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Progressive Multifocal Leukoencephalopathy:

An Uncommon Cause of Confusion in a Patient with Paranoid Schizophrenia and Acquired Immunodeficiency Syndrome

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LEARNING OBJECTIVE

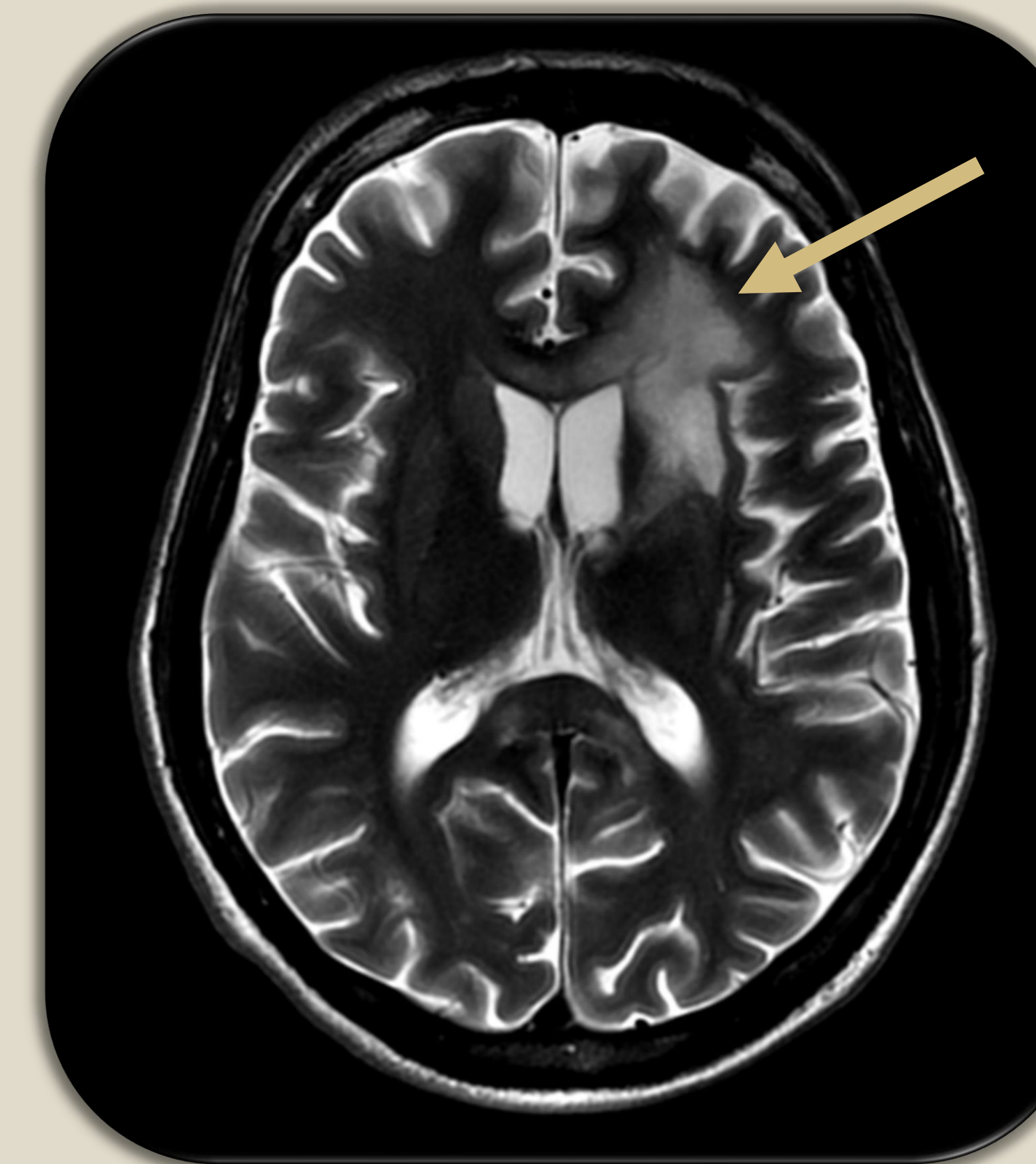
- Recognize that Progressive Multifocal Leukoencephalopathy (PML) is a rare and deadly cause of neurologic deficits in immunocompromised patients and often has a delayed diagnosis

CASE INFORMATION

- HPI**
 - 40 y/o man presented to the ED with headaches after his family noted progressive confusion for 3 weeks
 - Brain MRI revealed a **4mm frontoparietal lesion** and he was transferred to a quaternary care facility
- PMH:** Paranoid schizophrenia, agoraphobia, Hep C, and **untreated HIV/AIDS**
- Meds:** Risperidone, Bactrim (PJP prophylaxis), No ART (Cost-related non-adherence)
- Physical Exam:**
 - Oriented to person only
 - (+) Gait Imbalance
 - (-) Focal neuro deficits
- Labs, Imaging, Procedures:**
 - CD4 Abs: 10
 - Serum Toxoplasma, Cryptococcus, TPA all negative
 - MRI spectroscopy
 - LP
- DDX:** (included)
 - Toxoplasmosis
 - CNS lymphoma
 - Glioma
 - PML

