





# A Cross-Sectional Analysis of Breast Reconstruction with Fat Grafting Content on TikTok

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## Abstract

As of November 2021, TikTok has one billion monthly active users and is recognized as the most engaging social media platform. TikTok has seen a surge in users and content creators, ranging from athletes to medical professionals. In the past year, content creators have utilized the app to advocate for social reforms, education, and other uses that were not previously considered. Breast cancer is the most commonly diagnosed cancer in women, with an expected 281,550 new cases of invasive breast cancer in 2021. As more individuals with breast cancer choose to undergo resection, the demand for autologous fat grafting in breast reconstruction has increased due to the natural look and feel of breast tissue. The purpose of this article is to analyze content related to breast reconstruction with fat grafting found on TikTok and recommend methods to improve patient education, care, and outcomes.

We searched TikTok on November 1, 2021, for videos using the phrase “breast reconstruction with fat grafting.” The top 200 videos retrieved from the TikTok search algorithm were analyzed, and all commentaries, duplicates, and nonrelevant videos were removed. Video characteristics were collected, and two independent reviewers generated a DISCERN score

A total of 131 videos were included in the study. They were found to have a combined 1,871,980 likes, 41,113 comments, and 58,662 shares. The videos had an average DISCERN score of 2.16. Content creators had an overall low DISCERN score in items involving the use of references, disclosure of risks for not obtaining treatment, and support for shared decision-making. When stratified, the DISCERN score was higher for videos created by physicians (DISCERN average 2.48) than for videos created by nonphysicians (DISCERN average 1.99;  $p < 0.001$ ).

## Keywords

- ▶ breast reconstruction
- ▶ fat grafting
- ▶ breast cancer

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Content creators can improve the quality of their videos by disclosing treatment risks, benefits and risks, discussing risks for not obtaining treatment, and advocating for shared decision-making. Furthermore, including citations and academic references may offer increased credibility and promote evidence practice. This article is limited by the variability seen on the TikTok platform that is influenced by algorithmic trends. The top 200 search results vary, making each compilation of videos selected for analysis unique. Furthermore, although DISCERN is a reliable source to assess patient information, it has not been tested for its reliability with videos such as on TikTok. Despite TikTok being developed as a social media platform, it has shown to be a medium for patient outreach and an educational tool.

## Introduction

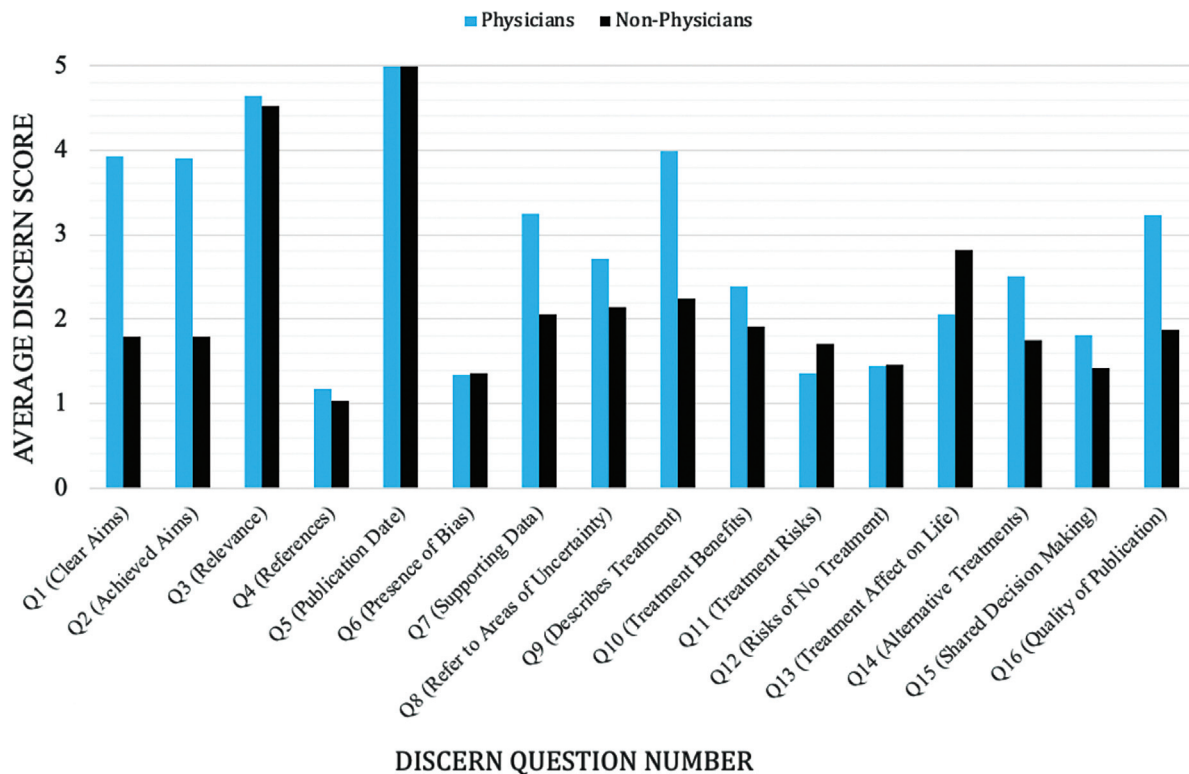
As of November 2021, TikTok has one billion monthly active users and is recognized as the most engaging social media platform.<sup>1</sup> TikTok has seen a surge in users and content creators, ranging from athletes to medical professionals. In the past year, content creators have utilized the app to advocate for social reforms, education, and other uses that were not previously considered. The purpose of this article is to analyze content related to breast reconstruction with fat grafting found on TikTok and recommend methods to improve patient education, care, and outcomes.

