Health Outcomes among Breast Cancer Patients: Effect of Long-Term NSAID Use on Opioid Abuse and peripheral IS.

OBJECTIVES/SPECIFIC AIMS: Cancer related pain presents a significant risk for opioid abuse among cancer survivors and contributes to the current opioid crisis. Nearly 90% of breast cancer patients have been reported to have cancer-related pain requiring treatment. Opioids, in combination with NSAIDs, have been widely used for pain management in this population despite the risk of abuse. Long-term NSAID use due to their antineoplastic and neuroprotective effects may offer additional protective effects against opioid abuse. Here, we assess the relationship between NSAID use and opioid abuse among breast cancer patients.

METHODS/STUDY POPULATION: Using ICD-9-CM codes, we identified and selected women aged >18 years with breast cancer from the National Inpatient Sample (NIS). Our primary predictor was a history of long-term NSAID use. Opioid abuse was the primary outcome of interest. Secondary outcomes were inpatient mortality and length of stay. Multivariable regression models were employed in assessing the association between predictors and outcomes while adjusting for relevant covariates.

RESULTS/ANTICIPATED RESULTS: Among 170,644 women with breast cancer, 7,838 (4.6%) reported a history of long-term NSAID use. Patients with a history of long-term NSAID use had lower odds of opioid abuse (aOR 0.53; 95% CI [0.32-0.88]) and in-hospital mortality (aOR 0.52; 95% CI [0.45-0.60]) and were likely to have shorter hospital stay (7.12 vs. 8.11 days) compared to women with no history of long-term NSAID use. DISCUSSION/SIGNIFICANCE OF IMPACT: Long-term NSAID use may offer a protective effect against opioid abuse and improve in-hospital outcomes translating to better quality of life and healthcare utilization indices among breast cancer patients.