



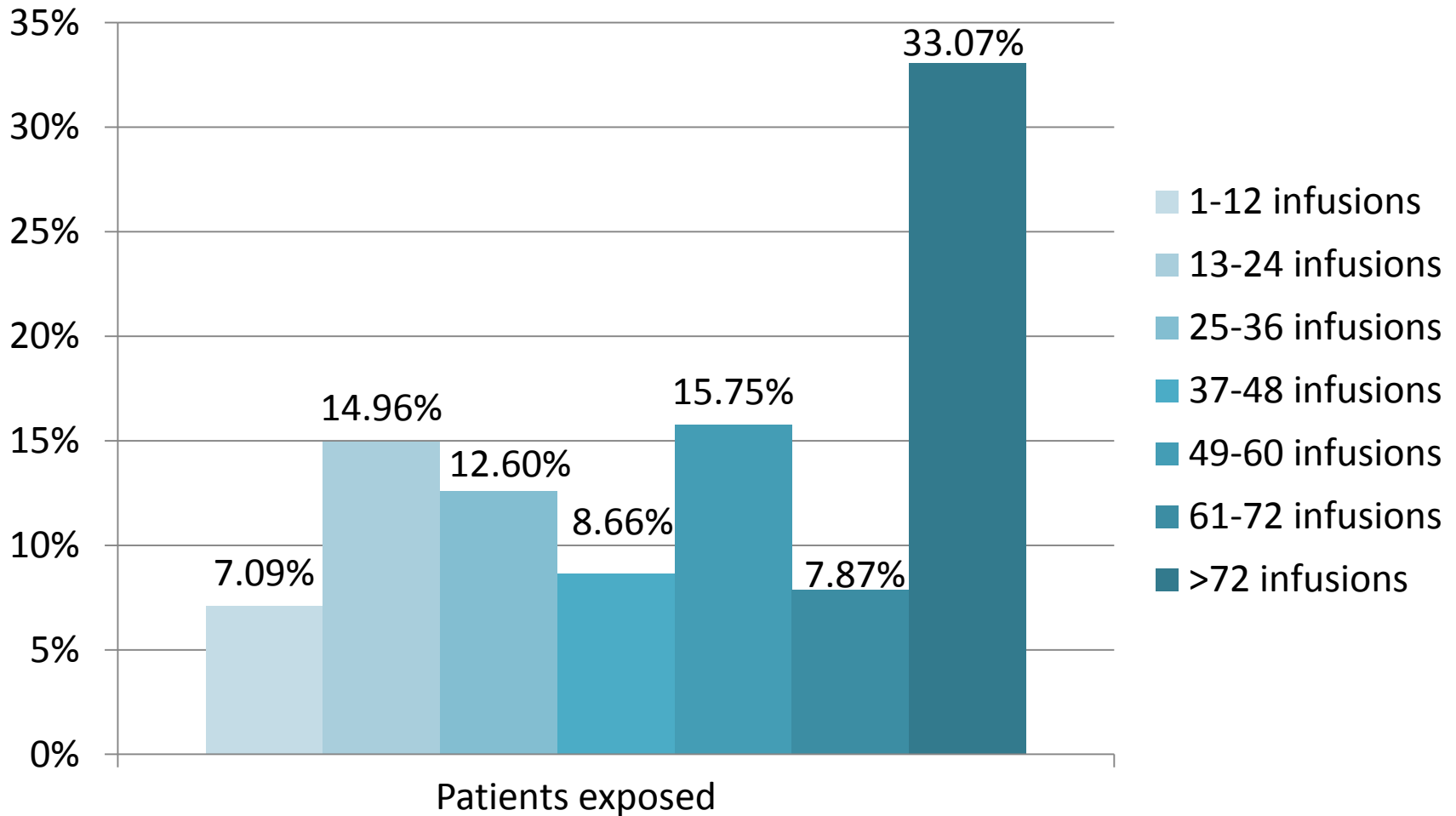
Audit – MS Masterclass, Sheffield, 31st March 2017

Education around PML risk and monitoring at NHNN Queen Square MS Centre

UCL Institute of Neurology
Queen Square Multiple Sclerosis Centre
National Hospital for Neurology and
Neurosurgery, London

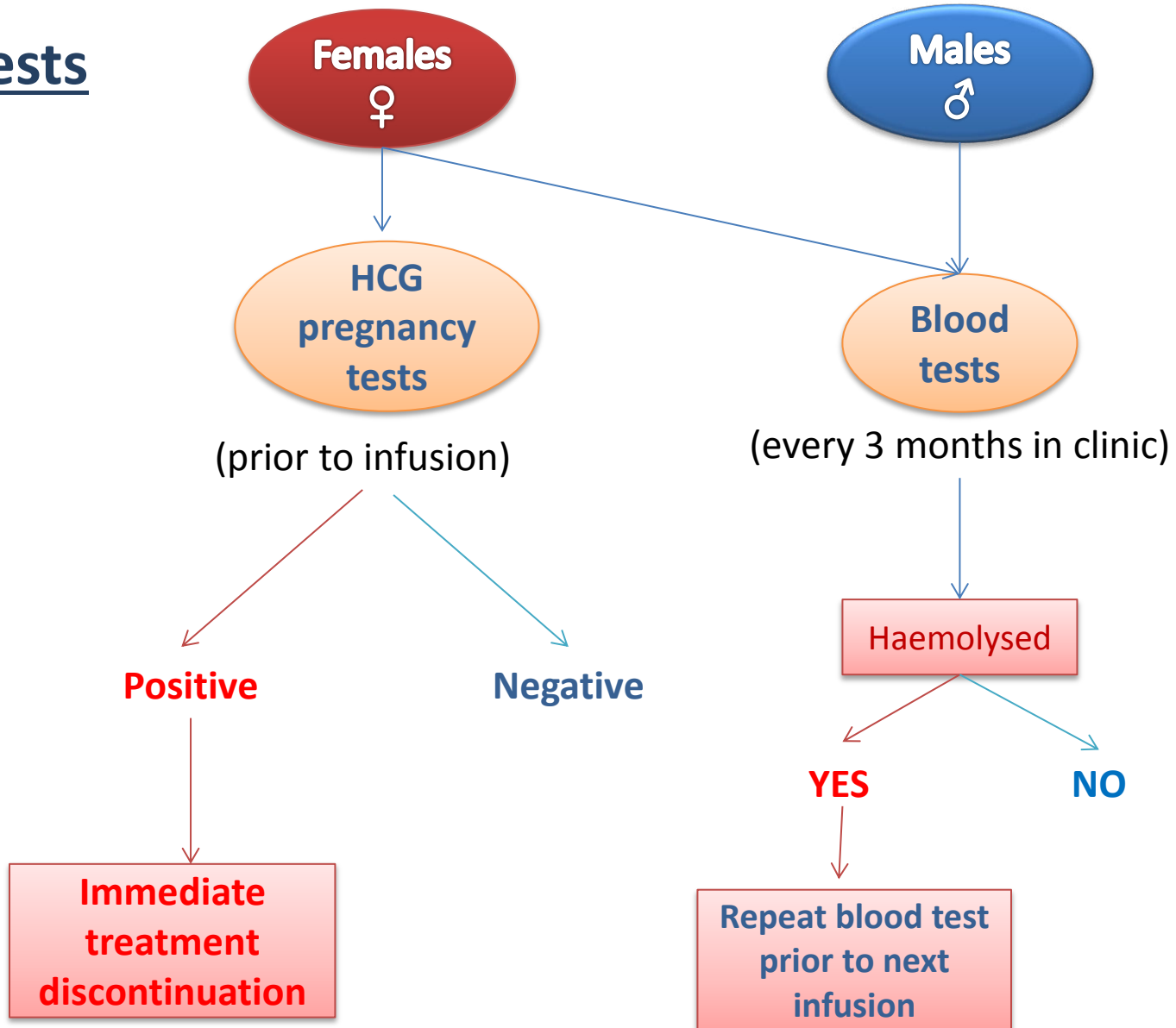
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Honorary Clinical Research Associate

