A Quad NRTI Regimen Fails to Perform

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A quadruple combination of four drugs from the same class—Truvada (tenofovir plus emtricitabine), Retrovir (zidovudine) and Ziagen (abacavir)—is inferior to standard three-drug regimens containing either a protease inhibitor (PI) or a non-nucleoside reverse-transcriptase inhibitor (NNRTI). These data were presented at the Fifth International AIDS Society (IAS) Conference on HIV Pathogenesis, Treatment and Prevention in Cape Town.

Though standard three-drug regimens—which typically include two nucleoside(tide) reverse transcriptase inhibitors (NRTIs) and either an NNRTI or a PI—can control HIV replication for years, they often come with unpleasant and sometimes serious side effects. Since modern three-drug therapy became the norm in the late 1990s, researchers have sought to minimize these side effects. Several studies have tried to construct all NRTI combinations, but none has proved as effective at controlling virus as standard regimens.

To determine whether a four-drug NRTI regimen may finally prove the trick, David Cooper, MD, from the University of New South Wales in Sydney, and his colleagues from the ALTAIR study group, randomized 322 patients to receive either Truvada plus Sustiva (efavirenz), Truvada plus Norvir (ritonavir)–boosted Reyataz (atazanavir), or Truvada plus Retrovir and Ziagen.

Though the Sustiva and Norvir-boosted Reyataz arms were equivalent in terms of virologic control, the all-NRTI arm performed much more poorly than the Sustiva arm—only 76 percent in the NRTI arm achieved a viral load of less than 50 copies, compared with 89 percent in the Sustiva arm. Also, the primary aim of an all-NRTI arm, to reduce side effects, was not achieved either. People in the quad-NRTI arm had twice the number of side effects as those in the Sustiva arm.

The authors conclude that standard therapy is preferable to a quad-NRTI arm—at least with these four NRTIs—in terms of viral control and side effects.