Choosing the Appropriate Disease-Modifying Protocol

No one can completely predict the severity of an individual's clinical course of MS. That said, there are clues your neurologist, or a neurologically trained healthcare provider, can use that may suggest a milder or more severe disease course.

Clues include the nature of changes on central nervous system MRIs, the number of relapses occurring over the past several years, the nature of the relapses, the sites of tissue injury, and most importantly, the degree of neurologic recovery from the relapses. These clues are essential in choosing the proper disease-modifying therapy.

There are two possible treatment protocols for the administration of disease-modifying therapies: escalation therapy and induction therapy.

Escalation Therapy
The basic premise of this treatment approach is that effective disease management should involve first using drugs with proven effectiveness, good patient tolerance and good long-term safety. While such drugs may not be the most powerful immune modulating agents, they are known to reduce disease activity in a large number of persons with MS, are well-tolerated and have few safety issues with long term use. Careful monitoring for recurrent disease activity should be part of any treatment protocol. If new, clinically substantive disease activity is detected after six months of using the drug as prescribed, you and your neurologist should discuss the option of changing therapy by escalating to a more powerful drug—one with more potent immune modulating properties, but one that may be less well

tolerated and may have long-term safety consequences.

Induction Therapy
The basic premise of this treatment approach is to stop the MS disease process as much as possible by starting therapy with the most powerful immune modulating drugs available. Then, at some point in the future, changing therapies to a less powerful drug, but one with fewer side effects and less substantive long-term safety issues. The hope is that “hitting the disease hard” early in its course will result in less future tissue destruction. How long to continue such “induction therapy” is not established. Usually a drug is continued for a relatively short period of time, for perhaps up to a year. If the disease is well controlled, the drug is well tolerated, and the risks and benefits continue to be acceptable to the person with MS and their neurologist, treatment with the drug can be continued. However, if the drug is not well tolerated or the potential risks of long term treatment are not acceptable, changing to a “milder” disease-modifying therapy, with better tolerance and long-term safety can be considered.

Each treatment protocol has its benefits and faults and there is no “right” or “wrong” approach. The benefits of the escalation protocol are that treatment is administered with an effective, well-tolerated and reasonably safe drug that may be sufficient to control an individual’s disease over the long term. The downside of this approach is that if the drug initially chosen is not effective in controlling disease, the person will have sustained new tissue damage that may affect function. Such a risk can be modified with close disease monitoring and perhaps not choosing this approach if clues suggesting more severe disease are present.

The benefits of induction therapy are that a powerful immune modulating drug is administered early in the course of disease, hopefully stopping as much new tissue-destructive inflammation as possible and altering the immune system sufficiently enough that switching to a less powerful drug will control the disease. Among the downsides of induction therapy are that a person is exposed to drugs that may be poorly tolerated, have significant side effects, and potentially serious, and even fatal long-term safety consequences. Induction therapy may be a preferred option if there are clues that more aggressive disease could develop.

It is **essential** that you discuss in detail both treatment protocols with your neurologist, with the final input being a joint assessment of the benefits of a particular disease-modifying therapy and your willingness to accept the risks that may accompany taking that drug.