129 MS Patients on Natalizumab treatment March 2017



Natalizumab-Treated Patients Monitoring

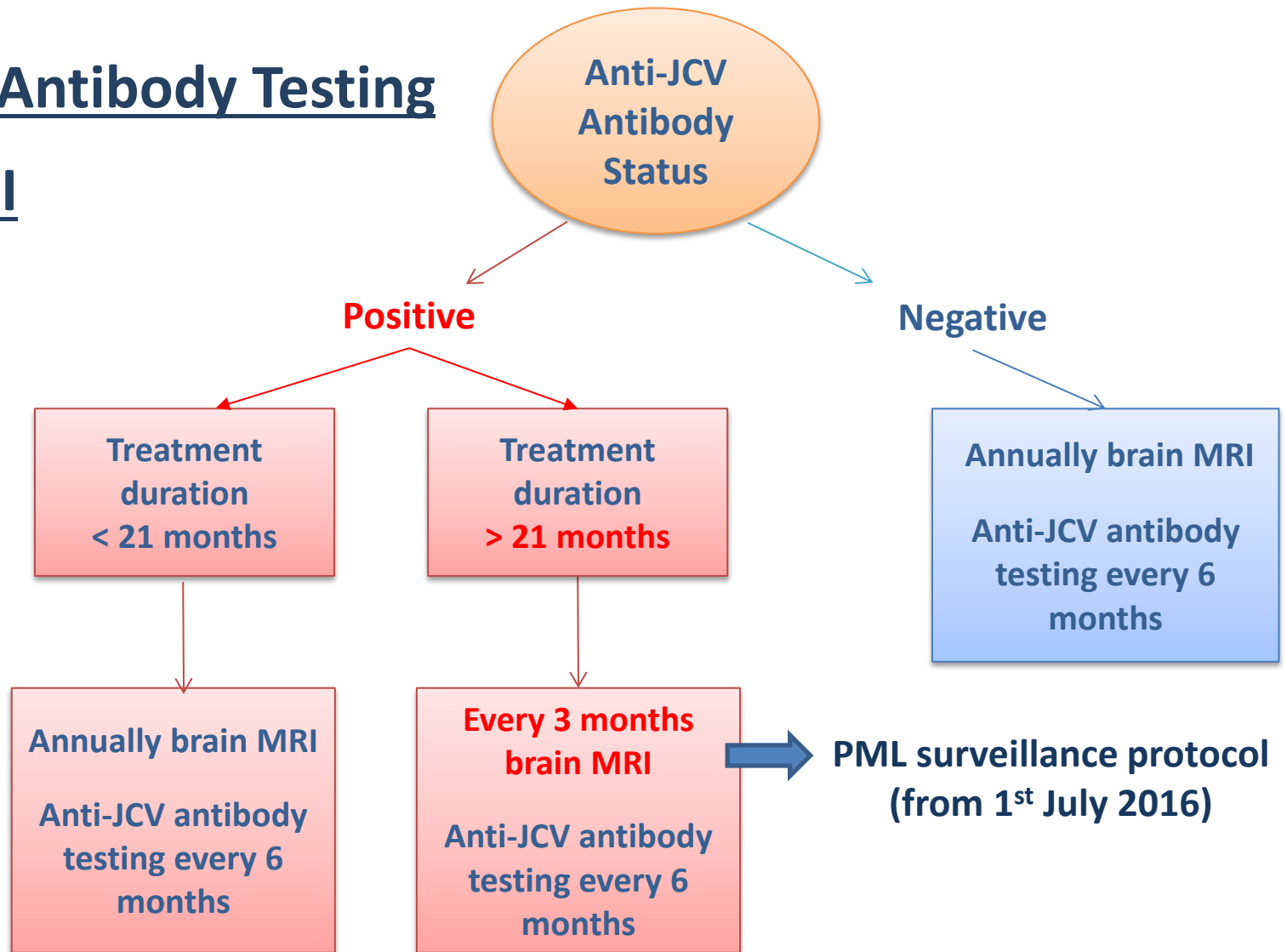
Blood tests



