

Epidemiology of Multiple Sclerosis

PR RIADH GOUIDER

NEUROLOGY DEPARTMENT, MS CENTER, LR18SP03 AND CLINICAL INVESTIGATION CENTER NEUROSCIENCE AND MENTAL HEALTH - RAZI UNIVERSITY HOSPITAL, TUNIS, TUNISIA.

FACULTY OF MEDICINE OF TUNIS, UNIVERSITY OF TUNIS EL MANAR, TUNIS, TUNISIA

WCN 2025 – OCTOBER 13



Disclosures

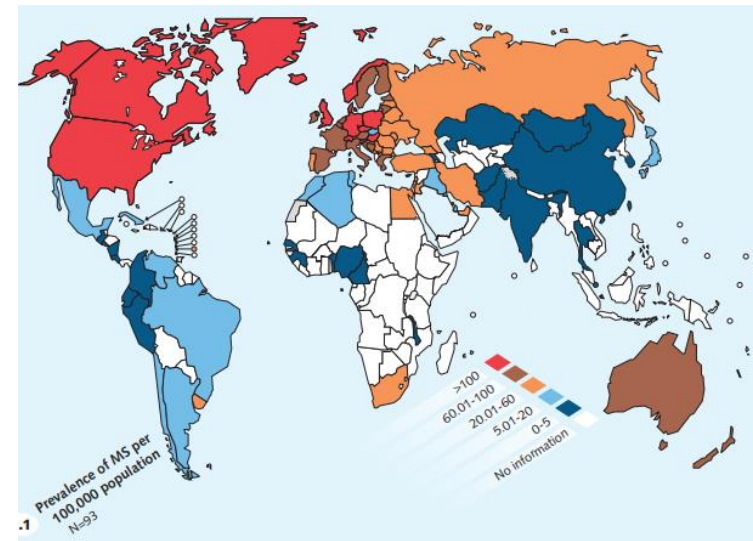
I have no conflict of interest, whether or not related to the content of this presentation.

Learning objectives

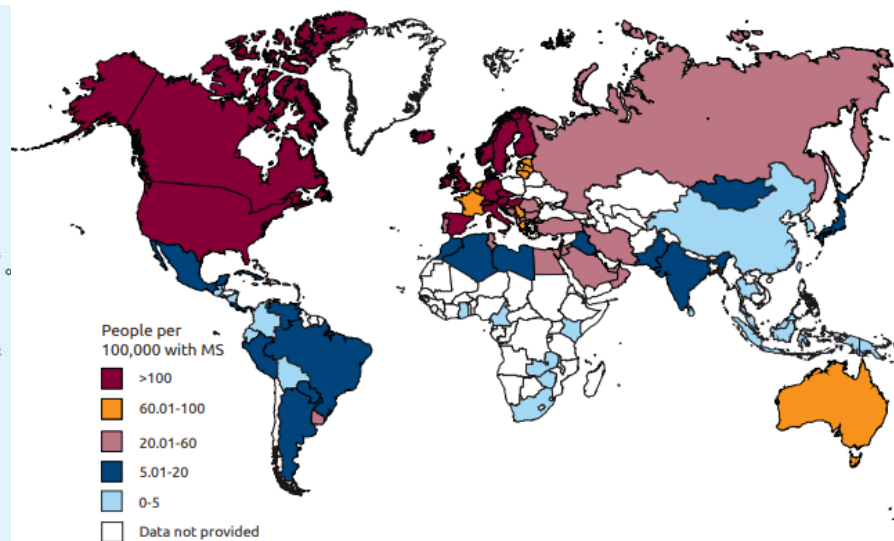
1. To observe that the prevalence of Multiple Sclerosis (MS) is clearly increasing worldwide.
2. To identify the phenotypic distribution and sex ratio of MS across the globe.
3. To investigate the underlying factors contributing to the changing prevalence of MS worldwide.

Worldwide distribution of MS:

