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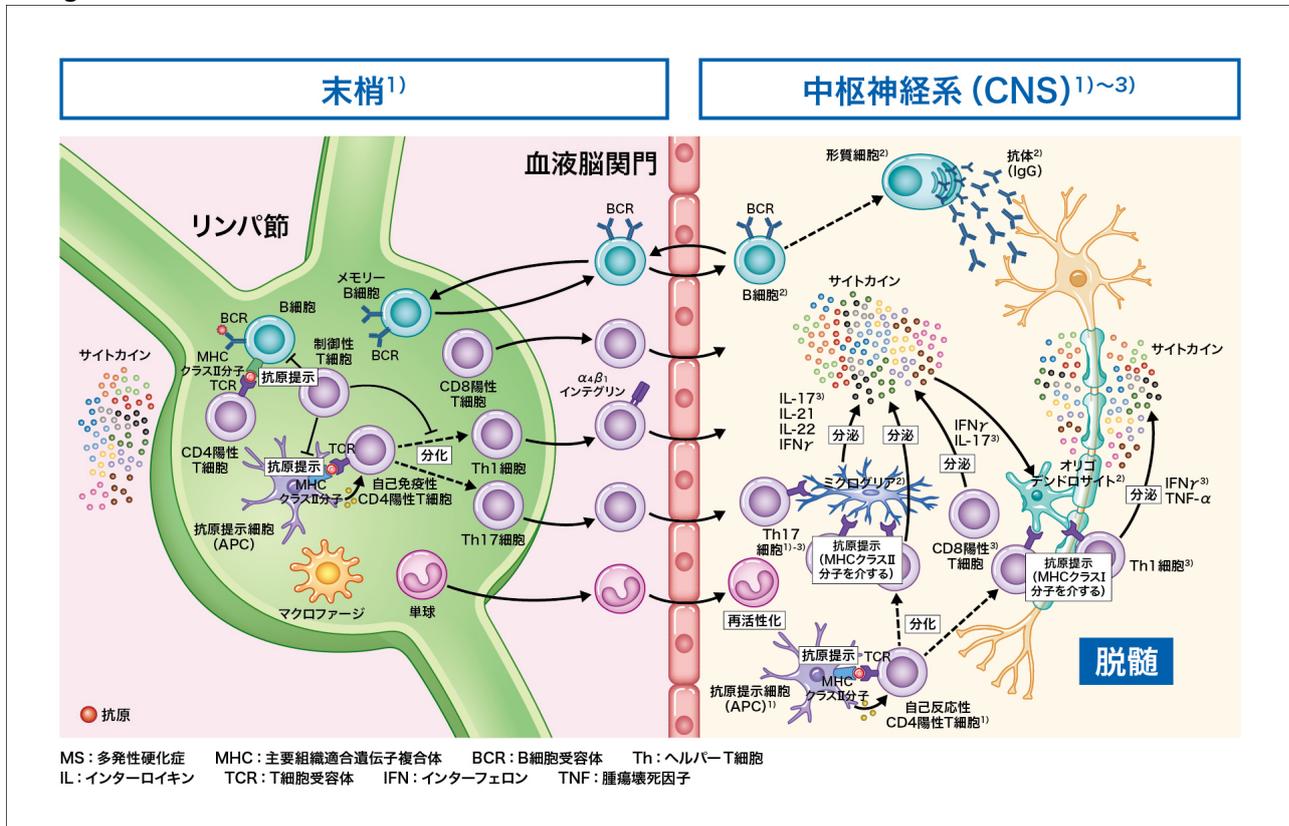


- □□□□
- T□□□MS
- B□□□MS
- □□□□□□□□

MS

1 MS

Image



- 1 Dendrou C et al Nat Rev Immunol 15(9): 545-558, 2015
- 2 Hemmer B et al Nat Rev Neurosci 3(4): 291-301, 2002
- 3 Baecher-Allan C et al : Neuron 97(4): 742-768, 2018

Reference

- 1 Dendrou C et al Nat Rev Immunol 15(9): 545-558, 2015
- 2 Hemmer B et al Nat Rev Neurosci 3(4): 291-301, 2002
- 3 Baecher-Allan C et al : Neuron 97(4): 742-768, 2018
- 4 p4-5 p26-27 2017