Natalizumab-Treated Patients - PML Risk Monitoring

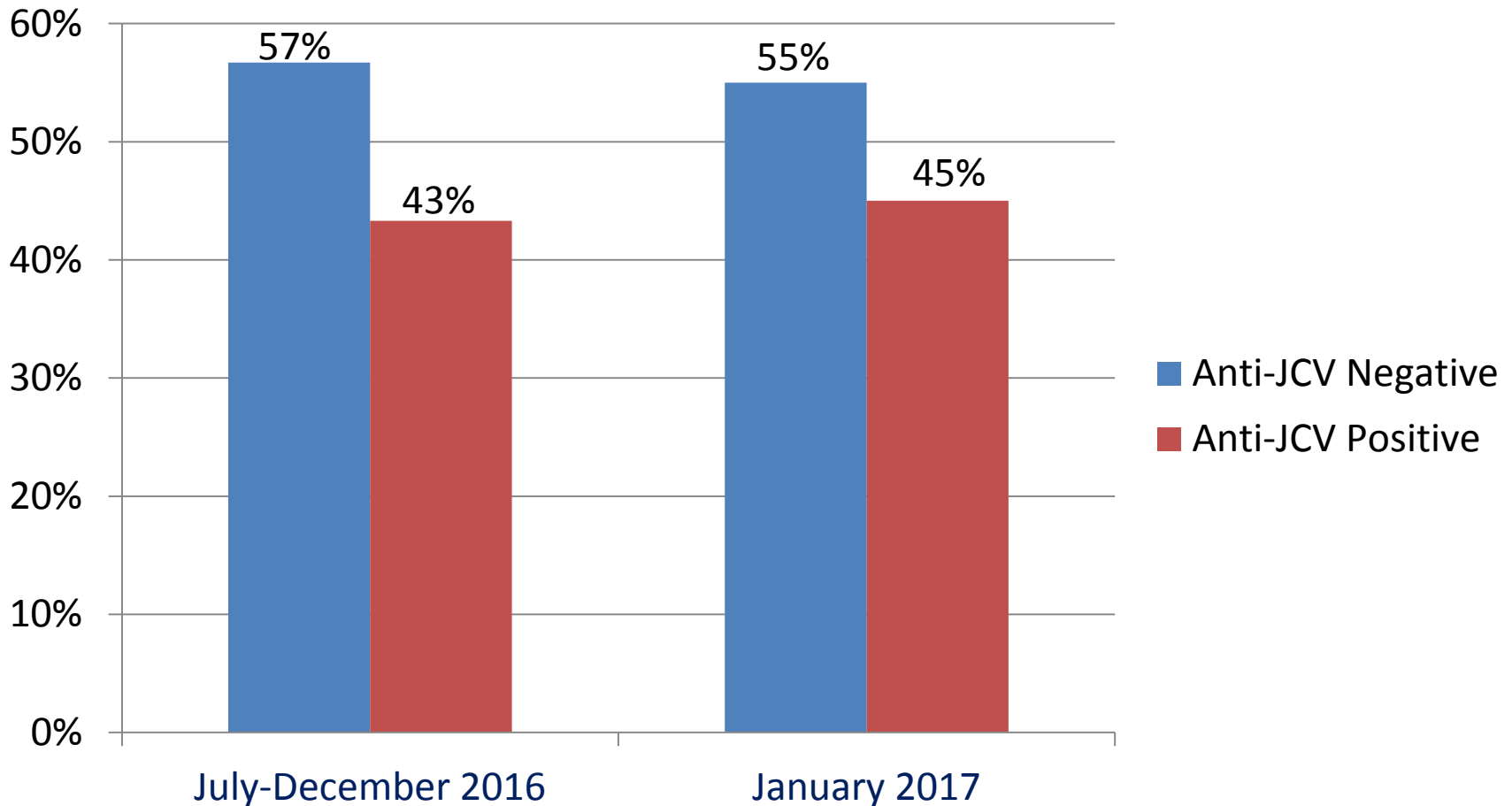
Anti-JCV Antibody Testing

Brain MRI



Anti-JCV Antibody Testing – Patients Monitoring (n=129)

