During pregnancy, discovery of a complex ovarian cyst should make us suspect first a malignancy. However, we should remember that pregnancy-related modifications of an ovarian endometrioma can mimic an adnexal cancer. So, and specially, if there is a medical history of previous endometriosis, this should be considered as a differential diagnosis.

Two cases were identified in our center.

The first patient, 32 years old, primigravida, has a long history of pelvic and ovarian endometriosis, who received a previous surgical and hormonal treatment. She had a spontaneous single pregnancy and presented a voluminous complex ovarian right cyst at 8 weeks with irregular solid parts and abnormal vascularisation, identified by ultrasonic evaluation and Magnetic Resonance Imaging (MRI). We performed a right oophorectomy by laparoscopy because of high suspicion of malignancy. The pathologic findings revealed decidualized endometrioma and decidual structures.

The second patient, 24 years old, had also a previous laparoscopic diagnostic of endometriosis. Following In Vitro Fecundation, an ultrasound examination performed in a context of pelvic pain, showed a twin pregnancy and a complex ovarian cyst of 10 cm, heterogeneous, with highly dense internal echos, and containing a solid component. The cyst was difficult to acces by laparoscopy, due to the numerous pelvic adherence and his localisation in the Douglas ; so, a transvaginal ovarian cyst puncture was performed. Pathologic findings showed a haemorrhagic fluid without malignancy.

Decidualized Endometrioma mimicking ovarian cancer during pregnancy is a challenging diagnostic entity. An expectant management could be performed in cases with clear history of endometriosis previously diagnosed and with stable ovarian lesion. The radiologic examination, specially MRI, help us to exclude an ovarian malignancy.If any doubt persist, an oophorectomy should be performed in the second trimester to obtain pathological evaluation of the lesion.