

## **O-RADS™ Pelvic Ultrasound Exam Report – Essential Components and Descriptors**

The following is not intended to represent a complete report template as varying reporting styles and templates are currently employed across practices. However, the essential components and descriptors to be included within the **Indication/Clinical History**, **Findings** and **Impression** sections of a pelvic ultrasound report utilizing O-RADS risk stratification for ovarian-adnexal findings are provided. Note, not all ovarian-adnexal findings warrant an O-RADS assessment (i.e. most follicles and corpora lutea, torsion, pelvic inflammatory disease, ovarian hyperstimulation syndrome, etc.). Findings which do merit an assessment/management recommendation per the O-RADS schema include: 1) non-physiologic lesions; 2) physiologic findings in high-risk patients (e.g. BRCA mutation carriers); those discovered on other imaging modalities for which ultrasound is requested for additional lesion characterization.

- I. **Indication for Exam/Clinical History:** As menopausal status is relevant, the LMP (if known), menopausal status or years since menopause should be included with the provided clinical information or as a separate entry.
  
- II. **Findings:** In general, findings should be clear, succinct and listed in order from most to least concerning. When describing an ovarian-adnexal finding, the following components are required:
  - a. **Location**
    - i. Situs: right, left, other (i.e. midline, cul-de-sac, etc.)
    - ii. Relative to ovary: intraovarian, adnexal (if ovarian tissue is not seen), extraovarian or separate from the ovary
  - b. **Category/Lesion Type**
    - i. Physiologic: follicle, corpus luteum
    - ii. Classic benign lesion: hemorrhagic cyst, dermoid cyst, endometrioma, paraovarian cyst, peritoneal inclusion cyst and hydrosalpinx
    - iii. Lesion (not classic benign): unilocular cyst with or without a solid component, multilocular cyst with or without a solid component, solid or solid-appearing lesion
  - c. **Descriptors**
    - i. Only those descriptors relevant to appropriate risk stratification for a given lesion is required. (See Table 3-4, full citation)
    - ii. Follicles, corpora lutea and simple cysts need no additional descriptors if criteria are met. Additional descriptors are optional.
    - iii. Classic benign lesions should be described using the lexicon associated descriptors below:

Classic Benign Lesion	Lexicon Descriptors ( <i>minimum of 1 bulleted term required</i> )
Hemorrhagic cyst	<ul style="list-style-type: none"> <li>• Reticular pattern</li> <li>• Retractable clot</li> </ul>
Dermoid cyst	<ul style="list-style-type: none"> <li>• Hyperechoic component with acoustic shadowing</li> <li>• Hyperechoic lines and dots</li> <li>• Floating echogenic spherical structures</li> </ul>
Endometrioma	<ul style="list-style-type: none"> <li>• Homogenous low-level echoes</li> <li>• Ground glass</li> </ul>
Paraovarian cyst	<ul style="list-style-type: none"> <li>• Simple cyst separate from ovary               <ul style="list-style-type: none"> <li>➤ Moves independent from ovary with transducer pressure</li> </ul> </li> </ul>

Peritoneal inclusion cyst	<ul style="list-style-type: none"> <li>• Cystic lesion with ovary at margin or suspended within             <ul style="list-style-type: none"> <li>➤ Internal septations</li> <li>➤ No mass effect</li> <li>➤ Follows contour of adjacent organs or peritoneum</li> </ul> </li> </ul>
Hydrosalpinx	<ul style="list-style-type: none"> <li>• Incomplete septation</li> <li>• Tubular</li> <li>• Endosalpingeal folds</li> </ul>

iv. Lesions that are not classic benign require the following descriptors below:

Lesion (Not Classic Benign)	Lexicon Descriptors ( <i>bulleted terms required</i> )
Unilocular, no solid component	<ul style="list-style-type: none"> <li>• Inner wall (smooth or irregular)             <ul style="list-style-type: none"> <li>➤ If smooth, include internal contents (simple versus non-simple) and size</li> </ul> </li> </ul>
Unilocular with solid component	<ul style="list-style-type: none"> <li>• Number of papillary projections</li> </ul>
Multilocular, no solid component	<ul style="list-style-type: none"> <li>• Inner wall and septations (smooth or irregular)             <ul style="list-style-type: none"> <li>➤ If smooth, include size and color score</li> </ul> </li> </ul>
Multilocular, with solid component	<ul style="list-style-type: none"> <li>• Color score</li> </ul>
Solid	<ul style="list-style-type: none"> <li>• Outer contour (smooth or irregular)             <ul style="list-style-type: none"> <li>➤ If smooth, include color score</li> </ul> </li> </ul>

v. Color flow may be described using the color score numeric value (1-4) with associated terminology or terminology alone. The numeric value may be used alone as long as a legend is included within the report.

