O-RADS Ultrasound Risk Stratification – Governing concepts:

1. Recommendations should function as guidance rather than requirements for the management of patients with ovarian/adnexal masses. Individual case management may be modified by professional judgment, regardless of the O-RADS US recommendations.

2. The management system is based upon an average risk patient with no acute symptoms and no substantial risk factors for ovarian cancer such as a significant family history of ovarian cancer or BRCA gene mutation. If these factors are present, management may vary from this system.

3. The involvement of an “ultrasound specialist,” denoted as a physician whose practice includes a focus on ultrasound assessment of adnexal lesions has been added to the O-RADS US System.[5] However, at this time, there are no mandated requirements or guidelines that define such a specialist.

4. Each patient will be categorized as pre- or postmenopausal with the post-menopause category defined as amenorrhea of ≥ 1-year.

5. The size of the lesion, an important element in risk assessment, should be obtained by measuring the largest diameter of the lesion regardless of the plane in which that diameter appears.

6. O-RADS applies only to lesions involving the ovaries and/or fallopian tube. If a pelvic lesion origin is indeterminate but suspected to be ovarian or fallopian in origin, the O-RADS system may apply. If a pelvic lesion is clearly identified as non-ovarian/tubal in origin then the O-RADS system would be appropriate only in the case of a paraovarian cyst or peritoneal inclusion cyst and, otherwise, does not apply.

7. Recommendations are generally based upon transvaginal sonography although may be augmented by transabdominal or transrectal sonography as needed.

8. In cases of multiple or bilateral lesions, each lesion should be separately characterized, and management driven by the lesion with the highest O-RADS score.

O-RADS Ultrasound Risk Stratification and Management System

O-RADS Score	Risk Category [IOTA Model]	Lexicon Descriptors		Management	
				Pre-menopausal	Post-menopausal
0	Incomplete Evaluation [N/A]	N/A		Repeat study or alternate study	
1	Normal Ovary [N/A]	Follicle defined as a simple cyst ≤ 3 cm		None	N/A
		Corpus Luteum ≤ 3cm			
2	Almost Certainly Benign [< 1%]	Simple cyst	≤ 3 cm	N/A	None
			> 3 cm to 5 cm	None	Follow up in 1 year. *
			> 5 cm but < 10 cm	Follow up in 8 - 12 weeks	
		Classic Benign Lesions	See table on next page for descriptors and management strategies		
		Non-simple unilocular cyst, smooth inner margin	≤ 3 cm	None	Follow up in 1 year * If concerning, US specialist or MRI
			> 3 cm but < 10 cm	Follow-up in 8 - 12 weeks If concerning, US specialist	US specialist or MRI
3	Low Risk Malignancy [1-<10%]	Unilocular cyst (simple or non-simple) ≥ 10 cm		US specialist or MRI Management by gynecologist	
		Typical dermoid cysts, endometriomas, hemorrhagic cysts ≥ 10 cm			
		Unilocular cyst, with irregular inner wall (<3 mm height), any size			
		Multilocular cyst with smooth inner walls/septations, < 10 cm, CS = 1-3			
		Solid lesion with smooth outer contour, any size, CS = 1			
4	Intermediate Risk [10- < 50%]	Multilocular cyst, no solid component	Smooth inner wall, ≥ 10 cm, CS = 1-3	US specialist or MRI Management by gynecologist with gyn-oncologist consultation or solely by gyn-oncologist	
			Smooth inner wall, any size, CS = 4		
			Irregular inner wall ± irregular septation, any size, CS = any		
		Unilocular cyst with solid component	1-3 papillary projections (pp), or solid component that is not a pp, any size, CS= any		
		Multilocular cyst with solid component	Any size, CS = 1-2		
		Solid lesion	Smooth outer contour, any size, CS = 2-3		
5	High Risk [≥ 50%]	Unilocular cyst, ≥ 4 papillary projections, any size, CS = any		Gyn-oncologist	
		Multilocular cyst with solid component, any size, CS = 3-4			
		Solid lesion with smooth outer contour, any size, CS = 4			
		Solid lesion with irregular outer contour, any size, CS = any			
		Ascites and/or peritoneal nodules**			

CS=color score; GYN = gynecologic; IOTA = International Ovarian Tumor Analysis; N/A = not applicable

* At a minimum, at least one-year follow-up showing stability or decrease in size is recommended with consideration of annual follow-up of up to 5 years, if stable. However, there is currently a paucity of evidence for defining the optimal duration or interval of timing for surveillance.

**Presence of ascites with category 1-2 lesion, must consider other malignant or non-malignant etiologies of ascites

O-RADS Ultrasound Risk Stratification and Management System
Classic Benign Lesions (O-RADS 2)

Lexicon Descriptor	Definition	Management	
		Premenopausal	Postmenopausal
Typical hemorrhagic cyst	Reticular pattern: Fine thin intersecting lines representing fibrin strands Retracting clot: An avascular echogenic component with angular, straight, or concave margins	≤ 5 cm None	US specialist, gynecologist or MRI
		>5 cm but < 10 cm Follow up in 8-12 weeks If persists or enlarges, referral to US specialist, gynecologist, or MRI	US specialist, gynecologist or MRI
Typical dermoid cyst < 10 cm	• Hyperechoic component with acoustic shadowing • Hyperechoic lines and dots • Floating echogenic spherical structures	Optional initial follow up in 8-12 weeks based upon confidence in diagnosis If not removed surgically, annual US follow up should then be considered * US specialist or MRI if there is enlargement, changing morphology or a developing vascular component	US specialist, gynecologist, or MRI With confident diagnosis, if not removed surgically, annual US follow up should then be considered * MRI if there is enlargement, changing morphology or a developing vascular component
Typical endometriomas < 10 cm	Ground glass/homogeneous low-level echoes		
Simple paraovarian cyst/any size	Simple cyst separate from the ovary that typically moves independent of the ovary when pressure is applied by the transducer	None If not simple, manage per ovarian criteria	Optional single follow up study in 1 year
Typical peritoneal inclusion cyst/any size	Follows the contour of the adjacent pelvic organs or peritoneum, does not exert mass effect and typically contains septations. The ovary is either at the margin or suspended within the lesion.	Gynecologist	Gynecologist
Typical hydrosalpinx/ any size	• Incomplete septation • Tubular • Endosalpingeal folds: Short round projections around the inner wall of a fluid distended tubular structure	Gynecologist	Gynecologist

*There is currently a paucity of evidence for defining the optimal duration or interval of timing for surveillance. Evidence does support an increasing risk of malignancy in endometriomas following menopause.