specificity=86.9%) at the baseline and BAC of 79.7% (sensitivity=75.9%, specificity=83.6%) at the follow-up. In the NFBC 1966 schizophrenia patients, we found that SVM decision scores varied as a function of timepoint into the direction of more schizophrenia-likeness at the follow-up (paired T-test, Cohen's d=0.58, P=0.004). The same was not true in controls (Cohen's d=0.09, P=0.49). The SVM decision score difference*timepoint interaction related to the decrease of hippocampus and medial prefrontal cortex. The SVM models' performance was also validated at the two replication samples (BAC of 77.5% in the CNP and BAC of 69.1% in the NMorphCH). In the NFBC 1966 the strongest clinical variable correlating with the trajectory of SVM decision scores over the follow-up was poor performance in the California Verbal Learning Test. This finding was also replicated in the CNP dataset. Further, in the NFBC 1966, those schizophrenia patients with a low degree of SVM decision scores had a higher probability of being in remission, being able to work, and being without antipsychotic medication at the follow-up. The generalization of the SVM models to MDD was worse compared to schizophrenia classification (DeLong's tests for the two ROC curves: P<0.001).

Discussion: The degree of schizophrenia-related neurodiagnostic fingerprints appear to magnify over time in schizophrenia. By contrast, the discernibility of these fingerprints in controls does not change over time. This indicates that the NF captures some schizophrenia-related progressive neural changes, and not, e.g., normal aging-related brain volume loss. The fingerprints were also generalizable to other schizophrenia samples. Further, the fingerprints seem to have some disorder specificity as the SVM models do not generalize to depression. Lastly, it appears that a low degree of schizophrenia-related NF in schizophrenia might possess some value in predicting patients' future remission and recovery-related factors.

T158. NO ALTERATION OF PITUTARY VOLUME IN PATIENTS WITH FIRST-EPISODE SCHIZPHRENIA BUT A TREND OF ENLARGEMENT IN NON-PSYCHOTIC FIRST-DEGREE RELATIVES

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Background: There is growing evidence suggesting that the abnormal pituitary volume (PV) may be an essential deficit in schizophrenia spectrum disorders, and PV may change depending on the stage of the illness. However, previous studies assessing PV in schizophrenia spectrum disorders, especially in ultra-high risk individuals, were confounding. The present study aimed to assess whether there would be alteration of the PV in patients with first-episode schizophrenia and their non-affected first-degree relatives.

Methods: This study recruited 147 subjects, including subjects with 62 first-episode schizophrenia (31 man, 31 female), 25 non-psychotic first-degree relatives (11 male, 14 female), and 60 healthy controls (30 male, 30 female). All of them underwent a T1 weighted image magnetic resonance imaging using 3T MRI Scanner (Siemens, Germany). All volumes were examined with the 3D-Slicer 4.10.1 (Surgical Planning Laboratory, Brigham and Women's Hospital, USA; http://www. slicer.org/). The PV was traced in all coronal slices with well-defied boundaries (such as diaphragma sellae (superiorly), the sphenoid sinus (inferiorly), the cavernous sinuses(bilaterally)). The infundibular stalk was excluded while the bright posterior pituitary was included. All images were tranced manually by a trained rater who was blind to the participants' group assignment. In a random subset of 24 cases, both the inter-rater reliability (intraclass correlation coefficient r=0.916, p<0.001) and the intra-rater reliability (intraclass correlation coefficient r=0.924 p<0.001) were high. We conducted MANCOVA with gender, and whole brain volumes (WBV) as covariates to compare the PV among the groups.

Results: We found no significant differences in gender ratio, age, and WBV (p>0.05) among the three groups, but patients with first-episode schizophrenia showed shorter length of education than healthy controls (p<0.001). As expected, we found that male participants in general (Mean ± SD: 486.85 ± 100.24) exhibited a prominently smaller PV than female participants (Mean ± SD: 562.13 ± 102.90) after controlling for WBV (t=25.087, p<0.001). Findings from MANCOVA analysis showed that although first-episode schizophrenia patients (Mean ± SD: 523.81 ± 116.41) and healthy controls (Mean ± SD: 513.17 ± 103.57) showed no significant difference in PV (F=0.581, p=0.447), there was a trend of statistical significance in their non-psychotic first-degree relatives (Mean ± SD: 557.85 ± 93.58) compared with healthy controls (F=3.334, p=0.072). We also found a negative correlation between the duration of treatment and PV in female schizophrenia patients (r=-0.398, p=0.029), whose mean duration of treatment was 4.71 months (SD=2.18 months). No significant correlation was observed in in male patients.

Discussion: Our findings found no alteration of PV in first-episode schizophrenia patients but a trend of enlargement was observed in their non-psychotic first-degree relatives. Moreover, female schizophrenia patients with longer duration of treatment exhibited smaller PV. These findings suggested that the enlarged PV might be an early detection signal for individuals with potentially high risk of developing into schizophrenia, and such an enlargement of PV might be responsive to antipsychotic medications.

T159. STRUCTURAL BRAIN ABNORMALITIES IN SCHIZOPHRENIA IN ADVERSE ENVIRONMENTS: EXAMINING THE EFFECT OF POVERTY AND VIOLENCE IN SIX LATIN AMERICAN CITIES

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Background: Social and environmental factors such as poverty or violence, modulate the risk and course of schizophrenia, but how they affect the brain in patients with psychosis remains unclear. We here studied how they

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