A Case of Breastfeeding With Active Breast Cancer

Erika Gergerich, PhD, MSW[a]
Bethany Garling-Spychala, BSW[b]

Introduction: *Pregnancy-associated breast cancer is relatively uncommon, with few guidelines for management. Women with an active breast cancer diagnosis who wish to offer their children breast milk (either first or second hand) face a number of obstacles and gaps in information.*

Method: *This article presents a case study and summary of current research on the topic of breastfeeding and breast cancer.*

Results and Discussion: *Different types of cancer and cancer treatment influence whether a woman will be able to breastfeed. Some mothers can resume breastfeeding after treatment. If treatment is lengthy, breastfeeding may need to cease permanently. Mothers may need to take medications to help them wean. Finally some mothers may use donor milk to feed their babies once they are no longer able to breastfeed.*

Conclusions: *Further research is needed to determine and formalize guidelines related to the safety of breastfeeding with an active cancer diagnosis. And there is a need for increased access to breast milk for mothers who are unable to breastfeed. There are geographic barriers, as well as obstacles related to availability and cost.*

Keywords: breastfeeding; lactation; breast cancer

First-Hand Introduction of Case

Just moments earlier, my mom and I had been laughing uncontrollably as I had tried to wrap the medium-sized gown around my massively pregnant belly. I was almost full term with my second child at age 37. My career had finally stabilized, and I was ready to take the plunge. I was going to have my second child by choice—on my own, as a single mother. Now I silently faced the general surgeon who had just told me that the lump in my breast was cancer. At a loss for words, the first thing I could manage to say was, "Will I be able to breastfeed my baby?" His discomfort was clear as he responded that, "theoretically . . . you could breastfeed," but that it was "not likely advisable." I was crestfallen, as breastfeeding my daughter had been one of the greatest joys of early motherhood.

The next week was a blur as I prepared for an induced labor so that I could start chemotherapy. My delivery was normal, and my son Ira was born healthy. I did not revisit the idea of breastfeeding again until a lactation consultant visited my room in the hospital. The consultant shared that she had recently attended a conference presentation at which she had learned that, although I had breast cancer, it was perfectly safe for me to breastfeed my baby up until the point of starting chemotherapy. She quickly put me in touch with the specialist who had presented, to confirm that I could safely breastfeed. For two irreplaceable weeks, I was able to nurse my son.

Guidelines for Breastfeeding With Breast Cancer

Pregnancy-associated breast cancer (PABC) is defined as being "diagnosed during pregnancy or in the first postpartum year" and is an uncommon occurrence, with few guidelines for management (Keyser, Staat, Fausett, & Shields, 2012). Additionally, there remains a large gap in the literature related to recommendations for breastfeeding women with an active cancer diagnosis. There was a time when scientists and physicians recommended that women not breastfeed their infant if they had personal or family histories of breast cancer. This counsel was based on studies with mice that showed maternal transmission of a retrovirus through lactation that increased

a. New Mexico State University, Las Cruces. egerger@nmsu.edu
b. New Mexico State University, Las Cruces. bgspy@nmsu.edu

the likelihood of cancer in offspring (Bittner, 1939; Vlahakis, Heston, & Chopra, 1997). Human studies showed a presence of virus-like particles in human breast milk, which led to concern for transmission to nursing children and subsequent potential for the heightened risk of cancer (Berger, 1981). Since then, it has been determined that the children of nursing mothers do not have a higher likelihood of developing breast cancer (Ekbom et al., 1993). Costa and Saldanha (2016) state that "lactation appears to be safe and possible" for women with breast cancer but offer no explanation or research.

Presently, women are instructed not to nurse during certain breast cancer treatments such as chemotherapy and hormonal therapy. However, lactation may be possible in one or both breasts following treatment (Durrani, Akbar, & Heena, 2018). Therefore, women may "pump and dump" their breast milk during cancer treatment to maintain milk supply until treatment has concluded. Then, they may resume breastfeeding once the medication is no longer present in their milk.

While this is an option for some cases, it is not realistic for those facing lengthy treatment. The diagnosis for this particular mother was stage four, metastatic, triple negative, breast cancer. The mother was, therefore, facing cancer treatment for an infinite amount of time and needed to cease lactation permanently.

Another consideration for some mothers could be prenatal colostrum expression. Prenatal colostrum expression must be approached with caution and in consultation with lactation and medical professionals, as it can induce contractions. This could help maximize milk production until chemotherapy is started.

There are many different types of breast cancer, some of which may require chemotherapy and some of which may not. If chemotherapy is not indicated, then the patient may undergo a single treatment—or more likely a combination of surgery, radiation, and endocrine therapy. These treatments may impact lactation in different ways, and a careful plan should be developed utilizing lactation and medical professionals.

