

**PUBLIC SUBMISSION**

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**Docket:** NRC-2015-0020

Nuclear Request for Sodium Iodide I-131 Treatment and Patient Release Information

**Comment On:** NRC-2015-0020-0014

Sodium Iodide I-131 Patient Release Information Collection; Request for Information

**Document:** NRC-2015-0020-DRAFT-0017

Comment on FR Doc # 2015-29027

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DFR 70843

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RULES AND DIRECTIVES  
BRANCH  
IN/PO**General Comment**

I did 103 mci RAI after my TT in 2006 with only uptake in my thyroid bed. I still had a Tg of 12 on meds (suppressed)/146 off meds(unsuppressed). My first 2 endos told me I was ok because my RAI scans were clear. They weren't checking my Tg like they should have or doing additional testing. They just saw clear RAI scans and assumed I was ok. So, I wanted to bring up that doctors shouldn't always rely on RAI scans to determine whether a patient has metastatic disease or not. I found out through doing bloodwork for a life insurance policy and getting denied that there was a problem because of my thyroglobulin level. I had a PET scan jan 2008 that was able to diagnose my metastatic disease. I did 250 mci RAI after a neck dissection for a persistant tumor behind my carotid. I had absolutely NO uptake. And I also had extreme nausea and diarrhea after doing such a high dose. I also developed sores in my nose as well as salivary gland issues. I had to call them to find out what to do about my nose. There was nothing in the instructions about nose sores and it being able to fry my nose and tear ducts. They also didn't explain the salivary gland issues from it as well. Nor did they go into much detail about the possible albeit

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FRIDS = ADM-03  
Add = D-B Howe (dbh)

small risk of secondary  
 cancers from it! Patients who are doing RAI should have it stressed to them how important having teeth  
 cleanings before and  
 after RAI are and how to prevent and treat salivary gland issues better. Many times when we have swollen  
 salivary glands, they  
 just shrug their shoulders at us. It is EXTREMELY painful to have clogged swollen salivary glands! Not only  
 do our jaws swell up bad  
 but it hurts extremely bad! It's some of the worst pain I've experienced and I've been through a lot! So not  
 giving us many treatment  
 options for it and shrugging it off adds insult to injury. Salivary gland damage is a very real issue for us and  
 many times can lead to  
 dental issues. I am on SSDI disability and Medicare. Because I worked and paid into the system I make too  
 much on SSDI to  
 qualify for Medicaid or any other additional assistance. I pay roughly 20% out of pocket for my care which  
 does NOT include dental.  
 How is a long time disabled metastatic thyroid cancer patient supposed to pay for medical care on a limited  
 budget nonetheless  
 dental care?! We don't. I'm going without proper dental care with salivary gland damage. Instead of being  
 able to have crowns and  
 bridges for broken teeth, I'm forced to just have them pulled and go without teeth because I can not afford it!  
 Patients need some  
 sort of assistance to help bridge this gap in our care! While they did explain that I should be quarantined and  
 avoid  
 contact with people, I feel that a. they shouldn't have had me do that high of a dose and release me outside. I  
 should have done  
 quarantine in a hospital with that high of a dose to avoid inadvertently exposing other people. b. they didn't  
 explain well about how  
 long I should keep pets away. I've had 2 cats pass from diseases/cancer since my treatment. The first cat I  
 thought nothing of it  
 being a possible association. He was 12 when he passed. But when the 2nd one got sick and passed at 6, it  
 became less of a  
 coincidence. While I quarantined them away for 1-2 weeks like I did with everyone else, he loved to  
 sleep on my pillow and around my head and neck. Which that was the same pillow I slept on through RAI.  
 Even though I washed  
 the pillow cases and such and 2 weeks had passed, given how small cats are and how sensitive they are to  
 radiation that him  
 hanging out around my head and pillow while I slept did him no favors. He was under 2 years old when I did  
 RAI. It would be very  
 nice if they stressed more pet safety to us! But they most definitely need to do something about salivary gland  
 treatment and stress  
 that more to patients so that we can keep our teeth! Thyroid cancer is often negated because of it's high cure  
 rate/low death rate,  
 but our bankruptcy rate is among the highest among cancers! I've been told that my cancer must not be that  
 bad because I didn't  
 do chemo and lose my hair. While it wasn't obvious, my hair did thin from RAI! Thankfully it grew back, but  
 my teeth continue to  
 break and deteriorate from having decreased saliva from salivary gland damage. I've also had a salivary stone!  
 Which is more

functional and important to our health- hair or teeth?? Wigs are much more cheaper than dental work and dentures!

