫生做臨床上的膝關節功能診斷。

關鍵詞：磁核共振造影，自動診斷，骨頭位置限制，亮度能量最大法，滑動視窗二值化分割法

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