**Supplementary Table 1.** Subgroup comparisons in fasciculation intensity between antagonistic muscles with different level of muscle strength in ALS patients.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  |  | Muscle strength (MRC) | Elbow Flexor-Extensor | Wrist Flexor-Extensor | Knee Extensor-Flexor | Ankle Flexor-Extensor |
| Progression rate(48-ALSFRS-R score/duration) | <1 | 0-1 | ns | ns | ns | ns |
| 2-4 | ns | \* | \*\*\*\* | \*\* |
| 5 | ns | \*\* | \* | ns |
| ≥1 | 0-1 | ns | ns | ns | ns |
| 2-4 | ns | ns | ns | ns |
| 5 | ns | ns | \* | ns |
| Clinical subtypes | UMN+LMN | 0-1 | ns | ns | ns | ns |
| 2-4 | ns | \* | \* | \*\*\* |
| 5 | \* | \*\* | \* | ns |
| LMN | 0-1 | ns | ns | ns | ns |
| 2-4 | ns | ns | ns | ns |
| 5 | ns | \* | ns | ns |

Abbreviations: amyotrophic lateral sclerosis ALS, medical research council MRC, ALS Functional Rating Scale-Revised ALSFRS, upper motor neuron UMN, lower motor neuron LMN.

Note: ns no significance, \*<0.05, \*\*<0.01, \*\*\*<0.001, \*\*\*\*<0.0001.

**Supplementary Table 2.** Differences in fasciculation intensity between antagonistic muscles in non-ALS patients

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  | Elbow flexor | Elbow extensor | Wrist flexor | Wrist extensor | Knee flexor | Knee extensor | Ankle flexor | Ankle extensor |
| Multifocal motor neuropathy (n=9) | mean±SD | 0.22±0.43 | 0.17±0.38 | 0.89±1.18 | 0.94±1.39 | 0.06±0.24 | 0.11±0.32 | 0.39±0.78 | 0.56±0.78 |
| *p* | 0.58 | 0.77 | 0.58 | 0.38 |
| Cervical spondylosis or lumber spondylosis (n=18) | mean±SD | 0.17±0.51 | 0.22±0.59 | 0.28±0.66 | 0.33±0.68 | 0.11±0.47 | 0.14±0.49 | 0.17±0.38 | 0.03±0.17 |
| *p* | 0.49 | 0.68 | 0.32 | 0.06 |
| Peripheral neuropathy (n=31) | mean±SD | 0.17±0.51 | 0.22±0.59 | 0.28±0.66 | 0.33±0.68 | 0.11±0.47 | 0.14±0.49 | 0.17±0.38 | 0.03±0.17 |
| *p* | 0.49 | 0.68 | 0.32 | 0.06 |
| Myopathy (n=7) | mean±SD | 0.00±0.00 | 0.14±0.54 | 0.00±0.00 | 0.00±0.00 | 0.14±0.36 | 0.00±0.00 | 0.21±0.43 | 0.07±0.27 |
| *p* | 0.34 | 1.00 | 0.17 | 0.34 |

Abbreviations: amyotrophic lateral sclerosis ALS, standard deviation SD

Note: *P*-values with significant differences are listed in bold type.