

# Size of Papillary Projection/Solid Component in O-RADS US Risk Stratification and Management System

Behnaz Moradi<sup>1</sup>, Sara Naybandi Atashi<sup>2</sup>, Elham Shirali<sup>3\*</sup>

1. Department of Radiology, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran
2. Department of Radiology, Taleghani Hospital, Mazandaran University of Medical Sciences, Chalus, Iran
3. Department of Gynecologic Oncology, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran

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## Corresponding Information:

Elham Shirali, Department of Gynecologic Oncology, Yas Hospital, Tehran University of Medical Sciences, Tehran, Iran

Email: [shirali.gyn@gmail.com](mailto:shirali.gyn@gmail.com)



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## Dear Editor in Chief

Adnexal masses characterization is a challenging issue and essential for appropriate patient management. Morphological scoring systems that combine important structural features of adnexal tumors are necessary to determine the risk of malignancy (2).

International Ovarian Tumor Analysis (IOTA) and Ovarian Adnexal Reporting and Data System (O-RADS) are two excellent standardized lexicons to provide practical uniform terms, definitions, and measurements for describing and classifying ovarian masses (1,5).

The O-RADS system has mostly used the evidence-based terms and definitions of the International Ovarian Tumor Analysis (IOTA) model (1, 2, 3). The maximum size of papillary projection/solid component is one of these features that has a nearly high positive likelihood ratio (LR) of malignancy (2.4). This item had a higher positive LR compared to other variables related to the size of the solid part as papillary/lesion ratio and solid/lesion ratio with positive LR of 1.6 and 1.5 respectively (2).

It had been included in both IOTA simple rules and Assessment of Different Neoplasia in the Adnexa (ADNEX) model. In the ADNEX model, when only the maximal diameter of the largest solid part is selected from <7mm to significantly higher than 7mm, the risk of malignancy can change from less than 10% to higher than 50% (O-RADS 3 to O-RADS 5). Furthermore, when we choose the maximal diameter of the largest solid part of  $\geq 7$  mm and change other items (except selecting acoustic shadow), the risk of malignancy is nearly always higher than 10%.

In the first publication of the O-RADS system, they noted that cystic lesions with a maximum diameter of the solid component of  $\geq 7$  mm, are at higher risk for malignancy (4). On the other hand, it had been shown that the number of papillary projections had nearly similar positive LR (2.2) (2). Despite this and the inclusion of the number of papillary projections in the final risk stratification system, the maximal size of the solid part was not included, and no cystic lesion with a solid component could be categorized in O-RADS 3 category. The size of the papillary projection makes no change in malignancy risk stratification. Adding this item and other criteria could improve the current classification and management system.

## Conclusion

In conclusion, we propose that in the O-RADS lexicon, the use of maximal diameter of solid components (with a 7 mm cut-off point) along with some papillary projections is helpful to categorize cystic ovarian mass lesions as an auxiliary item for classifying the risk of malignancy less than 10% to higher than 50% (O-RADS 3 to ORADS 5).

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## Conflict of Interest

The authors declare no conflict of interest.

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