Diffuse large B-cell lymphoma of the ovary: a predictive radiogenomic model based on LVSI and Ki67 in prediction of lymph-node metastasis

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Introduction Diffuse large B-cell lymphoma (DLBCL) of the ovary is a very rare condition. Surgery is often mandatory to establish the diagnosis which is based on the histologic examination and immunohistochemistry tests. Treatment is based on chemotherapy.

Methods We report a series of four cases treated in Salah Azaiez Institute of Oncology, Tunis, Tunisia, from 2001 to 2019.

Results The average age was 49 (from 34 to 67 years old). The abdominal symptoms consisted of pelvic pain and swollen abdomen. CA-125 was high in one case. The average radiological size of the ovarian mass measured with CT scan was 141 mm (from 50 to 200 mm). Pleural effusion, mediastinal, axillary and supravacuicular lymphadenopathies were found in one case. Per-operative findings showed ascites in one case and unilateral ovarian mass in three cases. One case showed an invasion of the uterus requiring a hysterectomy. For another patient, the tumor invaded the small intestine therefore she underwent an additional small bowel resection. The average histological size of the tumor was 92.5 mm. CD 20 and Bcl-2 were expressed in all cases and the Ki67 was higher than 50% in all cases. Two patients had R-CHOP chemotherapy and are in total remission; the two others are lost to follow-up.

Conclusion Ovarian DLBCL mimics usually both clinically and radiologically an ovarian epithelial tumor. Surgery remains the only way to establish the diagnosis and guide the treatment.

Predictive radiogenomic model on US images predicting germ-line BRCA1/2 status

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Results A total of 109 patients treated between 2000 and 2018 with primary LGSOC were identified in our institution database. Complete data of Ki67 expression and LVSI in patients who underwent lymph node dissection was obtained in 61 (84.7%) of those patients. Presence of LVSI was associated with higher risk of lymph-nodes metastases in univariate analysis (p = 0.017). No significant correlation between Ki67 expression level and nodal metastases was found (p = 0.145). Neither presence of LVSI, nor nodal metastases were associated with prognosis differences.

Conclusions This is the first study showing association between LVSI presence, Ki67 expression and risk of lymph-node metastasis in primary low-grade ovarian cancer.