



# Radiation Treatment For Cancer Called Into Question



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A recently published study from the David Geffen School of Medicine, Department of Radiation Oncology, UCLA reaffirms what Nobel Prize-winner Otto Warburg, MD, PhD published decades ago: Radiation treatment makes the remaining cancer cells more virulent! This is why cancer often “returns” in a much more virulent form years later. With cancer recurrence, the patient typically is terminal – both radiation and chemotherapy are no longer effective.

The journal article by Lagadec, et al., titled “Radiation-Induced Reprogramming of Breast Cancer Cells,” (*STEM CELLS*; 2012;30:833–844) showed the following incredible results every physician prescribing radiation for cancer treatment and every cancer patient needs to know:

❖ “...[M]any solid cancers, including breast cancers, are organized hierarchically with a small number of cancer stem cells (CSCs) able to regrow a tumor while *their progeny lack this feature*.

❖ “Importantly, CSCs in breast cancer and glioma have been found to be relatively resistant to radiation and chemotherapy compared with their nontumorigenic progeny.

❖ “When we compared the absolute number of BCSCs that survived radiation treatment to the number of BCSCs expected to survive, we found a *profound enrichment in BCSCs after exposure to ionizing radiation*, and such a drastic increase in numbers could not easily be explained by differences in radiation sensitivity and/or by active repopulation.

❖ “...We therefore chose to test an alternative explanation, namely that nontumorigenic breast cancer cells acquire a BCSC phenotype in response to ionizing radiation, thus contributing to the enrichment in BCSCs seen after radiation treatment. [Note: Warburg understood this decades ago.]

❖ “Treatment gaps in radiation therapy have long been known to worsen the outcome for patients suffering from epithelial cancers including cancers of the head and neck region and the breast.” [Note: A common attribute to the vast majority of cancers.]

1. Radiation kills both normal cells along with cancerous cells.
2. Those cancer cells that the radiation doesn't kill are because they have already shifted from an oxygen respiration to a glycolysis respiration (because of an oxygen deprived environment – the *prime* characteristic and the *prime* cause of cancer).
3. Those cancerous cells that survive are now extremely respiration (the normal energy mechanism) impaired – they are primarily “fueled” by glycolysis.
4. The fact that these cancer cells are highly glycolytic, makes them extremely resistant to both chemotherapy and radiation (journal articles confirm this).
5. Over time, these surviving cells cause more malignant cancer and are extremely resistant to treatment.

Therefore, by understanding that PEOs; in particular the LA component, are cellular oxygenators – they minimize these issues. **If cellular oxygenation stays sufficient, the patient never contracts cancer to begin with.**