



Toby Bradford, MD¹, Christina Chou, MD², Ayesha Zahiruddin, MD³
¹Department of Medicine, Alameda Health System, ^{2,3}Division of Gastroenterology and Hepatology, Highland Hospital, Oakland, California

BACKGROUND

- Nonalcoholic fatty liver disease (NAFLD) is one of the most common etiologies of cirrhosis and leading indications for liver transplantation (LT) [1,2].
- There is no universal screening recommendation for NAFLD.
- Clinical data analysis can be used to identify patients at risk for developing NAFLD for screening purposes.

OBJECTIVES

- Identify patients with clinically significant fibrosis
- Develop screening and risk stratification protocol

METHODS

- Clinical data from Epic Software electronic medical record system from 2020-2022 was evaluated.
- A cross-sectional analysis was performed for patients who met inclusion criteria (presence of metabolic risk factors for NAFLD).
- Statistical analysis was performed using Excel with the Data Analysis Toolpak.
- The inclusion criteria consisted of hemoglobin A1c \geq 6.5, BMI \geq 30, age \geq 50, with normal liver function test and normal estimated platelet counts.
- The inclusion criteria was found to correspond to a NFS \geq 0.7 (Fibrosis stage 3 to 4).
- The exclusion criteria included a history of viral or autoimmune hepatitis or clinically significant alcohol use.

KEY: BMI = body mass index, NFS = NAFLD fibrosis score, AST = alanine aminotransferase
 ALT = alanine aminotransferase, Plt = platelets, CV = cardiovascular. ST elevation myocardial infarction
 NSTEMI – non-ST elevation myocardial infarction, HGH = Highland General Hospital

