

EP04.01. Uterine morphology in patients with and without PCOS.

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Objectives

To evaluate differences in uterine morphology according to a patient's PCOS status.

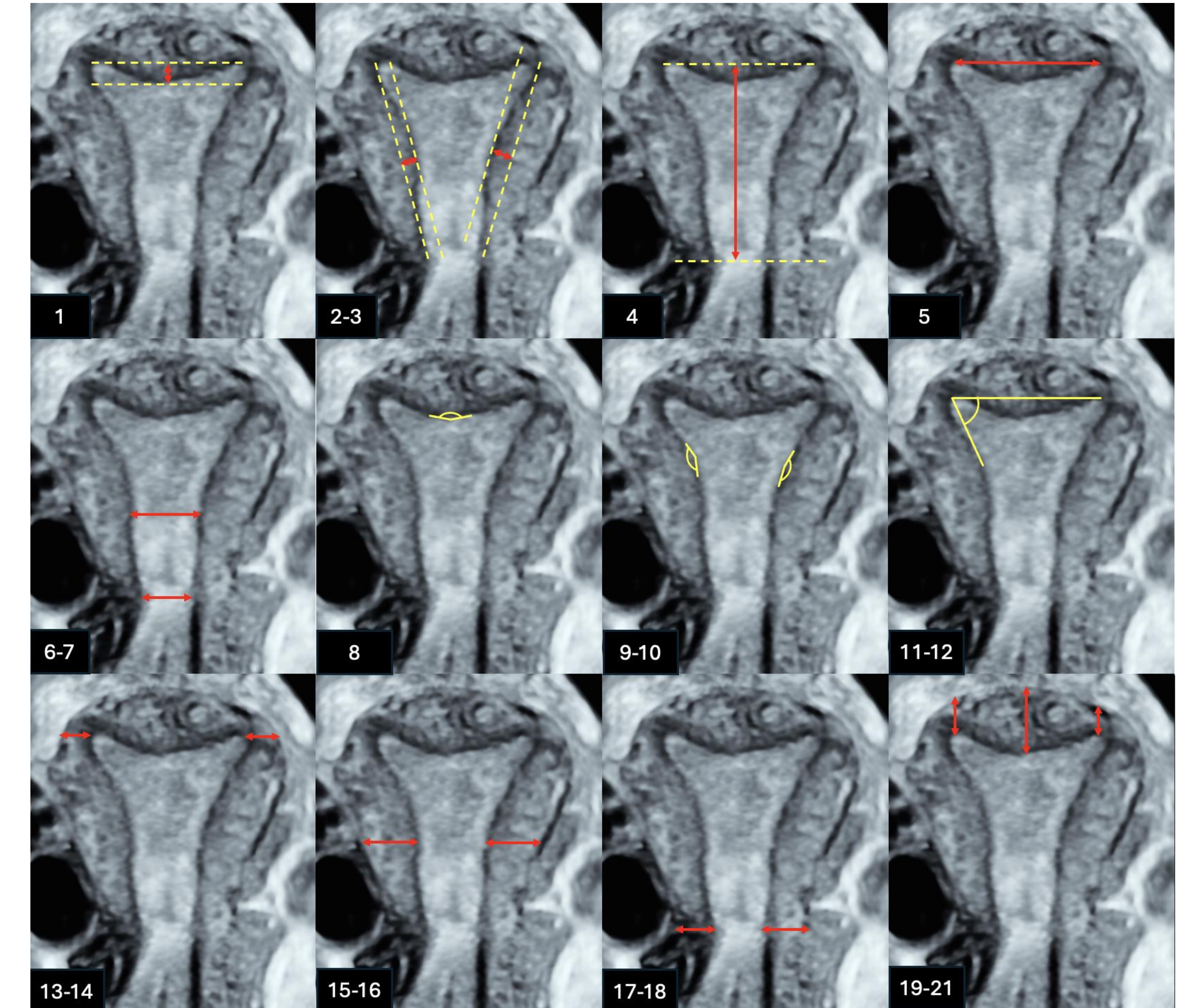
Methods

This is a prospective cohort study recruiting unselected women of reproductive age with and without a previous diagnosis of PCOS. The enrollment was conducted via social media in 2024. We performed the 2D/3D transvaginal ultrasound (TVUS), acquired a coronal view of the uterus, and obtained detailed uterine measurements of the uterine cavity and walls. Uterine malformations were assessed with ASRM MAC 2021, ESHRE/ESGE, and CUME classifications. All included subjects were screened for potential comorbidities via hormonal blood tests, gynecological examination, and detailed interviews. The cohort was divided into women with confirmed PCOS diagnosis by Rotterdam criteria and those without PCOS.

Results

The study included 170 women (68 PCOS and 102 non-PCOS). The median age was 30 years (26–34). We identified significant differences for several uterine TVUS measurements: the presence of fundal indentation (86.76% PCOS vs 68.63% controls, $p=0.01$); fundal indentation depth (0.28 cm PCOS vs 0.2 cm controls, $p=0.01$); T angle - mean value (61.79° PCOS vs. 60.49° controls, $p=0.03$). Free androgen index and testosterone level were identified as independent predictors of the presence of fundal indentation. The general prevalence of uterine anomalies was assessed as 3.5% (AFS 1988, ASRM MAC 2021), 18.8% (ESHRE/ESGE), and 2.9% (CUME). The most common uterine anomaly was the septate uterus. Statistically significant differences between groups were found only for ESHRE/ESGE classification (29.4% PCOS vs 11.8% controls, $p=0.031$), and mainly for septate uterus (29.4% vs 10.7%).

Figure 1. TVUS measurements performed in the coronal plane.



Conclusion

Our study found statistically significant, yet minute differences in some TVUS parameters between PCOS and non-PCOS patients. The difference in prevalence of uterine anomalies was found only for ESHRE/ESGE classification.