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Data Article

Dataset on growth factor levels and insulin use in patients with diabetes mellitus and incident breast cancer

Zachary A.P. Wintrob [a], Jeffrey P. Hammel [b], George K. Nimako [a], Dan P. Gaile [c], Alan Forrest [d], Alice C. Ceacareanu [a,e,*]

[a] State University of New York at Buffalo, Dept. of Pharmacy Practice, NYS Center of Excellence in Bioinformatics and Life Sciences, 701 Ellicott Street, Buffalo, NY 14203, United States
[b] Cleveland Clinic, Dept. of Biostatistics and Epidemiology, 9500 Euclid Ave., Cleveland, OH 44195, United States
[c] State University of New York at Buffalo, Dept. of Biostatistics, 718 Kimball Tower, Buffalo, NY 14214, United States
[d] The UNC Eshelman School of Pharmacy, Division of Pharmacotherapy and Experimental Therapeutics, Campus Box 7569, Chapel Hill, NC 27599, United States
[e] Roswell Park Cancer Institute, Dept. of Pharmacy Services, Elm & Carlton Streets, Buffalo, NY 14263, United States

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ABSTRACT

Growth factor profiles could be influenced by the utilization of exogenous insulin. The data presented shows the relationship between pre-existing use of injectable insulin in women diagnosed with breast cancer and type 2 diabetes mellitus, the growth factor profiles at the time of breast cancer diagnosis, and subsequent cancer outcomes. A Pearson correlation analysis evaluating the relationship between growth factors stratified by of insulin use and controls is also provided.

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* Corresponding author at: State University of New York at Buffalo, Department of Pharmacy Practice, NYS Center of Excellence in Bioinformatics and Life Sciences, 701 Ellicott Street, Buffalo, NY 14203, United States. Fax: +1 716 849 6651.
E-mail address: ACC36@BUFFALO.EDU (A.C. Ceacareanu).

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TGF
VEGF
Insulin
Breast cancer
Diabetes
Cancer outcomes
Cancer prognosis

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 of growth factors (epidermal growth factor, fibroblast growth factor 2, vascular endothelial growth factor, hepatocyte growth factor, platelet-derived growth factor BB, and tumor growth factor-β) from plasma samples was conducted. A Luminex®200™ instrument with Xponent 3.1 software was used to acquire all data
Data format	Analyzed
Experimental factors	Growth factors 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 growth factor profiles. A growth factor 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 injectable insulin use, circulating growth factors at breast cancer diagnosis and outcomes.
- Reported data has the potential to guide future research evaluating insulin-induced growth factor modulation in breast cancer.
- Our observations may assist future studies in evaluating the relationship between insulin safety and effectiveness and growth factors production in cancer.

1. Data

Reported data represents the observed association between use of injectable insulin preceding breast cancer and the growth factor profiles at the time of cancer diagnosis in women with diabetes mellitus (Table 1). Data in Table 2 includes the observed correlations between growth factors stratified by type 2 diabetes mellitus pharmacotherapy and controls. C-peptide correlation with each of the studied growth factors is presented in Table 2, however details regarding its determination from plasma, association with cancer outcomes and use of injectable insulin has been previously reported by us [1].