Re-testing of anti-JCV antibody every 6 months



Anti-JCV Antibody Testing

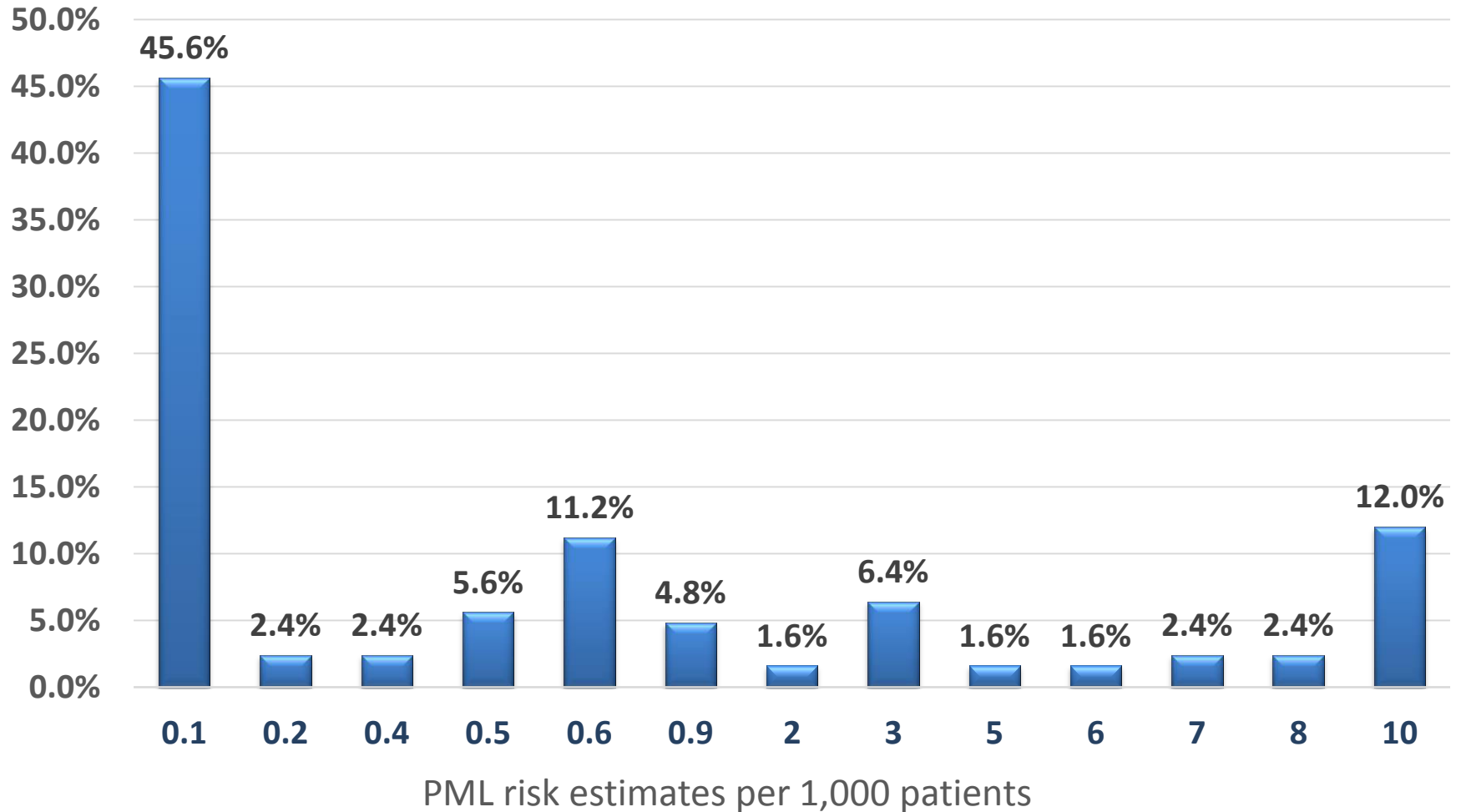
PML Risk Monitoring

Changed serostatus (from July - December 2016 to January 2017)			
Positive	→	Negative	3%
Negative	→	Positive	5%

Anti-JCV antibody positive patients (n=58) (March 2017)		
Antibody index ≤ 0.9	Antibody index $> 0.9 \leq 1.5$	Antibody index > 1.5
42.31%	7.69%	50%

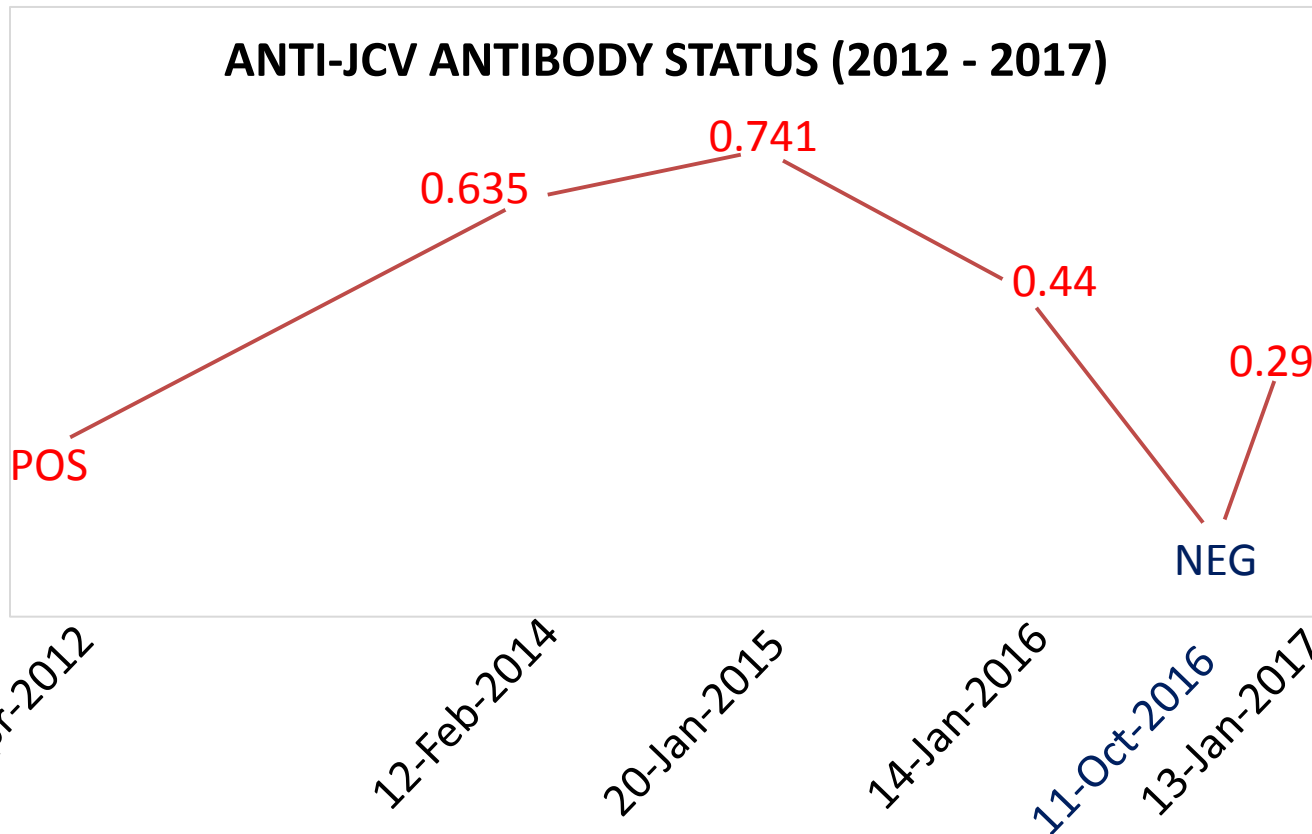
PML Risk estimates (129 patients)

March 2017



Patient 1 – QSD01XXX – Male , 55 years of age

- Onset of MS: 1999
- First DMT – Avonex
- Commenced on Natalizumab 23/11/2010 (overall 72 infusions)
- Anti-JCV positive

