

Houssem ABIDA
Faculty of medicine of Tunis

&

Fadi MRAIHI
Faculty of pharmacy of Monastir

Anti-mitotic spindle apparatus (anti-MSA) antibodies

- Firstly reported in 1981 by Anne McCarty in a patient with osteoarthritis
- Less than 1% of Antinuclear antibodies (ANA)

- Indirect Immunofluorescence (IIF) on HEP-2 cells: Only method for routine clinical detection.
- IIF: provides good sensitivity and screening for a wide range of MSA but lacks standardization
- Patterns varies according to the cell cycle of HEP-2

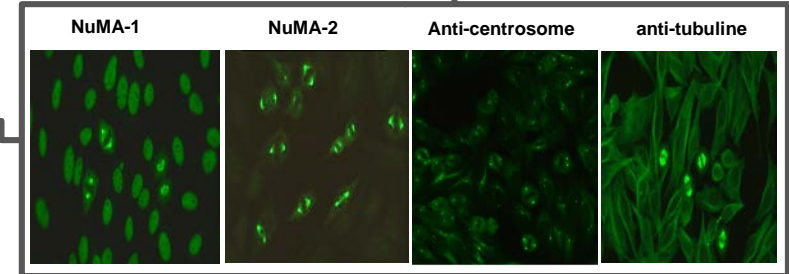
NuMA-1 /NuMA-2
Most frequent (73% of anti-MSA)

In Sjogren syndrome (SSj):

- Less severe glandular involvement
- More hematological and neurological involvement

In systemic lupus erythematosus (SLE)

- More thrombopenia
- Less renal involvement
- Less complement consumption
- Lower anti-DNA titer



Target antigen:
centrophillin

Target antigen:
HEg5

Target antigen :
ninein, pericentrin, enolase, PCM-1, cep250, cep110, etc.

Target antigen:
α-tubulin and β-tubulin

Less frequently:
Anti-MSA-2 **anti-MSA-3**

Associated with cancers ++

Systemic sclerosis
Primary biliary cholangitis, SS
Infections, etc.

Infections +++
Autoimmune thyroiditis
Autoimmune hepatitis
Autoimmune neuropathies (IgM)

Mostly found in:

- Autoimmune diseases, mainly Connective Tissue diseases (CTD) (65.5%)

But also:

- Cancers: pulmonary, breast, chronic lymphoblastic leukemia
- Infections: Hepatitis B, mycoplasma pneumonia
- Dilated cardiomyopathy

In CTDs:

- Mainly SLE, SSj and Mixed Connective Tissue Disease (NuMA1++)
- The only positive antibodies in 74.5% of MSA positive CTDs
- Associated to another antibody in 25% of cases, mainly anti-SSA

⇒ possible serological markers of SS or SLE when anti-SSA/SSB and anti-dsDNA are negative

⇒ Suggested to rule out an underlying cancer

