**Introduction**

- Cancer patients undergoing treatment
  - The successful mission completion/survival of warfighters
  - Technology to measure performance
- Exceptional development of sensors
  - 3D Camera sensor (Depth, Infrared, RGB, …)
  - Wearable sensor

**Previous Work**

- Mobility Assessment using a Single 3D Sensor
  - [1](#)
- Activity Recognition Using Wrist-Worn Sensors for Human Performance Evaluation
  - [2](#)

**Condition**

- PS [3](#) remains best predictor of patient survival in patients with metastatic cancer: better than genomics, blood based biomarkers, imaging
- Evaluation limited to observations during visits

**Motivation**

**System**

**Home Remote Patient Monitoring**

- Tasks for Clinical Study
  - Chair to Exam-Table
  - Get-Up and Go

**In the Clinic**

- Mobility Recording / Process

- Mobility Data Analysis


**Related Research**


**ECOG Performance Status Scale**

<table>
<thead>
<tr>
<th>Grade</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Normal activity. Fully active, able to carry on all pre-disease performance without restriction.</td>
</tr>
<tr>
<td>1</td>
<td>Symptoms but ambulatory. Restricted in physically strenuous activity, but ambulatory and able to carry out work of a light or sedentary nature (e.g., light housework, office work).</td>
</tr>
<tr>
<td>2</td>
<td>In bed less than 50% of the time. Ambulatory and capable of all self-care, but unable to carry out any work activities. Up and about more than 50% of waking hours.</td>
</tr>
<tr>
<td>3</td>
<td>In bed more than 50% of the time. Capable of only limited self-care, confined to bed or chair more than 50% of waking hours.</td>
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<tr>
<td>4</td>
<td>100% bedridden. Completely disabled. Cannot carry on any self-care. Totally confined to bed or chair.</td>
</tr>
<tr>
<td>5</td>
<td>Dead.</td>
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</tbody>
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