RESULTS

- MRI spectroscopy – Left frontal white matter lesion with **lack of mass effect and enhancement** – not consistent with neoplasm; concerning for PML
- LP Initially delayed due to concurrent mental health issues
 - CSF – Toxo, Crypto both negative
 - CSF – Positive for JC virus**
- Combined with MRI results, the diagnosis of PML was made**
- ART was restarted and he was closely monitored for immune reconstitution inflammatory syndrome (IRIS) before ultimately being discharged home into the care of his mother



DISCUSSION

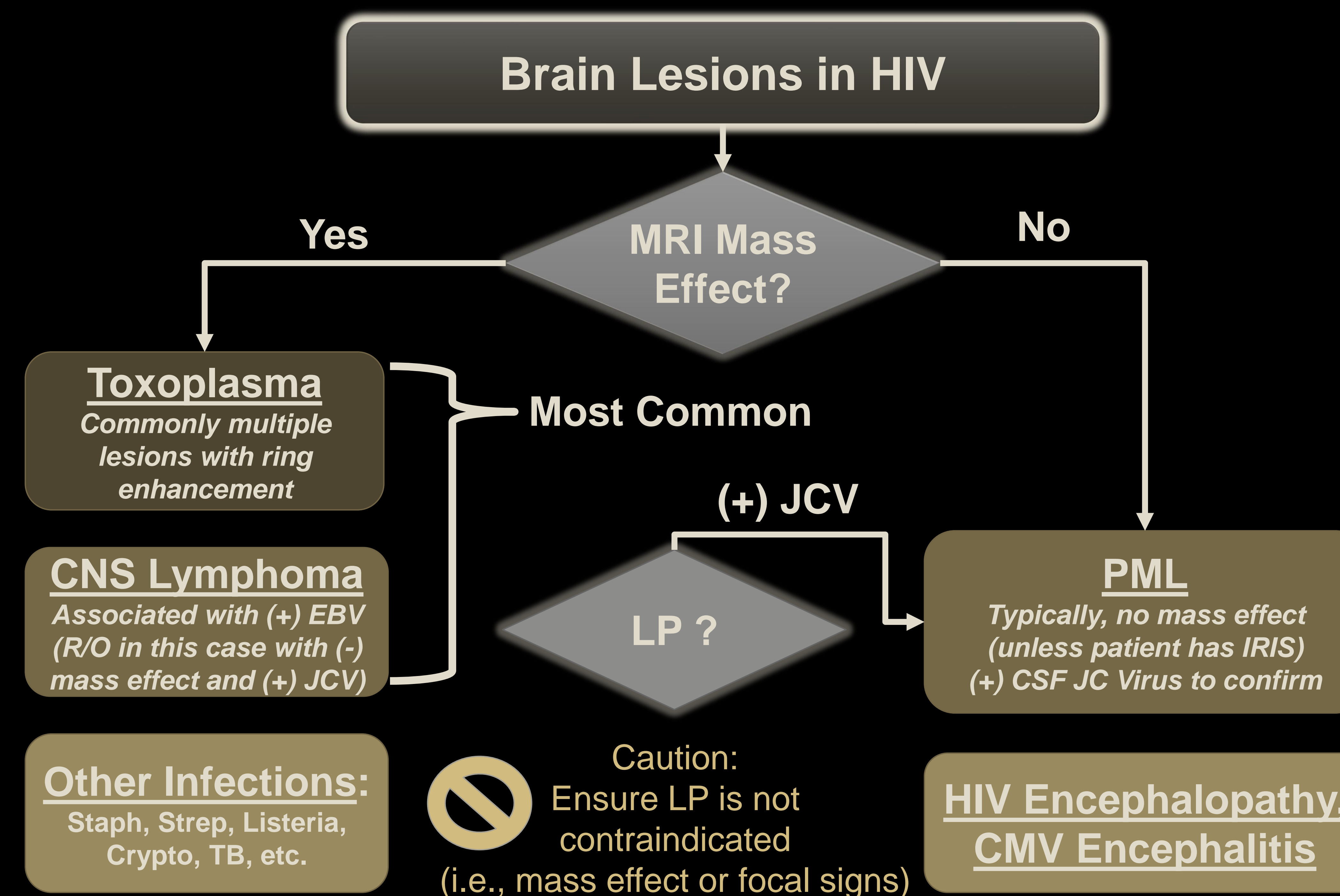
JC Virus and PML

- JC virus is a common, usually asymptomatic, infection seen in over half the population
- In **immunocompromised individuals**, including patients with **poorly controlled HIV/AIDS**, the opportunistic **JC virus can cause PML**, a potentially deadly diagnosis
- There are approximately 4000 cases of PML per year in the US and Europe, with the diagnosis typically occurring months after initial symptoms

Health Disparities

- In this case, his paranoia led him to decline Medicaid enrollment and for years he could no longer afford his ART, leading to untreated AIDS and increasing his risk of opportunistic infections and PML
- His paranoia along with his acute delirium also led him to initially decline care and delayed his labs, imaging, and procedures
- With the assistance of social work and psychiatry, he applied for Medicaid that could cover the cost of his ART

Brain Lesions in HIV



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