

Disclosures

- Michael C. Levin, MD
Has no financial interest or relationships to disclose

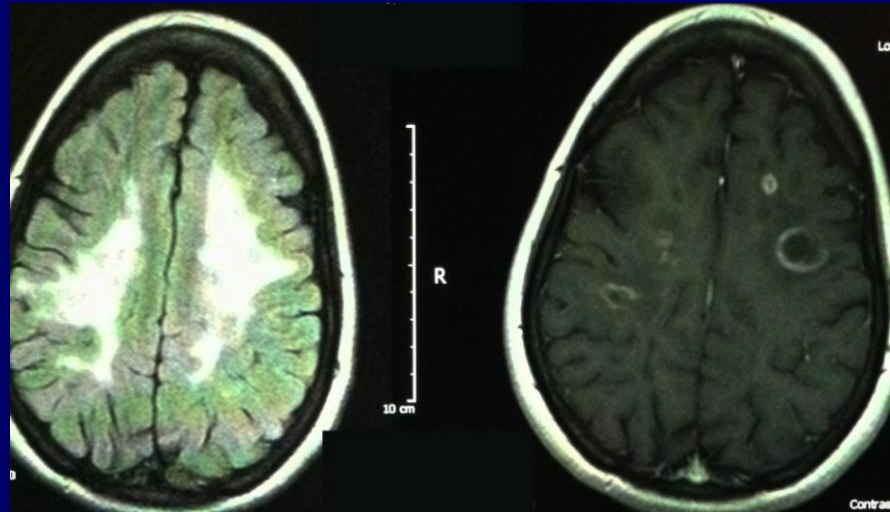
- CME Staff Disclosures
Professional Education Services Group staff have no financial interest or relationships to disclose.

Learning Objectives

At the conclusion of this activity, the participant will be able to:

- A. Assess MRI findings in MS patients on Natalizumab
- B. Discuss the differential diagnosis of MRI findings in MS patients on Natalizumab
- C. Discuss therapeutic options for MS patients on Natalizumab

Follow-up: on Natalizumab for 3.5 years

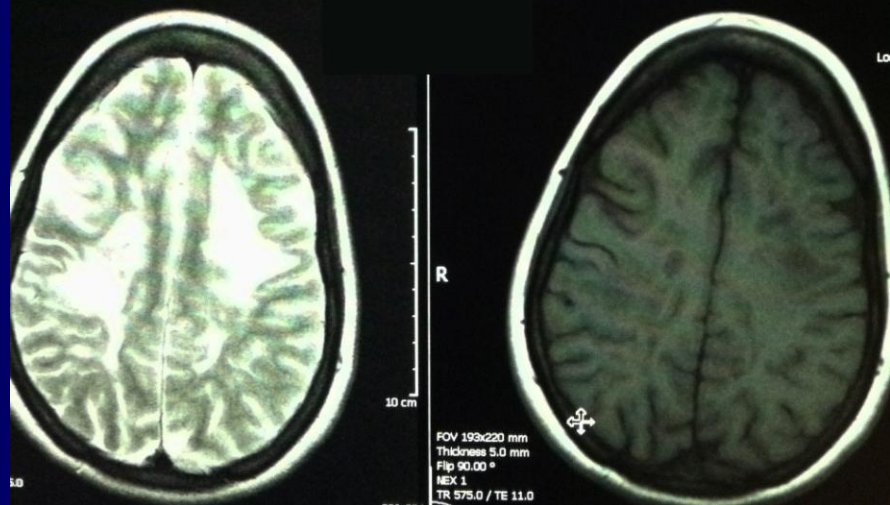
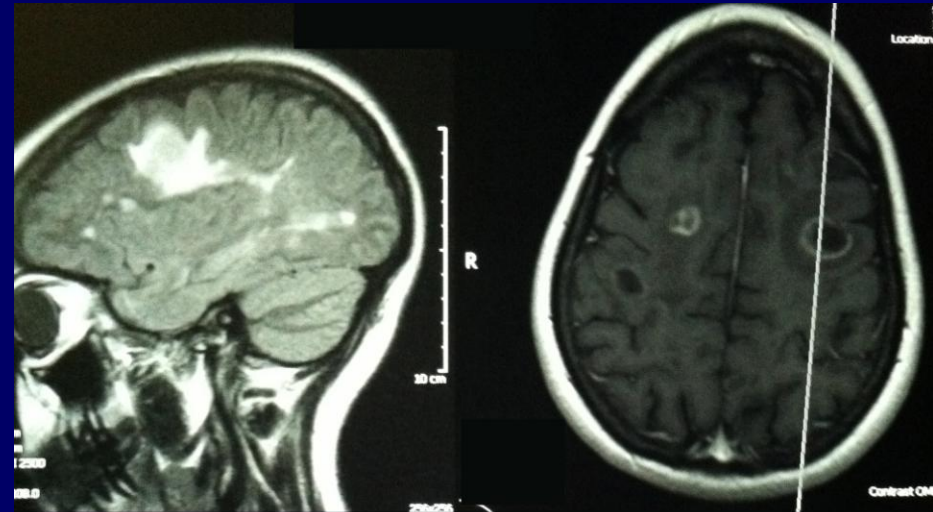


