have argued that it could represent a distinct clinical entity. The present study undertook in depth phenotyping along with assessment of cortical function to further explore disease pathophysiology in MND with malignancy (MND-M) patients.

**Methods** Clinical features along with assessment of peripheral and cortical function was undertaken in 13 MND-M and results were compared to sporadic and familial MND cohorts.

**Results** From a cohort 13 patients (10 males; aged 65.2±2.0 years), 30.8% were diagnosed with a haematological malignancy. The lower motor neuron phenotype predominated in the in the MND-M patients (χ²=10.8, P<0.01), with the upper motor neuron (UMN) score being significantly reduced in MND-M patients compared to sporadic and familial MND cohorts (χ²=6.84, P<0.01). The neurological deficits did not respond to treatment of the underlying malignancy in the majority of MND-M (92%) patients, and as such there were no significant differences in survival between the cohorts. Despite a paucity of UMN signs, cortical hyperexcitability was evident in MND-M patients, as indicated by reduction in short interval intracortical inhibition (P<0.01) and increase in motor evoked potential amplitude (P<0.01), that were similar to findings in sporadic and familial MND cohorts.

**Conclusions** The present study suggests that MND-M falls within the spectrum of MND. A co- incidental association between MND and malignancy is underscored by cortical dysfunction and clinical findings which seems within the spectrum of abnormality evident in classical MND phenotypes.

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**Abstracts**

**HOW TO DIAGNOSE LEWY BODY DEMENTIA? PREVALENCE AND UNDERLYING RELATIONSHIP BETWEEN CLINICAL AND NEUROPSYCHOLOGICAL FEATURES OF DLB**

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**Introduction** Despite its importance for management, prognostication and selection of patients for clinical trials, the diagnosis of Dementia with Lewy Bodies (DLB) remains challenging. Complicating this is a recent change in the diagnostic criteria which has arguably shifted the expected phenotype of DLB patients. In this study we aimed to characterize and examine the relationship between cognitive and clinical diagnostic variables in DLB patients to uncover latent symptom clusters that may streamline future diagnostic approaches in the clinic.

**Methods** The clinical and neuropsychological profile of 27 prospectively recruited participants diagnosed with probable DLB and 25 age-matched controls was characterized according to the most recent consensus criteria. Symptoms were scored using a novel combination of established clinical and research instruments.

**Results** We demonstrate comparable sensitivity of formal neuropsychological testing and bedside screening tools (MOCA/MMSE) for identifying domain-specific differences between controls and patients (p<0.001). Optimal sensitivity thresholds for diagnosis of Parkinsonism (88.9%) were explored yielding a prevalence range of 50%-90% within our cohort. Factor analysis using all core and supportive features of the diagnostic criteria identified 6 independent factors accounting for 81% of the total variance. Unique relationships identified included between hallucinations and fluctuations and excessive daytime somnolence; between REM sleep behavior disorder and orthostatic hypotension; and Parkinsonism and urinary disturbance. ‘Prodromal’ symptoms including autonomic and early neuropsychiatric features are represented in the remaining factors.

**Conclusion** Parsimonious delineation of clinical variables using identified symptom clusters can aid DLB diagnosis. Clusters are also used to highlight latent pathological relationships. Appropriate instruments and thresholds for detecting dementia and core and suggestive features are presented.

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**PREDICTING PARKINSON’S AND DEMENTIA WITH LEWY BODIES (PRE-D) RESEARCH STUDY – A SYDNEY-BASED LONGITUDINAL BIOBANKING PROGRAM**

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**Introduction** Idiopathic REM sleep behaviour (iRBD) disorder represents the most specific prodromal marker of an