

Supplementary Table 1a: Clinical and oncologic associations of 7 male PCA-1-IgG positive patients (aged 50-79)

Case #	Cancer Type	PCA-1 Titer	Presenting Symptoms / Signs	Treatment	Course	Potential Extra-Cerebellar Signs	Notes
1	adenocarcinoma gastroesophageal junction, poorly differentiated; prostate cancer one year prior	serum -1:61,440 CSF – 1:256	subacute onset of dizziness, imbalance, incoordination	chemotherapy, tumor resection, IVMP	asymmetric cerebellar ataxia and involuntary ipsilateral tremor developed	- tremor - dysphagia	non-smoker
2	large cell carcinoma of lung, poorly differentiated	serum – 1:122,880 CSF – 1:2,048	subacute onset of dysarthria, dizziness, difficulty walking, altered mental status	none	died	altered mental status	- smoker - 30 lbs weight loss
3	cholangiocarcinoma	serum -1:61,440 CSF – NA	vocal nasality, dysarthria, spasticity, difficulty walking	IVMP, IVIG, tacrolimus	discharged to hospice	- bulbar weakness - spasticity - peripheral neuropathy	20 lbs weight loss
4	breast and esophageal carcinomas	serum -1:61,440 CSF – NA	subacute onset of disequilibrium, “dizzy spells”, spasticity, weakness, ataxia	NA	progressed to wheelchair dependence	- spasticity - weakness - vibration and position sensory loss - brisk reflexes	

5	? (hard breast masses removed 15 yrs earlier)	serum -1:7,680 CSF – 1:512	subacute onset of vertigo, dysarthria, diplopia, ataxia and nystagmus	plasmapheresis	severe nystagmus, unable to feed self, needed walker	diplopia	ex-smoker
6	gastric carcinoma	serum -1:61,440 CSF – NA	subacute onset of dysarthria, ataxia and anorexia	NA	died	none	-ex-smoker -30 lbs weight loss
7	esophageal adenocarcinoma	serum -1:7,680 CSF – 1:128	nausea, vertigo, vertical diplopia and ataxia.	IVIg/IV MP	very mild improvement	diplopia	smoker

Supplementary Table 1b: 10 previously published cases

Case #	Age (yrs) / Ethnicity	Cancer Type	Presenting Symptoms / Signs	Treatment	Course	Potential Extra-Cerebellar Signs	Notes
Ref# S1	55 / NA	adenocarcinoma of parotid gland	subacute onset of dysarthria, incoordination, difficulty walking and ataxia	8 courses of IVIG, tumor resection	stabilization and mild improvement	decreased reflexes	
Ref# S2	68 / NA	adenocarcinoma (unknown etiology; suspected lung)	subacute onset of difficulty walking and frequent falls.	tumor resection, plasmapheresis, and 1 course of IVIG	progressed to dysarthria, nystagmus and ataxia, no improvement; nursing home	none	-smoker -heavy alcohol use

Ref# S3	73 / NA	gastric adenocarcinoma, poorly differentiated	subacute onset of difficulty walking, incoordination, dysarthria and cognition disturbance	tumor resection	no improvement	- mild cognitive dysfunction - sensori-motor neuropathy - areflexia - paratonia	weight loss
Ref# S4	55 / NA	adenocarcinoma of esophagus and gastroesophageal junction	dysarthria, incoordination, difficulty walking and ataxia 9 months following cancer diagnosis	tumor resection, oral steroids, plasmapheresis, IVIG	-no improvement -died	decreased reflexes, upper limbs	smoker
Ref# S5	58 / NA	adenocarcinoma of esophagus and gastroesophageal junction	dizziness, ataxia and nystagmus 6 weeks following flu-like illness	tumor resection	progression to incapacitated	none	
Ref# S6	71 / Asian	gastric adenocarcinoma	difficulty walking, dysarthria, ataxia and nystagmus 7 months following cancer diagnosis	tumor resection, IV steroids, IVIG, plasmapheresis	poor response	decreased muscle tone	
Ref# S7	72 / NA	lung adenocarcinoma, poorly differentiated	progressive (18 months) gait disorder and ataxia	unknown	developed choreiform movements of upper limbs and toes 6 months after onset	choreiform movements	smoker

Ref# S8	79 / NA	prostatic adenocarcinoma, focal neuroendocrine differentiation	subacute onset of disequilibrium, ataxia, dysarthria, nystagmus and difficulty walking	none	rapid deterioration; died after one week of heart failure	none	
Ref# S9	57 / NA	adenocarcinoma of esophagus and gastroesophageal junction	subacute onset of dysphagia, difficulty walking, incoordination, diplopia and ataxia	tumor resection, IV steroids, IVIG	progression to wheelchair then bedridden and nonambulatory	brisk reflexes	45 lbs weight loss
Ref# S10	49 / C	large cell lung carcinoma, poorly differentiated	acute onset of vertigo, ataxia, dysarthria, nystagmus and disequilibrium	none	developed altered mental status; progressed to being bedridden and confused; passed away after a few weeks	- altered mental status - weakness - decreased sensation - decreased reflexes	-history of seizure disorder -smoker -30 lbs weight loss

Abbreviations: IG: immune globulin; IV: intravenous; lbs: pounds; mos: months; NA: not available; wks: weeks, C: Caucasian; AA; African American

Supplementary References:

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