FIGURE 1: IDENTIFY AND RISK STRATIFY

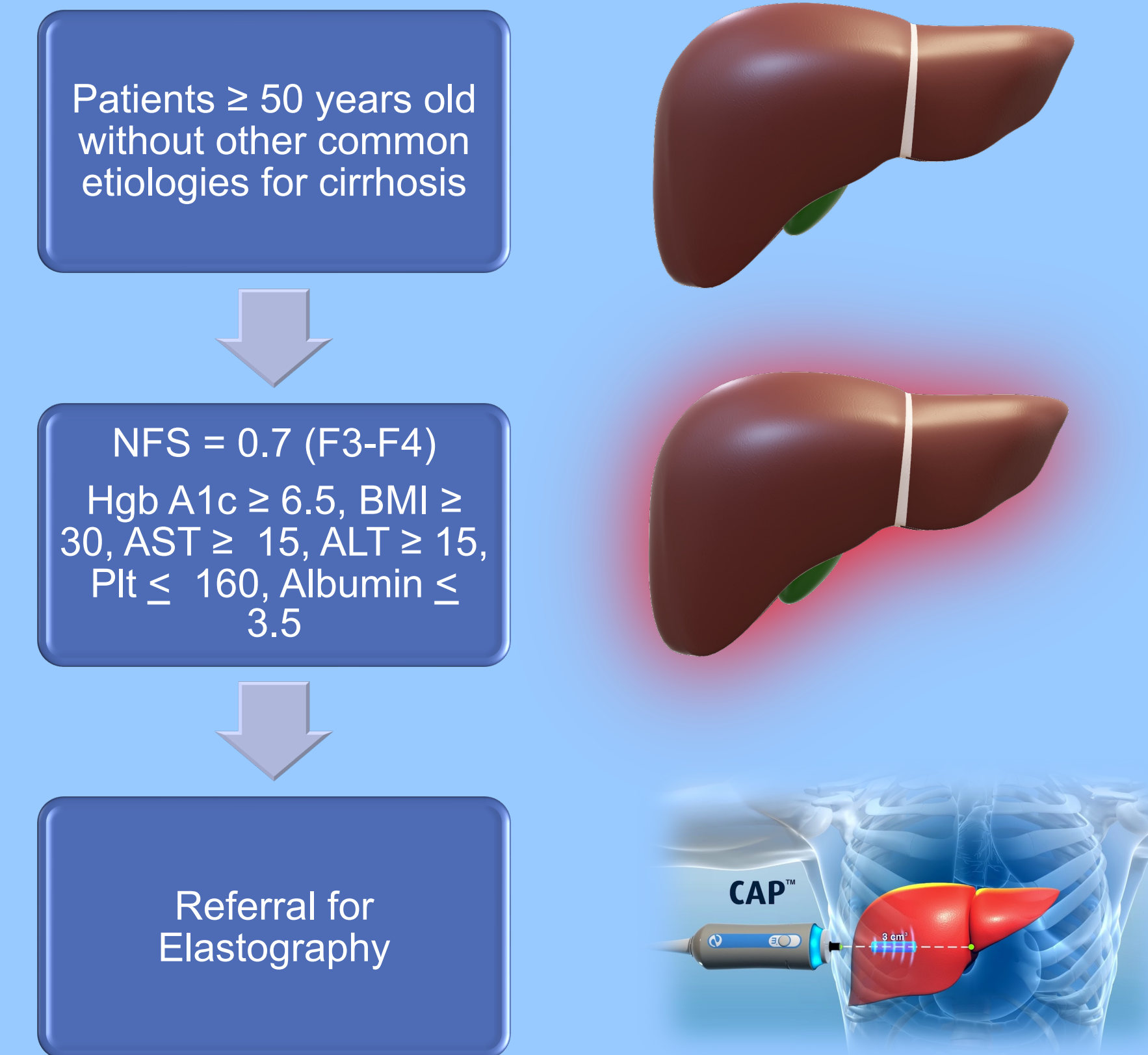


FIGURE 1. Proposed non-invasive NAFLD screen and risk stratification protocol.

FIGURE 2: NAFLD DEMOGRAPHIC TRENDS

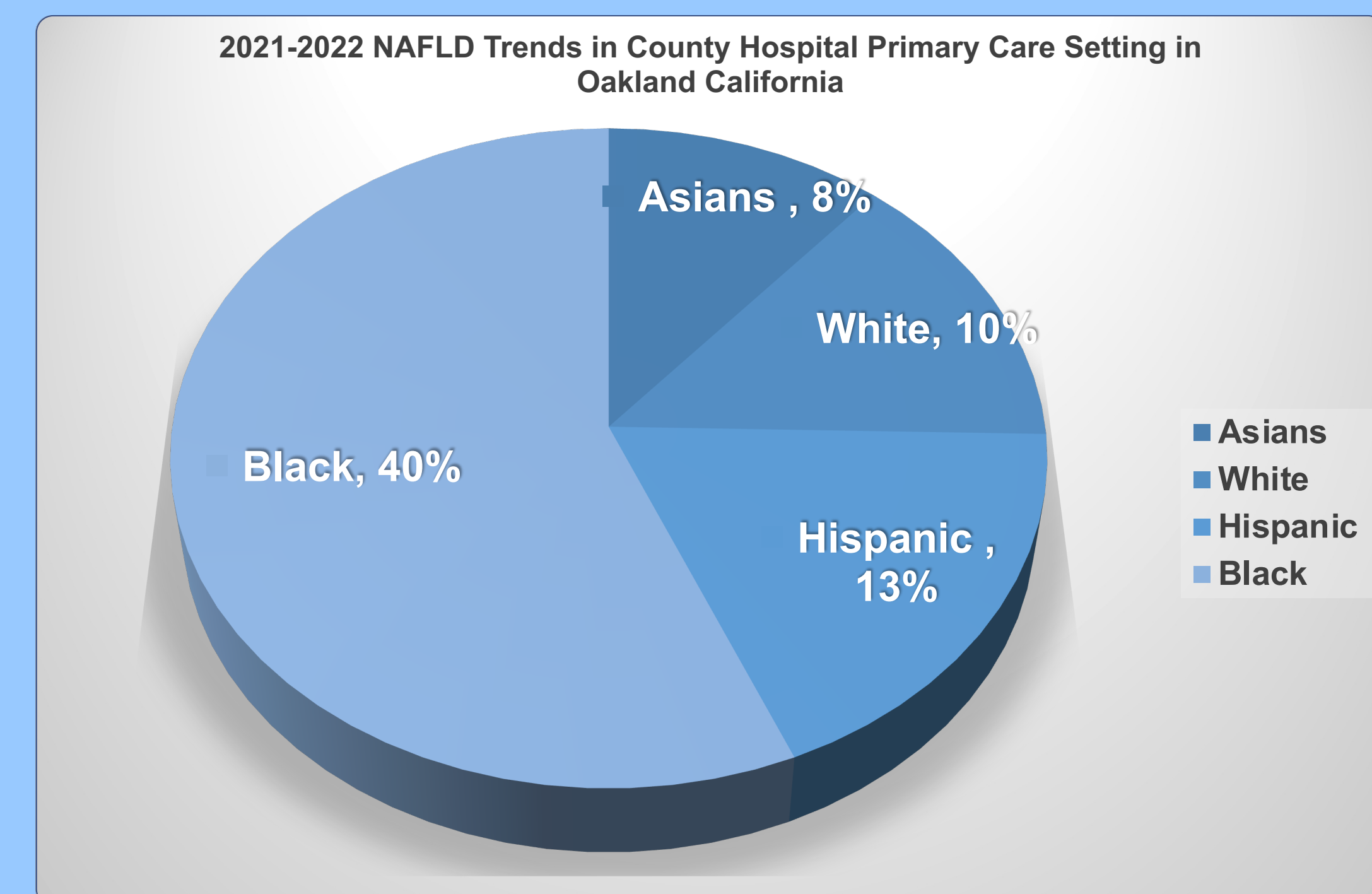


FIGURE 2. Demographic breakdown of NAFLD at HGH primary care clinic.

