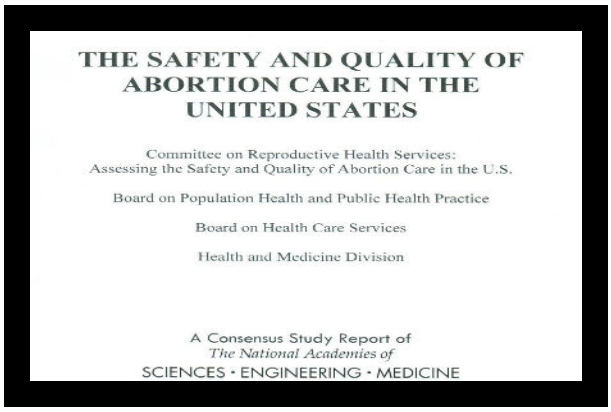
March 2018 National Academy of Sciences Consensus Report

Rife with Errors



In a single page, relying on 3 studies done after 2000, the report concluded there was no risk of breast cancer after abortion. This is despite the facts that, even without studies demonstrating induced abortion is an *independent risk* for breast cancer, a pregnant woman who chooses an induced abortion to end a pregnancy is at increased risk for breast cancer by virtue of these well known and accepted facts: 1) she denies herself the risk lowering effect of a birth; 2) she has fewer pregnancies, necessarily delays her next pregnancy or may remain nulliparous(childless); and 3) she increases her risk for preterm birth in her next pregnancy, which if it occurs before 32 weeks doubles her breast cancer risk.

The 3 studies they chose were the 2000 Newcomb, 2001 Goldacre and 2005 Brewster studies, thereby eliminating 25 statistically significant studies done from 1957-1999.

In the **Newcomb** study there were only 23 women with an abortion history and 138 cases of breast cancer. The authors admitted that the women in the study may have had abortions outside of the HMO records they used for the study. No time frames were used so an abortion could have occurred 1 day, 1 month or 1 year before a cancer diagnosis. We know it takes an average 8-10 years for detectable tumor to develop after an abortion. The authors also cautioned in their paper **"Some limitations of this study should be considered in interpreting our results."**

In the **Goldacre** study the authors state**, "Our data on abortions are substantially incomplete because they only include women admitted to hospital, only include those in the care of the National Health Service (NHS), and only in the time and area covered by the study."** In fact, a mere 300 of the 28,616 cases included in Goldacre (women diagnosed with breast cancer between 1968 and 1998) were classified as having a history of induced abortion— amounting to barely 1 percent of cases over a 30-year period of abortions done in the U.K. Induced abortion is usually an outpatient procedure and most young adults have insurance outside of the NHS.

In the 2005 **Brewster** study, the authors state they included women "**with *all* reproductive events occurring from 1981 onwards[, and] ... with *some* reproductive events occurring before 1981, and**

number of pregnancies equaled number of births— that is, no miscarriages or induced abortions before 1981 (note age at first birth was unknown). Furthermore, the analysis of the ordering and timing of women's reproductive events compares nulliparous(childless) aborting women, parous(given birth) aborting women, and women the sequence of whose abortions and pregnancies are unclear to a reference category of women with "no abortion," without specifying whether these women are parous or nulliparous. Combining non-aborting nulliparous women (who generally have increased breast cancer risk) and non-aborting parous women (who generally have low breast cancer risk) would produce a non-aborting cohort with a breast cancer risk elevated over that of the ideal reference group. This elevated risk would mute the risk associated with abortion, by comparison. The authors stated**, "The important weakness of the study relates to missing data on miscarriage and induced abortion status and potential confounding factors for a substantial proportion of the original study population."**

RECALL BIAS – A canard

The NAS impugned case control studies with recall/reporting bias and so relied on studies using records as being superior. Yet when looked for in studies, the reality of recall bias could not be verified.