Use of Medication for Cessation of Lactation

> *Chemotherapy eventually rendered me incapable of continuing to breastfeed my son. Cessation of breastfeeding was especially tricky for me, due to the risk of mastitis, which was potentially dangerous with my compromised immune system. I was already getting up in the night to feed Ira. Now, as I started chemotherapy treatments, I was getting up every few hours to pump (and discard) my breast milk. As my breasts became less engorged and the tumor more pronounced, it became difficult to tell whether I was expelling all of my milk. There was pain as well. Out of concern for the possibility of developing an infection, my oncologist prescribed Cabergoline to help stop lactation.*

There are several means that may be used to halt lactation. These include oral contraceptives (or other medications with estrogen), Sudafed, and herbs including sage or peppermint. However, pharmacologic agents are necessary with postpartum patients that need to cease lactation immediately. Cabergoline was introduced for the inhibition of postpartum lactation, among other uses, in the mid-1990s (Pertegaz, Alberdi, & Rodon, 2002). It functions by suppressing prolactin. Before this, bromocriptine was the drug of choice for halting lactation. When compared to bromocriptine, cabergoline has fewer adverse events and better rates of complete cessation of lactation (Rolland, Piscitelli, Ferrari, & Petroccione, 1991). Since the introduction of cabergoline, concerns have arisen regarding patients developing psychosis on the drug. It has been determined, though, that when compared to the alternative bromocriptine, cabergoline poses a lower risk for the development of psychosis (Snellen, Power, Blankley, & Galbally, 2016). Lactation cessation approaches after a diagnosis of breast cancer are currently understudied. This is particularly true with the use of pharmacologic agents.

Options for Procuring Breast Milk

> *Four years before having Ira, I had decided to move far from my hometown to take a University faculty position across the country, away from my well-established support system. Now, being newly diagnosed with cancer along with a new baby, I had only a handful of local people I felt I could turn to for support. The anguish of raising my children with an uncertain future was especially difficult. The support of extended family and old friends was essential. Among these supports were some new mothers. One of them asked if I would be interested in receiving her breast milk. The level of gratitude that I felt at this offer, and continue to feel today, is immeasurable. A first cousin of mine who lived halfway across the country not only expressed her breast milk, but she accumulated a frozen supply and had it shipped across the country overnight on dry ice. By the time Ira was 6 months old, he*

had received hundreds of ounces of breast milk from five different women, all well known to me. These amazing women continued to breastfeed their children while they supplied breast milk for Ira. Knowing that my son has been gifted the foundations of a healthy immune system, despite my illness, is priceless.

There are both formal and informal options available to women who wish to provide their children with breast milk but are unable to supply breast milk themselves. Formally, women may seek donor human milk through nonprofit and for-profit milk banks, which offer thoroughly screened and pasteurized milk donations (Updegrove, 2013b). The Human Milk Banking Association of North America together with the Centers for Disease Control and Prevention and U.S. Food and Drug Administration (FDA) have established clear guidelines for processing donated human breast milk, which includes pooling donations from multiple donors, pasteurizing pooled donations, and culturing for bacterial growth before ultimately freezing and storing donations (Human Milk Banking Association of North America, n.d.).

Access to breast milk donations through milk banks is significantly limited. U.S. milk banks are few, with large geographic areas having no local milk source to turn to for receipt or donation of breast milk (Updegrove, 2013b). Additionally, many banks face milk shortages caused both by lack of donations and stringent donor and recipient requirements that cause many to be turned away (Updegrove, 2013b). Potential donors may be turned away for a variety of reasons including regular use of medication or herbal supplements; any major illnesses, injuries, or vaccinations within the last 12 months; a history of certain health issues, such as HIV, human papillomavirus infection (HPV), diabetes, cancer, heart disease, or high blood pressure; current use of alcohol or tobacco products; or a history of living in Europe (National Milk Bank, n.d.). Breast milk from milk banks is available only by prescription, and priority is given to preterm babies with significant medical complications (Updegrove, 2013b). Finally, banked breast milk can cost up to $4.50 an ounce, which is a prohibitive factor for many families (Gribble, 2013).

In response to these obstacles, an increasing number of women are turning to informal peer-to-peer milk exchanges for donor breast milk (Gribble, 2013). While many exchanges are made between known donors and recipients, online peer-to-peer networks are also increasingly used to facilitate the exchange of donated human milk (Palmquist & Doehler 2016). Leading online networks for sharing human milk include Human Milk 4 Human Babies, Milk Share, and Eats on Feet. Together these organizations represent over 170 Facebook groups in more than 50 countries across the world (Gribble, 2012).

