# Effect of Ethnic Disparities on the Outcome of Stage III Colon Cancer Patients

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## Overall Goal/Abstract
This study was done to compare if in our health system a difference in survival based on ethnicities can be demonstrated in patients with Stage III colon cancer who received adjuvant chemotherapy.

## Background
Use of adjuvant chemotherapy has improved outcomes in patients with Stage III colon cancer. However, differences in survival has been seen in patients of different ethnic groups. Potential causes include disparities in the use of adjuvant chemotherapy among different ethnic groups, less access to medical care, including screening colonoscopies for early diagnosis, surgery and adjuvant chemotherapy.

## Materials/Methods
Retrospective cohort study of stage III colon cancer patients who were treated in two hospitals between 2004 and 2014. Inclusion criteria was surgery for stage III colon cancer and age greater than 18 years of age. Characteristics that were examined included age, sex, ethnic group, number of nodes involved, chemotherapy received. Survival curves with Kaplan Meier estimates were used to determine and compare survival between ethnic groups and treatments.

## Results
111 stage III colon cancer patients were identified and 74 patients received chemotherapy from four ethnic groups. There was no statistical difference between the groups for use of adjuvant chemotherapy, survival or recurrence. Mean survival and recurrence were substantially shorter for the Asian/Indian cohort compared to the entire cohort (survival: 35 versus 83 months; recurrence: 30 versus 89 months); however, the difference was not statistically significant. Increased number of nodes was a predictor of survival (HR = 1.06, 95%CI = 1.01-1.11, p = 0.014) but not a predictor of recurrence (HR = 1.05, 95%CI = 0.99-1.12, p = 0.110).

## Success Factors and Lessons Learned (Discussion)
Survival outcomes seem to be the same in different ethnic groups when racial disparities are taken out of the equation. There was no difference in use of chemotherapy within our Health system.

## Barriers Encountered/Limitations-
The Asian/Indian cohort seemed to have shorter mean survival but the sample was not enough and there was no statistical significance.

Socioeconomic status was not assessed in study.

## Conclusions
Although in the past studies have shown disparities in the use of adjuvant chemotherapy among Medicare patients with stage III colon cancer, our data does not show difference in use of chemotherapy among different ethnic groups within our system. The small numbers in the analysis hampers any meaningful analysis o be performed and limits the conclusions that can be made. After patients from different ethnic groups were diagnosed and treated there does not seem to be a difference in survival and recurrence among this groups. Continued efforts should be taken to resolve racial disparities at the time of cancer treatment.

## Bibliography
**Racial Disparities in Receipt and Comparative Effectiveness of oxaliplatin for Stage III Colon Cancer in Older Adults. Christina Mack; William Carpenter.**

**Impact of race/ethnicity and socioeconomic status on adjuvant chemotherapy use among elderly patients with stage III colon cancer. Hsieh MC, Chiu YW, Wu XC**

**Racial disparities in advanced stage colorectal cancer survival. Krisin Wallace, Elizabeth G. Hill**

**Socioeconomic Factors Impact Colon Cancer Outcomes in Diverse Patient Population. Wendy Lee, Rebecca Nelson, Brian Mailey.**