Introduction:
The lack of diversity in cancer clinical trials has been described as a major challenge to the equitable advancement of cancer treatments. Most studies have focused on race/ethnicity or gender disparities, but socioeconomic status has also been described as a barrier to cancer clinical trial participation. We utilized the Area Deprivation Index (ADI), a granular, comprehensive measure, to assess cancer clinical trial eligibility and enrollment at an NCI-designated Comprehensive Cancer Center.

Methods:
The University of Maryland Greenebaum Cancer Center (UMGCCC) OnCore database was used to identify patients approached for cancer clinical trial enrollment from 2010 to 2024. Inclusion criteria were age 18 or older, an available ADI, and a cancer diagnosis. The predictor variable was the ADI, a publicly available, validated dataset that ranks census block groups using variables such as income, education, employment, and housing, with higher scores representing increasing socioeconomic disadvantage. Covariates included age, race, ethnicity, gender, and distance travelled to UMGCCC. Descriptive statistical analyses by ADI quintiles and linear regression were performed in R (R Version 4.4.2).

Results:
The cohort included 7,132 patients, of whom 274 (4%) did not enroll in a cancer clinical trial. Of the non-enrollees 75% were in the least deprived group and 10.9% were in the most deprived group. The analytic cohort of 6,858 clinical trial enrollees were mostly (90%) Maryland residents. The median age was 59 years (49-66), 52% were female, and 61% percent were White, 33% African American, 3% Asian. Hispanic ethnicity comprised 3% of the cohort. ADI was associated with race, ethnicity, distance travelled to UMGCCC, age and gender. The median national ADI of the cohort was 33, and the most participants were from less disadvantaged neighborhoods. By national ADI, the least and most deprived groups comprised 28.3% and 8.5%, respectively. By state ADI, these groups comprised 18.0% and 21.5%.

Conclusion:
These results represent a detailed socioeconomic assessment of cancer clinical trial enrollment at an NCI-designated cancer center. The findings suggest inequity in cancer clinical trial enrollment at the national level; however, there was minimal difference in cancer clinical trial enrollment at the state level suggesting equitable representation. Several covariates were associated with ADI and future studies should evaluate the intersection of socioeconomic status and other demographic factors.