

### EFFECTS OF ZIDOVUDINE ON UNINFECTED CHILDREN BORN TO HIV-INFECTED MOTHERS

A long-term, prospective cohort study examined the late effects of in utero and neonatal zidovudine exposure for prevention of perinatal HIV transmission. Uninfected children ( $n = 234$ ) who were born to HIV-infected mothers and received either zidovudine or placebo during the prepartum and intrapartum periods and the first 6 weeks of life were observed for onset of adverse events. History, physical examination, growth measurements, and quality-of-life assessments were collected at baseline and then once or twice per year depending on patient age. Average follow-up concluded at age 4.2 years. Overall, zidovudine and placebo groups did not differ significantly in terms of morbidity and mortality, physical growth, cognitive/developmental function, and immunologic function. Cardiac and ophthalmologic observations were also similar for the two treatment groups. The study concluded that there is no evidence of adverse effects caused by zidovudine exposure in uninfected children through the preschool years. Long-term tracking strategies to assess late effects of perinatal antiretroviral exposure in children are still necessary.

*Culnane M, Fowler MG, Lee SS, et al: Lack of long-term effects of in utero exposure to zidovudine among uninfected children born to HIV-infected women. JAMA 1999;281:151-157.*

### CERVICAL CANCER SCREENING IN HIV-INFECTED WOMEN

A meta-analysis estimated the lifetime costs, life expectancy, and quality-adjusted life expectancy associated with cervical cancer screening strategies in HIV-infected women. Values for cervical neoplasia incidence, progression, and regression; HIV disease progression and mortality; screening efficacy; quality of life; and screening, diagnosis, and treatment costs were estimated from the medical literature. Morbidity and mortality consequences were combined into a single measure: quality-adjusted life-years (QALYs). The six strategies were no screening, annual Papanicolaou (Pap) smears, annual Pap smears after two initial smears obtained 6 months apart (recommended by the United States Centers for Disease Control and Prevention), semiannual Pap smears, annual colposcopy, and semiannual colposcopy. In patients with CD4 cell counts of 200 to 500 cells/mm<sup>3</sup> who were not screened, lifetime costs were \$71,060 and the quality-adjusted life expectancy was 62.4 months. Annual Pap smear screening increased total costs by \$2680 and increased quality-adjusted life expectancy by 2.51 months, resulting in an incremental cost-effectiveness ratio of \$12,800 per QALY saved. Annual Pap smear screening after two smears obtained 6 months apart increased total costs by \$2730 and increased quality-adjusted life expectancy by 2.55 months when compared

with no screening method, an incremental cost-effectiveness ratio of \$14,800 per QALY saved. Semiannual colposcopy increased total costs by \$5290 and increased quality-adjusted life expectancy by 2.79 months, \$375,200 per QALY saved, when compared with no screening method. The analysis concluded that cervical cancer screening in HIV-infected women was associated with projected life expectancy benefits equal to or greater than benefits provided by other preventative measures in general medicine or in HIV disease.

*Goldie SJ, Weinstein MC, Kuntz KM, Freedberg KA: The costs, clinical benefits, and cost-effectiveness of screening for cervical cancer in HIV-infected women. Ann Intern Med 1999;130:97-107.*

### DISCONTINUATION OF PNEUMOCYSTIS CARINII PNEUMONIA PROPHYLAXIS

A prospective observational study measured the incidence of *Pneumocystis carinii* pneumonia (PCP) after discontinuation of PCP prophylaxis in HIV-1-infected patients whose CD4 cell counts had risen above 200 cells/ $\mu$ L as a result of highly active antiretroviral therapy (HAART). HIV-1-infected patients ( $n = 78$ ) with CD4 cell counts higher than 200 cells/ $\mu$ L (measured twice, at least 1 month apart) after treatment with HAART who discontinued their primary or secondary PCP prophylaxis were included in the study. Study observation started at the time of prophylaxis discontinuation. CD4 cell counts and HIV-1 RNA levels were assessed at least every 3 months. Occurrence or recurrence of PCP was the study's primary endpoint; the mean follow-up period was 12.7 months. Of the 78 participants, 62 patients had been receiving primary prevention prophylaxis and 16 patients had been receiving secondary prevention. At the time of prophylaxis discontinuation, the mean CD4 cell count was 347 cells/ $\mu$ L and HIV-1 RNA was not detectable in 61 patients. During follow-up, CD4 cell count remained higher than 200 cells/ $\mu$ L in 76 patients. At the study's completion, no cases of PCP occurred; all patients were still alive. The study concluded that PCP prophylaxis can be stopped in HIV-1-infected patients whose CD4 cell counts have risen above 200 cells/ $\mu$ L as a result of HAART. More research is necessary to determine the optimum time to discontinue prophylaxis; criteria for restarting prophylaxis must also be defined.

*Schneider MME, Borleffs JCC, Stolk RP, et al: Discontinuation of prophylaxis for *Pneumocystis carinii* pneumonia in HIV-1-infected patients treated with highly active antiretroviral therapy. Lancet 1999;353:201-203.*

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