Actually, how you select therapies and initiate therapies and add on therapies, is actually a very unique topic, because each patient is done differently depending on what they present with, the level of symptoms, what type of therapeutics, and what other medical comorbid conditions they have. So if we look at the classes that are approved for initial monotherapy, we have our MAO-B inhibitor class. The monotherapy drug there that's approved as Rasagiline. Then we have our dopamine agonist class, where we have three agents approved for it, which is the ropinirole, pramipexole, as well as rotigotine, which is a transdermal system.

In addition to that, we have the levodopa class as an option. And then, we of course have our non-dopaminergic therapies, which is amantadine, as well as trihexyphenidyl, which is an anticholinergic. So we have an anti-glutaminergic agent and an anticholinergic agent. So this is the early onset options of where we can use first line.

Now how we choose one? Well we typically tend to go towards dopaminergic therapies. Non-dopaminergic therapies were used early on. Anticholinergics are rarely used in cases, unless there's a significant amount of tremor predominance. Not because it's not effective, but also because of the side effect potential in an aging population, such as dry mouth, mental fogginess, balance issues. So we tend to steer clear or minimize anticholinergics. We tend to use amantadine in some cases early on, but there's more tremor predominance we tend to use early on with dopaminergic therapies that I just mentioned.

Now, if somebody has milder disabilities, we may start with levodopa sparing therapies. If somebody is younger onset, we may start with levodopa sparing therapies. So keep in mind, Parkinson's is a progressive disease. People will have fluctuations over the course of time. And individuals have come to realize that, early on in the years ago, we were very much gung ho on dopamine sparing therapies, or levodopa sparing therapies 20 years ago, and over the time, pendulum has moved forward to really using a combination of therapies, a polypharmacy of sorts. So you're not using exclusively one therapy, but a combination in that sense.

So you may start with levodopa sparing therapies early on. The reason we do that, is more so because we're hoping to delay levodopa in a milder population of patients that may not need it at that time. The other reason we may use it earlier on with levodopa sparing therapies earlier on, is because we may want to use less pill burden up front, because levodopa when started as a minimum of typically three times a day dosing, whereas some of the dopaminergic medications and the MAO-B inhibitors are once a days.

Now, that's how we generally would approach it. However, somebody with moderate disability, significant impairments, we would start with levodopa first, adjust the levodopa, and then add in adjunctive therapy such as dopamine agonists, or amantadine, or of the rasagiline, and even selegiline at that point later on.

With that said, some comorbidities to keep in mind. For individuals who have lower extremity edema, individuals who are prone to orthostasis, we tend to be shying away a little bit from the dopamine agonist class. We always screen for dopamine agonist individuals about individuals who might have a tendency towards addictive behavior, and addictive personality, and because of the risk of developing impulse control issues. Which, once they occur, can be quite significant and quite impairing for folks.

Many times, individuals don't realize that the impulse control issues are the things that really are related to their medications. They may not necessarily see it that way, and the impulse control issues continue to become an issue for them, unresolved, because they're unaware that this is related to their dopaminergic medication.