Just the Facts, Ma’am

At long last, women get some answers on whether HIV affects them differently than men.

November 1, 2009 By Laura Whitehorn

In women, HIV progresses more rapidly

It’s a long-standing mystery: Why do women with untreated HIV progress faster to AIDS than men with similar viral loads? A research team at the Ragon Institute of MGH, MIT and Harvard has uncovered a clue. It seems that a family of white blood cells (dendritic cells) in pre-menopausal women produces more of a protein that causes CD4 cells to go haywire, ultimately speeding up damage to the immune system.

Dendritic cells (DCs) detect germs in the body. They secrete alpha interferon, which stimulates other immune cells. Sometimes, as with HIV and some other chronic infections, the DCs overstimulate the immune cells. Harvard’s Marcus Altfeld, MD, one of the researchers, says that female hormones (in this study, progesterone) may spark DCs to produce more interferon in women compared with men.

It’s unclear whether the results apply to people taking HIV meds. Because people with undetectable viral loads still harbor HIV, Altfeld told *POZ*, treatment might not eradicate the sex-linked difference. “We plan to explore that,” he adds.

How will this help women—and maybe men—resist HIV immune damage? “We [could develop] drugs to disconnect HIV from immune activation,” Altfeld says, “so the virus would replicate without producing pathology.” If that sounds fantastic, Altfeld offers this backup: “Sooty Mangabey monkeys have viral replication [of a simian version of HIV] without immune activation—and they don’t get AIDS.”

Moreover, the same overactive immune response seems to be responsible for women’s higher incidence of autoimmune diseases such as lupus. “Companies are developing drugs for lupus [to disrupt this immune overstimulation process],” Altfeld says. “We’ll know in a year or two whether such drugs work and are safe for lupus; then we might test them to block HIV-induced immune activation.”

Lack of housing undermines care and treatment

“Housing equals health care for people living with HIV/AIDS. Even the threat of homelessness can lead to unnecessary illness and premature death. Permanent housing means access to medication

and the ability to reenter the labor force. [Yet] among HIV-positive women of all races, 48 percent rely on subsidized housing, are living in transitional [housing] or are marginally housed. One percent reported living on the street or [being] homeless."

Source: HIV-Positive Voices in America*, April 2009*

Some HIV meds work as well in women as in men

An HIV combo that included Norvir (ritonavir)–boosted Prezista (darunavir) worked similarly in women as in men in the GRACE study (Gender, Race and Clinical Experience).

From the epidemic's beginnings, most HIV drug studies have been performed in men—predominantly white men. GRACE, which ran from 2006 to 2008, was designed to fill in some of the blanks in HIV treatment information for women, especially black and Latina women. Sixty-seven percent of GRACE participants were women, and only about a quarter of all participants were white.

Some gender and sex differences did emerge. For instance, more women than men dropped out during the year covered by the study report, and women reported more side effects (only some of which resulted from Prezista/Norvir).