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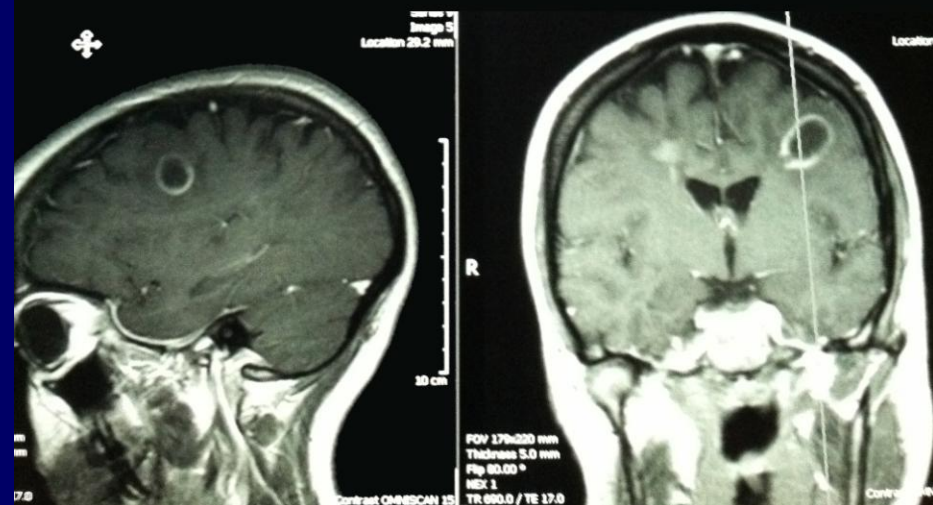
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FOV 193x220 mm
Thickness 5.0 mm
Flip 90.00 °
MEX 1
TR 575.0 / TE 11.0



Location 29.2 mm

FOV 170x220 mm
Thickness 5.0 mm
Flip 90.00 °
MEX 1
TR 690.0 / TE 17.0

Follow-up: on Natalizumab for 3.5 years

- DDx (?)
- Therapeutic plan (?)

Follow-up: on Natalizumab for 3.5 years

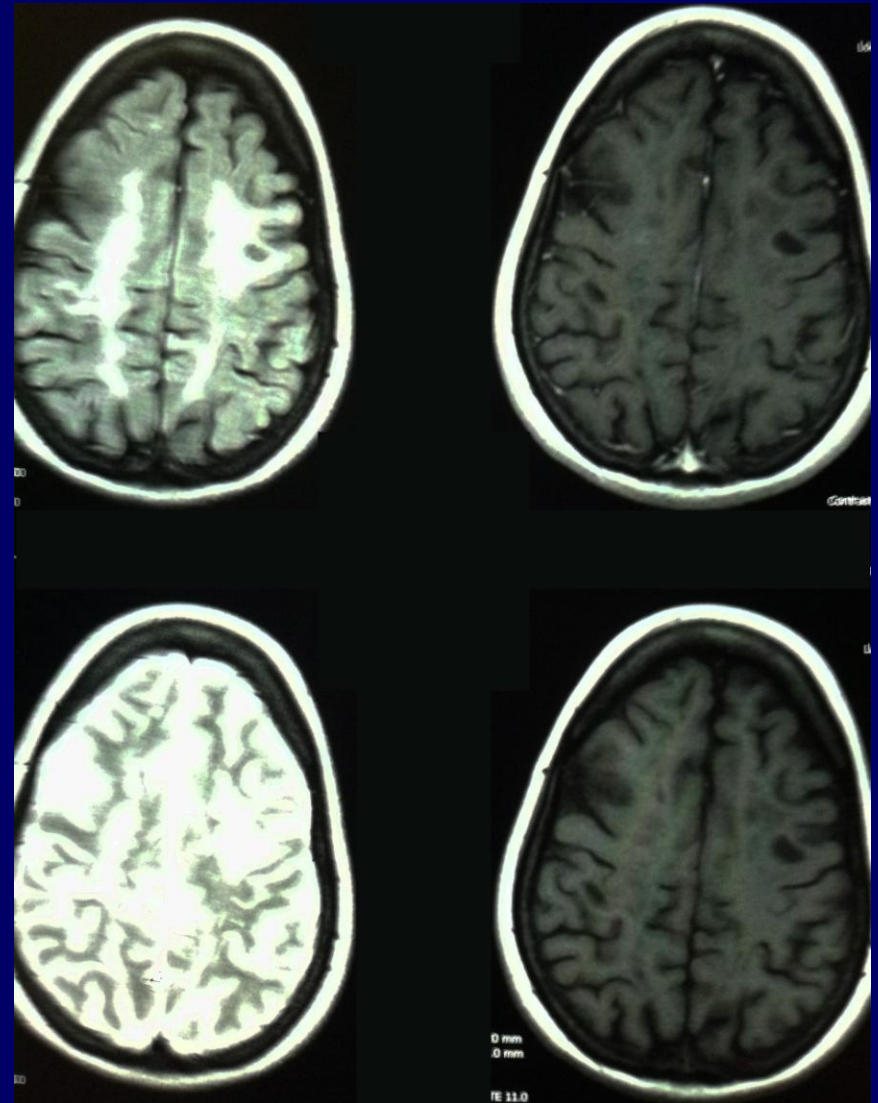
- One relapse per year requiring steroids
 - Myelitis
 - Developed thoracic pain syndrome
- Had at least two doses 1-2 weeks late
- Last dose was 6 weeks prior to MRI and clinical exam

