

Chemotherapy Adherence for Obese High-risk Breast Cancer Patients and the Role of Dose-Dense Chemotherapy

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Background

- These women are more likely to be diagnosed in advanced stages, develop metastases, and have an increased risk of dying from breast cancer. ¹
- Dose-dense chemotherapy has previously been found to improve outcomes for breast cancer patients. This occurs either by increasing the dose intensity of agents or reducing intervals between cycles. ²
- Study purpose: Describe dose-dense regimen use by BMI and the association of dose-dense regimens with RDI across BMI groups



Patients

Subset of high-risk breast cancer patients for whom chemotherapy is clearly recommended:

- Receptor Status
 - Triple negative status
 - HER2-positive
- Either positive lymph node metastases or tumor size >1.0 cm



Variables and Outcomes

- Primary outcome: RDI <85% of guideline-recommended doses
- Secondary outcomes:
 - Delays
 - Discontinuation
 - Composite measure of all three
- Variables: age, HER2/ER/PR status, race, BSA, Elixhauser co-morbidity score, dose dense indicator
- BMI categories
 - Non-overweight: BMI < 25
 - Overweight: BMI 25 - < 30
 - Obese: BMI >30

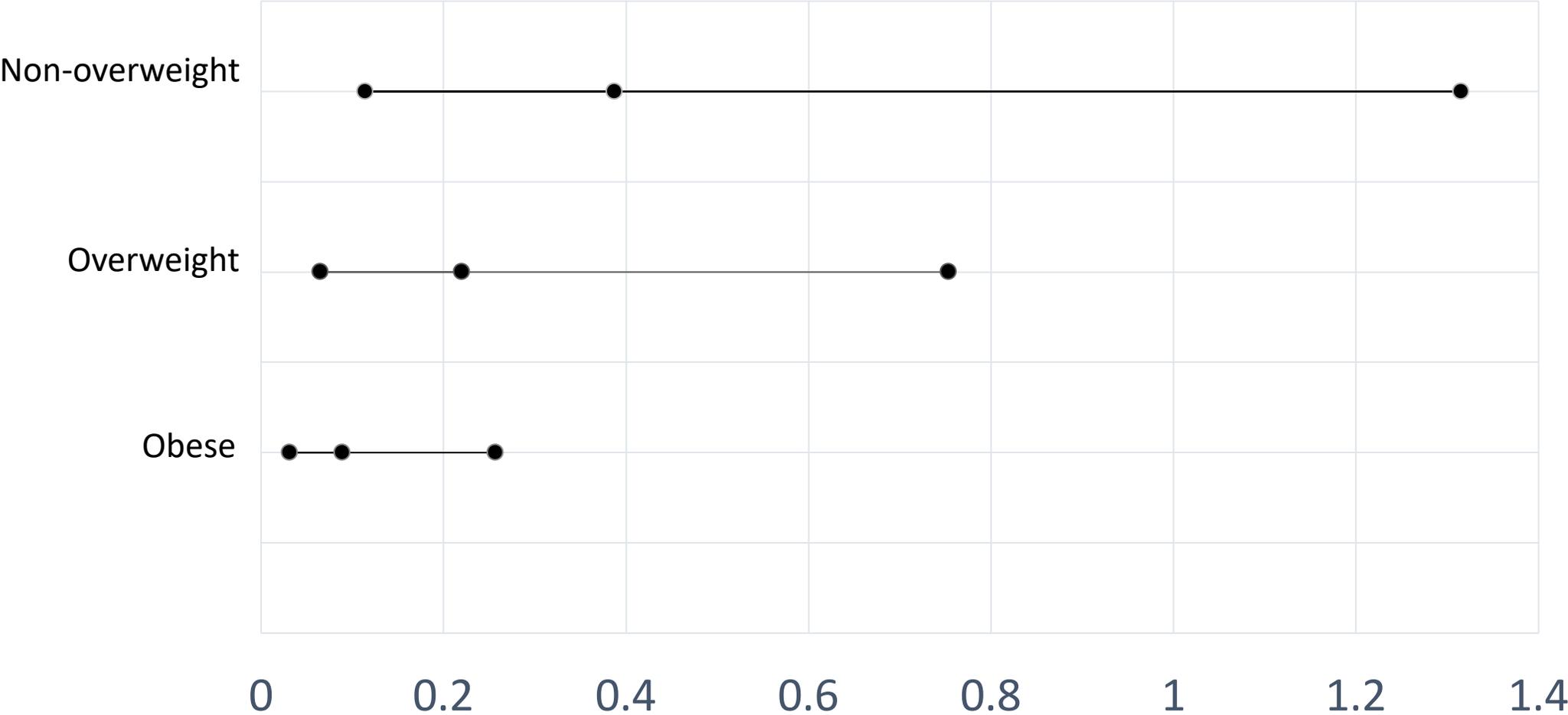


Results

- 244 patients who met our inclusion and exclusion criteria
- 48% (117 patients) were in a dose dense regimen
- Patient characteristics were similar between dose-dense and non-dose-dense groups except dose dense patients were more likely to be:
 - younger
 - HER2-negative

