Abstract 1585 : GLP-1RA are Associated with Improved Breast Cancer Outcomes in DCIS patients on hormonal therapy: A Real-World Cohort Study

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Background

- Obesity, diabetes, and insulin resistance independently raise recurrence risk; endocrine therapy often exacerbates these metabolic disturbances.
- GLP-1RAs improve metabolic parameters and exert anti-tumor activity in preclinical breast cancer models.
- **Objective**: Evaluate whether GLP-1RA exposure influences invasive progression and survival in DCIS patients receiving hormonal therapy.

GLP-1RA use was associated with ~64% lower risk of invasive breast cancer recurrence and improved survival compared to matched non-users.

Future Directions for Research

- **Validate findings in prospective, controlled trials.**
- **Clarify biological mechanisms** of GLP-1RA effects in HR+ breast cancer, including insulin pathways, inflammation, adipokines, and GLP-1R expression in breast tissue.
- Develop **BMI-centered survivorship interventions** and identify optimal patient selection **and integration with endocrine therapy**

Methods

Design: Multicenter, retrospective cohort study using the TriNetX electronic health-record database

Population: DCIS patients receiving adjuvant endocrine therapy

Matching: 1:1 propensity score matching on demographic variables , metabolic comorbidities (BMI, diabetes) comprehensive laboratory values, concurrent antidiabetic agents, endocrine therapy type

Time window for analysis: 5 years

Outcomes: Invasive recurrence risk, 5-year survival

Results

Outcome	Hormonal Therapy + GLP1 (n = 3,049)	Hormonal Therapy without GLP1 (n = 3,049)	Risk Ratio (95% CI)	HR (95% CI)	p-value
Invasive/metastatic breast cancer	126 (4.1%)	328 (10.8%)	0.38 (0.32, 0.47)	0.36 (0.29, 0.44)	<0.001
Death (overall survival)	89 (2.9%)	230 (7.5%)	0.39 (0.31, 0.49)	0.37 (0.29, 0.47)	<0.001

Discussion/Conclusion

- **GLP-1RA use associated with decreased recurrence risk and improved survival in DCIS patients on endocrine therapy.**
- **Findings suggest GLP-1RA confers oncologic benefit in addition to metabolic improvement in this population**
- Retrospective design **increases risk of unmeasured confounders related to tumor biology and treatment**; findings are hypothesis-generating and require prospective validation.

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