Applicability Criteria and Management

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FAQ-218: Can O-RADS US be applied to all adnexal lesions including those in high risk and symptomatic patients?

The short answer is: it depends!

It is important to remember that the goal of O-RADS US is to convey a level of concern for malignancy.However, there are lesions (and "apparent" lesions) encountered in the adnexa or ovary due to other etiologies such as PID, ectopic pregnancy and torsion of a normal ovary where malignancy is not of concern. These scenarios are guided by clinical context and lesions should not be described using O-RADS terminology nor given an O-RADS US score. Similarly, O-RADS US does not apply to adnexal lesions clearly demonstrated to be uterine in origin such as uterine myomas.

When these other etiologies are excluded, the O-RADS US lexicon and assessment categories can be applied to most lesions in the adnexa, even in patients at high risk and with acute symptoms. This is because the IOTA 1-5 data, upon which the O-RADS US system is based, consisted of consecutive patients with no cited exclusions. Lesions in

patients at high and average risk as well as those with acute symptoms were included; therefore, it is acceptable to risk stratify a lesion using O-RADS US descriptors in these patients.

The management recommendations in the O-RADS US system however were developed for the patient of average risk and without acute symptoms. Therefore, management may (and often does) differ, especially for patients with acute symptoms who may need immediate intervention.

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FAQ-219: Can O-RADS US be used in the pediatric population? Is there an age minimum?

There was representation by pediatric radiology on the original O-RADS US committee who developed the lexicon and risk assessment/management system. However, the IOTA data which serves as validation of O-RADS US risk assessment only includes patients >18 years of age and lesions primarily assessed by transvaginal sonography. Without data specific to the pediatric age group who are often imaged solely with transabdominal imaging, caution is required. In an analogous assessment in another organ system, recent TI-RADS data now supports a higher risk of malignancy in the pediatric population when using lexicon descriptors which result in the categories of “not suspicious” or “mildly suspicious” [1, 2]. The O-RADS committee is therefore prioritizing a validation study in the pediatric age group (<18 years of age) which is currently underway. In the meantime, the best answer to this question is that lexicon descriptors apply, and risk assessment should be used with caution with

liberal use of MRI as a problem-solving tool. As in all age groups, management offers guidance, but modification is allowed and should be based upon a multiplicity of clinical factors.

REFERENCE:
[1] Richman DM, Benson CB, Doubilet PM, et al. Assessment of American College of Radiology Thyroid Imaging Reporting and Data System (TI-RADS) for Pediatric Thyroid Nodules. Radiology. 2020;294:415-420.

(https://www.acr.org/Clinical-Resources/Reporting-and-Data-Systems/O-Rads)
[2] Scappaticcio L, Maiorino MI, Iorio S, et al. Exploring the Performance of Ultrasound Risk Stratification Systems in Thyroid Nodules of Pediatric Patients. Cancers (Basel). 2021;13. (https://www.acr.org/Clinical-Resources/Reporting-and-Data-Systems/O-Rads)

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FAQ-220: Does O-RADS US apply to the ovary without any physiologic cysts or lesions?

O-RADS US version 2022 now includes the normal ovary without a physiologic cyst or lesion within the O-RADS US 1 category. The rationale of this revision is twofold: 1) consistency with O-RADS MRI; and 2) the ability to incorporate O-RADS US in every pelvic US report, if desired. In the original version of O-RADS US, only physiologic cysts (follicles and corpora lutea) were listed which limited the application of the O-RADS US 1 category when no observations were seen.

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FAQ-221: When is a study considered “O-RADS US 0 - Incomplete Evaluation”? What if I do not see the ovary; is this an O-RADS US 0?

O-RADS US 0 covers the scenario of a technically inadequate study. This may occur when a patient declines a transvaginal evaluation or requests to discontinue a study based on discomfort, and transabdominal evaluation is insufficient for characterization. Technical factors such as bowel gas artifact obscuring a lesion or large lesion size are other reasons for an inadequate exam. In these cases, judgment must be made as to whether repeating the ultrasound study may add value or whether an MRI should be considered for exam completion. Please note, O-RADS US 0 applies to an incomplete study from a technical perspective, rather than to an interpretative perspective when one is uncertain about the diagnosis. The O-RADS US lexicon provides sufficient terms to categorize most all adnexal lesions; when features are mixed, those resulting in a higher O-RADS US score should be used to optimize sensitivity.

When an ovary is not seen (which is not uncommon in menopausal patients), an O-RADS US 0 score is generally unnecessary. If standard practice at your institution is to give an O-RADS score for every pelvic US exam, “O-RADS: Not applicable” will typically suffice; however, this depends on the indication for the exam. For instance, if the indication is specifically to screen for ovarian cancer due to genetic susceptibility or to follow-up a lesion previously seen that is undergoing surveillance, an O-RADS US 0 may be prudent.

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FAQ-222: How long do I need to follow a lesion that is stable?

In version 2022, follow-up recommendations for the O-RADS US 2 (almost certainly benign) category vary between 6 and 12 months for initial follow-up and then continue at 1 or 2 years from the initial exam for a maximum of 2 years. Clinical factors may dictate earlier initial follow-up (e.g., patient anxiety, ongoing fertility treatment, pregnancy, etc.) and professional judgment should be used in making this decision. After 2 years of stability, management is at the discretion of the gynecologist and may or may not include continued surveillance.

For the O-RADS US 3 (low risk) lesion, management options now include US surveillance within 6 months; however, MRI or evaluation by an ultrasound specialist is still recommended for solid lesions or when additional pre-operative characterization may be beneficial, such as when fertility-sparing intervention is desired. If stable, follow-up is recommended at 12 and 24 months from the initial exam, then as clinically indicated.

Please note, these surveillance intervals apply only in the setting of stable size and morphology. For changing features, one should reassess using lexicon descriptors and size criteria. These extended recommendations have been added to the bottom of the assessment categories table found on the ACR website as well as on the O-RADS US calculator smartphone app.

Did you find FAQ-222 helpful? **Yes** **(https://app.smartsheet.com/b/form/7737e609386c415d9929772d8505023b?Did%20you%20find%20this%20FAQ%20helpful?=Yes&RADS=LI-RADS&FAQ=FAQ-222)** **No** **(https://app.smartsheet.com/b/form/7737e609386c415d9929772d8505023b?Did%20you%20find%20this%20FAQ%20helpful?=No&RADS=LI-RADS&FAQ=FAQ-222)**

FAQ-223: Can I risk stratify an endometrioma or dermoid cyst that develops atypical features?

According to the O-RADS US system an endometrioma or dermoid <10 cm with atypical features on initial or follow-up exam is no longer considered a typical “classic benign lesion” in the O-RADS US 2 category. The patient is better served by assessing the lesion using other lesion descriptors (e.g., unilocular, multilocular, solid, etc.) which would most likely result in a higher risk category. Note, avascular hyperechoic components with shadowing that are a typical feature of a dermoid cyst are not considered solid components for the purpose of risk stratification; this feature may be included in the description, however “solid components” would be those at do not shadow or have internal vascularity.

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