O-RADS™ Risk Categorization and Management Quick Reference

Table 1. O-RADS™ Ultrasound Risk Stratification and Management System for Classic Benign Lesions (O-RADS™ 2)

Lexicon	**Descriptors and Definitions** For any atypical features on initial or follow-up exam, use other lexicon descriptors (e.g., unilocular, multilocular, solid, etc.).	**Management** If sonographic features are only suggestive, and overall assessment is uncertain, consider follow-up US within 3 months.

Typical Hemorrhagic Cyst	Unilocular cyst, **no internal vascularity***, and at least one of the following:
	• Reticular pattern (fine, thin intersecting lines representing fibrin strands)
	• Retractile clot intracystic component with straight, concave, or angular margins
		Imaging+:
		• Premenopausal:
		  ○ ≤5 cm: None
		  ○ >5 cm but <10 cm: Follow-up US in 2-3 months
		• Postmenopausal:
		  ○ <10 cm, options to confirm include:
		  ▪ Follow-up US in 2-3 months
		  ▪ US specialist (if available)
		  ▪ MRI (with O-RADS MRI score)
		Clinical: Referral to a Gynecologist**
		
		Note: Hemorrhagic cysts typically do not occur in post-menopausal people. If this is the case for your person, consider recategorizing the lesion with other lexicon descriptors.

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Typical Dermoid Cyst	Cystic lesion with ≤3 locules, **no internal vascularity***, and at least one of the following: • Hyperechoic component(s) (diffuse or regional) with shadowing • Hyperechoic lines and dots • Floating echogenic spherical structures	Imaging: • ≤3 cm: May consider follow-up US in 12 months*** • >3 cm but <10 cm: If not surgically excised, follow-up US in 12 months*** Clinical: Referral to a Gynecologist**

Typical Endometrioma	Cystic lesion with ≤3 locules, **no internal vascularity***, homogeneous low-level/ ground glass echoes, and smooth inner walls/ septation(s)
	• ± Peripheral punctate echogenic foci in wall
		Imaging:
		• Premenopausal:
		  ○ <10 cm: If not surgically excised, follow-up US in 12 months***
		• Postmenopausal:
		  ○ <10 cm and initial exam, options to confirm include:
		  ▪ Follow-up US in 2-3 months
		  ▪ US specialist (if available)
		  ▪ MRI (with O-RADS MRI score)
		Then, if not surgically excised, recommend follow-up US in 12 months***
		Clinical: Referral to a Gynecologist**

Typical Paraovarian Cyst	Simple cyst separate from the ovary	Imaging: None Clinical: None

Lexicon	Descriptors and Definitions For any atypical features on initial or follow-up exam, use other lexicon descriptors (e.g., unilocular, multilocular, solid, etc.).	Management If sonographic features are only suggestive, and overall assessment is uncertain, consider follow-up US within 3 months.
Typical Peritoneal Inclusion Cyst	Fluid collection with ovary at margin or suspended within that conforms to adjacent pelvic organs • ± Septations (representing adhesions)	Imaging: None Clinical: Referral to a Gynecologist**
Typical Hydrosalpinx	Anechoic, fluid-filled tubular structure • ± Incomplete septation(s) (representing adhesions) • Endosalpingeal folds (short, round projections around the inner walls)	

MRI = magnetic resonance imaging; US = ultrasound
*Excludes vascularity in walls or intervening septation(s)
**As needed for management of clinical issues
***There is currently a paucity of evidence for defining the need, optimal duration, or interval of timing for surveillance. If stable, consider US follow-up at 24 months from initial exam, then as clinically indicated. Specifically, evidence does support an increasing risk of malignancy in endometriomas following menopause and those present greater than 10 years. See O-RADS US Risk Stratification and Management System: A Consensus Guideline from the ACR O-RADS Committee for additional information.
+The recommendation differs from O-RADS™ v2022.

Table 2. O-RADS™ Ultrasound Risk Stratification and Management System Adapted for the Ontario Healthcare Context

