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## Closing the gap between objective measures and self-report in fibromyalgia

### SP0185 DIVERGENCES BETWEEN OBJECTIVE AND SELF-REPORTED PHYSICAL FUNCTION IN FIBROMYALGIA

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In fibromyalgia (FM), intolerance to physical activity, with increased pain and experience of early muscle fatigue, is a predominant feature. Furthermore, shorter endurance times and higher perceived effort during physical activity compared with healthy controls are characteristic. However, there are discrepancies between physical functioning as perceived by the patients and as measured objectively or during performance tests. For example, in 840 FM patients and 122 healthy controls, we found reduced muscle strength in approximately 50% of the FM patients. However, the patients with subnormal muscle strength did not self-report worse symptoms or more physical disablement than those with normal muscle strength. Much like central sensitization of pain, it has been suggested that impaired sensory-motor interaction is present in FM, which may be a cause for observed discrepancies between perceived and objective signs of muscle fatigue. That is, the sensory inputs to the central nervous system during a physical activity are over-interpreted, leading to amplified sensations of fatigue and discomfort normally associated with exhausting muscle work.

To illuminate this we conducted a controlled experiment, in which FM patients and health controls completed a muscle exhaustion test, while objective measures of muscle fatigue were collected by electromyography in parallel with reporting of perceived muscle fatigue. The results suggest that among FM patients, central nervous system processes normally associated with muscular fatigue were present, yet without any evidence of peripheral muscle fatigue. The study supports a hypothesis about abnormal sensory-motor interaction among FM patients that can explain the discrepancies between perceived and observed physical disability in FM.

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### SP0186 COGNITIVE FOG: SUBJECTIVE AND OBJECTIVE UNDERSTANDINGS OF THE SYMPTOM OF DYSCOGNITION

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Dyscognition refers to the complaint that a person's ability to perform thinking tasks is impaired. This complaint is colloquially known as "brain fog". It is a major symptom of a variety of disorders and associated with considerable work and social disability for those experiencing it. However, attempts to demonstrate objective cognitive impairment in persons reporting "brain fog" have not been straightforward. In this lecture, the symptom of cognitive dysfunction will be described from the patient's point of view, using fibromyalgia as a disease model. The cognitive tests used to determine objective alterations in cognitive ability will be reviewed, the amount of objective impairment demonstrated in fibromyalgia will be placed into clinical context, and the "disconnect" between what the experience of dyscognition is and the cognitive content measured by modern testing will be discussed. The poor relationship between the magnitude of subjective dyscognition and objective cognitive performance will be examined, including evidence gleaned from neurological imaging studies. In conclusion, the experience of cognitive fog is not well captured by current testing paradigms. Subjective complaint is a poor predictor of objective cognitive performance. The neuronal mechanisms responsible for the experience of cognitive fog may be separate from those required to perform cognitive tasks.

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### SP0187 ASSOCIATIONS OF PAIN-RELATED COGNITIONS WITH THE DISCORDANCE BETWEEN SUBJECTIVE AND OBJECTIVE PHYSICAL FUNCTION IN FIBROMYALGIA: THE AL-ÁNDALUS PROJECT

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**Background:** In fibromyalgia, there is a disagreement between patients' self-reports and performances; i.e., subjective and objective status, respectively.

**Objectives:** First, to test the discordance between subjective and objective measures of physical function. Second, to determine whether catastrophizing and self-efficacy are independently associated with this discordance.

**Methods:** Four hundred and five fibromyalgia females and 193 age-matched female controls. Participants filled out the Pain Catastrophizing Scale, Chronic Pain Self-efficacy Scale, and physical functioning subscales of the Revised Fibromyalgia Impact Questionnaire (FIQR) and Short Form-36 (SF-36) health survey. Objective physical function was measured with a battery of performance-based tests (e.g., 6-min walk test). Subjective and objective physical function were expressed as deviation from the general population in standard deviation (SD) units using means and SD of the control group.

**Results:** Fibromyalgia participants reported a worse physical function than performed ( $p < .001$ ). We found a consistent association of higher catastrophizing with greater discordance between subjective and objective physical function. A significant association of higher self-efficacy with lower discordance was only found when subjective physical function was reported on the SF-36 but not on the FIQR.

**Conclusions:** Although both are markedly impaired, subjective physical function is more impaired than objective physical function in fibromyalgia. Catastrophizing is associated with this discordance. In rehabilitation settings, physical function of fibromyalgia females should be evaluated by both subjective and objective assessments to fully understand their physical function.

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### SP0188 THE DRUGS DON'T WORK

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This presentation will depict the journey of Louise, a previous school teacher and a single mother of two, living with Fibromyalgia as well as multiple other diagnoses. Louise will discuss her feelings around being diagnosed with Fibromyalgia, how this was communicated to her and what this meant for her career and family life. Following this, Louise will share her journey through the secondary care as a Fibromyalgia patient, and her own search for answers and cure to Fibromyalgia in an attempt to salvage her life and independence, prior to accepting that this is a long-term condition which will require self-management and perseverance. In addition, Louise will share her thoughts on pain and fatigue in Fibromyalgia, and how the "drugs don't work".

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## Interactive cases from the HOT and WIN sessions

### SP0189 HOT SESSION: INTERACTIVE CLINICAL ASPECTS AND CASES ON VASCULITIS TREATMENT

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The systemic vasculitides are characterized by inflammation of blood vessels resulting in end organ, or tissue damage or necrosis. They are defined by the Chapel Hill nomenclature according to the calibre of the predominantly affected vessels. Other forms of vasculitis not defined by a predominant vessel size are also recognized (e.g. Behcet's syndrome). Large vessel vasculitides include giant cell arteritis and Takayasu arteritis; medium vessel vasculitides includes Kawasaki disease and PAN; small vessel vasculitides are divided into: immune complex small vessel vasculitis and anti-neutrophil cytoplasm antibody (ANCA) - associated vasculitis (AAV). The immune complex group, with moderate to marked vessel wall deposits of immunoglobulin and/or complement, is represented by anti-glomerular basement membrane disease, cryobulinaemic vasculitis, hypocomplementaemic urticarial vasculitis (anti-C1q vasculitis) and IgA vasculitis (Henoch-Schönlein). By contrast, AAV has few or no immune deposits and is associated with (in most cases) the presence of ANCA specific for myeloperoxidase (MPO-ANCA) or proteinase 3 (PR3-ANCA). Depending on their clinical presentation and ANCA specificity, AAV is divided into three major variants: granulomatosis with polyangiitis (GPA) (Wegener's granulomatosis), microscopic polyangiitis (MPA) and eosinophilic granulomatosis with polyangiitis (EGPA) (Churg-Strauss syndrome). In some cases, vasculitis is relatively trivial and may lead to minor, often asymptomatic clinical features such as splinter haemorrhages. However, in severe forms of ANCA associated vasculitis, the consequences of rapid onset of ischaemia and occlusion of blood vessels can lead to organ failure and death.

The multisystem involvement in most forms of vasculitis can be a real challenge. Patients may present to different specialists resulting in diagnostic delay. The investigation of patients with suspected vasculitis should follow on from a careful history and examination to determine the likely diagnosis. The differential diagnosis is very wide. It is important to correctly identify patients with vasculitis as early as possible, but it is also important to rule out more common causes. In acutely unwell patients, the differential diagnosis depends on the combination of clinical features. Vasculitides tend to involve multiple organ systems. In fact, the more organ systems affected, the more likely it is that the patient has vasculitis.