

Optic Neuropathy in Patients Treated with PD-1 Blockade

Optic Neuropathy in Patients Treated with PD-1 Blockade

Thank you for your participation in this survey investigating immune checkpoint blockade inhibitors and the risk of optic neuropathy. We would like to identify patients who developed optic neuropathy after receiving one of several commercially available PD-1 or PD-L1 inhibitors for the treatment of cancer.

Please perform an EMR search of patients who have received any of the following drugs of interest, cross referenced with one of the following optic neuropathy diagnoses. We appreciate your filling out a survey for each patient identified.

Generic Name	Brand Name
Pembrolizumab	Keytruda
Nivolumab	Opdivo
Atezolizumab	Tecentriq
Avelumab	Bavencio
Durvalumab	Imfinzi
Ipilimumab [CTLA-4 inhibitor]	Yervoy

Disease	ICD-10 codes	ICD-9 codes
Optic neuritis / Optic neuropathy	H46.xxx	377.xxx
Cancer/melanoma associated retinopathy	H36	362.71, 362.72
Myasthenia gravis	G70.00	358.00
Inflammatory Orbitopathy/Thyroid-Like Ophthalmopathy	H05.10	376.11

This survey is estimated to take 15 minutes to complete if the patient's chart is readily available. The survey will query information related to demographics and clinical course and treatment. We recommend having the patient's chart available while completing the survey to facilitate data gathering. This survey can also be saved and returned to and completed later if needed.

At the end of the survey, there is an optional field in which you can provide your personal identification if you choose. We will use this information to acknowledge all physicians that have contributed to this project in any future publications. This information will not be used to track responses. Please leave this field blank if you choose to remain anonymous.

The results of this survey will be used for research (and is approved by the IRB board at UCLA) and participation is voluntary. Your responses are anonymous and will not be tracked back to you.

Patient Demographic Information

Patient age at time of diagnosis (years)

Gender

Male Female

Race / Ethnicity

White African American / Black American Indian / Alaska Native Asian / Pacific Islander
 Hispanic / Latino Race/ethnicity unknown Other

(Other - please specify)

Neuro-ophthalmic diagnosis

Neuro-ophthalmic diagnosis

- Optic Neuritis / Optic papillitis / Swollen optic disc
- Optic Neuropathy
- Cancer / Melanoma Associated Retinopathy
- Myasthenia Gravis
- Inflammatory Orbitopathy / Thyroid-like Ophthalmopathy
- Other optic nerve disease

Other type of optic nerve disease observed, please describe clinical symptoms, treatment, and outcome.

ICD-10 / ICD-9 Diagnosis Code (if available)

Unilateral vs Bilateral

-
- Unilateral
 - Bilateral
-

Date of diagnosis

Date of resolution, if any

Optic Neuritis - Clinical Summary

Type of optic neuritis

- Retrobulbar Intraocular Other
-

(Other - please specify)

Initial diagnosis or recurrence of optic neuritis

- Initial Recurrent
-

Signs/Symptoms present (select all that apply)

- Decreased visual acuity Pain with eye movement and/or periorbital discomfort Visual field defect
 rAPD Color vision deficit Optic nerve swelling Other
-

(Other - please specify)

(Symptoms - any additional comments?)

Optic nerve exam (select all that apply)

- Normal exam Edema present Hemorrhages present Other
-

(Other - please specify)

(Exam - any additional comments?)

Grading of the optic nerve head edema if present (according to the Frisen Scale)

- Grade 1
 Grade 2
 Grade 3
 Grade 4
 Grade 5

Optic Neuropathy - Clinical Summary

Symptoms present (select all that apply)

- Decreased visual acuity Visual field defect rAPD Color vision deficit Other
-

(Other - please specify)

(Symptoms - any additional comments?)

Optic nerve exam (select all that apply)

- Normal exam Edema present Hemorrhages present Atrophy present Other
-

(Other - please specify)

(Exam - any additional comments?)

Cancer / Melanoma Associated Retinopathy - Clinical Summary

Type of Retinopathy

- Cancer associated Melanoma associated Other
-

(Other - please specify)

Symptoms Present (select all that apply)

- Decreased visual acuity Flashes Floaters Photosensitivity Nyctalopia
 Visual field defect Prolonged glare after light exposure Prolonged dark adaptation
 rAPD Color vision deficit Optic nerve swelling Other
-

(Other - please specify)

(Symptoms - any additional comments?)

Fundus Exam Findings (select all that apply)

- Normal exam Optic nerve pallor Macular edema RPE thinning and mottling
 Attenuation of arterioles Vitreous cells Vascular sheathing Periphlebitis
 Other
-

(Other - please specify)

(Exam - any additional comments?)

Myasthenia Gravis - Clinical Summary

Signs/Symptoms Present (select all that apply)

- Ptosis Diplopia Strabismus Issues with mastication Issues with facial expression
 Issues with speech Issues with neck extensors Issues with proximal limb muscle
 Issues with respiratory muscles Other
-

(Other - please specify)

(Symptoms - any additional comments?)

