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Data Article

Circulating adipokines data associated with insulin secretagogue use in breast cancer patients

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ABSTRACT

Oral drugs stimulating endogenous insulin production (insulin secretagogues) may have detrimental effects on breast cancer outcomes. The data presented shows the relationship between pre-existing insulin secretagogues use, adipokine profiles at the time of breast cancer (BC) diagnosis and subsequent cancer outcomes in women diagnosed with BC and type 2 diabetes mellitus (T2DM). The Pearson correlation analysis evaluating the relationship between adipokines stratified by T2DM pharmacotherapy and controls is also provided. This information is the extension of the data presented and discussed in "*Insulin use, adipokine profiles and breast cancer prognosis*" (Wintrob et al., in press) [1].

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Specifications Table

Subject area	Clinical and Translational Research
More specific subject area	Biomarker Research, Cancer Epidemiology
Type of data	Tables
How data was acquired	Tumor registry query was followed by vital status ascertainment, and medical records review Luminex®- or enzyme-linked immunosorbent assay- based quantitation of adipokines (adiponectin, leptin, C-reactive protein, interleukine-6, interleukine-1β, interleukine-1Ra, tumor necrosis factor-α, and C-peptide) from plasma samples was conducted. A Luminex®200™ instrument with Xponent 3.1 software was used to acquire all data except for C-reactive protein determinations which have been done using a Synergy 2 BioTek multi-mode reader
Data format	Analyzed
Experimental factors	Adipokines were determined from the corresponding plasma samples collected at the time of breast cancer diagnosis
Experimental features	The dataset included 97 adult females with diabetes mellitus and newly diagnosed breast cancer (cases) and 194 matched controls (breast cancer only). Clinical and treatment history were evaluated in relationship with cancer outcomes and adipokine profiles. A biomarker correlation analysis was also performed.
Data source location	United States, Buffalo, NY - 42° 53′ 50.3592″N; 78° 52′ 2.658″W
Data accessibility	The data is with this article

Value of the data

- Presented data shows the relationship between pre-existing insulin secretagogues use, adipokine production at the time of cancer diagnosis and breast cancer outcomes.
- This data serves as a benchmark for future investigations targeting pharmacotherapy-induced adipokine modulation in breast cancer.
- The data described here can assist study design of further biomarker evaluation in relationship with the safety and effectiveness of diabetes pharmacotherapy.

1. Data

Reported data represents the observed association between insulin secretagogues' utilization and the adipokine profiles at the time of breast cancer diagnosis in women with diabetes mellitus (Table 1). Data in Table 2 includes the observed correlations between adipokines stratified by type 2 diabetes mellitus pharmacotherapy and controls.

2. Experimental design, materials and methods

Evaluation of adipokine profile association with insulin secretagogue use and BC outcomes was carried out under two protocols approved by both Roswell Park Cancer Institute (EDR154409 and NHR009010) and the State University of New York at Buffalo (PHP0840409E). Demographic and clinical patient information was linked with cancer outcomes and adipokine profiles of corresponding plasma specimen harvested at BC diagnosis and banked in the Roswell Park Cancer Institute Data Bank and Bio-Repository.