Follow-up: on Natalizumab for 3.5 years

- Clinically felt well and denied:
 - Fever, headache
 - Rash
 - Change in mental status
 - Stiff neck
 - Neurological symptoms
 - Cough or any other systemic symptoms
- Neurological exam:
 - Normal mental status, no aphasia
 - Left APD & INO
 - Normal motor exam
 - No pathological reflexes
 - Mild loss of vibration at the toes
 - Narrow gait with mildly depressed tandem
- Medical exam - normal

Follow-up: on Natalizumab for 3.5 years

- Following IV steroids and natalizumab infusion



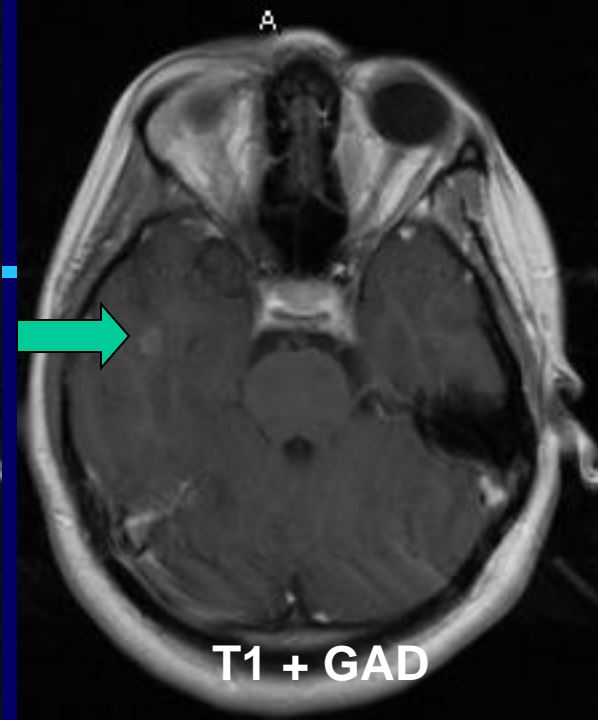
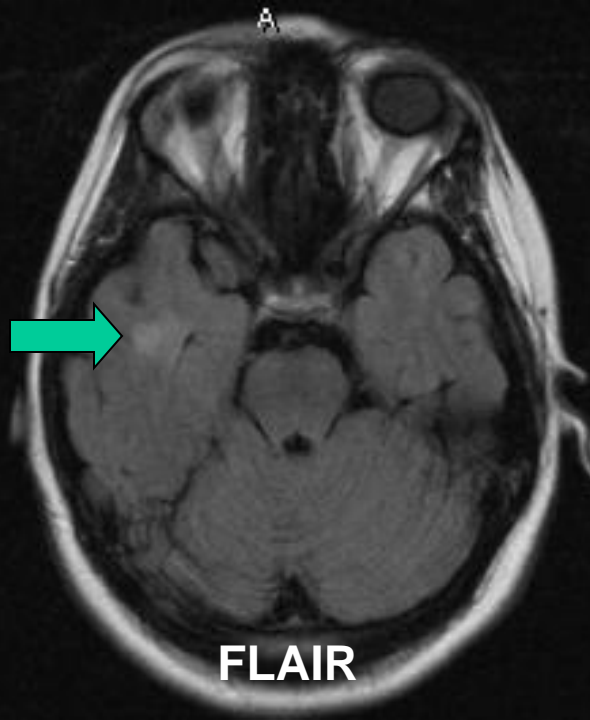
18 year-old woman – 2nd opinion

