*Methods* We have a complex psychopathological and psychodiagnostic research 97 IDPs in volunteer center, located at the central train station in Kharkiv.

**Results** In total, 75.9% of IDPs observed have violations of adaptation: long-term depressive reaction (*F* 43.21) and predominant disturbance of other emotions (*F* 43.23). The men reactive alarm indicators (average  $-37.7\pm3.0$ ), were higher than trait anxiety (average  $-32.6\pm2.9$ ). On the contrary, women figures trait anxiety (average  $-34.7\pm3.0$ ). Severity of depressive symptoms also slightly prevailed in women. The mean score on the Hamilton scale for men was  $17.0\pm2.3$  points, women  $-18.0\pm2.3$  points. Test results on a scale of quality of life showed no significant differences between men and women. We have developed a medical and psychological support system to correct the neurotic disorders in IDPs.

*Conclusions* The majority of people who left the ATO zone have emotional disorders of different severity and require a further correction in the specialized medical institutions.

*Disclosure of interest* The authors have not supplied their declaration of competing interest.

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# Neuroimaging

## EW342

## Prefrontal cortical thickness related to negative symptoms in antipsychotic-naive, first-episode psychotic patients

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*Introduction* A significant cortical thinning has been repeatedly observed in adult-onset first-episode schizophrenia patients compared to healthy controls, mostly in medial and inferior prefrontal cortices. However, it is yet unclear whether all these replicated alterations are related to any particular clinical feature.

*Objectives* This study aimed to investigate differences of cortical thickness in a sample of first-episode, drug-naive psychotic patients and age- and gender-matched healthy controls and explore clinical correlates of these parameters regarding negative symptoms.

*Methods* High-resolution T1-weighted images were acquired from 23 antipsychotic-naive, first-episode psychotic patients and 26 age-matched healthy comparison subjects. Clinical features were measured with the negative subscale of the Positive and Negative Syndrome Scale (PANSS) at baseline and after a 2-month follow-up period.

*Results* No differences were found regarding age or gender when comparing patients and controls. We found a significant cortical thinning in the left medial orbitofrontal cortex and in the right lateral orbitofrontal cortex in patients compared to healthy age- and gender-matched controls. Regarding clinical performance, no correlation was found at baseline between left medial orbitofrontal nor right lateral ortitofrontal cortical thickness and scores of the

negative subscale of the PANSS. However, at the 2-month evaluation clinical performances were significantly associated to the left medial orbitofrontal cortical thickness values.

*Conclusions* Cortical thickness alterations in prefontal cortex appear to be present at disease onset and these alterations may relate to clinical outcome. However, our findings must be considered just as exploratory. Larger longitudinal studies may help characterize, replicate and consolidate these findings.

*Disclosure of interest* The authors have not supplied their declaration of competing interest.

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## EW344

# Decreased interhemispheric functional coordination underlying the cognitive impairment in late-onset depression

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*Background* The intuitive association between cognitive dysfunction in late onset depression (LOD) and the aberrant functional activity in the brain's default-mode network (DMN) has prompted interest in exploring the role of the DMN in LOD. The altered pattern of resting state voxel-mirrored homotopic connectivity (VMHC) in cognitive processes is not yet well understood in LOD.

*Methods* The study was designed to examine the implicit coupling between the alteration of interhemispheric functional coordination and cognitive impairment in LOD. Thirty-one LOD patients and 37 matched healthy controls (HC) underwent neuropsychological tests and functional magnetic resonance imaging (fMRI) in this study.

*Results* Compared to HC group, attenuated VMHC in superior frontal gyrus, superior temporal gyrus, posterior cerebellar lobe, postcentral and precentral gyrus was observed in LOD. Neurobehavioral relevancy approach revealed that the imbalanced interhemispheric functional coordination in bilateral cerebellum was positively correlated with the performance of trail making test in LOD (r = 0.367, P = 0.040).

*Conclusion* Altered linkage pattern of intrinsic homotopic connectivity and cognition was firstly investigated in LOD, and it would provide a novel clue to reveal the neural substrates underlying the cognitive dysfunction in LOD.