T

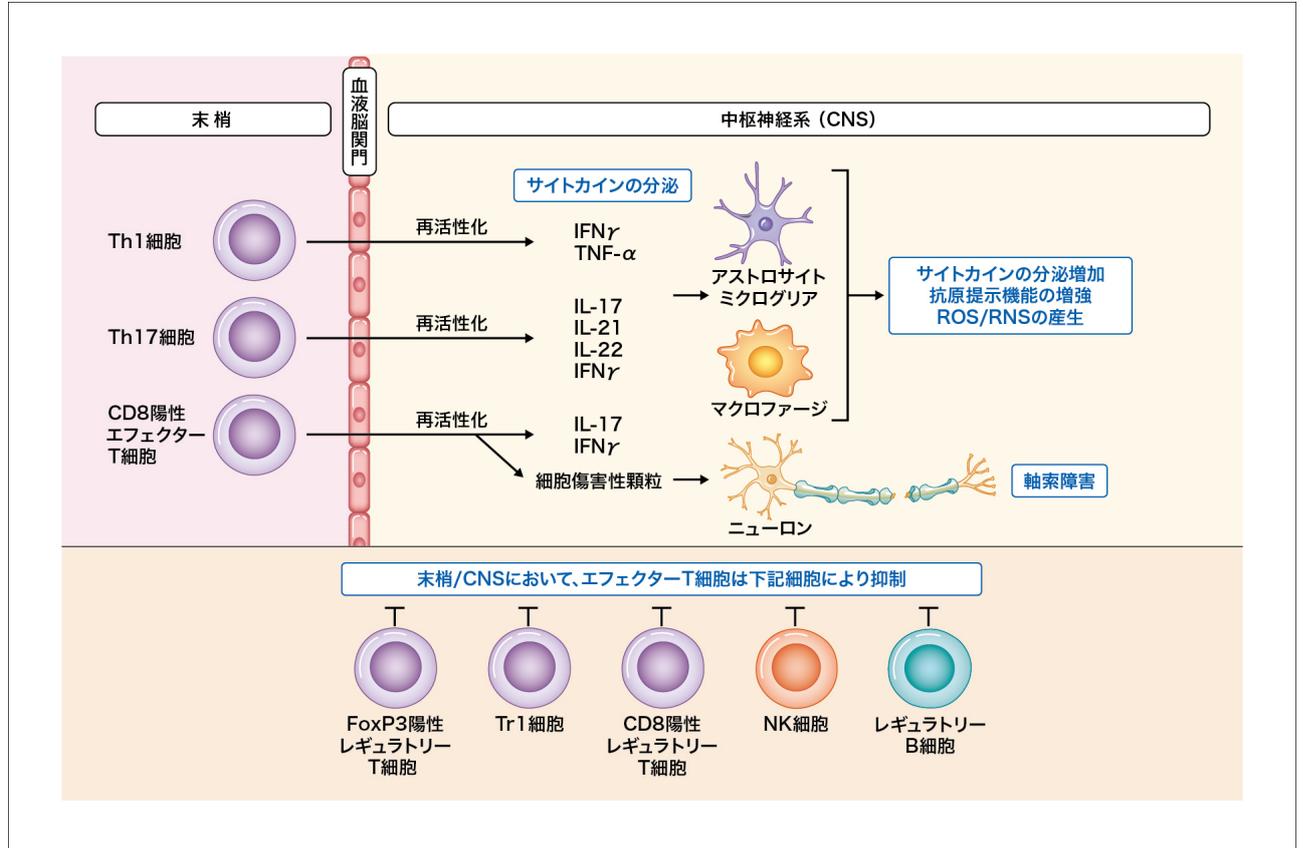
MS T Th1 Th17 CD8 T IFN-γ IL-17 ROS RNS 1 2 1

