

# **Handwriting Changes In Breast Cancer Patients**

## **Thesis**

Submitted for partial fulfillment of master degree in forensic medicine and clinical toxicology

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2020

**Title of thesis:**

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### **Abstract:**

**Keywords:** Breast Cancer – Handwriting

Breast cancer is the most common cancer and the leading cause of cancer death. Early breast cancer detection is very important; helping early treatment and decreasing death rate due to cancer.

**Aim of the work:** This study started from ( 9\ 2019) to ( 9 \2020) under supervision of forensic medicine and clinical toxicology department-faculty of medicine-fayoum university trying to find a useful, economic and non-invasive technique that help in diagnosis and follow up of female breast cancer patients Before starting of the study; the local ethical committee approval was obtained, the aim and benefits of the study were discussed with participants before collection of handwriting samples and confidentiality of all data was ensured to all participants.

Handwriting samples were collected from 160 female patients with breast cancer attending to different fayoum hospitals as fayoum university hospital and fayoum insurance hospital. Then all samples were examined by experts of handwriting in in Ministry of Justice-Egypt using magnified lenses and different microscopes.

**In our result;** by general observation and analysis of samples of handwriting from breast cancer patients ,stroke indicate that there is no evidence of significant difference between breast cancer samples and normal human standards ratio and no common characters between breast cancer samples (no tremors in stroke , no unusual configurations)