

## **Thyroid cancer patients receiving 131-iodine therapy: hospitalisation or not?**

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**Purpose:** To start a discussion in Norway if it is possible to give out-patient radioiodine therapy for thyroid carcinoma.

**Background:** ICRP-94 recommends that release of patients given radioiodine therapy should be based on their family situation rather than on retained activity and has not set any retained activity to require hospitalisation.

In 1998 the EC stated as a general rule that treatment of thyroid cancer should be performed in conjunction with hospitalisation of the patient. The European Thyroid Association favours radioiodine treatment on an out-patient basis for patients receiving up to 800 MBq only, provided they can abide given advices on their behaviour.

In Norway all thyroid cancer patients treated with radioiodine are hospitalised, while the thyrotoxic patients are treated as out-patients.

In 1997 the US NRC changed its regulation release from an activity-based limit to a dose-based limit. In several states in the USA and in Canada patients who are able to abide specific instructions concerning distance to other persons, time in the public, how to minimize contamination etc. are now routinely discharged with activities of 131-iodine up to 8 GBq. Several publications have concluded that the procedure of giving selected patients out-patient radioiodine therapy for thyroid carcinoma is safe (Griegsby et al. 2000, Mariott et al. 2006).

**Discussion:** Several issues should be discussed when deciding whether to release or hospitalise patients following treatment with 131-iodine: control of patient environment, dose to hospital staff, dose to relatives, the public, disposal of waste, monetary costs and psychological issues. A cost benefit analysis and health consequences should be considered before any conclusion is taken about this matter in Norway.