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## **Attachments**

RAIscan

Patient Name: HOLLIDAY, ELIZABETH Account #: [REDACTED]  
 Med Rec #: [REDACTED] Exam Date: 09/24/2008  
 Age: 31Y Sex: F DOB: [REDACTED]  
 Patient Class: Patient Type: SER  
 Location: Check In #: [REDACTED]  
 EDX and History:  
 Ordering Physician: [REDACTED]  
 Admitting Physician: [REDACTED]  
 Referring Physician: [REDACTED]  
 Radiologist: [REDACTED]

II #	Code	Exam	Reason (Dx)
[REDACTED]	[REDACTED]	OSBORN-RN I131 ABLATIVE THERAPY *	THYROID CA

/READ BY/ [REDACTED]  
 \*\*\*ADDENDUM REPORT\*\*\*

The patient returns seven days after administration of I-131. There is no abnormal radiotracer localization seen within the neck. Physiologic activity is seen within the stomach, urinary bladder, and liver.

There is a tiny area of contamination noted in the soft tissues of the knee.

IMPRESSION  
 No evidence of thyroid remnant or distant metastases.

Sounds good, but means the RAI did not take up in METS as mentioned below...

Addendum Transcriptionist- [REDACTED]  
 Addendum Reading Radiologist- [REDACTED]  
 Addendum Releasing Radiologist- [REDACTED]  
 Addendum Released Date Time- 10/06/08 [REDACTED]

CLINICAL HISTORY  
 Recurrent papillary thyroid carcinoma. The patient has an extensive history of having prior thyroidectomy with initially 100 mCi of I-131 sodium iodide therapy. Recurrent disease was discovered on two occasions recently. A PET CT scan demonstrated hypermetabolic activity near the left tracheoesophageal groove by the larynx. Dr. Balani and Dr. Trainor have requested I-131 therapy. The patient's current thyroglobulin level is 8.0. TSH is 38.

The risks, benefits and alternatives to I-131 therapy are described in detail to the patient. Extensive instructions following therapy were also discussed with the patient, and her questions were answered. Pregnancy test was not necessary due to prior history of bilateral salpingo-oophorectomy.

Informed consent was signed.

The patient was then administered 250 mCi of I-131 sodium iodide. The patient was instructed to return in seven to ten days for post-ablative whole-body imaging.

IMPRESSION  
 approximately 250 mCi of I-131 sodium iodide was administered for

# Radiation exposure

As fears of a meltdown in Japan rise, so do the fears of radiation exposure.

What does radiation do to the human body?

## GROUND RADIATION

Exposed to both naturally-occurring and artificial background radiation; range from 0.0015 - 0.0035



Radiation exposure is measured in units called sieverts (Sv).



