

Rising HIV in Older Adults Likely to Continue

BY DAMIAN McNAMARA

EXPERT ANALYSIS FROM THE ANNUAL MEETING OF THE AMERICAN GERIATRICS SOCIETY

ORLANDO — Physicians will see more elderly people with HIV, because of both more new infections among the population and prolonged survival of people with HIV, according to a physician epidemiologist.

Physicians should be screening their senior patients for HIV risk. Ask about sexual activity and counsel them about prevention of sexually transmitted diseases, Dr. Kelly A. Gebo advised.

Older people, in general, have a lack of awareness about HIV risk factors, said Dr. Gebo, associate professor and director of undergraduate research studies at Johns Hopkins Bloomberg School of Public Health in Baltimore. A lack of HIV prevention targeted at seniors is partly to blame, she said.

As a result, seniors with HIV infection often are diagnosed late in the disease. “The average CD4 count is about 250 in our practice at time of diagnosis. We’d like to diagnose them earlier,” she said.

Many older people are newly single and believe that HIV affects only younger people—two additional challenges to HIV prevention in this population. Erectile dysfunction drugs that increase senior sexual activity may play a role, and some older women stop using condoms once the risk of pregnancy passes with menopause, Dr. Gebo noted.

“I ask everyone from 12 to 112 about alcohol, sexual history, and drug use,” she said, while acknowledging that some physicians aren’t as comfortable as she asking seniors about these delicate issues.

In a subsequent presentation, Dr. Kevin P. High suggested how doctors could phrase a recommendation for HIV testing: “I don’t believe this is likely, but I would not be doing my job in 2010 if I did not test you for HIV. It’s a very treatable illness, and we ought to test.” He added, “I’ve never had anyone say no.”

Almost 18% of HIV diagnoses in 2007 were made in people older than 50 years, according to the Centers for Disease Control and Prevention. This proportion is expected to grow, Dr. Gebo added.

Compared with younger people, elderly people with HIV get less immunologic boost from some treatments and have shorter survivals. In addition, seniors with HIV can experience an acceleration of the effects of normal aging, including greater bone loss, muscle mass decreases, and memory loss, Dr. Gebo said.

Inflammation could be at the root of seniors’ HIV vulnerability. “We all know inflammation is bad in cardiovascular disease,” said Dr. High, professor of infectious diseases at Wake Forest University, Winston-Salem, N.C. Inflammation “is more present in HIV than in age-matched, HIV-negative adults. We think that is the reason for the disease acceleration in older patients with HIV,” he added.

On the plus side, older people are gen-

erally more compliant than younger people with their medication regimens. Adherence to prescriptions is particularly important to combat HIV infection because of an elevated risk for viral resistance, Dr. Gebo said.

Another plus, she added, is that older patients tend to experience better virologic suppression following treatment. In response to an audience question, she said that the improved suppression reported in

this population was independent of their better medication compliance.

“Unfortunately, it is not all good news for these older patients,” Dr. Gebo said. Evidence suggests that the decrease in immune system strength that comes with normal aging can diminish the efficacy of antiretroviral agents.

Frailty is another factor working against older people with HIV, Dr. High pointed out. The risk for frailty is in-

creased ninefold by HIV infection, he said. For example, only 1%-2% of 55-year-old HIV-negative men will meet the definition for frailty (J. Acquir. Immune Defic. Syndr. 2009;50:299-306). In contrast, 14% of men of the same age with an 8-year-old HIV diagnosis will meet the definition. ■

Disclosures: Dr. Gebo and Dr. High reported no financial conflicts of interest.

If you think all basal insulins are the same, think again

The topic of insulin and cancer has garnered increased attention with the publication of 4 retrospective studies in *Diabetologia* that investigate the potential role of a specific basal insulin analog in cancer risk.¹⁻⁴

For decades, researchers have investigated the relationship between insulin and IGF-1 receptor activation and the development of certain cancers.⁵ To date, the clinical significance of the in vitro activity of IGF-1R has not been established.

The Novo Nordisk philosophy of engineering insulin and IGF-1R affinity

Novo Nordisk has been working on refining the attributes of insulin for more than 85 years, redesigning the insulin molecule with a focus on efficacy and safety.

