

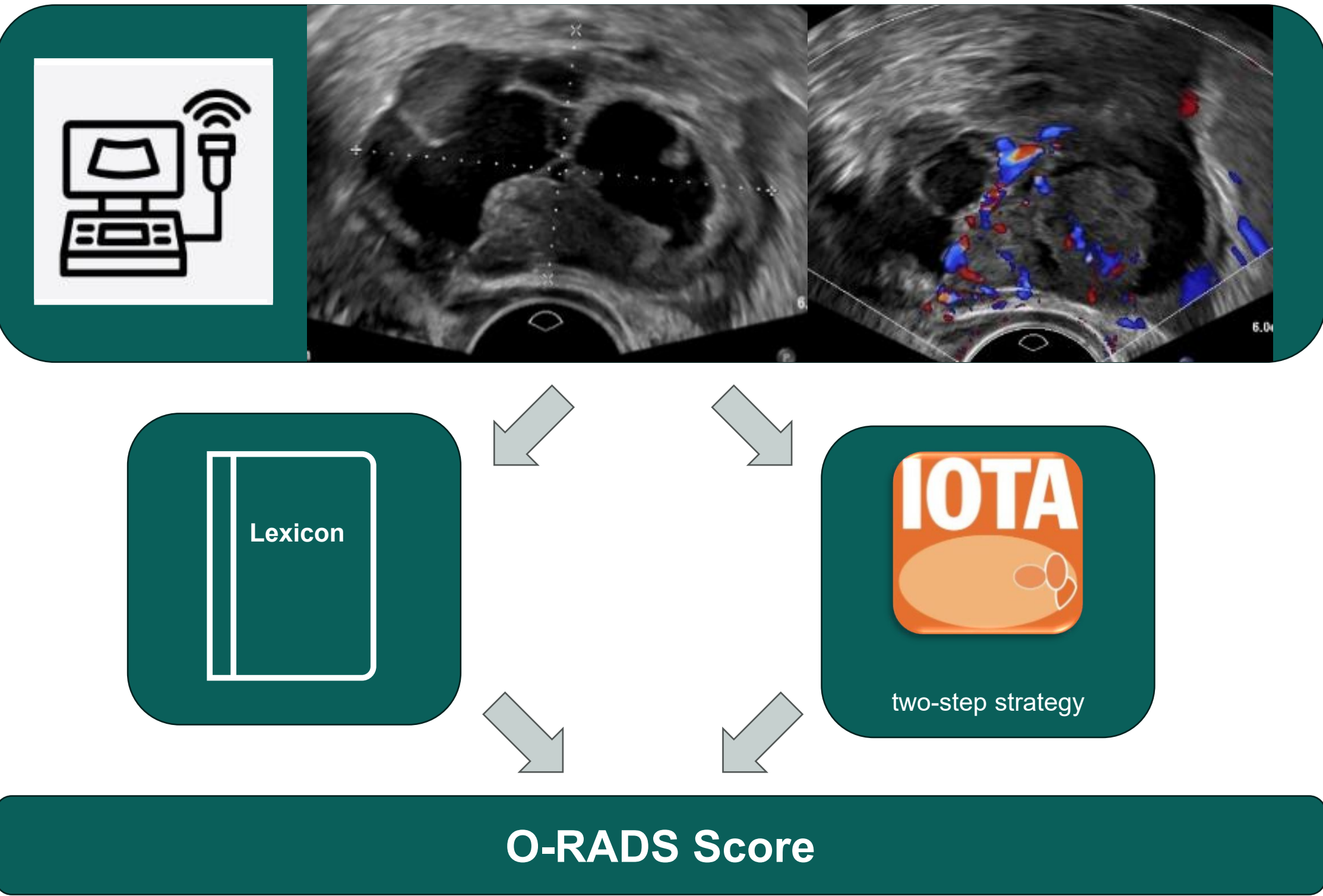
# IOTA two-step strategy compared to O-RADS lexicon descriptors in the preoperative characterization of ovarian and adnexal lesions

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## Introduction

- Accurate discrimination between benign and malignant ovarian and adnexal lesions is essential for patients' management.



- The Ovarian-Adnexal Reporting and Data System (O-RADS) provides standardized ultrasound-based risk stratification.
- O-RADS Scores can be assigned using O-RADS lexicon descriptors or by converting malignancy risk derived from the International Ovarian Tumor Analysis (IOTA) two-step strategy.