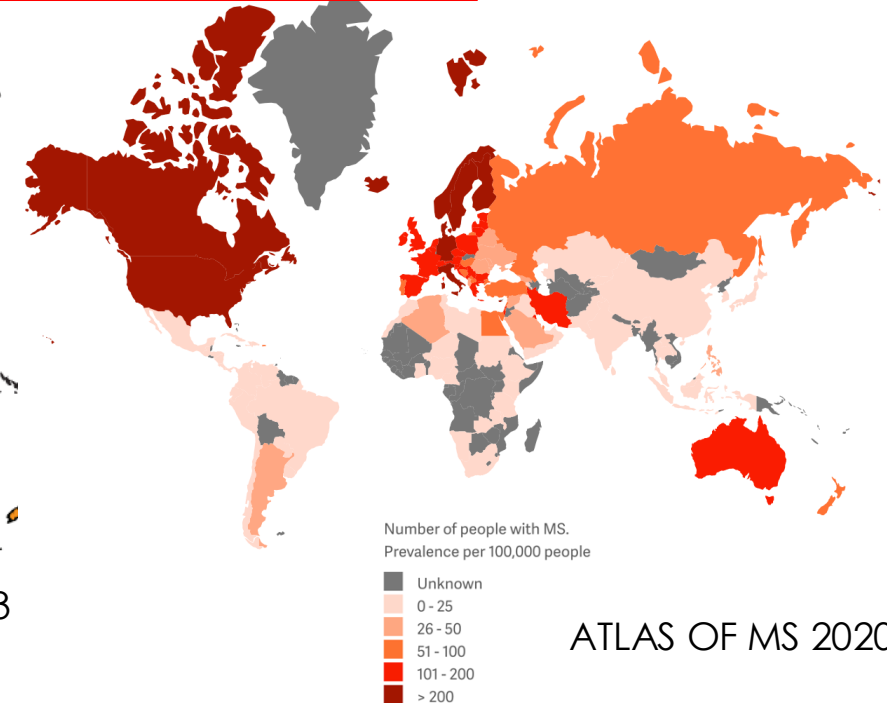
Evidence of rising prevalence (2008-2020)



ATLAS OF MS 2008

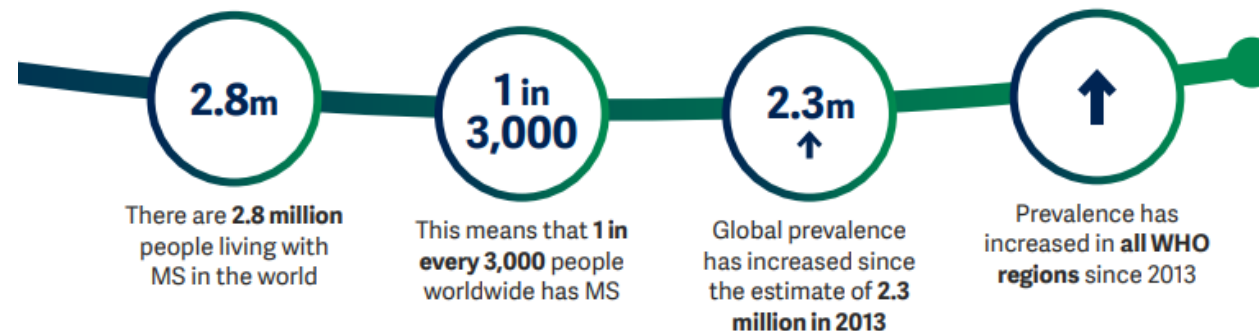


ATLAS OF MS 2013



ATLAS OF MS 2020

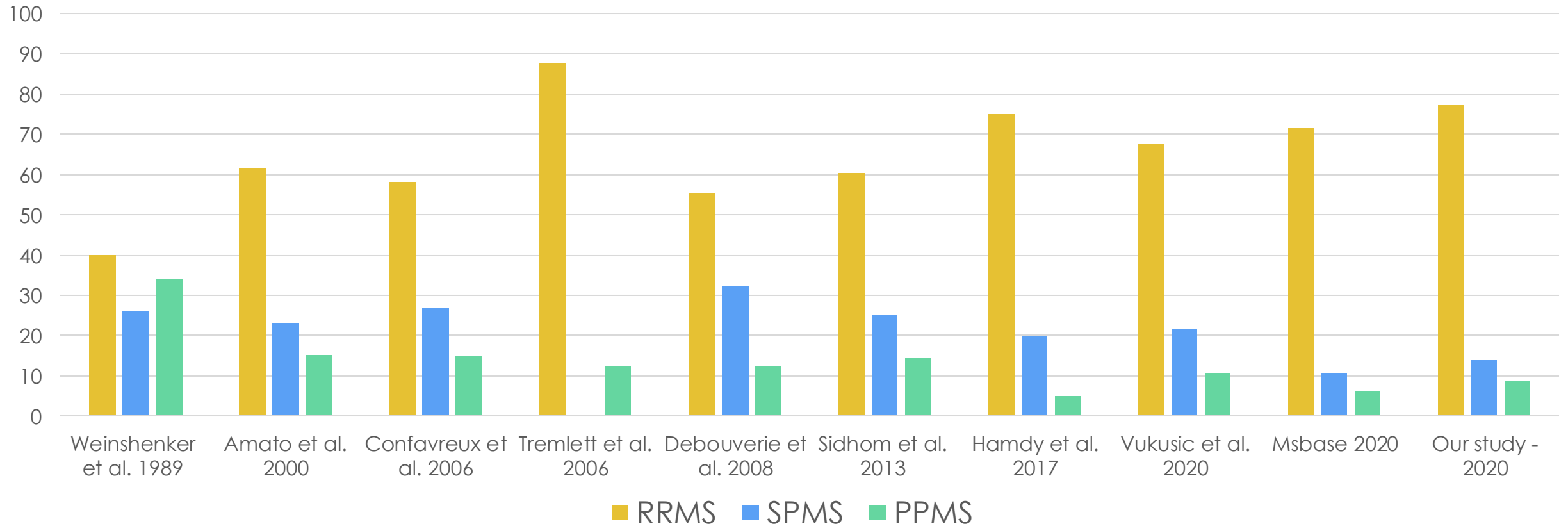
The number of people with MS around the world (prevalence of MS)



