

The past year has seen not just catastrophic oilleaks, earthquakes and thus marine and [radiation&nbsp;disaster](#) across the world, but also in Big-Business -driven campaigns to promote invasive radiation screening mammography. Is the Disease-industry-driven screening xray mammography tsunami fearmongering to inflate the \$trillion cancer industry? A tsunami is an overwhelming and non-tidal deluge. What does the screening mammogram xray deluge for ever-younger women bode for their later years?

Any intelligent consumer, not just a specialist for 40 years, should look very critically at all technology marketing and products, and ignore most as unjustified.

[Winifred Cutler from the Athena Institute](#) writes this month: it is claimed that screening xray mammography and early treatment of silent breast (pre)cancer has greatly reduced breast cancer mortality. But she points out that such mortality has also fallen in unscreened women, and given the incidence of overdiagnosis, “*the adjusted mortality reduction that can be attributed to widespread xray mammographic screening may be even more modest than reported by Kalager and colleagues: instead of the 7.2 reduction per 100,000 person-years that they report, a number somewhere between 5.99 and 5.54 should be compared to the 4.8 reduction per 100,000 person-years found in non-screened women. Hence, between 80% (4.8/5.99) and 88% (4.8/5.54) of the reduction in mortality may be attributable to issues other than mammogram screening*”.

Another paper this month reviews “[Antidepressants and breast and ovarian cancer risk &nbsp;and researchers' financial associations with industry](#)

” – concluding that “

*Researchers with industry affiliations were significantly less likely than researchers without those ties to conclude that ADs increase the risk of breast or ovarian cancer. (0/15 [0%] vs 20/46 [43.5%] (Fisher's Exact test P*

*= 0.0012).*”

ie in studies independent of ASD manufacturers, there is strikingly significant increase in breast cancer risk in those on antidepressants. With all the focus on the overblown risk of womens' cancers, and the oft-reported discomforts and recalls from screening xray mammography, no wonder that depression and breast cancer risk may be increased not just by stress (including the dreaded annual mammogram) but more so by estrogenic ADs .

In view of the controversies about both necessity for well-breast screening, and patient complaints and cost-benefit doubts about xray mammography, we consider two of the options that radiologists dont generally offer – thermography recommended by a recent patient with her thermography report, and tactile pressure-transducer mapping recommended and used by

CANSA the Cancer Association of South Africa, and the breast clinic at Newcastle-on-Tyne University.

Both equipment technologies are approved in eg USA/ UK/ Europe/ Australia, and have been screened and not disapproved by regulatory authorities since the latter have no experience of such, and they are approved overseas, and there are no usage hazards, and as yet no standards locally, and no claims are made about their efficacy for diagnosis, prevention or treatment.

Thermography is used in clinics around South Africa; while pressure transducer tactile breast mapping is recommended and offered by CANSA for the poor in the main centres. In Gauteng one radiologist does ultrasound followup in the ~10% of breasts where cancer cannot be confidently excluded.

There are obviously at least three major separate issues:

1. REAL RISKS OF COMMON CANCER? Is the risk – incidence and mortality- of presymptomatic cancer in well patients without genetic risk of developing breast or prostate cancer high? and does early detection of presymptomatic breast or prostate cancer in patients not at high risk do more good than harm? Careful analysis of all available unbiased data suggests not- in fact such early diagnosis possibly does more harm than good.

2. RISKS OF REPEATED INVASIVE XRAY SCREENING: are the risks of breast cancer increased by repeated xray screening?

3. IS ANY MAMMOGRAPHY METHOD TRULY SUPERIOR OR MORE RISKY? Are the alternative screening mammography options- MRI, tactile mapping, thermomammography, ultrasound- significantly different from each other and from invasive xray compression mammography in risks and in sensitivity/ specificity? The evidence suggests that thermomammo, MRI and tactile mapping are safer and more sensitive and specific than xray mammography, and more sensitive than ultrasound as primary screening.

BACKGROUND: *Screening* in medical practice thirty years ago used to refer to xray fluoroscopy – viewing through a fluoroscope screen- as is done of passengers at airports; but now refers to any preventative ie screening tests for silent undetected early disease. The most validated *screening* for cost-benefit – apart from taking a complete history- remains objective ie electronic bloodpressure monitoring.

