BREAST CANCER Prevention INSTITUTE

REPORT

April 2019

A Note from the President

By Angela Lanfranchi MD

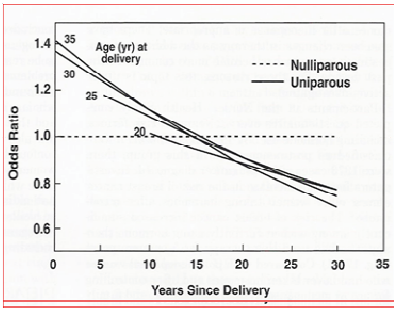

Figure 17—10 *Odds ratios for the risk of breast cancer in uniparous women of various ages at delivery, according to the number of years since delivery. (Lambe M, Hsieh C-C, Trichopoulos D, et al: Transient increase in the risk of breast cancer after giving birth. N Engl J Med 331:5-9, 1994.)*

In this BCPI report, Dr. Brind reviews a study that created a flurry of interest in the popular media and press. The study reported that women had an increased risk of breast cancer after child bearing. As BCPI readers know, this risk only occurs when women have children later in life. We know from studies that the risk of premenopausal breast cancer increases 5% per year for each year that a woman delays her first birth after the age of 20. The graph left, published in a 1994 *New England Journal of Medicine* study done by Lambe, reveals that a 20 year old who gives birth has an immediate reduction in breast cancer risk. Yet a 30 year old won't get risk reduction for about 15 years after birth. In this graph, risk reduction happens when the line goes below the dotted line at the 1.0 or Null Odds Ratio.

In fact a 35 year old who gives birth actually has almost a 40% transient increase in risk immediately post partum compared to a 20 year old which reduces over time. The 20 year old has a short "susceptibility window" while the 30 year old has a longer one. More information can be found on our website under the Resources tab and Fact Sheets: Changes during pregnancy and Breast Feeing https://www.bcpinstitute.org/uploads/1/1/5/1/115111905/fs-changes_during_preg_breastfeeding.pdf.

Dr. Brind's article on page 2 will explain how a study was done that confused these facts and alarmed some of the public that childbearing increased breast cancer risk.

Abortion and the Breast Cancer Epidemic in India

By Angela Lanfranchi MD

Last February 2017, "Epidemiology of breast cancer in Indian women" was published in the *Asia-Pacific Journal of Clinical Oncology*. The review found that from 1982-2005 the incidence of breast cancer almost doubled. They also found women were a **decade younger** than in western countries. Most breast cancers in India occur in women in their 30s and 40s!

In 2018, the Breast Cancer Prevention Institute funded and published in *Issues in Law and Medicine*, "Induced Abortion as an Independent Risk Factor for Breast Cancer: A Systematic Review and Meta-analysis of Studies on South Asian Women." (A meta-analysis looks at separate but similar studies in order to use the pooled data for statistical significance. It is regarded by scientists as very strong evidence.) Of the 20 studies analyzed, 16 were done on Indian women. The meta-analysis found a 151% increased risk of breast cancer after an induced abortion.

According to UNICEF, 27% of Indian women marry by the age of 18. Induced abortion in India is referred to as "Medical Termination of Pregnancy" and was legalized in 1971. Sons are most highly prized and sex selection abortions, although illegal, are not uncommon. A study published in the *Lancet* 2006 and based on conservative assumptions reported that the practice of sex-selection accounts for about 0.5 million missing female births yearly. Over the past two decades this translates into the abortion of some 10 million female fetuses: leading to 10 million absent female babies born to Indian women.

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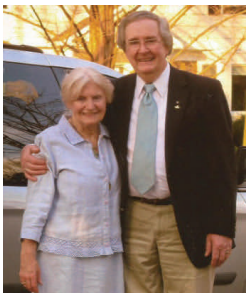
9th Annual Golf Outing Honorees Sean and Marjorie Flanagan

By Bob Gerling



Sean Flanagan came to America in the late 50's from Inchicore, Ireland, a suburb of Dublin. Sean was a working man when he came to America. With the support of his beloved Marjorie, he ultimately built what is today the top-rated Volvo dealership in the country. He and Margie raised 6 children who made them grandparents 30 times over. Faith and family are his deepest devotions.

A modest and generous couple, they support many worthwhile charities, including their most generous support of BCPI. Their generosity allowed BCPI to create a new updated website.

In addition to the gifts of faith and family, Sean has the wonderful gift of Irish prose and a great memory for profound quotes and great jokes. He may provide us with some of his wit during dinner. I am so blessed to be able to call them friends.

Please come for a round of Golf or join us for a 5 PM dinner in the Clubhouse at Cranbury Golf Course for the camaraderie and to honor Sean and Marjorie Flanagan.

Save the Date

Mark your calendars!
The next BCPI Annual Golf Outing will be held on June 7, 2019.
Please plan on joining us!

Celebrating 20 YEARS

BCPI—formed in April 1999.
Look for more information about our history in BCPI's October Report.

The ***Breast Cancer Prevention Institute*** is a non-profit, 501(c)(3) corporation, with headquarters at
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Breast Cancer after Childbirth

By Joel Brind, PhD

In December of 2018, there was big news in breast cancer research: An article in the very prestigious *Annals of Internal Medicine (AIM)* heralded the increased risk of breast cancer after having a baby! It sure seemed like big news, going against the prevailing wisdom from worldwide breast cancer research going back almost 50 years, that having a baby ***lowers*** a woman's future risk of breast cancer.