*Recall bias means women **without** cancer will under report (deny) abortions* so abortion only "appears" to increase breast cancer risk and *those women **with** cancer will tell the truth and admit to abortions*. Yet the very studies the authors cite as supporting recall bias do not support its existence.

The 1991 Lindefors-Harris study compared what women reported their abortion status was on interview and what computerized abortion records reported. It concluded that women "over-reported" their abortions, i.e. they said they had abortions when they didn't have any because the computer records must be correct!!!!! That was the ONLY statistically significant finding in the study. The Lindefors-Harris study is cited by the NAS as giving credence to recall bias. Yet it found that women with cancer and without cancer both underreported their abortion in similar percentages; 21% (5 out of 24 women with cancer), and 27% (16 out of 59 women without cancer) respectively a difference of 6% between the groups.

The 2007 Jones & Kost study was done that compared a woman's survey (self-written history) with their interview results, and there was very little difference between the two. When comparing women with an induced abortion and those with natural pregnancy losses *there was also little difference between the two*.

The assumptions made by the study were 1) that women would truthfully report pregnancy losses such as miscarriages, but be more likely to deny induced abortions and 2) that women would admit to abortions when they could privately write it down and more likely to deny induced abortions on face to face interviews.

Out of a total of 7,575 women studied, 6,154 reported having **no induced abortions** on both interview and survey while 19 reported having one or more induced abortions in the survey only. In other words, **only .3% denied having an abortion**.

This was similar to the group of pregnancy losses (miscarriages, ectopics, and still births) with a total 5,825 women reporting no pregnancy losses on interview and survey, while 29 women reported losses on the survey, a **.4% denying a pregnancy loss**.

Out of a total of 889 women, 767 reported **one abortion** on both interview and survey and 113 reported no abortions on interview or **only 12% denied having an abortion.**

In regards to pregnancy losses, (miscarriages, ectopics, and stillbirths) out of 1,129 women 991 reported one loss on interview while 122 reported no losses on survey, or **only a 10% denied a pregnancy loss**.

Regarding **two induced abortions or pregnancy losses** 20% in the abortion group and 24% in the pregnancy loss group gave inaccurate or conflicting reports, **only a 4% difference between groups.**

HUMAN BREAST MATURATION: WHY INDUCED ABORTION NECESSARILY INCREASES CANCER RISK

- The protective effect of a full-term pregnancy on breast cancer risk has been known since the Middle Ages when it was noted that nuns had a higher risk of breast cancer than women with children. In the18th century the protective effect was observed and published by Ramazzini of Padua in 1743.

- Today we know the molecular basis of protective effect of a full-term pregnancy. Many cancers originate in stem cells in the breast. Having a full-term pregnancy reduces the number of stem cells in the breast, thereby reducing breast cancer risk
- It is not until pregnancy and lactation that they (CK8/18 stem cells) undergo terminal differentiation to become secretory end cells." Terminally differentiated cells do not form cancers.

Medical authorities agree the following 4 medical facts necessarily cause a pregnant woman, who chooses to end her pregnancy by abortion, to increase her risk of breast cancer.

- That a full-term pregnancy lowers a woman's risk of breast cancer.
- That each additional pregnancy further lowers her risk by 10%.
- That for <u>each year</u> after age 20, a woman who delays a full-term pregnancy, increases her risk of premenopausal breast cancer by 5% per yr and postmenopausal breast cancer by 3% per yr

- That induced abortion increases the risk of premature birth which in turn increases breast cancer risk if it occurs before 32 weeks

A woman has an unplanned pregnancy.

