“Sarcopenia and Physical frailty IN older people: multi-component Treatment strategies” (SPRINTT)
SPRINTT: the challenge

“Developing innovative therapeutic interventions against physical frailty and sarcopenia (ITI-PF&S) as a prototype geriatric indication”

- **Problem:** Physical Frailty and Sarcopenia (PF&S) are major determinants of unsuccessful ageing → disability
  - prevention of disability in old age is a major unmet medical need

- **Innovation:** Operationalisation of PF&S with the definition of a “real-world” population with a pre-disability condition

- **Impact:** The identified population will:
  - Provide “real-world” older persons to test drug/procedures in RCTs
    - Define the «comparator» intervention effect size
  - Fight unsuccessful ageing
Operationalisation of PF&S

SARCOPENIA
- Weakness
- Slow walking speed
- Balance problems

FUNCTIONAL DEFICITS (SPPB)
- Impaired cognition
- Mood complaints
- Socioeconomic problems
- Geriatric syndromes (i.e., incontinence, pressures ulcers, delirium, malnutrition, etc.)

PHYSICAL FRAILTY

NEGATIVE HEALTH OUTCOMES
Mobility disability, falls, loss of independence, institutionalization, death

Focus on function vs. disease(s)

Additional interventions
Lifestyle modifications
## Results

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>MCI (N=759)</th>
<th>HALE (N=758)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years)</td>
<td>79.1 (5.9)</td>
<td>78.7 (5.7)</td>
</tr>
<tr>
<td>Female (%)</td>
<td>546 (71.9%)</td>
<td>540 (71.2%)</td>
</tr>
<tr>
<td>White (%)</td>
<td>670 (98.4%)</td>
<td>665 (98.2%)</td>
</tr>
<tr>
<td>Weight (kg)</td>
<td>70.7 (13.0)</td>
<td>70.5 (16.0)</td>
</tr>
<tr>
<td>BMI (kg/m²) ≥ 30 kg/m² (%)</td>
<td>28.6 (5.9)</td>
<td>28.6 (6.0)</td>
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<tr>
<td>SARC-F ≤4 (%)</td>
<td>2.9 (1.8)</td>
<td>3.0 (1.3)</td>
</tr>
<tr>
<td>SPPB total score 3-7 (%)</td>
<td>6.7 (1.4)</td>
<td>6.7 (1.4)</td>
</tr>
<tr>
<td>MMSE total score</td>
<td>27.9 (1.8)</td>
<td>27.9 (1.9)</td>
</tr>
<tr>
<td>400-m walk test (min)</td>
<td>8.7 (2.5)</td>
<td>8.7 (2.4)</td>
</tr>
<tr>
<td>DXA (local values)</td>
<td></td>
<td></td>
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<tr>
<td>aLM (kg) (M/F)</td>
<td>21.0 (3.4)</td>
<td>21.1 (3.6)</td>
</tr>
<tr>
<td>aLM/BMI (M/F)</td>
<td>0.728 (0.086)</td>
<td>0.723 (0.084)</td>
</tr>
</tbody>
</table>

Marzetti et al., Experimental Gerontology 113 (2018) 48–57
Public-Private Partnership

RCT expertise

Academia

ICT

Biomarkers

EFPIA

Scientific background