FIGURE 3A: NAFLD CV EVENTS

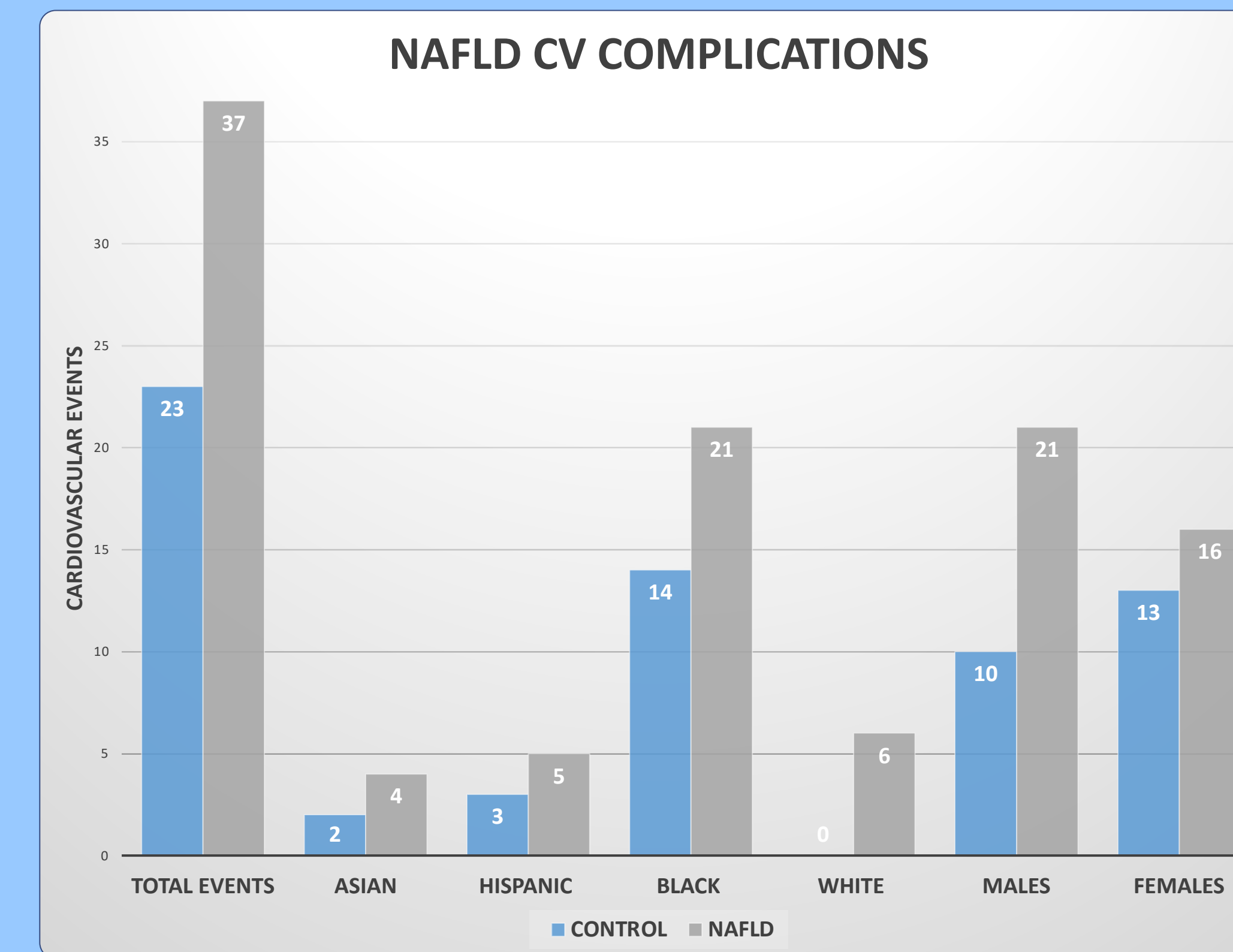


FIGURE 3B. Cardiovascular events associated with NAFLD were highest in Blacks and males.