However, is there still justification for ever exposing younger healthy tissue- especially the thyroid, breasts and gonads- to repeated preventative invasive xray “screening” under any circumstances including for mammography and bone densometry? Especially not children, and especially not well younger (pre or peri)menopausal women with already fluctuating endogenous estrogen dominance, who now with safe lifestyles have an average life expectancy ahead of them of perhaps 40 years. And when so many older middle-aged women simultaneously have been exposed needlessly to long-known carcinogenic smoking, alcohol and other oral estrogens- soya, psychotropes, estrogens and progestins- recent use of oral contraceptives increases the risk of breast cancer.

The ongoing argument for and against screening [is hotly debated](#) by specialists opposed by the vested interest of the Screening Industry.

XRAY MAMMOGRAPHY: A Sherbrooke University Quebec paper published in 2011 seems unique- *Irradiation (30Gy) of normal mouse tissue increases by some **30fold** [the invasiveness of subsequent subcutaneously injected induced mouse breast cancer cells](#) after*

### **6 weeks**

. There is nothing like it before on Pubmed nor apparently on Google – that recent normal-thigh irradiation vanquishes cancer resistance. This may explain why breast cancer incidence, and mortality, may be the same, if not higher than in non-screened women after 10 years of regular xray screening mammography of healthy breasts (the Norwegian and Danish studies of last year- see below) . The mouse irradiation study tries to simulate with one-off irradiation the situation in women who have breast cancer removed and then a course of fractionate radiotherapy – which may eradicate most existing cancer but promotes fibrosis, but may promote growth of metastatic cancer cells into surrounding previously cancer-free subcutaneous tissue. This correlates with the shrunken hard breast we see in women who have had breast cancer excision and then breast radiotherapy.

Whether this applies to repeated (bi)ennial screening xray mammography of “well” breasts over many years with perhaps a few milliGy of diagnostic xray each time remains to be clarified. [Ruth Kleinerman’s followup](#)

of children does suggest possible risk, that modest irradiation for diagnostic or therapeutic purposes with 0.1 to 0.7Gy increases breast cancer risk up to 2.5fold a decade to fifty years later.

**This especially when the breast sceening industry claims that breast cancer lifetime risk is already above 10% eg 1 in 10, and increases with aging.**

**And correlates with work 30 years ago - [Brian Henderson ea](#) San Fransisco -that even 'modest' dose of another indisputable secondary carcinogen – oral ie megadose xeno-estrogen-progestin eg PremPro – started soon after menopause- progressively increases breast cancer risk when continued ie > 1500mg premarin for much more than a decade . .**

Are women reaping the harvest of liberal combined (post)menopausal oral (in North America, mostly (xeno)-estrogen therapy – ERT – since the 1990s – ie to women born after WW2 – with liberal screening mammography? - “a social obligation” according to xray-screened British women recently canvassed by [Frances Griffiths ea](#) .

Have either of these universal prescriptions for women ever been justified by independent longterm (ie well over 10 year) cost-benefit trials? since the 1980s Canadian Breast Screening Trial ( [1990 Brian Miller ea](#) ) cast doubt on the benefit over 5 years of Xray screening mammography . .

A practicing USA radiologist like [Dr Jeff Dach](#) argues realistically against all such screening based on the evidence. . He says, 'just switch off the *screening* imaging machines, stop calling *ductal carcinoma in situ* of the breast a cancer.' This may enrage radiologists offering screening xray mammography, and breast surgeons specializing in early breast cancer surgery.

IS RISK INCREASED BY XRAY SCREENING? OVERDIAGNOSIS BY XRAY MAMMOGRAPHY SCREENING? Despite numerous modelling studies trying to *theorize – model* the safety of xray mammography, eg from [Netherlands](#) and

### [Canada](#)

#### [a Spanish study](#)

has just confirmed that breast cancer is overdiagnosed by screening mammography by almost 50% in younger women so screened. This bears out the observed greater Danish decline in overall mortality after about a decade (2%) in those

*not*

screened than in those screened (1%) by

#### [Jorgensen Zahl and Gotzche](#)

; and the lack of decline in incidence of breast cancer over the decades from screening mammography in the English-speaking continents, Sweden and Norway, documented by [Jorgensen and Gotzche](#).

