New Exercises Chapter 7 (Cohort Studies)

7.6 HIV infection and cervical dysplasia. Eight-hundred (800) HIV-infected women and 1200 HIV-uninfected women were enrolled in a study examining whether HIV infection increases a woman's risk of cervical dysplasia. All the women had intact uteri and were free of cervical dysplasia at the onset of the study.

(a) Is this a retrospective or prospective cohort study?

(b) After two years of follow-up during which subjects were tested for cervical dysplasia every six months, the investigators found 11 incident cases of cervical dysplasia in the HIV-positive women. Calculate the incidence rate (density) of cervical dysplasia per 1,000 woman-years in the HIV-positive group.

(c) After the two years of follow-up, 5 incident cases of cervical dysplasia were observed in the HIV-negative group. Calculate the incidence rate (density) per 1,000 woman-years in the HIV-negative group.

(d) Calculate the incidence rate difference.

(e) Interpret the incidence rate difference in terms of the exposure and outcome being studied.

(f) Use OpenEpi.com or WinPEPI to calculate a 95% confidence interval for the incidence rate difference.