FIGURE 3B: CV EVENT RISK

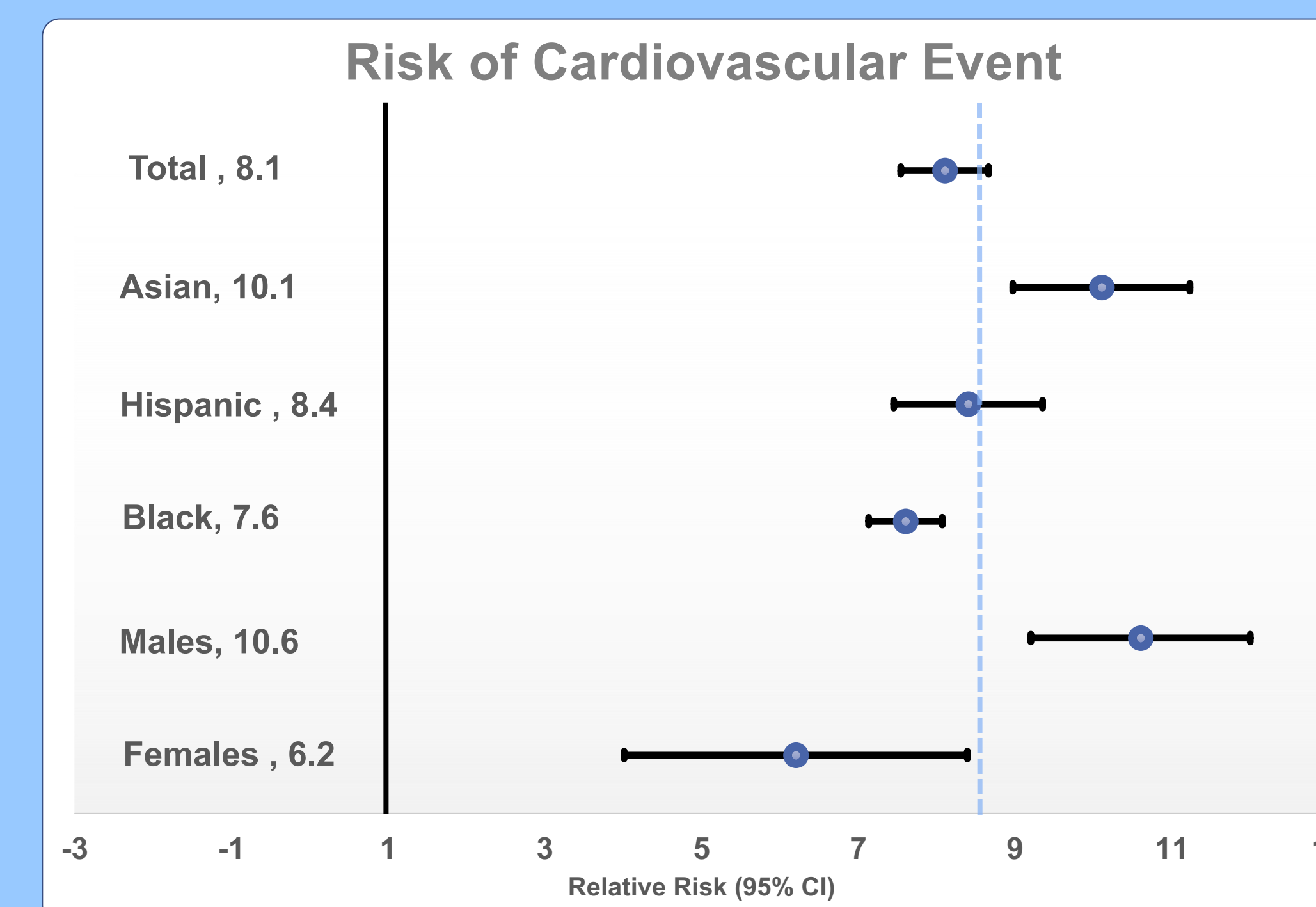


FIGURE 3A. The relative risk of a cardiovascular event was highest in Asians and males. CV event was defined as acute myocardial infarction (STEMI and NSTEMI).

RESULTS

Demographic	Percent (%)	Significance
HGH NAFLD 2020	16.8	95% [16.2-17.4]
HGH NAFLD 2021	18.5	95% [17.9-19.2]
Females	57	p < 0.01
Males	43.3	p < 0.01
Blacks	42.3	p < 0.01
Hispanics	11.9	p < 0.01
White	10.3	p < 0.01
Asians	8.2	p < 0.01

DISCUSSION

- The proportion of patients with NAFLD in the outpatient county hospital ambulatory setting is rising.
- Non-invasive NAFLD screening in the primary care setting can identify patients at risk for CV events.
- Patients of color may have a higher risk of NAFLD associated CV events.

CONCLUSION

- Non-invasive criterion-based screenings in the primary care setting are feasible and effective at identifying high risk patients.
- Risk stratification following NAFLD screening may significantly reduce mortality and morbidity from CV events by managing the underlying metabolic syndrome

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