- 2.25 years prior
 - left blurred vision – optic neuritis (R1)
 - MRI – consistent w. MS
 - Rx: medrol dosepak – vision returned to normal in 1 month
 - Dx: MS.
- 1 month later:
 - left foot numbness – oral steroids – resolved. (R2)
- Rx: Interferon beta 1a, IM, q week (Avonex)
- 7 months later:
 - Right optic neuritis (R3)
 - Oral steroids
 - Vision returned to normal in 2 months
- 16 months later:
 - Left optic neuritis (R4)
 - Oral steroids – resolved.
- No MRI since initial diagnosis
- 4 relapses in 2.25 years

18 year-old woman – 2nd opinion

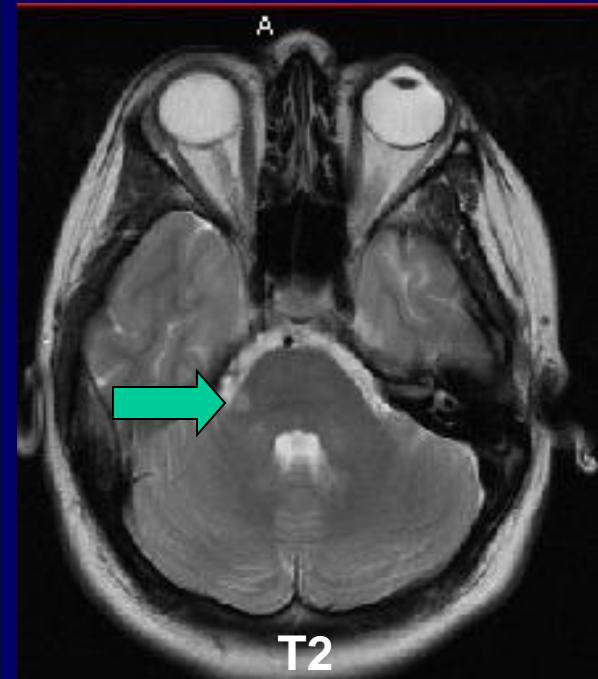
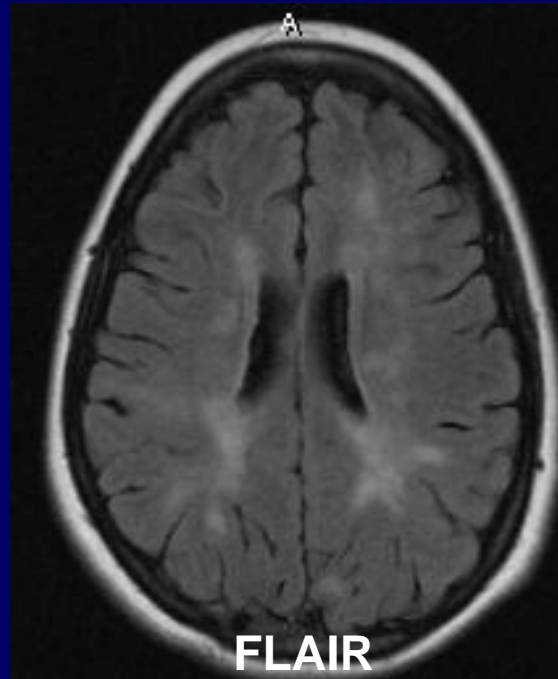
- Exam:
 - Left APD
 - Poor smooth pursuit
 - Right lower extremity weakness – mild (5--/5)
 - Hyper-reflexic in lower extremities, no Babinski signs
 - Fully ambulatory, no dysmetria, normal tandem gait
- Review of original MRI
- Review of new MRI

MRI while on interferon



Original MRI showed:
High moderate lesion load
At least 12 enhancing lesions

This MRI shows:
High lesion load
Some areas of confluency
New brainstem lesions
3 new enhancing lesions