*Keywords* Late-onset depression; Voxel-mirrored homotopic connectivity; Functional magnetic resonance imaging; Cognitive function; Cerebellum

*Disclosure of interest* The authors have not supplied their declaration of competing interest.

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### EW347

# The inattentive and hyperactive brain: Significant links between corpus callosum features and ADHD symptoms in adulthood

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*Introduction* Neuroimaging studies of attentiondeficit/hyperactivity disorder (ADHD) have revealed structural deviations of the corpus callosum in children and adolescents. However, little is known about the link between callosal morphology and symptoms of inattention or hyperactivity in adulthood, especially later in life.

*Objective* We aimed to further expand this understudied field by analyzing a large population-based sample of 280 adults (150 males, 130 females) in their late sixties and early seventies.

*Methods* We applied a well-validated approach capturing the thickness of the corpus callosum with a high regional specificity at 100 equidistant points. In addition to correlating point-wise callosal thickness with ADHD symptom measures within the whole sample, we tested for sex interactions.

*Results* There were significant sex interactions with respect to measures of inattention and hyperactivity, with follow-up analyses revealing significant negative correlations in males (see Fig. 1 – Top). In contrast, there were positive correlations with respect to hyperactivity only in females (see Fig. 1 – Bottom).

*Conclusion* A thinner corpus callosum may be associated with fewer fibers or less myelination. Thus, the negative correlations, as observed in males, suggest an impaired inter-hemispheric communication necessary to sustain motor control and attention, which may contribute to symptoms of hyperactivity, impulsivity and/or inattention. The functional relevance and underlying mechanisms of the positive correlations, as detected in females, remain to be resolved.

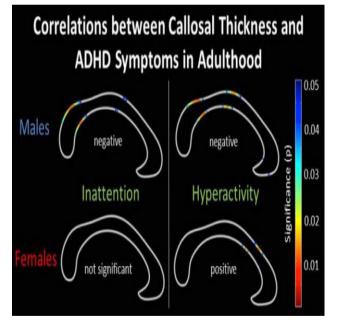


Fig. 1

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#### EW348

## Gamma band dysfunction in patients with schizophrenia during a Sternberg Task: A wavelet analysis

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*Background* Increasing body of evidence suggest that patients with schizophrenia (SCZ) present dysfunction of the gamma band oscillations (GBO) during cognitive tasks. The current study aimed to explore the GBO activity in SCZ during a Sternberg task.

*Materials and methods* Twenty-eight chronic stabilized SCZ and 18 healthy controls (HC), were recruited. Ongoing EEG was recorded during the execution of the Sternberg task. Continuous EEG data were band-pass filtered (1–100 Hz) and corrected for eye blink and muscle artefacts by ICA. For each subject, the event-related-spectral-perturbation (ERSP) and the inter-trial-coherence (ITC) were computed at the Pz channel only for those stimulus-locked segments containing correct responses. GBO wavelet analysis was performed with two different increasing cycle ranges (3 to 5.8 and 12 to 22.6; frequency range: 30–90 Hz), to obtain the best information about temporal and frequency dynamics. Student's t test (with multiple comparisons FDR correction) was used to compare the groups.

*Results* During the manteinance phase (4000 to 4600 ms after the stimulus onset), SCZ presented a significant increase, respect to HC, in low GBO activity (range: 30-50 Hz;). In the other phases of the Sternberg task (encoding, probe presentation and response periods), no significant difference in GBO was observed between SCZ and HC.

*Conclusions* These findings are in line with the evidence that GBO dysfunction in SCZ is present during selective phases of the working memory task. Future studies have to clarify the role of GBO dysfunction on the cognitive performance and the clinical utility of selective GBO modulation during cognitive rehabilitation.

*Disclosure of interest* The authors have not supplied their declaration of competing interest.

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### EW349

## Sweet and bitter taste perception in anorexia nervosa: A functional MRI study

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*Introduction* Taste perception is a complex phenomenon modulated by different factors, such as taste receptors and memory brain circuits. The palatability of the food, that activates the central reward pathways, also plays an important role in taste perception. It means that taste is able to influence the choice of food and then eating behaviour.

*Objectives* It is well known that people with anorexia nervosa (AN) have a lower sensitivity to reward stimuli and recent stud-