

<b>Paper Category:</b>	Diagnosis and Aetiology
<b>Paper Title:</b> (Arial Font; 14 Pt Size)	Evaluation of Movement-related Phase Using Instrumented Five-Time Sit-To-Stand Test in Frail Older Adults
<b>Abstract Body:</b> (Arial Font; 12Pt Size)	<ul style="list-style-type: none"> <li>• Background</li> <li>• Objectives</li> <li>• Method</li> <li>• Results</li> <li>• Discussions and Conclusions</li> </ul>
<p>Background: The Sit-to-Stand (STS) test is a widely used to assess physical function in clinical and research settings with restricted time and spaces and is one of the most important components of standard screening for frailty and sarcopenia in older adults.</p> <p>Objectives: This study aimed to explore the characteristics of movement-related phases of the five-time STS among frail older adults.</p> <p>Method: This study included 144 community-dwelling older adults (mean age: 82.4±3.8 years, 57.6% women) from Korean Frailty and Aging Cohort Study, who underwent assessments of the Fried frailty phenotype and five-time STS. Non-frail group was matched 1:3 with the frail group by sex and age. During the five-time STS, a device equipped with loadcells and LiDAR sensors was utilized to measure the participant's seated weight and posture. The five-time STS movements were divided into the following phases: first rising, initial STS, second STS, third STS, and final STS, and the total duration. Through multiple forward logistic regression analysis, we identified the phase of the five-time STS most strongly associated with frailty.</p> <p>Results: The increase in duration was observed across all phases for the frail group (all <math>p &lt; 0.05</math>). The results of the multiple forward logistic regression analysis revealed that among the five phases, the initial STS (odds ratio=2.35, 95% confidence interval=1.59–3.48) was linked to an increased risk of frailty. The initial STS duration was recorded as 2.73±0.85 seconds for the non-frail group and 4.00±1.79 seconds for the frail group, indicating a significantly longer duration in the frail group (<math>p &lt; 0.001</math>). However, no statistically significant association was found between the coefficient of variation of phases and frailty.</p> <p>Discussions and Conclusions: Among the phases of the five-time STS, the duration of the initial STS phase indicated as the most robustly associated with frailty. The initial STS can be useful screening tool for identifying the risk of frailty among community-dwelling older adults.</p>	