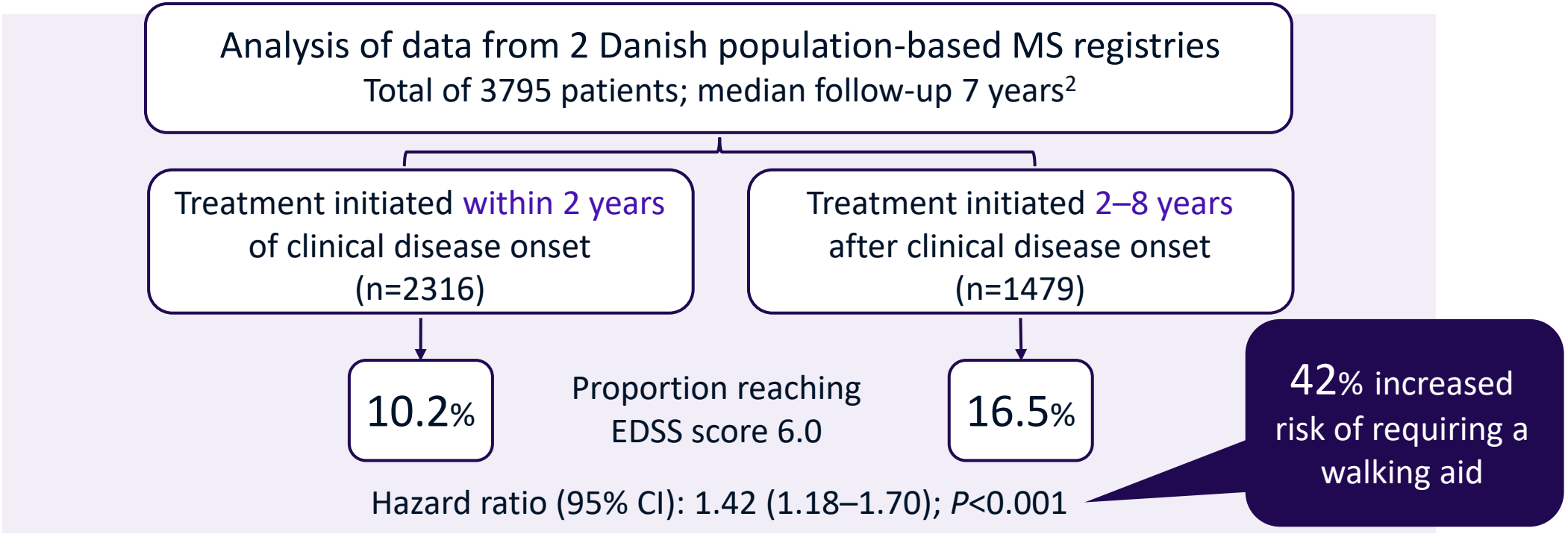
Evidence Supports Early Intervention with Disease-Modifying Therapy (DMT)

Compared with earlier initiation, delayed initiation of treatment is associated with poorer response to DMT and accumulation of more neurological disability[1]

Example study:



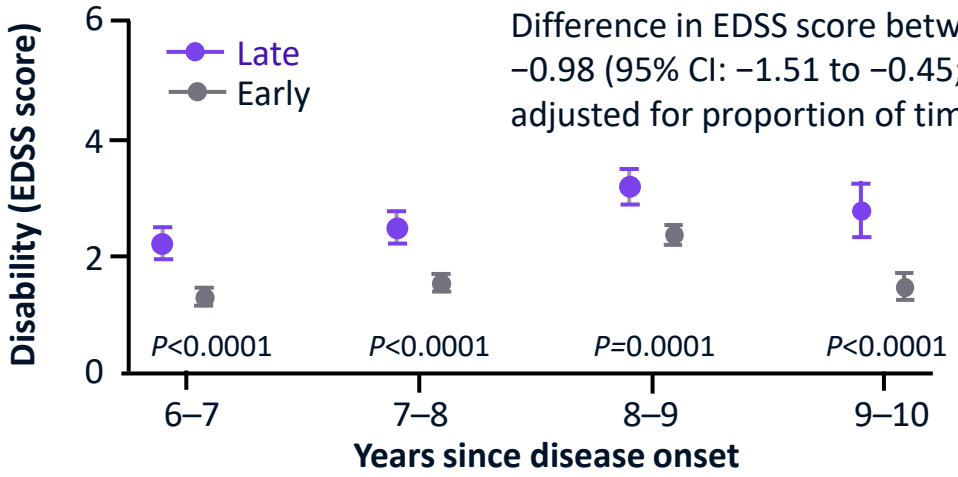
EDSS=Expanded Disability Status.

