

EP02.14

Pelvic ultrasound using IOTA terminology and algorithms for the evaluation of ovarian cysts in pediatric and adolescent patients (PAG) managed surgically

Alessandra Inzoli², Paolo Passoni², Valeria Carazita¹, Ramona Chiozzi¹, Beatrice Villa¹, Francesca Manzoni¹, Sara Nava¹, Stella Granato¹, Daniela Giuliani², Andrea Alberto Lissoni², ¹, Robert Fruscio², ¹

¹. Department of Medicine and Surgery, Università degli Studi di Milano-Bicocca, Milan, Lombardy, Italy.

². Department of Gynecology, Fondazione IRCCS San Gerardo dei Tintori, Monza, Lombardy, Italy.

Objectives

IOTA criteria and algorithms are validated in patients >18 years but not in PAG patients, where malignancy is rarer and tumor histotypes differ from adults.

The primary objective of this study was to assess the **diagnostic performance of various algorithms in this specific population.**

Methods

We retrospectively analyzed all **patients <18 years** who underwent surgery for ovarian masses at IRCCS San Gerardo (Monza) over the last 15 years.

158

patients underwent surgery for ovarian masses

15

years of retrospective data (2010–2025)



Figure 1. Histological report and surgical procedures

Comparison of Diagnostic Metrics			
Diagnostic Method	Sensitivity	Specificity	Inconclusive Results
Simple Rules	93%	96%	3%
Subjective Assessment (SE)	95%	93%	0

SE eliminates inconclusive results while maintaining high sensitivity and specificity.

Figure 2. Diagnostic performance of ultrasound approaches

Results

158 patients undergoing surgery for ovarian masses were included (mean age 15.3 years). We compared easy descriptors, the ADNEX-based 2-step strategy, IOTA simple rules and subjective evaluation (SE). **SE showed the best performance (Se 95%, Sp 93%)** with no inconclusive results, while simple rules had the highest accuracy among IOTA algorithms (Se 93%, Sp 96%).

Conclusion

Our findings support the use of expert evaluation as the preferred method in PAG patients.