Recruitment and Eligibility of a Diverse Study Population in INTERCEPT-AD: A phase I trial of Aβ oligomer-targeting ACU193 in early Alzheimer's disease

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Background

Enrolling participants from a diverse range of racial and ethnic backgrounds in Alzheimer's disease (AD) clinical trials can pose numerous challenges. Despite efforts to improve diversity, racial and ethnic minorities are still underrepresented in AD research.
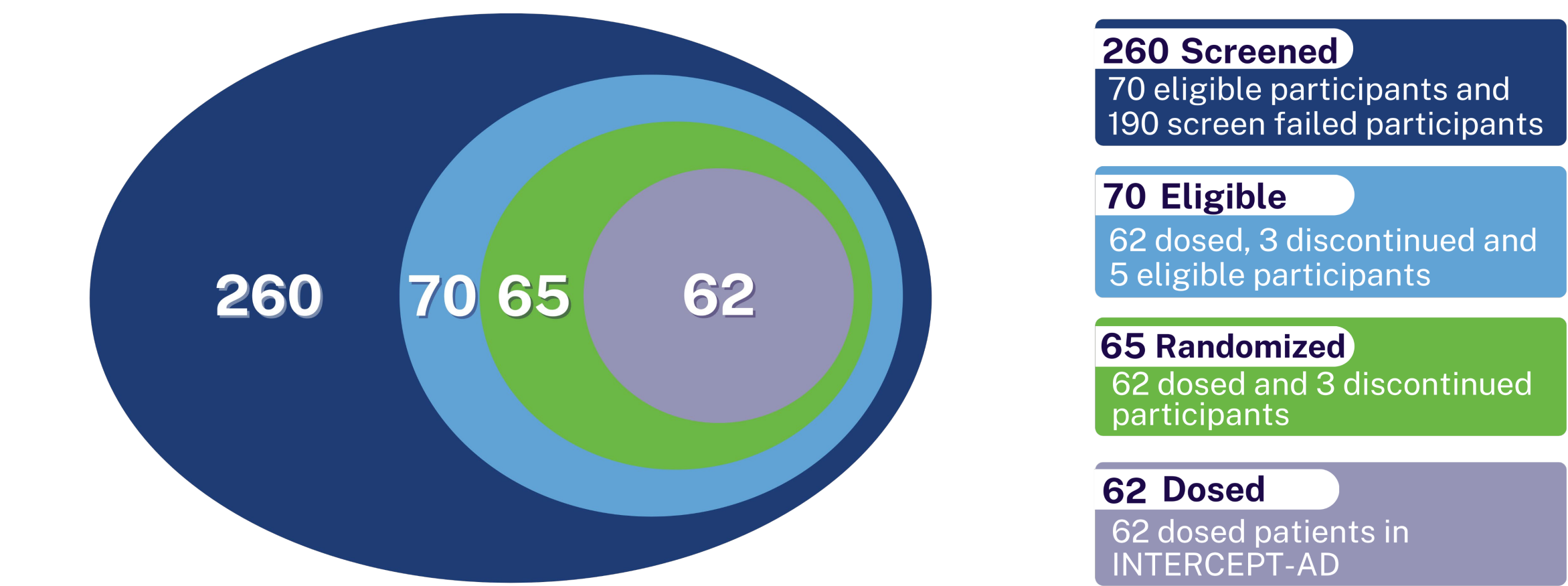

260 Screened — 70 eligible participants and 190 screen failed participants

70 Eligible — 62 dosed, 3 discontinued and 5 eligible participants

65 Randomized — 62 dosed and 3 discontinued participants

62 Dosed — 62 dosed patients in INTERCEPT-AD

Figure 1. INTERCEPT-AD Participants
Breakdown of number of participants screened, found eligible, randomized, and dosed. Color coding is consistent between left and right graphics.

INTERCEPT-AD was a phase 1 randomized, placebo-controlled, double-blind study of ACU193 in mild cognitive impairment or mild dementia due to AD. Seventeen study sites in the U.S. screened 260 potential participants identified through multiple recruitment tactics and 70 were eligible for participation.