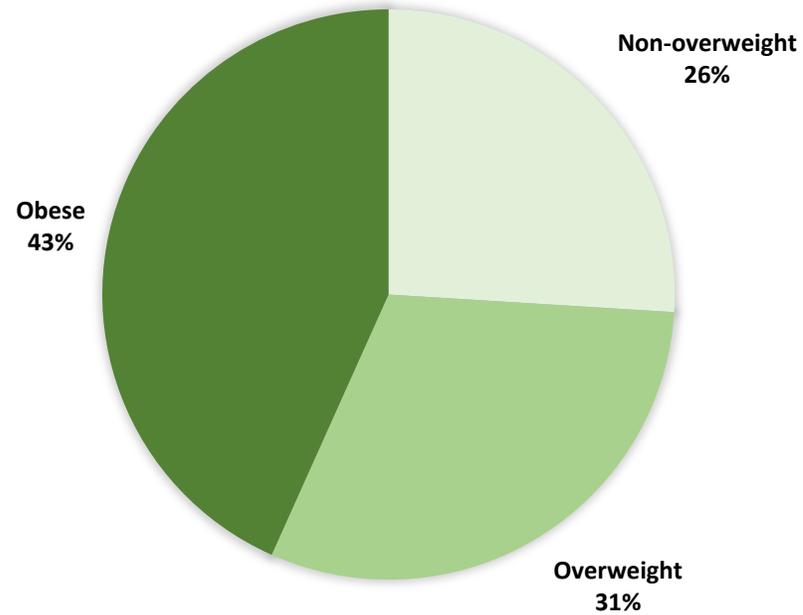


Odds Ratio Plot for Dose-Dense Use

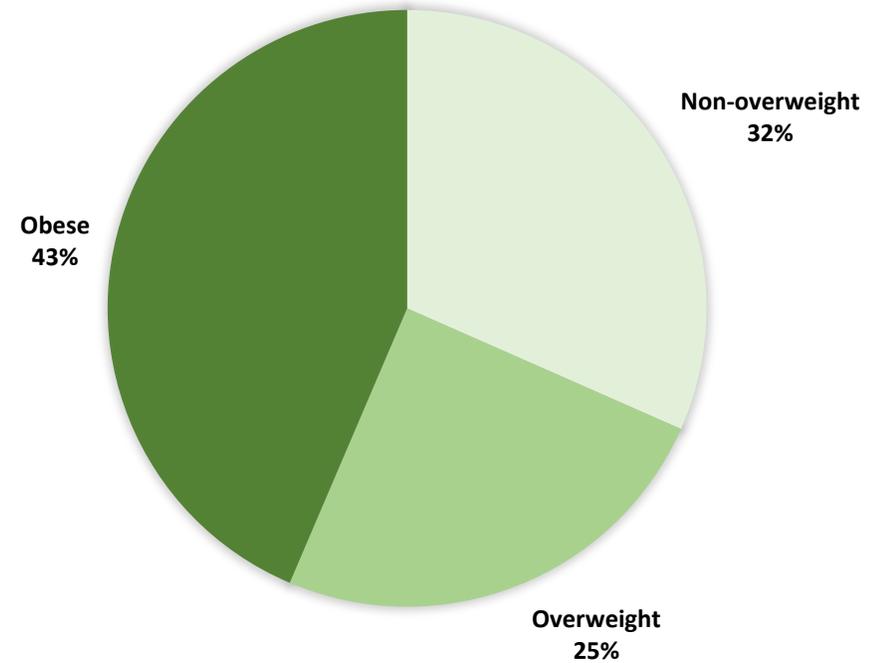


BMI by Regimen Type

NON DOSE-DENSE GROUP



DOSE DENSE GROUP



Discussion

- Implications:
 - We found that dose-dense regimens are protective from having a low RDI.
 - However obese patients, who could potentially benefit the most from a dose-dense regimen, are equally likely to receive non-dose-dense therapy
 - Our research suggests further investigation of strategies to increase use of dose-dense regimens for obese patients.
- Limitations
 - Could not determine differences in adherence between normal and underweight
 - Limited generalizability



References

1. Ewertz M, Jensen M-B, Gunnarsdóttir KÁ, et al. Effect of obesity on prognosis after early-stage breast cancer. *J Clin Oncol*. 2011;29(1):25-31. doi:10.1200/JCO.2010.29.7614
2. Blondeaux E, Poggio F, Del Mastro L. Role of dose-dense chemotherapy in high-risk early breast cancer. *Curr Opin Oncol*. 2019 Nov;31(6):480-485. doi:10.1097/CCO.0000000000000571.



Questions?



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