Overview of Paper
- Retrospective cohort study
- Major findings: This "study of HIV-infected childbearing women shows HCV seroprevalence of 3.8%. Maternal age of >35 years and IDU are the strongest predictors of HCV seropositivity"

Introduction
- Issues:
  - Elaborate on the difference between testing positive for the anti-HCV test and testing positive for the HCV RNA test. Since these tests were used in the study, something should be said about what would indicate an active infection, etc.
  - Why was the prevalence of HCV in women of childbearing age stated for the US, but the prevalence of HCV in pregnant women stated for both the US AND Europe? It's hard to tell if most of the infections in pregnant women are in one region vs. the other or if they are evenly distributed. If the rate is known for both regions, I would think the rate would be known for each one individually.
- The introduction does a satisfactory job at giving background information about HCV in general and among pregnant women. The significance of the study is supported based on the information given.
- The fact that most Americans infected with HCV are unaware of their infection status raises an important point that screening needs to be done for pregnant women especially.
- The objective is clearly stated:
  - To "identify factors associated with maternal hepatitis C virus seroprevalence and transmission" to infants during childbirth from HIV+ mothers.

Methods
- Issues:
  - Is this method the best option to test for HCV antibodies in the samples?
  - Why were positive results from the first test (ELISA) not tested with the second test (Chiron RIBA) as well if the second test is meant to distinguish between true seropositive and false positive results?
    - It is stated by the FDA that the Chiron RIBA test is meant to be used on samples that have been determined to be repeatedly reactive by a prior test, like an ELISA. In this study, after the ELISA, the repeatedly reactive samples were deemed confirmed and the samples below the cut off ratio were tested with the Chiron RIBA.
  - Is there concern about potential degradation of the samples or improper freezing methods that could damage the samples?
- While there is always room for human error and missing data, I don't see any indications that significant problems would exist that would impact the data.
- It is an efficient study design to use previously collected samples from infants of HIV infected mothers to test for HCV.
- The statistical analysis methods for the study seem sound.
  - Bivariate analysis- Chi square and Fisher's Exact Test
  - Multivariate analysis- Firth's bias

Results
- Issues:
  - In Table 1, why were the characteristics for mode of delivery divided into "C-section" and "Vaginal/unknown"? I think it would be more effective to divide this into 3 sections to better ascertain the difference between C-section and vaginal birth methods.
What is the significance of including data on mothers diagnosed with hepatitis B during pregnancy in Table 1?

Table 2 shows infant characteristics, however the data is not analyzed anywhere in the results or discussion sections.

The alignment of the 95% CI’s in Table 3 is somewhat confusing. The RRs don’t align properly with the corresponding CIs.

Why were only 20 (95.2%) of the samples that tested positive for antibodies tested for HCV RNA?

How many of the infant samples were confirmed positive for HCV antibodies using the ELISA compared to the Chiron RIBA?

It would be useful to include the total number of births in New York state during 2006 to give the reader a better idea of the proportion of pregnant women that are HIV infected and then how many infants become HCV seropositive. This would better indicate the prevalence of the issue in the state.

- Findings: 3.8% of the infants had antibodies against HCV. No cases of vertical transmission were identified among the infants exposed to HCV.
- The results correspond with the stated research questions and objective.

- Discussion
  - Issues:
    - Is the study accurately assessing maternal HCV seroprevalence and rate of transmission if they mothers were not tested for HCV? Is it possible that mothers could have been seropositive but the children did not develop antibodies? Its reported that the prevalence of HCV among HIV+ pregnant women is between 17 and 54%, but this study is reporting a seroprevalence of 3.8% based on infant antibodies.
    - Its probable that women that had not been formally diagnosed as HIV+ had children during this year and not been included in the study. This could have an effect on the rate of transmission to the child and estimated seroprevalence of HCV among HIV+ women. This is something that should probably be mentioned.
    - It isn’t mentioned anywhere in the paper if the mothers were tested for HCV or not. If they were tested, this information should be included. If they were not tested, it should be stated.
    - Future directions about further testing, etc. should be mentioned. Is more data not needed to evaluate those at greatest risk and better advocate for increased screening?
      - Because treatment is not recommended for pregnant women, I agree that that women of childbearing age with risk factors (IDU, HIV+) should be tested before they become pregnant so they can be treated. Also, pregnant women with the risk factors should be tested to ensure needed testing and monitoring of the child for infection after birth.
      - It was also good to include a list of limitations for the study in the discussion and address them; I agree with all of them.

- Conclusion
  - The conclusion did an adequate job describing the significance of the study and its implications for improving screening practices and overall health of pregnant women in particular.
  - Overall Impression- Provisional acceptance