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Data Article

TH1 and TH2 cytokines dataset in insulin users with diabetes mellitus and newly diagnosed breast cancer



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ABSTRACT

Exogenous insulin use may interfere with the T helper cells' cytokine production. This dataset presents the relationship between pre-existing use of injectable insulin in women diagnosed with breast cancer and type 2 diabetes mellitus, the T-helper 1 and 2 produced cytokine profiles at the time of breast cancer diagnosis, and subsequent cancer outcomes. A Pearson correlation analysis evaluating the relationship between T-helper cytokines stratified by of insulin use and controls is also provided.

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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 [®] -based quantitation from plasma samples was conducted for the following T-helper 1 and T-helper 2 cytokines: Interleukine-2, soluble interleukine-2 receptor α , interleukine-12 subunit p40, interleukine-12 subunit p70, interferon α 2, interferon γ , chemokine ligand 10 (interferon gamma-induced protein 10), chemokine ligand 9 (monokine-induced by interferon γ), chemokine ligand 8 (interleukine-8) interleukine-5, interleukine-10, and interleukine-13. A Luminex [®] 200 [™] instrument with Xponent 3.1 software was used to acquire all data.
Data format	Analyzed
Experimental factors	T-helper 1 and 2 produced cytokines 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 factor-helper 1 and 2 produced cytokine 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

- This dataset represents the observed relationship between administration of exogenous insulin, circulating T-helper 1 and 2 produced cytokines at breast cancer diagnosis and cancer outcomes.
- The data we present here has the potential to guide future research evaluating the role of insulin in the modulation of type 1 and type 2 immunity.
- Our observations can assist further research exploring the relationship between insulin administration and T-helper-driven signaling in breast cancer occurrence.

1. Data

Reported data represents the observed association between pre-existing use of injectable insulin before breast cancer diagnosis and the T-helper 1 and 2 produced cytokine profiles upon cancer diagnosis in women with both breast cancer and diabetes mellitus (Table 1). Data in Table 2 includes the observed correlations between T-helper 1 and 2 cytokines stratified by diabetes mellitus pharmacotherapy and controls.

2. Experimental design, materials and methods

Evaluation of the association between profiles of T-helper 1 and 2 produced cytokines, injectable insulin 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

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