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**Mr Derrick Phillips**  
University College London Medical School

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Clinical characteristics of HIV+ patients with white matter lesions on magnetic resonance imaging of the brain

D Phillips, L Haddow, R Fish, H Hyare, R Jäger, R Miller, J Cartledge

- AIMS** (1) Estimate the proportion of HIV+ patients having brain MRI who had white matter lesions
- (2) Describe their clinical and laboratory characteristics

University College London Hospitals   
NHS Foundation Trust

Camden   
Primary Care Trust

 **UCL**

- We searched our hospital database to identify all HIV+ patients who had undergone MRI brain for neurological symptoms between 08/2004 and 11/2009
- 261 patients had had a scan. We looked at the radiology reports for the initial MRI in these patients and selected those reported as having white matter lesions
- 99/261 (38%) patients had white matter lesions on initial MRI brain, either as a sole finding (62) or in combination with cerebral atrophy (28) or space occupying lesions (9)
- Data collected:
  - Proximal CD4 counts and Viral Loads
  - ART history
  - Presenting complaints
  - Clinical diagnosis

- **Characteristics of patients with white matter lesions (n=99):**
  - Mean age 44.3 years (SD 10.8)
  - Median CD4 count 240 (IQR 100-430 cells/ $\mu$ L)
  - 41/99 had undetectable VL and 66/99 taking ART
- **Final diagnoses in patients with white matter lesions (n=99):**
  - Probable causes of white matter disease (e.g. HIVE, PML): 49 cases
  - Conditions which may cause white matter changes (e.g. TB, Toxo, Crypto): 21 cases
  - No diagnosis, or diagnosis unlikely to be associated with white matter lesions: 29 cases
- **Summary:**
  - White matter lesions on brain MRI are a common finding and usually represent opportunistic disease
  - In a significant proportion, white matter lesions remain unexplained. They may be due to HAND, vascular changes or ageing, but their clinical significance is currently unknown