Breast cancer is the most commonly diagnosed cancer in women, with an expected 281,550 new cases of invasive breast cancer in 2021.<sup>2</sup> As more individuals with breast cancer choose to undergo resection, the demand for autologous fat grafting in breast reconstruction has increased due to the natural look and feel of breast tissue.<sup>3</sup>

## Case

We searched TikTok on November 1, 2021, for videos using the phrase “breast reconstruction with fat grafting.” The top 200 videos retrieved from the TikTok search algorithm were analyzed, and all commentaries, duplicates, and nonrelevant videos were removed. Video characteristics were collected, and two independent reviewers generated a DISCERN score, a 16-question scoring method to assess the quality of health information on various treatments reliably.<sup>4</sup>

A total of 131 videos were included in the study. They were found to have a combined 1,871,980 likes, 41,113 comments, and 58,662 shares. The videos had an average DISCERN score of 2.16. Content creators had an overall low DISCERN score in items involving the use of references, disclosure of risks for not obtaining treatment, and support for shared decision-making (→ Fig. 1). A total of 51 videos



**Fig. 1** Average DISCERN score by question for physician versus nonphysician videos.

**Table 1** Overview of TikTok videos related to breast reconstruction with fat grafting

	Number of videos	Mean number of likes	Mean number of comments	Mean DISCERN score
Content creator				
Physician	51	826,410	10,909	2.48
Nonphysician	77	1,040,116	30,139	1.99
Private company	3	5,454	65	1.77
Gender				
Male	37	821,599	10,026	2.47
Female	94	1,049,381	31,087	2.21
Other	0	0	0	0
Video category				
Personal experience	77	1,025,142	30,344	2.03
Educational	49	608,020	8,900	2.62
Advertising	5	238,818	1869	2.11

were created by physicians, 77 by nonphysicians, and 3 by private companies. All physicians were noted to be plastic surgeons. When stratified, the DISCERN score was higher for videos created by physicians (DISCERN average 2.48) than for videos created by nonphysicians (DISCERN average 1.99;  $p < 0.001$ ; ► **Table 1**).

## Discussion

Content creators can improve the quality of their videos by disclosing treatment risks, benefits and risks, discussing risks for not obtaining treatment, and advocating for shared decision-making. Furthermore, including citations and academic references may offer increased credibility and promote evidence practice. This article is limited by the variability seen on the TikTok platform that is influenced by algorithmic trends. The top 200 search results vary, making each compilation of videos selected for analysis unique. Furthermore, although DISCERN is a reliable source to assess patient information, it has not been tested for its reliability with videos such as on TikTok.<sup>5</sup> Despite TikTok being developed as a social media platform, it has shown to be a medium for patient outreach and an educational tool. Given the results of this article, it may be beneficial to develop a metric to accurately analyze social medial trends relating to medical procedures. It may be worthwhile to consider TikTok as a database for knowledge and trends.

### Authors' Contributions

Conceptualization: R.G., J.J., M.G., M.H., E.P., E.B., K.S., and K.C.; methodology: R.G., J.J., M.G., M.H., E.P., E.B., K.S., K.C.;

writing: original draft: R.G., J.J., M.G., M.H., E.P., E.B., E.S., K.C.; review & editing: R.G., J.J.

### Ethical Approval

No IRB consent was required for this article.

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None.

### Conflict of Interest

None declared.

## References

- 1 TikTok User Statistics. Published October 11, 2021. Accessed November 6, 2021, at: <https://backlinko.com/tiktok-users>
- 2 U.S. Breast Cancer Statistics. Breastcancer.org. Published February 4, 2021. Accessed November 6, 2021, at: [https://www.breastcancer.org/symptoms/understand\\_bc/statistics](https://www.breastcancer.org/symptoms/understand_bc/statistics)
- 3 Turner A, Abu-Ghname A, Davis MJ, Winocour SJ, Hanson SE, Chu CK. Fat grafting in breast reconstruction. *Semin Plast Surg* 2020; 34(01):17-23
- 4 Charnock D, Shepperd S, Needham G, Gann R. DISCERN: an instrument for judging the quality of written consumer health information on treatment choices. *J Epidemiol Community Health* 1999;53(02):105-111
- 5 Rees CE, Ford JE, Sheard CE. Evaluating the reliability of DISCERN: a tool for assessing the quality of written patient information on treatment choices. *Patient Educ Couns* 2002;47(03): 273-275