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## A typical biomarker combination in a young male with primary mediastinal yolk sac tumor: Case report

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Primary mediastinal endodermal sinus tumor (yolk sac tumor) is a rare neoplasm with uncertain effect of chemotherapy and other treatment strategies on the overall survival. A case of 37 year-old Hispanic Puerto Rican male with unremarkable medical history was evaluated for a sudden episode of shortness of breath, minimal hemoptysis, loss of consciousness and seizures. Initial physical examination was just significant for decreased breath sounds on right lung field. Laboratory results including coagulation panel were unremarkable except for an elevated beta hCG (44.62mIU/mL), AFP (11.9 IU/ML) and LDH (382 U/L). Contrast-enhanced computed tomography showed a large bulky mixed cystic-solid mass in the right anterior mediastinum with associated leftward displacement of the heart and mediastinal structures as well as metastatic deposits in the right cardiophrenic fat pad. Atypical mesothelial cells were the only specific finding observed in a pleural fluid sample obtained by thoracentesis. Biopsy result was significant for the presence of CDX-2, CEA, CK8/18, CK19 and CD20 markers. Additionally, immunochemistry reported tumor cells positive for SALL-4, OCT4 and glypican-3, which were consistent with yolk sac tumor. Patient was started on etoposide and cisplatin chemotherapy as well as radiotherapy. Nevertheless, initial response was not successful with progressive increase of mediastinal mass size. In the presented case, combined expression of CDX-2, CEA, SALL-4, OCT4, CK8/18, CK19 and CD20 was seen. Cancer genome and human protein atlas review showed that this combination has not been described in primary gonadal or extragonadal germ cell malignancies. Whether the combined expression of the genes codifying these biomarkers may affect the overall prognosis and response to therapy remains unknown. The reported case appoints to the combination effect of genetic expression as a possible factor to take into consideration when choosing the optimal therapy in patients with germinal cell malignancy.

### Biography

Karid Nieves Borrero is currently an Internal Medicine Resident at the University of Puerto Rico-Medical Sciences Campus, School of Medicine, San Juan, Puerto Rico. She has completed her Medical degree at the University of Puerto Rico, School of Medicine in 2015. She is currently working on the development of a research proposal in the use of bioinformatic tools to improve patient care in Hispanics.

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