**Table S1**. Detailed information about the demography of participants and aims of studies.

| Study | Year | Type of study | Number of participants | Number of observers | Sex (Male; Female) | Described diseases | Stage of disease | Age [years] | Age range [years] |
|---|---|---|---|---|---|---|---|---|---|
| Huang X.et al. [15] | 2018 | Prospective study (5 years follow-up) | 125 | 2 | (75; 50) | PD | early stage only | 63.47 ± 8.99 | no data |
| Moccia M. et al. [16] | 2014 | Cross-sectional study | 80 | a few physicians | (51; 29) | PD | early stage only | 59.3 ± 7.9 | 42-74 |
| Pan M. et al. [17] | 2012 | Cross-sectional study | 80 | a few physicians | (41; 39) | PD, VP (excluded) | no data | 60.25±12.24 | 17-88 |
| van Wamelen. et al. [18] | 2020 | Cross-sectional study | 87 | no data | (64; 33) | PD | no data | 68.34±10.34 | no data |
| Moccia M. et. al. [19] | 2015 | Prospective study (2 years follow-up) | 69 | a few physicians | (44; 25) | PD | early stage only | 59.5 ± 8.3 | 44-74 |
| Chen D. et al. [20] | 2015 | Cross-sectional study | 107 (60 PD, 47 MSA) | a few physicians | PD: (34; 26), MSA: (31; 16) | PD, MSA | no data | PD: 63.10 ± 10.62, MSA: 58.74 ± 10.18 | PD: 41-80, MSA: 23-79 |
| Yang T. et al. [21] | 2020 | Cross-sectional study | 556 | no data | (324; 232) | PD | all stages | 68.37 ± 10.47 | 36-92 |

| Study | Disease duration [years] | Hoehn-Yahr scale (mean points) | UPDRS part III (mean points) | Other scales (mean points) | LEDD [mg] | Aim of the study |
|---|---|---|---|---|---|---|
| Huang X.et al. [15] | 4.19 ± 3.44 | 1.91 ± 0.36 | 21.30 ± 10.19 | no data | 210.64 ± 152.38 | Investigate the relation between serum UA and motor subtypes of PD and NMS in the early PD stage. |
| Moccia M. et al. [16] | 1.1 ± 0.48 | 2 | 15.25 ± 7.7 | no data | no data | Uncovering the correlation between serum UA and NMS occurrence in de novo PD. Settling if serum UA could be a useful marker for early NMS occurrence |
| Pan M. et al. [17] | 4.10 ± 3.65 | 2.21 ±1.12 | 22.90 ± 9.77 | no data | no data | Comparison of serum UA in healthy individuals with PD and VP comparing age, disease duration, motor dysfunctions and NMS between PD and VP patients assessing whether UA levels in PD and VP are related to low motor function and levodopa dosage. |
| van Wamelen. et al. [18] | 11.92 ± 6.50 | 3 | no data | SCOPA-Motor Scale: 14.20±6.74 | 634.97 ± 542.25 | Inspect the presence of correlation between serum UA and incidence of specific domains in NMSS. Investigate the correlation between serum UA levels and higher frequency of NMS incidence in a larger and more diverse cohort of PD patients (using structured outcomes for NMS and motor scores). |
| Moccia M. et. al. [19] | no data | no data | 15.6 ± 7.7 | no data | 339.5 ± 136.9 | Assessing the usefulness of baseline UA levels as a marker for progression of newly diagnosed PD evaluating the relation between baseline UA levels and progression of motor dysfunctions and requirement of antiparkinsonian drugs. |
| Chen D. et al. [20] | no data | PD: 2.18 ± 0.95, MSA: 3.21 ± 0.81 | no data | UMSARS: 36.17 ± 10.49 | no data | Examining whether inflammatory mediators such as CRP, homocysteine (Hcy) and UA influence the severity and frequency of MSA in comparison to PD and control. Assessing if serum CRP, |

| | | | | | | |
|---|---|---|---|---|---|---|
| Yang T. et al. [21] | 6.34 ± 4.80 | 2.41 ± 0.73 | 25.02 ± 12.37 | no data | 420.32 ± 231.52 | Hcy and UA in MSA patients are associated with motor and non-motor symptoms and specific NMSS domains. Determining the diagnostic values of serum CRP, Hcy and UA for MSA. Evaluation of connection between patients' nutritional status and progression of PD. |

Abbreviations: PD, Parkinson's Disease; MSA, multiple system atrophy; VP, vascular parkinsonism; UPDRS, Unified Parkinson's Disease Rating Scale; LEDD, Levodopa Equivalent Daily Dose; UA, uric acid; NMS, non-motor symptoms; CRP, C-reactive protein; Hcy, homocysteine.