**Color score 1 = No flow**  
**Color score 2 = Minimal flow**  
**Color score 3 = Moderate flow**  
**Color score 4 = Very strong flow**

vi. If desired, a more extensive list of descriptors included in the full lexicon is available for use and may be accessed at: <https://doi.org/10.1016/j.jacr.2018.07.004>

**d. Size**

- i. Maximum diameter is required
- ii. 3 diameters are optional

**e. O-RADS Assessment Category**

- i. The assessment category may be provided in the findings section of a report and may prove beneficial in the setting of multiple lesions to reduce confusion. If included, one may provide the numeric value (0-5) with associated

terminology or using terminology alone. The numeric value may be used alone as long as a legend is included within the report (See III.b.). Note, as patients may have access to their radiology report, caution is advised in including the percent likelihood of malignancy or the term malignancy in the report.

**III. Impression:**

- a. In general, the impression should include a brief summary of each finding with the corresponding assessment category and management recommendation and should be listed from most to least concerning.
- b. The assessment category may be provided as the numeric value (0-5) with associated terminology or using terminology alone. The numeric value may be used alone as long as a legend is included within the report. Note, as patients may have access to their radiology report, caution is advised in including the percent likelihood of malignancy or the term malignancy in the report.

**O-RADS 0 = Incomplete due to technical factors**

**O-RADS 1 = Normal/physiologic ovary**

**O-RADS 2 = Almost certainly benign**

**O-RADS 3 = Low risk**

**O-RADS 4 = Intermediate risk**

**O-RADS 5 = High risk**

- c. **Optional:** A reference to the O-RADS risk stratification paper may be included at the end of the report as follows: <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

**Examples**

The following are examples of wording that may be used within the findings and impression section of a pelvic ultrasound exam report utilizing O-RADS.

***Sample 1***

Findings: “Within the right ovary, there is a 2.5 cm thick walled cyst with crenulated inner margin and peripheral vascularity consistent with a corpus luteum.”

Impression: “Right ovarian 2.5 cm corpus luteum corresponds to the finding on recent CT, O-RADS 1. No additional or follow-up imaging is needed.”

**O-RADS 0 = Incomplete due to technical factors**

**O-RADS 1 = Normal/physiologic ovary**

**O-RADS 2 = Almost certainly benign**

**O-RADS 3 = Low risk**

**O-RADS 4 = Intermediate risk**

**O-RADS 5 = High risk**

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

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### ***Sample 2***

Findings: “The right ovary is not seen. Within the right adnexa, there is a 10.5 x 4.7 x 8.5 cm multilocular cyst with no solid component, smooth inner wall and moderate flow (CS 3) on color Doppler imaging.”

Impression: “Right adnexal 10.5 cm multilocular cyst without solid component as described above, O-RADS 4. Recommend referral to an ultrasound specialist or additional imaging with MRI. Patient may be managed by a gynecologist consulting with a gynecologic-oncologist or solely by a gynecologic-oncologist.

**O-RADS 0 = Incomplete due to technical factors**

**O-RADS 1 = Normal/physiologic ovary**

**O-RADS 2 = Almost certainly benign**

**O-RADS 3 = Low risk**

**O-RADS 4 = Intermediate risk**

**O-RADS 5 = High risk**

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

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### ***Sample 3***

Findings: “Within the left ovary, there is a solid lesion with an irregular outer contour measuring up to 4.3 cm.”

Impression: “Left ovarian 4.3 cm solid lesion as described above which is high risk (O-RADS 5). Referral to a gynecologic-oncologist is recommended.”

### ***Sample 4***

Findings: “Separate from the right ovary, there is a 5.1 cm simple cyst consistent with a paraovarian cyst.”

Impression: “Right 5.1 cm paraovarian cyst, almost certainly benign (O-RADS 2). No additional or follow-up imaging is needed.”

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

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**Sample 5**

Findings: “Within the right ovary, there is a unilocular cyst containing hyperechoic line and dots and a hyperechoic component with acoustic shadowing measuring up to 6.4 cm. No internal flow is seen on color Doppler imaging. Findings are consistent with a dermoid cyst.”

Impression: “Right ovarian 6.4 cm dermoid cyst as described above, almost certainly benign (O-RADS 2). If not surgically removed, a follow-up US examination in 1 year is recommended.

