MRI monitoring (what is behind two numbers):
MRI pictorial essay volumetric MRI phenotypes of clinical MS, accidental findings, anatomical and pathological variations, MRI data mining

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MS lesions on MRI
classic MS (Charcot type)
MRI monitoring
data set with 15 timepoints 13.8 year of followup
Individual MRI
Longitudinal changes:
BPF & T2 lesions volume
MRI phenotype: BPF vs T2 (n=3094 MS MRI)
maxclust \{2, 3, 4, 5, 6, 7\}
MRI phenotype: BPF vs T2 in different clusters

<table>
<thead>
<tr>
<th>CLUSTER</th>
<th>n</th>
<th>BPF means</th>
<th>BPF std</th>
<th>T2 means</th>
<th>T2 std</th>
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<tbody>
<tr>
<td>1</td>
<td>110</td>
<td>0.815</td>
<td>0.002</td>
<td>30.015</td>
<td>0.380</td>
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</tr>
</tbody>
</table>

maxclust T=7
maxclust $T=7$

BPF vs Age at MRI

T2 vs Age at MRI

BPF vs T2 in different clusters
No T2 lesions present in brain, present in spinal cord

FLAIR
Black holes

up to 40% corresponding T2 lesions, 1.5 T
T1 hyperintensity on precontrast T1
Location: Brainstem lesion
Type enhancement: nodular enhancement
T1 post Gd MRI
T1 post Gd MRI

Type enhancement:
ring enhancement
Juxtacortical lesions
Diffusive changes of WM

“Dirty” WM
T2 lesions vs FLAIR lesions
Scattered FLAIR lesions
Postoperative
right CP angle mass

vestibular schwannoma
AVM/DVM

33000
Cavernous angioma

Developmental Venous Anomaly
Cerebral cavernous malformation
Cavum septum pellucidum and vergae

7067

24621
Cavum septum pellucidum and vergae
Sinusitis

Frontal sinus level

Maxillary sinuses level
Empty sella

Pineal cyst

28134
MPRAGE with labels
PV (red)
SV (green)

Rm
0.3875