Informal, peer-to-peer exchange has opened the door for women who do not qualify to give or receive breast milk through human milk banks but has also raised concerns about disease transmission, exposure to unsafe substances, and contamination through unsafe storage and handling practices (Palmquist & Doehler, 2016). Proponents of peer-to-peer milk sharing emphasize the ways that this practice opens the door for mothers whose babies are not medically fragile but would still benefit from receiving human breast milk (Gribble, 2013). Furthermore, peer-to-peer sharing creates an opportunity for healthy mothers who do not meet milk bank requirements, or who are not interested in donating to a milk bank, to offer their surplus breast milk to women in need (Gribble, 2013). Additionally, peer-to-peer milk sharing is generally free of cost, making breast milk accessible for those who cannot afford steep milk bank fees (Reyes-Foster, Carter, & Hinijosa, 2015).

While there has been a significant rise in peer-to-peer milk sharing, organizations such as the FDA and the American Academy of Pediatrics still strongly discourage informal milk sharing and reject online milk donation outright (AP Committee on Nutrition, AAP Section on Breastfeeding, & AAP Committee on Fetus and Newborn, 2017; U.S. Food and Drug Administration, 2018). Most frequently, opponents of peer-to-peer milk sharing cite the potential risks of the spread of disease through unscreened milk donors and bacterial contamination as a result of unsafe storage and shipping practices (Keim et al., 2013). Furthermore, some have argued that the recent turn to informal milk sharing networks has pulled potential donors away from already struggling milk banks, decreasing the scarce reserves of human breast milk available to the most medically fragile of babies (Updegrove, 2013a).

Despite its inherent risks, peer-to-peer milk sharing has become increasingly common. Physicians have a responsibility to educate both themselves and their patients to minimize the risks of milk sharing, should a patient choose to engage in this practice. The Academy of Breastfeeding Medicine recommends that physicians advise clients who have chosen to utilize donated breast milk to require that potential donors are medically screened, and that they educate patients on safe milk handling

practices to increase the safety of the milk that they may share or receive (Sriraman, Evans, Lawrence, Noble, & the Academy of Breastfeeding Medicine's Board of Directors, 2018).

Conclusion

Due to the relative rarity of PABC, there are few guidelines for the management of cancer care postpartum. Considering the numerous benefits of breastfeeding, if determined to be safe, nursing in the period between birth and the start of treatment could prove quite meaningful to both mother and child. Further research is needed to determine and formalize guidelines related to the safety of breastfeeding with an active cancer diagnosis. Finally, there is a need for increased access to breast milk for mothers who are unable to breastfeed. There are geographic barriers, as well as obstacles related to availability and cost.

References

AP Committee on Nutrition, AAP Section on Breastfeeding, & AAP Committee on Fetus and Newborn. (2017). Donor human milk for the high-risk infant: Preparation, safety, and usage options in the United States. *Pediatrics*, *139*(1). doi:10.1542/peds.2016-3440

Berger, L. R. (1981). When should one discourage breastfeeding. *Pediatrics*, *67*(2), 300–302.

Bittner, J. J. (1939). Relation of nursing to the extra-chromosomal theory of breast cancer in mice. *American Journal of Cancer*, *35*, 90–97. doi:10.1158/ajc.1939.90

Costa, M. M., & Saldanha, P. (2016). Breast cancer in pregnancy. In A. Aydiner, A. Igci, & A. Soran (Eds.), *Breast disease* (pp. 405–415). Switzerland: Springer Publishing.

Durrani, S., Akbar, S., & Heena, H. (2018). Breast cancer during pregnancy. *Cureus*, *10*(7), e2941. doi:10.7759/cureus.2941

Ekbom, A., Hsieh, C. C., Trichopoulos, D., Yen, Y. Y., Petridou, E., & Adami, H. O. (1993). Breastfeeding and breast cancer in the offspring. *British Journal of Cancer*, *67*, 842–845. doi:10.1038/bjc.1993.154

Gribble, K. D. (2012). Biomedical ethics and peer-to-peer milk sharing. *Clinical Lactation*, *3*, 108–111. doi:10.1891/215805312807022941

Gribble, K. (2013). Peer-to-peer milk donors' and recipients' experiences and perceptions of donor milk banks. *Journal of Obstetric, Gynecologic & Neonatal Nursing*, *42*(4), 451–461. doi:10.1111/1552-6909.12220

Human Milk Banking Association of North America.. (n.d.). *Milk processing and safety*. Retrieved from https://www.hmbana.org/our-work/milk-processing-safety.html

Keim, S. A., Hogan, J. S., McNamara, K. A., Gudimetla, V., Dillon, C. E., Kwiek, J. J., & Geraghty, S. R. (2013). Microbial contamination of human milk purchased via the internet. *Pediatrics*, *132*(5), e1227–e1235. doi:10.1542/peds.2013-1687

Keyser, E. A., Staat, B. C., Fausett, M. B., & Shields, A. D. (2012). Pregnancy-associated breast cancer. *Reviews in Obstetrics & Gynecology*, *5*(2), 94–99.

