Patterns Of Antiretroviral Therapy Use Among US Liver Transplant Candidates With HIV

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BACKGROUND

- People living with HIV have an increased risk of end-stage liver disease and liver-related death.
- Some antiretroviral therapy (ART) classes, like pharmacoenhancers (PEs) which inhibit cytochrome P450/CYP3A, can interact with post-liver transplant (LT) immunosuppression.

OBJECTIVE

- Describe trends in ART use among LT candidates with HIV over time.

METHODS

Study Population

- 126,531 adult LT candidates pharmacy claims data linked to SRTR (2001-2016).
- 85% of US LT waitlist in the study period was captured in the linkage.
- PLWH identified by ≥1 ART fill (HBV-related monotherapies excluded).

Analyses

- We summarized the proportion of LT candidates prescribed each medication class (non-nucleoside reverse-transcriptase inhibitors [NNRTIs], PEs, integrase strand transferase inhibitors [INSTIs]; fusion inhibitors; and entry inhibitors/CCR5 co-receptor antagonists with nucleoside reverse-transcriptase inhibitor backbone) by year using the prescription nearest to each candidate's listing date.
- We used multivariable logistic regression to explore factors associated with ART class.

KEY RESULTS

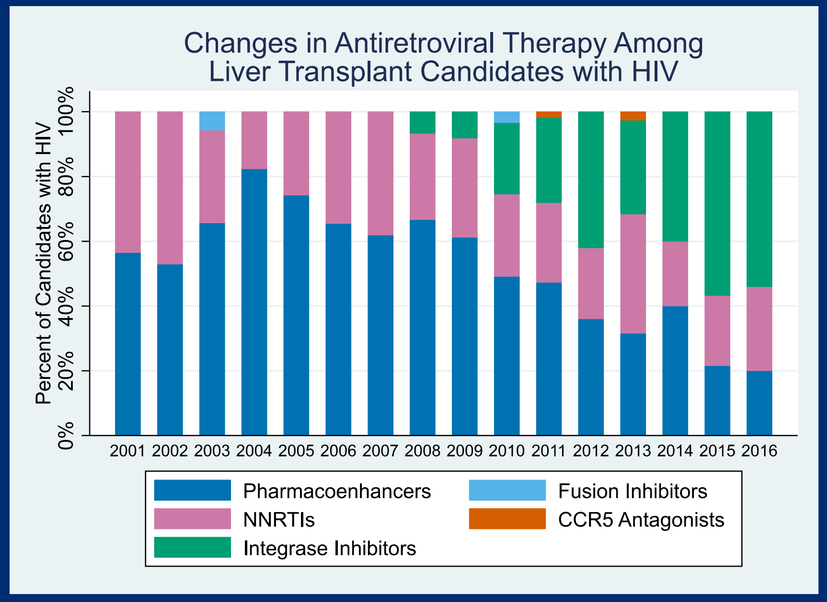
- PE use peaked in 2004 at 82.4%, decreasing to 20.0% in 2016.
- After FDA approval in 2007, INSTIs became the most commonly used ART: from 6.7% in 2008 to 54.0% in 2016.
- PEs were more likely to be used by African American candidates:
  - OR: 1.58 (95%CI: 1.07-2.34; p=0.02).
  - aOR*: 1.68 (95%CI: 1.10-2.56; p=0.02).
- INSTI use was not associated with race:
  - OR: 0.94 (95%CI: 0.61-1.46; p=0.8).
  - aOR*: 0.88 (95%CI: 0.54-1.42; p=0.6).

*adjusted for age, sex, year, education, insurance

CONCLUSIONS

- Over time, ART use among LT candidates with HIV became more compatible with post-LT immunosuppression.
- However, African Americans were more likely to be prescribed ART regimens that interact with post-LT immunosuppression.

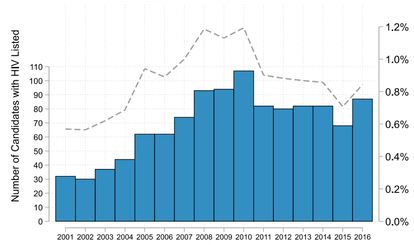
More liver transplant **candidates** with **HIV** are using **medications** that are **compatible** with post-transplant **immunosuppression**.



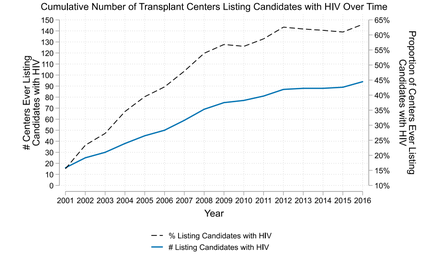
MORE RESULTS

Candidate Characteristics	HIV+ 1,116 (0.9%)	HIV- 125,415 (99.1%)
Age at listing, Median (IQR)	52 (46-57)	55 (49-61)
Male, %	81.6	64.2
Race, %		
Non-Hispanic Caucasian	54.8	72.1
African American	19.5	8.7
Cause of liver disease, %		
Hepatitis C Virus (HCV)	39.5	28.9
Hepatitis B Virus (HBV)	22.8	3.0
Alcoholic Liver Disease	6.9	23.2
Malignancy	13.4	9.2
Willing to accept HCV+ donor, %	48.4	38.8
Obese, %	18.6	36.9
Insurance Type, %		
Public	44.3	37.5
Private	53.2	58.4
History of Diabetes, %	16.4	23.9

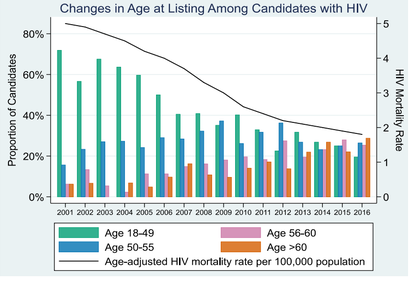
Candidates with HIV Listed Over Time



Cumulative Number of Transplant Centers Listing Candidates with HIV Over Time



Changes in Age at Listing Among Candidates with HIV



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