In fact, that full-term pregnancy transiently increases the risk of breast cancer for about 15 years after the last childbirth was established a quarter century ago. But this transient risk increase only applies to women who have their first child at age 25 or older, and is far outweighed in the long run with a decreased long term risk of breast cancer.

The new study by Hazel Nichols et al. of the University of North Carolina (UNC) would therefore appear to be not really news. What is new about it is that a.) It is an extremely large meta-analysis of 15 studies comprising almost 900,000 women from the US, Europe and Australia, and almost 19,000 cases of premenopausal breast cancer; and b.) It found that the transient risk increase for breast cancer lasts for an average of 24 years after the last childbirth — almost a decade longer than previously thought.

So whence the discrepancy between the Nichols study and prior research? What accounts for that additional decade of increased risk attributable to childbirth? The answer lies in a key difference in the study populations: The existence of the transient risk increase had been established by studies that were limited to women with one or two children. But Nichols et al. used data from women with any number of children, compared to women with no children, and the data were stratified by number of births into 3 groups: 1 child (uniparous), 2 children (biparous), or 3 or more children (multiparous).

Interestingly, the data for women with one or two children agree perfectly with earlier studies, with the transient risk increase lasting for an average of 18.5 years for uniparous women and 14.8 years for biparous women. It is only for the multiparous women that the transient risk increase goes out to 25 years, a finding which skews the overall data, presumably because the multiparous women comprise the largest segment of the study population.

But why does the transient risk increase last longer for multiparous women? The answer is to be found in a very key aspect of the methodology: The authors ignored abortion. Not that this is unusual in this line of research, for the previous studies ignored it also. But in the case of uniparous and biparous women it does not make a meaningful difference in the results. That's because women with only one or two children typically do not have any abortions after they have their child or children, abortions among such women having taken place before they had a full-term pregnancy.

But for multiparous women, particularly in many countries in Europe, abortion is used to limit family size after a woman has had 3 or more children. And as noted above, in the Nichols study, abortions were not taken into account. Why does this matter? It matters because the mechanism for the transient risk increase after childbirth is attributable to the pregnancy hormones' stimulation of the breasts to grow, and thereby stimulating the growth of already abnormal tissues that have formed previously in the breast, into actual malignant tumors. And that stimulation happens during the first trimester, before most abortions are done. So essentially, the transient risk increase is really a result of ***any*** pregnancy, as long as it is hormonally normal, as most electively aborted pregnancies are. Therefore, for every woman in the Nichols study (We don't know how many, but there are many.) who had an abortion after her last childbirth, the interval between last childbirth and breast cancer diagnosis is much longer than the really meaningful interval, i.e., that between her last ***pregnancy*** and breast cancer diagnosis. In other words, the effect of increasing breast cancer risk after an abortion is mistaken for the transient increase in risk following childbirth.

To take a simple example: Suppose a woman has 3 children by the time she is 30, finds herself with an unwanted 4th pregnancy at the age of 40, and aborts. If she is diagnosed with breast cancer at age 50, that would be 20 years since her last childbirth, but only 10 years since her last pregnancy. According to the reported findings of the Nichols study, such a woman would have fallen victim to the not-so-transiently increased risk attributable to her last childbirth, when in fact it would be attributable to her aborted pregnancy. The false conclusion is due to abortion's not being considered at all, in the epidemiologic study, even though the authors claim to have included the participants' "reproductive history" in assessing their breast cancer risk.

Nevertheless, there is something in the way of a positive contribution to understanding the mechanism of breast cancer development provided by Nichols et al. in their discussion. They cite several references in the context of the "postpartum breast microenvironment." Specifically, when the excess breast tissue that has been stimulated by the pregnancy hormones to be formed during the pregnancy is reabsorbed (i.e., dies and involutes, after delivery or, for that matter, after induced abortion), there is a microenvironment characterized by inflammation, which favors the progression of what is called "carcinoma in situ" to invasive cancer. As a cancer researcher myself, I have come to agree with the view that not only breast cancer in particular, but cancer in general, is rooted in chronic inflammation that results from a nutritional deficiency of the simple amino acid glycine. More on this in future *BCPI Report* articles.

Abortion and the Breast Cancer Epidemic in India

(Continued from page 1)

We know from the biology of cancer growth that it takes approximately 10 years to develop a detectable breast cancer after the cancer starts. In 2014, published in *Issues in Law and Medicine*, an analysis in the paper "Breast Cancer and Abortion" revealed that breast cancers were increased 10-14 years after an abortion. This analysis was concordant with the known biology of breast cancer. There was no statistically significant increase in breast cancer risk before 10 years and after 14 years of an abortion.

These facts, that Indian women marry at younger age than most Western countries and that many abort pregnancies that are female in order to have a male child could account for the younger ages in which breast cancer occurs in women.

India's burden of breast cancer is ever increasing and now impacting 1.5 million women a year. It is the leading cause of cancer deaths in women. Breast cancer in young women cuts to the heart of the family leaving young children without mothers and husbands without wives. Sex-selection abortion leading to abnormal male:female ratios results in a disordered society of men without a female spouse. We can only hope that education and changes of heart will lead to better outcomes for both women and men.