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## 比较背景抑制全身弥散加权成像与SPECT对骨转移瘤的诊断价值

### Comparison of diffusion weighted whole body imaging with background body signal suppression and SPECT in diagnosis of bone metastasis

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中文关键词: [肿瘤转移](#) [扩散磁共振成像](#) [体层摄影术](#),[发射型计算机](#),[单光子](#)

英文关键词:[Neoplasm metastasis](#) [Diffusion magnetic resonance imaging](#) [Tomography, emission-computed, single-photon](#)

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中文摘要:

目的 比较背景抑制全身弥散加权成像(DWIBS)与SPECT诊断骨转移瘤的价值。方法 对62例经手术或穿刺病理证实的恶性肿瘤患者行DWIBS及SPECT检查;分别以病例数和病变累及区域为单位,计算DWIBS与SPECT对骨转移瘤诊断的灵敏度、特异度、阳性预测值、阴性预测值及正确指数。结果 62例中,临床证实骨转移瘤43例,累及区域183个。①以病例数计算:DWIBS诊断骨转移瘤的灵敏度为90.70%(39/43),特异度为89.47%(17/19),阳性预测值为95.12%(39/41),阴性预测值为80.95%(17/21),正确指数为0.80;SPECT诊断骨转移瘤的灵敏度为81.40%(35/43),特异度为68.42%(13/19),阳性预测值为85.37%(35/41),阴性预测值为61.90%(13/21),正确指数为0.50,DWIBS的诊断效果优于SPECT。②以病灶累及区域数计算:DWIBS诊断骨转移瘤的灵敏度为92.90%(170/183),特异度为94.99%(474/499),阳性预测值为87.18%(170/195),阴性预测值为97.33%(474/487),正确指数为0.88;SPECT诊断骨转移瘤的灵敏度为88.52%(162/183),特异度为91.58%(457/499),阳性预测值为79.41%(162/204),阴性预测值为95.61%(457/478),正确指数为0.80,DWIBS的诊断效果优于SPECT。结论 DWIBS是诊断骨转移瘤的有效方法,其诊断灵敏度和特异度优于SPECT,但二者诊断不同部位转移灶时存在差异。

英文摘要:

**Objective** To analyze the value of diffusion weighted whole body imaging with background body signal suppression (DWIBS) and SPECT for diagnosis of bone metastases. **Methods** Totally 62 patients with malignant tumors were enrolled and underwent DWIBS and SPECT. The sensitivity, specificity, positive predictive value, negative predictive value and Youden's index were calculated and compared. **Results** Forty-three of these 62 patients were diagnosed as bone metastases with 183 involved regions. Taking case number as study unit, the diagnostic sensitivity of DWIBS and SPECT was 90.70% (39/43) and 81.40% (35/43), the specificity was 89.47% (17/19) and 68.42% (13/19), the positive predictive value was 95.12% (39/41) and 85.37% (35/41), the negative predictive value was 80.95% (17/21) and 61.90% (13/21), and Youden's index was 0.80 and 0.50, respectively. Taking involved region number as study unit, the diagnostic sensitivity of DWIBS and SPECT was 92.90% (170/183) and 88.52% (162/183), the specificity was 94.99% (474/499) and 91.58% (457/499), the positive predictive value was 87.18% (170/195) and 79.41% (162/204), the negative predictive value was 97.33% (474/487) and 95.61% (457/478), and Youden's index was 0.88 and 0.80, respectively. **Conclusion** DWIBS is an effective method for detection of bone metastases, the sensitivity and specificity of which are higher than those of SPECT. However, there are differences between DWIBS and SPECT on detection of metastases in different involved regions.

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