

## **Turmeric Protects Against Radiation Treatment's Horrible Effects**



Household Spice Protects Against Radiation Treatment's Horrible Effects

The humble spice turmeric, in doses available for pennies a day, has been found to reduce one of the most devastating side effects of radiation treatment for head and neck cancer.

Each year, 60,000 patients are diagnosed with 'head and neck cancer,' which includes cancer of the mouth, tongue, pharynx, larynx, oral cavity, and thyroid.[i] Sadly, within the conventional medical model, radiation therapy is the 'standard of care' for this type of cancer, which involves the use of up to 50-70 Grays of radiation over a 5-7 week period. To put this dose into perspective, a whole-body exposure to 8 Grays of high-energy radiation in a single dose has a 100% mortality rate within two weeks.[ii] This is a major (if not the primary) reason why radiation oncologists use 'fractionation,' breaking the total dose up into smaller fractions over time (1.8-2 Grays per day), in order to prevent the rapid death of the patient from acute radiation poisoning.

The primary adverse symptoms experienced by post-radiation treatment survivors is known as 'oral mucositis,' involving tissue destruction and functional problems in the oral cavity, which is painful, affects nutrition, contributes to local and systemic infections and greatly reduces the quality of life.[iii] There are other lesser known and potentially more lethal problems associated with radiotherapy, not the least of which is its ability to transform non-tumorigenic cancer cells into tumor-initiating ones (exhibiting cancer stem cell-like properties), but the medical establishment rarely if ever touches upon these downstream effects, many of which can not easily be linked to the treatment, or are conveniently written off as being caused by the recurrence of "treatment-resistant" cancer and not the inherent carcinogenicity of radiotherapy itself.

While in many ways the treatment of head and neck cancer through solely conventional means is tragic today, the medical establishment is beginning to wake up to the utility of natural compounds in at least reducing or preventing unnecessary harm caused by the use of chemotherapy and radiation. There is no denying that a massive body of research has now accumulated showing that spices as common as turmeric are capable of both increasing the effectiveness of conventional treatment while at the same time reducing the collateral damage to the patient caused by them. [Read: Integrative Cancer Research: Surviving Chemo & Radiation for more information]. From the perspective of a patient faced with the inevitable side effects of radiotherapy, it is clearly unethical for practicing physicians to ignore, or worse, deny the evidence that better outcomes are available using an integrative approach.