**O-RADS 0 = Incomplete due to technical factors**

**O-RADS 1 = Normal/physiologic ovary**

**O-RADS 2 = Almost certainly benign**

**O-RADS 3 = Low risk**

**O-RADS 4 = Intermediate risk**

**O-RADS 5 = High risk**

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**Sample 6**

Findings:

Laterality: Right

Location: Intraovarian

Descriptors: Reticular pattern, no internal flow

Maximum size: 4.4 cm

Impression:

“Right ovarian 4.4 cm hemorrhagic cyst, O-RADS 2. In this premenopausal woman, no additional or follow-up imaging is needed.”

**O-RADS 0 = Incomplete due to technical factors**

**O-RADS 1 = Normal/physiologic ovary**

**O-RADS 2 = Almost certainly benign**

**O-RADS 3 = Low risk**

**O-RADS 4 = Intermediate risk**

**O-RADS 5 = High risk**

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

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**Sample 7**

Findings:

Laterality: Left

Location: Adnexal

Type: Multilocular cyst, with solid component

Descriptors: Color score 2 (minimal flow)

Size: 7.8 x 3.4 x 5.6 cm

Impression: “Left adnexal 7.8 cm multilocular cyst with solid component as described above, O-RADS 4. Recommend additional imaging with MRI. Patient may be managed by a gynecologist consulting with a gynecologic-oncologist or solely by a gynecologic-oncologist.

**O-RADS 0 = Incomplete due to technical factors**  
**O-RADS 1 = Normal/physiologic ovary**  
**O-RADS 2 = Almost certainly benign**  
**O-RADS 3 = Low risk**  
**O-RADS 4 = Intermediate risk**  
**O-RADS 5 = High risk**

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

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### ***Sample 8 (bilateral lesions)***

#### Finding #1

Laterality: Right

Location: Intraovarian

Descriptors: Unilocular, homogenous low-level echoes, no internal flow

Maximum size: 2.8 cm

O-RADS category: 2

#### Finding #2

Laterality: Left

Location: Extraovarian

Descriptors: Tubular, endosalpingeal folds

Maximum size: 5.7 cm

O-RADS category: 2

Impression:

1. Right ovarian 2.8 cm endometrioma, O-RADS 2. If not surgically excised, recommend follow-up US examination in one year.
2. Left hydrosalpinx measuring up to 5.7 cm, O-RADS 2. Recommend management per gynecology.

**O-RADS 0 = Incomplete due to technical factors**  
**O-RADS 1 = Normal/physiologic ovary**  
**O-RADS 2 = Almost certainly benign**  
**O-RADS 3 = Low risk**  
**O-RADS 4 = Intermediate risk**  
**O-RADS 5 = High risk**

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>

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### ***Sample 9 (ipsilateral lesions)***

#### Finding #1

Laterality: Right

Location: Intraovarian

Type: Unilocular cyst with solid component  
Descriptors: ≥ 4 papillary projections  
Size: 5.6 x 3.6 x 4.8 cm

Finding #2

Laterality: Right  
Location: Extraovarian  
Type: Paraovarian cyst  
Descriptors: Simple cyst separate from ovary  
Maximum size: 2.8 cm

Impression:

1. Right ovarian 5.6 cm unilocular cyst with solid component as described above, O-RADS 5. Referral to a gynecologic-oncologist is recommended.
2. Right 2.8 cm paraovarian cyst, O-RADS 2.

**O-RADS 0 = Incomplete due to technical factors**  
**O-RADS 1 = Normal/physiologic ovary**  
**O-RADS 2 = Almost certainly benign**  
**O-RADS 3 = Low risk**  
**O-RADS 4 = Intermediate risk**  
**O-RADS 5 = High risk**

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***Sample 10 (ipsilateral lesions)***

Findings: “Left adnexal multilocular cyst without solid component measuring 7.6 x 5.4 x 4.3 cm. The inner wall and septations are smooth. Color Doppler imaging demonstrates minimal flow (color score 2). Adjacent to this, there is a 4.1 cm tubular lesion with endosalpingeal folds measuring up to 3.7 cm consistent with a hydrosalpinx.”

Impression:

1. Left adnexal 7.6 cm multilocular cyst without solid component as described above, low risk (O-RADS 3). Recommend referral to an US specialist or for a MRI study and management per gynecology.
2. Left 3.7 cm hydrosalpinx, O-RADS 2.

**Reference:** <https://pubs.rsna.org/doi/10.1148/radiol.2019191150>