<table>
<tr><th rowspan="2">O-RADS™ Score</th><th rowspan="2">Risk Category</th><th rowspan="2" colspan="2">Lexicon Descriptors</th><th colspan="2">Management</th></tr>
<tr><th>Premenopausal</th><th>Postmenopausal</th></tr>
<tr><td>0</td><td>Incomplete Evaluation [N/A]</td><td colspan="2">Lesions features relevant for risk stratification cannot be accurately characterized due to technical factors</td><td colspan="2">Repeat US study or MRI</td></tr>
<tr><td rowspan="2">1</td><td rowspan="2">Normal Ovary [N/A]</td><td colspan="2">No ovarian lesion</td><td colspan="2" rowspan="2">None</td></tr>
<tr><td colspan="2">Physiologic cyst: follicle (≤3 cm) or corpus luteum (typically ≤3 cm)</td></tr>
<tr><td rowspan="6">2</td><td rowspan="6">Almost certainly benign [<1%]</td><td rowspan="3">Simple Cyst</td><td>≤3 cm</td><td>N/A (see follicle)</td><td>None</td></tr>
<tr><td>>3 to 5 cm</td><td>None</td><td rowspan="2">Follow-up US in 12 months*</td></tr>
<tr><td>>5 to <10 cm</td><td>Follow-up US in 12 months*</td></tr>
<tr><td rowspan="2">Unilocular, smooth, non-simple cyst, smooth (internal echoes and/or incomplete septations)
Bilocular, smooth cyst</td><td>≤3 cm</td><td>None</td><td>Follow-up US in 12 months*</td></tr>
<tr><td>>3 cm to <10 cm</td><td colspan="2">Follow-up US in 6 months*</td></tr>
<tr><td>Typical benign ovarian lesion (Table 1)</td><td><10 cm</td><td colspan="2" rowspan="2">See Table 1 (Classic Benign Lesions) for descriptors and management</td></tr>
<tr><td>Typical benign extraovarian lesion (Table 1)</td><td>Any size</td></tr>
<tr><td rowspan="6">3</td><td rowspan="6">Low Risk Malignancy [1 - <10%]</td><td colspan="2">Typical benign ovarian lesion (Table 1), ≥10 cm</td><td colspan="2" rowspan="6">Imaging:
• If not surgically excised, consider follow-up US within 6 months**
• If solid, may consider US specialist (if available) <u>or</u> MRI (with O-RADS MRI score)***

Clinical: Referral to a gynecologist</td></tr>
<tr><td colspan="2">Uni- or bilocular cyst, smooth, ≥10 cm</td></tr>
<tr><td colspan="2">Unilocular cyst, irregular, any size</td></tr>
<tr><td colspan="2">Multilocular cyst, smooth, <10 cm, CS <4</td></tr>
<tr><td colspan="2">Solid lesion, ± shadowing, smooth, any size, CS = 1</td></tr>
<tr><td colspan="2">Solid lesion, shadowing, smooth, any size, CS 2-3</td></tr>
</table>

<table>
<tr><th rowspan="2">O-RADS™ Score</th><th rowspan="2">Risk Category</th><th colspan="2" rowspan="2">Lexicon Descriptors</th><th colspan="2">Management</th></tr>
<tr><th>Premenopausal</th><th>Postmenopausal</th></tr>
<tr><td rowspan="6">4</td><td rowspan="6">Intermediate Risk
[10 - <50%]</td><td>Bilocular cyst without solid component(s)</td><td>Irregular, any size, any CS</td><td colspan="2" rowspan="6">Imaging:
Options include:
US specialist (if available)
MRI (with O-RADS MRI score)***
Clinical: Referral to a gynecologist with gyne-oncologist consultation or solely by gyne-oncologist</td></tr>
<tr><td rowspan="3">Multilocular cyst without solid component(s)</td><td>Smooth, ≥10 cm, CS <4</td></tr>
<tr><td>Smooth, any size, CS = 4</td></tr>
<tr><td>Irregular, any size, any CS</td></tr>
<tr><td>Unilocular cyst with solid component(s)</td><td><4 pps or solid component(s) not considered a pp, any size</td></tr>
<tr><td>Bi- or multilocular cyst with solid component(s)</td><td>Any size, CS = 1-2</td></tr>
<tr><td>Solid lesion, non-shadowing</td><td>Smooth, any size, CS = 2-3</td></tr>
<tr><td rowspan="5">5</td><td rowspan="5">High Risk
[≥50%]</td><td colspan="2">Unilocular cyst, ≥ 4 pps, any size, any CS</td><td colspan="2" rowspan="5">Imaging: While referral pending, may consider ordering a staging CT (chest, abdomen, pelvis)+

Clinical: Direct urgent referral to a gyne-oncologist+</td></tr>
<tr><td colspan="2">Bi- or multilocular cyst with solid component(s), any size, CS = 3-4</td></tr>
<tr><td colspan="2">Solid lesion, ± shadowing, smooth, any size, CS = 4</td></tr>
<tr><td colspan="2">Solid lesion, irregular, any size, any CS</td></tr>
<tr><td colspan="2">Ascites and/or peritoneal nodules****</td></tr>
</table>

CS = colour score; gyne = gynecologic; MRI = magnetic resonance imaging; N/A = not applicable; US = ultrasound; pps = papillary projections

* Shorter imaging follow-up may be considered in some scenarios (e.g., clinical factors). If smaller (≥10 – 15% decrease in average linear dimension), consider follow-up US at 12 and 24 months from initial exam, then management per gynecology. For changing morphology, reassess using lexicon descriptors. Clinical management with gynecology as needed.