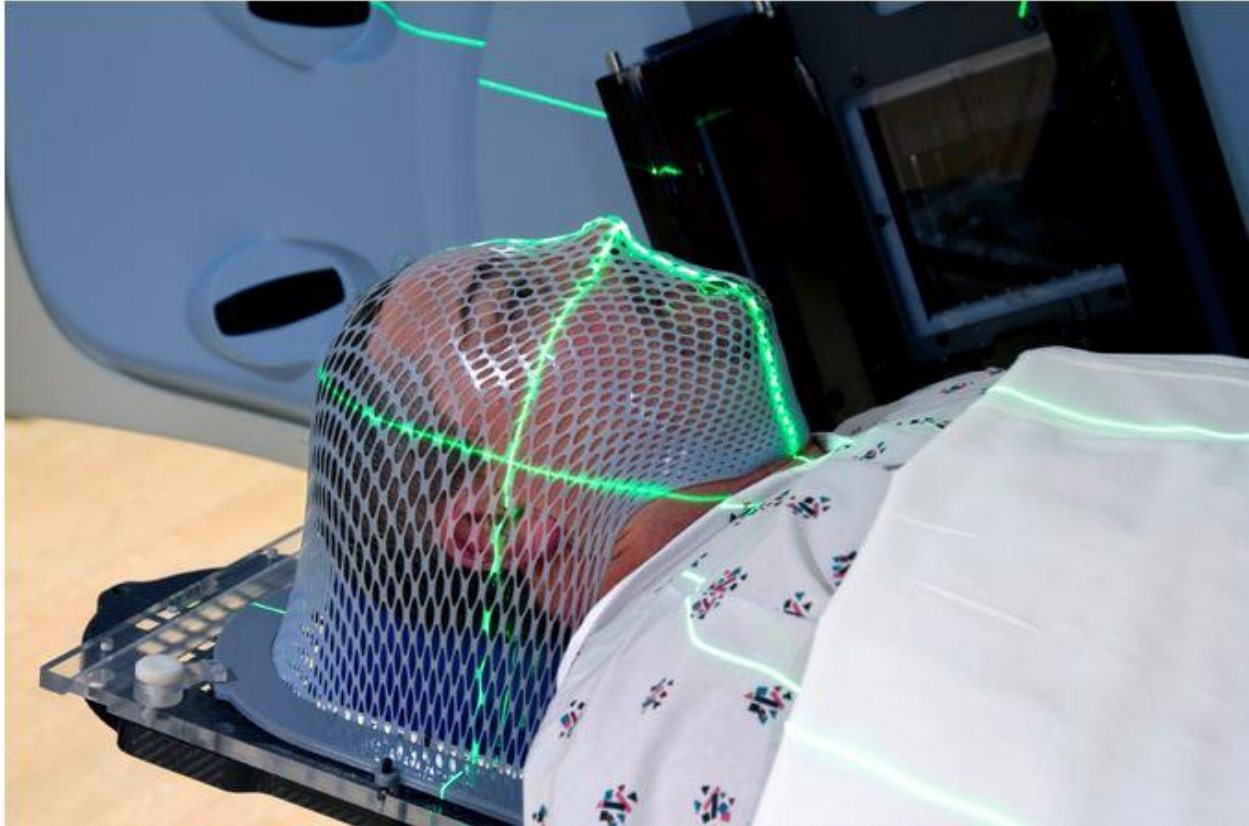


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All the more reason why a new study published in the journal *Integrative Cancer Therapies*, should move the oncology community closer in this direction. Titled, "The Indian Spice Turmeric Delays and Mitigates Radiation-Induced Oral Mucositis in Patients Undergoing Treatment for Head and Neck Cancer: An Investigational Study," [iv] researchers evaluated the efficacy of turmeric in preventing radiation-induced mucositis.

In the single-blinded, randomized, controlled clinical trial conducted with head and neck cancer patients requiring 70 Gray of radiation or chemoradiotherapy (daily radiotherapy plus carboplatin once a week), 80 eligible patients were randomly assigned to receive either turmeric gargle (40) or povidone-iodine (40) during chemo/radiotherapy during the period of treatment.

Oral mucositis was assessed before the start, during, and at the end of the treatment by an investigator unaware of the treatment. The primary endpoint of this study was the incidence of mucositis every week during the 7-week period. The secondary endpoint was the effect of turmeric gargle on the

incidence of treatment breaks, loss of scheduled treatment days, and decrease in body weight at the end of the treatment.

The study produced the following results:

*"This study clearly suggests that when compared with the cohorts using povidone-iodine gargle, the group using turmeric as a mouthwash had delayed and reduced the levels of radiation-induced oral mucositis and was statistically significant at all time points ( : < 0.001 to : < 0.0001). Additionally, the cohorts using turmeric had decreased intolerable mucositis ( : < 0.001) and lesser incidence of treatment breaks in the first half of the treatment schedule before 4 weeks ( : < 0.01) and reduced change in body weight ( : < 0.001)."*

They concluded:

*"Gargling with turmeric by head and neck cancer patients undergoing radiation therapy provided significant benefit by delaying and reducing the severity of mucositis. Turmeric is readily available, relatively inexpensive, and highly accepted making it useful in cancer treatment."*

While this study focused primarily on turmeric's ability to reduce the side effects of conventional treatment, and not the intrinsic anti-cancer properties of the spice itself, there is a good amount research indicating that turmeric is one of Nature's most powerful, affordable, safest and easily accessible anti-cancer agent. For a review of the literature we have accumulated on its health benefits read: 600 Reasons Why Turmeric May Be The World's Most Important Herb. With over 1500 studies indicating its health value, many of which focusing on turmeric's (and its primary polyphenol curcumin) ability to kill over 100 different types of cancer cell lines, it is no surprise to find research on its ability to kill head and neck cancer:

- Curcumin inhibits carcinogen and nicotine-induced head and neck squamous cell carcinoma. *Cancer Prev Res (Phila)*. 2010 Dec;3(12):1586-95. Epub 2010 Sep 17. PMID:20851953
- Curcumin inhibits head and neck cancer cell proliferation. *Int J Cancer*. 2006 Sep 15;119(6):1268-75. PMID: 16642480
- Curcumin inhibits head and neck squamous cell cancer cells. *Int J Cancer*. 2004 Sep 20;111(5):679-92. PMID: 15252836
- Curcumin suppresses head and neck cancer cell growth. *Arch Otolaryngol Head Neck Surg*. 2009 Feb;135(2):190-7. PMID: 19221248
- Review: Curcumin has therapeutic potential in the treatment of head & neck cancers. *Mol Cancer*. 2011 Feb 7;10(1):12. Epub 2011 Feb 7. PMID: 21299897

- Curcumin enhances the effect of cisplatin in suppression of head and neck squamous cell carcinoma. *Mol Cancer Ther.* 2010 Oct;9(10):2665-75. PMID: 20937593
- Curcumin is a potential radio-enhancer in head and neck cancer. *Laryngoscope.* 2009 Oct;119(10):2019-26. PMID: 19655336
- Curcumin suppresses growth of head and neck squamous cell carcinoma. *Clin Cancer Res.* 2005 Oct 1;11(19 Pt 1):6994-7002. PMID: 16203793
- Curcumin suppresses the growth of head and neck squamous cell cancer. *Clin Cancer Res.* 2008 Oct 1;14(19):6228-36. PMID: 18829502

We can only hope that the growing body of experimental, preclinical and clinical support for the use of natural substances in cancer treatment will break throw into the practice of so-called 'evidence-based' medicine. It would seem that given its self-definition, modern medicine has an obligation to do exactly that; especially when the result will be the reduction of human suffering.