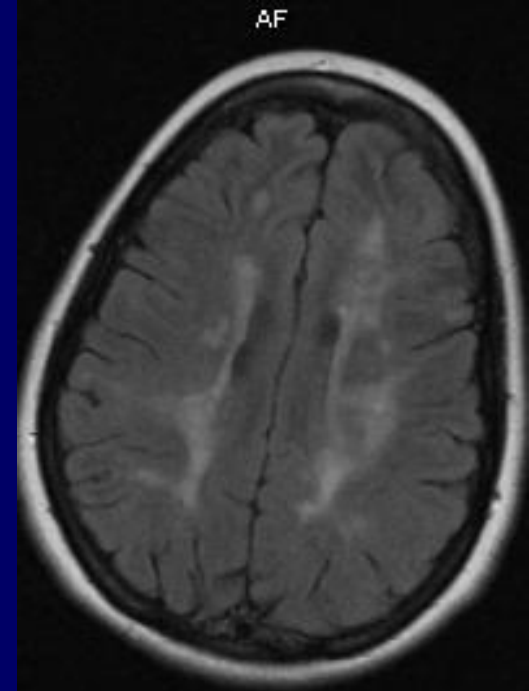
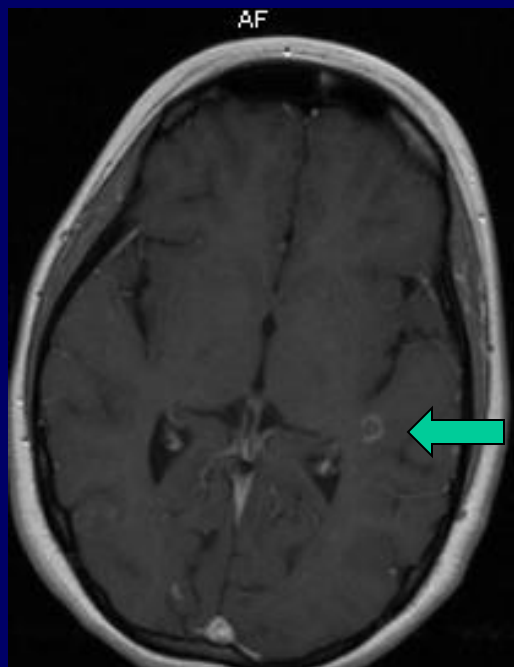
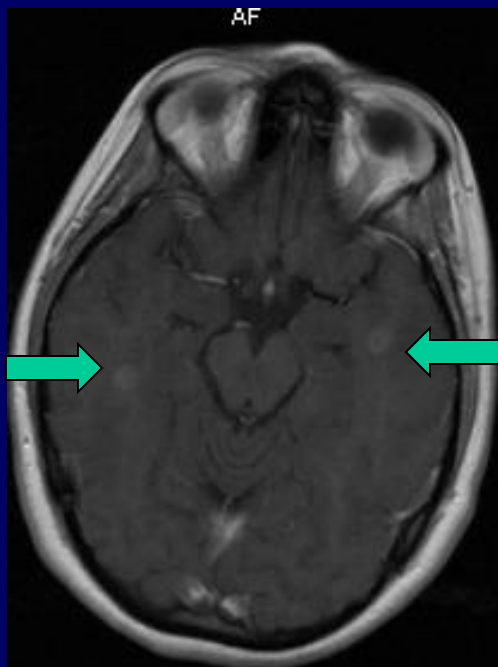
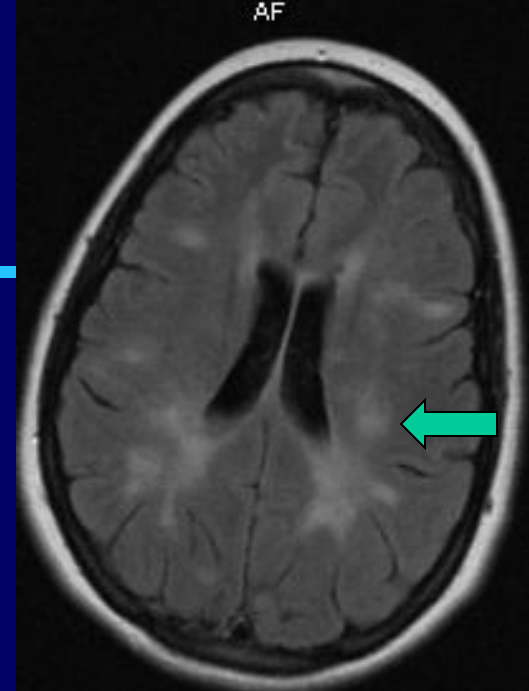
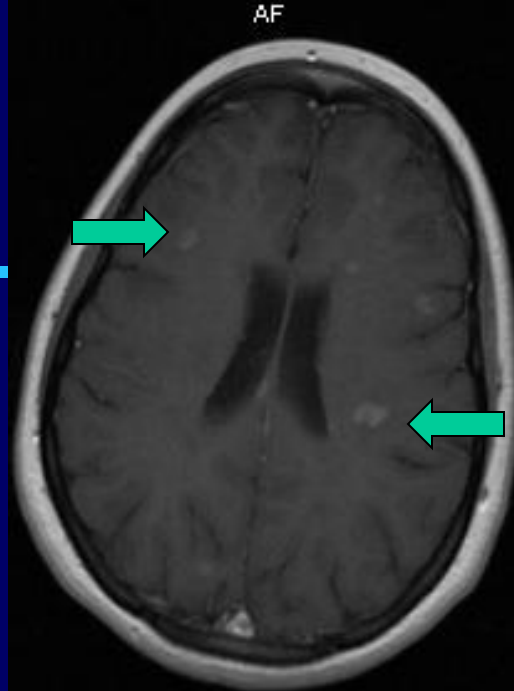
18 year-old woman – 2nd opinion