National Milk Bank. (n.d.). Donor qualification guidelines. Retrieved from http://www.nationalmilkbank.org/index.php/donor/qualification-guidelines

Palmquist, A., & Doehler, K. (2016). Human milk sharing practices in the U.S. *Maternal & Child Nutrition*, *12*(2), 278–290. doi:10.1111/mcn.12221

Pertegaz, I. B., Alberdi, J., & Rodon, E. P. (2002). Is cabergoline a better drug to inhibit lactation in patients with psychotic symptoms? *Journal of Psychiatry and Neuroscience*, *27*(1), 54.

Reyes-Foster, B. M., Carter, S. K., & Hinijosa, M. S. (2015). Milk sharing practice: A descriptive analysis of peer breastmilk sharing. *Breastfeeding Medicine*, *10*(5), 263–269. doi:10.1089/bfm.2015.0009

Rolland, R., Piscitelli, G., Ferrari, C., & Petroccione, A. (1991). Single dose cabergoline versus bromocriptine in inhibition of puerperal lactation: Randomised, double-blind, multicentre study. *British Medical Journal*, *302*, 1367–1371. doi:10.1136/bmj.302.6789.1367

Snellen, M., Power, J., Blankley, G., & Galbally, M. (2016). Pharmacological lactation suppression with D2 receptor agonists and risk of postpartum psychosis: A systematic review. *Australian and New Zealand Journal of Obstetrics and Gynecology*, *56*, 336–340. doi:10.1111/ajo.12479

Sriraman, N. K., Evans, A. E., Lawrence, R., Noble, L., & the Academy of Breastfeeding Medicine's Board of Directors. (2018). Academy of Breastfeeding Medicine's 2017 position statement on informal breast milk sharing for the term healthy infant. Breastfeeding Medicine. Advance online publication. doi:10.1089/bfm.2017.29064.nks

Updegrove, K. H. (2013a). Donor human milk banking: Growth, challenges, and the role of HMBANA. *Breastfeeding Medicine*, *8*(5), 435–437. doi:10.1089/bfm.2013.0079

Updegrove, K. (2013b). Nonprofit human milk banking in the United States. *Journal of Midwifery & Women's Health*, *58*(5), 502–508. doi:10.1111/j.1542-2011.2012.00267.x

U.S. Food and Drug Administration. (2018). *Use of donor human milk*. Retrieved from https://www.fda.gov/scienceresearch/specialtopics/pediatrictherapeuticsresearch/ucm235203.htm

Vlahakis, G., Heston, W. E., & Chopra, H. C. (1997). Transmission of mammary tumor virus in mouse strain DD: Further support for the uniqueness of strain GR. *Journal of the National Cancer Institute*, *59*(5), 1553–1555. doi:10.1093/jnci/59.5.1553

Acknowledgment. The authors would like to thank Dr. Katrina Mitchell for her valuable input on the topic of breastfeeding and breast cancer care. Dr. Mitchell is a member of the Academy of Breastfeeding Medicine and is an IBCLC. She completed her breast surgical oncology fellowship at MD Anderson Cancer Center in Houston, Texas, is board certified in surgery, and currently practices in Albuquerque, New Mexico at Presbyterian Healthcare Services, a MD Anderson Cancer Network affiliate. She can be reached at (505) 559–6231 or kmitchell2@phs.org.

Disclosure. The authors report no actual or potential conflict of interest related to the topic of this article.

Erika Gergerich, PhD, MSW, has her Master's degree in Social Work and PhD in Public Policy with an emphasis in healthcare. Her social work practice has included work in healthcare with adults experiencing social challenges, mental health concerns, new diagnoses, and addictions. In her current position as Assistant Professor at New Mexico State University, she teaches both undergraduate and graduate students. Teaching interests include Social Welfare Policy, and Social Work with Communities and Organizations.

Bethany Garling-Spychala is a current graduate student at New Mexico State University. Her professional interests focus specifically on early childhood learning and development and school social work. Bethany received her Bachelor of Social Work from Valparaiso University.