

## CHANGES IN MULTIPLE SCLEROSIS DISEASE-COURSE (OR “TYPE”) DESCRIPTIONS

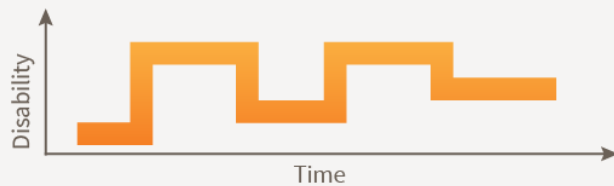
1996 DISEASE-COURSE DEFINITIONS	2013 DISEASE-COURSE REVISIONS*	<b>THREE COURSES ARE THE SAME, BUT WITH ADDED DESCRIPTORS</b> To be assessed at regular intervals by neurologic examination and MRI									
N/A	<b>NEW COURSE ADDED: Clinically Isolated Syndrome (CIS)</b> — referring to a first episode of inflammatory demyelination in the central nervous system that could become MS if additional activity occurs.										
<b>Relapsing-Remitting (RRMS)</b> — episodes of acute worsening of neurologic functioning with total or partial recovery and no apparent progression of disease	<b>Relapsing-Remitting (RRMS)</b> — episodes of acute worsening of neurologic functioning (new symptoms or the worsening of existing symptoms) with total or partial recovery and no apparent progression of disease. RRMS can be further characterized as: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"> <b>Active</b> — showing evidence of new relapses, new gadolinium-enhancing lesions and/or new or enlarging T2 lesions on MRI over a specified time period                             </td> <td style="width: 33%; border: none; text-align: center; vertical-align: middle;"> <b>AND OR</b> </td> <td style="width: 33%; border: none;"> <b>Worsening</b> — defined as increased disability confirmed over a specified time period following a relapse                             </td> </tr> <tr> <td style="border: none;"> <b>OR</b> </td> <td style="border: none;"></td> <td style="border: none;"> <b>Stable</b> — defined no evidence of increasing disability over a specified time period following a relapse                             </td> </tr> <tr> <td style="border: none;"> <b>Not active</b> — showing no evidence of disease activity                             </td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </table>		<b>Active</b> — showing evidence of new relapses, new gadolinium-enhancing lesions and/or new or enlarging T2 lesions on MRI over a specified time period	<b>AND OR</b>	<b>Worsening</b> — defined as increased disability confirmed over a specified time period following a relapse	<b>OR</b>		<b>Stable</b> — defined no evidence of increasing disability over a specified time period following a relapse	<b>Not active</b> — showing no evidence of disease activity		
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<b>Primary Progressive (PPMS)</b> — steadily worsening neurologic function from the beginning without any distinct relapses or remissions	<b>Primary Progressive (PPMS)</b> — steadily worsening neurologic function from the onset of symptoms without initial relapses or remissions. PPMS can be further characterized as: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"> <b>Active</b> — showing evidence of new relapses, new gadolinium-enhancing lesions and/or new or enlarging T2 lesions on MRI over a specified time period                             </td> <td style="width: 33%; border: none; text-align: center; vertical-align: middle;"> <b>AND OR</b> </td> <td style="width: 33%; border: none;"> <b>With progression</b> — evidence of disease worsening on an objective measure of change**, confirmed over a specified period of time, with or without relapses                             </td> </tr> <tr> <td style="border: none;"> <b>OR</b> </td> <td style="border: none;"></td> <td style="border: none;"> <b>Without progression</b> — no evidence of disease worsening on an objective measure of change** over a specified period of time                             </td> </tr> <tr> <td style="border: none;"> <b>Not active</b> — showing no evidence of disease activity                             </td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </table>	<b>Active</b> — showing evidence of new relapses, new gadolinium-enhancing lesions and/or new or enlarging T2 lesions on MRI over a specified time period	<b>AND OR</b>	<b>With progression</b> — evidence of disease worsening on an objective measure of change**, confirmed over a specified period of time, with or without relapses	<b>OR</b>		<b>Without progression</b> — no evidence of disease worsening on an objective measure of change** over a specified period of time	<b>Not active</b> — showing no evidence of disease activity			
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<b>Secondary Progressive (SPMS)</b> — progressive, with or without relapses	<b>Secondary Progressive (SPMS)</b> — following an initial relapsing-remitting course, the disease becomes more steadily progressive, with or without relapses. SPMS can be further characterized as: <table style="width: 100%; border: none;"> <tr> <td style="width: 33%; border: none;"> <b>Active</b> — showing evidence of new relapses, new gadolinium-enhancing lesions and/or new or enlarging T2 lesions on MRI over a specified time period                             </td> <td style="width: 33%; border: none; text-align: center; vertical-align: middle;"> <b>AND OR</b> </td> <td style="width: 33%; border: none;"> <b>With progression</b> — evidence of disease worsening on an objective measure of change**, confirmed over a specified period of time, with or without relapses                             </td> </tr> <tr> <td style="border: none;"> <b>OR</b> </td> <td style="border: none;"></td> <td style="border: none;"> <b>Without progression</b> — no evidence of disease worsening on an objective measure of change** over a specified period of time                             </td> </tr> <tr> <td style="border: none;"> <b>Not active</b> — showing no evidence of disease activity                             </td> <td style="border: none;"></td> <td style="border: none;"></td> </tr> </table>	<b>Active</b> — showing evidence of new relapses, new gadolinium-enhancing lesions and/or new or enlarging T2 lesions on MRI over a specified time period	<b>AND OR</b>	<b>With progression</b> — evidence of disease worsening on an objective measure of change**, confirmed over a specified period of time, with or without relapses	<b>OR</b>		<b>Without progression</b> — no evidence of disease worsening on an objective measure of change** over a specified period of time	<b>Not active</b> — showing no evidence of disease activity			
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<b>Progressive Relapsing (PRMS)</b> — steadily worsening neurologic function from the beginning with occasional relapses	<b>COURSE ELIMINATED: Progressive Relapsing (PRMS)</b> — individuals who were previously diagnosed with progressive relapsing MS would now be considered primary progressive: active (at the time of relapses or new MRI lesions) or not active.										