- Exam:
 - Left APD
 - Poor smooth pursuit
 - Right lower extremity weakness – mild (5--/5)
 - Hyper-reflexic in lower extremities, no Babinski signs
 - Fully ambulatory, no dysmetria, normal tandem gait
- Review of original MRI
- Review of new MRI
- Plan:
 - Check antibodies to interferon
 - Introduce Natalizumab (Tysabri)
 - Patient chose high dose beta-interferon 1a (Rebif, sq, tiw)
 - MRI q 6 months, clinical exam q 3 months

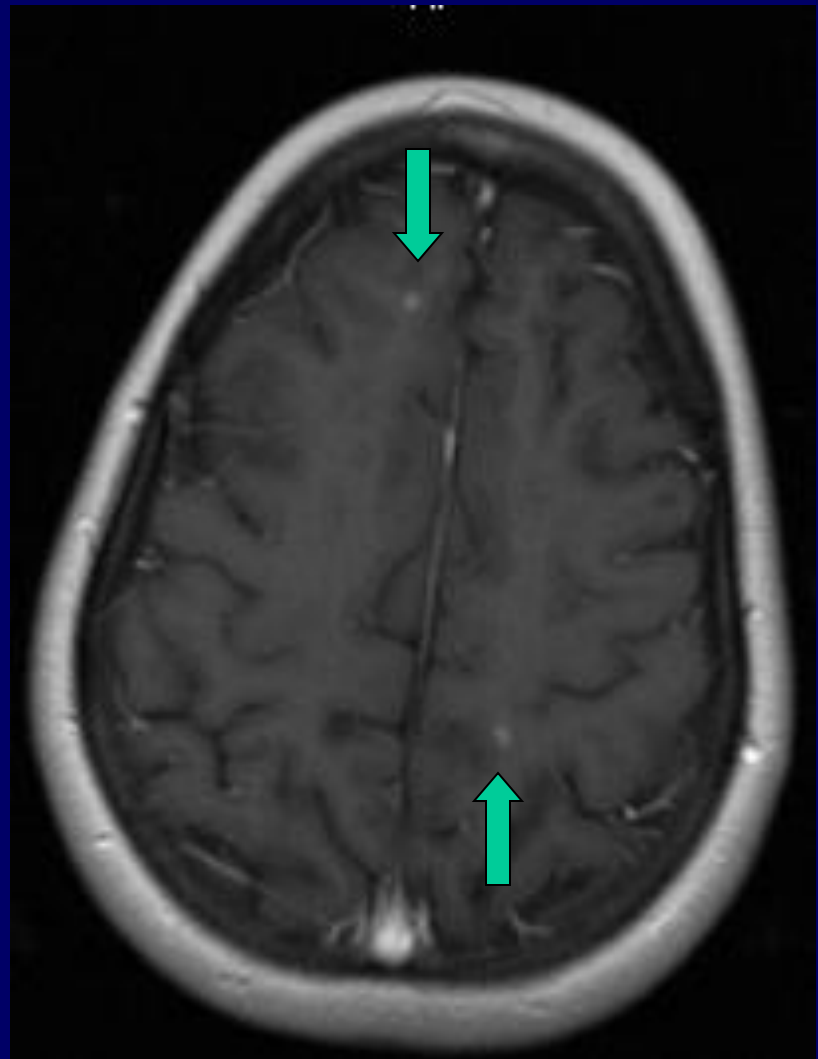
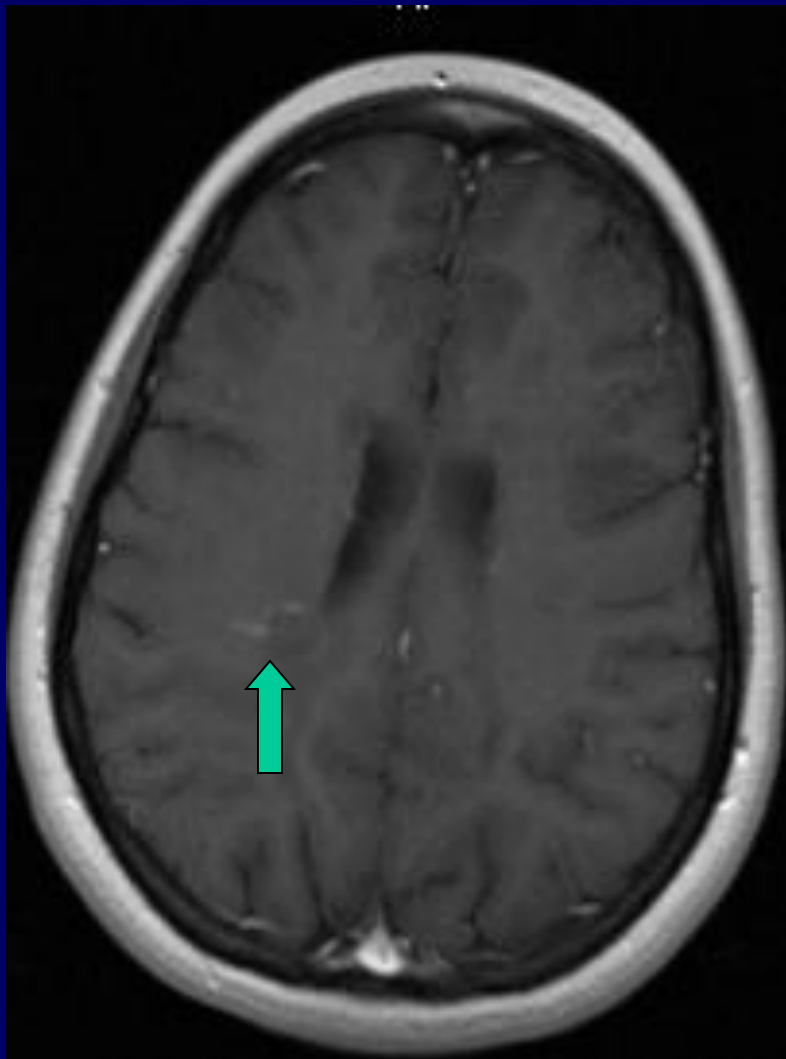
18 year-old woman – 2nd opinion