Methods

Of 260 potential participants screened, 52.7% identified as White/non-Hispanic, 31.5% Hispanic/Latino, 14.2% Black/African American, 1.2% American Indian/Alaska Native, 0.4% Asian. For the 70 eligible participants, 78.6% were White/Non-Hispanic, 15.7% Hispanic/Latino, 4.3% Black/African American, 1.4% American Indian/Alaska Native, and 0% Asian.
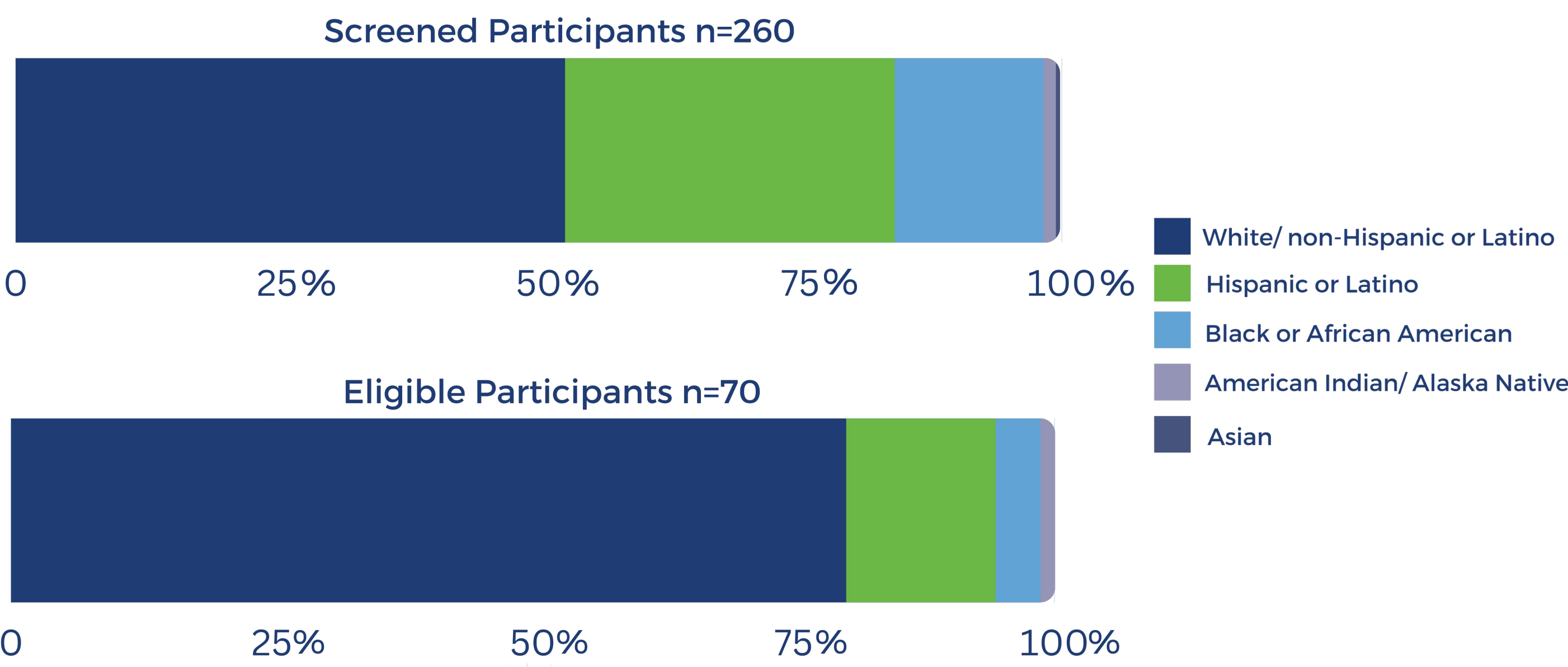

Figure 2. Race and Ethnicity of INTERCEPT-AD Participants.
Stratification of screened (top) and eligible (bottom) participants by race and ethnicity.