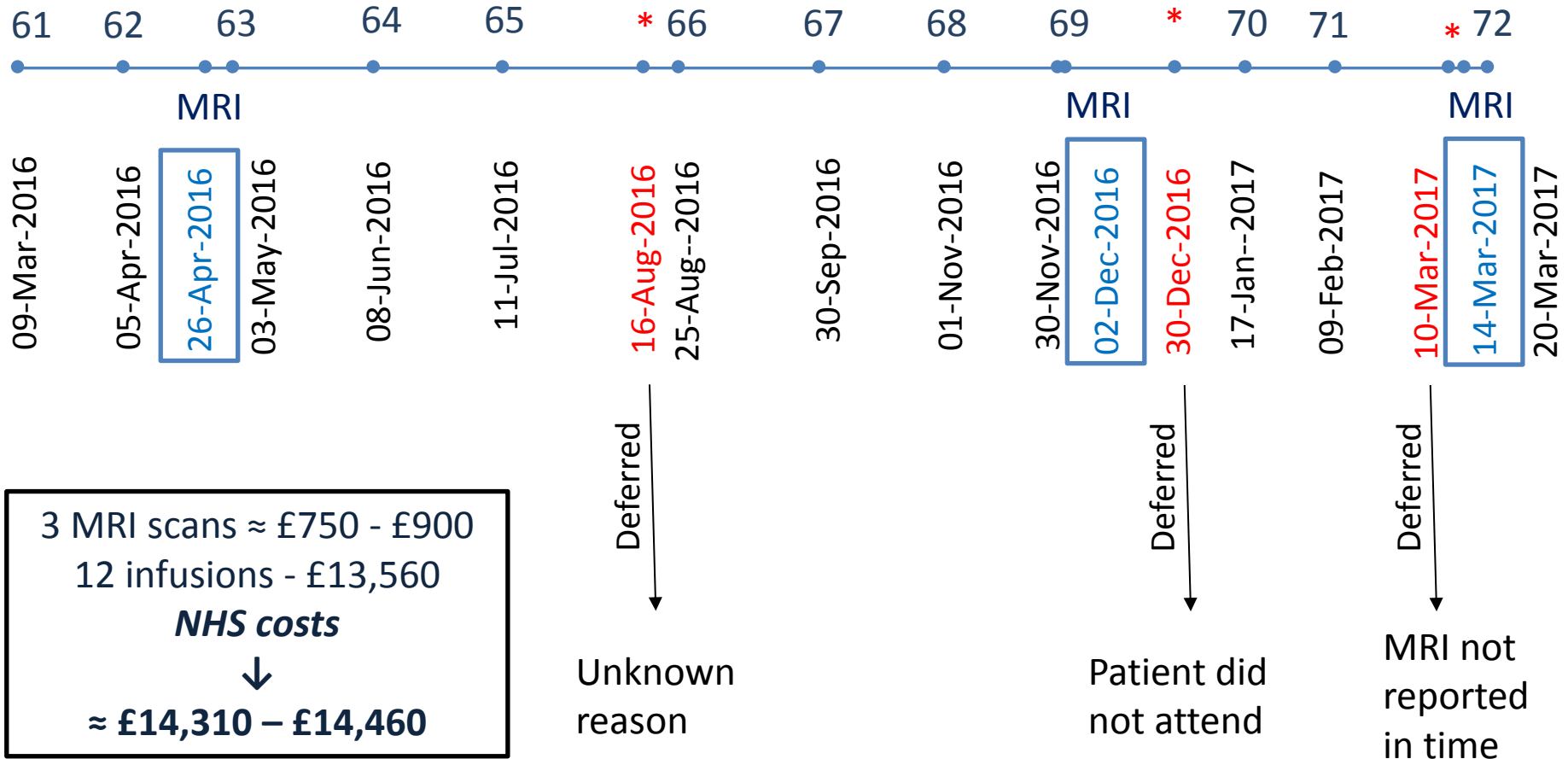


JCV stratify
↓
Unilab
Denmark
↓
No NHS
consts

Patient 1 – Male , 55 years of age

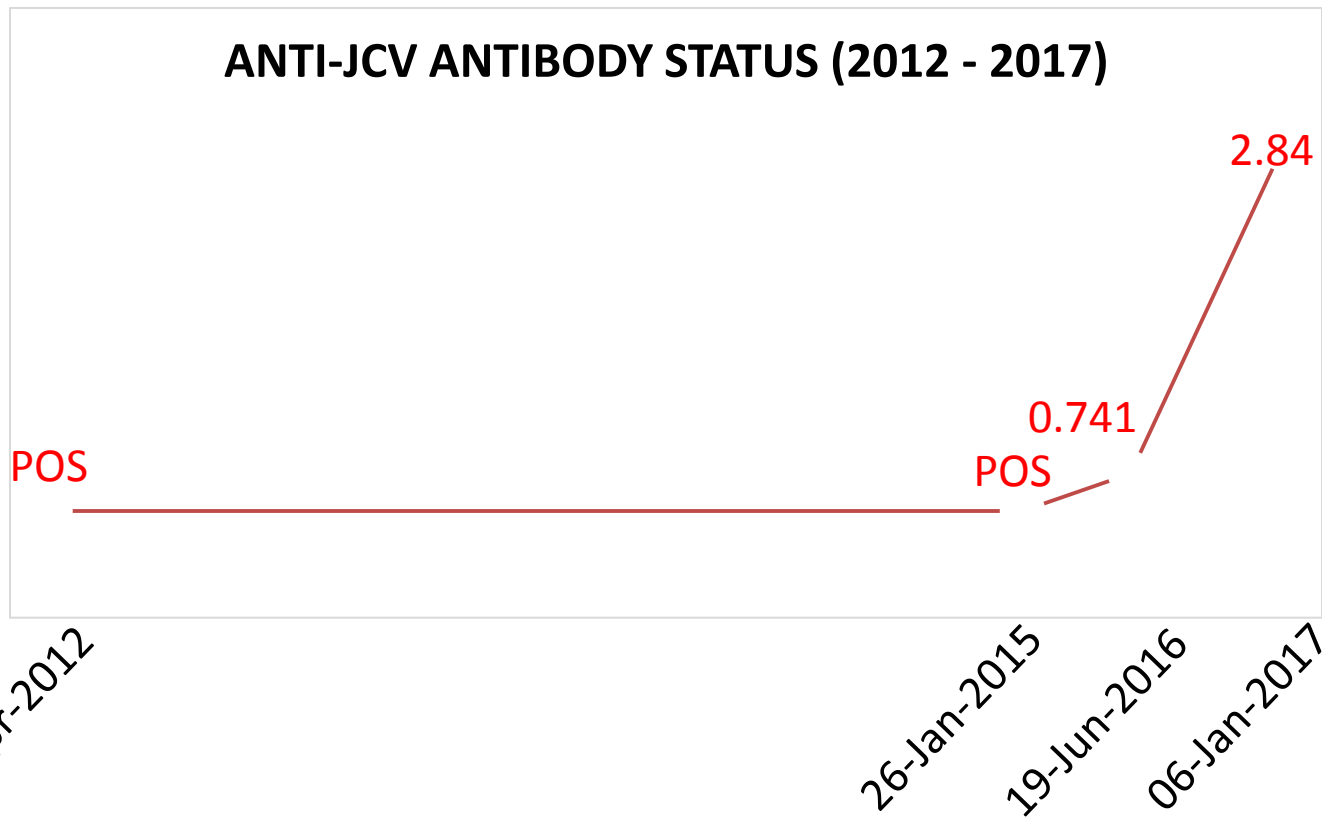
Day care – 1.5 – 2.5 hours stay

Infusions / MRI scans (March 2016 -2017)



Patient 2 – 4041XXXX – Male , 44 years of age

- Onset of MS: 2006
- First DMT – Rebif 44 mcg
- Commenced on Natalizumab 20/11/2009 (overall 93 infusions)
- Anti-JCV positive



JCV stratify



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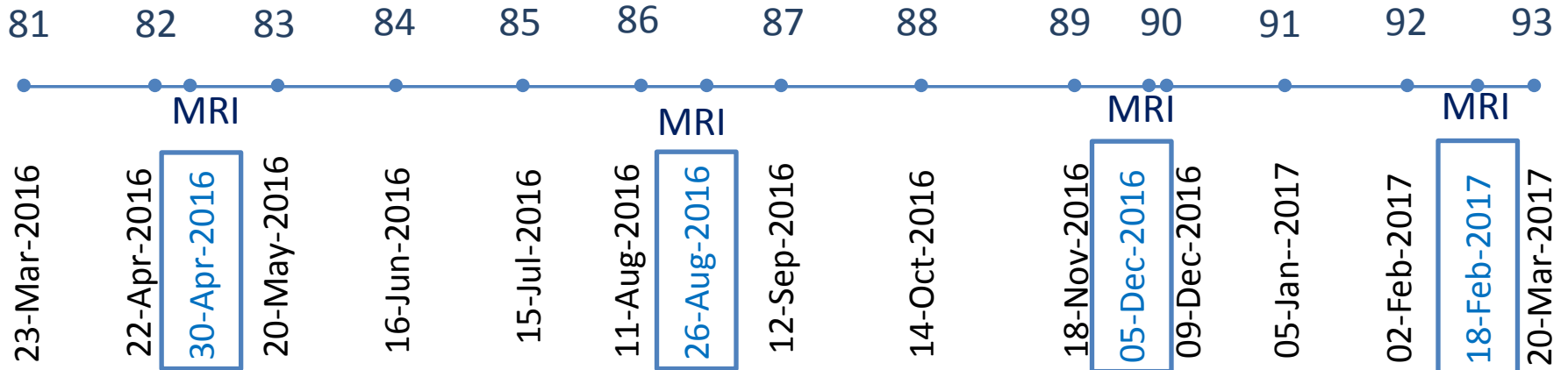
