OBJECTIVES: To evaluate the false negatives (FN) of the predictive indexes of the IOTA (International Ovarian Tumor Analysis) and ADNEX (Assessment of different neoplasms in the adnexa). To study whether the addition of indices based on tumor markers incorporating HE4 (ROMA (Risk Ovarian Malignancy Algorithm) and CPH-I (Copenhagen Index) improve the efficiency of IOTA and ADNEX to identify adnexal tumors with indeterminate ultrasonographic criteria that require "oncological approach"

METHODS: Retrospective study of 251 patients undergoing surgery in our center due to the finding of an adnexal mass with indeterminate ultrasound diagnosis following the Simple Rules model of IOTA and/or under subjective criteria. We consider as "oncological approach" the tax tumors of preferential oncological surgery, which correspond to the histologies of invasive ovarian epithelial carcinoma and metastases. The sensibility (S), specificity (E), and positive predictive value (VPP) and negative predictive value (NPV) were calculated, emphasizing the study of FN of the indices studied and combinations.

RESULTS: With IOTA (cutoff 10) and ADNEX (cutoff 5), 10 and 7 FN were documented, respectively. 5 FN were shared by both indices. By adding the ROMA (cutoff 15) and CPH-I (cutoff 7) indices, FN for IOTA and ADNEX decreased to 1 and 2 respectively, maintaining E and VPP above 75% and 50% respectively.

CONCLUSIONS: Adding HE4 in the form of its related indexes (ROMA and CPH-I) increases the efficiency of ultrasound-based indices (IOTA and ADNEX) in the preoperative evaluation of the adnexal ultrasonographically indeterminate tumors that must be managed with oncological criteria. The need arises for a new unique probabilistic index that integrates clinical variables (age), ultrasound, Ca-125 and HE4.