** There is a paucity of evidence for defining the optimal duration or interval for imaging surveillance. Shorter follow-up may be considered in some scenarios (e.g., clinical factors). If stable, follow-up at 12 and 24 months from initial exam, then as clinically indicated. For changing morphology, reassess using lexicon descriptors.

*** MRI with contrast has higher specificity for solid lesions, and cystic lesions with solid component(s).

**** Not due to other malignant or non-malignant etiologies; specifically, must consider other etiologies of ascites in categories 1-2.

+The recommendation differs from O-RADS™ v2022.

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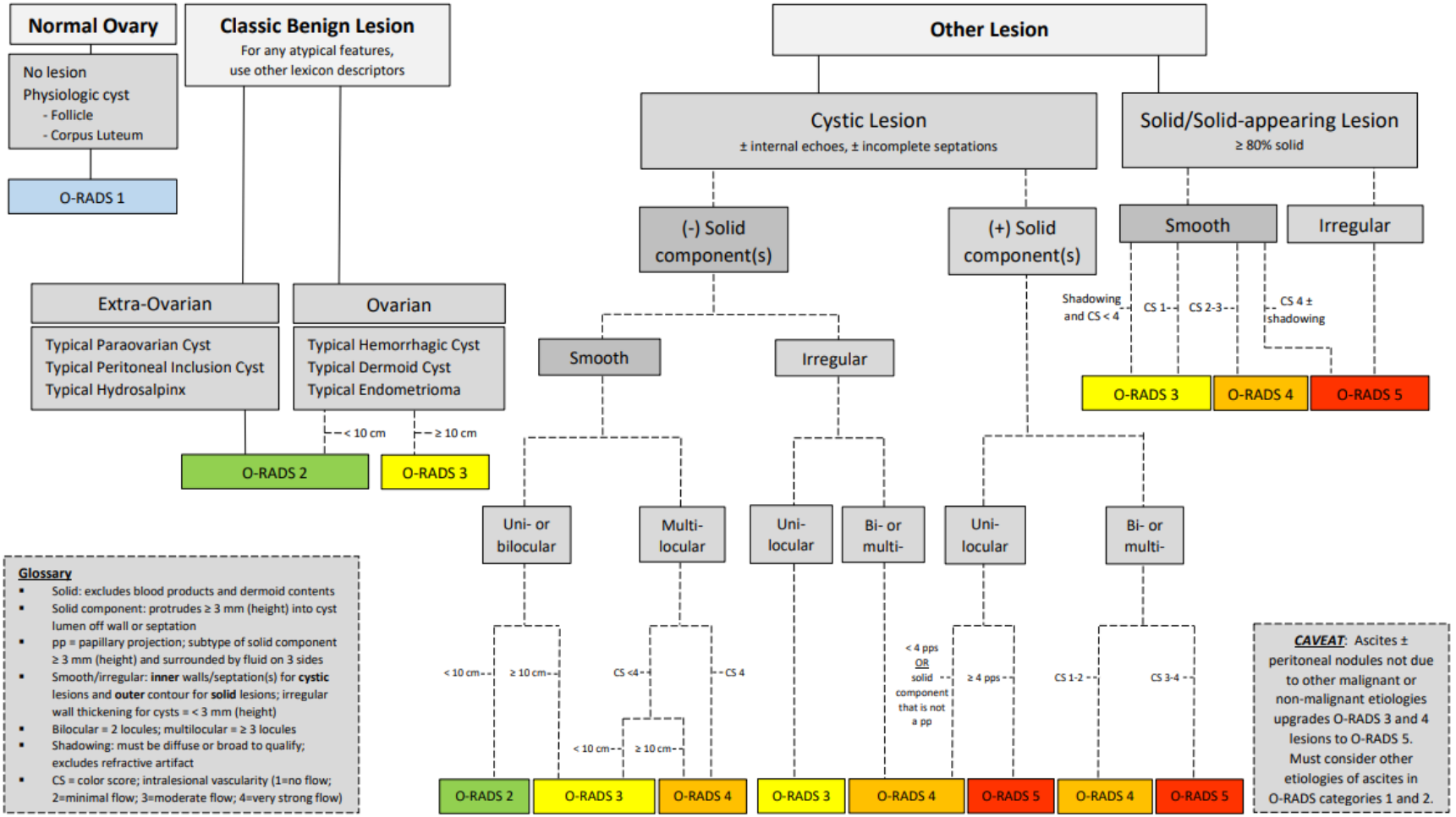
Figure 1. O-RADS™ Ultrasound v2022 Assessment Categories Algorithm



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