No NHS

consts

Patient 2 – Male , 44 years of age

Day care – 1.5 – 2.5 hours stay

Infusions / MRI scans (March 2016 -2017)



4 MRI scans \approx £1,000 - £1,200

13 infusions - £14,690

NHS costs

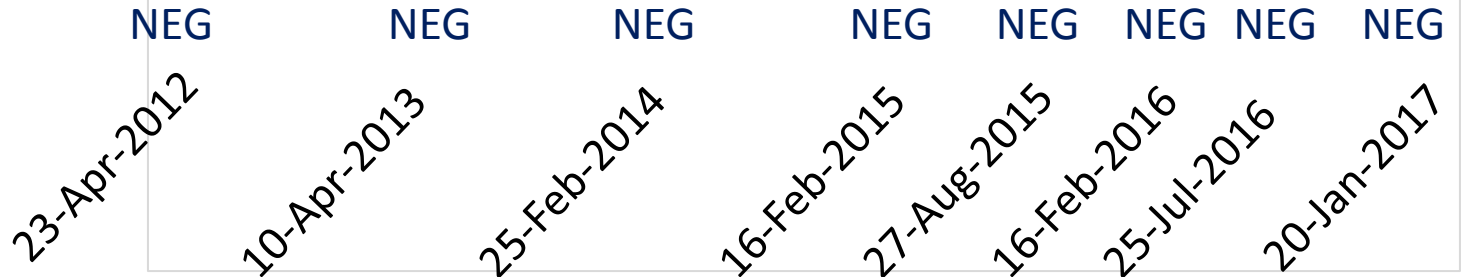


\approx £15,690 – £15,890

Patient 3 – 4039XXXX – Female , 52 years of age

- Onset of MS: 2009
- First DMT – Rebif 44 mcg
- Commenced on Natalizumab 28/02/2011 (overall 75 infusions)
- Anti-JCV negative

ANTI-JCV ANTIBODY STATUS (2012 - 2017)