## Aim

- External validation of O-RADS Scores derived from the IOTA two-step strategy with the other pathway using O-RADS lexicon descriptors (version 2022)

## Material and Methods

- Retrospective single-centre diagnostic accuracy study
- Histopathology served as reference standard

## Results

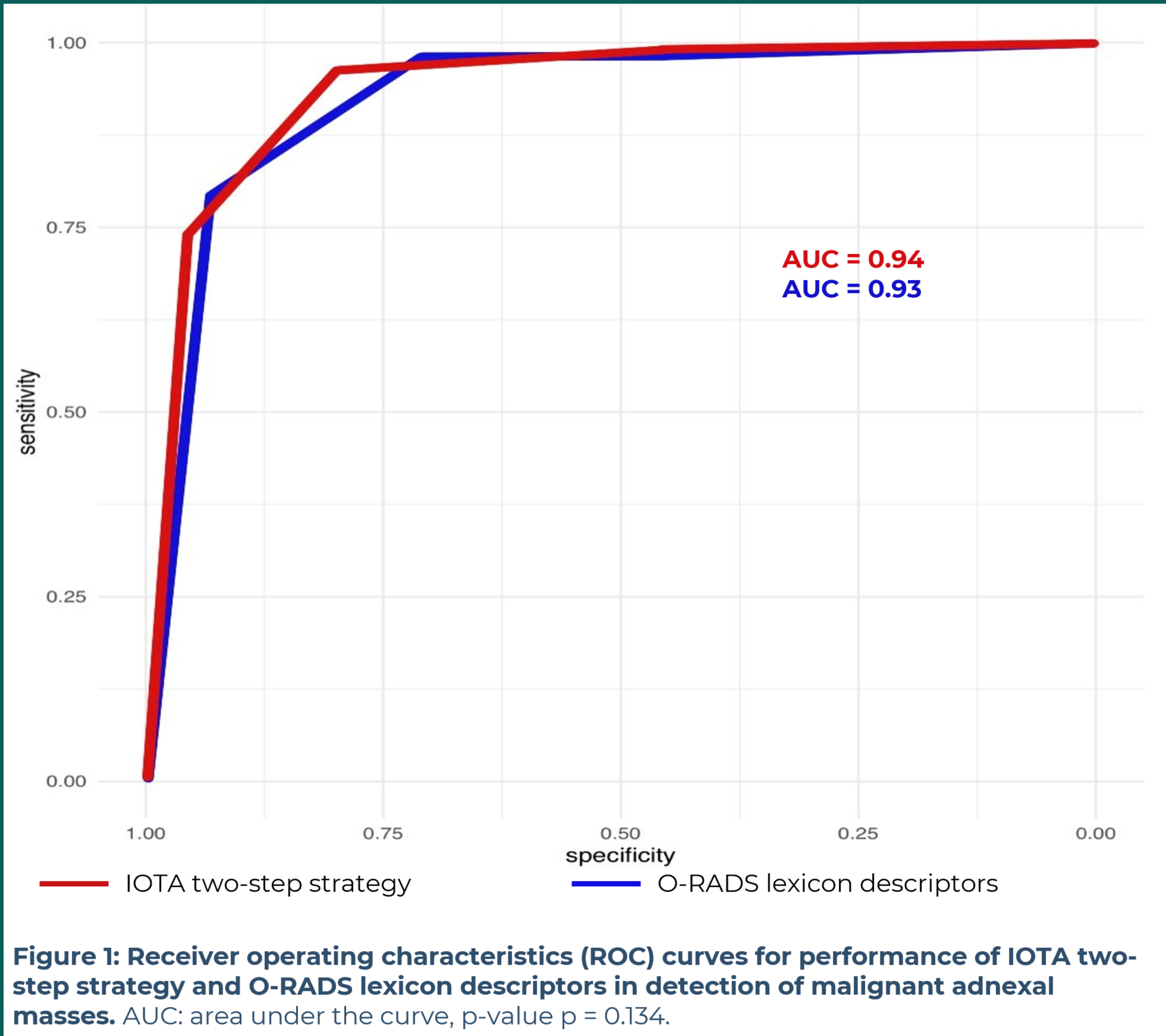
- 446 patients included
- Histopathology revealed 338 (75.8%) benign and 108 (24.2%) malignant lesions, including 19 (17.6%) borderline ovarian tumours

| Model                      | Sensitivity (%) | Specificity (%) | PPV (%) | NPV (%) |
|----------------------------|-----------------|-----------------|---------|---------|
| IOTA two-step strategy     | 96.3            | 80.2            | 60.8    | 98.6    |
| O-RADS lexicon descriptors | 98.2            | 70.7            | 51.7    | 99.2    |