Myasthenia Gravis - Diagnostic Testing

	Positive	Negative	Not Performed
Edrophonium test	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Repetitive nerve stimulation testing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Single fiber EMG	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Sleep test	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Ice test	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(Diagnostic Testing - any additional comments?)

	Positive	Negative	Not Performed
Anti-ACh receptor antibody titer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Serum anti-muscle specific kinase antibody titer	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(Labs - any additional comments?)

Other Neuromuscular Junction related disease present?

 Yes No

Please describe symptoms, treatment, and outcomes of any other neuromuscular disease.

Inflammatory Orbitopathy / Thyroid-Like Ophthalmopathy - Clinical Summary

Signs / Symptoms Present (select all that apply)

- Proptosis Pain Swelling Erythema Diplopia Decreased vision Visual field issues
 Other
-

(Other - please specify)

(Symptoms - any additional comments?)

Exam Findings (select all that apply)

- Decreased vision Color vision abnormalities rAPD Proptosis Extraocular muscle restriction
 Lid retraction Lid lag Lagophthalmos Chemosis Episcleritis Scleritis
 Optic nerve pallor Other
-

(Other - please specify)

(Exam - any additional comments?)

Visual Field

Visual field defect if present (select all that apply)

- None Altitudinal Arcuate or partial arcuate Central Cecocentral scotoma
 Enlarged blind spot Diffuse visual field loss Quadrant Hemianopia Three quadrant
 Bitemporal hemianopia Other
-

(Other - please specify)

(Visual Field - any additional comments?)

Optic Neuritis - Additional Tests

MRI Findings

Other white matter lesions present on brain MRI

Yes No Unknown

Systemic neurologic findings associated with optic neuritis?

Yes No

Please describe any associated systemic neurologic findings

	positive	negative	not performed
Anti-Aquaporin 4 antibody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-MOG antibody	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Optic Neuropathy - Additional Tests

MRI / imaging findings

Additional tests and results

Cancer / Melanoma Associated Retinopathy - Additional Tests

Fundus Angiography Findings (select all that apply)

- Normal Leakage Macular edema Other
-

(Other - please specify)

(FA Findings - any additional comments?)

Optical Coherence Tomography (OCT) Findings (select all that apply)

- Normal Thinning Macular edema Other
-

(Other - please specify)

(OCT findings - any additional comments?)

Type of Electroretinogram (ERG) done

- Full field ERG Multifocal ERG Not performed
-

Electroretinogram (ERG) Findings (select all that apply)

- Normal Attenuated photopic response Absent photopic response Attenuated scotopic response Absent scotopic response Other
-

(Other - please specify)

(ERG Findings - any additional comments?)

Laboratory Testing

- None performed Anti-retinal antibody positive Anti-retinal antibody negative
 Other
-

(Other - please specify)

(Labs - any additional comments?)

Inflammatory Orbitopathy / Thyroid-Like Ophthalmopathy - Additional Tests

	Abnormal	Within normal limits	Not Performed
Complete blood count	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Basic metabolic panel	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Thyroid function studies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Erythrocyte sedimentation rate	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
	Positive	Negative	Not Performed
Anti-thyroid antibodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-nuclear antibodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Anti-neutrophil cytoplasmic antibodies	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rheumatoid factor	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Angiotensin converting enzyme	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Rapid plasma reagin test	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

(Labs - any additional comments?)

Imaging Performed (select all that apply)

- Computed tomography Magnetic resonance imaging B-scan Optical Coherence Tomography
 (OCT) optic nerve head Other None performed

(Other - please specify)

Imaging Findings

Treatment Details

Treatment that patient received

Patient response to treatment

Clinical outcome

Checkpoint Inhibitor Drug Information

Which of the following drugs of interest was the patient administered? (select multiple if patient on combination therapy)

- Pembrolizumab (Keytruda) Nivolumab (Opdivo) Atezolizumab (Tecentriq) Avelumab (Bavencio) Durvalumab (Imfinzi) Ipilimumab (Yervoy) [CTLA-4 inhibitor] Other
-

(Other - please specify)

What was the drug dose and dosing regimen, if available?

Date of first drug infusion

Date of last drug infusion

What was the clinical indication for the drug of interest (concurrent cancer diagnosis)?

- Malignant melanoma Hodgkin's lymphoma Non small cell lung cancer Squamous cell carcinoma of head and neck Urothelial carcinoma Renal cell carcinoma Merkel cell carcinoma Microsatellite instability high or mismatch repair deficient metastatic cancer Other
-

(Other - please specify)

Physician Identification (optional)

If you would like to be acknowledged for your contribution to this research project, please provide your full name, email address, and city. This will not be used to track information. If you would like to remain anonymous, please leave this field blank.

If you have any feedback related to this survey or research project, please provide feedback here.