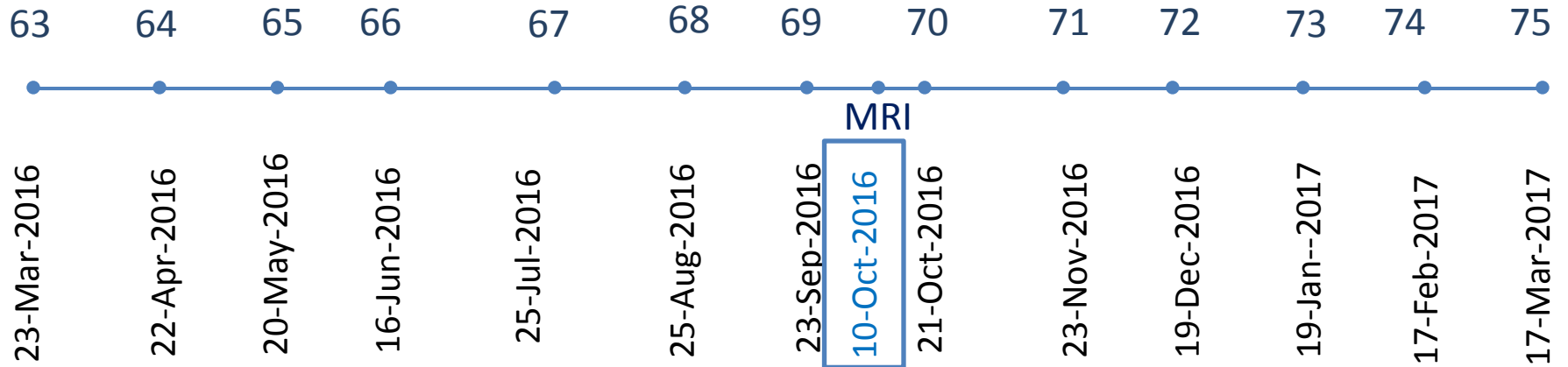


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consts*

Patient 3 – Female , 52 years of age

Day care – 1.5 – 2.5 hours stay

Infusions / MRI scans (March 2016 -2017)



1 MRI scan ≈ £250 - £300

13 infusions - £14,690

NHS costs

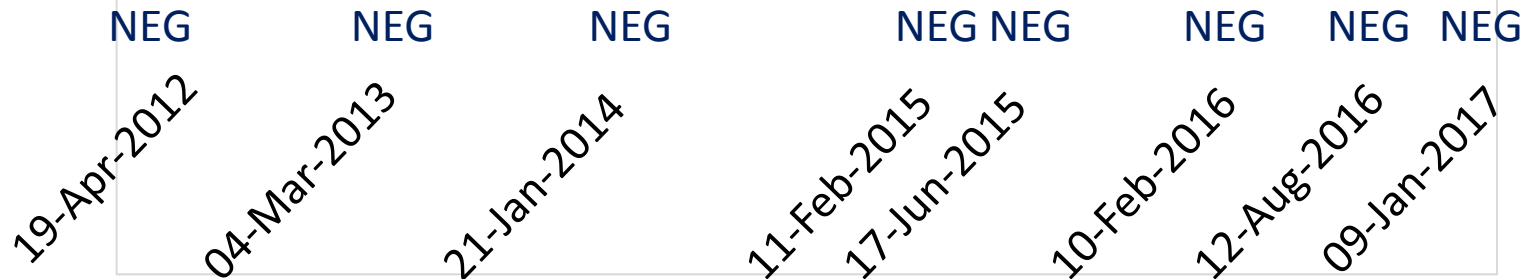


≈ £14,940 – £14,990

Patient 4 – 4000XXXX – Male , 28 years of age

- Onset of MS: 2006
- First DMT – Rebif 44 mcg
- Commenced on Natalizumab 01/11/2010 (overall 76 infusions)
- Anti-JCV negative

ANTI-JCV ANTIBODY STATUS (2012 - 2017)

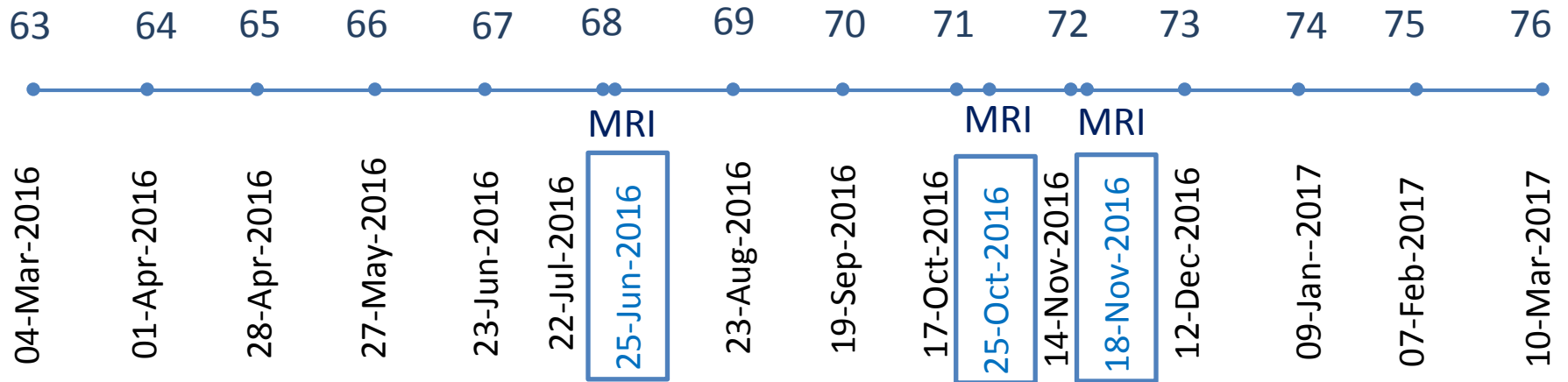


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Patient 4 – Male , 28 years of age

Day care – 1.5 – 2.5 hours stay

Infusions / MRI scans (March 2016 -2017)