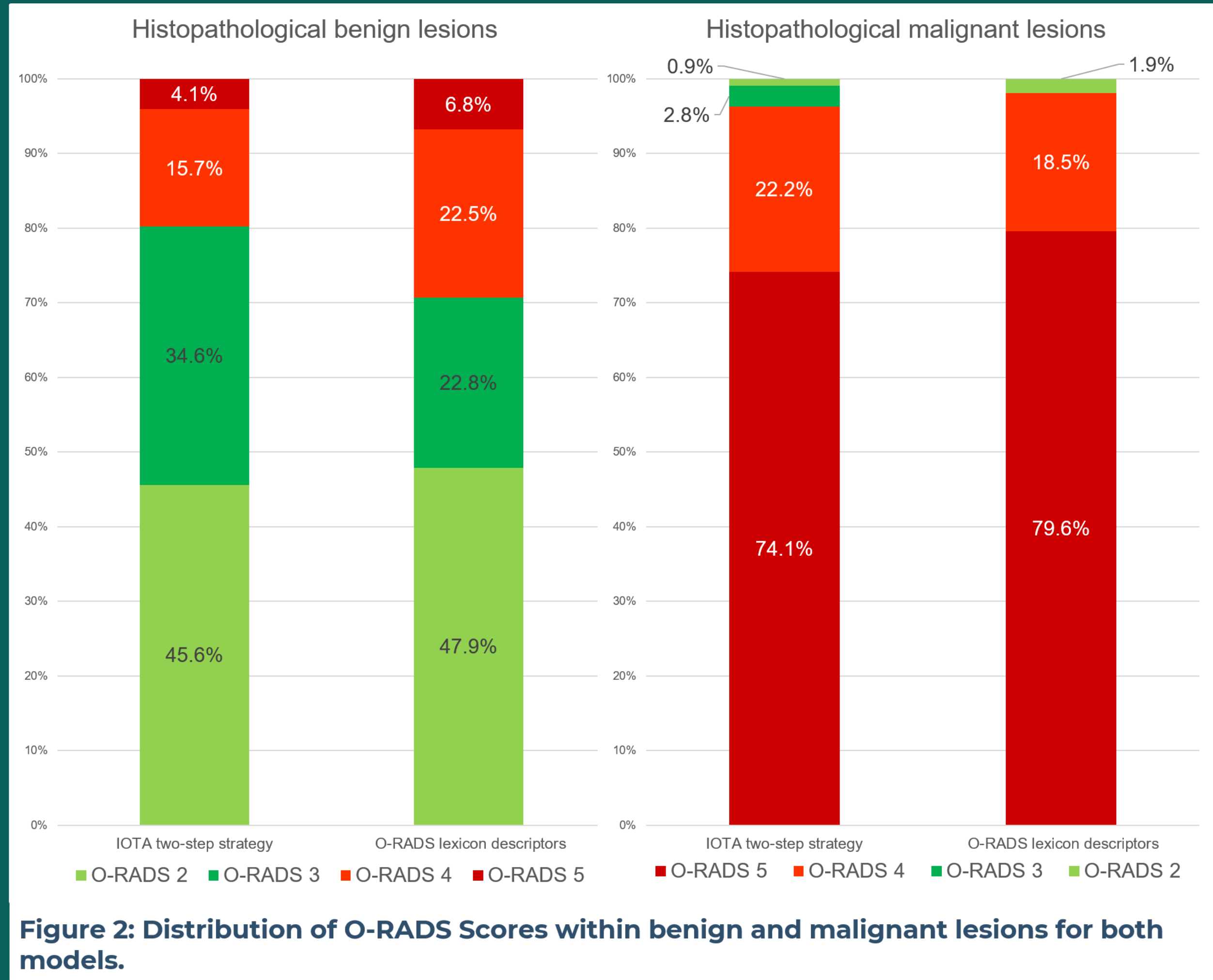
**Table 1: Performance of both models for the prediction of malignancy.**  
PPV = Positive Predictive Value, NPV = Negative Predictive Value

## Conclusion

- The IOTA two-step strategy and the O-RADS lexicon descriptors provided **reliable risk stratification** of adnexal masses with **high sensitivity** for malignancy detection.
- Both risk models demonstrated **very good performance** and comparable diagnostic accuracy.
- IOTA two-step strategy showed a **higher specificity**. This may contribute to a reduction in false-positive classifications and unnecessary interventions.



**Figure 1: Receiver operating characteristics (ROC) curves for performance of IOTA two-step strategy and O-RADS lexicon descriptors in detection of malignant adnexal masses.** AUC: area under the curve, p-value p = 0.134.



**Figure 2: Distribution of O-RADS Scores within benign and malignant lesions for both models.**

## References

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