## WOMEN'S HEALTH

# Polycystic ovary syndrome (PCOS)



PCOS is a complex condition with serious implications for your patients, and accurate diagnosis is key to improving care and outcomes. Our multidisciplinary approach brings you a PCOS diagnostic profile that reflects multiple guideline recommendations.

PCOS is the most common endocrine disorder affecting reproductive-aged women and is one of the most common, but treatable, causes of infertility.<sup>1</sup> For this reason, it is often diagnosed when women have trouble getting pregnant. However, PCOS may begin soon after the first menstrual period and is a lifelong metabolic syndrome.



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**Diagnosis of PCOS:** Several guidelines suggest using the Rotterdam criteria or variations of that for the diagnosis of PCOS.<sup>2,3</sup> This is defined by the presence of two out of the three following criteria: menstrual irregularity, clinical and/or biochemical hyperandrogenism, or polycystic ovaries on ultrasound. In adolescents, both menstrual irregularity and hyperandrogenism are required, and ultrasound is not recommended for diagnosis.<sup>2</sup>

Guidelines also recommend certain testing to rule out other endocrine disorders with similar presentation including thyroid disease, prolactin excess, and nonclassical congenital adrenal hyperplasia (CAH).<sup>4</sup> In some women, additional diagnoses should be considered and ruled out such as Cushing's syndrome, androgensecreting tumors, and other disorders associated with androgen excess.<sup>4</sup>

**After Diagnosis:** Once diagnosed, assessment and management of reproductive, metabolic, and psychological features is vital to patient care. Many significant comorbidities are associated with PCOS, and clinical management may span across several types of healthcare providers and specialists.

#### Impacts of PCOS<sup>1,5</sup>

- Irregular menstrual cycles
- Painful menstrual cycles
- Infertility
- Gestational diabetes
- Preeclampsia
- Insulin Resistance

- Diabetes
- Heart disease
- High blood pressure
- Sleep apnea
- Stroke
- NAFLD/NASH

Measurement of testosterone in women should be performed by liquid chromatography/tandem mass spectrometry (LC/MS)<sup>6</sup>

Method Matters: Because women and children have lower levels of testosterone, it is important to utilize the more sensitive liquid chromatography/tandem mass spectrometry (LC/MS) methodology when measuring testosterone in these patients. This method provides more reliable results and is recommended by the Endocrine Society.<sup>3,6</sup>

### One panel—many answers. Your clear, multidisciplinary approach to PCOS.

We recognize the challenges facing healthcare providers. We strive to be an extension of your team, and to help you care for your patients. To assist you in ordering the recommended testing by the appropriate methodologies, we've created a PCOS Diagnostic Profile.2-4

Test Name	Test No.
PCOS Diagnostic Profile	505550
Components	Clinical Utility
Testosterone Total, LC/MS-MS	Identify biochemical hyperandrogenism
Testosterone Free, Equilibrium Dialysis	Identify biochemical hyperandrogenism
Dehydroepiandrosterone Sulfate (DHEA-S), LC/MS-MS	Identify biochemical hyperandrogenism and rule out androgen-secreting tumor
Sex Hormone Binding Globulin (SHBG)	Identify biochemical hyperandrogenism
Anti- Müllerian Hormone (AMH)	Reflect ovarian follicular reserve
17-OH Progesterone, LC/MS-MS	Rule out nonclassical CAH
Prolactin	Rule out prolactin excess
Thyroid Stimulating Hormone (TSH)	Rule out thyroid disease
Luteinizing Hormone (LH)	Rule out hypothalamic amenorrhea and primary ovarian insufficiency
Follicle-Stimulating Hormone (FSH)	Rule out hypothalamic amenorrhea and primary ovarian insufficiency
Estradiol, LC/MS-MS	Rule out hypothalamic amenorrhea and primary ovarian insufficiency

#### References

1. Centers for Disease Control and Prevention (CDC). PCOS (Polycystic Ovary Syndrome) and Diabetes. CDC Web site. https://www.cdc.gov/diabetes/basics/pcos.html. Updated March 24, 2020. Accessed July 1, 2021. 2. Teede HJ, Misso ML, Costello MF, et al. Recommendations from the international evidence-based guideline for the assessment and management of polycystic ovary syndrome. Fertil Steril. 2018 Aug;110(3):364-379. 3. Goodman NF, Cobin RH, Futterweit W, et al. American Association of Clinical Endocrinologists, American College of Endocrinology, and Androgen Excess and PCOS Society disease state clinical review: Guide to the Azziz R, Carmina E, Dewailly D, et al. The Androgen Excess and PCOS Society criteria for the polycystic ovary syndrome - bart 1. *Endocr Pract.* 2015 Nov;21(11):1291-1300.
Azziz R, Carmina E, Dewailly D, et al. The Androgen Excess and PCOS Society criteria for the polycystic ovary syndrome: the complete task force report. *Fertil Steril.* 2009 Feb;91(2):456-488

5. Setji TL, Holland ND, Sanders LL, Pereira KC, Diehl AM, Brown AJ. Nonalcoholic steatohepatitis and nonalcoholic Fatty liver disease in young women with polycystic ovary syndrome. J Clin Endocrinol Metab. 2006 May:91(5):1741-1747.

6. Rosner W. Auchus RJ. Azziz R. Sluss PM. Raff H. Position statement: Utility. limitations, and pitfalls in measuring testosterone: an Endocrine Society position statement. J Clin Endocrinol Metab. 2007 Feb:92(2):405-413. 7. Goodman NF, Cobin RH, Futterweit W, et al. American Association of Clinical Endocrinologists, American College of Endocrinology, and Androgen Excess and PCOS Society disease state clinical review: Guide to the best practices in the evaluation and treatment of polycystic ovary syndrome - Part 2. Endocr Pract. 2015 Dec;21(12):1415-1426.

> For more information about PCOS and our testing options, visit Labcorp.com/tests/505550/pcos-diagnostic-profile.





Guidance from the American Association of Clinical Endocrinologists recommends that all women with PCOS be tested for components of metabolic syndrome including glucose intolerance, dyslipidemia, and nonalcoholic fatty liver disease.<sup>7</sup> Labcorp offers a comprehensive test menu to assess cardiometabolic risk.

Test Name	Test No.	
Glucose Intolerance/Diabetes		
Glucose, Plasma	001818	
Glucose Tolerance Test (GTT), Two-hour (Oral WHO Protocol)	101200	
Hemoglobin (Hb) A1C	001453	
Dyslipidemia		
Lipid Panel	303756	
NMR LipoProfile® With Lipids and Insulin Resistance Markers (Without Graph)	884000	
NAFLD/NASH		
FIB-4 With Reflex to Nash FibroSure®	402070	
NASHnext™	504960	

Please refer to our online test menu at Labcorp.com for additional test options.