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**DIAGNOSTIC CRITERIA FOR PCOS IN ADOLESCENTS: BALANCING SENSITIVITY
AND SPECIFICITY TO PREVENT OVERDIAGNOSIS**

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Polycystic Ovary Syndrome (PCOS)—the most prevalent multifactorial endocrine disorder in 3-11% of adolescents, characterized by hyperandrogenism, chronic oligo-anovulation and polycystic ovarian morphology (PCOM). Application of adult-oriented diagnostic frameworks in adolescents increases the risk of overdiagnosis emphasizing the vital importance of critically evaluating the criteria used for diagnosing PCOS in adolescents.

Diagnosing PCOS during adolescence remains challenging due to the physiological and anatomical changes that occur during puberty. Irregular menstrual cycles and anovulatory cycles—frequently considered as a key diagnostic feature of PCOS are common during early adolescence due to immature estrogen feedback mechanisms and follicle-stimulating hormone (FSH) secretion and under-developed ovarian response. Hyperandrogenism—another central component of PCOS diagnosis, is also difficult to assess, as biochemical thresholds for adolescent androgen levels have not been established for adolescents. PCOM—incorporated into the PCOS diagnostic criteria in adults demonstrates low specificity in adolescents.

The framework for diagnosing PCOS in adolescents comprises six core components. First, exclusionary diagnosis which requires that all conditions mimicking PCOS be ruled out before confirmation, with patients not meeting full criteria requiring long term reevaluation. Second—long term reevaluation is necessary to ensure ongoing monitoring for those in diagnostic gray zones. Third, timing and criteria for diagnosis necessitate that PCOS cannot be diagnosed in the first year after menarche, and from the second year onward, diagnosis requires menstrual irregularities (cycles >90 days, <21 or >45 days, or <8 cycles/year) combined with hyperandrogenism, assessed biochemically (testosterone, DHEA) or clinically (acne, hirsutism via mFG score) notably, pelvic ultrasound should not be used in adolescents. Fourth—glucose metabolism screening via OGTT is mandatory for all patients regardless of BMI, given that insulin resistance can occur even in normal-weight patients. Fifth—additional investigations including LH:FSH ratio and AMH levels further strengthen the diagnosis. Finally, risk group identification recognizes five clinical groups, ranging from isolated menstrual irregularities without hyperandrogenism to metabolic syndrome combined with menstrual irregularities, enabling clinicians to appropriately monitor and manage adolescent patients

It is crucial to avoid premature labelling of adolescents who present with only one feature suggestive of PCOS but instead to consider them “at risk” with continuous monitoring. Ultimately, achieving an optimal balance between diagnostic sensitivity and specificity is essential through continued research and long-term observational studies in the evaluation of adolescent PCOS.