We have developed insulin analogs that work like normal human insulin but which have a more consistent and predictable absorption profile associated with a low risk of hypoglycemia, the most common adverse event with insulin use.⁶⁻⁸

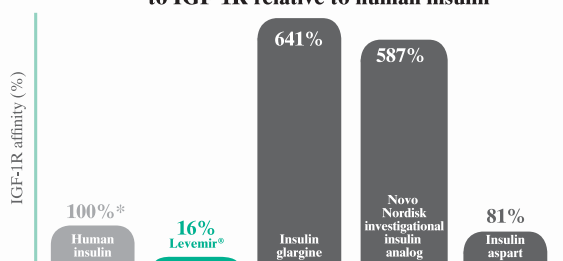
In 1992, Novo Nordisk stopped development of a rapid-acting investigational insulin analog when laboratory testing revealed it had undesirable mitogenic side-effects.⁹ A toxicopharmacological evaluation indicated the compound’s affinity to IGF-1R was high, one possible cause of the tumor growth.⁹

With work on this investigational compound discontinued, Novo Nordisk adopted a philosophy that all future insulins cannot have a greater binding affinity to IGF-1R and the insulin receptor (IR) than human insulin, the relevant comparator against which binding affinity is measured.⁹

Levemir® was designed with a low affinity to IGF-1R

Levemir® was designed with the lessons of the earlier investigational insulin analog in mind, with a specific fatty acid side chain to LysB29 to prolong its absorption and provide steady plasma levels while also having a lower IGF-1R affinity than human insulin.¹⁰

Levemir® was shown to have a low affinity to IGF-1R relative to human insulin¹⁰



*Human insulin is the relevant comparator against which IGF-1R affinity was measured.

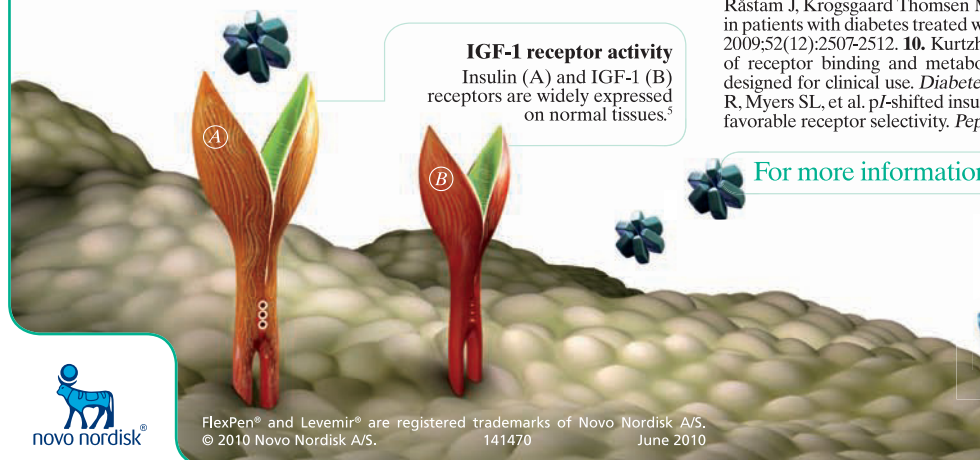
An in vitro study that compared the insulin- and IGF-1R-binding properties and the metabolic and mitogenic potencies of the rapid-acting and long-acting insulin analogs with human insulin. IGF-1R affinity was measured using purified human IGF-1R.¹⁰

In another study, conducted by Lilly Research Laboratories, insulin glargine had an affinity to IGF-1R of 551% compared with 100% for human insulin.¹¹

The clinical significance of the in vitro activity of IGF-1R has not been established.

IGF-1 receptor activity

Insulin (A) and IGF-1 (B) receptors are widely expressed on normal tissues.⁵



Indications and usage

Levemir® is indicated for once- or twice-daily subcutaneous administration for the treatment of adult and pediatric patients with type 1 diabetes mellitus or adult patients with type 2 diabetes mellitus who require basal (long-acting) insulin for the control of hyperglycemia.

Important safety information

Levemir® is contraindicated in patients hypersensitive to insulin detemir or one of its excipients.

Levemir® should not be diluted or mixed with any other insulin preparations.

Hypoglycemia is the most common adverse effect of all insulin therapies, including Levemir®. As with other insulins, the timing of hypoglycemic events may differ among various insulin preparations. Glucose monitoring is recommended for all patients with diabetes. Levemir® is not to be used in insulin infusion pumps. Any change of insulin dose should be made cautiously and only under medical supervision. Concomitant oral antidiabetes treatment may require adjustment.

Needles and Levemir® FlexPen® must not be shared.

Inadequate dosing or discontinuation of treatment may lead to hyperglycemia and, in patients with type 1 diabetes, diabetic ketoacidosis. Insulin may cause sodium retention and edema, particularly if previously poor metabolic control is improved by intensified insulin therapy. Dose and timing of administration may need to be adjusted to reduce the risk of hypoglycemia in patients being switched to Levemir® from other intermediate or long-acting insulin preparations. The dose of Levemir® may need to be adjusted in patients with renal or hepatic impairment.

Other adverse events commonly associated with insulin therapy may include injection site reactions (on average, 3% to 4% of patients in clinical trials) such as lipodystrophy, redness, pain, itching, hives, swelling, and inflammation. Less common but more serious are severe cases of generalized allergy, including anaphylactic reaction, which may be life threatening.

Please see brief summary of Prescribing Information on adjacent page.

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For more information, visit www.IGF1Raffinity.com



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