

# Overexposure to Member of the Public

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Posted on: 08 September 2014

Event Date:	22 March 2013	Event Type:	Other
Event Location:	United States of America, New York, NY/ Children's Hospital at Montefiore	INES Rating:	2 (Final)

The patient received 555 MBq (15 mCi) of I-131 for therapy conducted from March 22, 2013, through March 29, 2013. During the patient's hospitalization, visitors, including family members, were provided with radiation badges to monitor exposure. The badges were processed by Landauer on May 5, 2013, and the results of the badge reading indicate that a family member appears to have received 59 mSv (5.9 rem) effective dose equivalent during the period of the patient's hospitalization. The badge was re-read on May 6, 2013, which confirmed the initial reading, and the licensee was notified on May 10, 2013. However, analyses by the hospital shows that even if the patient's care giver was 30 cm (one foot) from the patient for twenty four hours per day, seven days per week during the entire period of hospitalization, the dose to the care giver would be 4.6 mSv (460 mrem). Furthermore, the care giver stated that she was not in close contact (for example, 30 cm) to the patient for any prolonged period of time, and only approached the patient to shower him. The statements of the care giver correspond to the observations of the hospital staff, who stated that whenever they entered the patient's room for necessary care, the patient's care giver was always at a considerable distance from the patient. Based on these statements and New York's investigation, the cause of the high reading is inconclusive. The patient's care giver was counseled and received a thyroid uptake test on June 6, 2013, and no thyroid uptake was detected. Also, a thyroid stimulating hormone test was administered to the care giver, and the results were normal. The licensee and the New York Office of Radiological Health conducted an extensive investigation, but could not definitively identify the cause of the overdose. Corrective actions included creating an instruction form for inpatients and visitors regarding radiation precautions of I-131 treated patients. NRC EN49305.

INES Rating: 2 - Incident (Final) as per 21 November 2013

## Impact on people and the environment

Release beyond authorized limits?	No
Overexposure of a member of the public?	Yes
Overexposure of a worker?	No

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## Impact on the radiological barriers and controls at facilities

Contamination spread within the facility?	No
Damage to radiological barriers (incl. fuel damage) within the facility?	No

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Degradation of Defence In-Depth	No
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## Other information

Person injured physically or casualty?	No
Is there a continuing problem?	No

## Contact Person for Further Information

**Patricia Milligan, Office of Nuclear Security and Incident Response**

*Nuclear Regulatory Commission (NRC)*