# Breast Cancer on Instagram: A Descriptive Study

**Abstract**

**Background:** Breast cancer has an impact not only on those who are diagnosed, but also on their social network, creating an even greater need for the availability of reliable information and support. **Methods:** The purpose of this study was to document the content of posts on the highly popular social media platform, Instagram. Posts were garnered and analyzed from Instagram using the hashtag #breastcancer. Data were collected at three different points in time in 2018 and were then aggregated. **Results:** The most common attributes were highlighting an individual story ($n = 76$), discussing support for those with breast cancer ($n = 75$), discussing treatment ($n = 55$), or promoting an alternative treatment or product ($n = 24$). Posts that contained images of people were more likely highlight an individual story ($P = 0.001$) and discuss treatment ($P = 0.046$). **Conclusions:** Future research can focus on best practices for developing breast cancer-related information on social media.

**Keywords:** *Breast cancer, Instagram, social media*

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## Introduction

Breast cancer is a highly common cancer in women in the United States (US).[1] In the US, on an annual basis, roughly 237,000 cases of breast cancer are diagnosed in women and 2100 in men. This results in an estimated 41,000 deaths in women and 450 deaths in men annually.[1] Breast cancer has an impact not only on those who are diagnosed, but also on their social network as well, creating an even greater need for the availability of reliable information and support. Although this can happen in different ways, it is typical that the internet and specifically varied forms of social media become sources of both information and support. The purpose of this study was to document the content of posts on the highly popular social media platform, Instagram.

## Methods

Using a fact sheet from the Centers for Disease Control and Prevention, content categories on breast cancer were established.[1] Methods for this descriptive study were adapted from prior studies.[2,3] Posts were garnered from Instagram using the hashtag #breastcancer. Data were collected at three different points in time, 3 weeks apart in 2018 (December 7, December 14, and December 21), and was then aggregated. One researcher conducted the coding. Each time data were coded, the 50 most recent posts were included in the sample. Posts that were irrelevant or those which included text not in the English language were excluded. At the first, second, and third collection points there were 1,869,298, 1,872,894, and 1,877,045 posts, respectively. A total of 14 posts were excluded in the first round of coding, 23 in the second, and 19 in the third. During each coding period, Instagram posts were coded for purpose and/or content. Content categories were coded in a dichotomous fashion using yes or no to indicate the presence of absence of each. A subset of ten videos were coded by a second coder with good interrater reliability (Cohen's kappa = 0.936).

Independent sample t-tests were used for continuous variables and Chi-square tests of association for categorical variables. Results were considered to be significant if $P < 0.05$. SPSS (v23) software was used to conduct the statistical analysis. The IRB at William Paterson University does not review studies that do not involve human subjects and considers them to be exempt.

## Results

Among the 150 posts analyzed, the mean number of likes was 27.17 (standard deviation 42.66) with a range of 0–316 likes. Most posts contained an image with text ($n = 146$), whereas some contained a video with

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## Table 1: Content of Instagram posts

|  | N | (%) |
|---|---|---|
| Highlights an individual story | 76 | (51) |
| Support | 75 | (50) |
| Treatment | 55 | (37) |
| Promote alternative treatment/product | 24 | (16) |
| Diagnosis | 7 | (5) |
| Implants/reconstruction | 6 | (4) |
| Screening-self screen | 6 | (4) |
| Screening-encourage mammogram | 4 | (3) |
| Family history as risk factor | 2 | (1) |
| Prevention | 2 | (1) |
| Medication advertisement | 2 | (1) |

## Table 2: Comparison of post content based on presence of people

|  | Total (N=150) | | People (n=85) | | No People (n=65) | | P* |
|---|---|---|---|---|---|---|---|
|  | N | (%) | n | (%) | n | (%) |  |
| Highlights an individual story | 76 | (51) | 55 | (65) | 21 | (32) | **<0.001** |
| Support | 75 | (50) | 39 | (46) | 36 | (55) | 0.249 |
| Treatment | 55 | (37) | 37 | (44) | 18 | (28) | **0.046** |
| Promote alternative treatment/product | 24 | (16) | 4 | (5) | 20 | (31) | **<0.001** |

*Chi-square test; Bold: $P<0.05$

text ($n = 4$). Among the 85 videos (57%) that contained an image of a person, most were of women ($n = 67$) versus both men and women ($n = 13$) or only men ($n = 5$).

The most common attributes were highlighting an individual story ($n = 76$), discussing support for those with breast cancer ($n = 75$), discussing treatment ($n = 55$), or promoting an alternative treatment or product [$n = 24$, Table 1]. Posts that contained images of people were more likely highlight an individual story ($P = 0.001$) and discuss treatment [$P = 0.046$, Table 2]. Posts without people were more likely to promote an alternative treatment or product ($P < 0.001$). Posts did not differ significantly in mean number of likes based on any of the content categories.

## Discussion

The findings of this study only begin to scratch the surface of describing breast cancer content on Instagram. A prior study exploring the activity of reproductive cancers on Instagram and Twitter indicated that women's reproductive cancers outperformed men's both during campaign periods as well as other times.[4] This confirms the findings of this study in part by way of confirming that breast cancer posts

on Instagram tended to focus more on support and versus actionable items.[4]

Prior research suggests that information on the internet related to breast cancer can be difficult to read.[5] The extent to which this influences consumers to turn to other platforms that use primarily images or videos is not well-known and hence is another area for further exploration. This is especially important since breast cancer-related videos have demonstrated inconsistent reliability and coverage of important topics.[6,7]

This study has several limitations. The limited data collection of a descriptive study at three close points in time and the small sample size make the results not generalizable. The incredibly large number of posts suggests that future studies could include a much more robust sample over time. The changing nature of content on the internet also limits this study, which was accounted for here by coding posts at three points in time; however, these points in time were close, which may have influenced results. Nevertheless, this study can provide a springboard for further research on this platform. Future research can focus on best practices for developing breast cancer-related information on social media.

### Conficts of interest

There are no conflicts of interest.

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