Dolutegravir Plus TAF Associated With Steepest Weight Gain

However, all integrase inhibitors were associated with similar weight gain.

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Weight gain is steepest when people switch to an integrase inhibitor or a regimen that includes tenofovir alafenamide (TAF), according to data presented at the recent Conference on Retroviruses and Opportunistic Infections (CROI) .

Much research has shown that when people new to HIV treatment start on integrase inhibitors or TAF, they experience more weight gain than their peers taking other regimens. But weight gain may also occur among people who already have an undetectable viral load but want to switch to integrase inhibitors for other reasons.

So researchers looked to the HIV Outpatient Study (HOPS), an ongoing prospective cohort study of people living with HIV who were receiving care at eight sites in the United States. They used medical record data from 2007 through 2018.

To be included in the analysis, participants had to have never used an integrase inhibitor before and had to have had an undetectable viral load for at least a year and switched their antiretrovirals and maintained viral suppression for at least six months after the switch. In addition, they had to have had at least two body mass index (BMI) readings before the switch and at least one after. About a quarter were Black, and 20% were assigned female at birth. People who switched to an integrase inhibitor were more likely to be over age 50.

Of the 736 people included in the analysis, 60% switched to an integrase inhibitor, primarily raltegravir (40%), dolutegravir (32%) or elvitegravir (25%). Raltegravir is sold as Isentress. Dolutegravir is sold alone as Tivicay and is included in the Triumeq, Dovato and Juluca combination pills. Elvitegravir is sold as Vitekta and included in the Genvoya, Stribild, Triumeq, Dovato and Juluca combination pills.

In addition to an integrase inhibitor, the vast majority of participants (95%) included nucleoside reverse transcriptase inhibitors in their new regimen. Further, 11% were taking a protease inhibitor, and 10% were also taking a non-nucleoside reverse transcriptase inhibitor as part of their regimen. About 40% included TAF in their pre-switch regimen. TAF is sold alone as Vemlidy and is a component of Descovy and various single-tablet regimens.

So what happened after the switch? All participants gained weight, whether they took an integrase inhibitor or TAF or not. But the weight gain was particularly pronounced in the first eight weeks among those who switched to an integrase inhibitor and even more so for those who switched to an integrase inhibitor with TAF.

After the first eight months on integrase inhibitor–based treatment, “the trajectory of weight change became similar” to persons not switched to integrase inhibitors, said Frank Palella, MD, of Northwestern University in Chicago. But those on an integrase inhibitor and TAF saw their weight continue to rise.

There was no statistically significant difference in weight gain depending on which integrase inhibitor a participant received, “though the dolutegravir slope was steepest,” Palella said.

In total, Palella and colleagues attributed 87% of weight gain in the first eight months after the switch and 27% of weight gain after those first eight months to the integrase inhibitor in participants’ new drug cocktail. The team attributed the rest to TAF.

For those who took TAF but not an integrase inhibitor, 84% of the more modest weight gain was attributed to TAF during the first eight months.

“During the first eight months post-switch, the rate of weight gain was greatest and was mostly associated with [integrase inhibitor] use,” the researchers concluded. “After that, continued gradual weight gain was primarily associated with TAF use.”

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