3 MRI scans \approx £750 - £900

14 infusions - £15,820

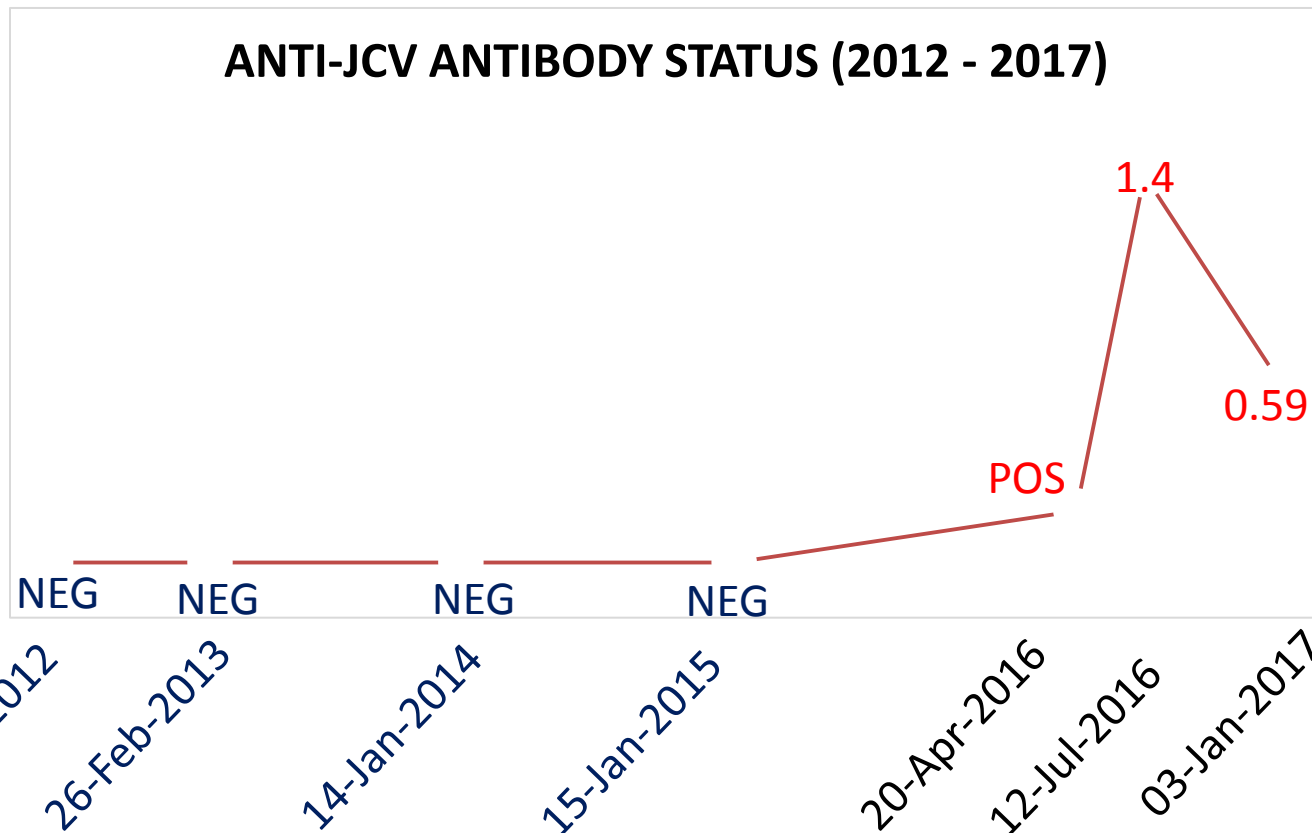
NHS costs



\approx £16,570 – £16,720

Patient 5 – 4075XXXX – Female , 28 years of age

- Onset of MS: 2007
- First DMT – Copaxone
- Commenced on Natalizumab 2008 (overall 97 infusions)
- Anti-JCV positive



JCV stratify



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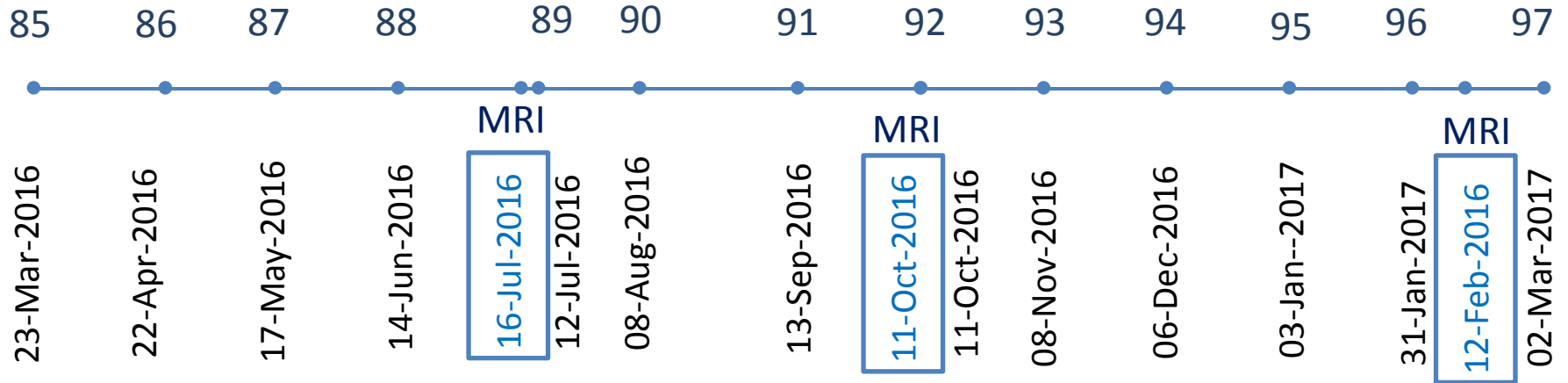
No NHS

consts

Patient 5 – Female , 28 years of age

Day care – 1.5 – 2.5 hours stay

Infusions / MRI scans (March 2016 -2017)



3 MRI scans \approx £750 - £900

13 infusions - £14,690

NHS costs



\approx £15,440 – £14,990

Conclusions

At NHNN Queen Square MS Centre:

- Patients are educated about PML risk by a well-organized team;
- A continuous monitoring of PML risk is proved to be on a high level and according to required standards;
- From the 1st of July 2016 a new PML surveillance protocol was approved and is applicable to Anti-JCV positive patients who have been on Natalizumab treatment for more than 21 months (MRI scans: currently – every 3 months; previously – every 6 months);
- Anti-JCV Antibody tests are performed every 6 months;
- Overall, during a period of time March 2016 – March 2017, based on the examples of five MS Natalizumab-treated patients, NHS paid approximately £76,950 – £77,050.

Acknowledgements

Prof Kenneth Smith

Dr Martin Duddy

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Margaret Vincent

Pinar Kara





**Thank you
very much
for your attention!**