INTRODUCTION: Paraneoplastic neurologic syndromes (PNS), a heterogeneous group of oncologic immune-mediated neurologic disorders, often antedate cancer diagnosis. PNS recognition results in early cancer screening/treatment. Paraneoplastic cerebellar degeneration (PCD) is an aggressive/debilitating/fatal PNS characterized by pancerebellar symptoms—progressive ataxia/dysarthria/nystagmus/vertigo. PCD is predominantly associated with breast/gynecologic cancers. Though 12 onconeural antibodies are implicated in PCD, anti-Yo antibody is the most common/specific antibody seen in PCD. We present the first case of anti-Yo PCD associated with uterine carcinosarcoma.

METHOD: Case analysis. CASE: 78yo female presented with month-long history of ataxia/gait instability/falls and abrupt onset diplopia/nausea/vomiting without fever/syncope/headache/dysarthria. Past medical history was significant for right breast T1 N0 invasive ductal carcinoma s/p partial mastectomy and adjuvant whole breast radiation that occurred 1 year prior to presentation. Neurologic exam revealed intact language/comprehension, left sixth cranial nerve palsy, truncal/limb ataxia, bilateral horizontal nystagmus, and symmetric 3+ deep tendon reflexes without focal deficits or dystonia noted. Routine blood work was unremarkable. Brain MRI with/without contrast noted no evidence of metastatic disease/demyelinating process/hemorrhage/infarction. She declined CSF studies. Within two months, she developed dysarthria/dysphagia and was unable to stand without assistance due to progressive ataxia. PNS laboratory evaluation yielded high titer of anti-Yo antibody (1/245,760) with positive Western blot assay as the only onconeural antibody. Chest/abdomen/pelvis CT scan demonstrated multiple soft tissue lesions in the omentum with bilateral sub-centimeter pulmonary nodules. Tumor marker analysis noted elevated CA-125/CA-27.29/CA-15.3. CT guided biopsy of omental lesions revealed poorly differentiated carcinosarcoma. Immunohistochemistry confirmed malignant stage IV uterine carcinosarcoma. Chemotherapy with IVIG was initiated. Though tumor burden size decreased, PCD progressed (bedbound, increased anti-Yo antibody titers). Rapid neurologic decline required hospice 8 months after PCD diagnosis associated with uterine carcinosarcoma. She died 1 month later. CONCLUSIONS: This case confirms anti-Yo PCD association with uterine carcinosarcoma. PCD requires early cancer screening/treatment and aggressive multi-modal immunotherapy interventions. Clinicians should have a low threshold for PCD. Double primary cancers must be considered. Prospective trials addressing anti-Yo PCD therapeutic interventions, illness progression, associated cancer, double primary, and survival are indicated. Clinicians require further education regarding PCD and other PNS.