\*Lublin et al. Defining the clinical course of multiple sclerosis; the 2013 revisions. Neurology 2014;83:278-286.

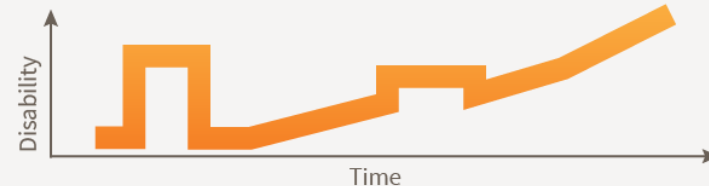
\*\*For example, the Expanded Disability Status Scale (EDSS)

# WHAT HAPPENS IN MS OVER TIME?

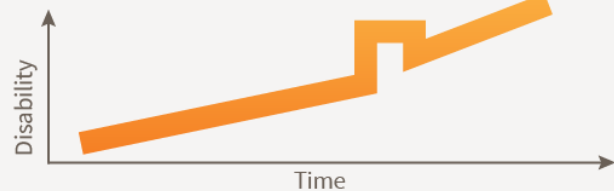
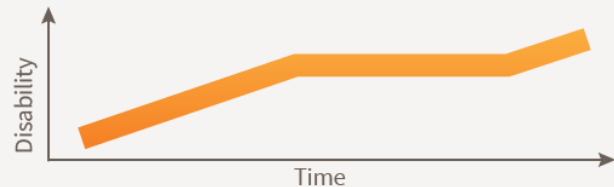
## RELAPSING-REMITTING MS



## SECONDARY PROGRESSIVE MS



## PRIMARY PROGRESSIVE MS



### Relapsing course can be:

- Active or inactive
- Worsening or not worsening

### Progressive courses can be:

- Active with or without progression
- Not active with or without progression

Source: Lublin et al., 2014.