



Micro Trace Minerals Laboratory
35+ years of clinical & environmental
laboratory diagnostics

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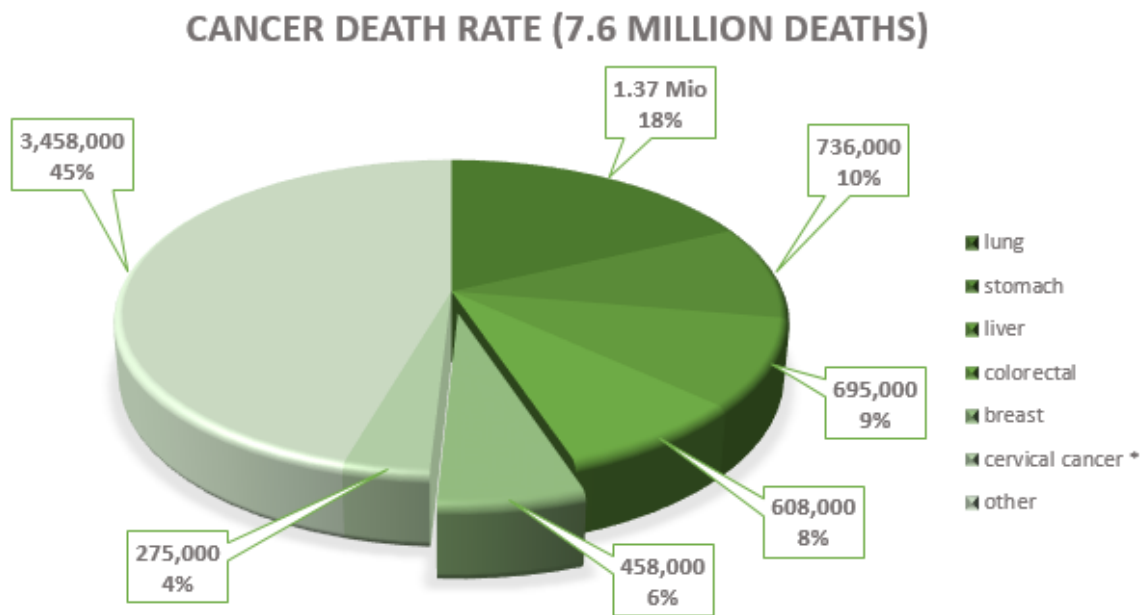
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Breast Cancer Information

Angelina Jolie an inspiration for women to have genetic testing and mastectomies? Scotland has already widened eligibility for breast cancer genetic tests. Previously, one in five (20%) women were eligible for the genetic test, now it is one in 10. It won't be long and double mastectomies are on the rise.

The World Health Organisation in 2008 stated that 11% of the population die of Breast Cancer, see diagram below. To be born with a gene fault may increase the risk of cancer, but does not mean one definitely gets cancer. It does mean, however, that such an individual is more likely to develop cancer than the average person. It also means that reducing the risk factor should be a priority.



Source: World Health Organisation (WHO) 2008 (* Globocan 2008, IARC, 2010)

Aside from genetics, environmental factors increase cancer risks. Cadmium, a highly persistent heavy metal, has been categorized as a probable human carcinogen by the U.S. Environmental Protection Agency. Primary exposure sources include food and tobacco smoke. Researchers from the University of Wisconsin Comprehensive



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Cancer Center, Madison, WI Hutchinson Cancer Research Center, Cancer Prevention Program, Seattle, WA and affiliated organizations measured cadmium levels in urine samples by inductively coupled plasma mass spectrometry and conducted interviews by telephone to obtain information on known breast cancer risk factors. They noted a statistically significant increase in risk with increasing cadmium levels. ⁽¹⁾

In our study, published in 2007, we determined a remarkable difference in metal accumulation in malignant breast tissue compared to healthy breast tissue. ⁽²⁾ A highly significant accumulation of iron ($p < 0.0001$), nickel ($p < 0.00005$), chromium ($p < 0.00005$), zinc ($p < 0.00001$), cadmium ($p < 0.005$), mercury ($p < 0.005$), and lead ($p < 0.05$) was found in the cancer samples when compared to the control group. This pathological accumulation of transition metals in breast tissue may be closely related to the malignant growth process.

A Lithuanian study concluded 'exposure to cadmium appears to be associated with breast cancer. Higher concentration of cadmium in breast cancer tissue and cancer patients' urine, assessing cumulative cadmium exposure from all sources including smoking and diet, supports a possible relationship between cadmium and breast cancer. ⁽³⁾

As a preventative measure, EDTA chelation comes to mind. For more information:

<http://www.microtraceminerals.com/en/chelation-newsarticles/edta>

And

<http://www.microtraceminerals.com/en/metals-and-disease-research/cancer/breast-cancer>

We wish you all the best. If you find this newsletter informative, let us know.

E.Blaurock-Busch and team



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References:

- 1) Jane A. McElroy, Martin M. Shafer, Amy Trentham-Dietz, John M. Hampton, Polly A. Newcomb. Cadmium Exposure and Breast Cancer Risk. JNCI J Natl Cancer Inst. Volume 98, Issue 12 Pp. 869-873.
- 2) Ionescu JG, Novotny J, Stejskal V, Lätsch A, Blaurock-Busch E, Eisenmann-Klein M. Increased levels of transition metals in breast cancer tissue. Neuro Endocrinol Lett. 2007 Oct;27 Suppl 1:36-9.
- 3) http://repository.peerproject.eu/jspui/bitstream/123456789/8640/1/PEER_stage2_10.1007%252Fs10549-010-1007-8.pdf