These studies contrast with other studies quoted by the mammography industry. Each group disputes the statistics of the other. .

The recent review in [NEJM by Kalager ea](#) of screening xray mammography in Norway similarly showed that such repeated breast screening irradiation if anything saves 1 in 40 000 lives from breast cancer, and barely reduces the longterm risk of breast cancer- contrary to what the dominant Xray Screening Industry would have us believe the past 20 years. .

But as [Welch's accompanying editorial](#) on Kalager's Norway study points out, (*and sent by the South African Menopause Society January 2011 email Menopause Matters newsletter*) “*The risk of a 50 year old woman dying from breast cancer in the next 10 years of her life is 0.4% (or 40 per 10 000) – this calculation includes (xray) screening. Put in the obverse frame of reference 9 960 per 10 000 will not die from such cause. Screening contributes 10% to this survival so without screening 9 956 women will not die. The number of lives saved by screening is thus 4 per 10 000 women per 10 years of screening. Using “numbers needed to treat” 2 500 women would need to be screened for 10 years to save one life. This is the benefit of screening. The harms are what happen to the 2499 women who are screened that do not die. Depending on screening techniques roughly 1 000 of the 2 499 (ie 40%) can anticipate a false-positive and some sort of recall for further screening □ This number rises with the frequency of mammography and is here calculated on screening every 2 years. Over-diagnosis and over-treatment is more sinister and would occur in 10 of the 2 499 survivors. This is needless (iatrogenic) treatment of a condition that was never going to bother them. False-positive diagnoses and over-treatments are the harms of screening.”*

Is there any objective evidence for the marketing slogan of the American Radiological and Breast Surgeons' Associations- and the Curves International website- that *Screening Xray Mammography Saves Lives*

– in order to promote the \$8billion a year xray screening mammography industry and the \$trillion a year cancer industry?

And it needs to be stressed that the above concerns about screening mammography are directed at XRAY mammography, since due to heavy marketing and promotion, Xray mammography is the only mammography method in use in all papers and studies of widespread primary screening of well breasts in women not at high risk from eg family history, previous cancer or already having breast lump or bleeding or pain.

**It may be asked again: what male doctor would have biennial let alone annual crush xray imaging of his testes from age 40years to reduce his theoretical risk of silently developing testicular cancer, even if the hypothetical risk were 1 in 10?**

**THERMOGRAPHY:** A [practicing academic gynecologist](#) speaks for thermomammography from good experience for years. Whether his experience and opinion is more or less valid than that of [breast surgeons](#) who claim they can run and report xray mammography machines without a radiologist is as usual a matter of hotly divided opinion.

Far more important is that recent trials from [Cornell](#) , [Cambridge](#) UK and [Shanghai](#) universities speak for the comparable effectiveness of thermography

**COMPUTERIZED TACTILE PRESSURE TRANSDUCER BREAST MAPPING** has evolved over the past decade, with applications in prostate and colorectal cancer mapping heavily funded by US Govt agencies. It ( computerized palpation tactile pressure mapping of breasts eg SureTouch) has been validated by academics such as

[Prof Cary Kaufman](#)

and in controlled studies,

[at least eight](#)

the past decade eg at the Newcastle on Tyne Breast Clinic by

[Prof Clive Griffith](#)

and team (paper under peer review by the British Journal of Surgery). A recent abstract from Griffith(2009) describes

*study of 137 patients at a UK NHS breast clinic, 66 of whom had palpable breast masses.*

*Seventy-seven of these were chosen at random to have a SureTouch examination in addition to CBE. Use of SureTouch reduced the percentage of missed lesions by senior and junior surgical trainees. The reproducible reports allowed efficient review by examiners with various levels of experience. Authors state that SureTouch imaging improved patients' safety in breast clinic and likely had a role in the training and assessment of surgical trainees.*

All the above options are now accepted in many western countries including South Africa, for both screening and diagnostic breast imaging, since the evidence supports each of the options.

**DEFINITION OF WHAT CONSTITUTES OPTIONS FOR MAMMOGRAPHY:** It is common sense that equipment methods involving the prefix/suffix

*gram eg*

ECG/ EKG/EEG/ spirogram/ renogram/ gramradio often dont involve xrays. Equally, there are many established useful reliable alternative types, options for imaging the heart/lung/ breast.

