Introduction/Background The discrimination of borderline ovarian tumor (BOT) is challenging. Ultrasonography (US) is the most essential imaging modality for distinguishing ovarian masses but depends on the experience of radiologists. In 2014, the IOTA group carried out the assessment of different neoplasia’s in the Adnex Model. It was used to discriminate benign, BOTs, stage I, stage II-IV invasive ovarian cancer, and secondary metastatic cancer. This study aims to evaluate the efficacy of the Adnex model in the determination of BOTs.

Methodology This was a retrospective study, medical records of histopathologically proven cases of BOTs were included from the year 2009 to 2021. The ultrasound and clinical findings were entered in an online Adnex calculator. These results were used to calculate the absolute risk predicting the probability of mass being as BOT.

Results A total of 22 cases of BOT were included. Efficacy in terms of sensitivity of the Adnex model for preoperative diagnosis of BOTs was 18.2% [95% CI: 7.31–38.52]. Performance of the Adnex model based on absolute risk (AR) improves with a selection of a more inclusive cut-off value, varying from 4.5% (1/22) correctly classified case of BOT with the cut-off 20%,18.2% (4/22) with the cut-off 10% and up to 55.5% (12/22) classified cases of BOT with cut off value of 3%. Similarly, relative risk (RR) was also used to classify the BOT, but only 4(18.2%) cases were identified correctly.

Conclusion More encompassing cut-off values allow the model to differentiate BOTs better. The calculation based on RR or AR with a cut-off value of at least 10% should be used when evaluating BOTs. The IOTA Adnex model did not perform well in predicting cases of BOTs that were histopathologically proven in terms of sensitivity.