CD8 T CNS 1²⁰

T B Tr NK 1²⁰

2 MS T²⁰

Image



2 Baecher-Allan C et al Neuron 97(4): 742-768, 2018

Reference

1 2017 p26-27 2017

2 Baecher-Allan C et al Neuron 97(4): 742-768, 2018

B T MS B MHC II T CD4 T³⁰ 2³⁰ TNF- α IL-6 GM-CSF B⁴⁰ 3¹⁰

MS IL-10 T B³⁰

4 Dalakas MC Nat Clin Pract Neurol 4(10): 557-567, 2008

Reference

1 2017 p26-27 2017

2 Comi G et al Ann Neurol 89(1): 13-23, 2021

3 Pröbstel AK et al J Neuroophthalmol 38(2): 251-258, 2018

4 Dalakas MC Nat Clin Pract Neurol 4(10): 557-567, 2008

MRI

^{1,3,4}

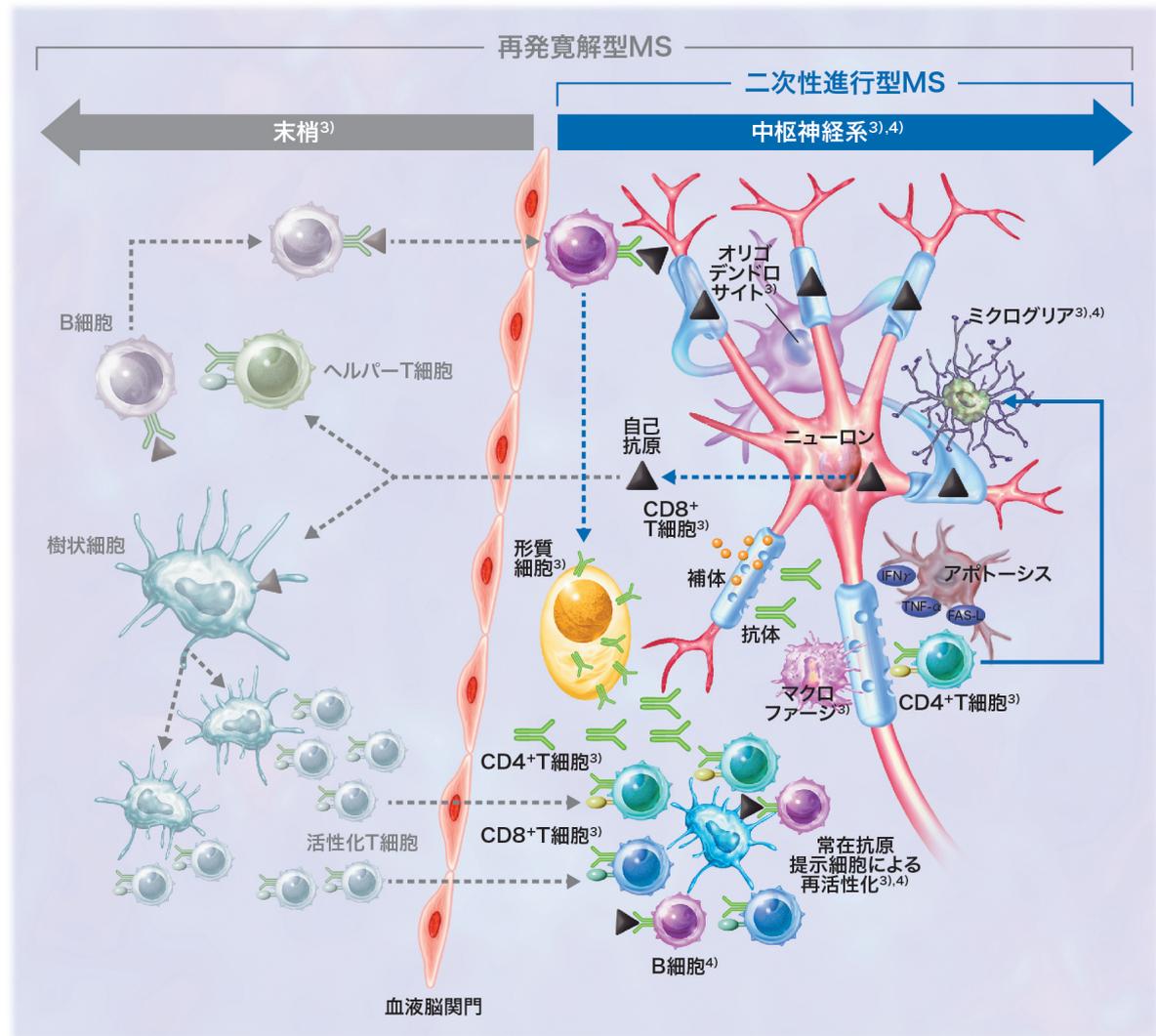
TNF- α

⁵

5 Compartmentalized inflammation

Image

末梢免疫系から独立しているCompartmentalized inflammation (中枢に局在する炎症) が、
 髄鞘破壊に寄与していることが示唆された^{1),2)}



3 Bar-Or A Semin Neurol 28(1): 29-45, 2008

4 El Behi M, et al Immunol Lett 96(1): 11-26, 2005

Reference

1 2017 p26-27 2017

2 Baecher-Allan C et al Neuron 97(4): 742-768, 2018

3 Bar-Or A Semin Neurol 28(1): 29-45, 2008

4 El Behi M, et al Immunol Lett 96(1): 11-26, 2005

5 Niki I, et al Nat Med 17(4): 495-499, 2011

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