Patient recruitment tactics were grouped post hoc into seven categories: site database, external referral, physician referral, site campaign, and three sponsor-initiated campaigns (A, B, and C). To determine whether there were differences in recruitment source connected to race and/or ethnicity, participants were split into two groups. The groups were: white [White/Non-Hispanic] and ethnically diverse (Hispanic/Latino, Black/African American, American Indian/Alaska Native and Asian). Screen failure rates and reasons were analyzed with Fisher's exact test between the two groups.
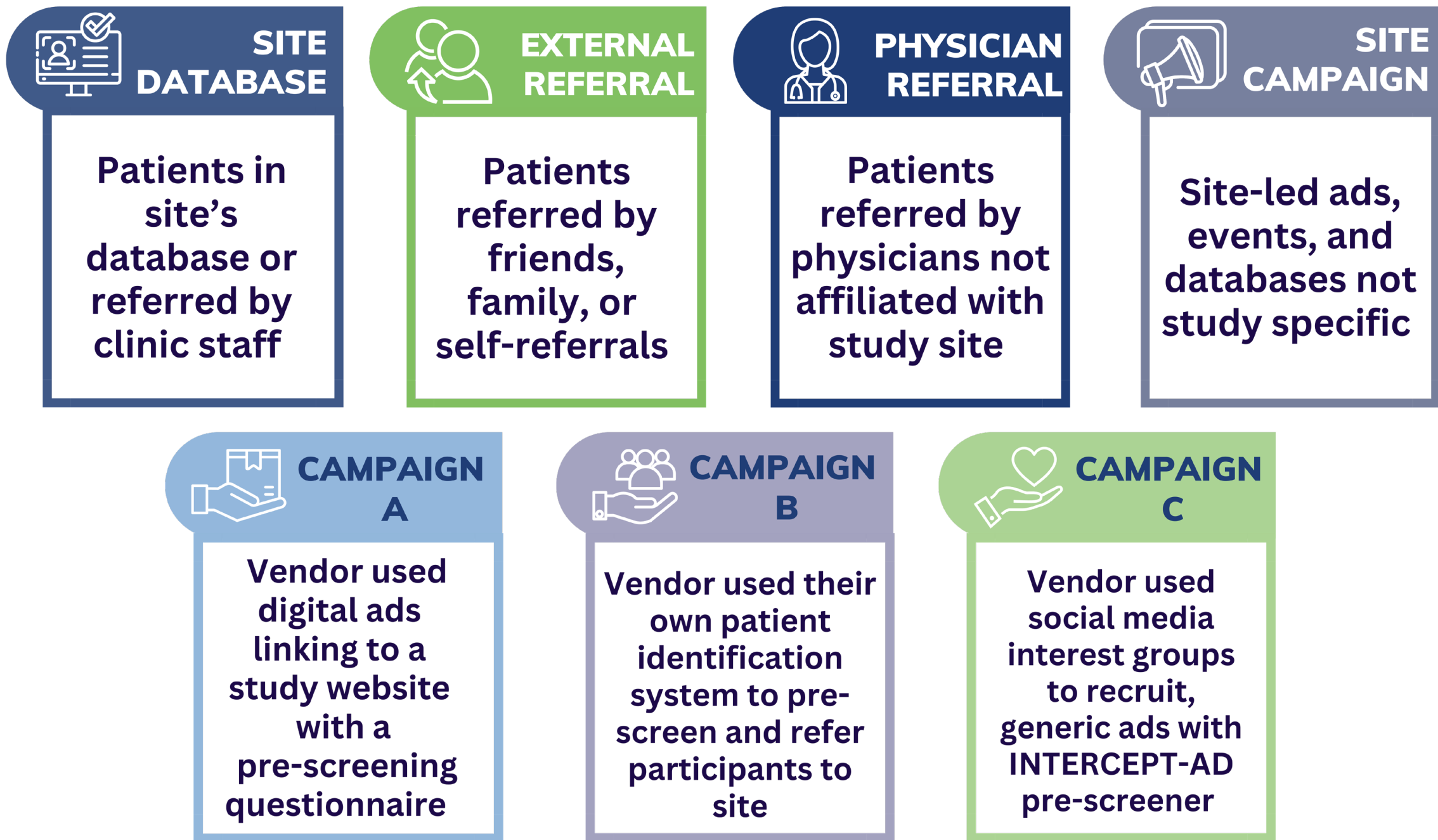