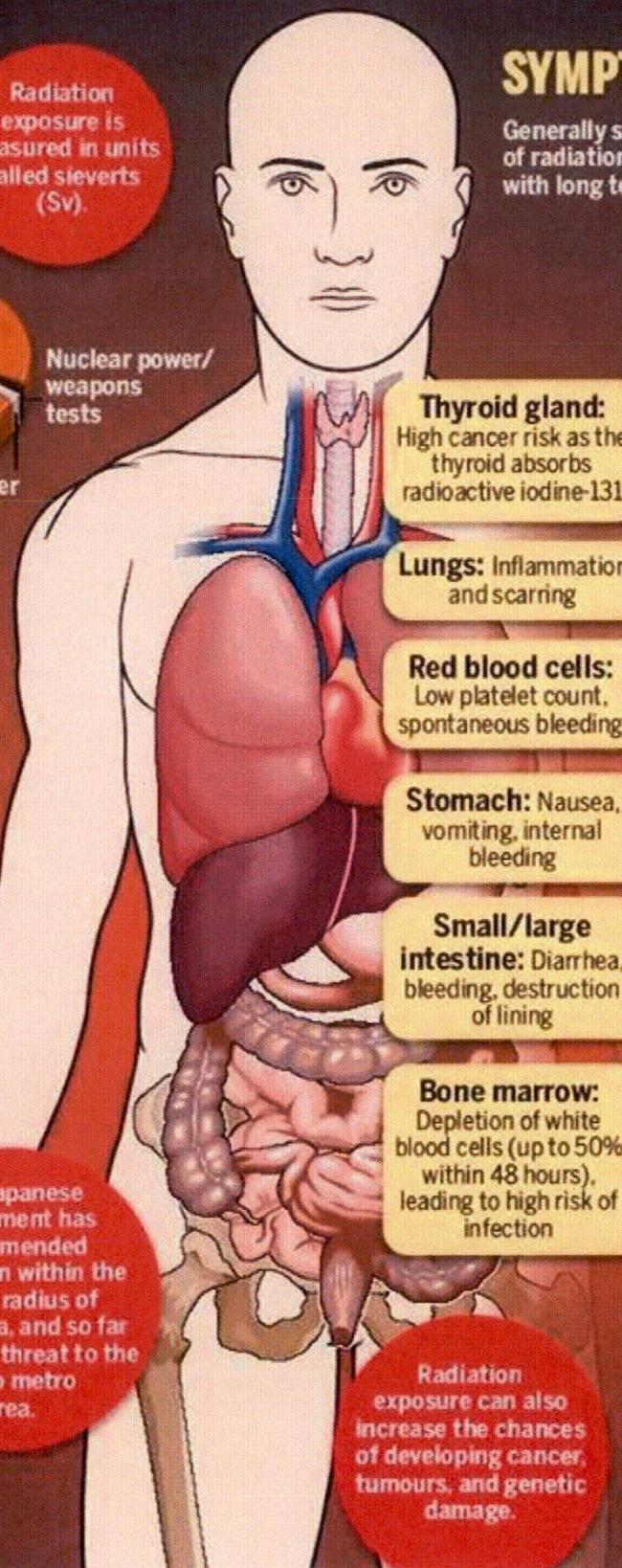
## HEALTHY EXPOSURES

- Fatal within weeks
- Typical levels in Chernobyl workers who died within a month
- A single dose would kill half of those exposed within a month
- A single dose could cause radiation sickness and nausea
- Detected level at Fukushima (as of Tuesday morning in Japan)
- Exposure of relocated Chernobyl residents
- Recommended limit for people working with radiation every 5 years
- Full-body CT scan
- Typical natural radiation per year
- Mammogram x-ray
- Chest x-ray
- Dental x-ray

The Japanese government has recommended evacuation within the 30 km radius of Fukushima, and so far there is no threat to the Tokyo metro area.

## SYMPTOMS OF RADIATION EXPOSURE

Generally speaking, radiation sickness is brought on by a short period of time, but it has also occurred with long term exposure.



**Thyroid gland:** High cancer risk as the thyroid absorbs radioactive iodine-131

**Lungs:** Inflammation and scarring

**Red blood cells:** Low platelet count, spontaneous bleeding

**Stomach:** Nausea, vomiting, internal bleeding

**Small/large intestine:** Diarrhea, bleeding, destruction of lining

**Bone marrow:** Depletion of white blood cells (up to 50% within 48 hours), leading to high risk of infection

Radiation exposure can also increase the chances of developing cancer, tumours, and genetic damage.

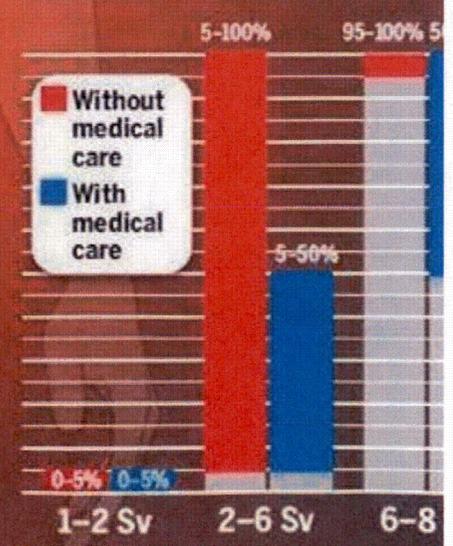
### Early symptoms, exposure level and time to symptom onset

	1-2 Sv	2-6 Sv	6-8 Sv
Nausea, vomiting	6 hrs.	2 hrs.	30 mins.
Diarrhea	-	8 hrs.	30 mins.
Headache	-	24 hrs.	4 hrs.
Fever	-	3 hrs.	1-2 hrs.

### Later symptoms

	1-2 Sv	2-6 Sv	6-8 Sv
Dizziness, disorientation	-	-	1-2 hrs.
Weakness, fatigue	4 wks.	1-4 wks.	1-2 hrs.
Hair loss, bloody vomit and stools, infections, poor wound healing, low blood pressure	-	1-4 wks.	1-2 hrs.

## CHANCES OF DEATH BASED ON EXPOSURE



World Nuclear Association; Wikiline; Graphic News