Second line therapies should be first line in patients with aggressive disease

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Disease modifying therapies approved for relapsing multiple sclerosis, which interfere with a variety of immunological mechanisms, reduce relapse rate, accumulation of disability and MRI activity. Most patients start with first line therapy including interferon beta, glatiramer acetate, dimethyl fumarate or teriflunomide. In the case of treatment failure and breakthrough disease activity, second line therapy with more powerful drugs such as natalizumab, fingolimod or alemtuzumab are recommended. These drugs can also be chosen for highly active forms of the disease based on careful risk-benefit stratification. In subgroup analysis in patients with highly active MS, natalizumab reduced annualized relapse rate by 81% (AFFIRM Study) and 76% (SENTINEL Study), as well as reduced the risk of disability progression sustained for 24 weeks by 64% (AFFIRM Study) and 58% (SENTINEL Study). In another study in 70 patients with highly active RRMS (at least 2 relapses and progression of disability of at least 1 point during the year before treatment, sustained for at least 6 months).after two years of natalizumab treatment 48% patients were free from disease activity. Post –hoc subgroup analysis of FREEDOMS study demonstrated that 0.5 mg fingolimod in rapidly evolving severe RRMS patients (at least 2 relapses in the year before baseline and at least 1 Gd+ lesion at baseline) reduced ARR by 67% versus placebo over 24 months (54% in overall study population). Alemtuzumab is also highly effective medication and can be a good choice for therapy in aggressive MS.