- **If she chooses to continue her pregnancy and has a full-term pregnancy, or one that lasts at least 32 weeks, she will lower her risk of breast cancer.**

OR

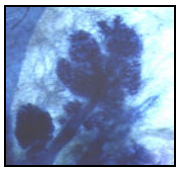
- **If she chooses to end her pregnancy with an induced abortion, she will necessarily have an increased risk of breast cancer because:**

1. **She will lose the benefit of a full-term pregnancy.**
2. **She will delay a full-term pregnancy or have no or fewer full-term pregnancies.**
3. **She may have a premature delivery before 32 weeks of another pregnancy.**

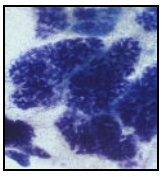
<u>Breast maturation with pregnancy</u>

- **Type 1 lobules mature into Type 2 lobules under the cyclic influence of the female hormones, estrogen and progesterone, during menstrual cycles after puberty**
- **Type 2 lobules only become fully mature into Type 4 lobules which produce milk under the influence of the hormonal changes of a full-term pregnancy.**
- **Type 4 regress to Type 3 after weaning.**

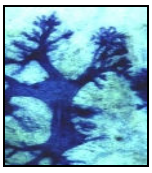
Type 1 forms ductal cancers



Type 2 forms lobular cancers



Type 3 NO Cancer



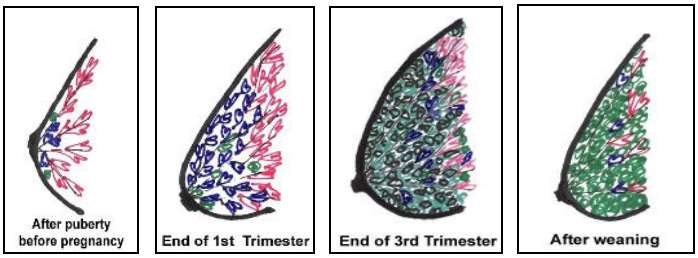
Ductal cancers are about 85% of all cancers and lobular cancers are about 10-15% of all breast cancers

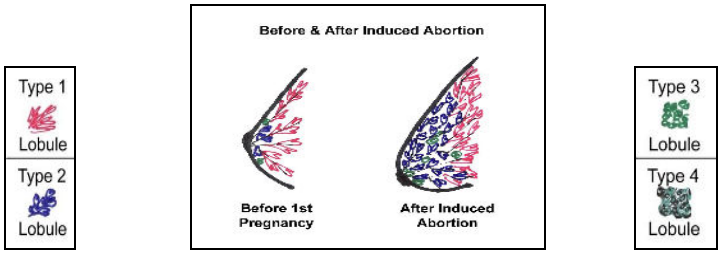
1st half of pregnancy Breast volume doubles by increasing the number of Type 1 and 2 lobules
Proliferation (cancer vulnerability)

2nd half of pregnancy Maturation to Type 4 lobules

Differentiation (full terminal differentiation confers cancer protection)

A terminally differentiated (TD) cell is defined as one that, in the course of acquiring specialized functions, has irreversibly lost its ability to proliferate. However, new research shows they cance be "reprogrammed" and then divide and form cancer





After an induced abortion THERE ARE MORE PLACES FOR CANCERS TO START

The longer the pregnancy proceeds before abortion, the greater the number of undifferentiated lobules are left and the higher the risk. (Approximately 3% increase risk for each week of gestation) *(Melbye's 1997 and Daling's 1994)*

In a study by KUNZ and P.J. KELLER Department of Gynaecology and Obstetrics University of Zurich, Switzerland they found: Women who spotted blood while pregnant had **spontaneous abortions** if their **estrogen levels were found to be low**. If their estrogen levels were **normal**, they did **not**.

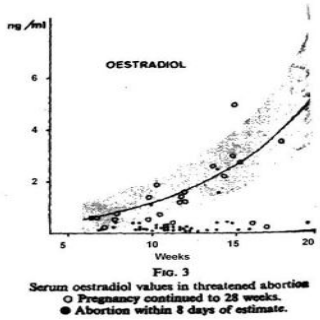
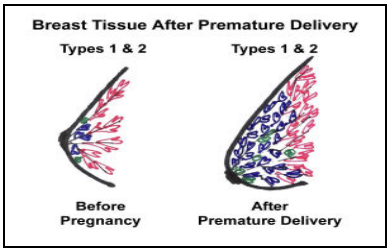


FIG. 3
Serum oestradiol values in threatened abortion
○ Pregnancy continued to 28 weeks.
● Abortion within 8 days of estimate.

