

## **Rulemaking1CEm Resource**

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**Attachments:** NRC-2015-0057-DRAFT-0305.pdf

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**Docket:** NRC-2015-0057

Linear No-Threshold Model and Standards for Protection Against Radiation

**Comment On:** NRC-2015-0057-0010

Linear No-Threshold Model and Standards for Protection Against Radiation; Notice of Docketing and Request for Comment

**Document:** NRC-2015-0057-DRAFT-0305

Comment on FR Doc # 2015-15441

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## General Comment

I have attached my comment as an html file with hyperlinks.

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## Attachments

Comment on 2015-15441

Dr. Marcus has proposed such legislation before, to raise the limits of allowable radiation to which others would be exposed from a patient undergoing radiation therapy. Reading over the text of the final version of that 1999 document, I was struck by the many pages of data quantifying the effect a pregnant woman's radiation therapy would have on her unborn fetus, an expansion upon the original report submitted for comment. (See below for links).

Although arguably more common today, a pregnant woman undergoing radiation therapy is not a common situation. Ionizing radiation is expected to not be encountered by the mother. Exceptions are considered tragic or risky events: a plant is known to have melted down, or the mother is known to have some form of cancer.

That, however, is the case only given the world as it is now, a world whose radiation readings and assessments have been and are still being based on the LNT model. A world where it is expected,, at least on paper, that one should expose the average citizen, and thus the average pregnant mother, with as little ionizing radiation as may be achieved. It is expected that one should bend what technology one has at one's disposal to do this. It is understood, at least among the general public. that the costs of doing so are far outweighed by the benefits; and at least in my experience, it is expected that if one cannot reasonably prevent such exposure, then one ought reengineer before the fact rather than reimburse after. This is, as I understand it, the most basic level of responsibility owed from the nuclear industry, grown obese with profit, by means of whose lies the people who stand the most to lose have long been placated.

A world based instead on the hormesis model could not be expected to operate in this way.

With the stated goal of allowing everyone to enjoy the benefits of low-level doses of ionizing radiation, there would be a decreased attention paid to shield or protect female (or male) reproductive organs, the unborn, babies, and children, all of whom are known to be more at risk.

In fact, were we to take advice put forth in the proposal and expose unborn fetuses to the same amount of radiation as is allowed a nuclear worker, more citizens may find themselves familiar with the data in these charts , as they calculate the dose a fetus may have sustained, or may be about to sustain. Procedures which are capable of being rescheduled may not be, increasing the possible dose received by the unborn. More importantly, dose is measured per event and not per individual. In other words, when considering a radiological release, possible doses to the public are calculated, as if the will be the only exposure they will sustain. In a world where regulation is based on the hormesis model, this cannot be said to be the case with confidence.

Therefore, even if you subscribe to hormesis, the only way to be sure that human beings are receiving only the amount that is supposedly good for them would be to measure individual dose rates *individually*. Calculations based on disparate events will not be accurate enough to determine what is safe. This is expensive to implement, but without this added precaution the benefits of hormesis, and the boundary between therapeutic and harmful doses, can only be guessed at. That would not do; that is reckless endangerment. One could easily imagine future legal action, adding expense to this unwise decision.

I call upon the people with the power to influence this decision to act responsibly, not on behalf of some corporate bottom line, but on behalf of the sentient human beings the length and quality of whose lives such decisions will affect.

Please keep the LNT model. Do the right thing.

Thank you,

johanna faust

The main document cited in this comment:

Regulatory Analysis on Criteria for the Release of Patients Administered Radioactive Materials:  
 (Final version: <https://drive.google.com/file/d/oBxgj6hd2GfSPO2ZDbXRpUHJOVGM/view?usp=sharing>)  
 (Draft: <https://drive.google.com/file/d/oBxgj6hd2GfSPRmtrNTVrOWswbXM/view?usp=sharing>)

A short bibliography of serious scholarly arguments against the 'hormesis' model:

- [Prof. Karl Grossman: 'Radiation Hormesis An Incredible Lie'](#)
- [AIOM \(Italian Association of Medical Oncology\) President Carmelo Iacono: 'Nuclear Radiation Is The Most Carcinogenic Thing That Exists'](#)
- [IAEA Admits: There Is No Such Thing As 'Safe' Levels Of Radiation](#)
- ['Fukushima: Gross Miscarriage Of Radiation Science' – Childrens Cancer Risk From Radiation Is 10 To 100 Times Higher For The Same Exposure To Adults](#)

- [Physicians For Social Responsibility Press Conference \(04/26/2011\): Chernobyl, Fukushima And Nuclear Power – Disturbing Facts!](#)
- [Dr. Steven Wing And Chief Nuclear Engineer Arnie Gundersen Discuss Global Radiation Exposure and Consequences: There Is No Safe Dose of Radiation](#)
- [UC Santa Cruz Nuclear Expert Daniel Hirsch: ‘Every Amount of Radiation Exposure Increases Your Risk of Cancer.’ ‘There Is No Safe Level of Radiation.’](#)
- [Dr. Helen Caldicott: How Nuclear Apologists Mislead The World Over Radiation](#)
- [Dr. Brian Moench: There Is No ‘Safe’ Exposure To Radiation](#)
- [Dr. Peter Karamoskos: Don’t Be Fooled By A Never-Ending Cabal Of Paid Industry Scientific ”Consultants’ – Radiation Is Bad And Causes Cancer](#)
- [Are There Safe Levels of Radiation? How Much Radiation Is Safe?](#)

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Nuclear Hotseat #217: August 18, 2015 10:05- Interview with Dr. Ian Fairlie, a British scientist and independent consultant on radioactivity in the environment. [lhalevy-20150819120854.mp3](#) (VLC.app Document, 13.7 MB)