1. Noyes K, Weinstock-Guttman B. *Am J Manag Care.* 2013;19:s321-s331; 2. Chalmer TA et al. *Eur J Neurol*. 2018;25:1262-e110.

Effect of Timing of High-Efficacy DMT on Disability

Matched analysis of patients in the MSBase and Swedish MS registries

- 213 initiated high-efficacy DMT[a] 0–2 years (early) after clinical disease onset (mean EDSS score: 2.2)
- 253 initiated high-efficacy DMT[a] 4–6 years (late) after clinical disease onset (mean EDSS score: 2.1)
- Median follow-up time: 7.8 years



Difference in EDSS score between groups over the whole follow-up period: −0.98 (95% CI: −1.51 to −0.45; *P*<0.0001), adjusted for proportion of time on any DMT

Number of patients					
	Late	**233**	**192**	**168**	**135**
	Early	**189**	**140**	**126**	**89**
Proportion of patients above EDSS 6 score					
	Late	**14 (6.0%)**	**16 (8.2%)**	**17 (9.9%)**	**15 (11.0%)**
	Early	**5 (2.6%)**	**3 (2.1%)**	**4 (3.2%)**	**3 (3.4%)**

High-efficacy therapy started within 2 years of disease onset was associated with less disability after 6–10 years than when started later in the disease course

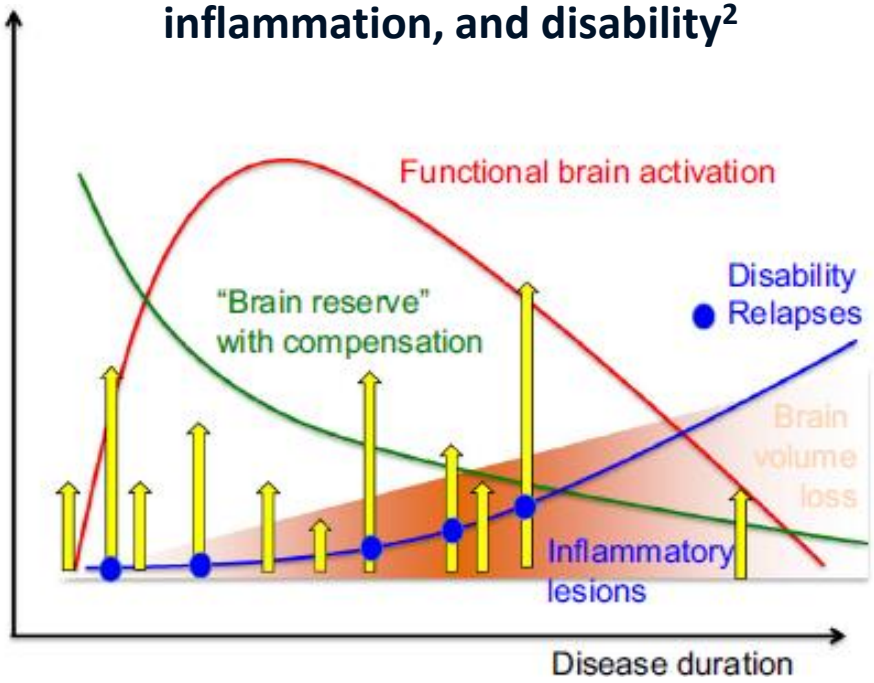
[a]High-efficacy DMTs included alemtuzumab, mitoxantrone, natalizumab, ocrelizumab, and rituximab; EDSS, Expanded Disability Status Scale.

He A et al. *Lancet Neurol.* 2020;19:307-316.

DMT Counseling for Newly Diagnosed MS Patients

- Explain rationale for early treatment[1,2]
  - MS causes irreversible damage to the CNS
  - Over time, compensatory mechanisms can become exhausted
  - Goal is to preserve brain tissue and maximize lifelong brain health
- Assess readiness for DMT
- Engage in open and ongoing dialogue
- Manage expectations
  - Not a cure; not to improve symptoms
  - Time for effect of therapy after initiation

Relationship between relapses, inflammation, and disability[2]



CNS, central nervous system.

1. Giovannoni G et al. *Mult Scler Relat Disord*. 2016;9 Suppl 1:S5-S48; 2. Ziemssen T et al. *J Neurol*. 2016;263:1053-1065; 3. Rae-Grant A et al. *Neurology.* 2018;90:777-788.