

## A Note from the President

*By Angela Lanfranchi, MD FACS*

This year, two studies from Australia and Iran concerning breast cancer risk both cited a study that was made possible by supporters of BCPI. Many thanks to you all! In 2018, *Issues in Law and Medicine* published “Induced abortion as an independent risk factor for breast cancer: A systematic review and meta-analysis of studies on South Asian women”. The funding for its statistical analysis came from BCPI. It is now part of the world’s literature accessible to researchers who are looking for causes of the ever increasing worldwide incidence of breast cancer. The National Cancer Institute (NCI) held a Workshop on reproductive risks in 2003. It came to a faulty and contradictory conclusion that there was no link between abortion and breast cancer. Their conclusion was so strong that the NCI declared that the topic of induced abortion and breast cancer should no longer be studied and funded. This was despite the fact that the NCI during the same workshop acknowledged that premature birth before 32 weeks doubled breast cancer risk. Why should a premature birth before 32 weeks, i.e. the end of a pregnancy with a live baby, be any different in its effects upon the mothers’ breasts than the end of a pregnancy before 32 weeks with a dead baby? Weren’t the mothers’ breasts exposed to the same hormonal changes while pregnant? Didn’t both mothers have more cancer vulnerable breast tissue due to their breasts’ growth by the end of their pregnancies before 32 weeks thereby increasing their risk? None of the mothers benefited from their breast tissue maturing and becoming cancer resistant after 32 weeks. This could not occur without the mothers being exposed to hPL, human placental lactogen, made by the baby who either continued to live or died at the end of their pregnancies. There has been no Federal funding for induced abortion as a breast cancer risk since 2003. However, data keeps accumulating that supports a link even in NCI funded studies. You see, scientists know that induced abortion is a risk for breast cancer. When doing research all known risk factors must



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## Strong USA Data 2003-2017 Finds Cannabis Increases Breast Cancer Risk

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In February 2022, medical researchers from the University of Western Australia, Drs. Reece and Hulse, published in the journal of *Environmental Epigenetics* a large study that used U.S. data from the Center for Disease Control for cancer statistics (SEER data) and from the National Survey of Drug Use and Health for cannabis usage and other variables. The paper was entitled “Geospatiotemporal and causal inference study of cannabis and other drugs as risk factors for female breast cancer USA 2003-2017” and can be found on line without charge at PubMed. They described their findings as robust for establishing cannabis and cannabinoids as a significant risk for breast cancer after adjustment for the effects of other risk factors for breast cancer such

as age, hormonal, sociodemographic and socioeconomic factors. The cannabinoids studied were delta 9- tetrahydrocannabinol (THC), cannabidiol (CBD), and cannabigerol (CBG). Not surprisingly, they reported that breast cancer incidence is higher under “cannabis-liberal legal paradigms”. They also stated that their study showed that usage of cannabis, cannabinoids and alcoholism fulfilled quantitative causal criteria for breast cancer incidence across space and time. Additionally, they found that abortion was independently and causally significant in time-space models.

Although they had found no previous studies investigating cannabis or cannabinoids as a risk for breast cancer, they had found many studies linking cannabis to other cancers. The cancer most closely linked to cannabis exposure is testicular cancer as well as cancer of the head and neck, larynx, prostate, lung, brain and uroepithelium i.e. bladder, kidney and ureters. Importantly, the literature also found data linking cannabis exposure to acute myeloid leukemia whose incidence peaks in the first 5 years of life.



Cannabis was also linked to other pediatric tumors including neuroblastoma, rhabdomyosarcoma and acute lymphocytic leukemia (ALL). It is widely understood that most pediatric cancers result from inherited genotoxic or epigenotoxic abnormalities. The authors felt that investigation into cannabis is especially important because breast cancer is the most common adult cancer and

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## Pay Pal to End on BCPI Web Site

In the April 2022 BCPI Report, we announced that after 20 years of being unable to accept credit card payments or donations, BCPI would use PayPal. Alas, like other large corporations, Pay Pal will be contributing to their employees’ risk of breast cancer by monetarily facilitating their ability to travel for an abortion. As BCPI’s mission is to reduce breast cancer incidence, we will stop accepting PayPal by the end of 2022.