Because most 1st trimester spontaneous abortions have low hormonal levels, there is no increase in breast cancer risk

Because most 2nd trimester spontaneous abortions have normal hormone levels, there is an increase in breast cancer risk (eg. Fetal demise with umbilical cord around neck or MVA)

Premature births before 32 weeks also cause an increase in breast cancer risk



Premature births before 32 weeks more than doubled the risk of breast cancer. The breast tissue has not gone through differentiation into Type 3 & 4 lobules

Premature delivery, *the delivery of a live infant*,
IS <u>NO</u> different physiologically in its effect on the mother's breast than Induced abortion, *the delivery of a dead infant*.

For each year a woman delays her pregnancy after age 20: she increases her risk of premenopausal breast cancer 5% per year
post menopausal breast cancer 3% per year.

<u>Bradford Hill Criteria</u>

In 1964, the US Surgeon General applied the newly developed 9 *Bradford Hill Criteria* for causality to the cigarette lung cancer link epidemiologic studies to warn the public.

These same criteria have been fulfilled by the world's epidemiologic studies of the abortion breast cancer

1. Timing:
The patient must be exposed to the risk before the cancer

2. Similar findings in many studies
60/76 studies worldwide; 19/24 in the US associate abortion and breast cancer

3. Statistically significant increases in risk
36 studies worldwide; 9 US are statistically significant

4. Dose effect: The risk should become higher with more exposure to the risk
The longer the pregnancy before abortion, or the more abortions, the higher the risk,
e.g. 1994 Daling Study, 1997 Melbye Study

5. A large effect observed (RR>3)

e.g. 1994 Daling Study for subgroups of teens, over 30, and family history all with over 200% increase risk; there was an 800% increase risk in 18 yo and younger between 9-24weeks

6. Causal association is biologically plausible

Elevated estrogen levels in pregnancy leaves the breast with increased numbers of Type 1 and 2 lobules where cancers form without the benefit of full maturation to cancer resistant Type 3 lobules

7. Experimental studies

1980 Russo and Russo study on virgin, aborted and parous rats; aborted rats had highest incidence

8. **Coherence natural history and biology of breast cancer** Breast cancers caused by abortion are found after 8 to 14 years and average cancer cell growth takes 8 to 10 years to be clinically detectable

9. **Analogy – similar exposures associated with similar effects** Premature delivery before 32 weeks doubles breast cancer risk

Epidemiological Studies from 1957 to 2018

76 studies differentiating induced from spontaneous abortion
60 studies show a positive association and
36 studies are statistically significant to the 95th percentile.

List at https://www.bcpinstitute.org/resources---fact-sheets.html

Europe

Study by Patrick Carroll in the Journal of American Physicians and Surgeons 2007

Table 2. Summary: Forecast Cases of Breast Cancer and DCIS

	Cancers						In Situ Cancers					
	Base Year	2005	2010	2015	2020	2025	Base Year	2005	2010	2015	2020	2025
England & Wales	39229	40018	45529	51849	58567	65252	3827	3848	4373	5074	5765	6319
Scotland	3917	3963	4482	5058	5639	6177	333	345	392	450	502	537
Northern Ireland	1117	1137	1256	1382	1508	1626	87	87	99	111	119	122
Republic of Ireland	2336	2336	2560	2883	3222	3601	163	163	178	200	223	248
Sweden	7293	7777	8519	9288	10096	10895	950	981	1077	1177	1281	1384
Czech Republic	5449	5596	6200	6804	7561	8412	248	258	278	300	334	372
Finland	3794	3824	3931	4005	4024	4045	-	-	-	-	-	-
Denmark	3952	4043	4175	4325	4452	4533	-	-	-	-	-	-

In 9 countries with computerized cancer and abortion registries, abortion was the greatest predictor of breast cancer rates.