Neither the pre/suffix 'gram' nor the prefix 'mammo' are exclusive to the

*xray*

breast image, there are many established comparable modern breast imaging techniques from *physiological*

-

[thermomammography](#)

which reflects temperature ie bloodflow, – to

*anatomical*

eg xray, ultrasound; magnetic resonance; and the past decade to computerized palpation tactile pressure mapping (eg SoftTouch). This is despite

[van Steen and Van Tiggelen's](#)

semantic illogic in regarding only xray breast imaging as

*mammography*

in their 2007 Belgian History of Mammography. Already i

[n 1999, the Dutch](#)

used

*mammography*

interchangeably for both xray and ultrasound screening. But the earliest apparent Pubmed reference to

[ultrasound mammography](#)

is in 1982.

:-

**RISK OF BREAST (AND PROSTATE) CANCER:** it is common cause that in a first world population- where most die of “natural” degenerative aging diseases rather than classic malnutrition, plagues, exposure and violence - these cancers cause about 4% of all deaths. But

most sufferers do not die from these cancers. Hence their *clinical* occurrence over a lifetime may be around 10% risk ; although silent – never suspected- cancers may be found in far more people at autopsy. .

With routine repetitive xray mammography screening, the annual risk of breast cancer detection is generally reported to be about 6 per thousand.

But Winifred Cutlers' influential Athena Institute group from USA and Switzerland recent study [\*Breast cancer in postmenopausal women: what is the real risk?\*](#) concluded that regular xray screening of well not-at-high risk breasts, *in the 18 published major studies without obvious vested interest bias* involving over a million women screened, the annual incidence is more like 1 in a thousand. Her group questions the bias, data massage of SEER statistics to inflate ie fearmonger. They thus question the cost-benefit of repeated xray screening of *all older women from midlife* to find 1 silent cancer in every thousand women- many of which cancers may be overdiagnosis since without intervention many will never present clinically diuring lifetime..

But it is also common cause that, apart from those with strong genetic risk (at least 2 close relatives who get one of the five hormonal cancers young ie prostate, colon, breast, ovary and womb), the risk of cancer lifelong may be 10% or less since without screening, many never present during lifetime and are found incidentally at autopsy. There are many putative avoidable – preventable- causes: obesity, diabetes and bad food choices; and drugs- alcohol; sugar; smoking; aspartame; high cortisol (stress, lack of exercise), and oral estrogenic drugs like unfermented soya, the birth control and hormone therapy pills,. The risk of cancer subsides once these risk factors are minimized – this applies even to the familial cancers- eg after more than 5 years off **oral** birth control or sex hormone therapy. All diabetics- and all who stay overweight, or have raised cholesterol (mostly caused by insulin resistance) – should take the best preventative all-purpose prescription drug there is, the natural plant extract- metformin- in appropriate tolerated dose- as well as abundant all-system-protectant antioxidant insulin sensitizer nitric oxide promoting eg vitamins, minerals, biologicals including fish oil; and appropriate human HRT. .

So the only women who justify early and ongoing screening for breast cancer may in fact be those who are at high risk from the above factors; and those who want to use appropriate HRT. For such women, even if if they have no breast symptoms or lumps, thermomammogram and/or tactile breast imaging (SureTouch) screening may arguably be started young since they are at least harmless, to indicate whether there is need for further screening with ultrasound, xray,



MRI etc. . .

Obviously the (Xray and thermo- and Tactile mapping and ultrasound and MRI) mammography machine suppliers and users are not going to fund a head-to-head comparative trial of the five methods . But if we collaborate as Griffith's Newcastle-on-Tyne group did in an observational study ie recruiting enough women to have two or more of the mammography methods each time they elect to have screening, with screening staff blinded to what is suspected and shown on other and previous mammograms, and have central co-ordination – registration and independent collation- of results, we will soon have answers, as was invaluablely shown without error in eg the major longterm Nurses Study.

With already available statistics, it will not take statisticians long to calculate how many women – maybe as little as 100 in each set- will need to have at least a preset minimum of at least two different mammography options, ideally say a year apart for baseline comparison and standardization.. This will be as simple as the [Groote Schuur Hospital evaluation](#) of the quantitative ultrasound bone risk system versus xray bone densometry in over a thousand women reported in 2009- it showed equivalence.

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