- 6 months later:
 - New MRI lesions
 - No change in exam
 - Counseled to change to Natalizumab
- 3 months later
 - Paresthesias in both lower extremities, then right UE
 - Myelitis
 - New MRI lesions
 - Began Tysabri
- 12 months post – Natalizumab
 - No relapses for over a year
 - Exam – stable
 - New MRI – no new lesions

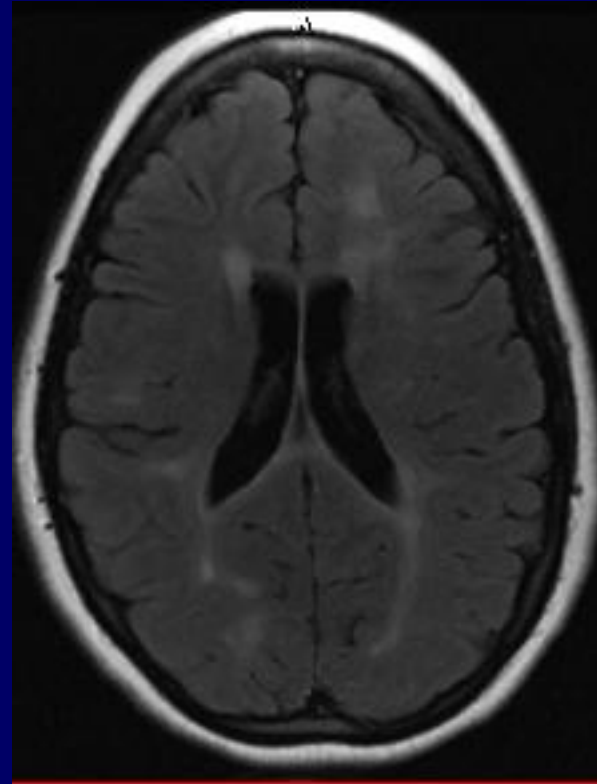
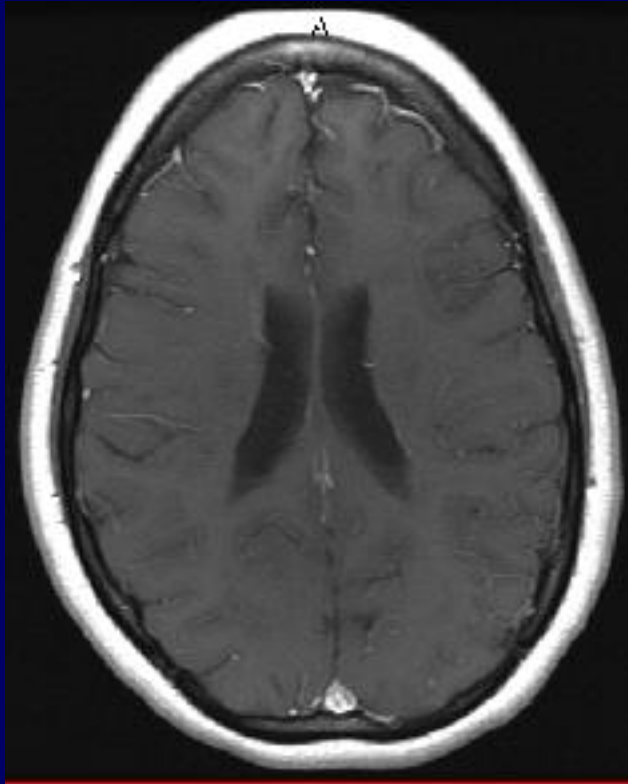
MRI on 2nd interferon



