DATA EXTRACTION

Study description

Indicate n.a. if data is not given in manuscript

Study ID

Title

Title of paper that data are extracted from

First Author

Journal

Year of publication

Study design

- Case report
- Case series
- Cohort study
- Non-randomized controlled trial
- Randomized controlled trial
- Other

Clear above selection

Data collection

- Cross-sectional
- Longitudinal
- Retrospective
- Prospective
- Other

Clear above selection

Workgroup-specific quality aspects

Are the staining protocols appropriate?

- ☐ Yes
- ☐ No (--> consider exclusion)
- ☐ Not available / not applicable

Clear above selection

Are the provided histological images of high quality?

- ☐ Yes
- ☐ No (--> consider exclusion)
- ☐ Not available / not applicable

Clear above selection

How certain is PML diagnosis based on the reported data?

- ☐ Uncertain (--> consider exclusion)
- ☐ Possible
- ☐ Very certain

Clear above selection

Manuscript excluded during extraction

- ☐ No
- ☐ Yes

Clear above selection

If excluded, indicate why

- ☐ Duplicate
- ☐ Reviews
- ☐ Quality issue (see above)
- ☐ Other reason

Clear above selection

Comments to quality assessment

Patient population and PML diagnosis

Number of patients with JCV-associated disease

Only patients with JCV-associated disease and tissue analysis fulfill inclusion criteria for the histopathology working group. Thus only these patients should be listed here.

	Number of patients
Patients with JCV-associated disease	
Female patients with JCV-associated disease	

Age of patient(s) (mean/median and range)

Race and Ethnicity of patients

	Number of patients
Asian	
Black or African American	
White	
Hispanic or Latino	
Other	
Multiple races	
Not indicated	

If other, please indicate

PML 2013 diagnostic criteria

PML diagnostic criteria

	Number of patients meeting criteria	Number of patients not meeting criteria	Number of patients with insufficient data
2013 diagnostic criteria applied by authors			
2013 diagnostic criteria applied by us			

PML diagnostic certainty

	Number of patients definite PML	Number of patients probable PML	Number of patients possible PML
PML 2013 diagnostic criteria applied by authors			
PML 2013 diagnostic criteria applied by us			

Histopathological or clinical criteria fulfilled

	Number of patients with histopathological criteria fulfilled	Number of patients with clinical criteria fulfilled	Number of patients with histopathological and clinical criteria fullfilled
PML 2013 criteria applied by authors			
PML 2013 criteria applied by us			

If histopathological description is not consistent with 2013 diagnostic criteria for definite PML, please explain

JCV detected in CSF

	Number of patients yes
JCV PCR analysis performed in CSF before (1st) tissue sampling	
JCV detected in CSF before (1st) tissue sampling (PCR positive)	
JCV PCR analysis performed in CSF during entire disease course	
JCV detected in CSF during entire disease course (PCR positive)	

Comment JCV detected in CSF

Tissue source

	Number of patients with biopsy	Number of patients with serial biopsies	Number of patients with autopsy	Number of patients with biopsy and autopsy
Tissue source				

Comment tissue source

Method of JCV detection

	Number of patients
No specific (DNA or protein based) JCV detection	
IHC applied for JCV detection	
ISH applied for JCV detection	
Tissue PCR applied for JCV detection	
EM applied for JCV detection	

If IHC applied for JCV detection, please indicate antibody specificity

	Antigen detected (VP1, T-Antigen...)	Antibody specification/source
Antibody 1		
Antibody 2		
Antibody 3		
Antibody 4		

Comment method of detection

If an analysis war performed for prototype / archetype differentiation, please indicate results also here.

Histopathological characteristics

PML subtype / other JCV-associated diseases as indicated by authors

	Number of patients
PML (not other specified)	
Classic PML (low inflammation)	
Inflammatory PML / IRIS	
Granular cell neuronopathy (GCN)	
JCV encephalitis	
JCV meningitis	
Other	

If other, please specify

Please indicate here also when asymptomatic PML was analyzed.

General comments for histopatholological characterization

E.g. with mixed populations please indicate which PML subtype is described in the histopathological characteristics section

Lesion location / location of JCV positive cells

- ☐ Not given
- ☐ Deep white matter
- ☐ Subcortical white matter
- ☐ Cortex
- ☐ Deep grey matter
- ☐ Brain stem
- ☐ Cerebellum - white matter
- ☐ Cerebellum - granular cell layer
- ☐ Spinal cord
- ☐ Meninges
- ☐ Plexus choroideus
- ☐ Other

Clear above selection

PML typical histological characteristics reported

Does not exclude that other histopathological characteristics were present, but are not mentioned in paper.
Please indicate with "other" any other characteristic histopathological features mentioned by the authors.

- ☐ Not given
- ☐ Enlarged oligodendroglial nuclei / ground glass oligodendrocytes
- ☐ Oligodendrocyte loss
- ☐ Demyelination
- ☐ Bizarre astrocytes
- ☐ Axonal damage
- ☐ Tissue necrosis
- ☐ Macrophage accumulation
- ☐ Lymphocytic inflammation
- ☐ Other

Clear above selection

Cell populations positive for JCV

Other cells may be plexus choroideus cells, meningeal cells...

- ☐ Not given
- ☐ Oligodendrocytes
- ☐ Astrocytes
- ☐ Neurons
- ☐ Other

Extent of inflammation

	Number of patients
Not given / uncertain	
Low inflammation	
High inflammation	

Comment extent of inflammation (e.g. quantitative or semiquantitative evaluation, definition of low and high inflammation)

Composition of inflammation

- ☐ Not given
- ☐ Macrophages / microglial cells
- ☐ T cells
- ☐ CD8>CD4 T cells
- ☐ CD4>CD8 T cells
- ☐ B cells
- ☐ Plasma cells
- ☐ Other

Clear above selection

Clinical characteristics

Duration of symptoms prior to biopsy / autopsy in days

Duration of symptoms until PML diagnosis in days

Underlying disease for PML or other JCV-related diseases

	Number of patients
HIV	
Heme-onc	
MS - natalizumab	
MS - not natalizumab	
Other autoimmune disease	
HSCT	
Solid organ transplantation	
Primary immunodeficiency	
Sarcoidosis	
Idiopathic PML	
Other	

If other underlying disease, please specify

Treatment before tissue sampling

	Number of patients
HAART	
Discontinuation immunosuppressive therapy	
Experimental therapy / other (please specify below)	
Apheresis	
Steroids	

Specification / Comment for treatment

If applicable: Interval between stop of immunosuppressive therapy or beginning of HAART and biopsy / autopsy in days

Clinical worsening after immune reconstitution / clinically suspected IRIS

	Yes	No	Not applicable / not given
Number of patients			

Comment clinical worsening after IRIS / clinically suspected IRIS

MRI signs of IRIS

	Gadolinium enhancement	Enlarging lesions	Edema	Not applicable / not given
Number of patients				

Comment MRI signs of IRIS

Uncommon clinical features

Please add here only uncommon clinical features such as those associated with JCV meningitis and JCV encephalopathy (should be covered in detail by other working groups).