ATLAS OF MS 2020

Worldwide distribution of MS:

Focus on MS phenotype: relapsing vs progressive

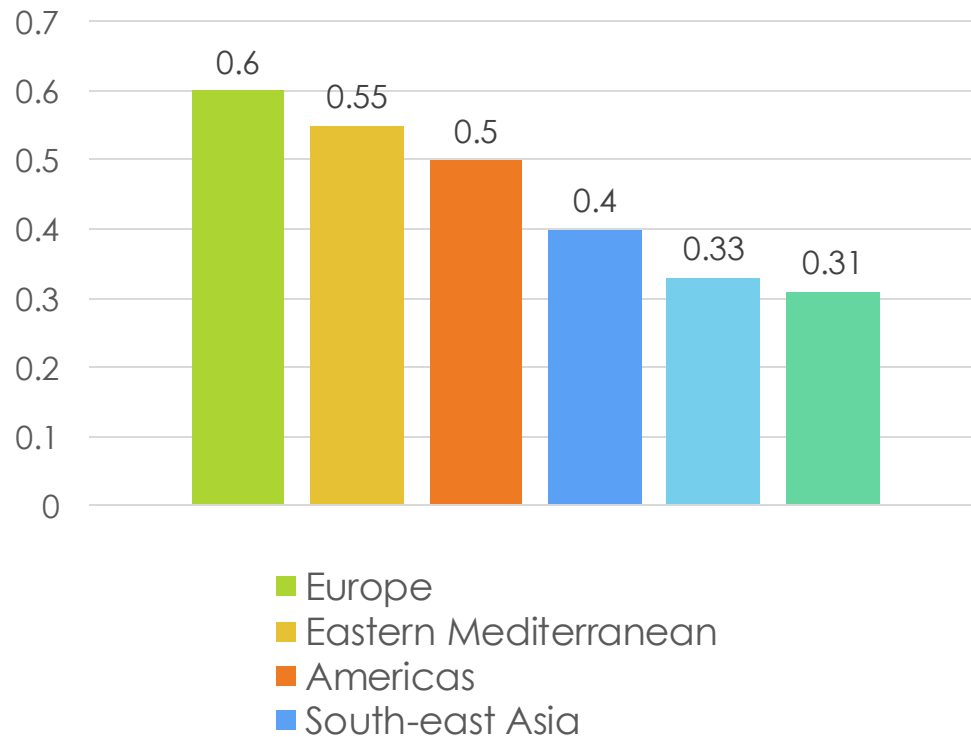


Higher prevalences of relapsing MS worldwide

MS prevalence in the world:

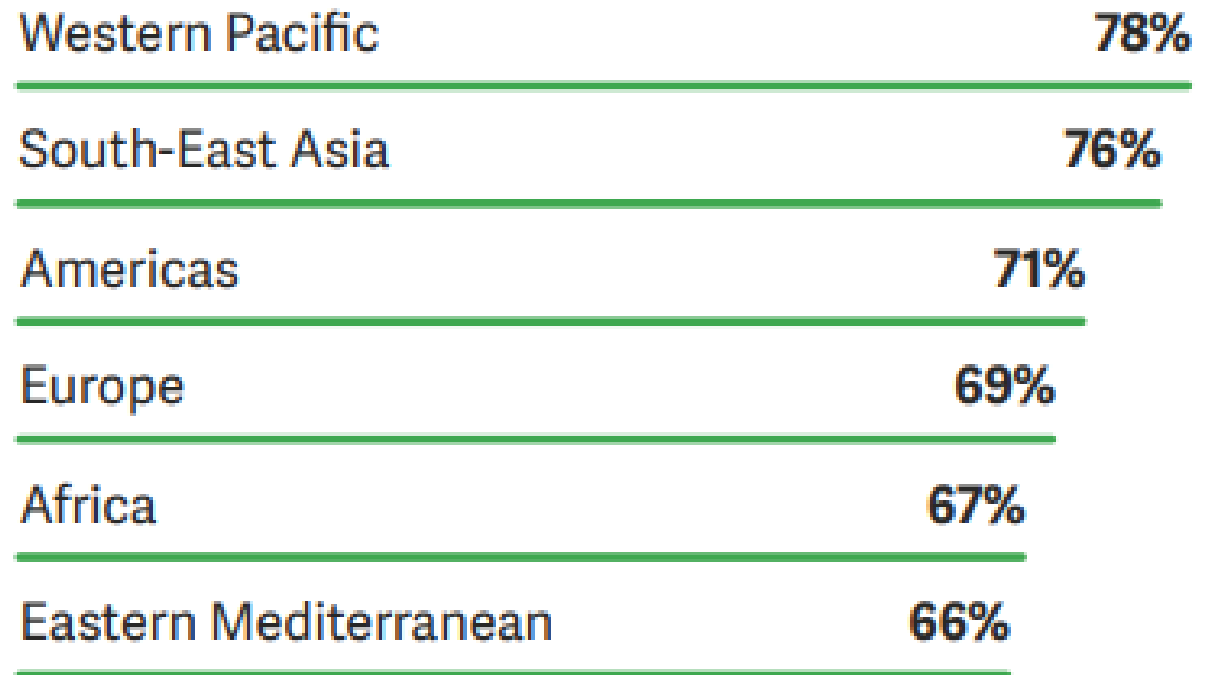
Focus on the sex-ratio

Male/Female ratio in 2013



ATLAS OF MS 2013

Percentage of people with MS who are female - WHO region



ATLAS OF MS 2020

Higher prevalence of MS among females

MS prevalence is increasing:

What is changing?

- Earlier diagnosis :

- Advent of Magnetic resonance imaging in the 1980s
- More awareness
- New McDonald Criteria

Cohen JA. Mult Scler. 2017

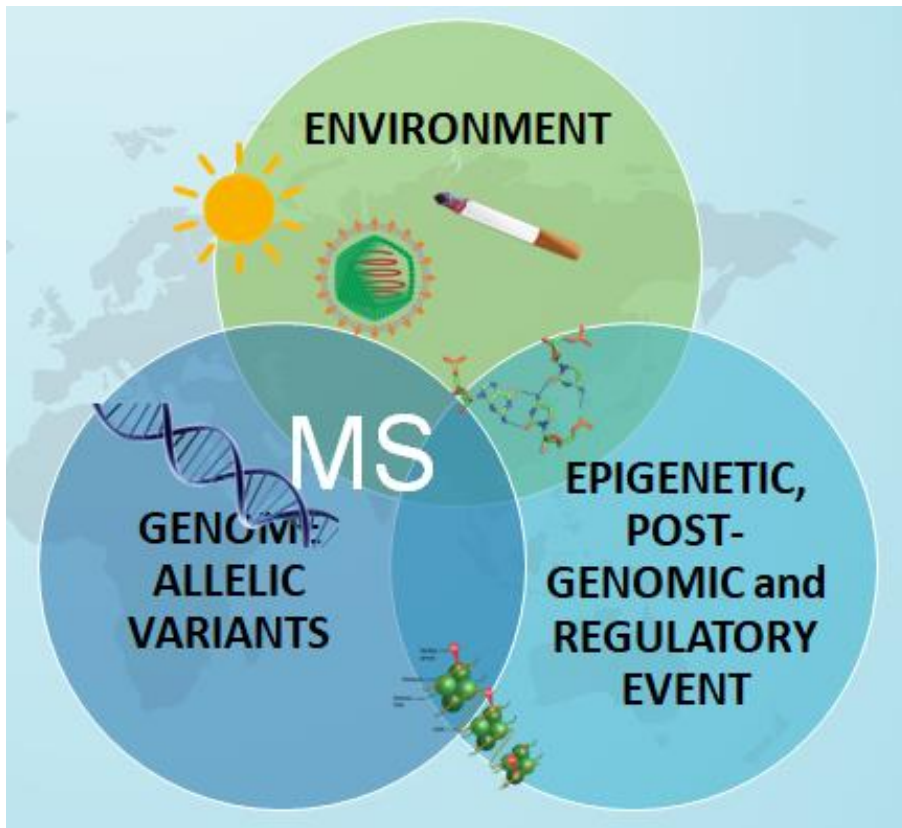
- Prolonged Survival → More MS patients reaching older ages

- Better understanding of MS mimickers

Marrie RA. Neurology. 2010

Interplay between genetics and environment

Increased MS frequency worldwide and in areas with previously low rates



Oksenberg JR. Expert Rev Neurother. 2013

- Environment:

- Vitamin D deficiency
- Low Sun Exposure
- Higher body weight
- Infections (EBV++)
- Increased Stress
- Increased Smoking