Romania

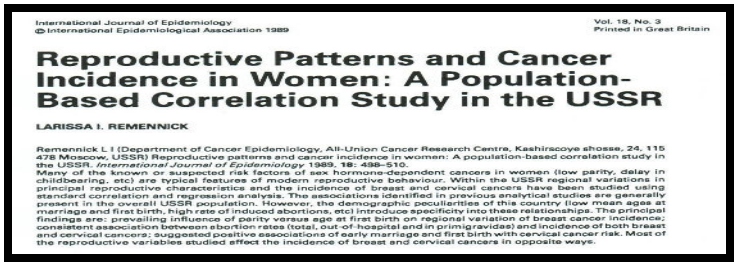
Under Ceausescu, abortion was illegal. Romania had one of the lowest incidences of breast cancer in Europe. In 1989 he was shot and abortion legalized. In one year abortions increased 5 times to 992,256/yr. Romanian breast cancer incidence doubles from 25/100,000 to 51/100,000 a year. Breast cancer goes from 7% to 23% of all cancers.

China

1979 China develops "One-Child Policy" which includes forced abortion and
marriage not permitted before age 25. Since 1983, breast cancer incidence rose in China.
Since 2003, in Shanghai incidence rose 31% to 55/100,000 women
in Beijing, incidence rose 23% to 45/100,000 women

USSR

1989 study USSR abortions 1960-1987



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Reproductive Patterns and Cancer Incidence in Women: A Population-Based Correlation Study in the USSR

LARISSA I. REMENNICK

Remennick L I (Department of Cancer Epidemiology, All-Union Cancer Research Centre, Kashirscoye shosse, 24, 115 478 Moscow, USSR) Reproductive patterns and cancer incidence in women: A population-based correlation study in the USSR. *International Journal of Epidemiology* 1989, 18: 498–510.
Many of the known or suspected risk factors of sex hormone-dependent cancers in women (low parity, delay in childbearing, etc) are typical features of modern reproductive behaviour. Within the USSR regional variations in principal reproductive characteristics and the incidence of breast and cervical cancers have been studied using standard correlation and regression analysis. The associations identified in previous analytical studies are generally present in the overall USSR population. However, the demographic peculiarities of this country (low mean ages at marriage and first birth, high rate of induced abortions, etc) introduce specificity into these relationships. The principal findings are: prevailing influence of parity versus age at first birth on regional variation of breast cancer incidence; consistent association between abortion rates (total, out-of-hospital and in primigravidae) and incidence of both breast and cervical cancers; suggested positive associations of early marriage and first birth with cervical cancer risk. Most of the reproductive variables studied affect the incidence of breast and cervical cancers in opposite ways.

Conclusion by author:
"The most important statistical determinants of both breast and cervical cancers in USSR are low parity and high prevalence of induced abortions- demographic features of three-quarters of the population of this country." Incidence breast cancer increased from 1960-1987Incidence abortion increased with legalization from 1955

USA

Abortion was legalized USA 1973 and
Breast Cancer Incidence has risen since 1975
According to SEER data: 1975-2000 Invasive cancers increased 30%
1975-2000 In-Situ cancers increased 400%
Cumulative Lifetime Risk goes from 1 in 12 to 1 in 8 women since 1975

South Asia: India, Bangladesh, Sri Lanka, Pakistan

2018 meta-analysis of 20 studies, 15 of which were from India, showed a 151% statistically significant risk for breast cancer with abortion. In India, where almost 1/3 of women marry by 18 years and sex selection

abortion results in 500,000 female deaths per year, breast cancer occurs a decade younger than in western countries. Most Indian breast cancers occur in women in their 30s and 40s

Angela Lanfranchi MD FACS, President, Breast Cancer Prevention Institute www.bcpinstitute.org