**The Breast Cancer Prevention Institute**  
is a non-profit, 501(c)(3) corporation, with headquarters at  
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be accounted for in both the control and experimental group in order to arrive at a sound conclusion. These known risks are referred to as variables. For example, if the control group had more women in it that had never given birth (resulting in a higher risk for breast cancer) and the experimental group had mostly women who had given birth (therefore at lower risk for breast cancer), the true effect of the risk that was being evaluated in the experimental group would be skewed. Scientists know that induced abortion is a risk for breast cancer and therefore include it as just another variable. For example, in the 2009 Dolle study concerning triple-negative breast cancer, the researchers controlled for all known risks such as hormone replacement therapy, age at menopause, etc. in both the control and experimental groups. In the discussion section of their paper they stated that their research had confirmed what other studies had found: “Specifically, older age, family history of breast cancer, earlier menarche age, **induced abortion**, and oral contraceptive use were associated with an increased risk for breast cancer. Risk was decreased in relation to greater number of births and younger age at first birth. Oral contraceptive use >1 year was associated with a modest increased risk for breast cancer, and among oral contraceptive users only, earlier age at first use further elevated the risk.” The authors noted that abortion increased breast cancer risk by 40% in young women. (Cancer Epidemiol Biomarkers Prev 2009;18(4). April 2009)

I'll end with a quote from Shakespeare's play, The Merchant of Venice, “Well, old man, I will tell you news of your son: give me your blessing: truth will come to light; murder cannot be hid long; a man's son may, but at the length truth will out.” These are the words of Shylock's humble servant, Lancelot Gobbo. Yes, truth will out! It may take a while for the truth to be well-known but with your continued support I believe it will happen.

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ALL is the most common pediatric cancer impacting humans across generations. In other words, parents who used cannabis or cannabinoids had damage to their germ cells, i.e. sperm and ova, that would pass to their children. The children could then pass the defective genes to their children causing the damage to be transgenerational. This was the situation that was also found when women took DES. Not only their children but also both their male and female grandchildren developed cancers and medical problems related to DES use.

The authors controlled for the variables of drugs, including cigarettes, alcohol, and cocaine as well as the reproductive factors of induced abortion, post-menopausal hormonal replacement therapy and hormonal contraception. The authors had no data on age at first childbearing, age of menarche, age of menopause and duration of breast feeding. Socio-economic variables of ethnicity, age and income were used as well as whether cannabis was either medically and/or legally attainable.

The results of their study evidenced a strong relationship between cannabis and cannabinoid exposure (THC, CBG and CBD) and breast cancer incidence. In fact, they stated the relationship “is observed across all six ethnicities studied, persists after spatial and temporal lagging to at least eight years, is evident after inverse probability weighting and is associated with high e-values and may thus be properly said to be causal in nature.” E-values are derived from odds ratios used in relative risk calculations. Unsurprisingly, they also found breast cancer incidence was significantly higher under medical and decriminalized cannabis legal paradigms as well as cannabis-liberal paradigms generally.

In addition to concerns regarding cannabis and pediatric cancers, the authors noted that there have been Australian and Canadian studies linking birth defects such as anencephalus, esophageal atresia and heart malformations to cannabis. One study in the U.S. identified 42 birth defects, including arm reduction defects, as being more common in the highest quintile of cannabis using states. In Colorado there has been a 29% rise in total congenital defects across the period of cannabis legalization.

Another cause for concern is the effect of cannabinoids in food and the food chain. Reports from France where animals can be fed hemp containing cannabinoids, and Germany both show an unexplained spike in congenital limb defects. Contemporaneously, in nearby Switzerland, where cannabinoids are banned from the food chain, there has been no spike in limb defects. In the U.S., foods containing cannabinoids are sold as processed foods. In Colorado, CBD containing cookies, jams and sweets are widely marketed as benign. This past February, organizations warned against hemp in pet food and livestock feed. The American Veterinary Medical Association warned that more studies needed to be done for safety. Despite a Federal ban against hemp as feed, several states have allowed its use for livestock.

The authors also described four pathophysiological mechanisms by which cannabinoids cause damage to humans. One mechanism is through endocrine disruption. For example, it stimulates prolactin levels which have been shown by meta-analysis to increase breast cancer risk. Another mechanism is direct genotoxic effects. For example, THC, CBD and cannabinol have been implicated in chromosomal translocations. In turn, THC and CBG have been implicated in congenital heart defects across the U.S. There has also been transgenerational epigenetic inheritance in both animal and humans. Cannabis use in humans and rats effect several molecular pathways involved in cancer formation. Lastly, cannabis is associated with a shortening of female reproductive lifespan of upto 58% as well as accelerated cardiovascular aging.

There is no doubt that breast cancer incidence will continue to rise with the increasing legalization and use of cannabis and cannabinoids. Regretfully, physicians will add to the numbers of afflicted with their prescriptions for medical marijuana, not unlike their prescriptions for hormonal contraception and hormone replacement therapy.