

# Racial Diversity in Hepatitis C Infection and Demographics of Hepatocellular Carcinoma in an Urban Medical Center Population

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## INTRODUCTION

- Chronic Hepatitis C Virus (HCV) infection can lead to liver cirrhosis and is a major cause of Hepatocellular Carcinoma (HCC) in the United States.
- Direct acting antiviral (DAA) therapies revolutionized HCV treatment by increasing the SVR of African Americans (AA) with HCV from 25% with interferon to greater than 95%.
- We hypothesized that our predominately AA medical center population would demonstrate a reduction in HCV-driven HCC diagnosis secondary to the initiation of DAA-mediated treatment beginning in 2014.

## METHODS

- The patient dataset used ICD-9/10 codes for HCC as the primary diagnosis from 2010 to 2021.
- We excluded patients with a diagnosis prior to 2009, those seeking a second opinion, patients without accurate tumor measurement and confirmation of HCC, patients with only tumor measurement but no follow-up and patients with rare risk factors.
- SAS/JMP was used for statistical analysis with ANOVA for numeric variables and Pearson chi-square for character variables.

## RESULTS

	AA (n=353)	Non-AA (n=84)	
Gender (% Male)	72%	67%	p>0.1
Age (years)	65	65	p>0.1
Risk Factors (All)			
HCV	85%	52%	p=0.0001
Alcohol	5%	8%	
HBV	4%	4%	
Cryptogenic	5%	24%	
NAFLD/NASH	1%	12%	
Risk Factors (HCV vs Other)			
HCV	85%	52%	p=0.0001
Other	15%	48%	

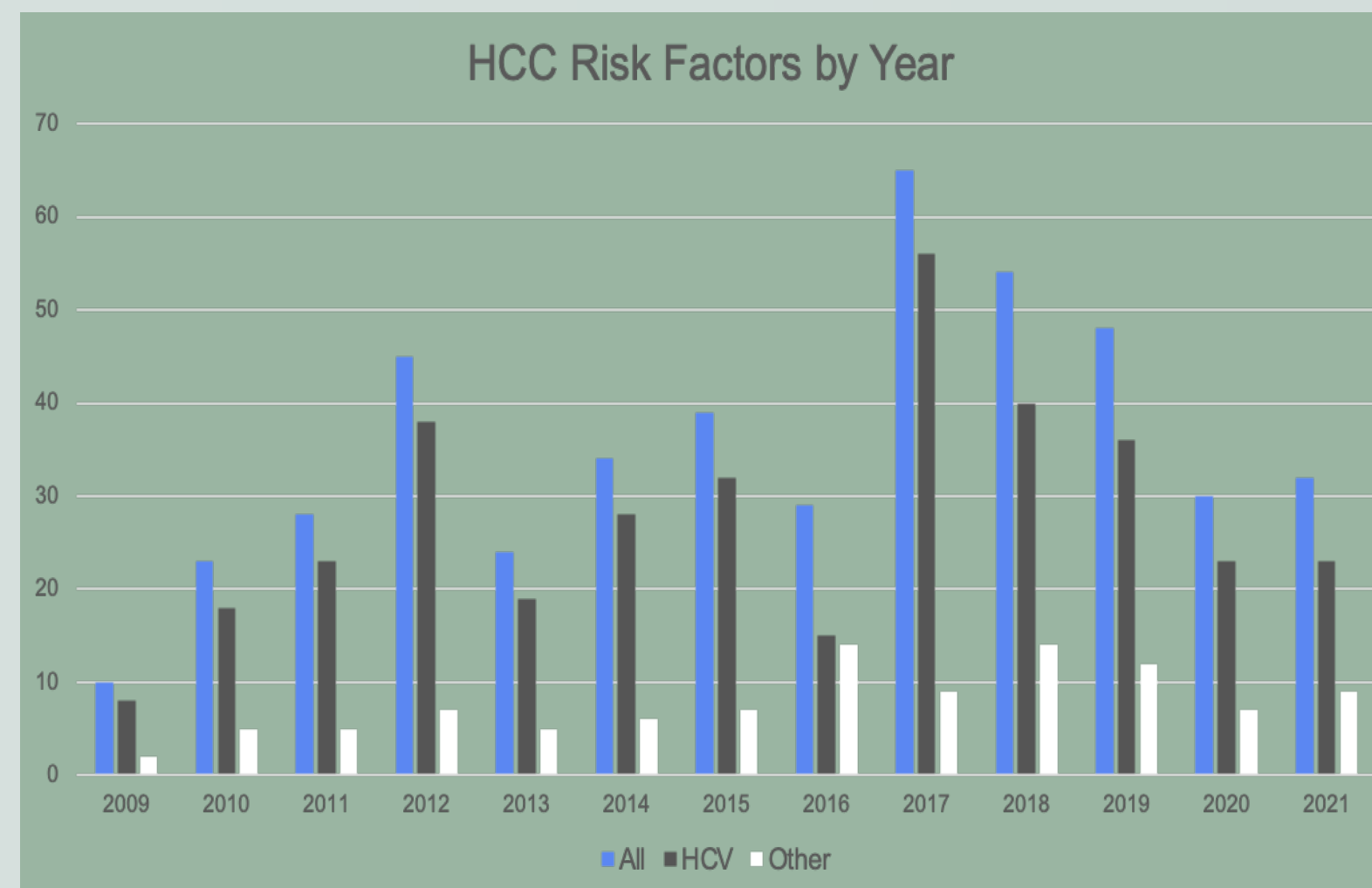


Figure 1: HCC risk factors by year. The graph presents the number of patients with hepatocellular carcinoma (AA and Non-AA combined) diagnosed by year, along with risk factors sorted by HCV vs others. The primary risk factor for HCC in this patient population is infection with HCV.

## RESULTS

- 465 patients with HCC of whom 437 had self-identified race in the database (AA=353; Non-AA= 84).
- There was no difference in gender or age between both race groups with HCV being the dominant risk factor (Table 1).
- Non-AA patients were less likely to have an identified risk factor (cryptogenic) as compared to AA patients.
- There was a statistically significant difference between the prevalence of HCV in AA (85%) compared to Non-AA (53%) patients.
- The increase in HCC to a peak in 2017 reflects an increase in the number of HCC patients with HCV.
- Subsequent decline through 2021 corresponded to a decrease in patients with HCV as the primary risk factor for HCC.
- The number of patients without HCV as risk factor was similar throughout the period between 2009 and 2021.

## CONCLUSIONS

- There was a significant increase in the number of patients with HCC diagnosed in our medical center prior to 2018 which correlated with an increase in HCV as the risk factor.
- The significant decrease between 2018 and 2021 was a result of fewer HCC patients with HCV.
- Although observational data cannot prove causation, the introduction of DAA therapies to treat HCV in 2014 is indirect evidence that such therapy is responsible for the reduction in HCC cases.