

# 学 位 論 文 内 容 の 要 約

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論文題目	Multilevel model analysis for relation of external surface makers to internal target motion. (複数体表マーカと体内標的変位の関係におけるマルチレベル分析による検討)
学位論文内容の要約	
<p><b>(Purpose)</b> To analyze the relation of external surface makers to internal target motion using multilevel model analysis.</p> <p><b>(Patients and Methods)</b> Twenty-one patients treated with stereotactic body radiotherapy for lung or liver cancer were enrolled in the study after informed consent, and received computed tomography (CT) scans under 2 breath-hold conditions: at therapeutic phase (4 repeat scans) and at other phases (different scans). We measured displacement of the same landmark of normal lung structure (main branch of B9) in right lower lobe instead of tumor locations and different points of external surface markers (P1, second intercostal point on right midclavicular line; P2, 4th intercostal point on right mid-axillary line; P3, lower border point of sternal bone; P4, point on epigastric fossa). We analyzed relation among the displacement of anterior-posterior direction of P1(P1ap), the displacement of left-right direction of P2(P2lr), the displacement of anterior-posterior direction of P3(P3ap), the displacement of anterior-posterior direction of P4(P4ap), sex, age, forced expiratory volume in the first second (FEV1), body mass index (BMI), patterns in spirometry, anterior-posterior body thickness at lower border of sternal bone (AP thickness), and change in the anterior-posterior body thickness (APchange) to internal target motions: the displacement of left-right direction (Tlr), the displacement of anterior-posterior direction(Tap), and the displacement of cranio-caudal direction (Tcc) using multilevel model analysis. A significance level of <math>\alpha=0.05</math> was used.</p> <p><b>(Results)</b> According to the multivariate analysis, P1ap was significantly associated with Tlr(<math>p=0.0471</math>). P1ap and P4ap were significantly associated with Tap (respectively, <math>p=0.0007</math>, <math>p=0.0007</math>). Mixed disorder, obstructive disorder in spirometry, P1ap and P4ap were significantly associated with Tcc (respectively, <math>p=0.0376</math>, <math>p=0.0291</math>, <math>p=0.0024</math>, <math>p&lt;0.0001</math>).</p> <p><b>(Conclusion)</b> One or two points of external surface makers were significantly associated with internal target motion.</p>	

学位論文内容の要約（続紙）

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