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论著

64排螺旋CT灌注成像多参数联合评估孤立性肺结节

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摘要 摘要：目的 使用动态增强CT评估良、恶性孤立性肺结节血流模式和灌注特征的差异，探讨多参数联合评分诊断孤立肺结节的应用价值。方法 52例经病理或临床随诊证实的孤立性肺结节，行同层动态增强CT扫描。使用body perfusion 软件对图像进行分析，测定表面渗透性（P）、血流、血容积、patlak血容量、patlak R 方程(PRS)、patlak残余指数、峰值等灌注参数，绘制灌注曲线及伪彩图。对良、恶性肺结节的灌注特征进行统计学分析，选择有显著性差异的观察指标构成多参数联合评分，运用多参数联合评分鉴别良、恶性结节。结果 良、恶性肺结节在注射造影剂开始20、22、24、25、26、28、30、34s时的强化值差异具有显著性。34s时斑片状全强化和边缘型不全强化在良、恶性肺结节间差异具有显著性。PRS、Ⅰ型和Ⅱ型灌注曲线、均匀低型或外高内低型P伪彩图及均匀低型PRS伪彩图等参数在良、恶性肺结节间差异具有显著性。以多参数联合评分>0.5分作为诊断恶性的界值，其敏感性、特异性分别为94.3%、41.2%。结论 多参数联合评分有助于鉴别孤立性肺结节的良、恶性。

关键词 动态增强CT 灌注 孤立性肺结节 评分

分类号

扩展功能

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Combined Scores of 64 Multi-slice CT Perfusion Characteristics for Evaluating Solitary Pulmonary Nodules

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Abstract ABSTRACT:Objective To study the bloody flow mode and the perfusion feature of solitary pulmonary nodules (SPN) on 64 multi-slice CT, and to evaluate the diagnostic value of combined scores in SPN. Methods Fifty-two patients with SPN proved by pathology or follow-up underwent dynamic enhancement CT. Perfusion characteristics, including permeability(P), blood flow, blood volume, patlak blood volume, patlak R square(PRS), patlak residual, peak enhancement, perfusion curve, and false color image were analyzed by the body perfusion software. Perfusion characteristics were compared between benign and malignant nodules. Combined scores composed of significant difference observed parameters were used to differentiate benign or malignant SPN. Results There were significant differences in the enhancement values at 20, 22, 24, 25, 26, 28, 30, and 34s, PRS, Ⅰ or Ⅱ type perfusion curve, and marginal uncomplete enhancement or patchy complete enhancement at 34s between benign and malignant SPN. With the multi-variant combined score >0.5 as the threshold value to differentiate benign and malignant SPN, its sensitivity and specificity was 94.3% and 41.2%, respectively. Conclusion The combined scores of 64 multi-slice CT can help differentiate the benign or malignant SPN.

Key words dynamic enhancement CT perfusion solitary pulmonary nodule score

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