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Supplemental Material

Environmental Exposure to Emerging Alternatives of Per- and Polyfluoroalkyl Substances and Polycystic Ovarian Syndrome in Women Diagnosed with Infertility: A Mixture Analysis

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Figure S3. Clustered heatmap of the spearman correlation matrix of PFAS (ln-transformed) (n = 943) (see Excel Tables S1 for corresponding numeric data). The numbers in the box are pairwise correlation coefficients. For full chemical names see Table 1.

Figure S4. Clustered heatmap of the spearman correlation matrix of PFAS (ln-transformed) in PCOS cases (A) (n = 366) and controls (B) (n = 577) (see Excel Tables S2-3 for corresponding numeric data). The numbers in the box are pairwise correlation coefficients. For full chemical names see Table 1.

Figure S5. Univariate exposure-response relationship between PFAS and the risk of PCOS (n = 943) (see Excel Tables S4 for corresponding numeric data). Estimates were adjusted for age (linear), BMI (categorical), annual household income (categorical), educational level (categorical), study site (categorical), age at menarche (linear) and menstrual volume (categorical). Curves were fitted via generalized additive model with restricted cubic spline (df = 4). For full chemical names see Table 1.

Figure S6. Bivariate exposure-response associations between the PFAS and PCOS from BKMR model (n = 943) (see Excel Table S7 for corresponding numeric data). Estimates were adjusted for age (linear), BMI (categorical), annual household income (categorical), educational level (categorical), study site (categorical), age at menarche (linear) and menstrual volume (categorical). Bivariate exposure-response functions for one PFAS when another PFAS fixed at either the 25th, 50th, or 75th percentile and the remaining PFAS are fixed at the median. For full chemical names see Table 1.

Figure S7. Joint effect estimates with 95% CI for the PFAS mixture in relation to PCOS in the hierarchical BKMR models, stratified by BMI; all the chemicals at particular percentiles (from 0.25 to 0.75 increment by 0.05) were compared to all the chemicals at their 50th percentile (see Excel Tables S8-9 for corresponding numeric data). A: Normal weight group (n = 622); B: overweight/obese group (n = 321). All estimates were adjusted for age (continuous), BMI (categorical), annual household income (categorical), educational level (categorical), study site (categorical), age at menarche (continuous) and menstrual volume (categorical). The *P*-values indicated the significance of the association between PFAS mixture and PCOS in the BKMR model. Abbreviations: PCOS, polycystic ovarian syndrome.

Additional File- Excel Document