Figure 3. Recruitment Source Categories
Description of recruitment sources used for INTERCEPT-AD.
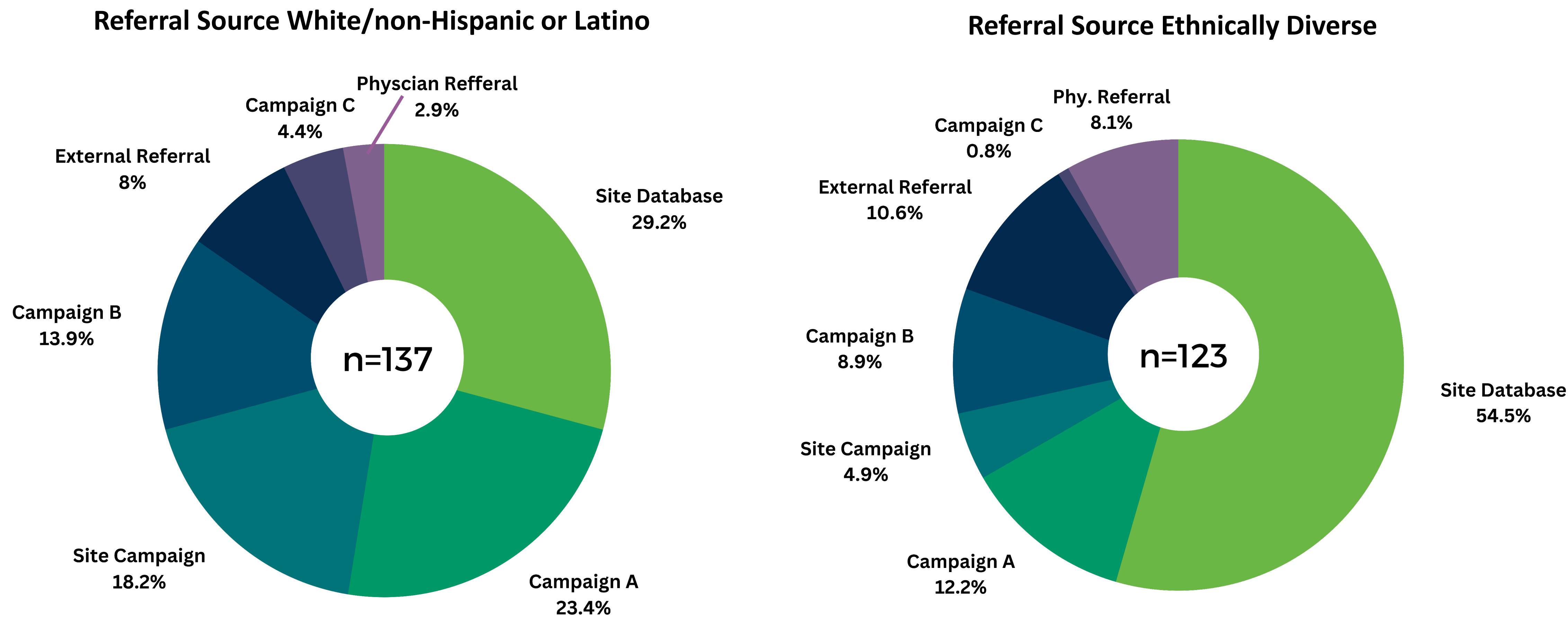
Results

Figure 4. Screening Referral Source by Race/Ethnicity
Pie charts depicting proportions of white/non-Hispanic or Latino (left) or ethnically diverse (right) participants referred by each recruitment source. Total sample size screened for each racial/ethnic group shown in the center of the pie chart.

Potential participants for the INTERCEPT-AD study were recruited from a variety of campaigns. Between white and ethnically diverse participants, the main sources of recruitment varied. White participants were recruited through a relatively balanced combination of sources: site database (29%), campaign A (23%), site campaigns (18%), campaign B (14%), external referrals (8%), campaign C (4%), and physician referrals (3%). In the group of ethnically diverse participants, the majority (54%) were referred from the site's database, followed by campaign A (12%), external referrals (11%), campaign B (9%), physician referrals (8%), site campaign (5%) and campaign C (1%).

Screen Fail Reason	PET Negative	Withdrew Consent	CDR	MRI Abnormal	MRI Contrai-ndication	MMSE	Unstable Illness	ECG	History of Cardiac Disease	Other Neurol-ogical Diseases	No Caregiver	Neurol-ogical Illness	Lab Abnor-mality	Use of Antico-agulants
White / non-Hispanic n=82	43 (52.4%)	9 (11%)	8 (9.8%)	5 (6.1%)	3 (3.7%)	3 (3.7%)	3 (3.7%)	2 (2.4%)	1 (1.2%)	1 (1.2%)	1 (1.2%)	1 (1.2%)	1 (1.2%)	0
Ethnically Diverse n= 108	73 (67.6%)	14 (13%)	1 (0.9%)	3 (2.8%)	5 (4.6%)	3 (2.8%)	1 (0.9%)	4 (3.7%)	2 (1.9%)	0	0	0	0	2 (1.9%)
% difference	+15.2%	+2%	-8.9%	-3.3%	+0.9%	-0.9%	-2.8%	+1.3%	+0.7%	-1.2%	-1.2%	-1.2%	-1.2%	+1.9%

Figure 5. Screen Fail Reasons by Race/Ethnicity
Shown for white/non-Hispanic or ethnically diverse participants. Sample size of total patients that screen failed during the screening process. Top two rows show sample size (% proportion); bottom row shows % difference.

Screen failure rates were significantly different between white potential participants (60%) and ethnically diverse potential participants (88%) (p < 0.001). The most frequent reason for screen failure in both groups was amyloid-negative PET scan results, which was also significantly different between the two groups (p < 0.02), accounting for 52% of screen failures in white potential participants and 68% in ethnically diverse potential participants.

RESEARCH HIGHLIGHTS

➢ INTERCEPT-AD screened a diverse patient population, but the randomized population was much less diverse.

➢ Recruitment was relatively balanced across sources for white/non-Hispanic participants, whereas the majority of ethnically diverse participants were recruited from the clinical site databases.

➢ The ethnically diverse group of participants had a higher screen fail rate (88%) than white/non-Hispanic participants (60%) and had a higher rate of PET Negative results (68% vs 52%).