

Background

Tamoxifen is an oral estrogen modulator that is used as treatment for metastatic breast cancer and adjuvant therapy for early breast cancer following surgery or radiation therapy. It also serves as a preventive measure for those who are at a high risk of developing breast cancer, especially estrogen dependent breast cancer. The top 300 tweets were randomly collected as a sample on February 23, 2017, with tweets ranging from January 1, 2012, through February 23, 2017.

Twitter Analysis

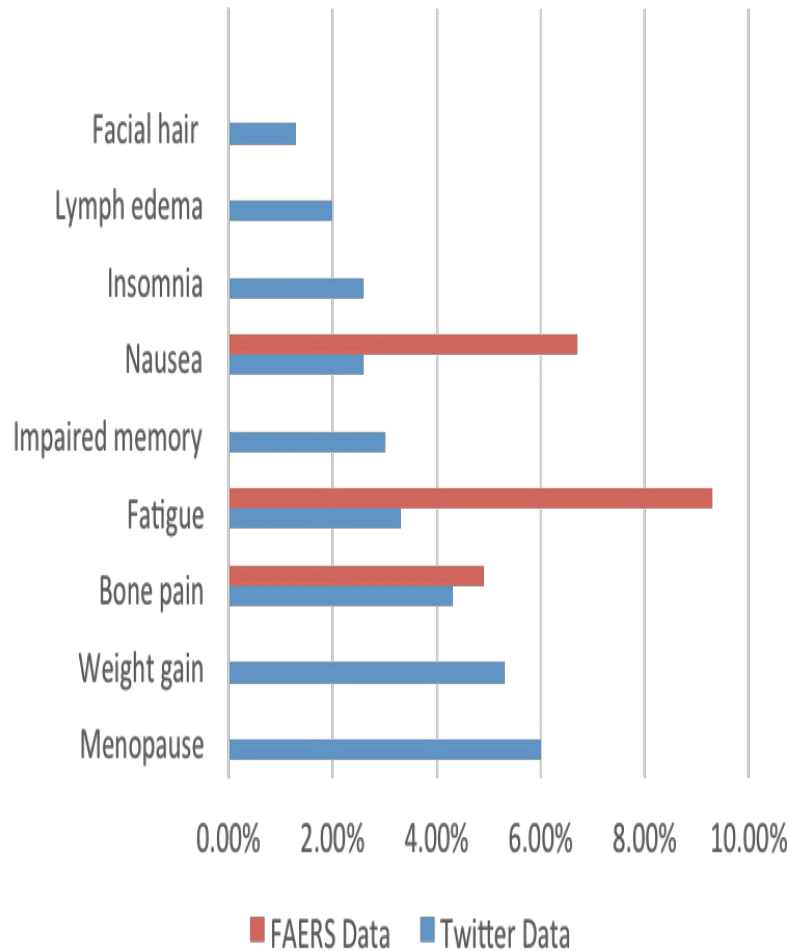
Of the 300 tweets analyzed, 195/300 (65%) tweets collected mentioned at least one adverse effect. No tweets contained more than one adverse effect.

Top 10 Twitter Events

Adverse Effect	Number of Events
Hot Flashes	34
Menopause	18
Weight Gain	16
Bone Pain	13
Fatigue	10
Impaired Memory	9
Nausea	8
Insomnia	8
Lymphedema	6
Facial Hair	4

Comparison of Twitter and FAERS Data

Comparison of Top 10 ADEs Reported



FAERS Analysis

Total number of Reported Adverse Drug Effects

- 927

Top 10 Adverse FAERS

1. Fatigue 86, 9.3%
2. Hot flashes 64, 6.9%
3. Nausea 62, 6.7%
4. Arthralgia 61, 6.6%
5. Disease progression 61, 6.6%
6. Headache 54, 5.8%
7. Dizziness 50, 5.4%
8. Metastases to bone 46, 5.0%
9. Myalgia 46, 5.0%
10. Pain 45, 4.9%

Conclusion

When comparing the top ten adverse drug effects of Twitter and FAERS data, only three of the adverse effects were the same, and many differences between the two data sets were noticed. Nausea, fatigue, and bone pain were reported in both the top ten for Twitter and FAERS data. With there being 927 FAERS reports, we can conclude that this information is a better representation of the population because it is a larger sample size than our Twitter information, which consisted of 300 tweets.