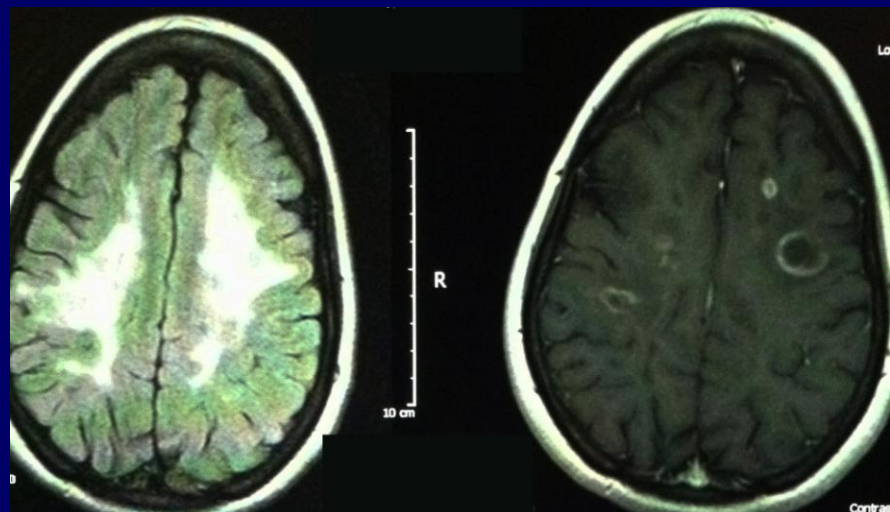
MRI on 2nd interferon: 6 new enhancing lesions in 6 months



MRI on tysabri: no enhancing lesions



Follow-up: on Natalizumab for 3.5 years

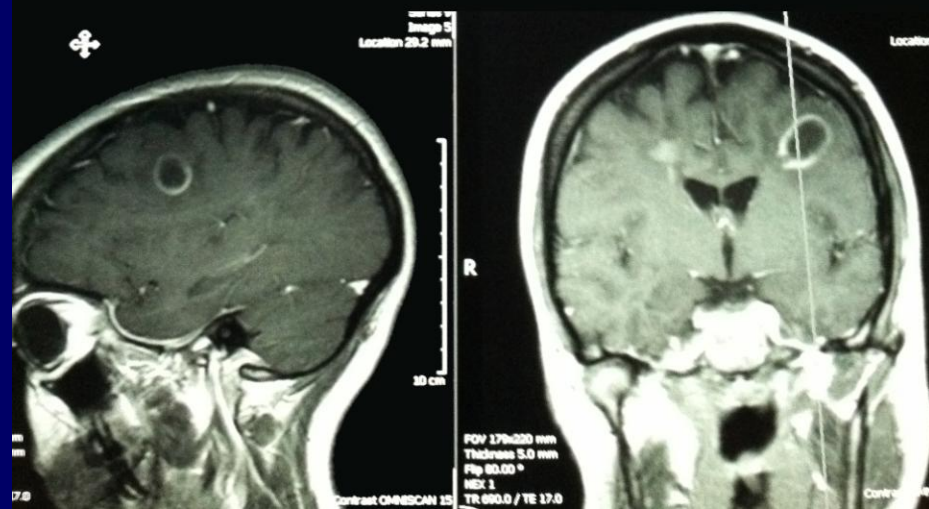
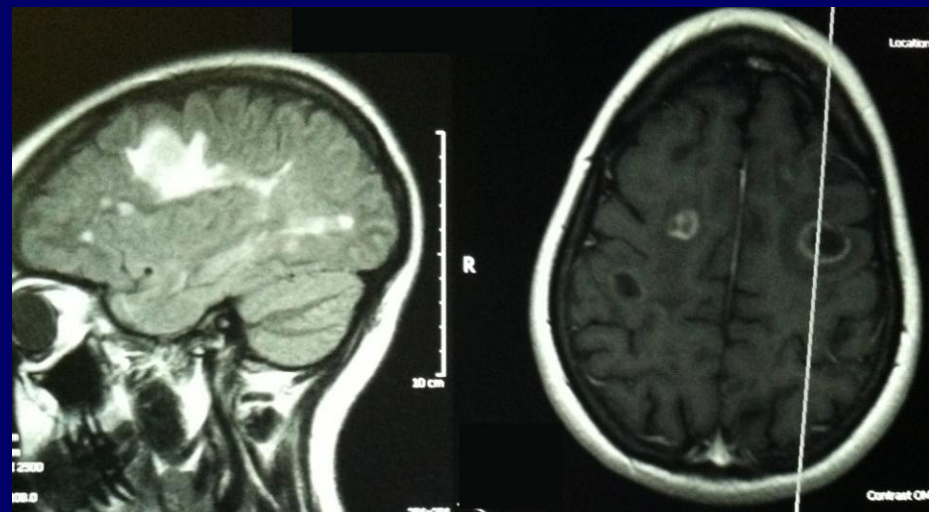


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